Graduate Internship Report
Bakersfield High School

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Bakersfield High School Agriculture Department
AGED 539, Fall Quarter 2018
Cal Poly, SLO
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Curriculum and Instruction  
The Bakersfield High School Ag Department follows the three circle model of agriculture education when setting forth organized classes in the study of agriculture science and technology; student supervised agriculture experience; and a program of leadership, organization, and personal development. Currently there are four pathways taught: Animal Science, Ag Business, Floral, and Ag Mechanics. These pathways serve the needs of our relative urban population of students living in an agriculture community. Within these pathways, there are a large number of courses that meet high school graduation requirements and/or University of California a-g credit. Besides providing students with credits needed for graduation and/or college, students learn a variety of skills that can be used in the agriculture industry. The courses in these pathways are based on the Career Technology Education Model Curriculum Standards and the Next Generation Science Standards.

The following courses are available for students in the pathways.

<table>
<thead>
<tr>
<th></th>
<th>Animal Science</th>
<th>Ag Business</th>
<th>Floral</th>
<th>Ag Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>Ag Soils or Sustainable Ag</td>
<td>Ag Soils or Sustainable Ag</td>
<td>Floral 1</td>
<td>Ag Mechanics 1</td>
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<td>Sustainable Ag or Ag Chemistry</td>
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<td>Junior</td>
<td>Ag Chemistry or Animal Science*</td>
<td>Ag Sales and Marketing</td>
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<td>Senior</td>
<td>Animal Science or Ag Econ</td>
<td>Ag Econ</td>
<td>Floral 4</td>
<td>Projects 4</td>
</tr>
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</table>

*An Animal Science class is currently not taught at BHS. The hope it is will be taught in the future.

All of our science courses meet the University of California a-g credit in the area of laboratory science area d while our floral course meets area f. All of the courses in our pathways give students credits towards graduation. Since we align our courses with graduation requirements and college admittance requirements our students are able to take the recommended sequence of agriculture courses to complete the selected career pathway. Ag Mechanics 1 is currently receiving college credit through Bakersfield College.

Students are required to have a supervised agriculture experience project. It is factored into their final grade in each ag class. Students keep records on their projects through The Agriculture Experience Tractor (AET). The ag department has moved away from paper recordbooks in the last four years. The department was
able to make this move because we have a Chromebook Cart available for use in the department. Not only are students able to use AET to record hours and expenses for their projects, they can record their FFA activities, speeches, community service, parliamentary procedure demonstration or test, and school based activities in AET as well. This helps the students track their progress towards their FFA degrees.

Students learn about the agriculture industry in their classes as part of the curriculum. Students are also able to go on field trips to expand their knowledge. In past years, students have gone to nurseries, industrial greenhouses, and other agricultural businesses. Each year students in the floral classes go to the LA Flower Market to learn about the wholesale flower industry. The field trip is first open to floral students. Floral students have priority to go before it is open to all other FFA students. Floral students are also given the opportunity to volunteer at a local floral shop to earn experience in the floral industry. Students also have the opportunity to attend the Tulare Farm Show each year. At the farm show they are not only exposed to many different avenues of agriculture, they are also able to make connections with colleges and trade schools to further their education after high school. Guest speakers are also invited to the Fall and Spring Banquet.
Quality Criteria 2
Leadership and Citizenship Development

The Bakersfield FFA Chapter is currently one of the oldest chapters in the state. It received its charter in 1928. Its’ charter number is CA0015. In its prime the chapter hosted 11 agriculture teachers; however as Bakersfield grew and more high schools were built, these teachers transferred to teach agriculture at these new schools. Currently there are three agriculture teachers at Bakersfield High School. Since the starting of the program in 1929, the demographics of the chapter have shifted from a more rural to mostly urban population as Bakersfield grew and changed over the years.

Each student is given a grade based on participation in leadership activities. FFA activities are calculated as a portion of a student’s grade. FFA points comprise 10-15% of a student’s grade. Every student must earn a minimum of 30 FFA points per quarter through participation in the activities of their choice. Students are informed of the activities and point values of the activities through a couple of ways. Each student is given an academic planner for the year that has been customized with all of the FFA activities for the entire school year. The student will be able to use and keep the planner for the school year. They are able to look and see what activities are coming up as well as keep track of assignments and grades for each of their classes.

FFA activities are announced on a daily basis in the classroom. Upcoming activities are written on the board and discussed as needed. Some of the teachers keep wall calendars of events as well for the students to see. Students are also reminded of FFA activities using the Remind App that delivers messages to their phones via text message. There is a chapter Remind that the students can add where they receive updates on activities, fundraisers, and community service. The FFA advisors are in charge of the Remind App for the chapter.

FFA points are tracked for each student throughout the semester. At each activity, students sign in to earn their points. Individual sales for chapter fundraisers are tracked by each advisor for his or her classes. Students who wear their chapter t-shirts are recorded by their advisor as well. Memos are kept for activities above the chapter level to track attendance for these activities. Jacob Eyraud, one of the ag teachers, is in charge of compiling all of the FFA points for all of the members. He provides the updated points to all of the other ag teachers to enter into their grade books. He also is in charge of determining who the top 10 FFA point earners are. Points are also tracked to reward students at the Spring Banquet for their involvement.
The newly elected chapter officers plan and develop activities for the school year during the mandatory summer officer retreat. Working with the advisors, the officers brainstorm to develop activities that will be appealing to the chapter members. While planning out activities, the officers consider a variety of elements such as interest, tradition, and financial ability to do the activity. The officers use the previous year as a guide to plan the upcoming year. The Program of Work is created based on these decisions. The current year’s program of work is sent to the Regional Supervisor by November 15th. The Program of Work is revised throughout the year to check if the officers are meeting their goals for the year. A mid-year retreat is hosted in January for the officers to reflect on their progress with the Greenhand Officers. The officers evaluate the activities that had occurred to help them learn what went well in those activities and what can be improved on. They also use this information to plan out for the rest of the school year.

The Bakersfield High School Agriculture Department has participated in more than the minimum of 12 activities listed on the FFA Activities Check Sheet. Chapter members are active on the local, section, regional, and state level. Some members are also active at the national level by attending the National FFA Conference. This year the Bakersfield FFA chapter has focused in on serving the community through the following community service activities: SPCA pet blankets for winter, Fall Clothing Drive for the Battered Women’s Shelter, Love for Thanksgiving, Adopt a Family at Christmas, and the Easter Egg Hunt for the Homeless Shelter.

A minimum of 80% of the students do participate in at least three leadership development activities annually. The students participate in activities such as:

- Chapter, Sectional, and Regional Meetings
- State and National FFA Leadership Conference
- Greenhand, Made for Excellence, and Advance Leadership Academy Leadership Conferences
- Sectional Opening and Closing Contest
- Local BIG, Co-ops, Recordbook, and Banking Contests
- Tri Tip Dinner and See’s Candy Fundraisers
- Community Service Activities: SPCA pet blankets for winter, Fall Clothing Drive for the Battered Women’s Shelter, Love for Thanksgiving, Adopt a Family at Christmas, and the Easter Egg Hunt for the Homeless Shelter
Quality Criteria 3
Practical Application of Agricultural Skills

Each student is required to participate in a Supervised Agriculture Experience (SAE). Throughout the Agriculture Department the SAE portion of a student’s grade ranges from 10-15% depending on the student’s year in agriculture. The grading policy for SAE participation is laid out in each of the agriculture teacher’s syllabus at the beginning of the school year. This syllabus is signed by both the parent and the student before being returned to the agriculture teacher.

Students are expected to use the Agriculture Experience Tracker (AET) to record their SAEs. Greenhands are taught how to use AET through a record book unit. They are also taught the purpose and what is an SAE project as well. They also use the resources provided on AET and proficiency descriptions to help determine what their project is going to be for the school year. Greenhands are also given one on one help when deciding and planning out their project. They must all complete a SAE Plan and Budget on AET before starting any project. Their SAE Plans and budgets are reviewed by their ag teachers to make sure that they are on the right track.

Older members are advised on how to improve and continue their previous year’s project or given help to plan a new project for the school year. They are required to update or write new SAE Plans and/or budgets before continuing or starting a new project. Older members are also given refresher lessons on how to use AET if needed. All record books in the department are graded using the AET Record book Grading Rubric. This rubric was adapted from the old record book rubric to fit with AET. It helps the students focus on what they need to fix as well as how they are progressing towards their State Degree. Record books through AET are graded through year. Each student is also required to complete a SAE board at the end of the school year. This SAE board must contain 5 different pictures of the student doing different activities in his or her project, a description of the project, skills learned, future plans, and profits and/or losses from the project. This board is considered part of their final for the class. Many of the students in the department are able to obtain their Greenhand and Chapter degrees, but they struggle with earning their State Degree. As juniors, the students are required to apply for their State Degrees or a proficiency if they have not yet met the requirements for a State Degree.
As of now the Bakersfield High School Ag Department is working to improve their students' involvement in SAE projects. Since a majority of students live in the urban portion of Bakersfield, it is harder for them to develop and maintain SAE projects that allow them to earn the hours and money required to earn the State Degree. Most of the SAE projects completed by members involve plant or yard care and livestock projects for the Kern County Fair. A number of the members also work in the grapes during the summer as their SAE project. There is a large interest in small animal projects as well. Students raise chickens and rabbits. Other students are interested in having dog walking businesses. Students are also able to have ag mechanics and ag welding based SAE projects because the ag mechanics teacher holds open shop for the students. With the focus on agriscience and research in the freshman and sophomore level agriscience classes, students are also encouraged to have agriscience fair projects. Students can compete at the local science fair as well as the agriscience fair with their projects. Other students also volunteer at a local floral shop during the peak times of year. The ag teachers try to help tailor each SAE project to the student and the resources available to the student. The ag mechanics teacher is also working on having more open shop days to help more ag mechanics students with their SAE projects.

Students with livestock projects are visited weekly. A project meeting for each large species is conducted weekly. This is recorded through a Google Forms sheet and AET. Students at the school farm must check in and out using a QR Code each time they go out to the school farm. The QR code is connected to a Google Form that tracks their activity on the farm. Students then use this data to complete their record books through AET. The ag teachers use the Google Forms to track attendance and hold students responsible for their duties on the farm. Students who do not have their animals at the school farm are visited on a regular basis. These visits are coordinated between the advisor in charge of their species and the student. Students with smaller livestock projects are visited at their homes throughout the summer and leading up to the fair. Project visits are also held at the school so students can bring their small animals in for showmanship practice. All other SAE projects are visited on an as needed basis.
There are three agriculture teachers teaching at Bakersfield High School.

Jennifer Wilke is the department head of the program. She has been teaching for twenty three years. This is her twentieth year at Bakersfield High School. Jennifer teaches ag chemistry, floral, ag business, ag econ, and ag communications. She holds a single subject in agriculture credential with a single subject specialist in agriculture. Jennifer is CLAD certified and has a life science add-on to her credential.

Jacob Eyraud has been teaching at Bakersfield High School for three years. He currently holds a CTE credential in agriculture that authorizes him to teach Agriculture and Natural Resources. Jacob teaches ag mechanics and ag welding.

Jenna Eyraud started teaching at Bakersfield High School this year. She previously taught at the Regional Occupational Center. She has been teaching for agriculture for ten years. Jenna teaches ag soil science and sustainable agriculture. She holds a single subject in agriculture credential with a single subject specialist in agriculture. Jenna is CLAD certified.

All ag teachers attend a minimum of four professional development activities per year. They attend the San Joaquin Regional Road Show and Regional Meeting, CATA Summer Conference, the Spring San Joaquin Regional Meeting, the State Degree Recordbook Scoring Meeting, and all Kern Inyo Sectional Meetings throughout the school year. Jacob also meets with all the Ag Mechanics teachers in the district throughout the year to keep informed about curriculum and the requirements for students to obtain college credit for ag mechanics through Bakersfield College.

The agriculture staff at Bakersfield High School meets every Monday during the designated learning team meeting time. During this time, they discuss announcements from administration, what is being taught in each course for the week, activities, fundraisers, field trips, field days, and other responsibilities as needed. A copy of the meeting’s minutes are emailed each week to the vice principal of instruction.

The agricultural staff also meets once a month with the other CTE instructors on campus who teach Fashion, Wood Shop, and Project Lead the Way during the Monday learning team meeting time. Jennifer Wilke is the head of the CTE department on campus. During these meetings, the CTE department discusses what is
going on in their programs, specific tasks given by the principal, and WASC if necessary. Minutes from the meeting are typed and emailed to the vice principal of instruction. Although Jenny doesn’t meet with the science department during learning team meetings, she collaborates with the chemistry department on labs, lectures, tests, and CFAs.

Each teacher is required to fill out a Request to Be Absent form for each activity associated with FFA, SAE, and professional CATA in-service activities when they will not be in the classroom. These forms are usually filled out during the summer in preparation for the coming school year. This form provides the account number to pay for the substitute and a place for expenses to be reimbursed. Teachers are reimbursed for hotel expenses through the district. These expenses must be recorded on his or her request to be absent that is submitted to the district. The receipts for these expenses must then be submitted to the district for reimbursement.
Quality Criteria 5
Facilities, Equipment and Materials

Seven years ago the agriculture department was renovated. The main agriculture classroom and ag welding shop were modernized. Mrs. Wilke’s classroom originally consisted of a classroom, a single stall bathroom, and indoor greenhouse. Her classroom did not have air conditioning and the bathroom plumbing did not function correctly. In the ag welding shop, the welding booths and equipment needed updating. Mrs. Wilke’s classroom was refitted to include an office for the ag teachers, two classrooms, separate men’s and women’s bathrooms, and an agriscience lab. The Ag office provides ample space for storage of student records and paper supplies. There is a desk and computer for each ag teacher in the ag office as well as a desk for the officer team. Other FFA supplies and equipment are stored in cabinets in the hallway between the two ag classrooms. All floral supplies are stored in a room located above Mrs. Wilke’s classroom. Air conditioning and heating were also installed in all areas. In the ag welding shop, a new ventilation system was installed. Air conditioning and heating were installed in the shop. All of the windows were replaced to decrease the amount of noise from the train. The metal doors on the original booths were replaced with welding curtain. Eight new booths were added and equipped with new welders.

Currently Mrs. Wilke and Mrs. Eyraud are in the new classrooms in the ag department and share the agriscience lab between their agriscience classes. Last year Mrs. Wilke updated the chemistry equipment in the agriscience lab through a Donors Choose grant. This allows the ag chemistry students to have access to lab equipment during class but also when they are absent. Until Mrs. Wilke obtained the new equipment, the ag chemistry class was sharing equipment with the regular chemistry classes which made make up labs difficult for students who were absent. The agriscience lab is outfitted to have 8 stations with enough lab equipment for three to four students.

Mr. Eyraud has a classroom in the IT building. In addition to his classroom, Mr. Eyraud has two ag shops for his ag mechanics classes. For the last two years he has been in the process of retooling the shops to have all the tools necessary to teach ag mechanics according to the pacing guide adopted by the Ag Mechanics teachers in the Kern High School District. He has cleaned out and reorganized the ag mechanics shop.
<table>
<thead>
<tr>
<th>Description of Major Equipment</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers, Keyboards, and Monitors</td>
<td>8</td>
</tr>
<tr>
<td>Chromebook Cart (School’s cart, but housed in the Ag Department)</td>
<td>1 cart with 39 chromebooks</td>
</tr>
<tr>
<td>Printers</td>
<td>4</td>
</tr>
<tr>
<td>TV</td>
<td>1</td>
</tr>
<tr>
<td>Floral Display Cases</td>
<td>2</td>
</tr>
<tr>
<td>Floral Refrigerator</td>
<td>1</td>
</tr>
<tr>
<td>Floral Shears</td>
<td>30</td>
</tr>
<tr>
<td>Misc. Floral Equipment- glue guns, vases, compotes, etc</td>
<td>1</td>
</tr>
<tr>
<td>Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Camera for Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Laptops</td>
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</tr>
<tr>
<td>Surface Pro 3 Tablets</td>
<td>2</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>1</td>
</tr>
<tr>
<td>Timeclock Machine</td>
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</tr>
<tr>
<td>DVD/VHS Player</td>
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</tr>
<tr>
<td>Trout Tanks</td>
<td>2</td>
</tr>
<tr>
<td>Photocopy Machine</td>
<td>1</td>
</tr>
<tr>
<td>Document Cameras</td>
<td>2</td>
</tr>
<tr>
<td>Projectors</td>
<td>5</td>
</tr>
</tbody>
</table>

*See the department’s comprehensive plan for a full list of equipment*

The Bakersfield High School Ag Department has access to their own ag truck and ag van to transport students to FFA events and all SAE activities. The program also owns their own livestock trailer to haul animals during the summer and to the Kern County Fair. The ag van was only obtained in 2015 and will not be replaced for a while.

The Bakersfield Ag Department also has two facilities off campus for SAE purposes. The first is the school farm. The ag program is lucky enough to have its own school farm located on land borrowed from alumni of the program. Students are able to keep their pig and sheep SAE projects out there for the duration of the summer. Students pay rent to help cover water costs and cost of using the land. Students also have access to a district wide school farm located at the Regional Occupation Center. A student is able to keep their animal there if the need arises. Also the Bakersfield High Ag Department has a locked storage unit to store all of the fair equipment there.
Quality Criteria 6
Communities, Business and Industry Involvement

The Bakersfield High School Agriculture Department has an advisory committee composed of school administrators, past agriculture teachers, local college professors, agribusiness community members, floral shop owners, irrigation and crop specialists, nursery owners, and other members of the community who are supportive of the agriculture program. The Advisory Committee meets twice a year with the advisors and FFA members. The FFA members update the committee on the Program of Work and what is currently happening in the chapter. Each meeting follows a detailed agenda created by the Ag department. Minutes of the meeting are recorded. The committee members provide feedback to the advisors and help guide them on what is desired in the industry. They also advise on Career Technical Grants and direction of the program. The members also review the Ag Incentive Grant when it is their turn to do so.

The Ag Department is also supported by the Bakersfield FFA Alumni Association. The Bakersfield FFA Alumni Association was formally the Bakersfield FFA Ag Boosters. The program transitioned from a boosters group to an alumni association a few years ago. The Alumni Association is primarily composed of parents whose students are in the program. However, the Ag Department is working on expanding the group to include more alumni of the program. The alumni association supports the program by hosting a fundraiser to provide financial support to students through scholarships, and financial assistance during fair for supplies and Career Development Event (CDE) judging season and State Conference by helping to pay for hotel rooms for the students. This helps offset the cost for the students. The Ag Department is working with the alumni association to improve their membership and support of the program.

The Bakersfield Ag Department is also supported in the community. There are a large number of Bakersfield High School FFA member alumni who come back and support the program. They volunteer as judges for CDE and public speaking events. They also support the program through fundraisers and donations to the program. Bakersfield High School has a long standing tradition of school pride and ownership. Alumni believe fully “Once a Driller, Always a Driller.” This support is seen by the program.
Quality Criteria 7
Career Guidance

At Bakersfield High School, there are seven guidance counselors who are able to help counsel the students throughout their high school career. The ag advisors and FFA members work with the counselors to teach them about the career opportunities in agriculture, agribusiness, and agriculture education. The counselors are taught about the pathways and courses that are offered in the program. They are also taught about the opportunities the FFA and SAE present for the students. Each year the chapter officers invite the counselors to chapter events to help them learn more about the program. The officers also work with the counselors to complete the Star Chapter Counselor Awards each year. Each spring the students are counseled by their agriculture teacher on classes to take for the upcoming school year. The ag teachers talk them through what agriculture classes to take that will fit in their schedules and their pathway. Students also talk with their ag teachers about their progress towards graduation and their plans for life after graduation.

As the students become seniors in the program, they are presented with scholarship opportunities through their capstone classes. These scholarship opportunities focus on students who live in Kern County and are planning on pursuing a career in agriculture. Each spring all of the agriculture scholarships are presented to students at a banquet hosted in the Ag Pavilion located at the Regional Occupation Center. Students are also provided with letters of recommendation when requested. The ag teachers are always willing to lend a hand with college applications and scholarship forms.

The students also learn about careers in agriculture through their classes and field trips. One of the major field trips in which they learn about careers in agriculture is the Tulare Farm Show. Each year the students are given an assignment that directs their exploration of the farm show, so they have some guidance when visiting. The students visit different vendors and ask questions. They visit with colleges as well. Another way students learn about continuing their education in agriculture is when they visit the ag colleges for field days. This allows them to interact with current college students who can provide them with first-hand knowledge about college. Other ways students are able to learn about careers is through hands on experience in their SAE projects.
At this time only the Ag Mechanics course is articulated with a local college, Bakersfield College. All Ag Mechanics classes in the district have this articulation since it was the result of the ag mechanics teachers working together to establish this course.
Quality Criteria 8
Program Promotion

The program promotes to incoming freshmen through visits to the feeder middle schools, 8th grade registration, and Freshmen orientation. In the spring prior to the incoming freshmen visiting the campus to register for classes, groups of passionate FFA members are sent to the feeder schools. The members practice a script that introduces the eighth graders to the FFA and ag program in fun hands on activities. These activities get the future members up and moving while being engaged in what ag can offer them.

When it is closer to 8th Grade Registration and Freshmen Orientation, the ag advisors train current FFA members during a training session on how to talk to potential FFA students. The members are taught how to enthusiastically answer 8th graders’ and their parents’ questions about our program. They are also reminded to share their own FFA stories. It is usually these stories that pull future members into the program. These members also create attractive and fun displays for the income freshmen to see so they can become excited about joining our program. Each interested freshman is asked to fill out an interest paper and have it signed by their parents. The Agriculture Student Planning Handbook is handed out which gives an in-depth look at what our program has to offer. After 8th Grade Registration occurs, the ag advisors type the list of students interested in our program and sort them accord to class preference. This list is then turned into our counseling department to place student for the coming school year in our classes.

In August, all freshmen are invited to Freshmen Orientation. This orientation is hosted by the Bakersfield High School LINK Crew. The LINK Crew are juniors and seniors that are paired with incoming freshmen to help them make the transition from middle school into high school a little easier. FFA members in our program have been nominated to be members of the LINK Crew. Having FFA members as part of the LINK Crew is beneficial to the program as they provide a positive image for the department.

The Bakersfield Ag Program is promoted to the community and our current members through a variety of electronic accounts. Parents and members can sign up for the FFA Remind, an app that sends out reminders about FFA activities and events. The ag advisors also use Remind as a classroom tool for their classes. The program is also promoted through a Facebook and Instagram account.
Through planning the FFA calendar, a large number of activities are provided for the students to participate in. Activities range from lunch time activities, community service, report card checks, fundraisers, helping at tri tip dinners, attending banquets, helping at banquets, and going on field trips. This allows the program to be prepared for all kinds of students whether that student is heavily involved in sports, choir, band, or other organizations on campus. It also helps give opportunities to students that may have financial barriers to participating in the program activities. Since a large number of students receive free or reduced lunch it is important to make sure that financial barriers do not keep students from participating in FFA activities, SAE, or Leadership Activities. For all leadership conferences, students are allowed to have a payment plan if they need it. Students are also able to borrow any and all parts of the FFA uniform. This year the program was able to add two complete new sets of FFA jackets, skirts, pants, and shirts for students to borrow. The ag advisors work hard with the students to work through any financial barriers that may occur for a student.
Quality Criteria 9
Program Accountability and Planning

A Comprehensive Program plan has been developed for the Bakersfield High Ag Department. It can be found in its printed form in the ag office shared by the agriculture teachers. Each year the Five Year Equipment Acquisition Schedule, Chart of Staff Responsibilities, FFA Program of Activities, Advisory Committee Roster and Advisory Committee Minutes are updated and added to the binder. The Five Year Equipment Acquisition Schedule, Chart of Staff Responsibilities, and FFA Program of Activities are updated in the summer. The Advisory Committee Roster and Advisory Committee Minutes are updated throughout the year as the Advisory Committee meets. They usually meet once in the fall and once in the spring. The Graduate Follow Up is posted through the Cal Ag Ed website by October 15th each year. The FFA Roster and the Program and Teacher Profiles are also updated on the Cal Ag Ed website. AET is used to update the FFA Roster.
Quality Criteria 10
Classroom Size

At this time, the Bakersfield Ag Department does not meet the classroom size criteria required by the Agriculture Incentive Grant. Most classes taught by the agriculture teachers have more than 25 students. Since this is the case most of the shop and laboratory-based classes have more than 22 students enrolled in the class.

The breakdown below shows the classroom sizes for the three agriculture teachers.

<table>
<thead>
<tr>
<th>Course</th>
<th>Number of Students Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture Soils</td>
<td>32</td>
</tr>
<tr>
<td>Agriculture Soils</td>
<td>32</td>
</tr>
<tr>
<td>Sustainable Ag</td>
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<td>16</td>
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<td>Sustainable Ag</td>
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<td>Ag Government</td>
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<td>Projects 3</td>
<td>39</td>
</tr>
<tr>
<td>Projects 4</td>
<td>32</td>
</tr>
</tbody>
</table>

As it can be observed from looking at the class sizes for the different classes, there are too many classes that exceed the class size requirement.
The agriculture teachers at Bakersfield High School have a 10 month contract with the school district. Each agriculture teacher at Bakersfield High School does receive an extended contract in the form of a summer contract. This summer contract is for the specific purpose of advising students throughout the summer on their SAE projects, FFA officer leadership development, department business, and professional development. The ag teachers are paid for 36 days during the summer. At the beginning of the summer, they submit plans to the principal on how they are going to fulfill their responsibilities for those days.

Jennifer Wilke does have a Project Supervision Period. This period rotates periods each year. None of the other ag teachers have a Project Supervision Period. All of the ag teachers have 4\textsuperscript{th} preparation period with 5\textsuperscript{th} lunch, so they are free to work together. Chapter meetings and activities are able to be held during this time. Public Speaking and CDE teams practice during the ag teacher’s preparation period. All of the ag teachers also teach an 8\textsuperscript{th} period. There are two different types of 8\textsuperscript{th} periods taught in the department: Ag Leadership 1-4 and Ag Production 1-4. The 8\textsuperscript{th} period classes are flexible and are planned out to meet the needs of the students and teachers. Ag Leadership is used in the spring to give students credit for their participation in CDE judging teams, Parliamentary Procedure, and Public Speaking Events while Ag Production is used in the fall semester to give students elective credit for their work with their livestock projects. Students are given grades for their involvement in these two courses.
Section 2
Supporting Materials
Supporting Material 1
Permanent Ag Student Files

The Permanent Ag Student Files are located in the ag office. There are two filing cabinets for the files. One filing cabinet is dedicated to current students while the second filing cabinet is used for graduated students. Applications, paper record books, and proficiencies are all stored in the files. Shown below are pictures of the filing system.
During my last year teaching at Bakersfield High School, I taught Agriculture Soils, the freshman agriscience class and Sustainable Agriculture, the sophomore level agriscience class. Both of these classes were being taught for the first time at Bakersfield High School. I worked with other ag teachers in the district to create the pacing guides and resources to teach the classes. The courses of studies for both classes were developed by two ag teachers in our district. Besides the courses of study I have include the syllabus for both classes. Each syllabus describes the grading scale, what the course is graded on, expectations, and how to contact me. FFA involvement and SAE projects are explained as well as what portion of the grade it is.
Agriculture Soils  
2016-2017  
Mrs. Ou

Contact Me
1. amanda_ou@kernhigh.org 
2. 661-324-9841 ext. 
3. Remind app chat

Remind Text Alerts
Sign up for the class text alerts for the updates on homework, tests, quizzes, and other important due dates. Download the Remind App to be able to chat with Mrs. Ou for help.

Ag Soils
Text
@bshsagsoils to 81010

BHS FFA
Text
@drillerffa to 81010

Grading

<table>
<thead>
<tr>
<th>12 POINT GRADING SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>100%</td>
</tr>
</tbody>
</table>

All classes taught by Mrs. Ou will use a 12 point grading system. Scores on assignments, tests, etc. will receive a percentage. The percentage will be converted to the 12 point system above. The letters above the 12 point system are reflective of the grades that students will earn.

Tests & Quizzes
All Unit Tests will be given with a 4 day advanced notice. If you a test or quiz it must be returned to Mrs. Ou with your parent signature and assigned corrections two days after the test is returned to retake it. You will be given CFAs (Common Formative Assessments) to prepare for the exam or quiz.

Homework & Class work
All homework and class work is due as it is assigned. Late work is given one day grace period and then is docked 1 point per day late on the 12 point scale.

Career Readiness
Students will be graded on their daily warm ups and use of the FFA planner.

FFA Youth Leadership
30 FFA points must be earned each quarter and are cumulative all year. FFA activities are found in the FFA student planner that is provided to the students ($10 value). FFA points are noted weekly in class for each activity and discussed to answer any questions regarding the activity.

Ag Project (Supervised Agriculture Experience)
Students will undertake an ag project during the school year. Common examples in our department include yard work, plant care, and animal care. Students will learn Record Keeping items such as developing a budget, writing business agreements, and keeping records of work, income and expenses related with their project. Additionally, they will have a record of all school, FFA and community service activities during the year. All record books will be done on AET, an online recordbook.

- Grades will be updated in the paper gradebook as well as Synergy.
- Please keep all graded work to track your grade as well. Also if you have any questions about your grade, this is your opportunity to make sure I've everything correct!
- If you need a login to Synergy you can obtain a Student.gznd/or Parent login from your counselor.
Rules & Expectations

1. Be on time, on-task. Be prepared to work hard & learn

2. PUT AWAY all personal electronics.

3. BE RESPONSIBLE for your own learning.

4. RESPECT the teacher, the classroom, other students.

5. Trash goes in the trashcan! #NOTYOURMAID

Daily Routine for Class
- Arrive on time before the bell rings
- Submit Homework to the Homework box (if assigned)
- Retrieve file folder (not colored hanging folder)
- Be seated in assigned seat
- Daily Warm up
- Lesson (can occur in any order)
  - Daily announcements
  - Lecture & /or lab
  - CFA or test as appropriate
  - Intervention activities
  - Submission of class work
  - Homework that is due tomorrow (or as assigned) is reviewed and/or handed out
  - Exit activity
- Classroom Cleanup
  - Table top and surrounding floor cleaned up
  - Return book NEATLY
  - ALL supplies returned
- Return file folder
- Wait for bell and TEACHER’S DISMISSAL (The bell does not dismiss you.)

AG SOILS SIGNATURE PAGE
Bakersfield High School - Mrs. Ou

We, the student and parent, have read the class information and understand how Mrs. Ou’s Ag Soils class will be run, how grades are earned, and the expectations of the class.

<table>
<thead>
<tr>
<th>Student’s Printed Name</th>
<th>Student’s Signature</th>
<th>Date</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Parent/Guardian’s Printed Name</th>
<th>Parent/Guardian’s Signature</th>
<th>Date</th>
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Please provide your contact information below.

Phone Number: ____________________________

Email: ____________________________

“Always be humble and kind.”
### Unit 1: Agriscience Practices

#### Goals of Unit

- I can ask questions and define problems.
- I can conduct research by forming a hypothesis, determining the experimental design, analyzing and interpreting data, developing conclusions, and communicating my findings in a lab report.
- I can select an Agriscience project based on the topics taught and mini-labs completed.

<table>
<thead>
<tr>
<th>Days</th>
<th>Chapter</th>
<th>Textbook Ch.*</th>
<th>I Can Statements</th>
<th>Key Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>First Week of School</td>
<td>NA</td>
<td>None</td>
<td>Classroom Procedures/Norms, Syllabus, Intro Activities, Intro to FFA (taught through qtr too)</td>
</tr>
<tr>
<td>5</td>
<td>Lab Safety and the Scientific Method</td>
<td>NA</td>
<td>1. I can explain and give examples of the steps of the scientific method (in order). 2. I can distinguish between a hypothesis and a theory. 3. I can identify the parts of a scientific experiment including, control, independent variable, and dependent variable. 4. I can collect, analyze, and display data correctly.</td>
<td>Lab Safety PowerPoint &amp; Activities, KHSD Lab Safety Test and Agreement, Scientific Method/Engineering Method, Agriscience Fair Project, APA Formatting</td>
</tr>
<tr>
<td>3</td>
<td>Importance of Soil and Uses of Soil</td>
<td>1</td>
<td>1. I can summarize the ecological functions of soil and its role in recycling nutrients. 2. I can describe 4 ways plants use soil. 3. I can explain agricultural uses of soil. 4. I can discuss the concept of soil quality.</td>
<td>Intro to Sci. Mthd. Lab, Agriscience Fair Project Outline and Handouts, APA Formatting Handout</td>
</tr>
<tr>
<td>8</td>
<td>Physical Properties of Soil</td>
<td>4</td>
<td>1. I can describe the concept of soil texture and its importance. 2. I can identify the texture of a soil sample. 3. I can describe soil permeability. 4. I can describe structure and its formation and purpose. 5. I can discuss soil compaction.</td>
<td>How soil has shaped history, ecological functions of soil, layers of the earth (crust, mantle, and core), plant uses of soil, ag uses of soil, and what is soil quality</td>
</tr>
<tr>
<td>8</td>
<td>Soil Fertility &amp; Plant Nutrients</td>
<td>10,12</td>
<td>1. I can name and classify the essential elements. 2. I can list four sources of nutrients in the soil. 3. I can explain how plants absorb nutrients. 4. I can discuss nitrogen’s role as a nutrient and the nitrogen cycle. 5. I can discuss phosphorus’ role as a nutrient and its sources. 6. I can discuss potassium’s role as a nutrient and its sources.</td>
<td>Soil particle size, major components of soil, measuring % of sand, silt, and clay, composition of soil &amp; percolation rates, soil moisture levels.</td>
</tr>
<tr>
<td>7</td>
<td>Organic Matter &amp; Amendments</td>
<td>6,15</td>
<td>1. I can explain what organic matter is and how it forms. 2. I can describe what organic material does in soil. 3. I can list ways to maintain soil organic matter. 4. I can explain the benefits of organic amendments. 5. I can explain how to use animal manure and biosolids as organic amendments.</td>
<td>Nutrients plants need, role/purpose of nutrient, plant intake of nutrients, importance and role of N,P, and K, Nitrogen Cycle</td>
</tr>
<tr>
<td>5</td>
<td>Fertilizers</td>
<td>14</td>
<td>1. I can distinguish the different forms of fertilizers and how they affect the soil. 2. I can describe fertilizer sources for each nutrient. 3. I can perform fertilizer calculations. 4. I can describe how to use fertilizers.</td>
<td>Different types of amendments (review synthetic vs. organic), what is organic matter, how does it affect soil, how does organic matter provide plants with nutrients needed</td>
</tr>
<tr>
<td>3</td>
<td>Agriscience Fair Project</td>
<td>NA</td>
<td>None</td>
<td>Agriscience Fair Project Outline and Handouts</td>
</tr>
<tr>
<td>3</td>
<td>FFA O/C</td>
<td>NA</td>
<td>None</td>
<td>Agriscience Fair Project Outline and Handouts</td>
</tr>
</tbody>
</table>
## Unit 2: The Nature of Soil

### Goals of Unit
- I can explain how soil forms based on the role of the rock cycle in soil formation, seafloor spreading, volcanic activity, and mountain building.
- I can identify how climate, weather, natural resources and hazards, and environment impacts soil properties.
- I can examine how erosion affects soil and how it is influenced by human activity.
- I can test soil samples using industry standards to determine physical and chemical characteristics of local soil samples.
- I can create a soil map based on the physical and chemical characteristics of soil.
- I can compare and contrast my soil map with existing soil maps to determine accuracy.

<table>
<thead>
<tr>
<th>Days</th>
<th>Chapter</th>
<th>Tex. Book Ch.</th>
<th>I Can Statements</th>
<th>Key Ideas</th>
<th>Labs/Resources</th>
</tr>
</thead>
</table>
| 7    | Rocks & Minerals | 2 | 1. I can define a body of soil.  
2. I can list and give examples of the five soil-forming factors.  
3. I can describe how soils develop.  
4. I can describe the horizons of the soil profile. | Rock cycle, how earthquakes, volcanism, erosion, and weathering drive rock cycle, seafloor spreading & mountain building create new parent material, ID of rocks, how climate & erosion affect rock formation and influence human activity & soil mgmt. | Sedimentary Rock Lab |
| 8    | Life in the Soil | 5 | 1. I can define the carbon cycle and explain its importance.  
2. I can describe soil organisms.  
3. I can explain why soil organisms are important.  
4. I can describe how to promote beneficial soil organism populations. | Testing of physical (ribbon test, soil texture, composition, particle size) and chemical characteristics (pH, nitrogen, potassium, phosphorous levels) of soil, examine soil for living organisms | Soil Testing Labs-Relates to Soil Capstone Project |
| 8    | Soil Classification & Surveys | 3 | 1. I can describe the current USDA soil classification system.  
2. I can explain how soil surveys are prepared and used.  
3. I can list soil capability classes.  
4. I can create a soil map. | Use physical & chemical characteristics & location of soil to map soils, compare own soil map to current USDA/IRCS maps | Soil Map Lab, Commodity Projects, |
| 5    | pH & Salinity | 11 | 1. I can describe soil pH and its development.  
2. I can describe how pH affects soil.  
3. I can tell how to lime or acidify soil.  
4. I can describe saline and sodic soils and the methods used to treat them. | Using soil samples from local farms, students will tests soils for physical & chemical characteristics, determine how characteristics impact ag outcomes and amendments to add to achieve desired result, examine cost-benefit ratio | Salinity & pH Soil Testing Lab, Soil Mgt Lab |
| 7    | Agriscience Fair Project | NA | Spread throughout quarter | | |
| 5    | FFA Creed | NA | | | |
### Unit 3: Water and Soil Management

**Goals of Unit**
- I can analyze how the water cycle impacts soil based on its soil type, soil location, vegetative state, and natural slope of the land.
- I can explain how water moves through the soil with respect to how intermolecular forces impact percolation, capillary action pore size, cohesion, and adhesion.
- I can explain how organic matter impacts the movement of water.
- I can explain how soil impacts the quality of water and perform water analysis tests.
- I can provide solutions for possible contaminations and/or toxic levels or residues/nutrients in water.
- I can determine how different types of irrigation, tillage and planting practices will impact the soil and surrounding water using water quality tests.
- I can use GPS to analyze watersheds and rationalize how drought can impact water quality and quantity as well as soil composition.

<table>
<thead>
<tr>
<th>Days</th>
<th>Chapter</th>
<th>Textbook Ch.</th>
<th>I Can Statements</th>
<th>Key Ideas</th>
<th>Labs/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Water &amp; Soil Mgt</td>
<td>7</td>
<td>1. I can identify the role of water in plant growth.</td>
<td>The role of water in plant growth, forces that act on water in the soil, types of soil water, how water moves through the soil, how plants obtain water, water holding capacity and how to calculate it, when there is too much or too little water and effects on crops</td>
<td>Soil Erosion and Runoff Lab</td>
</tr>
<tr>
<td>7</td>
<td>Soil Conservation</td>
<td>18,19</td>
<td>1. I can describe how soil erosion occurs and the effects of it.</td>
<td>Using soil maps, analysis of how soil with vegetation has a greater water holding capacity and less runoff than soil with no vegetation, discuss climate, natural hazards, and human activity can influence soil erosion and runoff</td>
<td>Groundwater Contamination &amp; Aquifer Lab, Kern Co. Water Agency Guest Speaker</td>
</tr>
<tr>
<td>5</td>
<td>Water Conservation</td>
<td>8</td>
<td>1. I can explain the source of our fresh water supply.</td>
<td>Understand the bonds between hydrogen and oxygen, the polarity of water, how hydrogen bonds give water properties to percolate into the soil, how pollutants stick to water and are taken up by plants, how to protect water quality in agriculture for the community</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tillage &amp; Cropping Systems</td>
<td>16</td>
<td>1. I can explain the reasons for and effects of tillage.</td>
<td>Investigate the physical and chemical changes in the soil due to tillage, examining the soil pretilage and posttilage to predict potential erosion and runoff issues, develop best tillage practices, using GPS and topographic maps to determine the natural slope of the land, to conserve water and prevent erosion</td>
<td>Tillage Protocols Impact on Structure and Soil Lab</td>
</tr>
<tr>
<td>5</td>
<td>Irrigation &amp; Drainage</td>
<td>9</td>
<td>1. I can define drainage and explain its importance.</td>
<td>How evaporation and soil type plays a roll in irrigation methods</td>
<td>Irrigation Practices Lab</td>
</tr>
<tr>
<td>3</td>
<td>Capstone Project</td>
<td>Working on Land Planning Model Capstone Project</td>
<td>Can be placed in curriculum where desired</td>
<td></td>
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<tr>
<td>5</td>
<td>Parli Pro</td>
<td>Can be placed in curriculum where desired</td>
<td>Taught throughout the quarter</td>
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<tr>
<td>6</td>
<td>Record Books</td>
<td>Taught throughout the quarter</td>
<td></td>
<td>Vegetable Garden</td>
<td></td>
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<tr>
<td>5</td>
<td>Hort. Use of Soil</td>
<td>Container gardens- mixing potting soil, sterilizing soil, how to plant transplants, abiotic planting, landscaping</td>
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</tbody>
</table>
### Unit 4: Plants and Soil Management

#### Goals of Unit
- I can determine the effects of plant, soil, and water interactions in order to maintain or restore environmental health and structure.
- I can model the carbon, water, and nitrogen cycle through the environment.
- I can explain the nutrients required for plant growth.
- I can analyze how pH can affect nutrient availability.
- I can determine water holding capacity.
- I can identify possible nutrient deficiencies based on observations.
- I can apply this learning to develop knowledge of soil nutrients and their role in the environment.

<table>
<thead>
<tr>
<th>Days</th>
<th>Chapter</th>
<th>Txt book Ch.</th>
<th>I Can Statements</th>
<th>Key Ideas</th>
<th>Labs/Resources</th>
</tr>
</thead>
</table>
| 10   | Life in the Soil & Biochem. Cycles | 5           | 1. I can explain the water cycle.  
2. I can explain the nitrogen cycle.  
3. I can explain the carbon cycle.  
4. I can explain an agricultural ecosystem.  
5. I can explain how the cycles are affected in the ag. ecosystem and how we impact it. | Water cycle, nitrogen cycle, carbon cycle, ag ecosystem: forestry, rangeland, vineyard, annual crops, and orchards, human impact on each cycle |  |
| 2    | Plant Nutrients | 12          | 1. I can compare the difference between natural and synthetic fertilizers on plant growth.  
2. I can make quantitative and qualitative observations of plant growth and draw conclusions about available nutrients and practical application of crop growers.  
3. I can write a recommendation about what type of fertilizer to use | Experiment with natural and synthetic fertilizers, Create a written report to a local crop producer to explain which type of fertilizer to use on their farm to achieve production goals, Optional extension: add a cost-analysis to see if adding fertilizers is cost effective. | Plant Requirement Lab-Fertilizer Lab |
| 2    | Soil Mgt Project | Working on Soil Management Projects |  |  |  |
| 2    | Plant & Soil Interactions |  | Relates to the soil management project and revisits Soil Erosion and Runoff Lab from Unit 3 |  |  |

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### Unit 5: Soil Sustainability

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<table>
<thead>
<tr>
<th>Days</th>
<th>Chapter</th>
<th>Textbook Ch.#</th>
<th>I Can Statements</th>
<th>Key Ideas</th>
<th>Labs/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Govt. Agencies &amp; Programs</td>
<td>20</td>
<td>1. I can list the federal and local agencies that assists soil users.</td>
<td>USDA Agencies, USDA Conservation Programs, State and Local Efforts, and Phytoremediation Lab</td>
<td>Phytoremediation Lab</td>
</tr>
<tr>
<td></td>
<td>Impact on Soil Structure &amp;</td>
<td></td>
<td>2. I can describe some of the soil programs of these agencies.</td>
<td></td>
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<tr>
<td></td>
<td>Soil Sustainability</td>
<td></td>
<td>3. I can explain the remediation effects of plants in the uptake of soil</td>
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<td></td>
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<td>contaminations.</td>
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<tr>
<td>5</td>
<td>Ag Issues Debate</td>
<td></td>
<td>4. I can create a poster to explain the benefits and drawbacks of each</td>
<td>Conventional, No Till, and Low Till Practices,</td>
<td>Tillage Practices Lab, Land Use Planning Model</td>
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<tr>
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<td></td>
<td></td>
<td>tillage practice.</td>
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<tr>
<td>3</td>
<td>Soil Mgt. Project</td>
<td></td>
<td>1. I can research the global use of methyl bromide as a chemical soil</td>
<td>Using industry journals to research methyl bromide, pros and cons of using it, current</td>
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<td>sterilant.</td>
<td>practices</td>
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<td>2. I can examine the pros and cons of using methyl bromide.</td>
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<td>3. I can defend my position using verified resources and scientific logic.</td>
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<td>4. I can develop a model policy for the use of methyl bromide in agricultural</td>
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<td></td>
<td>applications.</td>
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<tr>
<td>15</td>
<td>Weather, Climate, and</td>
<td></td>
<td>Working on Soil Mgt Project, adding knowledge from</td>
<td>Effects of Climate Change on Ag, Land Resources, Water Resources, and Biodiversity in the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effects on Climate</td>
<td></td>
<td>Phytoremediation and Tillage Protocol, Impact of Soil Structure and Soil Mgmt</td>
<td>United States-</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Soil Mgt. Project</td>
<td></td>
<td>1. I can develop a Soil Management Plan to recommend soil amendments, tillage</td>
<td>Completing portfolio and interview a farmer, develop soil management plan based on given</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>practices, irrigation methods, and crop recommendations.</td>
<td>scenario, research</td>
<td></td>
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<tr>
<td></td>
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<td>2. I can analyze information about soil topography, climate/rainfall,</td>
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<td>composition, nutrients, pH, and salinity levels.</td>
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<td>3. I can identify and evaluate solutions to reduce human impact on the</td>
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<td></td>
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<td></td>
<td>environment.</td>
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<td></td>
<td>4. I can justify my recommendation based on the sustainability and scientific</td>
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<td></td>
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<td></td>
<td>logic.</td>
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</tbody>
</table>

**Soil Management Capstone Project Timeline**

<table>
<thead>
<tr>
<th>Qtr.</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Collect Soil Samples from various locations around their community or teacher obtains soil from local farmers to test based on industry standards:</td>
</tr>
<tr>
<td></td>
<td>- Ribbon Test</td>
</tr>
<tr>
<td></td>
<td>- Soil Texture</td>
</tr>
<tr>
<td></td>
<td>- Soil Composition</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| 1 | Particle Size  
  - Presence of living organisms  
Students will hypothesize what chemical elements are present in the soil based on observations. Students will research what chemical are prominent in the soil in their test areas and check their hypothesis. An annotated bibliography will be written to explain their major findings. Students will give a presentation on their annotated bibliography, give details on where their soil came from, the lab tests they performed, the results of the tests, their data analysis, and how that analysis compared to their research. |
| 2 | Students will now test the chemical properties of soils:  
  - pH  
  - Nitrogen levels  
  - Potassium levels  
  - Phosphorus levels  
  - Presence of microorganisms  
Students will compare the chemical elements they found in the soil to what they hypothesized based on the physical characteristics. They will turn in a lab report which details where their soil came from, the lab tests they performed, the results of their tests, and the analysis of their results as compared to their finds. |
| 2 | Students will use the soil analysis results to construct a soil map of their local area.  
Students will create a soil map and compare it to the map to existing maps and analyze the similarities and differences with previous USDANRCS maps.  
Students will analyze how the physical and chemical characteristics of their soil impact agricultural outcomes, and how amendments can be made to the soil samples to achieve a desired outcome. Students will look at the cost-benefit ratios of the different soil characteristics and amendments on the desired result. |
| 3 | Students will plant their soils with vegetation and collect runoff water from each plot.  
Students will analyze the runoff water by measuring the amount of runoff and testing the water for percent of solids. Students will complete the lab write up by emphasizing their understanding of these key concepts: climate, natural hazards, availability and crop production. Lab report should contain qualitative and quantitative observations. Students should analyze data to draw conclusions about water holding capacity.  
Students will make recommendations for soil amendments which would increase the nutrient availability of the soil in order to grow a crop. Postplanting students will test soil nutrient concentration. Students will use their knowledge of the biogeochemical cycles to explain how nutrients are being transferred from soil to plants. |
| 4 | Conclusion of Project: Students will test their soils and use their knowledge of Phytomediation and Tillage Protocols, Impact on Soil Structure and Soil Sustainability Labs to propose a plan to treat the soil for the desired end result.  
Students will put all of their research together into one final report. |
| 5 |   |
Sustainable Agriculture
2016-2017
Mrs. Ou

Contact Me
1. amanda_ou@kernhigh.org
2. 661-324-984
3. Remind app chat

Remind Text Alerts
Sign up for the class text alerts for the updates on homework, tests, quizzes, and other important due dates. Download the Remind App to be able to chat with Mrs. Ou for help.

Sustainable Ag
Text
@bhssustag to 81010

BHS FFA
Text
@drillerffa to 81010

Grading

12 POINT GRADING SYSTEM

<table>
<thead>
<tr>
<th>A+</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
<th>D-</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>100%</td>
<td>96%</td>
<td>91%</td>
<td>86%</td>
<td>81%</td>
<td>77%</td>
<td>73%</td>
<td>69%</td>
<td>65%</td>
<td>61%</td>
<td>57%</td>
<td>53%</td>
<td>below</td>
</tr>
</tbody>
</table>

All classes taught by Mrs. Ou will use a 12 point grading system. Scores on assignments, tests, etc. will receive a percentage. The percentage will be converted to the 12 point system above. The letters above the 12 point system are reflective of the grades that students will earn.

Tests & Quizzes
All Unit Tests will be given with a 4 day advanced notice. If you a test or quiz it must be returned to Mrs. Ou with your parent signature and assigned corrections two days after the test is returned to retake it. You will be given CFAs (Common Formative Assessments) to prepare for the exam or quiz.

Homework & Classwork
All homework and class work is due as it is assigned. Late work is given one day grace period and then is docked 1 point per day late on the 12 point scale.

Career Readiness
Students will be graded on their daily warm ups and use of the FFA planner.

FFA-Youth Leadership
30 FFA points must be earned each quarter and are cumulative all year. FFA activities are found in the FFA student planner that is provided to the students ($10 value). FFA points are noted weekly in class for each activity and discussed to answer any questions regarding the activity.

Ag. Project (Supervised Agriculture Experience)
Students will undertake an ag project during the school year. Common examples in our department include yard work, plant care, and animal care. Students will learn Record Keeping items such as developing a budget, writing business agreements, and keeping records of work, income, and expenses related to their project. Additionally, they will have a record of all school, FFA and community service activities during the year. All record books will be done on AET, an online recordbook.

Grades will be updated in the paper gradebook as well as Synergy.

Please keep all graded work to track your grade as well. Also if you have any questions about your grade, this is your opportunity to make sure I've everything correct

If you need a login to Synergy you can obtain a Student and/or Parent login from your counselor.
Rules & Expectations

1. Be on time, on-task. Be prepared to work hard & learn

2. PUT AWAY all personal electronics.

3. BE RESPONSIBLE for your own learning. the teacher, the classroom, other students.

4. RESPECT Trash goes in the trashcan! #NOTYOURMAID

Daily Routine for Class

- Arrive on time before the bell rings
- Submit Homework to the Homework box (if assigned)
- Retrieve file folder (not colored hanging folder)
- Be seated in assigned seat
- Daily Warm up
- Lesson (can occur in any order)
  - Daily announcements
  - Lecture & /or lab
  - CFA or test as appropriate
  - Intervention activities
  - Submission of class work
  - Homework that is due tomorrow (or as assigned) is reviewed and/or handed out
  - Exit activity
- Classroom Cleanup
  - Table top and surrounding floor cleaned up
  - Return book NEATLY
  - ALL supplies returned
- Return file folder
- Wait for bell and TEACHER’S DISMISSAL (The bell does not dismiss you.)

Sustainable Ag SIGNATURE PAGE
Bakersfield High School - Mrs. Ou

We, the student and parent, have read the class information and understand how Mrs. Ou’s Sustainable Ag class will be run, how grades are earned, and the expectations of the class.

<table>
<thead>
<tr>
<th>Student’s Printed Name</th>
<th>Student’s Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Parent/Guardian’s Printed Name</th>
<th>Parent/Guardian’s Signature</th>
<th>Date</th>
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</thead>
<tbody>
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</tbody>
</table>

Please provide your contact information below.

Phone Number:

Email:

“Always be humble and kind.”
**Sustainable Biology Pacing Guide**

*This is a tentative schedule based on the materials and timelines provided on the UCCI curriculum website. Feel free to add or take away materials as you see fit, just make a copy of the pacing guide for your use.  
*Read the COS for more details on assignments as well as the research papers.*

**Quarter 1**

<table>
<thead>
<tr>
<th>Goals of Unit</th>
<th><strong>I Can Statements</strong></th>
<th><strong>Key Ideas &amp; Labs/Resources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>None</strong></td>
<td>Classroom Procedures/Norms, Syllabus, Intro Activities, Intro to FFA (taught through qtr too)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>Textbook Ch.*</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
</table>
| 2    | First Week of School | NA | 1. I can explain what agriculture is.  
2. I can explain what the fields are within ag.  
3. I can explain the career paths in ag.  
4. I can explain the issues facing the fields within ag.  
5. I can explain what is FFA and its benefits. | None |
| 3    | Introduction to Agriculture | 1. I can explain what is sustainability?  
2. I can discuss how sustainability relates to agriculture.  
3. I can explain the three “Es” of sustainability.  
4. I can explain how ag affects the quality of life.  
5. I can discuss the economic impact of resource utilization.  
6. I can discuss the biological divisions of agriculture. | Intro to Ag Ppt  
Issues in Modern Ag Briefs  
Intro to FFA lesson  
Benefits of FFA |
| 4    | What is sustainability? | NA | 1. I can explain and give examples of the steps of the scientific method (in order).  
2. I can distinguish between a hypothesis and a theory.  
3. I can identify the parts of a scientific experiment including, control, independent variable, and dependent variable.  
4. I can collect, analyze, and display data correctly. | Defining Sustainability Lesson  
Challenges with Sustainability Activity  
Farming Types and sustainability Activity  
Levels of sustainable ag lesson/activity |
| 4    | Lab Safety and the Scientific Method | NA | 1. I can explain what competition is.  
2. I can describe the different types of competition.  
3. I can distinguish the difference between intraspecific competition and interspecific competition.  
4. I can explain population size and carrying capacity.  
5. I can distinguish between native species and invasive species.  
6. I can list and explain the attributes of successful invasive species.  
7. I can explain the problems caused by invasive species.  
8. I can explain why biodiversity is important. | Competition, Natives, Invasive PPT  
Native vs invasive species case study activity  
Native vs Invasive Research Paper  
Work Like a Scientist Native vs. Invasive Species Lab |
## Unit 2: How does sustainable agriculture fit into our environment?

### Goals of Unit
- I can describe how energy is transferred from trophic levels.
- I can discuss how nutrients cycle through the environment.
- I can draw conclusion on how biogeochemical cycles apply to the sustainability of agriculture.
- I can conduct research in the areas of photosynthesis, chemical energy creation, nutrient cycling, transpiration and water use, ecological relationships and the global farming practices to draw biological conclusions on how agriculture affects the natural environment.

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
</table>
| 3    | Types of Cells & Microscope Use | **1.** I can identify different prokaryotic and eukaryotic cells.  
2. I can utilize a microscope with slides. | • Plant Cell Color Page Worksheet and Quiz  
• Microscope Lab & Pictures  
• Microscope Quiz  
• Microscope Parts  
• Microscope Draw  
• Intro to Microscope |
| 4    | Parts of a Cell | **1.** I can identify the different organelles within a plant and animal cells.  
2. I can distinguish the differences and similarities between plant and animal cells.  
3. I can explain the functions of the organelles and how they relate to photosynthesis. | • Cell Dairy Farm Activity  
• Using Oreo's to Teach chloroplast structures  
• Cell Project  
• Cell Organelle Advertisement |
| 3    | Plant Anatomy | **1.** I can differentiate between cells and tissues.  
2. I can explain the function of vascular structures. | • Plant Tissues  
• Plant Parts Handout  
• Plant Parts Diagram  
• Investigation of Leaf Stomata |
| 3    | Plant Physiology | **1.** I can identify the plant growth requirements. | • Reading a fertilizer label and application calculations  
• Plant Nutrients PowerPoint  
• Nutrients Wanted Poster Template  
• Nutrients Wanted PowerPoint  
• N-P-K PowerPoint  
• Fertilizer Label Calculations Quiz |
| 6    | Photosynthesis | **1.** I can identify the components of photosynthesis.  
2. I can describe the process of photosynthesis, including the reactants and products.  
3. I can interpret graph.  
4. I can analyze the occurrence of photosynthesis in spinach leaves. | • Plant Processes  
• Plant Biomass Activity (Photosynthesis)  
• Photosynthesis Review Game  
• Photosynthesis Fast Plant Lab  
• Photosynthesis- Do Plants Prefer the Blues  
• Investigating Photosynthesis  
• Investigating Photosynthesis Lab  
• Hunting for Glucose |
| 2    | Water Cycle | **1.** I can identify the components of the water cycle.  
2. I can identify the parts and functions of a leaf.  
3. I can explain how transpiration can occur. | • Transpiration Webquest  
• Move through the Crop Transpiration Lab  
• Leaf Transpiration Lab  
• Investigation of a Leaf Stomata |
| 3    | Carbon Cycle | **1.** I can identify the components of the carbon cycle.  
2. I can describe the process of cell respiration. | • Heavy Air Lab- Weight of CO2 vs Air.docx |
<table>
<thead>
<tr>
<th>3</th>
<th>Nitrogen Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. I can identify the components of the nitrogen cycle</td>
</tr>
<tr>
<td></td>
<td>2. I can identify the equations involved in nitrogen cycle</td>
</tr>
<tr>
<td></td>
<td>3. I can explain global farming practices: crop rotation, soil amendments, over-farming/soil depletion</td>
</tr>
</tbody>
</table>

- Exercise_Cellular_Respiration_lab.pdf
- carbon cycle game.pdf
- BTB lab set up.pdf
- Understanding Nitrogen in Soils
- There's Something Fishy
- The Nitrogen Problem
- Nitrogen from Fertilizers Article
- Nitrogen-Plant Nutrients
- Nitrogen in Plants Info
- Nitrogen Cycle Worksheet
- Nitrogen Cycle Worksheet Copy
- Farming Nitrogen Activity
- Farming Nitrogen Activity Teacher
- Fact- Information Sheets
<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
</table>
| 5    | How does energy move through the Ecosystem? | 1. I can identify consumers, producers, decomposers etc and how they fit into trophic levels | - Trophic Levels Note Sheet.pdf  
- Trophic Levels in a Food Web Worksheet.pdf  
- The Web of Life.docx  
- Taxonomy Project.docx  
- Surviving Dust Bowl Activity Trophic Levels.pdf  
- Peppered Moth Simulation.docx  
- Peppered Moth Simulation (Paper _ Pencil).htm  
- Peppered Mink Simulation.docx  
- Natural Selection Simulation.docx  
- Misconception About Insects (Ecology Activity).pdf  
- Decline in Saltwater Fish Populations Activity (Ecology_Human Impact on Envir.).pdf  
- CA Plankton and Foodweb Teacher.pdf  
- CA Plankton and Foodweb Student.pdf |
| 2    | Energy Pyramid | 1. I can explain how energy is transferred (and lost) in energy pyramids  
2. I can explain how much energy is lost at each step of the pyramid | - Soda Energy Pyramid Lab.docx  
- ENERGYPYRAMIDMODEL.pptx  
- Energy Flow in Ecosystems Activity.doc |
| 7    | Biomass | 1. I can describe the difference between aerobic & anaerobic (compare/contrast)  
2. I can describe the process of decomposition/fermentation (reactants and products)  
3. I know how biogas is created and how it can be utilized in agriculture  
4. I can explain global farming practices: no-till farming/low-till, cover crops  
5. I can complete the “From Trash to Gas” sustainable waste management lab. | - Ricee (Biomass).pdf  
- Lessons from a Global Garden Article.docx  
- factsheet-biomass.pdf  
- Copy of Lesson 2_ Aerobic vs. Anaerobic.docx  
- Copy of Lesson 1_ Biomass and Biogas.docx  
- Aerobic vs Anaerobic Cell Respiration Activity.pdf |
| 5    | Composting & Renewable Energy | 1. I know/identify necessary plant nutrients  
2. I can test available nutrient levels.  
3. I can identify the different types/know the difference between compost & mulch.  
4. I can identify renewable/nonrenewable resources  
5. I can identify techniques/methods in creating compost  
6. I can complete “Composting, Do The Rot Thing?” composting lab | - Renewable_Act.ppt  
- Trash to Gas Lab - Student.docx  
- LESSON #2_ Composting Challenges _ Benefits.docx  
- LESSON #1_ what-do-plants-need-to-grow-plant-nutrients-os21Cq.docx  
- SoilWebquestpdf.pdf  
- Let It Rot- Teacher .docx  
- Let It Rot- Student.docx  
- Compare - Contrast .docx  
- Annotation Guide.docx |
### Quarter 2

**Unit 3: What molecular biology principles guide sustainable agriculture?**

**Goals of Unit**
- I can explore the concepts of taxonomy of plants and the nomenclature of animals, cell structure, cell division, DNA, and chromosomes.
- I can apply this knowledge to evaluate species to artificially select characteristics to breed more efficient and productive offspring.
- I can understand genetic markers, genetically modified organisms, and biotechnology.
- I can examine and evaluate biotechnology, the ethics of gene manipulation, and its implication on the sustainability of agriculture.
- I can use these concepts to research a biological issue facing agriculture and report my findings.

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
</table>
| 6    | Mitosis & Meiosis | 1. I can distinguish the difference between Eukaryotic vs. prokaryotic cells  
2. I can explain the cell organelle structures and functions  
3. I can explain mitosis.  
4. I can explain meiosis.  
5. I can explain the cell cycle.  
6. I can explain how mutations can occur. | • Mitosis.docx  
• Using The Microscope-2.docx  
• labels for students - dairy cell farm.doc  
• Cell_Farm PP.ppt  
• Cell Model Project.docx  
• Dairy Cell Farm.pub  
• Organelle Hiring Sheet.docx  
• Organelle Cards.docx  
• Lesson Plan.docx  
• Cell Farm Grading Rubric.docx  
• Cell Farm Assessment.docx |
| 8    | DNA & RNA  | 1. I can explain DNA and RNA.  
2. I can describe chromosomes, ribosomes.  
3. I can explain the differences between RNA and DNA  
4. I can read and use a codon table.  
5. I can explain how DNA replicates itself.  
6. I can explain protein synthesis.  
7. I can explain enzymes and their role in biochemical reactions. | • Simulating Protein Synthesis.doc  
• EnzymeReading 3 .pdf  
• DNA Extraction Lesson Plan.docx  
• DNA Extraction lab- teacher.docx  
• Codon Bingo.docx  
• Simulating Protein Synthesis.doc  
• Cheese Making Teacher Lab.docx  
• Cheese Making Student Lab.docx  
• DNA Extraction lab |
| 2    | Final     | NA  
Review for final- Kahoot, Study Guide | |
| 5    | SAE Project | NA  
Spread throughout the quarter, part of final- books closed out for year | |
### Quarter 3

#### Unit 3: What molecular biological principles guide sustainable agriculture?

**Goals of Unit**
- I can explore the concepts of taxonomy of plants and the nomenclature of animals, cell structure, cell division, DNA, and chromosomes.
- I can apply this knowledge to evaluate species to artificially select characteristics to breed more efficient and productive offspring.
- I can understand genetic markers, genetically modified organisms, and biotechnology.
- I can examine and evaluate biotechnology, the ethics of gene manipulation, and its implication on the sustainability of agriculture.
- I can use these concepts to research a biological issue facing agriculture and report my findings.

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
</table>
| 15   | Genetics & Punnett Squares | 1. I can explain the difference between genotypes and phenotypes.  
2. I can explain and identify dominant and recessive traits.  
3. I can distinguish between complete dominance, co-dominance and sex-linked traits.  
4. I can determine heritability (genetic vs. environmental factors).  
5. I can understand the role that probability plays in genetics.  
6. I can explain how dihybrid Cross works.  
7. I can complete Punnett squares for sex-linked, complete dominance, co-dominance, and monohybrid crosses. | • Reebop lab.docx  
• Reebop Chromosomes Girl.docx  
• Reebop Chromosomes Boy.docx  
• Reebop Lab.doc  
• Understanding EPDs.pdf  
• Swine EPD PPT for Lab.pptx  
• Evaluating Hog EPD’s Lab.docx  
• EPD’s and Selection.ppt  
• EPD Notes.pdf  
• Pedigree Table.docx  
• Genetics Pedigree and Effect of Env on Gene Expression.docx  
• Cattle Genetic Traits  
• Scientific Selection of Agricultural Animals.docx  
• Naked Bunny Lab.docx  
• Heredity or Environment.docx  
• baby_lab.pdf  
• Scientific Selection of Agricultural Animals.docx  
• Oomaph Punnett Square Practice.docx  
• Sex linked practice problems.docx  
• Punnett Square Probability.docx  
• Monohybrid Worksheet.docx  
• Monohybrid Mice.doc  
• Genetics Problems in Agriculture.docx  
• Genetic Web Quest.docx  
• funky-chicken-genetics- LP.docx  
• Funky Chicken Genetics .docx  
• Dihybrid.docx  
• Genetics Problems in Agriculture |

| 7    | Animal Anatomy | 1. I can explain the components and function of the Skeletal and Muscle System.  
2. I can explain how Circulatory System functions.  
3. I can explain the Respiratory System.  
4. I can explain how the Nervous System functions.  
5. I can explain the parts and functions of the Digestive System.  
6. I can explain how the male and female Reproductive System functions. | • Simple Digestion.docx  
• Sheep Heart Dissection.docx  
• Ruminant Digestion.docx  
• reproductive structures and cycles (NXPowerLite).ppt  
• Pass It Along Lab.doc  
• Pass it Along Lab- Numbers.pdf  
• mystery_skeleton_lab_form.pdf  
• Muscle tissues _ Nerve tissues.pptx  
• lung lab.pdf  
• General Livestock Reproduction Male (NXPowerLite).pptx |
| 7 | Reproduction | 1. I can explain compare and contrast asexual and sexual reproduction.  
2. I can identify and explain male and female reproductive systems.  
3. I can discuss how semen is sexed.  
4. I can discuss artificial insemination and embryo transfer. |
|---|---|---|
| 7 | Taxonomy | 1. I can understand the Nomenclature for the taxonomy of plants.  
2. I can explain the classification system for plants.  
3. I can identify and explain the function of the roots, stems, leaves, and flowers. |
|   | SAE Project | NA | Spread throughout quarter- Updated, graded monthly. |
**Quarter 4**

### Unit 3: What molecular biological principles guide sustainable agriculture?

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Livestock Selection</td>
<td>1. I can select breeds of Livestock based on purpose (bos indicus vs. bos taurus).</td>
<td>Livestock Suitability and Selective Breeding.pdf</td>
</tr>
<tr>
<td>2</td>
<td>Topography Climate Zones</td>
<td>1. I can explain the topography of California.</td>
<td>InTheZone.pdf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I can explain the climate zones of California.</td>
<td>In the Zone California (Adapt)</td>
</tr>
<tr>
<td>2</td>
<td>Ecosystem Classification</td>
<td>1. I can explain ecosystems as they relate to biomes.</td>
<td>Biome Project.docx</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I can explain the basic classifications of biomes.</td>
<td>Biome Flip Book.doc</td>
</tr>
<tr>
<td>7</td>
<td>Plant Growth</td>
<td>1. I can explain how the environment affects plant growth.</td>
<td>Soil Webquest.docx</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I can explain plant growth requirements.</td>
<td>Plant Growth Seed Lab.doc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. I can discuss the biotechnology used on plants.</td>
<td>Plant Growth Seed Germination.pdf</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Plant Growth Seed Germination Lab.pdf</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plant Growth Requirements.ppt</td>
</tr>
<tr>
<td>5</td>
<td>Crop Production</td>
<td>1. I can list and explain the advantages and disadvantages of GMO/Organic/Conventional farming methods.</td>
<td>Planning for Planting.pdf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I can explain Local/State Crop Management &amp; Production.</td>
<td>GMO Debate Activity.doc</td>
</tr>
</tbody>
</table>

**Quarter 4**

### Unit 4: How has the agriculture industry used evolutionary principles to develop practices and commodities?

<table>
<thead>
<tr>
<th>Days</th>
<th>Subunit</th>
<th>I Can Statements</th>
<th>Key Ideas &amp; Labs/Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2. I can recognize the applications of evolutionary principles for medicine, agriculture, and conservation.</td>
<td>Back to the Future Assignment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Evolution in the News</td>
</tr>
<tr>
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<td></td>
<td>Evolutionary change in Ag Research Project</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Evolution in Agriculture: The Domestication of Wheat Assignment</td>
</tr>
<tr>
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<td></td>
<td>BLAST- Compare the Evolutionary Relationships of Modern Grains to</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Create a Cladogram</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Differential Survival of Organisms EEI Lessons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Anatomical Evidence of Evolution Lab</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Geometric Fossil Evolution Lab</td>
</tr>
<tr>
<td>Days</td>
<td>Subunit</td>
<td>Textbook Ch.</td>
<td>I Can Statements</td>
</tr>
<tr>
<td>------</td>
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<td>--------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>SAE Project</td>
<td>NA</td>
<td>This unit has several projects to be completed:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o Show Me You Care Practice in Animal Health Management</td>
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<td>o If you root it, they will grow Sustainable Practices in Horticulture</td>
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<td>o It's Easy Being Green Growing Green Communities Landscaping</td>
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<td>o Use Me Responsibly or Lose Me Forever Using Nature's Natural Resources</td>
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<td>3</td>
<td>Final Review</td>
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<td>Spread throughout the quarter- Updated, part of final grade</td>
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While teaching at Bakersfield High School I was required to use the grading program called Synergy. This program allowed me to take attendance, record grades, and communicate with parents and students. One of the challenges using this program was the program did not calculate a 12 point scale very well. My teaching partner and I had to adjust the percentages so it would read the 12 point scale. The grade book was set up into five sections: Quizzes and Tests, Homework and Classwork, Career Readiness, FFA, and SAE. While grades were reported through Synergy, I kept a paper record of their grades as well in case there was a mistake. The students and parents could check the grades online. Grades were submitted twice each quarter- a grade check and quarter grade. Semester grades were a reflection of two quarters and a final. Usually each quarter represented 40% of the grade while the final made up the last 20%.
Supporting Material 4
Program of Activities

Over the last few years the Program of Activities has been revised to fit the National Chapter Evaluation Criteria. It was first revised to reflect what was presented by the San Joaquin Regional Officers in their Program of Activities. When we realized that it need to be changed more to reflect the National Chapter Evaluation Criteria, the ag teachers revised it in the last two years to reflect that. The Program of Activities contains an introduction, mission and strategies of the chapter, FFA emblem, motto and colors, FFA Creed, list of current officers, Program of Activities Divisions 1-3, FFA Budget, Judging Teams Public Speaking Opportunities, FFA Awards, and FFA Point Award System. The Program of Activities is revised each summer by the incoming chapter officers and the advisors. It is reevaluated at the mid-winter retreat in January.
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Judging Teams  
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FFA Points Award System
INTRODUCTION

The Future Farmers of America is a national organization of, by, and for students studying agriculture in public secondary schools under the provision of the National Vocational Education Act in 1917. It is a non-profit, non-political youth organization designed to help students strive for excellence through the development of leadership, advancement of agriculture technology, and improvement of life. The FFA is also an intra-curricular activity providing opportunities for students to participate in. The foundation upon which the FFA organization is modeled is leadership, service, thrift, scholarship, agricultural advancements, organized recreation, citizenship, and patriotism.

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success. For more than 81 years, the FFA has complemented agricultural instruction by making classroom lessons come to life through realistic applications. Organized in November 1928 it serves to motivate and vitalize effective instruction offered to students in agriculture and provide further training in citizenship and agricultural business.

The Bakersfield High School Agriculture Department dates back to 1905 with the chapter being established in 1929. It was the 15th chapter to earn its charter. At one point in the department’s history, eleven agriculture teachers taught at Bakersfield High School with their own agriculture building located just west of the current science building. The Bakersfield High School Agriculture Department is one of the oldest agriculture departments in California. Since the 1950s, the rapid growth of Bakersfield forced the district to open new high schools. The agriculture teachers at Bakersfield High School moved to teach at the new schools. Currently Bakersfield High School has three agriculture teachers advising over 400 FFA members who currently represent the urban characteristics of the school.

THE MISSION AND STRATEGIES OF THE FFA

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

To accomplish this mission, FFA:

- Develops competent and assertive agricultural leadership.
- Increases awareness of the global and technological importance of agriculture and its contribution to our well-being.
- Strengthens the confidence of agriculture students in themselves and their work.
- Promotes the intelligent choice and establishment of an agricultural career.
- Encourages achievement in supervised agricultural experience programs.
- Develops interpersonal skills in teamwork, communications, human relations and social interaction.
- Builds character and promotes citizenship, volunteerism and patriotism.
- Promotes cooperation and cooperative attitudes among all people.
- Promotes healthy lifestyles.
- Encourages excellence in scholarship.
The National emblem of the FFA is significant and meaningful in every detail. Used by members in all recognized units of the organization, it is made up of five symbols: the owl, the plow, and the rising sun within the cross section of the ear of corn, which is surmounted by the American eagle.

The FFA Motto

Learning to do,
Doing to learn,
Earning to live,
Living to serve

FFA Colors

National Blue and Corn Gold
The FFA Creed

I believe in the future of agriculture, with a faith born not of words but of deeds - achievements won by the present and past generations of agriculturalists; in the promise of better days through better ways, even as the better things we now enjoy have come to us from the struggles of former years.

I believe that to live and work on a good farm, or to be engaged in other agricultural pursuits, is pleasant as well as challenging; for I know the joys and discomforts of agricultural life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of progressive agriculturalists to serve our own and the public interest in producing and marketing the product of our toil.

I believe in less dependence on begging and more power on bargaining; in the life abundant and enough honest wealth to help make it so – for others as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

I believe that American agriculture can and will hold true to the best traditions of our national life and that I can exert an influence in my home and community which will stand solid for my part in that inspiring task.

The creed was written by E.M. Tiffany, and adopted at the 3rd National FFA Convention. It was revised at the 38th and 63rd National FFA Conventions
BHS FFA Chapter Officers
2018-2019

President
Morgan Wilke

Vice President
Renee Rodriguez

Secretary
Joebel Marcelino

Treasurer
Jesse Shelbourne

Reporter
Isaiah Ruiz

Sentinel
Montera Womack

Committee Chairs
Healthy Lifestyles
Selma Alvarez

Financial
Wendy Becerra

Human Resources
Kirstyana Avila

Advisors
Mr. Eyraud
Mrs. Eyraud
Mrs. Wilke
PROGRAM OF ACTIVITIES
Division 1: Growing Leaders

LEADERSHIP To provide leadership development opportunities for all members.

Activity: Region Boot Camp
Description: The Region Boot Camp is hosted by the Regional FFA Officers and State FFA Officers. Team building activities, personal reflection, goal setting and team bonding experiences are core experiences of this leadership experience. Officers are put into time sensitive situations faced with a problem to solve together; how they accomplish that is up to them. Where they start and end that process usually changes from the start of the camp and the end of camp.

Goal #1 100% of the chapter officer team attend the boot camp.

Goal #2 Have the chapter officer team complete all of the challenge courses in the allotted time given. Having attended for the first time last year it was evident that our students had a hard time with the challenge courses and communication as they did not complete a single task in the assigned time period. Returning officers stressed to new officers how to stay on task.

Goal #3 Have the officers keep a positive attitude towards one another for the duration of the event. With the start of school pending and other extra-curricular activities creating stress the physical stress of this event created strain and exhaustion that at the end of the day pushed the team to their breaking point. At the weakest time the team needed to be the strongest by not giving into verbal attacks but lifting on another up.

Activity: Chapter Officer Leadership Conference
Description: A day event intended to provide officers with leadership training provided by the section officer team and provide a social atmosphere for section members.

Goal #1 Have 100% of the chapter officers attend the Chapter Officer Leadership Conference.

Goal #2 Have the officers participate in the section competition activity and be competitive.

Goal #3 Have the officer team look professional in the afternoon session during “casual” wear session by wearing officer polos and matching pants that they will wear throughout the year at lunch activities.

Activity: Chapter Officer Retreat
Description: The Chapter Officer Retreat is a four day camping retreat at a State Beach Park. Most of the members in the chapter have never camped, so the experience is a unique one for most everyone involved. The trip is filled with planning activities for the year, goal setting, team building, and of course, free time for recreation.

Goal #1 Have 100% of the officer team and the advisors attend the camping retreat.

Goal #2 Everyone sleeps in a tent, so the students are responsible for setting up and taking down their own tents. The chapter supplies the tents for the students. The tents must fit in their original bag at the end of the trip.

Goal #3 Students set the menu before leaving for the camping trip. The menu is divided up so that each officer brings an equal share on the trip. Students then draw for cooking/cleaning duties during the campout. They each must experience equal cooking and cleaning experiences.
LEADERSHIP, continued...

Name of Activity: National FFA Week – Chapter leadership activities

Activity Description: During National FFA Week lunch time activities are conducted to promote FFA Week and encourage engagement in member involvement.

Goal #1: Form committees for each of the activities early in the month of January, so that students get the opportunity to run the daily activities. This helps promote the activities and encourage greater participation. Committees need to meet regularly to organize and have supplies ready one week prior.

Goal #2: Plan activities that include all types of skills such that it appeals to all members in the chapter. Activities such as nail pounding or hay bucking might be more appealing to the Ag Mechanics students who tend to not participate as much as our other students.

Goal #3: Include a Teacher Appreciation lunch as one of our activities and allow only those students that have been on the committee to serve during lunch. Students must be dressed in chapter t-shirts, and officers will be in their officer polos and pants.

Activity: Integrated Leadership Development Conferences (Greenhand, MFE, ALA, SLE)

Description: Leadership series conferences that students participate in to develop leadership skills each year as they progress through the FFA program.

Goal #1: Take 50 students to the Greenhand Conference. Promote conference with posters to encourage kids to sign up.

Goal #2: Take up to 27 total students to MFE and ALA and encourage seniors to apply for the SLE conference.

Goal #3: Take up to 27 students to the State FFA Leadership Conference in Anaheim, CA.

Goal #4: Take up to 9 students to the National FFA Leadership Conference in Indianapolis, Indiana.

HEALTHY LIFESTYLES To improve mental & physical health of members through healthy lifestyle choices.

Activity: Water Balloon Dodgeball

Description: Much like the game of dodgeball this game is played with water balloons in our school’s grass quad area after our first chapter meeting. It is played on a court similar to the size of a volleyball court. Teams are divided based on the number that show up to the meeting. Balloons are prepared prior to the meeting, and placed in buckets that surround the court.

Goal #1: Attract a high number of students to the first meeting with this fun activity. Have students sign up by forming teams, but also allow add-ons for those that are able to come at the last minute to the meeting.

Goal #2: Be prepared with the balloons and court long before the meeting starts. Purchase quick filling balloon sets from Costco, and mark the court with chalk or paint.

Goal #3: Practice a concise set of rules so that they are simple and easier to manage the large group for this activity.

Goal #4: Keep this first chapter meeting agenda short so that the focus of the time is spent on the activity.
HEALTHY LIFESTYLES, continued...

Activity: Frito Boat/Hot Cheetos Boat Social

Description To kick off the first chapter meeting there is a Frito Boat/Hot Cheetos Boat lunch social on the same day that is free to all members. Students cannot go off campus, so the free lunch is a great way for them to see the other students that are in the program as well.

Goal #1 Serve the students as quickly as possible. Have a committee of older students sign up to help serve to allow officers to run activities. Typically there are almost 250 that attend the lunch activity.

Goal #2 Plan activities (Ninja, Concentration, music, etc...) that keep the students in the ag department area, so they will mingle with other students. Officers will run these activities and get to know the members.

Goal #3 Make sure there is enough food for everyone, and that they are not left hungry afterwards. To do this have sign ups for 1 week prior to the event to get an accurate count.

Activity: Movie Night

Description After our chapter meeting in January we offer a movie night for our members with refreshments. As it is winter and many do not go want to go outside for activities, this is fun activity just before our three day weekend when the teachers have their in-service day.

Goal #1 Keep the students engaged in chapter meetings throughout the winter months by offering a fun activity, such as movie night, to participate in.

Goal #2 Peak interest by creating a voting list of the top five movies for those coming to the meeting. Unveil the result at the meeting.

Goal #3 Provide refreshments and a lounge type atmosphere for students to enjoy the movie. Refreshments recommended include hot chocolate and smores as well as popcorn. To create the lounge type atmosphere the officers will rearrange the tables and chairs so that students will be able to sit on blankets and pillows.

Goal #4 When discussing the movie at the executive meeting officers should choose between movies they own. After the ballot is official the officers should know as soon as possible so we are ready with the movie by the time of the meeting.

Activity: Morning, Lunch and Evening Meetings rotated

Description Many chapters offer meetings at one time only. Due to the fact that many of our students have single parent families, we rotate when the meetings are held to provide students with opportunities to attend some of the chapter meetings.

Goal #1 Offer at least one chapter meeting before school. This is held the day after Back to School Night, and we call it the Breakfast Buddy meeting.

Goal #2 Offer at least three chapter meetings at lunch during the school year as well trying to offer at least one lunch activity per month.

Goal #3 Offer chapter meetings that occur after school at 6:00 pm, and if possible, coordinate the meetings to be held at the same time as the BHS Ag Alumni meetings, so that the BHS FFA members’ parents do not have to leave when they drop their kids off (if they choose).
SCHOLARSHIP To enhance the development of scholastic achievement to improve the qualities and abilities of each member.

Activity: Quarterly Academic Progress
Description At the end of each quarter when report cards are sent out students are able to show their report cards to their advisor/teacher. Each student will receive FFA Points for showing their report card, and those with the established GPA are invited to a GPA pizza party.

Goal #1 Set an attainable GPA, which the committee determined to be a 3.0, for 3 quarters, in order to qualify for the pizza party.

Goal #2 Have at least half of our membership show their report card each quarter for 10 FFA points in order to promote academic success regardless of their GPA. The hope is that it will spark some conversation to motivate them for the next quarter.

Goal #3 Provide a two week time period for students to show their report card and/or Synergy on their phones (since some kids do not get printed report cards)

Activity: College Board Corner
Description Create and post a college and career information board regarding post-secondary agriculture material.

Goal #1 Post information in the fall about upcoming SAT, PSAT and college application deadlines.

Goal #2 Post information about scholarship applications and deadlines. Also post award recipients after the Kern Scholarship Dinner and Senior Financial Awards Nights in May.

Goal #3 Post ag career information and opportunities.

Goal #4 Print a list of current seniors and the ag scholarships available and check off the scholarships they submit. Also check off if they complete FAFSA.

Activity: Officer Tutoring
Description Have the officers and/or older members with strong academic provide tutoring opportunities during the first semester to help students improve their GPA. (first semester only; promote by making posters that are put in ag classes throughout the first semester)

Goal #1 Offer tutoring to ag students twice per week before school, at lunch, and after school as it works for each individual officer.

Goal #2 Offer tutoring for core subjects.

Goal #3 Track the students that attend the tutoring to determine success rate of tutoring.

Goal #4 Advertise the tutoring opportunity better in all classrooms. Make a signup card for interested students to complete and turn in to the ag teachers who can then distribute to the officers.

Activity: HS Alumni in College and/or Supporters as Guest Speakers at Banquet
Description Invite BHS FFA alumni and/or supporter to speak the Fall and/or Spring banquet as a guest speaker.

Goal #1 Provide at least one month’s notification/invitation.

Goal #2 Provide the invitee(s) with the theme of the banquet and length of time for the presentation.

Goal #3 Announce the Alumni/Supporter on the invitation.
Personal Growth To improve the identity and self-awareness of members.

**Activity: Haunted House**

*Description* As a safe alternative in the month of October we offer a Safe Halloween Haunted House after our chapter meeting.

**Goal #1** Have 80% of our Greenhand members present at the chapter meeting. Have students sign up to make sure that they will attend. Provide them with a ticket for entrance into the Haunted House.

**Goal #2** Form a Haunted House Committee comprised of 2nd-4th year members in September that meets weekly.

**Goal #3** They will develop a list of their top five unique themes (chapter-friendly so that all can participate and differs from previous years) that the greenhands will vote on. The theme will be revealed the night of the Haunted House so as to provide a

**Goal #4** Promote the Haunted House with posters and flyers as well as classroom announcements. Make a short video to promote it as well.

**Goal #5** Close the ag shop to Homecoming Float building so that their supplies are not in our way. Plan a set up day the weekend prior to the event.

**Activity: Host Section Opening and Closing Ceremonies Contest**

*Description* The Kern Inyo Section FFA Opening and Closing Ceremonies Contest is the largest section activity. This year will be our second year to host it (2018).

**Goal #1** Have the following teams compete: 1 Freshmen, 1 Novice, 1 Open A, 1 Open B, 1 Open C, 1 Officer, and 1 Spanish. Make sure to promote the Spanish team more since we had interested members but not enough to know that there was a full team.

**Goal #2** Give priority to students who need an activity above the chapter level to help them for their State FFA Degree requirement, but encourage all members that want to help so that they can get the same above the chapter level activity credit. Conduct a meeting for all volunteers one week prior to the event to make sure they know their responsibilities and attire to wear.

**Goal #3** Conduct the event efficiently, correctly and on time so that all participants are able to leave by 8:30 pm.

**Goal #4** Have facilities unlocked and set up one hour prior to the event with a supervisor present in each.

**Goal #5** Have registration and orientation ready one hour prior with all materials.

**Activity: Lunchtime Activities**

*Description* These are activities offered during lunch each month as an opportunity to earn FFA points. Since there are students who cannot earn leadership points by attending chapter meetings after school due to transportation, lunch activities were created as an option for those students to participate.

**Goal #1** Provide a minimum of one/two lunchtime activity per month. During the month of February there will be three student lunch activities and one staff lunch appreciation activity at which the students will be servers.

**Goal #2** Well planned Lunchtime activities will be aimed at drawing 80-100 members or more for each lunch period.

**Goal #3** Activities will rotate in variety and/or two types will be offered at the same lunchtime to draw attention from all groups in the ag department.
Personal Growth, continued...

Activity: Fall Banquet
Description In the fall the first year members are required to attend the fall banquet where they are awarded their Greenhand Degree certificate and pin.

Goal #1 Have 80% of the first year members attend the banquet.

Goal #2 Have all first year members complete the greenhand degree application and learn how to receive an award on stage.

Goal #3 Complete the awards ceremony and greenhand auction (volunteer hours of service) in two hours so everyone can get home early. To have dinner, awards, and the auction end in this time frame it will leave a favorable impression.

Goal #4 Provide awareness of the multiple opportunities for greenhands to develop their leadership, personal growth, and career success in upcoming chapter events and activities.

Activity: Chapter T-shirts
Description Chapter t-shirt days will be held every Tuesday to promote chapter spirit and leadership.

Goal #1 Design a chapter t-shirt that can be worn by both boys and girls.

Goal #2 Have the t-shirts purchased and ready to sell the first week of school. Offer the standard t-shirt and v-neck shirts. Also purchase chapter t-shirts in pink for the month of October for cancer awareness.

Goal #3 Have three t-shirts as door prizes at chapter meetings.

Goal #4 Send out a Google Form link on the Chapter’s Remind to request input for the upcoming year’s chapter t-shirt.

Goal #5 Provide FFA points for purchasing the chapter t-shirt (10 points) and for wearing the shirt on the designated day(s) (5 points). This helps promote the chapter as well.

Goal #6 Offer an alternative for those students who cannot afford to purchase a chapter t-shirt. During our Tri-tip dinner to go fundraiser, if the student sells $80 (or more) in dinner tickets, they can earn a chapter t-shirt. Limit is 1 chapter t-shirt per student.

Goal #7 Provide a chapter t-shirt for every staff member during National FFA week.

CAREER SUCCESS To help members achieve lifelong success during high school and after.

Activity: World Ag Expo
Description This is the largest international agriculture career show, which we commonly call the Tulare Farm Show. It is a marketplace and celebration of all things ag. Students are exposed to how farmers can transform their operation, and consumers all over the world are positively impacted by the increased efficiency and the continuous re-evaluation of ‘what we’ve always done.’

Goal #1 Take 50 students representing all parts of the department on the field trip using a shared google sheet for sign ups.

Goal #2 Get the tickets donated if possible since more than 85% of our school is on free and reduced lunch.

Goal #3 Transport students on a Charter Bus since other programs in the school also attend the same event and also transport students using a Charter Bus. If we want to keep kids in our program, we have to be as desirable to them as the other programs since they transport them on a charter bus as well.
CAREER SUCCESS, continued...

Activity: LA Flower Market

Description: The Los Angeles Flower District is the premiere wholesale L.A. flower market resource for flower growers, shippers, suppliers, floral wholesalers, distributors, floral designers, event planners and retail florists. It is on Wall Street between 7th and 8th streets, the Flower District and Los Angeles flower markets* welcome both the floral trade and the public.

It is known as the Los Angeles Flower Mart, Los Angeles Flower Market, LA Flower Mart and Los Angeles Flower District. The large walk-through flower markets offers a spectacular and unequalled array of the freshest flowers, greens and fillers available, many of them California grown, along with an impressive, overwhelming selection of floral supplies. This field trip offers the best possible exposure to the extreme volume of wholesale flowers, plants and media used in the floral industry.

Goal #1 Take 50 floral students, but have a waiting list of approximately 5 students. We leave at 3:00 am, so if they do not arrive on the day of the field trip, the waiting list students can take their place.

Goal #2 Provide students with an ID list of flowers, plants and tools. They are to take ID pictures and submit them via google slides that can be utilized for the floral team and class purposes.

Goal #3 Have the badge program at the floral market provide complimentary badges to admit the students into all part of the flower market so that students have access to plants, flowers and tools for identification.

Goal #4 Have the students find three different flower designs that they might try to create in a future arrangement and take a picture of it. Have them identify the principles of design.

Activity: CDE Fair

Description: In order to better promote Career Development Events (CDEs), the officer team decided that a CDE Fair needed to be held in the fall. This event is held during lunch before Back to School Night and at the Breakfast Buddy Meeting. A parent meeting will also be incorporated in October.

Goal #1 Provide a poster board presentation explaining each of the CDEs our chapter offers, where it competes, who competes, etc. Create flyers about each competition, the field days and the dates of the competitions; include the parent meeting date as well.

Goal #2 Set up a schedule of CDE representatives to work/talk during lunch with members and hand out the flyers.

Goal #3 Promote the CDE fair with a short video clip, posters, and announcements. Use balloons, decorations, and candy at the booths to make it more appealing for students to coming and participate.

Goal #4 Provide a parent message by flyer, email and Remind App to inform them of the CDE meeting, which will explain more details about CDEs and the commitment required.

Activity: Log Cabin Florist

Description: To provide a real world industry experience, students are able to volunteer at Log Cabin during the holiday season to get volunteer hours and more floral experience.

Goal #1 Provide hands-on experience in the floral industry where the students can put the skills that they have learned in the classroom into the test.

Goal #2 Provide students with exposure to a variety of plants and flowers that our department cannot purchase due to budgetary constraints.

Goal #3 Provide a unique learning opportunity to see floral design from a different perspective and learn from very talented designers while still learning the most basic skills and making industry connections.
Division 2: Building Communities

ENVIRONMENTAL To ensure good stewardship of the land and develop individuals who have good environmental practices.

**Activity: Recycling Wars**

*Description* As a trial in our first year we did a recycle war between class periods for aluminum cans and plastic bottles for two weeks. It was very successful, and though we did not continue with recycling because our Academy program was recycling, we plan to have ongoing recycling collection in class and two recycling wars - one in the fall and one in the spring to match our service projects.

**Goal #1** Create multiple lined boxes identified by periods and types (bottles and cans) for each teacher for the two week collection as part of the environmentally responsible contribution and the human resources projects. Bottles/cans are checked/colllected every 2-3 days based on officer assignments to advisors' rooms.

**Goal #2** All money collected would go toward the designated human resource project.

**Goal #3** Separate and weigh all cans/bottles by period and provide results within one week of the event. Take recycling to local recycling center and deposit money into account until it can be distributed for our human resource project.

**Goal #4** Incorporate recycling wars each semester.

**Activity: Trout Release with Department of Fish and Game**

*Description* Through the Department of Fish and Game our department is given a contract to raise trout eggs from the egg state to the fry stage. These are then released into the Kern River in the biologist approved site with the students that were on the project for the duration of the project.

**Goal #1** Of the 90 eggs delivered to each of the two classrooms, the goal is to raise 90% of them to the fry stage.

**Goal #2** Take 27 of the most active members on the project to the trout release.

**Goal #3** Have the students participate in a fly fishermen presentation, demonstration, try fly fishing, release the fry into the river, and visit the fish hatchery.

**Activity: Campus Clean Up**

*Description* Unfortunately not all students take responsibility for their own garbage at lunch. Campus Clean Up is a voluntary activity where FFA members help beautify the campus instead of creating extra work for the custodial staff. As a follow up to National FFA week, we plan to take 2 days to clean up the campus after both lunches.

**Goal #1** Enlist 40 members per lunch period to assist with garbage clean up.

**Goal #2** Clean up the campus area in 10 minutes or less by breaking up into teams of 10 or more students and assigning them sections of campus to pick up.

**Goal #3** Provide students with proper equipment (gloves, garbage bags, etc.) to pick up the litter left behind.

**Activity: Outdoor Recreation - Camping (Officer Retreat)**

*Description* Many students in the program have never been camping in a tent, and for some, they have never been to the beach. For the officer retreat the teamwork and bonding that our students find from this activity is invaluable as bond during the learning process of “camping in the outdoors.”

**Goal #1** Set up and take down the tents as a team.

**Goal #2** Prepare, cook, and clean up meals at the campsite.

**Goal #3** Conduct team building activities that they have brought with them.

**HUMAN RESOURCES** Follow the FFA Creed by offering members opportunities to exert an influence in their homes and communities.
Activity: Clothing Collection for Nonprofit Organization

Description In the month of October just as everyone is pulling out their winter clothes from last year, and sorting through what still fits and what can be donated. To put those donations to good use and provide a beneficial outlet for families that sometimes do not know where to donate these items, we held a clothing drive this year.

Goal #1 Officers will kick start donations by bringing items to each classroom to be donated. When others see donations, they are more likely to follow the example. Also, the officers will provide more promotional posters to provide information about the event.

Goal #2 Collect donations of men’s, women’s, and children’s clothing appropriate for winter wear that were new or very gently used. Garments could include pants, shirts, sweaters, and jackets. Undergarments and socks needed to be new donations.

Goal #3 Provide donation boxes for each classroom so that students and advisors had a place to put the donated items once brought to the classroom. This would help with the organization of the items collected during the process.

Goal #4 Sort through the donated items to verify that the items were new/gently used as well as sort them by men, women and children. Once sorted and folded the items would be donated to the local Salvation Army on behalf of the chapter.

Activity: Tie Blankets

Description The chapter makes tie blankets for the two SPCAs, patients at the AIS, CBCC, Lauren Small Children’s Medical Center, Grossman Burn Center, and the Homeless Shelter.

Goal #1 Apply for the year long Living to Serve Grant by June 15 to get funding for part of the tie blanket material.

Goal #2 Have a tie blanket making activity with the entire KI Section at the KC Fair.

Goal #3 Have two activities with multiple ASB groups on campus in December and February.

Goal #4 Donate 100 blankets to the Homeless Shelter/hospitals and 50 to the SPCAs.

Activity: Easter Egg Hunt and Activities for Homeless Shelter

Description The chapter provides an annual Easter Egg Hunt at the Homeless Shelter located on East Truxton Avenue, providing Easter Baskets and activities for kids.

Goal #1 Collect plastic Easter eggs, baskets, stuffed animals, candy, bubbles, Easter grass, and chalk to provide for the Easter Egg hunt and activities for 60 kids at the Homeless Shelter.

Goal #2 Reach out to staff for donations beyond what our FFA chapter provides. Send out an email, and provide a donation box in the staff lounge.

Goal #3 Provide 60 Easter baskets filled with goodies, an Easter Egg hunt, sidewalk chalk art, and face painting for a two hour window during Spring Break on a day that does not conflict with other free community Easter programs.

HUMAN RESOURCES, continued...

Activity: Adopt a Family Christmas

Description The Adopt a Family Christmas program identifies a family in need through our counseling staff at school or through a local community service agency. The chapter provides a reasonable Christmas celebration for the adopted family that they might not otherwise be able to celebrate.

Goal #1 Identify a medium size family, and the individual wants/needs of each individual. Provide an anonymous list of the family (just gender, age, and wants/needs) to the members with a due date.

Goal #2 Secure Christmas dinner donations from the members

Goal #3 Deliver the gifts wrapped and the dinner in time for Christmas.

Citizenship To encourage members to become active, involved citizens of their school, community, and country.

Activity: Military Letter Writing
**Description** We owe a debt of gratitude to our military members. Most of our students do not have a connection to military members, so they do not have a way to express their gratitude. Hosting a military letter writing campaign once a semester is a small way to show our thanks.

**Goal #1** Host a letter writing campaign every semester at lunch.

**Goal #2** Provide the guidelines and paper for students to write with, but allow the students to write the message they want so long as it is a positive message.

**Goal #3** Try to make our own cards that look both patriotic and professional to show a bit more care and consideration.

**Activity: Love for Thanksgiving**

**Description** Love for Thanksgiving is a community wide program providing meals for families in need at Thanksgiving. Community members are able to participate in the preparation of the turkeys and food boxes, and then deliver the meals on Thanksgiving Day. Since this is held during Thanksgiving week which is a holiday week, we do not anticipate a high number our first year.

**Goal #1** Involve 30% of our membership for the preparation night.

**Goal #2** Involve 10% of our membership for the delivery day.

**Activity: 9/11 Commemorative Wreath**

**Description** On 9/11, or the designated school day observed before or after the 9/11 weekend, our school observes Patriot’s Day with a 9/11 ceremony complete with our Jr. Air force ROTC and a wreath laying ceremony. The advanced floral students are responsible for the design and creation of the wreath that will be used in the ceremony.

**Goal #1** Identify the students that will be creating the design, and approve their creation and flower order three weeks prior to the event.

**Goal #2** Secure funding for the budgeted amount, and order the flowers needed to create the design two weeks in advance.

**Goal #3** Deliver the wreath and demonstrate how to properly set it up as most people are unaware to how to set up a floral wreath.

**STAKEHOLDER ENGAGEMENT** To develop teamwork and cooperation between the local chapter and stakeholders.

**Activity: Ag Advisory Committee**

**Description** The Ag Advisory Committee is made of Ag Industry partners, parents, administrators, and ag teachers. Its job is to advise the department regarding curriculum, finances, support, industry standards, and local matters.

**Goal #1** Have the Chapter Officers provide a presentation of our FFA Program of Activities at the fall meeting.

**Goal #2** Invite Ag Alumni officers to attend the meeting to provide input and be active members of the Ag Advisory Committee to better understand the requirements of the Ag Department, Ag Incentive Grant, and the department’s review process.

**Goal #3** Meet a minimum of twice per year with the Ag Advisory Committee.
STAKEHOLDER ENGAGEMENT, continued...

Activity: Harvest Hall at the local county fair
Description Harvest Hall is the still exhibits hall for all junior organizations at the local county fair. As a large number of our students enter exhibits, we volunteer to help with receiving entries, setting them up/placement, and any other tasks that are asked of our members.

Goal #1 Obtain a work schedule with a number of responsible students and one responsible officer for each shift from the Harvest Hall Staff. Fill the schedule with responsible students available to work and that have transportation to and from the fairgrounds.

Goal #2 Check with the Harvest Hall staff to verify that shift workers have shown up for assigned shifts and are meeting the expectations.

Goal #3 Have students help run Harvest Hall activities that are run during the fair as assigned by the Harvest Hall staff. Make sure that the Harvest Hall staff provide the fair gate entry passes beforehand.

Activity: Teacher Appreciation Lunch
Description During National FFA Week each year the chapter members make homemade chili for the 100+ staff members to be served during lunch as a thank you for their support.

Goal #1 Send out an email invitations (including all kitchen and custodial staff) with all information and obtain RSVPs for the event two weeks prior to the event.

Goal #2 Prepare four varieties of homemade chili (mild, medium and spicy as well as vegetarian) for the staff. It will be served during both lunches by the students that are on the National FFA Week Committee that is formed in January. Refreshments and dessert are also provided as well as delivery service for staff members unable to attend.

Goal #3 Provide a note of thanks in each of the staff members’ boxes signed by a minimum of 10 members (no photocopies) that provides an individual note of thanks for their support.

ECONOMIC DEVELOPMENT To improve the economic welfare of the community.

Activity: Canned Food Drive
Description Collect as much canned food as possible amongst the Ag classes as possible during November-December to be donated to the local food bank.

Goal #1 Work with Interact Club as a cooperative activity on campus as they do a canned food drive for the local food bank.

Goal #2 Set a goal of 300 cans as a minimum to collect for chapter members over a two week period.

Goal #3 Deliver the canned food to the local food bank.

Activity: Soup Kitchen
Description St Francis Parish offers a free soup kitchen to anyone in need to the local community near our high school. It gladly welcomes the members of our high school FFA program to volunteer serving at the soup kitchen on Monday nights during the school year.

Goal #1 Set up an opportunity for students to participate in a soup kitchen community service night for FFA members during the Fall and Spring semester.

Goal #2 Provide supervision for the first night so that parents and students can get an idea of what the event is like and ask questions for future nights should they wish to volunteer for more community service hours.

Goal #3 Promote more in class, with video and at meetings for community service hours so that students remember to attend.
ECONOMIC DEVELOPMENT, continued...

Activity: SPCA Animal Shelters

Description: There are more than 16,000 animals each year that go through the SPCA each year that need help. Animals that are surrendered or picked up must be cared for until they are adopted or otherwise taken care of. Until that time we know that the limited budget constraints require assistance from outside organizations.

Goal #1 Collect donations from students in the form of blanket making kits or fabric, pet toys, and dog/cat food.

Goal #2 Hold one drive in December (with Christmas stockings for each pet) and one drive in March.

Goal #3 Take two groups of students to deliver—one to each of the SPCA locations.
Division 3: Strengthening Agriculture

**SUPPORT GROUP** To maintain good relationships with our supporters.

**Activity: Livestock Parent Informational Meetings**
*Description* One of the most beneficial practices put in place is the requirement of a beginning meeting for livestock exhibitors and parents. Budgets, project visits, time management, feeding and showing expectations, grooming, and overall expectations as well as any changes from previous years are covered in this meeting.

**Goal #1** Host the meeting in March and/or April to provide an opportunity for parents and students to attend; usually the first meeting follows a chapter meeting in March, and the second meeting is after 8th grade students have registered for their freshmen classes.

**Goal #2** Provide the exhibitor handbook with the rules and expectations complete with the acknowledgement forms.

**Goal #3** Have everyone understand the expectations and rules prior to starting the project(s), so as to avoid any consequences and/or inability to show at the fair.

**Activity: Ag Alumni**
*Description* Ag Alumni are made of parents, advisors and alumni. They meet each month at the same time as the FFA chapter meeting. These individuals are responsible for providing the physical and monetary support for the chapter activities, fair, and scholarship fund.

**Goal #1** Have the officers invite the Ag Alumni officers to the Ag Advisory Committee meetings to provide input.

**Goal #2** Invite past FFA members and the parents of current FFA members to each meeting via a variety of social media, flyers and copies of calendars at the first few meetings.

**Goal #3** Have the Ag Alumni coordinate the dinner for the Opening and Closing Ceremonies contest.

**Activity: Principal Partners Day**
*Description* The Kern High School District brings community stakeholder to the district to tour schools and see programs and classrooms each year in October. These stakeholders are the supporters that tie us to the industry for our department.

**Goal #1** Have powerful lesson plans ready for Principal Partners Day to demonstrate student knowledge, hands-on learning, and the Driller Way.

**Goal #2** Have ag facilities set up with current awards and clean so are in top form.

**Goal #3** Have officers wearing their polos and pants, and FFA members wearing chapter t-shirts.

**CHAPTER RECRUITMENT** To interest incoming freshmen in joining the FFA Program.

**Activity: Recruitment Presentations at Jr. High Schools**
*Description* To educate Jr. High students about what the Bakersfield Highs School agriculture program is, has to offer, and provide an assortment of student led leadership activities designed to engage students in an effort to encourage them to sign up for one or more of the ag classes when they register at Bakersfield High School.

**Goal #1** Contact 3-5 of the biggest feeder Junior Highs in January to set up times to make presentations to eighth grade students about our ag programs.

**Goal #2** Take videos during the school year during class that show the variety of interesting activities in each of the ag classes. Then compile a final video that can be sent to the junior highs that do not have a time slot for presentations similar to a Youtube video.

**Goal #3** Form teams of presenters so that we avoid having cliques at the presentations. We want the student to see FFA as young leaders.
CHAPTER RECRUITMENT, continued...

Activity: Orientation Night Presentation

Description This is presentation night in Harvey Auditorium for all organizations to incoming freshmen and their parents. Each group is theoretically given two minutes (though some take longer) to make their presentation about the value of their program and what class(es) to take.

Goal #1 Have members from each grade represented that are good speakers and that have practiced their parts ready to present a concise presentation. We are generally toward the end, and so staying in the two minute time frame and being polished yields better enrollment results.

Goal #2 Need lots of video from throughout the year versus pictures that can be included in the video that is shown. Use music that is upbeat and has no words so it does not violate the KHSD policies.

Goal #3 Be sure videos are directed to learn by doing and student travels to the various colleges and other field trips.

Activity: Incoming Freshmen Registration Night

Description To sign up students for the upcoming school year for agriculture classes and have them complete student interest sheets with both the parent and student signatures.

Goal #1 Get more people/recruiters with clipboards recruiting papers to expand the number of FFA members.

Goal #2 Assign groups of 2 people per recruiting group that goes around doing the recruiting.

Goal #3 Have a lightheartedly professional booth/members that attracts future members. Purchase new banners that reflect the classes offered in our program.

SAFETY To promote activities that enhance safety in the community.

Activity: Monthly Safety Tips

Description Provide a safety tip at each of the chapter meetings that is appropriate for that month. Common sense seems to evade most of the world, so bringing safety to the forefront is an easy task and so simple to incorporate.

Goal #1 Give one safety tip on the calendar each month.

Goal #2 Provide holiday statistics about how people get hurt, and how to prevent getting hurt.

Goal #3 Announce farm safety facts during National Farm Safety and Health Week (Sept 16-22, 2018) and Ag Safety Awareness Program (ASAP in March 2019).

Activity: Chapter Newsletter Safety Tip of the Month

Description Provide a safety tip of the month in the chapter newsletter.

Goal #1 For every chapter newsletter, a Safety article will be included.

Goal #2 The safety tips for the month and during National Farm Safety and Health Week (Sept 16-22, 2018) and Ag Safety Awareness Program (ASAP in March 2019) will be included on the chapter’s Instagram.
**Agricultural Advocacy** To articulate and promote agricultural programs, practices, policies and/or education to elicit action.

**Activity: Kern County Fair "Free" Public Days**  
**Description** To educate the kids and elderly about the proper care taking needs of the animals our members are raising.

**Goal #1** Group in class make Poster Boards for barns with information about the animals and how to properly pet the animals.

**Goal #2** Have the barns be accessible to the people we are helping especially the pens are members are in so that it makes it easier for the people to get around.

**Goal #3** Have the members that are showing at the fair help facilitate this activity.

**Activity: From Gate to Plate - Learning How to Address the Public**  
**Description** To inform the public about how the food industry works in order to ensure that they are fully aware of the process from harvesting to the grocery store.

**Goal #1** Have all member write a 6-8 minute speech about the food processing industry and present it to the class.

**Goal #2** Have 1 or 2 students present part or all of their speech at the Teacher Appreciation Lunch and/or present a video at the Teacher appreciation lunch about ag facts from gate to plate.

**Goal #3** Have 2-3 students participate in prepared public speaking contest at section level.

**Activity: Bits and Pieces - School Newsletter**  
**Description** The Bits and Pieces is newsletter from the principal and counselling office about upcoming events and recent awards. We are able to include information about the Ag Department and FFA program to let parents know of important dates and how to contact us.

**Goal #1** Keep it simple and to the point, but make sure that the reader understands the explanation; place an emphasis on explaining any current issues that might be controversial that the principal would want supported by research.

**Goal #2** Promote our Ag Alumni group for anyone interested in supporting and/or joining.

**Goal #3** Recognize specific students that have excelled in recent months, i.e. State FFA Degree, proficiency, etc.

**AGRICULTURAL LITERACY** To inform the people about how agriculture affects their daily lives.

**Activity: Ag Literacy Week**  
**Description:** Our chapter puts on its own agriculture literacy week during April 1-5, where members are educated on the importance of agriculture in our nation.

**Goal #1** Educate our members about the importance of agriculture with lunch time activities during the week

**Goal #2** Have Officers create a video about different SAEs and how students have been successful with them.

**Goal #3** Write at least one fun fact about agriculture on the classroom boards to keep members interested.

**Goal #4** Provide at least one fun ag fact about ag to be read in the daily bulletin each day.
AGRICULTURAL LITERACY, continued...

Activity: Farm Day in the City
Description: In the month of March the Kern County Farm Bureau puts on an event that helps educate elementary students about agriculture in the state of California.

Goal #1 Have members sign up to help work the day of the event.

Goal #2 Have students wear their chapter t-shirts on the day of the event so they are easy to spot and teachers can recognize the leadership skills of our students.

Goal #3 Hold a meeting to educate our members before they attend so they are aware of what to expect.

FINANCIAL To promote adequate financing and budgeting for fiscal operations and to stress the importance of thrift.

Activity: Tri Tip Dinner To Go
Description: A fundraiser within the chapter that is held every quarter to help earn money for activities and other charity events the chapter is involved in.

Goal #1 Have 50% of our members sell $80 worth of tri tip tickets at the first tri tip dinner.

Goal #2 Have those members that sell $80 worth of tickets earn their chapter t-shirt while establishing their clientele for the school year. This will help them for the last two tri tip dinners to go.

Goal #3 Have 20 students sign up to help with each hourly shift on the night of the fundraiser.

Activity: Wooden Christmas Tree Sales
Description: A December Christmas fundraiser incorporated into the chapter to help with the budget and increase the amount of FFA points students can receive throughout the school year.

Goal #1 Conduct a presale from October to November with specific sizes and colors of trees. All money and forms are due by the deadline on the calendared date.

Goal #2 Have 30% of the students sell at least one Christmas tree.

Goal #3 Once the trees are completed at the end of November, a committee of students will be formed to paint and distribute them by the end of the first week of December.

Activity: Penny Wars
Description: Jars are created and labeled for each class period for each teacher with a narrow slot for money to enter easily but not to be removed until the last day. The lids are placed on and secured. Pennies are positive points; all other coins and dollar bills are negative points. The class with the best point value at the end of the “war” wins the prize that the teacher or chapter sets up at the start.

Goal #1 Have all classes participate in the fundraiser trying to sabotage the other classes while earning the best score for their class by developing the best strategy they can.

Goal #2 Raise the most amount of money between all of the classes by providing incentive to want to win the war.

Goal #3 Meet the goal of the fundraiser, which is generally for a community service project, so that it proceeds as planned without additional fundraising being required.
2018-2019 FFA Budget

<table>
<thead>
<tr>
<th>Activity</th>
<th>Income</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Tri Tip Dinners</td>
<td>8000</td>
<td>4000</td>
</tr>
<tr>
<td>FFA T-Shirts</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Welcome Back Frito/Cheetos Boats</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Monthly Activities</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Fall Banquet</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>FFA Week</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Spring Banquet</td>
<td>1700</td>
<td>1500</td>
</tr>
<tr>
<td>Points Award Trip</td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Officer Leadership Retreat</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>Judging Teams</td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10700</strong></td>
<td><strong>10700</strong></td>
</tr>
</tbody>
</table>

Judging Teams

Bakersfield FFA encourages students to participate in at least one of the following teams. Students are able to travel to different colleges throughout the state of California as they learn critical thinking, speaking, and leadership skills.

<table>
<thead>
<tr>
<th>Impromptu</th>
<th>Job Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Informed Greenhand</td>
<td>Floriculture</td>
</tr>
<tr>
<td>Creed Speaking</td>
<td>AET</td>
</tr>
<tr>
<td>Cooperatives</td>
<td>Nursery/Landscape</td>
</tr>
<tr>
<td>Banking Contest</td>
<td>Opening &amp; Closing Ceremonies</td>
</tr>
<tr>
<td>Prepared Public Speaking</td>
<td>Extemporaneous Public Speaking</td>
</tr>
<tr>
<td>Parliamentary Procedure &amp; Debate</td>
<td>Welding</td>
</tr>
<tr>
<td>Citrus</td>
<td>Cotton</td>
</tr>
</tbody>
</table>

PUBLIC SPEAKING

Public speaking contests are major leadership activities in the FFA. They promote speaking skills to large and small crowds alike. These skills are vital to any field of business students may be entering in the future. Public speaking is not limited to the “traditional” contests such as:

- Creed Speaking
- Prepared Public Speaking
- Extemporaneous Speaking
- Parliamentary Procedure & Debate
- Job Interview
- Impromptu Public Speaking
Possible FFA Awards

There are many FFA awards possible to achieve in the FFA. The following is a short list of possible awards.

<table>
<thead>
<tr>
<th>Award</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhand Degree (First year Ag students)</td>
<td>Outstanding Ag Student Awards</td>
</tr>
<tr>
<td>Star Greenhand Degree (First year Ag students)</td>
<td>Top Ten Awards (FFA points)</td>
</tr>
<tr>
<td>Chapter FFA Degree (2nd year Ag students)</td>
<td>Bronze, Silver and Gold FFA Leadership Awards</td>
</tr>
<tr>
<td>Star Chapter FFA Degree (2nd year Ag students)</td>
<td>Scholarships</td>
</tr>
<tr>
<td>State FFA Degree (3rd/4th year Ag students)</td>
<td>Proficiency Awards (local, section, region, state, &amp; national)</td>
</tr>
<tr>
<td>Judging Team Awards</td>
<td></td>
</tr>
</tbody>
</table>

FFA POINT AWARD SYSTEM

Students may accumulate their 30 FFA points per quarter in any fashion they choose. In order to be recognized at the Spring Awards Banquet, students must have earned 120 FFA points. These points CANNOT be solely from one category. The categories can be identified below by the bold and capitalized headings.

**General FFA Activities List**

**LOCAL ACTIVITIES**
- Chapter T-Shirt Purchase: 10 points
- Chapter T-Shirt Day: 5 points
- Lunchtime Activities: 5 points
- Chapter Meetings: 10 points
- Committee Chairperson: 15 points
- Committee Member: 10 points
- FFA Jacket Purchase: 25 points

**FUNDRAISING AND COMMUNITY SERVICE**
- Fundraisers (Points per item TBA): Max. of 60
- Community Service - FFA Approved Activities
  - Donating Items (Points per item TBA): Max. of 60
  - Donating Time (1 hour): 10 points

**CAREER DEVELOPMENT EVENTS (CDE)**
- Students wishing to earn these points must be enrolled in the 8th period Public Speaking and Leadership Class during the Spring Semester. Students must maintain a C grade in this class.
- Students traveling with a CDE team should participate in a minimum of TWO fund-raisers.

<table>
<thead>
<tr>
<th>Event</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring CDE Team Member</td>
<td>15</td>
</tr>
<tr>
<td>Field Days and/or Qualifying Contest</td>
<td>15</td>
</tr>
<tr>
<td>State Finals</td>
<td>20</td>
</tr>
</tbody>
</table>

**PUBLIC SPEAKING**
- Public Speaking: Prepared or Extemporaneous: 15 points
- Section Contest: 15 points
- Region Contest: 20 points
- State Contest: 25 points
- Public Speaking: Creed or Job Interview: 15 points
- Section Contest: 15 points
- Region Contest: 20 points
- State Contest: 25 points
LEADERSHIP ABOVE THE CHAPTER

<table>
<thead>
<tr>
<th>Event</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section Meetings/Conferences</td>
<td>15</td>
</tr>
<tr>
<td>Section Contests</td>
<td>15</td>
</tr>
<tr>
<td>Region Meetings/Conferences</td>
<td>15</td>
</tr>
<tr>
<td>State Conference **</td>
<td>15</td>
</tr>
<tr>
<td>National Conference***</td>
<td>15</td>
</tr>
<tr>
<td>National Contest Participant</td>
<td>25</td>
</tr>
<tr>
<td>Section Officer</td>
<td>15</td>
</tr>
<tr>
<td>Region Officer</td>
<td>15</td>
</tr>
<tr>
<td>Leadership Applications at/or above region</td>
<td>25</td>
</tr>
</tbody>
</table>

** State Conference Participants will be selected by an application process.

*** National FFA Convention Participants will be invited to attend based on FFA points earned, SAE records, CDE involvement, and scholastic achievement.

AGRICULTURE PROJECTS (SAES)

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Exhibitor</td>
<td>15</td>
</tr>
<tr>
<td>Proficiency</td>
<td>15</td>
</tr>
<tr>
<td>Section Winner</td>
<td>15</td>
</tr>
<tr>
<td>Region Winner</td>
<td>15</td>
</tr>
<tr>
<td>State Winner</td>
<td>25</td>
</tr>
</tbody>
</table>

If you are unable to participate in FFA activities, which generally occur outside of class time, students may fulfill their FFA points by the following option:

Give an oral speech about any aspect of the FFA. The speech must be (a) 4-6 minutes in length, (b) have a typed outline in correct format (Introduction, Body, and Conclusion), and (c) be scheduled one week in advance. Each speech must meet all of the criteria and be genuinely different to be given a full 10 points. There is a limit of one speech per week, and a maximum of three per quarter. No speeches during finals week.
Supporting Material 5
SAE Supervision Forms

Although I did not use the traditional SAE Supervision Forms with my students, I did track and record information about their SAE Projects. For most of my time at Bakersfield High School, I was in charge of the rabbit, chicken, and lamb fair projects in the summer. Each summer I would create a binder to store all of the fair forms, school farm leases, project visit agendas, feed schedules, weights and other important information. Each student with a livestock project had their own tab in my binder. For each project visit, I would have the students sign in on paper as well as through the QR code I set up for the school farm. The QR code was linked to a Google Form. The students who kept their animals at the school farm had to use the QR code to check in and out whenever they came to the farm. Using the QR code allowed me to track who was going out to the farm from my computer. They also signed in with a paper check in and check out as well. Having the students sign in on paper allowed me to quickly see who came out to the farm when I was not able to download and look at the information through the Google Form. Throughout the summer, the students would record their hours and expenses for their projects using AET. They would also record their Project Visits in AET too. Using AET, I was able to print a record of Project Visits for the 2016-2017 school year starting when the students started their projects.
### Teacher Journal Report

**Detailed Summary of Extended Contract Days and Work Detail**

<table>
<thead>
<tr>
<th>START Date:</th>
<th>END Date:</th>
<th>Teacher:</th>
<th>SAE Visit</th>
<th>Activity Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/20/2016</td>
<td>10/1/2016</td>
<td>Amanda Ou</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Journal Hours Summary

No journal entries match your filter criteria.

#### Student Supervision Details

| Number of Students Supervised: | 11 |
| Total Number of Projects Supervised: | 11 |
| Total Number of Visits: | 116 |
| Hours Logged: | 626.20 |

#### Date | Teacher | Student | Experience | Details |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5/20/2016</td>
<td>A Ou</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>5/20/2016</td>
<td>A Ou</td>
<td>Jessie Logan</td>
<td>Lamb</td>
<td>Managing animal facilities Cleaning up the BHS farm</td>
</tr>
<tr>
<td>5/20/2016</td>
<td>A Ou</td>
<td>Jessie Logan</td>
<td>Lamb</td>
<td>Evaluating and selecting animals for best use Picking out and working with Phillip (my lamb)</td>
</tr>
<tr>
<td>5/20/2016</td>
<td>A Ou</td>
<td>Robert Lara</td>
<td>Market Sheep</td>
<td>Evaluating and selecting animals for best use looked at an selected my lamb</td>
</tr>
<tr>
<td>5/26/2016</td>
<td>A Ou</td>
<td>Ambrila Jackson</td>
<td>Market Lamb 2016</td>
<td>Managing animal facilities Ambrila went to the school farm with the people who are showing in the fair. She and the others cleaned the area in the farm where the animals are being kept which included pulling out all the weeds, taking down drapes and shuiving old dirt. After that Mrs. Ou took the kids back to the school and then to the other farm where the lambs are being kept. Everyone picked out thier lamb.</td>
</tr>
<tr>
<td>5/27/2016</td>
<td>A Ou</td>
<td>Robert Lara</td>
<td>Market Sheep</td>
<td>Proper handling of animals I walked my lamb on a halter so that it would become comfortable with me and to get it used of halters.</td>
</tr>
<tr>
<td>6/4/2016</td>
<td>A Ou</td>
<td>Ambrila Jackson</td>
<td>Market Lamb 2016</td>
<td>Proper handling of animals Ambrila, her classmates and teacher Mrs.Ou went to transfer the lambs from the breeder Mr.Whitney to the BHS school farm. There Ambrila and her classmates unloaded the lambs from the truck to their pens.</td>
</tr>
<tr>
<td>6/4/2016</td>
<td>A Ou</td>
<td>Robert Lara</td>
<td>Market Sheep</td>
<td>Managing animal facilities Lambs were transferred to the school farm.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal facilities Cleaned animal facilities and weighted lambs.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal facilities project meeting.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Ambrila Jackson</td>
<td>Market Lamb 2016</td>
<td>Proper handling of animals Ambrila went to the school farm in which there was a project meeting so all the other kids where there as well. She helped them feed the animals, Mrs. Ou told her and all the other kids how to properly care for the lambs and showed them how to walk their lambs correctly.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Isabelle Blanco</td>
<td>Market Lamb 2016</td>
<td>Activities in the animal industry feeding, weighing, giving water, getting schedules.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Isaiah Ruiz</td>
<td>Market Lamb 2016</td>
<td>Activities in the animal industry Attended project meeting. Advisor assigned us to clean stalls, feed lambs, and to walk our lambs, etc.</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Robert Lara</td>
<td>Market Sheep</td>
<td>Proper handling of animals Project Visit: we cleaned stalls and practiced showmanship</td>
</tr>
<tr>
<td>6/13/2016</td>
<td>A Ou</td>
<td>Wyatt Imke</td>
<td>Ducks</td>
<td>Managing animal facilities I was raising two ducklings. I would clean their water and poop as well as feed them. It didn't work out so we got rid of them.</td>
</tr>
<tr>
<td>6/15/2016</td>
<td>A Ou</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal health</td>
</tr>
<tr>
<td>6/25/2016</td>
<td>A Ou</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal facilities Farm work day.</td>
</tr>
<tr>
<td>6/26/2016</td>
<td>A Ou</td>
<td>Isabelle</td>
<td>Market</td>
<td>Managing animal facilities we made a new pin for the sheep, put fly traps up, fed the sheep.</td>
</tr>
</tbody>
</table>

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https://theaet.com/Chapter/Reports/TeacherJrn.aspx
<table>
<thead>
<tr>
<th>Date</th>
<th>Animal</th>
<th>Activity Description</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/26/2016</td>
<td>Ou</td>
<td>Activities in the animal industry attended farm work day, and helped make pens for the lambs, then all students there help feed the lambs.</td>
<td>4.00</td>
</tr>
<tr>
<td>6/27/2016</td>
<td>Ou</td>
<td>Proper handling of animals project meeting.</td>
<td>2.00</td>
</tr>
<tr>
<td>6/27/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia helped other students feed the lambs since it was a project meeting. She hen helped clean out the poop in the pens, clean the fly traps and help divide the big pen. Mrs. Ou then weighed her lamb. Ambrilia worked with her lamb for 15 minutes.</td>
<td>1.50</td>
</tr>
<tr>
<td>7/3/2016</td>
<td>Ou</td>
<td>Managing animal facilities cleaned out his kennel.</td>
<td>1.00</td>
</tr>
<tr>
<td>7/5/2016</td>
<td>Ou</td>
<td>Proper handling of animals</td>
<td>2.00</td>
</tr>
<tr>
<td>7/5/2016</td>
<td>Ou</td>
<td>Managing animal nutrition cleaned pin, fed lambs, changed waters, weighed the lambs, and walked my lamb.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/11/2016</td>
<td>Ou</td>
<td>Activities in the animal industry showman ship practice feed and weigh.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/11/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia and the other students fed the lambs, gave them water, weighed them, clean their pens, and clean the fly traps. Mrs. Ou then showed them how to properly hold the lambs for showing in the fair.</td>
<td>1.30</td>
</tr>
<tr>
<td>7/11/2016</td>
<td>Ou</td>
<td>Managing animal nutrition Cleaned out water buckets, fed, gave water, walked the lambs, and weighed.</td>
<td>1.00</td>
</tr>
<tr>
<td>7/11/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Attended project meeting. Advisor assigned us to clean stalls, feed lambs, and to walk our lambs, etc.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/15/2016</td>
<td>Ou</td>
<td>Activities in the animal industry</td>
<td>5.00</td>
</tr>
<tr>
<td>7/16/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia and all the other students went to the farm in the morning to load the lambs onto a truck with Mrs.Ou to take the lambs to the fair to get ear tagged. The kids fed the lambs first. Everyone then went to the fairgrounds where they unloaded the lambs and waited in line for two hours. After all the lambs got ear tagged everyone loaded the lambs back onto the truck and went back to the farm and put them back in their pens.</td>
<td>4.25</td>
</tr>
<tr>
<td>7/16/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Feeding, water, giving b-12, ear tagging.</td>
<td>5.00</td>
</tr>
<tr>
<td>7/16/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Went to the farm to feed lambs and then went to ear tag our lambs with Mrs.ou at the kern county fairgrounds.</td>
<td>4.00</td>
</tr>
<tr>
<td>7/18/2016</td>
<td>Ou</td>
<td>Proper handling of animals showmanship practice, feeding and weighing.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/18/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia went to the school farm and helped the other students feed the lambs, fill up water buckets, clean their pens, and change fly traps. After Mrs. Ou showed us how to properly shear a lamb.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/18/2016</td>
<td>Ou</td>
<td>Managing animal health Feed, clean water buckets, give water, clean pins, get b-12, walk, shear, bathe.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/25/2016</td>
<td>Ou</td>
<td>Proper handling of animals project meeting.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/25/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia helped the other students feed all the lambs, fill water buckets, clean fly traps and clean out the pens. Mrs.Ou then showed the students how to properly hold their lambs for the fair time.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/25/2016</td>
<td>Ou</td>
<td>Managing animal nutrition fed, cleaned pins and water buckets, put new water in buckets, weighed in, showmanship practice.</td>
<td>2.00</td>
</tr>
<tr>
<td>7/25/2016</td>
<td>Ou</td>
<td>Managing animal nutrition Fed, watered, and practiced showmanship</td>
<td>2.00</td>
</tr>
<tr>
<td>7/26/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Attended project meeting. Advisor assigned us to clean stalls, feed lambs, and to walk our lambs, etc.</td>
<td>2.00</td>
</tr>
<tr>
<td>8/1/2016</td>
<td>Ou</td>
<td>Proper handling of animals</td>
<td>1.00</td>
</tr>
<tr>
<td>8/1/2016</td>
<td>Ou</td>
<td>Proper handling of animals Ambrilia had a project meeting and when to the farm to meet with the other students and her teacher. When she arrived she helped feed all of the lambs, give them water, and clean their pens. After she and the other students worked with their lambs, and after that they went home.</td>
<td>1.30</td>
</tr>
<tr>
<td>8/1/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Today was a project visit, today we cleaned the pins that the lambs stay in, we fed the lambs/gave them water. once those this things were done we weighed in our lambs, took the lambs for walks, then started showmanship practice.</td>
<td>2.00</td>
</tr>
<tr>
<td>8/1/2016</td>
<td>Ou</td>
<td>Activities in the animal industry Fed, watered, cleaned pens, and practiced showmanship.</td>
<td>2.00</td>
</tr>
<tr>
<td>8/5/2016</td>
<td>Ou</td>
<td>Managing, producing, harvesting and handling crops</td>
<td>0.50</td>
</tr>
<tr>
<td>8/8/2016</td>
<td>Ou</td>
<td>Managing animal facilities</td>
<td>1.00</td>
</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Category</td>
<td>Activity</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8/8/2016</td>
<td>A Ou Am briskie Jackson</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>8/8/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/8/2016</td>
<td>A Ou Julian Portillo</td>
<td>Chicken</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>8/15/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>8/15/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Dealing with health, safety, and environment</td>
</tr>
<tr>
<td>8/15/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/15/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/20/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>8/20/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>8/20/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/21/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/22/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/23/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>8/27/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>8/27/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>8/27/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/10/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/10/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Lamb</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/10/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/15/2016</td>
<td>A Ou Julian Portillo</td>
<td>Chicken</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/16/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>9/17/2016</td>
<td>A Ou Alejandro Valdez</td>
<td>Lamb</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>9/17/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/17/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/17/2016</td>
<td>A Ou Robert Lara</td>
<td>Market Sheep</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/17/2016</td>
<td>A Ou Robert</td>
<td>Market Sheep</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Sheep Type</td>
<td>Activity Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9/20/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Lamb</td>
<td>Managing animal nutrition Today I went to the fair grounds to feed my lamb and change out the water buckets to make sure that the water is clean so that the lambs could drink the water perfectly.</td>
</tr>
<tr>
<td>9/21/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Managing animal facilities Transferring animals to fair, cleaning, feeding, preweigh, and cleaning school farm.</td>
</tr>
<tr>
<td>9/21/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I and the other students went to the farm and transferred the lambs to the fair then set up the area where the lambs were being kept.</td>
</tr>
<tr>
<td>9/21/2016</td>
<td>A Ou Isabelle Jackson</td>
<td>Market Lamb</td>
<td>Activities in the animal industry Today was the day we took the lambs to Kern county fair. The first thing I (we) had to do was clean up the school farm of anything that I (we) put up for this years animal handling. Once we finished cleaning I (we) made sure to put all the lambs on halters and load them onto the trailer to haul the lambs to the fair.</td>
</tr>
<tr>
<td>9/21/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry Cleaned school farm, hauled lambs at the fair, finish set up.</td>
</tr>
<tr>
<td>9/22/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry feeding, cleaning of stalls and weighing in.</td>
</tr>
<tr>
<td>9/22/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair and took care of my lamb and clean the pens.</td>
</tr>
<tr>
<td>9/22/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Market Lamb</td>
<td>Activities in the animal industry Today was the weigh in day for the lambs at the Kern county fair. We got in line with our lambs and waited for our lambs to be put on the scale.</td>
</tr>
<tr>
<td>9/22/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry Fed, watered, and weighed in the lambs.</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry Shearing and feeding</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair and fed the lambs food and water and changed the bedding in the pens.</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair and fed my lamb food and water.</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Market Lamb</td>
<td>Managing animal nutrition Today I fed my lamb at the fair grounds for the first time. First I had to zip tie the feeder onto the fence do that my lamb had some where to eat. I tied my lamb to the fence with her halter to the fence then fed my lamb grain hay, while my lamb was eating I cleaned the water bucket and filled it up again.</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Market Lamb</td>
<td>Proper handling of animals today was a shearing day for the lambs. This meant that I was going to first wash my lamb baa then once I was done I went to go put her on the shearing rack to sheер her, once that step wash finished she was still wet so I took the blow drier and a towel to dry her off.</td>
</tr>
<tr>
<td>9/23/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry Fed, watered, washed lambs, touch ups for shearing.</td>
</tr>
<tr>
<td>9/24/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry Feed, clean, get lambs ready for market and show.</td>
</tr>
<tr>
<td>9/24/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair to feed my animal and then showed my lamb.</td>
</tr>
<tr>
<td>9/24/2016</td>
<td>A Ou Isabella Martinez</td>
<td>Lawn Care</td>
<td>Managing, producing, harvesting and handling crops mowed the lawn.</td>
</tr>
<tr>
<td>9/24/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry Fed, watered, washed lambs, and makert show.</td>
</tr>
<tr>
<td>9/25/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry Feed, clean, get lambs ready for showmanship, and walk my lamb.</td>
</tr>
<tr>
<td>9/25/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair and fed and gave mine and the other lambs food and water.</td>
</tr>
<tr>
<td>9/25/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Market Lamb</td>
<td>Activities in the animal industry Today was the regular showmanship day instead of looking at the way our lambs look, they will be judging us instead on the way we present our lambs. We got them bathed again and sheered any fleece that needed to be trimmed. Then headed to the ring to be judged.</td>
</tr>
<tr>
<td>9/25/2016</td>
<td>A Ou Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry Fed, watered, washed lambs, and showmanship.</td>
</tr>
<tr>
<td>9/26/2016</td>
<td>A Ou Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry feed, clean stalls, wash lambs, walk lamb, get lamb ready for kern county bred and fed.</td>
</tr>
<tr>
<td>9/26/2016</td>
<td>A Ou Ambrilia Jackson</td>
<td>Market Lamb</td>
<td>Proper handling of animals I went to the fair and helped feed the lambs. Then I helped everyone get ready to show their animal</td>
</tr>
<tr>
<td>9/26/2016</td>
<td>A Ou Isabelle Blanco</td>
<td>Market Lamb</td>
<td>Managing animal nutrition Today I went to the Kern County fair grounds so that I could feed my lamb and clean up the pin. I started out by feeding my lamb, then changing out the water buckets, then I cleaned up after my lamb so that her environment was clean.</td>
</tr>
<tr>
<td>9/26/2016</td>
<td>A Ou Kimberly</td>
<td>Lamb</td>
<td>Activities in the animal industry Fed, watered, washed lambs, and Kern Bred and Fed.</td>
</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Lamb</td>
<td>Activity</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------</td>
<td>---------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9/27/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/27/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/27/2016</td>
<td>Isabelle Blanco</td>
<td>Market 2016</td>
<td>Managing animal nutrition</td>
</tr>
<tr>
<td>9/28/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/28/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Managing animal facilities</td>
</tr>
<tr>
<td>9/28/2016</td>
<td>Isabelle Blanco</td>
<td>Market 2016</td>
<td>Managing animal nutrition</td>
</tr>
<tr>
<td>9/28/2016</td>
<td>Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Managing animal nutrition</td>
</tr>
<tr>
<td>9/29/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/29/2016</td>
<td>Isabelle Blanco</td>
<td>Market 2016</td>
<td>Managing animal nutrition</td>
</tr>
<tr>
<td>9/29/2016</td>
<td>Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/30/2016</td>
<td>Alejandro Valadez</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
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<tr>
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<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
</tr>
<tr>
<td>9/30/2016</td>
<td>Isabelle Blanco</td>
<td>Market 2016</td>
<td>Activities in the animal industry</td>
</tr>
<tr>
<td>9/30/2016</td>
<td>Isabelle Blanco</td>
<td>Market 2016</td>
<td>Managing animal nutrition</td>
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<td>Activities in the animal industry</td>
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<tr>
<td>10/1/2016</td>
<td>Amibria Jackson</td>
<td>Market 2016</td>
<td>Proper handling of animals</td>
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<tr>
<td>10/1/2016</td>
<td>Kimberly Rodriguez Gonzalez</td>
<td>Lamb</td>
<td>Activities in the animal industry</td>
</tr>
</tbody>
</table>
Supporting Material 6
Recruitment Brochure

The Agricultural Student Planning Handbook was prepared for our members to hand out at the 8th Registration. It is updated each year. It gives a list of available Freshman level courses, a brief summary of all the ag courses, the ag career pathways, and the benefits of joining FFA. This handbook provides more information for interested students and parents. Students and parents also fill out a Student Interest Sheet.
AGRICULTURAL STUDENT PLANNING HANDBOOK

Once a Driller,
Always a Driller!

Learning to Do,
Doing to Learn,
Earning to Live,
Living to Serve.

Where Leaders Begin!
Freshmen Agriculture Classes

The following classes are available to incoming freshmen:

- Ag Soils – CP Lab Science
- Floral Design I – CP Fine Arts
- Ag Mechanics I
## Career Paths

<table>
<thead>
<tr>
<th>Grade</th>
<th>College Preparatory</th>
<th>Floral Design</th>
<th>Ag Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th</td>
<td>Ag Soils (CP)</td>
<td>Floral Design 1</td>
<td>Ag Mech 1</td>
</tr>
<tr>
<td>10th</td>
<td>Sustainable Ag (CP)</td>
<td>Floral Design 2</td>
<td>Ag Mech 2</td>
</tr>
<tr>
<td>11th</td>
<td>Ag Chemistry (CP)</td>
<td>Floral Design 3</td>
<td>Projects 3</td>
</tr>
<tr>
<td>12th</td>
<td>Ag Econ/Ag Govt(CP)</td>
<td>Floral Design 4</td>
<td>Projects 4</td>
</tr>
</tbody>
</table>

## Course Descriptions

**Ag Soils**—This is a COLLEGE PREPARATORY class for FRESHMAN. It meets the University of California “D”-Lab Science requirement and will cover soil science concepts, leadership, and ag natural resources.

**Sustainable Ag**—This COLLEGE PREPARATORY class will cover many of the same aspects of a regular biology class with an emphasis in agriculture. Sustainable Ag is also a Freshman level class for AVID students, but is available to Sophomores if they didn’t take biology Freshman year.

**Ag Chemistry**—This is a COLLEGE PREPARATORY class for students in Algebra II or higher. It meets the University of California “D”-Lab Science chemistry requirement with an emphasis on agriculture.

**Ag Sales & Marketing**—This class is designed to teach students about agriculture sales techniques, marketing, advertising and entrepreneurship. Ag Sales and Marketing is offered to Third Year Ag students that do not take Ag Chemistry

**Ag Econ/Ag Govt**—These COLLEGE PREPARATORY classes focuses on types of agricultural business ownership, economics, supply and demand, marketing cooperatives, finances, computers in agriculture, agriculture law, and the structure and history of government. These are each a semester long and meet graduation requirements for seniors.

**Floral Design 1-4**—These classes fulfill the COLLEGE PREPARATORY UC fine arts credit requirement. Floral design teaches the art of floral design, construction, sales, flower identification, and leadership. This class is for first to fourth Year Ag students.

**Ag Mechanics/Projects**—This class fulfills the general elective requirements and is in the process of getting approved for UC elective credit. The courses offers experience in welding, woodworking, electrical, plumbing and small engines. Welding techniques in Arc, Oxyacetylene, and MIG welding will be covered. Students in the advanced classes design and build projects as well.
**Benefits of Being in the Agriculture Program**

Through the FFA, students have opportunities to these three keys elements:

- Learn Leadership Skills while travelling across California and meeting new friends!
- Earn Money!
- Qualify for Ag Scholarships! Thousands of dollars in Ag Scholarships have few to NO applicants EACH year!

**Who can be in the Ag Program/FFA?**

Everyone in grades nine through twelve that take a high school agriculture class.

**WHAT IS AN AG PROJECT AND DO YOU NEED TO HAVE ONE?**

Yes! An Ag (agriculture) project is required. This is a “learning by doing” tool in agricultural education. All students are required to conduct a project, which reflects their agricultural interests and career goals. Through these individual programs, members receive hands on training in goal setting, planning and record keeping.

**What are some EXAMPLES of the different types of projects that can be conducted?**

- Home Improvement (Placement)
- Gardening (Ownership)
- Yard Work (Placement)
- Landscaping (Placement)
- Plant Care (Placement)
- Small Animal Care (Placement)
- Rabbits (Ownership)
- Sheep (Ownership)
- Cattle (Ownership)
- Goats (Ownership)
- Pigs (Ownership)
- Working in a feed store (Placement)
- Working in a floral shop (Placement)

**What is the FFA?**

The FFA is known in California as Future Farmers of America. The FFA makes a positive difference in the lives of students by developing their potential for premiere leadership, personal growth and career success. It is the largest rural youth organization in the United States, with over 500,000 members in the national organization.

**DOES 4-H AND FFA DIFFER?**

Yes, 4-H and FFA differ. FFA is an intra-curricular program – one that is an extension of the classroom. Students participate in FFA activities under the supervision of the agriculture instructor. The 4-H club is a county activity and is optional and operated under the supervision of interested adults.
BAKERSFIELD HIGH SCHOOL AGRICULTURE PROGRAM
STUDENT INTEREST SHEET

Incoming Freshman Name: ________________________________

Jr. High School attending: ______________________________

Which part of the agriculture program interests you the most?

<table>
<thead>
<tr>
<th>Travel</th>
<th>Making New Friends</th>
<th>Making $$$</th>
<th>Plants &amp; Flowers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Scholarships</td>
<td>Competition</td>
<td>Visiting Colleges &amp; Universities</td>
<td>Animals / Vet Science</td>
</tr>
<tr>
<td>Engines/Motors/Electrical/Welding</td>
<td>Public Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Email address: ___________________________  Cell Phone: _______________________

Which of the following agriculture classes interests you the most?

<table>
<thead>
<tr>
<th>Check Class(es)</th>
<th>Classes Offered</th>
<th>Course Credit</th>
<th>UC Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ag Soils</td>
<td>UC Approved Course</td>
<td>D – Lab Science</td>
</tr>
<tr>
<td></td>
<td>Floral Design I</td>
<td>UC Fine Arts</td>
<td>F – fine arts</td>
</tr>
<tr>
<td></td>
<td>Ag Mechanics I</td>
<td>CTE Course – Graduation</td>
<td>G – pending</td>
</tr>
</tbody>
</table>

_____________________________________

Student Signature

Parent Name: ________________________________________________________________

Physical Mailing Address: ____________________________________________________

City: Bakersfield  State: CA  Zip Code: ________________________________

Email address: ___________________________  Cell Phone: _______________________

_____________________________________

Parent Signature
Supporting Material 7
Graduate Follow-Up Survey

A paper based Graduate Follow-Up Survey is mailed out to our recent graduates at the beginning of the school year. After all the forms are returned, the surveys are read and the data from them is recorded. If a graduate does not return the Graduate Follow-Up Survey, they will be contacted by phone or email to complete the survey. The Graduate Follow-Up Survey provides the department about what career paths our students take after graduation. This feedback helps the department grow and develop to better serve our students. The results of the survey are recorded on the Cal Ag Ed Website and placed in the Ag Incentive Grant Binder.
BAKERSFIELD HIGH SCHOOL AG. DEPARTMENT

GRADUATE FOLLOW UP FORM for the Class of 20___

Graduate Name: ________________________________

Physical Mailing Address: ________________________________ 933____

Cell phone: ________________________________

E-mail address: ________________________________

____________________________________________________________________

Number of Years in the BHS Ag Program  1  2  3  4

Were you in another High School's Ag Program? Yes  No

If yes, which school? ________________________________

Years in that school’s program?  1  2  3

Highest Degree Received in the FFA Greenhand Chapter State

After graduation, what do you plan to do right now?

____ Attend a trade/technical school (write name of school): ________________________________

       Studying what trade? ________________________________

____ Attend a Junior College/Community College: ________________________________

       Studying what subject area/major? ________________________________

____ Attend a Four Year University: ________________________________

       What will your major be? ________________________________

____ Go get a job so that you can begin your career. (Do not want to go to school anymore.)

____ Go get a job. You do not want to go to school right now, but possibly you will go to school later.

____ Go directly into Armed Forces: Army  Navy  Air Force  Marines  Coastguard  National Guard
Supporting Material 8
Graduate Follow-Up Results

Each year the results of the Graduate Follow-Up Survey are recorded through the Cal Ag Ed website.

There are 36 students who graduated from the program in 2018. All of our graduates completed three or more years of agriculture. Of those 36 graduates, 13 graduates are pursuing careers in agriculture either at a four-year university or two-year college.
**California Ag Ed Online**

### Post Graduate Follow-Up

#### Students by Graduation Year

<table>
<thead>
<tr>
<th>NAME</th>
<th>FFA ID</th>
<th>GRAD YEAR</th>
<th>YEARS IN AG</th>
<th>GRAD STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avizyu, Brendan</td>
<td>601273593</td>
<td>2018</td>
<td>5</td>
<td>Two Year College - Ag Major</td>
</tr>
<tr>
<td>Barnes, Joanne</td>
<td>601273596</td>
<td>2018</td>
<td>3</td>
<td>Two Year College - Non-Ag Major</td>
</tr>
<tr>
<td>Brantley, Conner</td>
<td>601273606</td>
<td>2018</td>
<td>3</td>
<td>Military</td>
</tr>
<tr>
<td>Burke, Caitlin</td>
<td>601385317</td>
<td>2018</td>
<td>3</td>
<td>Location or Position Unknown</td>
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<tr>
<td>Burton, Egyptia</td>
<td>601273610</td>
<td>2018</td>
<td>3</td>
<td>Two Year College - Non-Ag Major</td>
</tr>
<tr>
<td>Carrasco, Taylor</td>
<td>602435582</td>
<td>2018</td>
<td>3</td>
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</tr>
<tr>
<td>Castillo, Ashlie</td>
<td>601273919</td>
<td>2018</td>
<td>4</td>
<td>Two Year College - Non-Ag Major</td>
</tr>
<tr>
<td>Coffee, Trynadie</td>
<td>602455545</td>
<td>2018</td>
<td>3</td>
<td>Two Year College - Ag Major</td>
</tr>
<tr>
<td>Crabtree, Tiffany</td>
<td>601273931</td>
<td>2018</td>
<td>3</td>
<td>Two Year College - Ag Major</td>
</tr>
</tbody>
</table>

Only students with 3 or more years in Ag Ed will be shown in this list.

Save Changes
<table>
<thead>
<tr>
<th>NAME</th>
<th>FFA ID</th>
<th>GRAD YEAR</th>
<th>YEARS IN AG</th>
<th>GRAD STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaz, Julissa</td>
<td>602435259</td>
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<td>3</td>
<td>Two Year College - Ag Major</td>
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<tr>
<td>Duran, Valerie</td>
<td>601273943</td>
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<tr>
<td>Esqueda, Gabriella</td>
<td>601273946</td>
<td>2018</td>
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</tr>
<tr>
<td>Fuller, Alexander</td>
<td>602435535</td>
<td>2018</td>
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</tr>
<tr>
<td>Garcia, Yazmine</td>
<td>601274261</td>
<td>2018</td>
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<td>Two Year College - Non-Ag Major</td>
</tr>
<tr>
<td>Herrera, Madison</td>
<td>601189786</td>
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<tr>
<td>Imke, Wyatt</td>
<td>601274289</td>
<td>2018</td>
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<tr>
<td>Isidore, Pedro</td>
<td>601274291</td>
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<tr>
<td>Jackson, Ambria</td>
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<td>3</td>
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<tr>
<td>Lawrence, Loren</td>
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<tr>
<td>Logan, Jessie</td>
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<td>Lopez, Nick</td>
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<td>Mamedrez, Sarai</td>
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<td>Medrano, Kaleen</td>
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<td>Navarro, Adrian</td>
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<td>Pagele, Micheal</td>
<td>602435499</td>
<td>2018</td>
<td>3</td>
<td>Two Year College - Ag Major</td>
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<tr>
<td>Pecor, Norman</td>
<td>601274527</td>
<td>2018</td>
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<tr>
<td>Portillo, Julian</td>
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<td>Four Year College - Non-Ag Major</td>
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<td>Rodriguez, Kimberly G</td>
<td>602435263</td>
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<td>Military</td>
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<tr>
<td>Samuel, Naomi</td>
<td>601274919</td>
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</tr>
<tr>
<td>Sanchez, Jessie</td>
<td>602435318</td>
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<td>Two Year College - Ag Major</td>
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<tr>
<td>Short, Katie</td>
<td>601398153</td>
<td>2018</td>
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</table>

https://www.calaged.org/connect/roster/students_graddata.aspx
<table>
<thead>
<tr>
<th>NAME</th>
<th>FFA ID</th>
<th>GRAD YEAR</th>
<th>YEARS IN AG</th>
<th>GRAD STATUS</th>
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<tr>
<td>Vaughn, Sierra</td>
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<td>Villalpando, Aaron</td>
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<td>Wilson, Patrick</td>
<td>601640969</td>
<td>2018</td>
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</table>

**Our Mission**

Agricultural Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resources systems.

2018 California Agricultural Education
Supporting Material 9
Department Budget and Budget Process Description

Each year during the summer, the ag teachers work together to develop a department budget for the upcoming school year. The typical funding sources for the department are AIG, Perkins, and Site. Usually both Jenny and Jake receive separate Perkins funding for their floral and ag mechanics classes. The funding for the ag department is spent several ways. Ag Incentive Grant money is used for the Fall Regional Meeting, Fall Roadshow, Spring Regional Meeting, Planners, Ag Advisory Meetings, flowers, floral supplies, State FFA Conference, office supplies, copy machine contract, lab supplies, CATA Conference, Conference, and FFA Activity registration. Perkins funding is used for leadership packets, flowers, MFE/ALA, Ag Chemistry labs, and ag mechanics equipment. Site funding is used for banquet supplies and other miscellaneous projects.
## BUDGET

2018-2019 Bakersfield High School Ag Dept.

<table>
<thead>
<tr>
<th>Ag Incentive</th>
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<tr>
<td><strong>Total Start</strong></td>
<td>16400</td>
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<tr>
<td>Fall Region Mtg, Roadshow, Spring Mtg</td>
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<td>Planners</td>
<td>3,600.00</td>
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<td>Ag Advisory Meetings</td>
<td>575.00</td>
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<td>Flowers &amp; Supplies</td>
<td>4,400.00</td>
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<td>State FFA Conference</td>
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<td>Office Supplies</td>
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<td>Copy machine contract</td>
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<tr>
<td>Lab Supplies</td>
<td>850.00</td>
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<td>CATA Conference</td>
<td>2,000.00</td>
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<tr>
<td>Conference/FFA activity registration</td>
<td>200.00</td>
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<tr>
<td>San Diego Floral</td>
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<td><strong>TOTAL</strong></td>
<td><strong>16,375.00</strong></td>
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<table>
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<tr>
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<td>Leadership packets</td>
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<tr>
<td>Flowers</td>
<td>1300.00</td>
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<tr>
<td>MFE/ALA (35)</td>
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<tr>
<td>Ag Chemistry lab</td>
<td>1600.00</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>10000.00</strong></td>
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Supporting Material 10
Advisory Committee Agenda

The Bakersfield High School Ag Advisory Committee meets twice a year. They usually meet once in the fall and once in the spring. At each meeting, they go over the agenda that has been prepared by the ag teachers. It is during this time that they provide feedback and support for the program. If needed, they will also review the Comprehensive Program Plan for the Ag Incentive Grant Review.
I. Welcome
II. Introductions
III. Dinner
IV. FFA
   a. Program of Work Highlights
V. Ag Incentive Grant Review – Self Review ☑ - will be conducted next week on Monday
VI. Election of Ag Advisory Committee Chair
VII. Next Ag Advisory Meeting
     a. Tuesday, March 6, 2017
VIII. Ag Program Update
      a. Enrollment Numbers – 388 students in the program (391 last year)
      b. Specialized Incentive Grant: Proposed idea for Ag Mechanics Shop to be converted and still have
         Greenhouse in the plans
            i. Still have Specialized Grant money to spend as well
IX. Other
X. Adjourn
BHS Ag Advisory Meeting
Agenda
March 21, 2018

I. Welcome
II. Introductions
III. Update/provide information card
IV. Dinner
V. Approve minutes from November
VI. FFA Update
   a. 15 State FFA Degrees & 3 Section Proficiencies
   b. Judging Teams –
      i. Floral
      ii. Livestock
      iii. Novice & Advanced Parli Pro
      iv. Nursery/Landscape
      v. Poultry
      vi. Welding
   c. 2 regional speech finalists (1 prepared and 1 job interview)
   d. State Convention – 22 going
   e. Tri Tip Dinner To Go – moved to May
   f. Easter Egg Hunt at Homeless Shelter– March 29

VII. Ag Program
    a. 8th grade recruitment
    b. District pathways

VIII. Other Business

IX. Adjourn
Supporting Material 11
Advisory Committee Minutes

After the Bakersfield High School Ag Advisory Committee meets, minutes are written up to document
the meeting. These minutes are kept and placed into the Comprehensive Program Plan. The minutes serve as a
resource and reference from our community members.
The BHS Ag Advisory Committee meeting was called to order on November 28, 2017 at 6:05 p.m. by chairperson, Dawn Baumgarten. Members present were: Mrs. Dawn Baumgarten, Mr. Ken Whitney, Mr. Zach Green, Mrs. Jacie Green, Mr. Roger Williams, Mrs. Ana Williams, Mr. Dan Wilke, Mrs. Audrea Estrada, Mr. Joey Estrada, Mrs. Mary Moreno, Mrs. Jennifer Wilke, and Mr. Eyraud were present. FFA members present included Naomi Samuel, Julian Portillo, Kim Rodriguez, Grecia Camorlinga, and Morgan Wilke.

Minutes from the March meeting were moved to be approved by Roger. Seconded and passed by voice vote. The first item on the agenda was the FFA Program of Activities presentation by the Chapter Officers.

The next item was the announcement of the Ag Incentive Grant Self Review that will be conducted Monday by the department at their regular meeting. It is open for the committee to review at any time.

The election of the Ag Advisory Committee Chair was next. Dawn nominated Dan Wilke to be the chairperson. Audrea seconded it. Motion was approved by voice vote. Dan nominated Joey Estrada as co-chair. It was seconded by Roger. Passed by unanimous consent.

The ag teachers then provided the committee with a program update. There are currently 388 members enrolled. We discussed the proposed idea for the Ag Mechanics shop renovation for the Specialized funding grant as well as the greenhouse plans. We still have the money from the last grant spend as well for the greenhouse project.

The meeting was adjourned at 7:08 p.m.

Respectfully submitted,

Jennifer Wilke
Ag Teacher
The BHS Ag Advisory Committee meeting was called to order on March 21, 2018 at 6:10 p.m. by chairperson, Dan Wilke. Members present were: Mr. Dan Wilke, Mr. Ken Whitney, Mr. Lindsay Ono, Mr. Roger Williams, Mrs. Ana Williams, Mr. Stan Shelbourne, Mrs. Mary Moreno, Mrs. Jennifer Wilke, and Mr. Eyraud were present. FFA members present included Naomi Samuel, Justin Wilke, Joebel Marcelino, Isaiah Ruiz, Kim Rodriguez, Morgan Wilke, and Jesse Shelbourne.

Minutes from the November meeting were moved to be approved by Roger. Seconded and passed by voice vote.

The first item on the agenda was the FFA update presentation by the FFA members including the judging teams, regional speech finalists, State Convention, Tri Tip Dinner To Go in May, and Easter Egg Hunt for the Homeless Shelter.

The next item was an update on the Ag Program with regards to the 8th grade recruitment and district pathways (need to ask Mr. Ono for BC curriculum). Lindsay made us aware that we can contact the BC Ag Ambassador program for presentations. He also shared information about the San Joaquin Air Pollution Control District Grant for gators. Ag Alumni – Stan talked about ideas for fundraising and corporate sponsors as well as a benefit concert. Finally Ana talked about the Kern County Fair Harvest Hall changes that were being made for the still exhibit entries divisions.

The meeting was adjourned at 7:10 p.m.

Respectfully submitted,

Jennifer Wilke
Ag Teacher
I currently hold a Clear Single Subject Agriculture Credential and a Clear Specialist Instruction Credential in Agriculture. I received my credentials in 2012. Since that time I have renewed them once. My credentials are authorized until 2019.
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

AMANDA OU

is hereby awarded a

Clear Single Subject Teaching Credential: Renewal

AUTHORIZED SUBJECT(S):
   Agriculture

SUBJECT MATTER AUTHORIZATION(S):
   Agriculture

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 05/13/2014 to 06/01/2019

This is not an official document. The official record of credentials, permits, and certificates is the Commission's website at www.ctc.ca.gov
Note: If you have any questions, please view the CTC Online - Written Instructions for Application and Payment page.

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<th>Document Title</th>
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<th>Status</th>
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<th>Expiration Date</th>
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<td>Specialist Instruction Credential (Agriculture)</td>
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Authorization/Subjects

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<td>R3A1</td>
<td>AGRI</td>
<td>This credential authorizes the holder to teach agriculture in grades twelve and below, including preschool, and in classes organized primarily for adults. It also authorizes the holder to develop and coordinate curriculum, develop programs, and deliver staff development for agriculture education programs coordinated by school districts or county offices of education.</td>
<td>Agriculture</td>
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Renewal Requirements:
Please disregard any # signs you may see below and refer to the "Additional Description" column to the right for specific renewal requirements.

<table>
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<th>Renewal Code</th>
<th>Renewal Description</th>
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<td>R15P</td>
<td>The term of this credential is limited by the term of the prerequisite credential. To renew this credential, the holder must also renew the prerequisite credential. To renew this credential, the holder needs to submit only an application and fee to the Commission no earlier than 12 months before the expiration date. The renewal period is five years.</td>
<td>TC Code Not Required</td>
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<td>R20</td>
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Supporting Material 13
Calendar of Activities

Each year the ag teachers take the Regional Calendar of Activities to use as a basis for the chapter's Calendar of Activities. After removing all of the unnecessary information, the ag teachers and the chapter officers use the calendar to plan out the dates for the activities and fundraisers. This planning process takes place during the summer. This calendar is then used to create the planners that each student receives in the fall.
Bakersfield FFA

2018-2019

Calendar
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<tr>
<th>Sunday</th>
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<tr>
<td>Teacher Work Day And Officer work day + exec mtg Fair meeting</td>
<td>Teacher Work Day</td>
<td>Act. Sch School Starts</td>
<td>Chapter t-shirts go on sale</td>
<td>Howdy Hop Dance Sign Up for Frito Hot cheetos boat Social - Tues 8/28</td>
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<td>Act Sch</td>
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<td>Last Day to sign up for Frito Boat Lunch</td>
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<tr>
<td>Act Sch Greenhand Conference sign ups start</td>
<td>Chapter t-shirt day Lunch Social First Chapter &amp; parent meeting 6 pm IT 109 &amp; 111 + WATER BALLOON DODGEBALL</td>
<td>Harvest Hall Entries Due</td>
<td>MFE/ALA Conference Intent Letters go out; due back by 9/13</td>
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<td>3 <strong>Labor Day</strong></td>
<td>4 Act Sch Chapter t-shirt day Back to School Night Fall Banquet RSVP before 9/28</td>
<td>5 Reverse Min. Day Breakfast meeting 8 - 9 am</td>
<td>6 Haunted House Committee meets at lunch (2nd-4th year members ONLY)</td>
<td>7 Greenhand Leadership Conference Bakersfield</td>
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<td>Chapter t-shirt day Lunch activity</td>
<td>12 Tri Tip Dinner To Go #1 Presale Starts</td>
<td>13 MFE/ALA letters due</td>
<td>8 KI COLC/CATA-Kern Valley</td>
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<td>9</td>
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<td>Act Sch</td>
<td>All students enroll in their 1st ag class</td>
<td>11 Chapter t-shirt day Lunch activity</td>
<td>12 Tri Tip Dinner To Go #1 Presale Starts</td>
<td>13 MFE/ALA letters due</td>
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<td>17 Act Sch</td>
<td>18 Chapter t-shirt day</td>
<td>19 Kern County Fair</td>
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<td>18 Chapter t-shirt day</td>
<td>19 Kern County Fair</td>
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<td>24 Act Sch Chapter t-shirt day</td>
<td>25 Chapter t-shirt day</td>
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<td>Kern County Fair</td>
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<td>Kern County Fair</td>
<td>25 Chapter t-shirt day</td>
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<td>Kern County Fair</td>
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# October 2018

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<tbody>
<tr>
<td>1 Act Sch</td>
<td>2 Chapter t-shirt day</td>
<td>3 Exec Mtg 0 per Tri Tip # 1 Presale Ends ($$ or tickets due)</td>
<td>4 Haunted House work day after school</td>
<td>5 Banquet practice after school</td>
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<td>8 Act Sch SLE, State Nom Com, Band, Choir, &amp; Comm Chair apps available online; due by 11/1 Banquet practice at lunch</td>
<td>9 Fall Banquet BHS Cafeteria 6:00 pm</td>
<td>10 Opening &amp; Closing Tryouts @ lunch and after school Haunted House work day after school</td>
<td>11 Opening &amp; Closing Tryouts @ lunch and after school</td>
<td>12 Farm Bureau Career Show @ BC 1st Quarter Ends</td>
<td>13 MJC Cotton</td>
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<td>15 Act Sch Email ag advisory</td>
<td>16 Chapter t-shirt day Opening &amp; Closing Tryouts @ lunch and after school</td>
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<td>19 MFE/ALA payment #1 (half)</td>
<td>20 Corcoran Cotton</td>
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<td>21</td>
<td>22 Act Sch after school</td>
<td>23 Chapter t-shirt day Tri tip Dinner To Go #1 4-6 pm</td>
<td>24 See's Xmas Candy Pre-Sale Starts National Convention</td>
<td>25 Flower Market Field Trip Sign Ups Start $15 EXACT cash first 50</td>
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<td>29 Act Sch Haunted house set up 1 pm</td>
<td>30 Chapter t-shirt day</td>
<td>31 Halloween Lunch activity</td>
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# November 2018

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<td>1 Hanford Cotton Sign Up for Open &amp; Close Committees</td>
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<td>8 Skate Night 6-9 pm</td>
<td>9 Committee Meetings for Open &amp; Close Contest @ lunch</td>
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<td>Act Sch</td>
<td>Chapter t-shirt day</td>
<td>Chapter mtg @ lunch</td>
<td>8 Skate Night 6-9 pm</td>
<td>9 Committee Meetings for Open &amp; Close Contest @ lunch</td>
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<td>11 Veteran’s Day</td>
<td>12 Veteran’s Day Observed – No School</td>
<td>13 Chapter t-shirt day</td>
<td>14 Kern Inyo Opening &amp; Closing Contest @ BHS</td>
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<td>16 MIN DAY Region Road Show</td>
<td>17 Region CATA Mtg</td>
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<td>20 Love for Thanksgiving dinner Prep</td>
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<td>22 Love for Thanksgiving dinner delivery Thanksgiving</td>
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<td>30 Flower Market Field Trip</td>
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<td>State Conference Applications Available – due 12/13 Penny Wars Start</td>
<td>27 Chapter t-shirt day</td>
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<td>30 Flower Market Field Trip</td>
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<td>Sunday</td>
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<td>5 Chapter meeting @ lunch</td>
<td>6 Section Banking-Ag Pavilion @ 4 pm</td>
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<td>5 days left in canned food drive</td>
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<td>See’s Candy Arrives</td>
<td>12 Lunch activity</td>
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<td>3rd quarter begins</td>
<td>Exec Mtg 0 period</td>
<td>9 Final Due (7)</td>
<td>10 Tulare Farm Show sign ups start - $15 EXACT cash</td>
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<td>20 Lunch Activity</td>
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<td>10 Section Office Contracts &amp; speeches DUE</td>
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<td>12 MIN DAY Chapter officer applications due w/videoed speeches</td>
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|        | 6      | 7       | 1 Section Off Contracts Due  
Tri Tip dinner #3 $5 and or  
Tickets due  
Kern Ag Foundation Scholarship dinner | 2 Exec Mtg 0 period  
LAST DAY to turn in Spring Banquet RSVPs; $15/person | 3 Leave for SLO | 4 Cal Poly State Finals |
| 5      | Act Sch | Chapter t-shirt day  
Officer Interviews @ lunch  
KI Officer Elections-Highland | 8 | 9 Chapter Meeting Ag Alumni Meeting 6-7 pm | 10 Pts Trip | 11 |
| 12 Mother's Day | Act Sch | Chapter t-shirt day  
CATA Meeting  
Tri tip dinner #3 4-6 pm | 15 | Spring Banquet 6-8 pm  
Cafeteria | 16 | 17 |
| 19 | 20 Spring Sports Awards | Chapter t-shirt day  
Sr. Financial Awards | 22 | Act Sch Yearbook Distribution | 23 | 24 MIN DAY American Degree Apps Due  
Sr Farewell Assembly | 25 |
| 26 Baccalaureate | 27 Memorial Day | Chapter t-shirt day  
Senior sunset | 29 MIN DAY  
2nd & 3rd period finals  
Senior breakfast & hypnotist | 30 MIN DAY 4th/5th & 6th Period finals GRADUATION!! | 31 MIN DAY 1st & 7th period Finals |
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GRADUATE FOLLOW UP FORM for the Class of 20____

Graduate Name: ______________________________________

Physical Mailing Address: _______________________________ 933____

Cell phone: __________________________________________

E-mail address: ________________________________________

Number of Years in the BHS Ag Program 1 2 3 4

Were you in another High School’s Ag Program? Yes No

If yes, which school? ________________________________

Years in that school’s program? 1 2 3

Highest Degree Received in the FFA Greenhand Chapter State

After graduation, what do you plan to do right now?

___ Attend a trade/technical school (write name of school): ________________________________

   Studying what trade? ________________________________

___ Attend a Junior College/Community College: ________________________________

   Studying what subject area/major? ________________________________

___ Attend a Four Year University: ________________________________

   What will your major be? ________________________________

___ Go get a job so that you can begin your career. (Do not want to go to school anymore.)

___ Go get a job. You do not want to go to school right now, but possibly you will go to school later.

___ Go directly into Armed Forces: Army Navy Air Force Marines Coastguard National Guard
Supporting Material 14
2016-2017 Professional Development

Each school year I participated in professional development not only as compliance for the Ag Incentive Grant, but to improve my skills and stay current in the ag education world. For the 2016-2017 school year, I attended the Spring Regional Meeting, Fall Sectional CATA Meeting, Spring Sectional CATA Meeting, State Degree Scoring, CATA Summer Conference, and other professional development through Bakersfield High School.
INCENTIVE GRANT IN-SERVICE ACTIVITIES DOCUMENTATION

CRITERIA 4.B  School Year  2016-17  School  Bakersfield High School

Based on the previous year's record, every agriculture teacher, teaching at least 1/2 time agriculture, attends a minimum of four of the following professional development activities:

Qualified and Competent Personnel

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>TEACHERS NAMES</th>
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<tbody>
<tr>
<td></td>
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<td>Section In-service*</td>
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<tr>
<td>Section In-service*</td>
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<td>Section In-service*</td>
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<td>Summer Conference</td>
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<td>University AgEd Skills Week</td>
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<td>Professional Development **</td>
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</table>

*Four Section In-service Meetings equals one Professional Development Activity

** Can utilize a maximum of two other "Agriculturally Related" Professional Development activities than those listed above. Explain the Professional Development:

1  CTE provider training
2
3
4
5
Supporting Material 15
Request to Be Absent Forms

Each summer after completing the Calendar of Activities, all of the ag teachers fill out their Request to Be Absent for the school year. This form is required each time we are absent for an activity. The form has basic information: destination, reason for activity, dates of activity, if and when a substitute is required, funding source, substitute job number, estimated expenses, the teacher’s signature, the principal’s signature, and district authorization. The form is completed and turned into the Vice Principal of Instruction Secretary. After it is signed by the principal, it is then turned into the district for approval. Once it is approved, it is sent back to me through interdistrict mail. If there are expenses we need to be reimbursed for, then it is recorded on the Request to Be Absent form. The receipts are then submitted to the district after the activity takes place. I have included an example of an approved form from 2015 as well as an example of one before it is approved by the district from 2016.
KERN HIGH SCHOOL DISTRICT
REQUEST TO BE ABSENT FROM ASSIGNED RESPONSIBILITIES FOR PROFESSIONAL ACTIVITIES

Instructions: This form is to be submitted by all personnel who expect to be absent from duties, other than for personal necessity or other leave. It must be received by the Office of Special Projects 10 days prior to absence.

Name: Amanda Ou
Social Security #: 2456 ID# 137587

School: Bakersfield High School
Department: Ag

Destination (City/State): Visalia, CA
Attach letter of explanation for out-of-state travel.

Reason (Explain in detail): MFE and ALA Conference

Dates: from 2/13/15 to 2/14/15
Total Days for this Activity: 2

Substitute: NO ☐ YES ☑ Dates and Periods: 2/13/15 All Day

Funding Source/Substitute: Acct #: 03 - 0000 - 0 - 1110 - 1000 - 1105 - 012 - 0251 - 01
CASE Job #: 562154

Funding Source/Expenses: Acct #: 03 - 0000 - 0 - 1110 - 1000 - 5200 - 012 - 0251 - 01

Estimated Expenses:
☐ Registration
☒ Hotel/Motel Name Holiday Inn $80
☒ Meals
☒ School Vehicle
☐ Private Car:
☐ Other Transportation:
☐ Other:

*Effective 1/1/08 mileage reimbursement: 50.5¢

TOTAL ESTIMATE: $80

Date: 1/9/2015 Signature

SCHOOL AUTHORIZATION
The expenses listed above are approved.

Date: 1/11/15 Principal’s Signature:

DISTRICT AUTHORIZATION

Date: District Approval:

(SEND TO OFFICE OF SPECIAL PROJECTS)
KERN HIGH SCHOOL DISTRICT
REQUEST TO BE ABSENT
FROM ASSIGNED RESPONSIBILITIES FOR PROFESSIONAL ACTIVITIES

Instructions: This form is to be submitted by all personnel who expect to be absent from duties, other than for personal necessity or other leave. It must be received by the Office of Special Projects 10 days prior to absence.

Name: Amanda Ou

School: Bakersfield

Social Security # (last four digits only): 137587

Department: Ag

Destination (City/State): Bakersfield, CA

Attach letter of explanation for out-of-state travel.

Reason (Explain in detail): Career Pathways Symposium

Dates: from 10-21-16 8:30AM to 10-21-16 2:45 PM Total Days for this Activity: 1

Substitute: NO ☐ YES ☒ Dates and Periods: 10/21/16 All Periods

Substitute Combo Code #: 10000000000365

Funding Source/Substitute: Acct #: 06 - 4035 - 0 - 3800 - 1000 - 1105 - 001 - 0000 - 3000

CASE Job #: 633877

Funding Source/Expenses: Acct #: __________ - ______ - ______ - 5200 - ______ - ______

Estimated Expenses:

☐ Registration

☐ Hotel/Motel Name

☐ Meals

☐ School Vehicle

☐ Private Car: *

☐ Other Transportation:

☐ Other:

TOTAL ESTIMATE:

$ __________

Date: 10/19/16 Signature

SCHOOL AUTHORIZATION

The expenses listed above are approved.

Date: ____________ Principal’s Signature: ____________

DISTRICT AUTHORIZATION

Date: ____________ District Approval: ____________

(SEND TO OFFICE OF SPECIAL PROJECTS)
Supporting Material 16
Five-Year Acquisition List

Each year at the beginning of the school year, the Five-Year Acquisition List is updated. This list includes equipment additions or replacements, facilities upgrades, or the addition of new facilities on campus. The purpose of the list is to give the department goals to work towards to improve the program through equipment and facilities to provide a better learning experience for the students. For the 2018-2019 school year, the focus is on purchasing a plasma cam and its software, purchasing a second livestock trailer, and updating/repairing/replacing welding units. Originally we had wanted to add a greenhouse and all of the necessary equipment to have a horticulture unit on campus, however, due to funding, we will not be able to further pursue that until 2021.
## Five Year Facility and Equipment Acquisition Schedule

*Bakersfield Agriculture Department*

**2018-2023**

<table>
<thead>
<tr>
<th>Year</th>
<th>Equipment and Equipment</th>
</tr>
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<tbody>
<tr>
<td><strong>2018-2019</strong></td>
<td></td>
</tr>
<tr>
<td>1. Purchase a plasma cam and its software.</td>
<td></td>
</tr>
<tr>
<td>2. Purchase an additional livestock trailer.</td>
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<tr>
<td>3. Update/repair/replace welding units.</td>
<td></td>
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<tr>
<td><strong>2019-2020</strong></td>
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<tr>
<td>1. Hand held plasma cutter.</td>
<td></td>
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<tr>
<td>2. Update/repair/replace welding units.</td>
<td></td>
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<tr>
<td>3. Lab Equipment.</td>
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<tr>
<td><strong>2020-2021</strong></td>
<td></td>
</tr>
<tr>
<td>1. Purchase a new ag truck</td>
<td></td>
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<tr>
<td>2. Update/repair/replace welding units.</td>
<td></td>
</tr>
<tr>
<td>3. Lab equipment.</td>
<td></td>
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<tr>
<td>4. Fork Lift.</td>
<td></td>
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<tr>
<td><strong>2021-2022</strong></td>
<td></td>
</tr>
<tr>
<td>1. Update/repair/replace welding units.</td>
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<tr>
<td>2. Lab equipment.</td>
<td></td>
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<tr>
<td>3. Update Farm pens.</td>
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<tr>
<td>4. Tractor.</td>
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<tr>
<td><strong>2021-2022</strong></td>
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<tr>
<td>1. Greenhouse</td>
<td></td>
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<tr>
<td>2. Purchase soil sterilizer and a batch mixer.</td>
<td></td>
</tr>
</tbody>
</table>
Supporting Material 17
Chart of Responsibilities

For this section, I have included the 2016-2017 Chart of Responsibilities to reflect on my duties and responsibilities for the program when I was teaching there. There is an update 2018-2019 Chart of Responsibilities in the Comprehensive Program Plan to show how the departmental responsibilities are currently being divided up. While I was an ag teacher and FFA advisor at BHS, I was responsible for helping run the FFA executive meetings. Jenny and Jake were in charge of running FFA Chapter Meetings while I ran the FFA Alumni Meetings with the FFA Alumni Officers. Usually the chapter meetings and the alumni meetings ran at the same time to make it more convenient for the FFA Alumni to attend. I also helped with chapter meetings when they were run at lunch time. For all fund raisers, I helped acquire supplies and conduct the event itself. I was responsible for chaperoning and transporting students to all of the conferences throughout the year as well as the Sectional Skate Night and the Tulare Farm Show. I was also responsible for coaching, chaperoning, and transporting students to contests and the Kern County Fair. When it came to community service, I helped with the Adopt a Family for Christmas, the Driller Giving Tree, Penny Wars, Easter Egg Hunt and the sewing of Isolet Blankets. My duties ranged from getting members to participate, shopping for families, counting money from the Penny Wars, acquiring supplies, taking pictures of the events, and transporting students to the community service. I was present at all Ag Advisory Committee meetings to help set up and run the meeting. Many times, I would be responsible for helping the students develop the presentations for the meetings. Project supervision was part of my duties. I coached the following judging teams while at Bakersfield High School: Opening and Closing Teams, Creed, Job Interview, Agri Science Fair Projects, Novice Record Books, Best Informed Greenhand, and the Poultry Team. I worked with Jenny to update the Program of Activities, the Comprehensive Program Plan, and the FFA Reports. When it came to FFA applications, I was responsible for helping with the Star Admin, Counselor, Support, Advisor, and Reporter applications. Since I taught the freshmen and sophomores, it was my job to make sure they filled out their Greenhand and Chapter Degree Applications. While I did not teach the juniors and seniors, I would help with their State Degree Applications when they State Degree Work Days. Other applications that I worked with students on are Sectional and Regional Officer Applications and Proficiency applications. I was responsible for
attending professional development throughout the school year. This ranged from Sectional and Regional
CATA meetings to Summer CATA Conference and any other professional develop through Bakersfield High
School. For example, I had to attend the CTE Career Pathways Symposium in 2016.
### Section I
Bakersfield High School Agriculture Department
Staff Assignment Chart

<table>
<thead>
<tr>
<th>General Assignments</th>
<th>Eyraud</th>
<th>Qu.</th>
<th>Wilke</th>
<th>Batt (Retired)</th>
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<tr>
<td>FFA Executive Meetings</td>
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<td>Band/Choir/Talent</td>
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<td>State Superior Chapter</td>
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<td>StarAdmin, Counselor, Support, Advisor, Reporter</td>
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<td>Greenhand Degrees</td>
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When I was absent from my classroom for FFA events, field trips, or professional development, I would have to prepare substitute teacher plans for my substitute. Our school administration required that we left all of our plans for the substitute in a red folder. The folder had to include the following paperwork: printed roll sheets for each class, a memorandum from the dean’s office, the school’s disaster plan and standardized emergency management system handout, roll sheets for students who are absent during an evacuation, and plans for what the substitute was required to do with the students that day. In my substitute plans, I wrote out the classroom norms and expectations. I also left any special instructions and students who were TA or could help the substitute out. After explain the class norms, the lesson plan for the day was explained for each class. If there were handouts or materials to be given to the students, I would paper clip them and label them with sticky notes so the substitute would know how to distribute the information. At the end of my plans, I would ask for feedback on my classes and leave my phone number in case the substitute had questions. I would also leave a seating chart for the substitute.
Hello and thank you for subbing for me today. Here is a little bit about my classes to help you through the day.

**Rules**

1. No cell phones in class. Students are given one warning. If it appears again, it is taken away. I do allow them to listen to music if they are working on their assignment.
2. Students have assigned seats and need to be in them.
3. If you need to call security, the extension for the dean office is 71013.
4. If students need a pencil, he or she needs to borrow one from another classmate. No one is allowed to be behind my desk.
5. Please walk around and make sure the students are completing their assignments.
6. Please have the following students check and put the chromebooks away.
   i. Period 1- Jesus Perez & Rosa Arrellano
   ii. Period 2- Diana Robledo & Xiclali Melgoza
   iii. Period 3- Grecia Camorlinga & Elyse Heredia
   iv. Period 6- Jasmin Amaro & Tynadie Coffee
   v. Period 7- Anthony Romero & Hugo Antonio
7. The chromebooks will need to be put in the safe room at the end of the day. Mrs. Wilke can help direct where that is. Thank you!

**Lesson Plan for Ag Soils and Sustainable Ag**

1. Hello and welcome to my class. Here is what the students are working on in class today.
2. Ag Soils
   a. All students will be working on their speeches for their finals.
   b. They will be using the Chromebooks. The Chromebooks will need to be put away in their correct spots at the end of the period.
   c. They will be working on the outlines for their speeches and be turning the outlines in through google docs today.
3. Sustainable Ag (2, 6, and 7 period)
   a. Their assignment is on Google Classroom. They will be using the Chromebooks. They will need to create a Prezi or PowerPoint for genetics. It is due tomorrow at the end of class.

Please leave a note about my classes. Please leave a note about any students who are misbehaving or deserve recognition for standing out. If you have any questions, please call me at 444-5484.

Thank you!

Amanda Ou
Memorandum from the Dean’s Office

The following list includes a few helpful hints in working with the Dean’s Office while you are on campus today.

1. Please call the Dean’s Office at 71013 for any questions/concerns/behavior issues—we will send a security guard to assist if necessary.
2. If you confiscate ANY item from a student, please call the Dean’s Office ASAP to have the item brought to the Dean’s Office. This includes cell phones, MP3s, iPods, e-readers.
3. If you send a student out of the classroom, please ensure they have either the teacher’s classroom pass OR a pass with the student’s name, date, time, and teacher’s name with your signature.
4. If you need a student escorted to the Dean’s Office for behavior, include (preferably written) a reason for the escort so the appropriate consequence can be administered.

Thanks for all that you do. Have a wonderful day!

BHS Dean’s Office

Ext. 71013
2015-2016

BAKERSFIELD HIGH SCHOOL DISASTER PLAN AND STANDARDIZED EMERGENCY MANAGEMENT SYSTEM
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6. APPENDIX B  
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# CRISIS RESPONSE TEAM OVERVIEW

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<td>Cheyenne Bell</td>
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<td>Stephanie Smith</td>
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<td>Lori Martinez</td>
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<td>Yadira Garza</td>
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<td>Tere Quintana</td>
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See Appendix A for additional information

i. CHAIN OF COMMAND AND AREAS OF RESPONSIBILITY
ii. EXPLANATION OF CHAIN OF COMMAND AND AREAS OF RESPONSIBILITY
iii. DISASTER PLANS TEAM DUTIES

Disaster Plan - Page 3
1. Duck and Cover Procedure

A. Students and teachers are to perform the duck and take cover procedure. If we receive any pre-warning that an incident might occur we will sound the siren. If there is no pre-warning, the teacher should use their own discretion as to when the procedure is necessary.

   i. **DROP** to the ground (before the earthquake drops you!),
   
   ii. Take **COVER** by getting under a sturdy desk or table, and

   iii. **HOLD ON** to it until the shaking stops.

B. Remain in classrooms and wait for further instructions. Do not leave the classroom until you receive orders to leave, unless you feel it becomes a life-threatening situation.

C. Teachers and other staff members (instructional assistants) who have free periods are to report to the staff room, Warren Hall basement, and await assignments.

D. Staff members who do not have specific assignments are to remain at their work stations.

E. Students who are not assigned to class are to report to the main cafeteria.
Federal, State, and local emergency management experts and other official preparedness organizations all agree that “Drop, Cover, and Hold On” is the appropriate action to reduce injury and death during earthquakes. Great ShakeOut Earthquake Drills (www.shakeout.org) are opportunities to practice how to protect ourselves during earthquakes.

You cannot tell from the initial shaking if an earthquake will suddenly become intense...so always Drop, Cover, and Hold On immediately!

- **DROP** to the ground (before the earthquake drops you!),
- **COVER** your head and neck with your arms and seek shelter by getting under a sturdy desk or table if nearby; and
- **HOLD ON** to your shelter and be prepared to move with it until the shaking stops.

If there is no table or desk near you, drop to the ground and then if possible move to an inside corner of the room. Be in a crawling position to protect your vital organs and be ready to move if necessary, and cover your head and neck with your hands and arms.

Do not move to another location or outside. Earthquakes occur without any warning and may be so violent that you cannot run or crawl. You are more likely to be injured if you try to move around during strong shaking. Also, you will never know if the initial jolt will turn out to be start of the big one...and that’s why you should always Drop, Cover, and Hold On immediately!

These are guidelines for most situations. Read below to learn how to protect yourself in other situations and locations, or visit www.earthquakecountry.org/step5.

**If you are unable to Drop, Cover, and Hold On:** If you have difficulty getting safely to the floor on your own, get as low as possible, protect your head and neck, and move away from windows or other items that can fall on you.

**In a wheelchair:** Lock your wheels and remain seated until the shaking stops. Always protect your head and neck with your arms, a pillow, a book, or whatever is available.
A2. Lock Down Procedure

Code Word: “Lock Down”

In the event of an emergency or serious incident, the code word “Lock Down” will be communicated over the intercom system. Initiating the code word will be an indication that an emergency or incident is taking place that warrants serious attention and can potentially threaten lives. This would include emergencies or incidents that involve bomb threats, hazardous materials, civil unrest, riots, hostage situations, weapons possessions and/or an armed individual/s on campus. It should be taken very seriously and teachers and staff members should take the following actions.

1. **Lock Down** is a holding pattern. All personnel are to remain in their assigned areas until the situation can be assessed by the administration and a course of action can be determined.

2. Teachers with students in classrooms are to remain there and wait for further instructions. Secure the classroom by locking entry doors and securing windows. Move students away from all entry areas and windows and pull curtains shut. **DONOT** leave the classroom until you receive instructions to leave.

3. **DO NOT ALLOW STUDENTS TO LEAVE YOUR CLASSROOM.** If you are experiencing difficulty, notify the office immediately. Also, **DO NOT** leave the classroom even if the regular bell sounds to dismiss class. You must remain inside the class until an “ALL CLEAR” signal has been given.

4. Wait for instructions. During this time classified and certificated personnel are to reassure students that the staff is merely taking these precautions to ensure their safety and well-being. **PLEASE DO NOT TIE UP COMMUNICATIONS SYSTEMS. THEY ARE FOR EMERGENCY USE ONLY.**

5. Teachers and other staff members who have free periods should secure themselves in the nearest available room and stay there until an “ALL CLEAR” signal is given.

6. Information regarding the situation will follow as the situation warrants.

7. If at any time a teacher or staff member makes an observation that they feel may be pertinent to the situation at hand, they should make every effort to communicate this information to the administration office as soon as possible, without putting themselves or students in danger.
DISASTER PLAN "B" - ALL SCHOOL EVACUATION

A. It has been determined that all buildings must be evacuated.

B. When the announcement is made to evacuate, by intercom or messenger, you must lead your class to your Assigned Evacuation Areas or Morrow Field.

DISASTER PLAN - B1. Evacuation Areas

DISASTER PLAN - B2. Morrow Field

See Appendix B for additional information

i. THE TEACHER BUDDY SYSTEM

ii. TEACHER BUDDY SYSTEM ASSIGNMENTS
B1. Assigned Evacuation Area Plan

A. If it becomes necessary to evacuate buildings due to Fire Alarm, Disaster Plan “C” will be put into effect. When the announcement is made to evacuate (by the intercom system or messengers) teachers must lead their classes to the assigned evacuation area. They should take the shortest, safest available route. When arriving at the evacuation area, report to the person in charge. Teachers should take roll and determine class status. Report any injuries and any people who need assistance.

1. Evacuation Area 1: “G” street between the administration building and the parking lot. Set up barricades to close the street at California Ave. and 14th streets. (Keep students away from overhead power lines in that area). People in charge: Katie Price & Alicia Olejnik.
   a. The following areas report to Evacuation Area I: Administration and Warren Hall classrooms: 4, 5, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 111m 112, 113, 115, 116, 117, 123, 124, 125, 211, 212, 213, 215, 216, 217, 222, 223, 224, SAB.

2. Evacuation Area II: “G” street between 14th and 13th streets. Person in charge: Paul Ogilvie, Dale Olivera & Matt Jones.
   a. The following areas report to Evacuation Area II. All Harvey Auditorium classrooms.

   a. The following areas will report to evacuation area III: All Industrial Technology classes.

   a. The following areas will report to Evacuation Area IV: Warren Hall 1, 2, 3, 14, 15, 16, 17, 101, 102, 103, 104, 105, 106, 107, 110, 119, 120, 121, 122, 201, 202, 203, 204, 205, 206, 207, 209, 210,, 217, 218, 219, 220, 221.

5. Evacuation area V: Science Field south end. Person in charge Nicole Stuebbe & Juan Leyva.
   a. The following areas will report to Evacuation Area V Science & Ludden Hall.

   a. The following areas will report to Evacuation Area VI: Spindt Hall, Library, Physical Education & Cafeteria

Disaster Plan - Page 8
B2. Morrow Field Evacuation Plan

A. When the announcement is made to evacuate, by intercom or messenger, you must lead your class to your assigned area in Morrow Field. This is the play field between Griffith field and the tennis courts. Make sure you take your roll sheet with you. Each teacher will be assigned a number. The number will be attached to the fence. Line up your students and take roll. Keep students lined up until the drill is over. **Send a messenger with “Student absent during Evacuation sheet” to Rachel Long who will be located on the east side of Morrow Field.**

B. Report any injuries to Adrienne Carothers. She will be located on the east side of Morrow Field.

C. All Classified employees will report to Mary Langston to check in. She will be located on the east side of Morrow Field.

D. A decision will be made whether to close school or return to class.

E. If school is closed, the process of reuniting students with parents will begin.

F. See map on following page for the number you have been assigned.

In case of an **ALL SCHOOL EVACUATION**, students will **ALWAYS report to their 2nd period teacher’s number on Morrow Field, regardless of the period.**

Example, if we evacuated 5th period, students would go to Morrow Field and report to their 2nd period’s teacher. This will make it easier for the student because they only have to remember one number and they already know where this number is located.

**It is important to explain this process to your 2nd period students in case of a real emergency.** Please keep the new yellow student evacuation absence sheet in your red folder for future use.
DISASTER PLAN "B" – CLEARING FACILITIES PROCEDURE

A. If it becomes necessary to evacuate all school buildings, the following personnel should report to assigned areas and assume control. They will be responsible to sweep their assigned areas and see that their area is clear of people. They should report to the F.O.C. the condition of the buildings, report any injuries to people and request any assistance that is necessary.

1. Counseling and Administration
   a. Teddy Jenkins
2. Ludden Hall
   a. Roman Fabian
3. Spindt Hall
   a. Penny Johnson
4. Warren Hall
   a. Joe Palacios  (second floor)
   b. Joe Palacios/Teddy Jenkins (main floor)
   c. David Carter (basement)
5. Harvey Auditorium
   a. Steve Perryman
6. Boys' and Girls Gym
   a. Brigette Leung
7. Industrial Technology
   a. Steven Thompson
8. Science Building
   a. Jesse Aranda
9. Student Activity Building
   a. Jeff Scott (ext. 85)
10. Griffith Stadium
    a. Stephanie Smith (ext. 32)
11. Cafeteria
    a. Lorena Pena (ext. 54)
12. Custodial Office and Boiler Room (ext 44)
    a. Gabriel Ramos
    b. Juan Huerta
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Disaster Plan - Page 11
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DISASTER PLAN “C"- SPECIAL CIRCUMSTANCE PLANS
The following are the plans to be followed when different types of potentially dangerous problems or circumstances occur.

A. Enemy attack.
   1. If we receive information of a potential enemy attack or any enemy attack occurs.
      a. Short blast of siren will be sounded and all staff and students are to perform the duck and cover procedure.
      b. Students and teachers are to remain in classrooms until further instructions are received through the intercom or by messenger or until the all-clear is sounded (a continuous ring of class bells or intercom tone.)
      c. If instructions are received that school is to be closed, instructions should be followed as stated in the transportation section.

B. Air Pollution
   If a dangerous local air pollution condition occurs, the following steps should be followed.
   1. Students and staff members are to remain in the classrooms until an assessment of the situation can be made. Further instructions will be sent by the intercom system or by messenger.
   2. The principal or disaster coordinator will assess the situation to determine if school should be closed. If time allows, outside advice should be sought. Call the Bakersfield Fire Department, 326-3098. For information on handling of hazardous materials check manual regarding "Handling of Hazardous Materials in Surface Transportation" located in Sydney Peterson's office.
   3. If sudden and very specific danger develops, chemical explosion in the rail yards, etc. students and staff will be advised by messenger or through intercom that an immediate evacuation is necessary and will be instructed as to the route to be taken. The police and fire departments will be called and notified of the situation.
   4. Staff and students will be instructed to proceed on foot to one of the following areas and further instructions will be given when people reach the predetermined areas. Transportation will be provided for bus student from the assembly area.
      a. SaundersPark (to the West).
      b. BealePark (to the South).
      c. Civic Auditorium/RaboBank Arena (to the Northeast).
      d. VistaHigh School (to the Southeast).
   5. If a dangerous explosive or gaseous condition develops, the plant supervisor will be advised to extinguish all heaters, boilers, and burners and prepare to turn off all utilities. Windows should be closed and air conditioning turned off, if situation has occurred outside. Utility companies will be notified of the situation.
   6. If school must close and time allows, the procedure in transportation section should be followed.
   7. The District Office will be notified of conditions and the action taken.
C. Bomb Threat
If bomb threat is received the following procedures should be followed.
   1. The assistant principal of administration will be notified immediately.
   2. The dean’s office and the security agent will be notified.
   3. The school action will depend on the nature and content of the threat. If the
decision is made to conduct a search, the following actions are to be taken.
   a. If location is specified:
      i. if evacuation is deemed necessary, personnel and students in
         affected area will be notified to evacuate the area either by
         messenger, fire alarm, or through the intercom.
      ii. a search of the designated area will be made by staff or police.
   b. If location is general:
      i. if evacuation is deemed necessary, personnel and students will be
         notified to evacuate the area by the sounding of the fire alarm
         system.
      ii. search of the school will be made by the staff or police.
      iii. the regular bell and intercom system should be shut off until the
           school buildings are considered safe to return to.

D. Campus Disorder
In the event of a campus disorder the following action will be taken:
   1. An administrator will alert the staff by special bulletin of serious problems
      developing on campus. A description of the problem and the action being taken and
      the expected action to be carried out by the staff should be stated.
   2. The dean of students will communicate with the Bakersfield Police Department to
      describe the incidents or problems, the action being taken by the school and
      discuss the possible need for police involvement.
   3. The dean of students will inform the campus security agent and the campus
      supervisors of the incidents or problems that have occurred and place them on
      special alert, if necessary.
   4. Contingency plans will be activated, appropriate to the extent of the problems.
   5. The Superintendent and the district’s public information office should be notified
      of the situation.

E. Earthquake
If an earthquake occurs, the following actions should be taken by all personnel within the
buildings.
   1. The teachers and personnel within the building should assume authority and take
      immediate action.
      a. All people must perform the duck and cover procedure. Move away from
         the windows and take cover under desks, tables, etc. If not available, move
         into doorways and against inside walls and cover face and head as much as
         possible.
      b. Keep students in the classroom unless serious damage has occurred.
      c. If injuries occur in the classroom, give emergency first-aid and send a
         messenger to the office stating the nature of the injury and request
assistance. DO NOT move seriously injured, unless their lives are in jeopardy.

d. If evacuation of the buildings are necessary, Disaster Plan "B" will be put into operation. Teachers will lead their students from the buildings to predetermined evacuation areas. Give special consideration to exit routes. DO NOT return to buildings until they are declared safe.

2. An administrator or the civil defense coordinator should these procedures:
   a. Notify the police and fire departments, if assistance is necessary.
   b. Notify plant supervisor to check all utilities and stand by to turn off utilities, if deemed necessary.
   c. Notify utility companies of any suspected gas or water line leaks or downed electrical lines.
   d. Secure water tower tank to save water for future needs.
   e. Assess the damage to buildings and injuries to personnel and the students and request assistance, if needed.
   f. Seek advice of competent authorities about the safety of buildings before returning personnel and students to the buildings.
   g. The Superintendent and the district's public information office should be notified of the situation.

F. Explosion
The following procedures should be followed if an explosion should occur on campus:

1. The teacher or personnel within the building should assume authority and take immediate action
   a. Direct students to seek cover, if another explosion is anticipated.
   b. Notify the office of damage to building and injuries to personnel or students, move to an area of safety, and teachers should give emergency first-aid and ask for assistance, if necessary.
   c. If explosion has occurred within a building, the fire alarm will be sounded. Students move to an area of safety and teachers should direct students and maintain control.

2. The administrator or disaster coordinator should follow the following procedure:
   a. Notify the police and fire departments and ask for assistance, if necessary.
   b. Notify plant supervisor to check all utilities and secure, if necessary.
   c. Notify the utility companies of any gas or water leaks and any downed electrical lines.
   d. Determine damage to buildings and injuries to students and personnel.
   e. The Superintendent and Public Information Officer should be notified of the situation.
   f. Seek advice of competent authorities about safety of buildings before returning personnel and students.
G. Fire
The following procedure should be followed, if a fire occurs on campus.

1. Contact administrative office by intercom, telephone (Dial "O"), or by messenger and identify yourself and give exact location and nature of the fire.
   a. Activate fire alarm in the room.

2. Personnel and students will be warned of the fire by the sounding of the fire alarm system, a continuous sounding of the horn.
   a. Personnel and students are to evacuate the building according to posted instructions and are to remain at a safe distance of 50 feet from the buildings to allow immediate access to emergency personnel and vehicles.

   b. Personnel and students are to evacuate buildings on ALL fire alarm signals. You'll be notified when the drill or the emergency is completed and then you may return promptly to class.

3. The administrator or civil defense coordinator should follow the following procedures:
   a. Notify the police and fire departments and ask for assistance, if necessary.
   b. Notify utility companies of any gas leaks or downed electrical power lines.
   c. Determine damage to buildings and injuries to students and personnel.
   d. Notify the Superintendent and Public Information Officer of the situation.

H. Flood/Wind Storm
In the event of a flood or wind storm, the following procedures should be followed:

1. Prepare for a power outage.
2. Contact transportation departments to schedule transportation.
3. Ask advice of authorities and district personnel regarding closing of school.
# APPENDIX A - CHAIN OF COMMAND AND AREAS OF RESPONSIBILITY

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<tr>
<td>David Reese</td>
<td>Chief Administrator</td>
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<td>Sydney Peterson</td>
<td>Plan &amp; Intelligence</td>
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<td>Cheyenne Bell</td>
<td>Operations</td>
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<td>Lorna Wilkerson</td>
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APPENDIX A - EXPLANATION OF CHAIN OF COMMAND AND AREAS OF RESPONSIBILITY

CHAIN OF COMMAND

A. The following chain of command is to be followed in the event that any part of the Disaster and Special Circumstance Plan is put into operation.
   1. Chief Administrator (overall supervision) – David Reese, Principal
   2. Disaster Plan Coordinator – Sydney Peterson, Assistant Principal
   3. Coordinator of Communications – Cheyenne Bell, Assistant Principal
   4. Coordinator of Security (Security, Traffic Control and Rescue) – David Carter, Dean of Students, Police Officer, Investigator

II. THE DISASTER AND SPECIAL CIRCUMSTANCE PLAN PERSONNEL ASSIGNMENTS

A. The following personnel shall report to the assigned areas and assume the assigned responsibilities for implementing various emergency plans.
   1. Principal's Office (ext. 30), will act as the Emergency Operations Center (E.O.C.)
      a. David Reese
      b. Sydney Peterson
      c. Cheyenne Bell
      d. David Carter, Police Officer
   2. Administration Building lobby will act as the Communications Center (ext. 30).
      a. Lorna Wilkerson
      b. Rachel Long
      c. Anne Woody, Lorna Wilkerson
   3. Dean's Office (ext. 13), will act as the Security and Traffic Control Center.
      a. David Carter
      b. Officer Steve Hansen
      c. Lori Martinez
      d. Campus supervisors will be assigned to areas as needed.
   4. Custodial Office, (ext. 44), will act as Damage and Fire Control Center and will evaluate damage to various areas and attempt to correct the problems.
      a. Gabriel Ramos
      b. Juan Huerta
      c. All custodians and grounds men will be assigned as needed.
   5. Health Office will act as the First Aid Center, (ext. 33), as well as the Stadium (ext. 32).
      a. Adrienne Carothers
      b. Stephanie Smith
   6. Cafeteria will provide food and water to personnel, if necessary, (ext. 54)
      a. Lorena Pena
      b. Cafeteria staff will be assigned as needed.
      c. 

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APPENDIX A – DISASTER PLANS TEAM DUTIES

A. Emergency Operations Center
   1. Duties
      a. Account for all staff and students.
      b. Implements and coordinates the emergency operations.
      c. Controls internal and external communications
   2. The following supplies and equipment are located in the Assistant Principal's Office (Sydney Peterson):
      a. Copy of Disaster Plan
      b. Battery operated radio, two-way radio and bull horn.
      c. Flashlights
      d. Maps of school and maps of all utility shut off valves.
      e. The following rosters: Staff roster, room location of each teacher.
      f. Supplies for keeping logs.

B. The Communications Center
   1. The Communication Center is equipped with a Civil Defense Alert Monitor System. The school will be notified by this system, if the Civil Defense Headquarters has any knowledge of a pending disaster or attack.
   2. If one of the disaster plans is put into effect the following plan should be activated.
      a. Turn off regular bell and intercom tone system
      b. Set up portable radio from the cabinet in Sydney Peterson’s Office to monitor local radio news broadcasts for further information. (Tune radio to "Conelrad A, 640 or 1240")
      c. The intercom system will be controlled by Sydney Peterson’s secretary, with only authorized calls being made. If electrical power is lost request the Damage Control (custodial department) to set up a portable generator to provide power for the intercom system.
      d. The telephone switchboard system will be controlled by Sydney Peterson’s secretary with only authorized calls being made.
      e. If electronic communication systems are inoperable, written or typed messages will be transmitted by staff members.
      f. The principal or the disaster coordinator will communicate with emergency agencies as needed

C. First-Aid Team
   1. Administers first aid and records information on extent of injuries and first-aid administered. Determines need for medical assistance. Insures that the following supplies are available.
      a. First-aid supplies
      b. Emergency cards
      c. Health records

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APPENDIX A - DISASTER PLANS TEAM DUTIES - (CONTINUED)

D. Campus Security Team
   1. Proceed in an orderly and pre-established sweep pattern while checking each shop, office, classroom, storage room, auditorium, etc. visually, vocally and physically. Report the location of all injured people to E.O.C.
      a. The following equipment will be available in Sydney Peterson’s office: master keys, maps and lists of areas to be checked, flashlights, etc. A person with a two-way radio will be assigned to each sweep team as they become available.
      b. Is responsible for security, traffic control, routing fire, police and ambulances to the area of need.
         a. All members of the team will be equipped with two-way radios.
         b. Will have the following supplies and equipment available: barricades to block of streets, materials to make signs, master keys to buildings.

E. Damage Control, Fire and Rescue Team
   1. Is responsible for damage control and rescue.
      a. Secure utilities when lines are broken or situations warrant that utilities be secured.
      b. Secure water in water tower to save for future needs.
      c. Set up portable generator to provide power for intercom system.
      d. Stand by with the following equipment for assignment: fire extinguishers, bolt cutters, shovels, saw and other tools, ropes, portable generators, and flashlights.

F. Cafeteria Team
   1. Will be responsible for providing food and drink to workers and victims.

G. Staff and Student Accounting Team (includes all teachers)
   1. Responsible for the following:
      a. Ascertains the extent of injuries and capabilities for class and staff evacuation.
      b. Determines the need for assistance for neighboring class or staff member.
      c. Evacuates classroom building using predetermined routes to specific evacuation areas.
      d. Takes roll and reports class status to E.O.C.
      e. Supervises and reassures student and staff throughout the duration of the emergency.
APPENDIX A - DISASTER PLANS TEAM DUTIES - (CONTINUED)

VII. TRANSPORTATION

1. If disaster plan is put in to effect the following procedures should be followed:
   a. When it is determined the school should be closed, students will be dismissed to go home. Parents should be notified by the public media of the action being taken.
   b. Students who ordinarily ride school buses will be informed when buses will run. The disaster coordinator will communicate with the transportation office to arrange bus schedules.
   c. If buses will not run, bus students will be advised to make arrangements for their own transportation.
   d. School owned vehicles should be brought to the administration building and will be used as directed by the principal or the disaster coordinator. (Gas/oil should be checked.)

VIII. DISSEMINATION AND TESTING OF PROCEDURES

1. Copies of the Disaster and Special Circumstance Plans shall be given to each certificated and classified staff member.
   a. Personnel are to review the part in each plan that affects them and keep plans readily available. Teachers keep copy in red book.
   b. The plans will be reviewed each year at the beginning of the school year meetings.
   c. Portions of the plans which effect students will be reviewed with students.

2. Drills and testing procedures will be conducted each school year.
   a. A record of each drill will be kept.
APPENDIX B - THE TEACHER BUDDY SYSTEM

When a disaster has occurred or a state of emergency has been declared all employees are considered to be disaster workers and would be expected to remain on duty until they can be relieved or are released to leave school.

You should prepare your family for this situation. Discuss with your family members what they would be expected to do, if a major disaster occurred. It is expected that if a major earthquake occurred most lines of communications would be cut off. There would also be little chance of reaching home by car immediately. It is also believed that elementary school children will be retained at school until they can be picked up by their parents. School buildings are generally considered to be the safest areas.

Each employee will be teamed up with another employee located nearby. They will be expected to check on the condition of each other, if a disaster occurred. Teachers would work together with another teacher (buddy system) to help them carry out their responsibilities. In case of an evacuation of school building(s), one teacher could lead a large group out while the other deals with hysterical or injured students. When they reach a safe evacuation area one teacher would relieve the other to seek further instruction or to attend personal needs or in long term situations, to check on their own families or homes. Students and staff members should not leave until they are accounted for and have received information regarding road conditions, etc.
# APPENDIX B - TEACHER BUDDY SYSTEM ASSIGNMENTS

## FIRE DRILL EVACUATION PLAN

### TEACHER BUDDY SYSTEM ASSIGNMENTS

<table>
<thead>
<tr>
<th>Evacuation</th>
<th>Area 1</th>
<th>Area 2</th>
<th>Area 3</th>
<th>Area 4</th>
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<tr>
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<td>Olejnık, A.</td>
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<th>WH ADMIN</th>
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Disaster Plan - 24
STUDENTS ABSENT DURING EVACUATION

TEACHER __________________________ DATE ________________

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<th>Please print student name</th>
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Disaster Plan - 13
Supporting Material 19
Program Completer

FFA members are considered Program Completers if they meet the following guidelines:

*Completion of the following standards identifies an agriculture program completer:*

**FFA PARTICIPATION**

- Involved in five activities per year as listed on the student’s tentative individual career plan.
- Served as a chairperson for a major activity identified in the Chapter’s Program of Activities.
- While involved in the FFA for a minimum of three years, the student must earn a total of 700 points according to Tehachapi’s Point System.
- Earned and received the Greenhand and Chapter FFA Degrees.

**SUPERVISED OCCUPATIONAL EXPERIENCE PROGRAM (SOEP)**

- Minimum of $1,000.00 project earnings.
- Minimum of 500 hours of self labor.
- Individual SOEP increased in scope and/or diversity each year and is related to the student’s individual career plan.
- The SOE must be at least four months in duration each year during the 10th, 11th, and 12th grade years.

**CLASSROOM INSTRUCTION**

- Completed a minimum of 720 classroom hours of course work in Vocational Agriculture.
- Maintained at least a 2.00 grade point average in all course work at the high school.
- Earned a grade of “C” or better in all agriculture courses.

**GENERAL CONSIDERATIONS**

- Developed attitudes and characteristics which are desirable for employment.
- Participated in at least one mock or actual job interview.

Proficient in at least 70% of the proficiency standards in the chosen area of instruction
Supporting Material 20
Community College Articulations

Currently we only have one articulation agreement with a community college. The Ag Mechanics class has an articulation agreement with Bakersfield College. This agreement was established in 2016. It gives students who take Ag Mechanics 1 three units of college credit when they attend Bakersfield College.
DATE: 7/24/2016
INDUSTRY SECTOR: Agriculture and Natural Resources
PATHWAY: Agricultural Mechanics
CBEDS TITLE: Introduction to Agriculture Mechanics
CBEDS Code: 4031

HOURS:

<table>
<thead>
<tr>
<th>Total</th>
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<th>Laboratory/CC/CVE</th>
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<tbody>
<tr>
<td>180</td>
<td>Hours 68</td>
<td>Hours 112</td>
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COURSE DESCRIPTION: Ag Mechanics I (Beginning Ag Mechanics) is a course designed to fulfill the student’s elective requirements from KHSD. The course is a year-long course which is designed to introduce the student to basic shop skills necessary to develop a well-rounded agricultural mechanics program. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program. The course is also a pre-requisite to the second course in the Ag Mechanics Pathway.

PREREQUISITES: In order to maintain enrollment in this course student must pass the Shop Laboratory Safety Assessment.

<table>
<thead>
<tr>
<th>High School Name: All High Schools with AG Mechanics</th>
<th>Site Prerequisite: a designated shop area</th>
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A – G APPROVAL:  Yes [x] No  Desired APPROVAL AREA: G

ARTICULATION OR DUAL ENROLLMENT: BC
KHSD Career Technical Education Course of Study

<table>
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<th>College Name:</th>
<th>College Course Title:</th>
<th>Articulation or DE:</th>
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<td>KHSD: All High schools with Ag Mechanics</td>
<td>Bakersfield College</td>
<td>Introduction to Mechanized Agriculture (MCAG B2)</td>
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**LEVEL:**
- [ ] Introductory
- [X] Concentrator
- [ ] Capstone

**INDUSTRY RECOGNIZED CERTIFICATION:**

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<th>High School Name:</th>
<th>Name of Certification</th>
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<tbody>
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<td>KHSD: All High schools</td>
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</table>

**METHOD OF STUDENT EVALUATION:**
- [✓] Pre and Post test
- [✓] Student Projects
- [✓] Written work
- [✓] Observation record of student performance
- [✓] Completion of assignments and worksheets

**METHOD OF INSTRUCTION:**
- [✓] Lecture
- [✓] Group and individual applied projects
- [✓] Demonstration
- [✓] Field Trips
- [✓] Guest Speaker

**RECOMMENDED TEXTS:**

**A. Instructional Materials**  *(List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)*

Basic Text:


2nd and 5th editions acceptable
B. **Supplementary Instructional Materials** (List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)


*Farm Shop*, Wakeman and McCoy, McMillan.


*Wiring Simplified*, H.P. Richter, et. al.


---

**CALIFORNIA CAREER TECHNICAL EDUCATION MODEL CURRICULUM STANDARDS**


<table>
<thead>
<tr>
<th>KNOWLEDGE AND PERFORMANCE ANCHOR STANDARDS</th>
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</thead>
<tbody>
<tr>
<td><strong>Agriculture Mechanics</strong></td>
</tr>
</tbody>
</table>

### 0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Agriculture and Natural Resources academic alignment matrix for identification of standards.

### 2.0 Communications

Acquire and accurately use Agriculture and Natural Resources sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats. (Direct alignment with LS 9-10, 11-12.6)

2.1 Recognize the elements of communication using a sender–receiver model.

2.2 Identify barriers to accurate and appropriate communication.

2.3 Interpret verbal and nonverbal communications and respond appropriately.

2.4 Demonstrate elements of written and electronic communication, such as accurate spelling, grammar, and format.

2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.

2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

### 3.0 Career Planning and Management

Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)

3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.

3.2 Evaluate personal character traits, such as trust, respect, and responsibility, and understand the impact they
3.3 Explore how information and communication technologies are used in career planning and decision making.
3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.
3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.7 Recognize the importance of small business in the California and global economies.
3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate candidates.
3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options

4.0 Technology
Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Agriculture and Natural Resources sector workplace environment. (Direct alignment with WS 11-12.6)
4.1 Use electronic reference materials to gather information and produce products and services.
4.2 Employ Web-based communications responsibly and effectively to explore complex systems and issues.
4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.
4.4 Discern the quality and value of information collected using digital technologies, and recognize bias and intent of the associated sources.
4.5 Research past, present, and projected technological advances as they impact a particular pathway.
4.6 Assess the value of various information and communication technologies to interact with constituent populations as part of a search of the current literature or in relation to the information task.
4.7 Demonstrate the use of appropriate tools and technology used in the Agriculture and Natural Resources sector.

5.0 Problem Solving and Critical Thinking
Conduct short as well as more sustained research to create alternative solutions to answer a question or solve a problem unique to the Agriculture and Natural Resources sector, using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)
5.1 Identify and ask significant questions that clarify various points of view to solve problems.
5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.
5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.
5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety
Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Agriculture and Natural Resources sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)
6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
3. Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
4. Practice personal safety when lifting, bending, or moving equipment and supplies.
5. Demonstrate how to prevent and respond to work-related accidents or injuries; this includes demonstrating an understanding of ergonomics.
6. Maintain a safe and healthful working environment.
7. Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 Responsibility and Flexibility
Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Agriculture and Natural Resources sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)
1. Recognize how financial management impacts the economy, workforce, and community.
2. Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
3. Understand the need to adapt to changing and varied roles and responsibilities.
4. Practice time management and efficiency to fulfill responsibilities.
5. Apply high-quality techniques to product or presentation design and development.
6. Demonstrate knowledge and practice of responsible financial management.
7. Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
8. Explore issues of global significance and document the impact on the Agriculture and Natural Resources sector.

0. Ethics and Legal Responsibilities
Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms. (Direct alignment with SLS 11-12.1d)
1. Access, analyze, and implement quality assurance standards of practice.
2. Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Agriculture and Natural Resources industry sector.
3. Demonstrate ethical and legal practices consistent with Agriculture and Natural Resources sector workplace standards.
4. Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
5. Analyze organizational culture and practices within the workplace environment.
6. Adhere to copyright and intellectual property laws and regulations, and use and appropriately cite proprietary information.
7. Conform to rules and regulations regarding sharing of confidential information, as determined by Agriculture and Natural Resources sector laws and practices.

9.0 Leadership and Teamwork
Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Future Farmers of America (FFA) career technical student organization. (Direct alignment with SLS 11-12.1b)
1. Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
2. Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills, as applied in groups, teams, and career technical student organization activities.
3. Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school.
9.4 Explain how professional associations and organizations and associated leadership development and competitive career development activities enhance academic preparation, promote career choices, and contribute to employment opportunities.

9.5 Understand that the modern world is an international community and requires an expanded global view.

9.6 Respect individual and cultural differences and recognize the importance of diversity in the workplace.

9.7 Participate in interactive teamwork to solve real Agriculture and Natural Resources sector issues and problems.

9.8 Define the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.9 Identify the ways in which pre-professional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.10 Understand how to organize and structure work, individually and in teams, for effective performance and the attainment of goals.

9.11 Explain multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

9.12 Demonstrate how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

9.13 Participate in group or team activities, including those offered by the student organization, that develop skills in leadership, cooperation, collaboration, and effective decision making.

10.0 Technical Knowledge and Skills

Apply essential technical knowledge and skills common to all pathways in the Agriculture and Natural Resources sector, following procedures when carrying out experiments or performing technical tasks. (Direct alignment with WS 11-12.6)

10.1 Interpret and explain terminology and practices specific to the Agriculture and Natural Resources sector.

10.2 Comply with the rules, regulations, and expectations of all aspects of the Agriculture and Natural Resources sector.

10.3 Construct projects and products specific to the Agriculture and Natural Resources sector requirements and expectations.

10.4 Collaborate with industry experts for specific technical knowledge and skills.

10.5 Interpret and explain the aims, purposes, history, and structure of the FFA student organization and know the opportunities it makes available.

10.6 Manage, and actively engage in, a career-related, supervised agricultural experience.

10.7 Understand the importance of maintaining and completing the California Agricultural Record Book.

10.8 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the Agriculture and Natural Resources anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and through the FFA career technical student organization.

11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Agriculture and Natural Resources sector program of study.

1.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued
11.3 Demonstrate entrepreneurship skills and knowledge of self-employment options and innovative ventures.
11.4 Employ entrepreneurial practices and behaviors appropriate to Agriculture and Natural Resources sector opportunities.
11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.
## Introduction

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## Exploring Careers in Agricultural Mechanics

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## Using the Ag Mechanics Laboratory/Shop (Safety)

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## Ag Construction

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b. Tool ID
   i. Specific to wood and construction

c. Tool Safety
   i. General uses and practices

B. Measurement and Layout
   a. Tools
   b. Procedure

C. Bill of materials
   a. Calculating expenses
   b. Ordering the correct amount
   c. Recording expenses

D. Basic woodworking skills
   a. Selecting
   b. Cutting
   c. Shaping
   d. Joining
   e. Finishing
      i. Preparing wood and metal for painting
      ii. Selecting and applying coating materials

E. Types of fasteners
   a. Metal and wood

F. Loads
   a. Hitching
   b. Loading/Unloading
   c. Tying and securing a load
   d. Towing laws

### V. Principles of Electricity

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<td>ii. DC</td>
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<td>iii. Ohm's Law</td>
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### VI. Principles of Plumbing

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### District Office Use Only

**Course Code #: 5527**

**Approved by Board:**

#### KHSD Career Technical Education Course of Study

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<td>iii. Galvanized</td>
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<td>iv. Plastic</td>
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#### Introduction to Small Engines

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#### Cold Metal Work

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<td>C. Selecting, marking, cutting, and bending metal</td>
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BAKERSFIELD COLLEGE

SECONDARY-POST SECONDARY ARTICULATION AGREEMENT

Articulation Contract Date:

BC College: MCAG B2
Course: Intro to Mechanized Agriculture
Address: 1801 Panorama Drive
Bakersfield College
Bakersfield, CA 93305

Secondary
Course Name & #: Secondary
School:
Address:

A. COLLEGE COURSE DESCRIPTION:
This course covers basic mechanical skills in woodworking, cold metal, electricity, plumbing, concrete, and project construction skills as related to farm maintenance and repair. The use of hand and power tools skills as well as emphasis on safety practices for all mechanical areas are covered. A laboratory course is required.

B. UNITS: 3

C. PREREQUISITES: None

D. REQUIRED CONTENT FOR ARTICULATION:
Lecture
- Farm Construction work
- Measuring, marking
- Hand tools, their care, proper use and operation
- Power tools-how to operate, adjust, and repair
- Surveying, squaring and leveling tools
- Safety rules and considerations
- Blueprints
- Sketching
- Reading blueprints
- Construction materials
- Properties of metals, woods, etc.
- Figuring bills of materials
- Fasteners of all types
- Wood work
- Use and care of tools and machines used in wood working
• Selection and characteristics of different woods
• Paints
  • Types
  • Mixing
  • Application and clean up
• Sheetmetal
  • Layout
  • Cutting and bending
  • Soldering
  • Operation and care of sheetmetal tools
• Cold Metal
  • Use and sharpening of hand tools such as chisels, punches, scribers, taps, and dies
  • Operation and care of power metal working tools
  • Bending, drilling, marking, threading, and sawing metal
• Plumbing
  • Operation and care of plumbing tools
  • Types of fittings
  • Layout and measuring
• Concrete
  • Physical properties
  • Estimating quantities, figuring costs
• Electrical
  • Splices and connections
  • Lighting circuit, receptacle circuits
  • Safety with electricity

Lab
• Safety Standards
  • We will take a look at general shop safety including basic safety actions, safety colors, and emergency fire control.
• Tool and Equipment Safety
  • Students take a look at all the tools and equipment used in the laboratory, including proper use.
• Measurement and Blueprint Reading
  • Students will demonstrate basic measurement skills, blueprint reading as well as plan drawing.
• Wood Construction Project
  • Class will review all wood tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Wood Construction Project
  • Wood construction project continues.
• Sheet Metal Project
  • Class will review all sheet metal tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Sheet Metal Project
  • Sheet metal project continues.
• Cold Metal Project
  • Class will review all cold metal tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Cold Metal Project
  • Cold metal project continues
• Plumbing Project
  • Class will review all plumbing tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Plumbing Project
  • Plumbing project continues.
• Concrete Project
  • Class will review all plumbing tool safe and proper use. Students will read plans and develop a project according to supplied plans.
• Concrete Project
  • Concrete project continues.
• Electrical Project
  • Electrical project class will review all plumbing tool safe and proper use. Student will read plans and develop project according to supplied plans.
• Electrical Project
  • Electrical project continues.

E. COMPETENCIES AND SKILL REQUIREMENTS REQUIRED FOR ARTICULATION:
• Develop an accurate construction plan that includes a bill of materials, project measurements, machine setups and material types for a given project to be constructed in class.
• Identify safe shop practices and potentially hazardous safety conditions in the work environment.
• Illustrate knowledge of concrete by forming, pouring, screeding, and finishing a slab to a proper size and slope.
• Assemble an electrical wiring board or display as per instructions.

F. MEASUREMENT METHODS (include any industry certification or licensure):
• Comprehensive Quizzes and Exams
• Written Critical Thinking Scenarios
• Problem Analysis and Solution
• Research and Term Papers
• Performance Evaluation

G. TEXTBOOKS OR OTHER SUPPORT MATERIALS (including Software)
H. PROCEDURES AND/OR CRITERIA FOR COURSE ARTICULATION:

Bakersfield College is committed to a comprehensive articulation program linking secondary and post-secondary instruction and learning outcomes to ensure high school students make a smooth transition from high school to college without experiencing delay or duplication of learning. Tech Prep articulated courses offer students the opportunity to earn college credit for eligible career and technical education (CTE) courses while still in high school. These courses are designed to give the student the same skills they would gain by taking a similar course at Bakersfield College. The articulated course applies toward high school graduation and a college degree or certificate while also preparing the student for a career.

This Articulation Agreement is approved based on the following criteria:
1. The College faculty in the appropriate disciple has determined this course to be comparable to a specific college course and have signed the agreement.
2. This agreement will remain valid for 3 years as long as there are no changes to course content by either party involved.
3. High school students must successfully satisfy all required course competencies at the "B" or better grade level as certified by the appropriate high school designee.
4. With respect to articulated high school courses, credit by examination will only be granted when the final examination for the high school course has the approval of knowledgeable college faculty in the same field, and the student passes this examination with a satisfactory grade ("A", "B", or "C" level).
5. The final exam requirement will be met by the high school final exam as approved by the College faculty in the appropriate disciple.
6. The student receives college credit using the high school grade, if a full year course the second semester grade will be posted to his/her college transcript.
7. The College credit will only be transcripted if a Bakersfield College application is completed when the student enrolls in the articulated course.
8. Articulated college credit may be awarded, up to three years after completion of the course, to those students that did not complete step 7.

In addition,
9. High school teachers teaching an articulated course will advise students to complete an on-line Bakersfield College application, so college credit can be awarded.
10. Students desiring college credits will identify themselves through the CATEMA system.
11. Bakersfield College will create CRN's for the BC courses to be awarded.
12. At conclusion of the course, semester or year depending on course duration, course grades are submitted to College via CATEMA system. Students who have met all course and the articulation requirements and whom high school teachers recommend will receive college credit.

Agreement was based on Statewide Career Pathway Project Template: ☐ Yes ☐ No

Name of Template Used:

This Articulation Agreement will be reviewed if there is a change to course content by either party and/or to exceed 3 years.

HIGH SCHOOL SIGNATURES:

Teacher/Department Chair ____________________________ Date ____________

Assistant Principal/Designee ____________________________ Date ____________

COLLEGE SIGNATURES:

Faculty ____________________________ Date ____________

Department Chair ____________________________ Date ____________

Dean of Instruction ____________________________ Date ____________

Executive VP, Academic Affairs/Designee ____________________________ Date ____________
Supporting Material 21
Reimbursement Processes

There were two reimbursement processes that I used while working at Bakersfield High School. The first process was used if I bought supplies for the program with my own money. I would have to fill out a reimbursement form that had to be signed by one of the other ag teachers and an FFA chapter officer. With the form, I had to submit receipts and bank statements if the purchase was not made in cash. This form was then sent to the financial office for approval. If it was approved, then I would receive a check in the mail. This was mostly used for when I might need to buy supplies for banquet or chapter meetings. The funding source was usually our ASB account. The second reimbursement process was for when I had to pay out of pocket for hotel rooms, registration, parking, and food during FFA events, conferences, field days, field trips and profession development. I would first have to record these expenses on my Request to Be Absent. After the form was approved by the district, they would send me an additional form to fill out. I would submit this form to the district with my receipts to be reimbursed.
Supporting Material 22
Comprehensive Program Plan

In 2016, it was my responsibility to update our Comprehensive Program Plan for our Ag Incentive Grant Review with the Regional FFA Supervisor. The Comprehensive Program Plan includes:

- Job Market Description
- Targeted Occupations
- Total Program Goals and Objectives
- Program Description of Included Courses, SOE, and Leadership Development
- Program & Course Subject Matter Content Outlines
- Program Completion Standards
- Description of Facilities and Major Equipment
- Five Year Facility and Equipment Acquisition Schedule
- Staff Assignments
- FFA Program of Activities
- School & Department Policies Pertaining to Student Eligibility to Participate. Leadership Development, and SOE Integration
- Proficiency Standards for Program Completers
- Teacher Data Sheets for Each Teacher
- Roster of Agriculture Advisory Committee
- Advisory Committee Minutes
- Current Year Budget
- Signed Articulation Agreement and/or Evidence of Articulation
- Graduate Follow-up System
- List of Active Placements
- Recruitment Activities and Materials
- Staff-In Service Record
- Staff Minutes
- Department Inventory
- List of Courses that Qualify for Alternative Credit

I have updated the Comprehensive Program Plan to reflect the 2018-2019 school year. The Comprehensive Program Plan will be presented to the Bakersfield High Ag Advisory Committee at their December Ag Advisory Meeting.
**Table of Contents**

A  Job Market Description  
B  Targeted Occupations  
C  Total Program Goals and Objectives  
D  Program Description of Included Courses, SOE, and Leadership Development  
E  Program & Course Subject Matter Content Outlines  
F  Program Completion Standards  
G  Description of Facilities and Major Equipment  
H  Five Year Facility and Equipment Acquisition Schedule  
I  Staff Assignments  
J  FFA Program of Activities  
K  School & Department Policies Pertaining to Student Eligibility to Participate. Leadership Development, and SOE Integration  
L  Proficiency Standards for Program Completers  
M  Teacher Data Sheets for Each Teacher  
N  Roster of Agriculture Advisory Committee  
O  Advisory Committee Minutes  
P  Current Year Budget  
Q  Signed Articulation Agreement and/or Evidence of Articulation  
R  Graduate Follow-up System  
S  List of Active Placements  
T  Recruitment Activities and Materials  
U  Staff-In Service Record  
V  Staff Minutes  
W  Department Inventory  
X  List of Courses that Qualify for Alternative Credit
Section A

Job Market Description
Section A
Job Market Description

Agriculture is the most important industry in the United States with California being the number one state in production, and the San Joaquin Region serving as its most important area. As the look of agriculture changes in the region, it is vital that the educational facilities and program keep pace with the agriculture industry by supplying students that are prepared to meet this vast job market.

Bakersfield is located in the heart of Kern County and is home to 363,630 individuals. It is located directly between Fresno and Los Angeles. The climate of Bakersfield is considered a hot desert climate with long, hot, dry summers and short, cool, and moist winter. The average rainfall of Bakersfield is on average ten inches per year. Fog is usually seen during the winter months. Bakersfield has long, mild autumns and warm springs. The climate of Bakersfield allows for a wide variety of crops to be grown in the area.

Agriculture is the second largest industry in Bakersfield after oil production. Crop production dominates in the area, but there is livestock production as well. Major crops in the area include carrots, safflower, cotton, tomatoes, hay, beans, grapes, citrus, pistachios, almonds, pomegranates, beef, sheep, swine, dairy, and many others. Irrigation is a must particularly during the hot, dry months. Bakersfield farmers have been also been impacted by the drought since most farmers get their water from irrigation districts and wells.

While a good percentage of Bakersfield High School graduates attend post-secondary education while many enter the work force. Because of the number of students who seek employment, it is important that that they are trained with the necessary job skills to make them marketable. These skills are learned through hands-on training in vocational classes. Agriculture job skills must be taught because that is where a number of jobs are available in our area. When examining the top hiring companies in Bakersfield, The Giumarra Companies, Grimmway Farms, and Bolthouse Farms rank in the top five of employers. A student who has been properly trained and has the soft skills necessary can enter the work force. Such jobs includes: farm manager, maintenance, landscaping, animal production supervisor, secretary, floral design/sales, nursery production, and other. It is the job of this Agriculture Program to provide these students with the educational background and vocational skills necessary for successful employment and/or continuation in post-secondary education.
Section B

Targeted Occupations
## Section B
### Targeted Occupations

The Bakersfield Agriculture Department trains its students to meet the competencies in an occupation in one or more of the following "Program Areas of Occupations in Agriculture. Listed below are various jobs within each of the program areas.

<table>
<thead>
<tr>
<th>AGRICULTURE PRODUCTION</th>
<th>JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Production</td>
<td>Irrigator, Propagator, Farmhand, Foreman, Ranch Laborer, Feed Lot Hand, Field Crop Grower, General Maintenance</td>
</tr>
<tr>
<td>Animal Production</td>
<td>Livestock Handler, Milker, Inseminator, Auctioneer, Vet Aide, Pet Care, Ranch Laborer, Brand Inspector, Farm Hand, Pest Control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGRICULTURE MECHANICS</th>
<th>JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanics</td>
<td>Small Engine Mechanic, Equipment Operator, Parts Person, Farm Mechanic, Shop Foreman, Repairman, General Maintenance/Mechanics</td>
</tr>
<tr>
<td>Welder</td>
<td>Welder/Helper, Fabricator, Specialized Repair and Maintenance</td>
</tr>
<tr>
<td>Equipment Operator</td>
<td>Tractor Driver, Harvest Equipment Operator, Fork Lift Driver, Mechanic Helper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORNAMENTAL HORTICULTURE</th>
<th>JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Management</td>
<td>Greenhouse Worker, Foreman, Maintenance, Propagator, Tissue Culture</td>
</tr>
<tr>
<td>Nursery &amp; Turf Management</td>
<td>Nursery &amp; Turf Operator Nursery Worker, Salesman, Plant Propagator, Gardener, Golf Course Maintenance</td>
</tr>
<tr>
<td>Landscape</td>
<td>Grounds Worker, Gardening Business, Garden Store Sales, Landscaper</td>
</tr>
<tr>
<td>Floriculture</td>
<td>Floral Design, Floral Sales, Floral Delivery</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGRIBUSINESS/COMPUTERS</th>
<th>JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agribusiness</td>
<td>Ag Sales, Banking, Keyboard Operator, Farm Accounting, Ag Secretary/Bookkeeper, Inventory Maintenance, Web Design</td>
</tr>
</tbody>
</table>
Section C

Total Program Goals and Objectives
Bakersfield Agriculture Department Goals and Objectives

The Bakersfield Agriculture Department will

1. Educate all students based on the three circle model of agriculture education.

2. Prepare students to enter higher education or the work force by instilling soft skills into each student through their involvement in the FFA program.

3. Encourage students to use the Driller Way to be a role model in their community.

4. Promote service beyond the FFA by conducting community service projects through the chapter.

5. Increase student involvement in chapter activities, career development events, fair, and other FFA related activities.

6. Increase the retention rate of FFA members from freshmen year to become program completers.

7. Have all eligible members for the FFA State Degree apply and submit record books and applications.

8. Transition to the new AET Record Book for all FFA members.
Section D

Program Description of

Included Courses, SOE, and Leadership Development
The Bakersfield High School Agriculture Department offers the three parts of a complete agriculture education program. These three components are: the Classroom, Hands on Training, and Leadership Development.

Classroom Instruction involves teaching the basic concepts of the units taught within each of the courses offered. Students are required to use reading, writing, mathematical, and thinking skills. Assignments, quizzes, tests, and finals are given and graded during the course of the semester.

The Hands on Training supplements the education in the classroom. Students are taught a variety of skills, techniques, and procedures used in Animal Science, Floral, Ag Business, and Ag Mechanics. These methods are then used in “real life” in either their agriculture projects or personal projects.

Leadership development is taught through the Future Farmers of American (FFA). FFA is covered in all classes to introduce and reinforce leadership skills throughout students’ high school agriculture career. The emphasis in this department is placed on diligence, respect, integrity, life-long learning, leadership, empathy, and responsibility. Students are encouraged to put these traits to use in the various FFA activities that are available to them throughout each year.
* Vet Science course is not offered at this time. The ag teachers are working to develop that portion of the pathway.
Section E

Program and Course Matter

Content Outline
Agriculture Production Courses of Study
COURSE OF STUDY

<table>
<thead>
<tr>
<th>Agriculture Production</th>
<th>Grade Level</th>
<th>Department</th>
<th>Max. Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-12</td>
<td></td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Course Title (Title must correlate with Course Code Catalog)

Does this course satisfy a graduation Requirement in another subject area? NO

If so, what subject area? _______________________

Prepared by: Jennifer Wilke

Bakersfield School 4/2008 Date

Approval of Site Administrator: __________________Signature __________________ Date

A. COURSE INFORMATION

Grade Level: 9-12

Length of Course: 1 semester

Maximum Credit: 5 units per year

Recommendation for Enrollment: Students must be concurrently enrolled in a regular agriculture class. This is NOT a stand alone agriculture class. It is intended for those students with production projects that begin in the summer and conclude in the fall.

B. BRIEF DESCRIPTION OF THE COURSE

This is a course designed for students learning about animal husbandry and/or crop production. Students will enter into the agriculture production class to learn about the agriculture industry practices associated with securing funds, setting up the appropriate environment, learning about their animal and/or crop, disease identification and prevention, and marketing their product. An outline of the animal husbandry project is provided and signed by both the parent and the student, which outlines the requirements for the animal production project.
C. BOARD – ADOPTED TEXTBOOKS


D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Western Garden, Sunset, 2000
Western Garden Problem Solver, Sunset, 2000
Introduction to Plant Science, Delmar, Parker, 2000
Marketing Challenge by the National FFA Association
Introduction to Agribusiness, Delmar Publishing, Ricketts & Rawlins, 2001
CTAP Portfolio Handbook, 2000
Agricultural Economics and Agribusiness. 9th edition, Cramer, Gail L., Jensen, Clarence W., Wiley and Sons, Inc.

E. BRIEF OUTLINE OF COURSE CONTENT

<table>
<thead>
<tr>
<th>Animal Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determining the Market</td>
</tr>
<tr>
<td>a. Species and Breeds</td>
</tr>
<tr>
<td>b. Market Influences</td>
</tr>
<tr>
<td>2. Safety</td>
</tr>
<tr>
<td>a. Animal Restraint</td>
</tr>
<tr>
<td>b. Animal Handling</td>
</tr>
<tr>
<td>c. Quality Assurance &amp; Ethics</td>
</tr>
<tr>
<td>3. Environment</td>
</tr>
<tr>
<td>a. Preventative environmental measures</td>
</tr>
<tr>
<td>b. Optimizing the environment</td>
</tr>
<tr>
<td>4. Pen Preparation</td>
</tr>
<tr>
<td>5. Anatomy</td>
</tr>
<tr>
<td>6. Physiology</td>
</tr>
</tbody>
</table>
a. Feedstuffs  
b. Rate of Gain & Feed Efficiency  
c. Vitals  

7. Vaccinations  
a. Injection sites  
b. Withdrawal times  
c. Techniques  
d. Seasonality  

8. Pests and Diseases  
a. Identification  
b. Options for removal  
c. Treatment  

9. Showmanship  
a. Technique  
b. Tools  
c. Sportsmanship  

10. Marketing  

11. Harvesting  

<table>
<thead>
<tr>
<th>Crop Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determining the Market</td>
</tr>
<tr>
<td>a. Seed Varieties: Selection for the time of year and area</td>
</tr>
<tr>
<td>b. Complimentary Crops: To be sold concurrently with pumpkins, i.e. Indian Corn</td>
</tr>
<tr>
<td>c. Market trends and associated costs with pumpkins and Indian corn</td>
</tr>
<tr>
<td>2. Safety</td>
</tr>
<tr>
<td>a. Tractor operation and safety</td>
</tr>
<tr>
<td>b. Pesticide and herbicide application and safety</td>
</tr>
<tr>
<td>c. Tool identification and safety</td>
</tr>
<tr>
<td>3. Soil</td>
</tr>
<tr>
<td>a. Soil components &amp; soil types</td>
</tr>
<tr>
<td>b. Soil Analysis</td>
</tr>
<tr>
<td>c. Types of Amendments</td>
</tr>
<tr>
<td>d. Determining Soil Moisture levels</td>
</tr>
<tr>
<td>4. Bed Preparation</td>
</tr>
<tr>
<td>5. Irrigation</td>
</tr>
<tr>
<td>a. Common Systems</td>
</tr>
</tbody>
</table>
b. Setting up Irrigation System
   i. Checking for Problems
   ii. Determining pressure in the system

6. Reading a Seed Label
   a. Spacing, Planting Depth
   b. Sowing Seeds in Field
   c. Application of Fertilizer

7. Germination/Plant Stand Count

8. Weeds
   a. Identification
   b. Options for removal
   c. Herbicide Application & Safety

9. Pests
   a. Identification
   b. Options for removal
   c. Pesticide Application & Safety

10. Solving Crop Problems
   a. Pest damage to crop
   b. Nutrient Deficiency

11. Harvesting
   a. Safety
   b. Proper Selection
   c. Efficiency

12. Storage
   a. Post Harvest Storage Options
   b. Keeping the Crop in Top Condition

13. Marketing
   a. Certification from the Farm Advisor’s Office
   b. Farmer’s Market
   c. School Site
   d. Elementary Schools
F. BEHAVIORAL OBJECTIVES FOR (TITLE OF COURSE)

3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of
particular products.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services
produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the
spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia
communication in a variety of formats and contexts. (The standards listed below retain in parentheses
the numbering as specified in the English–language arts content standards adopted by the State Board of
Education.)
(2.5) Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and
      the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.
   d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’
      readability and impact.
(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for
conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers’ problems, mistakes, and misunderstandings.

2.3 Written and Oral English Language Conventions: Specific applications of English Language
Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of
English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications
standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing
evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
b. Standard American English for clarity

c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:

a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.

b. Select an appropriate medium for each element of the presentation.

c. Use the selected media skillfully, editing appropriately and monitoring for quality.

d. Test the audience’s response and revise the presentation accordingly.

Career Technical Standards - Agriculture

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

5.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

6.3 Understand how to locate important information on a material safety data sheet.

6.4 Maintain safe and healthful working conditions.

6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
1. Understand the qualities and behaviors that constitute a positive and professional work demeanor.
2. Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
3. Understand the need to adapt to varied roles and responsibilities.
4. Understand that individual actions can affect the larger community.
5. Understand the importance of time management to fulfill responsibilities.
6. Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
1. Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
2. Understand the concept and application of ethical and legal behavior consistent with workplace standards.
3. Understand the role of personal integrity and ethical behavior in the workplace.
4. Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
1. Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
2. Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
3. Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
4. Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
5. Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
6. Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
1. Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
2. Manage and actively engage in a career-related, supervised agricultural experience.
3. Understand the importance of maintaining and completing the California Agricultural Record Book.
4. Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

CTE Course Standards as relevant to past and/or current agriculture course enrollment will be applied and enforced as related to the subject areas addressed in the course outline above.
### ASSESSMENT PROCEDURES

**Animal Production**
- Record Book: 20%
- Project Visitations: 40%
- Positive Exhibition at County Fair: 40%
  (per requirements outlined in exhibitor handbook)

**Crop Production**
- Record Book: 20%
- Project Visitations: 40%
- Project Marketing: 40%
  (Attendance to a minimum of 85% of marketing activities)
Agriculture Leadership Courses of Study
A. COURSE INFORMATION

Grade Level: 10-12
Length of Course: 1 Year
Maximum Credit: 10 units

Recommendation for Enrollment: Concurrent enrollment in any agriculture course is required. Students must maintain a C or better in their agriculture course. Spring semester requires a minimum fall semester GPA of 2.0. This course CANNOT be taken as an agriculture course for purposes of being in the FFA. It is a supplementary course to the established career pathways in the agriculture department.

B. BRIEF DESCRIPTION OF THE COURSE

This class is designed to help students enhance public speaking confidence and skills. Students will be required to demonstrate speaking abilities in prepared public speaking, debate, extemporaneous public speaking, recitation, presentations and parliamentary procedure. Students will learn to speak as an individual as well as work on a team. In addition, students will learn and demonstrate skills to think on their feet in debate and be able to answer questions after the delivery of a speech. Students will be required to prepare, write, and research topics by themselves and as a team. They will then be asked to evaluate
themselves and their peers. The course will also focus on discussion and evaluation of other famous speakers, current ag issues, and ag sales.

In addition, students will be required to coordinate FFA activities for both the chapter and the section. Some events will include involvement in the community. All students will be required to apply time management skills, learn resource allocation, cooperate, and demonstrate leadership to accomplish committee goals.

C. **SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

*California Vocational Agriculture Model Core Curriculum, Leadership*

Official FFA Manual (most current edition)
FFA Student Handbook (class reference set)

A variety of handouts, overheads, videos, magazines, newspapers, and guest speakers from our community will be utilized. The students will be using our shop, computer lab, and greenhouse to supplement classroom activities.

D. **BRIEF OUTLINE OF COURSE CONTENT**

Outline:

**FALL**
- Introduction to Speeches – Format & Presentation 1 week
- Prepared Public Speaking 3 weeks
- Extemporaneous Public Speaking 3 weeks
- Fall Banquet – Leadership 2 weeks
- Job Interview & Job Skills 3 weeks
- Community Service Activities 2 weeks
- Sectional Contest - Leadership 3 weeks
- Record Books & Proficiency Applications 2 weeks

**SPRING**
- Group Communication & Problem Solving 1 week
- Parliamentary Procedure 3 weeks
- Ag Sales & Marketing 4 weeks
- Ag Issues Debate Forum 3 weeks
- Computers 3 weeks
- Spring Banquet – Leadership 3 weeks
- Record Keeping 2 weeks

E. **BEHAVIORAL OBJECTIVES FOR PUBLIC SPEAKING & AG LEADERSHIP**

**FOUNDATION STANDARDS**
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):

1. (12.2) Students analyze the elements of America’s market economy in a global setting.
2. (12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English-language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.5) Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and
      the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.
   d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
   a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience's response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.

f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:

a. Prepare and ask relevant questions.

b. Make notes of responses.

c. Use language that conveys maturity, sensitivity, and respect.

d. Respond correctly and effectively to questions.

e. Demonstrate knowledge of the subject or organization.

f. Compile and report responses.

g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:

a. Informal expressions for effect

b. Standard American English for clarity

c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:

a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.

b. Select an appropriate medium for each element of the presentation.

c. Use the selected media skillfully, editing appropriately and monitoring for quality.

d. Test the audience’s response and revise the presentation accordingly.

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.
11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

CTE Course Standards as relevant to past and/or current agriculture course enrollment will be applied and enforced as related to the subject areas addressed in the course outline above.
The student will be able to:

1. Relate the importance of the agriculture industry to a group.
2. Describe career opportunities in the agriculture industry.
3. Recognize and demonstrate good public speaking skills.
4. Demonstrate principles of good speech format and delivery.
5. Demonstrate the ability to select an appropriate topic that is well researched for the group.
6. Demonstrate an understanding of public speaking as a medium of both sight and sound.
7. Demonstrate the ability to deliver a prepared speech, extemporaneous speech or job interview.
8. Demonstrate competence in answering questions related to their topic.
9. Recognize and demonstrate an appreciation for the struggles that all public speakers endure and understand the social barriers that intimidate some of their peers.
10. Demonstrate the ability to set goals, identify seek out resources, utilize good time management, set a budget, and carry out a plan of action.
11. Demonstrate cooperative learning.

The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

F. ASSESSMENT PROCEDURES

1. 30% of the grade will be based on classroom instruction, including: tests, quizzes, papers, homework, and daily participation points.
2. 30% of the grade will be based on speech completion and delivery and task completion.
3. 40% of the grade will be based on their on-going Supervised Agricultural Experience Project, record book and FFA activities.

Semester Grades are based on the following:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quarter 1</td>
<td>50%</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>50%</td>
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</tbody>
</table>

** Semester final is a project incorporated in the second quarter grade.**
COURSE OF STUDY

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Grade Level</th>
<th>Department</th>
<th>Max. Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Speaking &amp; Ag Leadership 2</td>
<td>9-12</td>
<td>Agriculture</td>
<td>10</td>
</tr>
</tbody>
</table>

Does this course satisfy a graduation requirement in another subject area? **NO**

Prepared by: Jennifer Wilke

Bakersfield High School

3/2008

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>Grade Level:</th>
<th>10-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Course:</td>
<td>1 Year</td>
</tr>
<tr>
<td>Maximum Credit:</td>
<td>10 units</td>
</tr>
</tbody>
</table>

Recommendation for Enrollment: Concurrent enrollment in any agriculture course is required. Students must maintain a C or better in their agriculture course. Spring semester requires a minimum fall semester GPA of 2.0. This course CANNOT be taken as an agriculture course for purposes of being in the FFA. It is a supplementary course to the established career pathways in the agriculture department.

B. BRIEF DESCRIPTION OF THE COURSE

This class is designed to help students enhance public speaking confidence and skills. Students will be required to demonstrate speaking abilities in prepared public speaking, debate, extemporaneous public speaking, recitation, presentations and parliamentary procedure. Students will learn to speak as an individual as well as work on a team. In addition, students will learn and demonstrate skills to think on their feet in debate and be able to answer questions after the delivery of a speech. Students will be required to prepare, write, and research topics by themselves and as a team. They will then be asked to evaluate
themselves and their peers. The course will also focus on discussion and evaluation of other famous speakers, current ag issues, and ag sales.

In addition, students will be required to coordinate FFA activities for both the chapter and the section. Some events will include involvement in the community. All students will be required to apply time management skills, learn resource allocation, cooperate, and demonstrate leadership to accomplish committee goals.

C. **SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

*California Vocational Agriculture Model Core Curriculum, Leadership*
Official FFA Manual (most current edition)
FFA Student Handbook (class reference set)

A variety of handouts, overheads, videos, magazines, newspapers, and guest speakers from our community will be utilized. The students will be using our shop, computer lab, and greenhouse to supplement classroom activities.

D. **BRIEF OUTLINE OF COURSE CONTENT**

Outline:

**FALL**
- Introduction to Speeches – Format & Presentation 1 week
- Prepared Public Speaking 3 weeks
- Impromptu Public Speaking 3 weeks
- Fall Banquet – Leadership 2 weeks
- Job Interview & Job Skills 3 weeks
- Community Service Activities 2 weeks
- Sectional Contest - Leadership 3 weeks
- Record Books & Proficiency Applications 2 weeks

**SPRING**
- Group Communication & Problem Solving 1 week
- Parliamentary Procedure 3 weeks
- Ag Sales & Marketing 4 weeks
- Ag Issues Debate Forum 3 weeks
- Computers 3 weeks
- Spring Banquet – Leadership 3 weeks
- Record Keeping 2 weeks

E. **BEHAVIORAL OBJECTIVES FOR PUBLIC SPEAKING & AG LEADERSHIP**

**FOUNDATION STANDARDS**
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.3 **History–Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(2.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.5) Write business letters:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and
     the knowledge and interests of, the recipients.
  c. Highlight central ideas or images.
  d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’
     readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for
conducting a meeting, minutes of a meeting):
  a. Report information and convey ideas logically and correctly.
  b. Offer detailed and accurate specifications.
  c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
  d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with
precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g.,
field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated
bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
  c. Modify the tone to fit the purpose and audience.
  d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page
     formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
  a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts,
     videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
  b. Select an appropriate medium for each element of the presentation.
  c. Use the selected media skillfully, editing appropriately and monitoring for quality.
  d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language
Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of
English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications
standards (grades nine and ten):

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:
  a. Marshal evidence in support of a thesis and related claims, including information on all relevant
     perspectives.
  b. Convey information and ideas from primary and secondary sources accurately and coherently.
  c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
  d. Include visual aids by employing appropriate technology to organize and display information on charts,
     maps, and graphs.
e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
a. Prepare and ask relevant questions.
b. Make notes of responses.
c. Use language that conveys maturity, sensitivity, and respect.
d. Respond correctly and effectively to questions.
e. Demonstrate knowledge of the subject or organization.
f. Compile and report responses.
g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:
a. Informal expressions for effect
b. Standard American English for clarity
c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
b. Select an appropriate medium for each element of the presentation.
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience’s response and revise the presentation accordingly

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
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4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.
11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

CTE Course Standards as relevant to past and/or current agriculture course enrollment will be applied and enforced as related to the subject areas addressed in the course outline above.
The student will be able to:

1. Relate the importance of the agriculture industry to a group.
2. Describe career opportunities in the agriculture industry.
3. Recognize and demonstrate good public speaking skills.
4. Demonstrate principles of good speech format and delivery.
5. Demonstrate the ability to select an appropriate topic that is well researched for the group.
6. Demonstrate an understanding of public speaking as a medium of both sight and sound.
7. Demonstrate the ability to deliver a prepared speech, extemporaneous speech or job interview.
8. Demonstrate competence in answering questions related to their topic.
9. Recognize and demonstrate an appreciation for the struggles that all public speakers endure and understand the social barriers that intimidate some of their peers.
10. Demonstrate the ability to set goals, identify/search out resources, utilize good time management, set a budget, and carry out a plan of action.
11. Demonstrate cooperative learning.

The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

F. ASSESSMENT PROCEDURES

1. 30% of the grade will be based on classroom instruction, including: tests, quizzes, papers, homework, and daily participation points.
2. 30% of the grade will be based on speech completion and delivery and task completion.
3. 40% of the grade will be based on their on-going Supervised Agricultural Experience Project, record book and FFA activities.

Semester Grades are based on the following:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Quarter 1</td>
<td>50%</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>50%</td>
</tr>
</tbody>
</table>

** Semester final is a project incorporated in the second quarter grade.**
Kern High School District
Office of Instruction

DPC#: ______
Approved by Board: ______

COURSE OF STUDY

<table>
<thead>
<tr>
<th>Public Speaking &amp; Ag Leadership 3</th>
<th>9-12</th>
<th>Agriculture</th>
<th>10</th>
</tr>
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<tbody>
<tr>
<td>Course Title</td>
<td>Grade Level</td>
<td>Department</td>
<td>Max. Credit</td>
</tr>
<tr>
<td>(Title must correlate with Course Code Catalog)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this course satisfy a graduation</td>
<td>If so, what subject area?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requirement in another subject area?</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared by: Jennifer Wilke</td>
<td>Bakersfield High School</td>
<td></td>
<td></td>
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<td></td>
<td>School</td>
<td></td>
<td></td>
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<tr>
<td>Date: 3/2008</td>
<td></td>
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</tr>
<tr>
<td>Approval of Site Administrator:</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

A. COURSE INFORMATION

Grade Level: 10-12

Length of Course: 1 Year

Maximum Credit: 10 units

Recommendation for Enrollment: Concurrent enrollment in any agriculture course is required. Students must maintain a C or better in their agriculture course. Spring semester requires a minimum fall semester GPA of 2.0. This course CANNOT be taken as an agriculture course for purposes of being in the FFA. It is a supplementary course to the established career pathways in the agriculture department.

B. BRIEF DESCRIPTION OF THE COURSE

This class is designed to help students enhance public speaking confidence and skills. Students will be required to demonstrate speaking abilities in prepared public speaking, debate, extemporaneous public speaking, recitation, presentations and parliamentary procedure. Students will learn to speak as an individual as well as work on a team. In addition, students will learn and demonstrate skills to think on their feet in debate and be able to answer questions after the delivery of a speech. Students will be required to prepare, write, and research topics by themselves and as a team. They will then be asked to evaluate
themselves and their peers. The course will also focus on discussion and evaluation of other famous speakers, current ag issues, and ag sales.

In addition, students will be required to coordinate FFA activities for both the chapter and the section. Some events will include involvement in the community. All students will be required to apply time management skills, learn resource allocation, cooperate, and demonstrate leadership to accomplish committee goals.

**C. SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

*California Vocational Agriculture Model Core Curriculum, Leadership*

Official FFA Manual (most current edition)

FFA Student Handbook (class reference set)

A variety of handouts, overheads, videos, magazines, newspapers, and guest speakers from our community will be utilized. The students will be using our shop, computer lab, and greenhouse to supplement classroom activities.

**D. BRIEF OUTLINE OF COURSE CONTENT**

Outline:

**FALL**
- Introduction to Speeches – Format & Presentation 1 week
- Prepared Public Speaking 3 weeks
- Extemporaneous Public Speaking 3 weeks
- Fall Banquet – Leadership 2 weeks
- Job Interview & Job Skills 3 weeks
- Community Service Activities 2 weeks
- Sectional Contest – Leadership 3 weeks
- Record Books & Proficiency Applications 2 weeks

**SPRING**
- Group Communication & Problem Solving 1 week
- Parliamentary Procedure 3 weeks
- Ag Sales & Marketing 4 weeks
- Ag Issues Debate Forum 3 weeks
- Computers 3 weeks
- Spring Banquet – Leadership 3 weeks
- Record Keeping 2 weeks

**E. BEHAVIORAL OBJECTIVES FOR PUBLIC SPEAKING & AG LEADERSHIP**

FOUNDATION STANDARDS

1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):

(12.2.2) Students analyze the elements of America’s market economy in a global setting.

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.5) Write business letters:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and
     the knowledge and interests of, the recipients.
  c. Highlight central ideas or images.
  d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’
     readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for
conducting a meeting, minutes of a meeting):
  a. Report information and convey ideas logically and correctly.
  b. Offer detailed and accurate specifications.
  c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
  d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with
precise and relevant examples.
(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g.,
field studies, oral histories, interviews, experiments, electronic sources).
(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated
bibliographies).
(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
  c. Modify the tone to fit the purpose and audience.
  d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page
     formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
  a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts,
     videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
  b. Select an appropriate medium for each element of the presentation.
  c. Use the selected media skillfully, editing appropriately and monitoring for quality.
  d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language
Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of
English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications
standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing
evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.2) Deliver expository presentations:
  a. Marshal evidence in support of a thesis and related claims, including information on all relevant
     perspectives.
  b. Convey information and ideas from primary and secondary sources accurately and coherently.
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e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
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   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
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9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

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10.4 Maintain and troubleshoot equipment used in the agricultural industry.
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2. Describe career opportunities in the agriculture industry.
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4. Demonstrate principles of good speech format and delivery.
5. Demonstrate the ability to select an appropriate topic that is well researched for the group.
6. Demonstrate an understanding of public speaking as a medium of both sight and sound.
7. Demonstrate the ability to deliver a prepared speech, extemporaneous speech or job interview.
8. Demonstrate competence in answering questions related to their topic.
9. Recognize and demonstrate an appreciation for the struggles that all public speakers endure and understand the social barriers that intimidate some of their peers.
10. Demonstrate the ability to set goals, identify/search out resources, utilize good time management, set a budget, and carry out a plan of action.
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The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

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</thead>
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<tr>
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<td>50%</td>
</tr>
</tbody>
</table>

** Semester final is a project incorporated in the second quarter grade.**
**COURSE OF STUDY**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Grade Level</th>
<th>Department</th>
<th>Max. Credit</th>
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<tr>
<td>Public Speaking &amp; Ag Leadership 4</td>
<td>9-12</td>
<td>Agriculture</td>
<td>10</td>
</tr>
</tbody>
</table>

Does this course satisfy a graduation requirement in another subject area? **NO**

Prepared by: Jennifer Wilke

Bakersfield High School

3/2008 Date

A. **COURSE INFORMATION**

<table>
<thead>
<tr>
<th>Grade Level:</th>
<th>10-12</th>
</tr>
</thead>
</table>

| Length of Course: | 1 Year |

| Maximum Credit: | 10 units |

Recommendation for Enrollment: Concurrent enrollment in any agriculture course is required. Students must maintain a C or better in their agriculture course. Spring semester requires a minimum fall semester GPA of 2.0. This course CANNOT be taken as an agriculture course for purposes of being in the FFA. It is a supplementary course to the established career pathways in the agriculture department.

B. **BRIEF DESCRIPTION OF THE COURSE**

This class is designed to help students enhance public speaking confidence and skills. Students will be required to demonstrate speaking abilities in prepared public speaking, debate, extemporaneous public speaking, recitation, presentations and parliamentary procedure. Students will learn to speak as an individual as well as work on a team. In addition, students will learn and demonstrate skills to think on their feet in debate and be able to answer questions after the delivery of a speech. Students will be required to prepare, write, and research topics by themselves and as a team. They will then be asked to evaluate
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Group Communication & Problem Solving 1 week
Parliamentary Procedure 3 weeks
Ag Sales & Marketing 4 weeks
Ag Issues Debate Forum 3 weeks
Computers 3 weeks
Spring Banquet – Leadership 3 weeks
Record Keeping 2 weeks

E. BEHAVIORAL OBJECTIVES FOR PUBLIC SPEAKING & AG LEADERSHIP

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and
employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses
the numbering as specified in the mathematics, science, and history–social science content standards adopted by
the State Board of Education.)

3. History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(2.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of
particular products.
12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
12.2.6) Describe the effect of price controls on buyers and sellers.
12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English-language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.

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f. Use technical terms and notations accurately.

(2.5) Write business letters:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
  c. Highlight central ideas or images.
  d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
  a. Report information and convey ideas logically and correctly.
  b. Offer detailed and accurate specifications.
  c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
  d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.
(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).
(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).
(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:
  a. Provide clear and purposeful information and address the intended audience appropriately.
  b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
  c. Modify the tone to fit the purpose and audience.
  d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
  a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
  b. Select an appropriate medium for each element of the presentation.
  c. Use the selected media skillfully, editing appropriately and monitoring for quality.
  d. Test the audience's response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:
  a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
  b. Convey information and ideas from primary and secondary sources accurately and coherently.
  c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
  d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:

1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

1 Understand past, present, and future technological advances as they relate to a chosen pathway.
2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
3 Understand the influence of current and emerging technology on selected segments of the economy.
4 Understand geographic information systems (G.I.S.).
5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

**6.0 Health and Safety:** Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

**7.0 Responsibility and Flexibility:** Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

**8.0 Ethics and Legal Responsibilities:** Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

**9.0 Leadership and Teamwork:** Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

**10.0 Technical Knowledge and Skills:** Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.
11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

CTE Course Standards as relevant to past and/or current agriculture course enrollment will be applied and enforced as related to the subject areas addressed in the course outline above.
The student will be able to:

1. Relate the importance of the agriculture industry to a group.
2. Describe career opportunities in the agriculture industry.
3. Recognize and demonstrate good public speaking skills.
4. Demonstrate principles of good speech format and delivery.
5. Demonstrate the ability to select an appropriate topic that is well researched for the group.
6. Demonstrate an understanding of public speaking as a medium of both sight and sound.
7. Demonstrate the ability to deliver a prepared speech, extemporaneous speech or job interview.
8. Demonstrate competence in answering questions related to their topic.
9. Recognize and demonstrate an appreciation for the struggles that all public speakers endure and understand the social barriers that intimidate some of their peers.
10. Demonstrate the ability to set goals, identify/seek out resources, utilize good time management, set a budget, and carry out a plan of action.
11. Demonstrate cooperative learning.

The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

F. Assessment Procedures

1. 30% of the grade will be based on classroom instruction, including: tests, quizzes, papers, homework, and daily participation points.
2. 30% of the grade will be based on speech completion and delivery and task completion.
3. 40% of the grade will be based on their on-going Supervised Agricultural Experience Project, record book and FFA activities.

Semester Grades are based on the following:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Percentage</th>
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<tr>
<td>Quarter 1</td>
<td>50%</td>
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<tr>
<td>Quarter 2</td>
<td>50%</td>
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** Semester final is a project incorporated in the second quarter grade.**
Agriculture Business Courses of Study
District Wide Course of Study Title:

Ag Sales and Marketing

A. COURSE INFORMATION

Grade Level: 11-12
Length of Course: 1 year
Maximum Credit: 10
Type: MISC
Recommendation for Enrollment: Completion of 2-3 agriculture classes.

B. BRIEF DESCRIPTION OF THE COURSE

This class is a survey and basic understanding of the business of the agriculture industry with a specific emphasis on agriculture sales, marketing and advertising. It is an introduction to agriculture business and its impact on the agricultural producer, consumer and the food system, and how these concepts are applied to create, sell and market agriculture products. The management principles encountered in the day to day operation of an agricultural enterprise are stressed as they relate to the decision making process.

C. BOARD – ADOPTED TEXTBOOKS

None

D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Marketing Challenge by the National FFA Association
Introduction to Agribusiness, Delmar Publishing, Ricketts & Rawlins, 2001
CTAP Portfolio Handbook, 2000
Prentice Hall. *Agribusiness Management*.
*Exploring Farm Cooperatives*, Agric. Council of CA 2003
E. **BRIEF OUTLINE OF COURSE CONTENT**

1. The role and organization of the Agribusiness
   a. Agribusiness's place in California, United States, and the global economy
   b. Types of agribusiness
   c. The organization of an agribusiness
   d. Managing the agribusiness

2. Models of management, organizations, and work.
   a. Survey and exploration of careers in the Ag Business industry
   b. Managerial work
   c. The agriculture organization
   d. Working in the agriculture organization

3. Goals in the agribusiness organization
   a. The nature of goals
   b. Multiple organizational goals
   c. Managerial process of goal setting
   d. Evaluation of goal attainment

4. The Decision Maker
   a. Image formation
   b. Behavioral decision methods
   c. Quantitative decision methods

5. Financial Management and Control of Agribusiness
   a. Overview of financial statements
   b. Controlling and managing the agribusiness
   c. Sources of financing

6. Communication in the Agribusiness Organization
   a. The communication process
   b. Communication and organization structure
   c. Communication and the managerial process

7. Leadership
   a. The nature of leadership
   b. Factors that influence the leadership role
   c. The role of the agriculture manager

8. Business Etiquette
   a. Professional dress for men and women
   b. Business conversation
   c. Men and women as colleagues
   d. Restaurant and table etiquette
   e. Telephone etiquette

9. Marketing and Sales
   a. Introduction to selling
   b. Preparing to sell
   c. Developing sales skills
   d. Selling
   e. Careers in Selling
   f. Advertisements
   g. Marketing Plan
1. SWOT Analysis
2. Long Term and Short Term Goals

10. Planning in the Agribusiness
   a. A model of planning
   b. Designing plans
   c. Organizing for planning

11. Ethics in Agriculture
   a. Agriculture values
   b. Agriculture ethics
   c. Personal values

12. Agriculture Employee Motivation
   a. Nature of human motivation
   b. Equity in the workplace
   c. Labor relations

13. Groups and Teams
   a. The nature of groups
   b. The character of groups
   c. Teams and team building

F. **BEHAVIORAL OBJECTIVES FOR (TITLE OF COURSE)**

At this conclusion of this course, the student should be able to:

1. Develop a basic understanding of how economic principles relate to commodity marketing sub sectors in agriculture.
2. Develop a sales presentation.
3. Evaluate a customer complaint and handle it correctly within the company's guidelines – customer relations.
4. Analyze information about a company and its products to take telephone orders.
5. Assess a prospective customer, develop rapport and establish a sale or follow up call – customer prospecting.
6. Develop a marketing plan as a team based on a company's current situation and proposed goals.
7. Develop an understanding of the kinds of agricultural business organizations, and the principles and functions involved in their organization and operation.
8. Assess people behavior in organizations.
9. Design a model plan to allocate resources for an agribusiness organization using a variety of computer software programs.
10. Compare and contrast the four functions of management and how they relate to the agribusiness organization.
11. Develop an awareness of the basic laws, regulations, and regulatory agencies that interact with the agriculture community.
12. Describe the nature of leadership and the role of the manager as a leader.
13. Solve problems in the areas of personnel, ethics and planning.

**Foundation Standards**

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):

   (10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

   (12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.

   (13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

   (15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Geometry standards (grades eight through twelve):

   (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

**Specific applications of Probability and Statistics standards (grades eight through twelve):**

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

**1.2 Science:** Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
(1.d) Formulate explanations by using logic and evidence.
(1.f) Distinguish between hypothesis and theory as scientific terms.
(1.j) Recognize the issues of statistical variability and the need for controlled tests.
(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.
(1.m) Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

**1.3 History–Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(12.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
(12.4) Students analyze the elements of the U.S. labor market in a global setting.
(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

**2.0 Communications:** Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

**2.1 Reading:** Specific applications of Reading Comprehension standards (grades nine and ten):

(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

**Specific applications of Reading Comprehension standards (grades eleven and twelve):**

(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.

(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(2.4) Make warranted and reasonable assertions about the author's arguments by using elements of the text to defend and clarify interpretations.

**2.2 Writing:** Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.

(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).

(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers' potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.

(2.5) Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.
   d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers' problems, mistakes, and misunderstandings.

**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.
(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
   a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
   (1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
   (1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
   (1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
   (1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
   (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
   (2.2) Deliver expository presentations:
      a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
      b. Convey information and ideas from primary and secondary sources accurately and coherently.
      c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
      d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
      e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
      f. Use technical terms and notations accurately.
   (2.3) Apply appropriate interviewing techniques:
      a. Prepare and ask relevant questions.
      b. Make notes of responses.
      c. Use language that conveys maturity, sensitivity, and respect.
      d. Respond correctly and effectively to questions.
      e. Demonstrate knowledge of the subject or organization.
      f. Compile and report responses.
      g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
   (1.8) Use effective and interesting language, including:
      a. Informal expressions for effect
      b. Standard American English for clarity
      c. Technical language for specificity
   (1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).
   (2.4) Deliver multimedia presentations:
      a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
b. Select an appropriate medium for each element of the presentation.
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience’s response and revise the presentation accordingly

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
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6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
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7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
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8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.

8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.

8.3 Understand the role of personal integrity and ethical behavior in the workplace.

8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:

10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.

10.2 Manage and actively engage in a career-related, supervised agricultural experience.

10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.

10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Business Pathway: In the Agricultural Business Pathway, students learn about agricultural business operation and management. Topics include accounting, finance, economics, business organization, marketing, and sales.

A1.0 Students understand decision-making processes within the American free enterprise system:

A1.1 Differentiate among the components of the American free enterprise system and other forms of economic systems.

A1.2 Distinguish among the main characteristics of individual proprietorships, partnerships, corporations, and cooperatives.

A1.3 Understand the advantages and disadvantages of the four types of business ownership.

A1.4 Analyze appropriate decision-making tools and financial records to make key management decisions.

A1.5 Analyze physical production relationships to determine optimum use levels.

A1.6 Understand how to calculate the fixed and variable costs associated with the production of agricultural products and determine the output level that will yield maximum profit.

A2.0 Students understand the fundamental economic principles of agribusiness and agricultural production:

A2.1 Understand how basic economic factors affect agricultural production and agribusiness management decisions.

A2.2 Know basic agricultural economic terminology.

A2.3 Understand the law of supply and demand as it effects price determination.
A2.4 Analyze how agriculture uses scarce resources to meet the needs and demands of its consumers.
A2.5 Differentiate between elastic and inelastic supply and demand.
A2.6 Understand the law of diminishing returns and its impact on agricultural production.

A3.0 Students understand the role of credit in agribusiness and agricultural production:
A3.1 Analyze the factors that determine the cost of credit in order to select optimum credit sources (e.g., the advantages and disadvantages of borrowing from the various types of credit providers and sources for short-, intermediate-, and long-term credit).
A3.2 Know the criteria lenders use to evaluate repayment capacity.
A3.3 Analyze balance sheets and cash-flow statements to determine the ability to repay loans.

A4.0 Students understand proper accounting principles and procedures used in business management and tax planning:
A4.1 Understand the differences between cash and accrual accounting systems.
A4.2 Understand the use and importance of budgets, income statements, balance sheets, and financial statements.
A4.3 Understand the basis of taxation within the tax system and its impact on the economy, including the role of taxes in agribusiness.
A4.4 Analyze the role of depreciation and purchasing in tax planning and liability.
A4.5 Understand how to determine property values and how to complete a depreciation schedule.
A4.6 Understand how to determine the tax obligations for an agribusiness.

A5.0 Students understand basic risk management principles and their impact on economic viability:
A5.1 Understand environmental responsibility and its impact on agribusiness.
A5.2 Understand the concept of liability and the economic impact of being held liable.
A5.3 Understand the concept and process of risk management, including the use of risk management tools such as insurance.
A5.4 Understand how recordkeeping, farm plans, and an analysis of best practices affect risk management decisions.
A5.5 Understand the role of contingency plans in risk management.

A6.0 Students understand the role and value of agricultural organizations:
A6.1 Understand the benefits of private, public, and governmental organizations, including the value and impact of cooperatives.
A6.2 Understand how participation within organizations would be beneficial in supporting various agricultural operations.
A6.3 Understand how to identify and electronically access public and private agricultural organizations.

A7.0 Students understand agricultural marketing systems:
A7.1 Understand how marketing functions in a free market society.
A7.2 Understand the advantages and disadvantages of the various marketing options for agricultural products and services.
A7.3 Understand how the law of comparative advantage affects agricultural production.
A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.
A7.5 Understand how promotion trends for agricultural products influence individuals.
A7.6 Understand how to develop a marketing plan for an agricultural product or service.

A8.0 Students understand the sales of agricultural products and services:
A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.
A8.3 Examine the physiological and psychological factors that influence motivation to purchase, including the fundamental steps in making a purchase.

A9.0 Students understand local, national, and international agricultural markets and how trade affects the economy:
A9.1 Understand how the importance of agricultural imports and exports affects state and national economies.
A9.2 Know how governmental, economic, and cultural factors affect international trade.
A9.3 Compare and contrast United States trade policies with those of other important trading partners.
A9.4 Understand how biotechnology affects trade and global economies.
A9.5 Understand how different cultural values affect agricultural production and marketing.
A9.6 Understand how negotiations and bargaining agreements affect trade agreements.
A9.7 Analyze agricultural marketing strategies in other parts of the world.

G. ASSESSMENT PROCEDURES

Homework/Class work 25%
Supervised Agriculture Experience Program 15%
FFA – Leadership 20%
Quizzes & Tests 25%
Participation 15%

Semester 1 50%
Semester 2 50%

**Weighting/categories may vary according to school site.

Prepared by: Amie Mertz, Elizabeth Bledsoe, Clay Freeman
A. COURSE INFORMATION

Grade Level: 12
Length of Course: 1 semester
Maximum Credit: 5
Type: SS3/5
Recommendation for Enrollment: Completion of 2-3 years of agriculture courses or instructor approval.

COURSE DESCRIPTION
This course is designed to familiarize students with the structure and processes of the United States Government system. Students will learn about the responsibilities and rights of citizenship, voting, political, parties, elections, campaigns, the Constitution, the branches of government, and the Bill of Rights. Students will also learn about state powers as it compares to the national government powers, and be introduced to world leadership. Students will study and discuss agricultural issues and what role the government system plays in the agricultural industry.

B. INSTRUCTIONAL MATERIALS
Magruder's American Government; Prentice Hall
We the People: Center for Civic Education 2009

Supplemental Materials
The Federalist Papers. New American Library/Mentor
The U.S. Farm Bill latest revised Edition
Exploring Farm Cooperatives Agric. Council of CA 2003

C. COURSE OUTLINE
Ag Government

A) The Constitution
   1) Development of Government
      a) Civic Republicanism
      b) Religious tolerance
      c) Spirit of individualism
      d) Philosophy of natural rights
      e) Established church
      f) Wide ownership of land
      g) Rural society
   2) Evolution of the Constitution
      a) Majority rule/Minority rights
      b) Large state/Small states
      c) Popular rule/knowledgeable elite rule
      d) Essential Principles
      e) Separation of power
      f) Checks/Balances
      g) Federalism
      h) Equal representation
      i) Due process
      j) Popular sovereignty
      k) Individual rights/responsibilities
      l) Common shared values

B) American Government
   1) Structure
   2) Congress
   3) Presidency
   4) Bureaucracy
   5) Judiciary
   6) Other political parties

C) Mechanics of Congressional Bills
   1) From an Idea to Law
   2) Responsibilities of the Speaker of the House
   3) Parliamentary Procedure

D) Civil Liberties
   1) Social context
      a) Socioeconomic status
      b) Race
      c) Sex
      d) Religion
      e) Age
      f) Region
   2) Public Opinion
      a) Party identification
      b) Political ideology
      c) Attitudes
   3) Elections
      a) Nomination process
      b) Voting
      c) Volunteerism
      d) Democratic features
      e) Funding
   4) Bill of Rights
a) Freedom of speech  
b) Freedom of press  
c) Right to assembly  
d) Freedom of religion  
e) Due process  
f) Limit of power  

5) Individual Freedoms/Public Necessity  
a) Crime  
b) Discrimination  
c) Eminent domain  
d) Taxes  
e) Defense  
f) Schooling  

E) Federalism  
1) Structure  
a) Federal government officers  
b) State government officers  
c) Local government officers  
d) Functions  
e) Court systems  
f) Law enforcement  

2) Federal/State Government  
a) Reserve powers  
b) Incorporation  
c) Jurisdiction  
d) Resources  

3) Federal/State Legal System  
a) Criminal/Civil matters  
b) Family/Juvenile Law  

4) Role of Local Government  
a) Education  
b) Crime  
c) Taxes  
    (1) Regulation  

5) Agribusiness Taxation  
6) Introduction to Taxes  
7) Income Tax Management  

F) Agriculture Policy  
1) Domestic International Issues  
2) Preoccupation with security  
3) Government influence  

G) Agriculture Law  
1) Historical & Current Sources of Law  
2) Regulatory Agencies  
3) Laws Affecting Ag Enterprises  
4) Labor Law  
5) Ag. Property Rights  
6) Farm Leases  
7) Ag. Liability Laws  
8) Air and Water  

H) Global Marketing and Trade  
1) World government  
a) Structure  
b) Goals
D. **COURSE OBJECTIVES FOR**

After completion of this course students will:

1. Understand the activities that lead to the development of our government, the evolution of the Constitution, and the essential principles of the structure of our government.
2. Students will be able to distinguish between the branches of government and identify the duties of each branch.
3. Students will be able to identify the social context and public opinion of our government system.
4. Students will be able to outline the process of election.
5. Students will understand the Bill of Rights and explain the meaning and implication of each right in our society.
6. Students will be able to distinguish between the powers of state government and the national government.
7. Students will recognize the role of tariffs and quotas as they relate to international agriculture trade and economic development.
8. Students understand how government organizations affect agriculture and the characteristics of and differences between national and international trade.
9. Students understand how government organizations affect agriculture and the characteristics of and differences between national and international trade.
10. Students will understand economic principles as they relate to agribusiness.
11. Students will be able to make management decisions based on their analysis and interpretation of economic information using the appropriate technology.
12. Student should be able to distinguish the differences between agricultural and industrial production.
13. Students will recognize the role of tariffs and quotas as they relate to international agriculture trade and economic development.
14. Students will distinguish between rural and urban problems in resource development.

**Foundation Standards**

**1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):**

(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.

(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

**Specific applications of Geometry standards (grades eight through twelve):**

(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
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(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

**Specific applications of Probability and Statistics standards (grades eight through twelve):**

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

**1.2 Science:** Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.f) Distinguish between hypothesis and theory as scientific terms.

(1.j) Recognize the issues of statistical variability and the need for controlled tests.

(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

(1.m) Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

**1.3 History—Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(12.2) Students analyze the elements of America’s market economy in a global setting.

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(12.2.6) Describe the effect of price controls on buyers and sellers.

(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

(12.4) Students analyze the elements of the U.S. labor market in a global setting.

(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

**2.0 Communications:** Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

**2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):**

(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.

(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).
Specific applications of Reading Comprehension standards (grades eleven and twelve):

(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.

(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.

(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).

(2.3) Write expository compositions, including analytical essays and research reports:

a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

b. Convey information and ideas from primary and secondary sources accurately and coherently.

c. Make distinctions between the relative value and significance of specific data, facts, and ideas.

d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.

e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.

f. Use technical terms and notations accurately.

(2.5) Write business letters:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.

c. Highlight central ideas or images.

d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.

b. Offer detailed and accurate specifications.

c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).

d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.

c. Modify the tone to fit the purpose and audience.

d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.
(2.6) Deliver multimedia presentations:
   a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
   (1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
   (1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
   (1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
   (1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
   (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
   (2.2) Deliver expository presentations:
      a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
      b. Convey information and ideas from primary and secondary sources accurately and coherently.
      c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
      d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
      e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
      f. Use technical terms and notations accurately.
   (2.3) Apply appropriate interviewing techniques:
      a. Prepare and ask relevant questions.
      b. Make notes of responses.
      c. Use language that conveys maturity, sensitivity, and respect.
      d. Respond correctly and effectively to questions.
      e. Demonstrate knowledge of the subject or organization.
      f. Compile and report responses.
      g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity
(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
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9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Business Pathway: In the Agricultural Business Pathway, students learn about agricultural business operation and management. Topics include accounting, finance, economics, business organization, marketing, and sales.
A1.0 Students understand decision-making processes within the American free enterprise system:
A1.1 Differentiate among the components of the American free enterprise system and other forms of economic systems.
A1.2 Distinguish among the main characteristics of individual proprietorships, partnerships, corporations, and cooperatives.
A1.3 Understand the advantages and disadvantages of the four types of business ownership.
A1.4 Analyze appropriate decision-making tools and financial records to make key management decisions.
A1.5 Analyze physical production relationships to determine optimum use levels.
A1.6 Understand how to calculate the fixed and variable costs associated with the production of agricultural products and determine the output level that will yield maximum profit.

A2.0 Students understand the fundamental economic principles of agribusiness and agricultural production:
A2.1 Understand how basic economic factors affect agricultural production and agribusiness management decisions.
A2.2 Know basic agricultural economic terminology.
A2.3 Understand the law of supply and demand as it effects price determination.
A2.4 Analyze how agriculture uses scarce resources to meet the needs and demands of its consumers.
A2.5 Differentiate between elastic and inelastic supply and demand.
A2.6 Understand the law of diminishing returns and its impact on agricultural production.

A3.0 Students understand the role of credit in agribusiness and agricultural production:
A3.1 Analyze the factors that determine the cost of credit in order to select optimum credit sources (e.g., the advantages and disadvantages of borrowing from the various types of credit providers and sources for short-, intermediate-, and long-term credit).
A3.2 Know the criteria lenders use to evaluate repayment capacity.
A3.3 Analyze balance sheets and cash-flow statements to determine the ability to repay loans.

A4.0 Students understand proper accounting principles and procedures used in business management and tax planning:
A4.1 Understand the differences between cash and accrual accounting systems.
A4.2 Understand the use and importance of budgets, income statements, balance sheets, and financial statements.
A4.3 Understand the basis of taxation within the tax system and its impact on the economy, including the role of taxes in agribusiness.
A4.4 Analyze the role of depreciation and purchasing in tax planning and liability.
A4.5 Understand how to determine property values and how to complete a depreciation schedule.
A4.6 Understand how to determine the tax obligations for an agribusiness.
A5.0 Students understand basic risk management principles and their impact on economic viability:
A5.1 Understand environmental responsibility and its impact on agribusiness.
A5.2 Understand the concept of liability and the economic impact of being held liable.
A5.3 Understand the concept and process of risk management, including the use of risk management tools such as insurance.
A5.4 Understand how recordkeeping, farm plans, and an analysis of best practices affect risk management decisions.
A5.5 Understand the role of contingency plans in risk management.
A6.0 Students understand the role and value of agricultural organizations:
A6.1 Understand the benefits of private, public, and governmental organizations, including the value and impact of cooperatives.
A6.2 Understand how participation within organizations would be beneficial in supporting various agricultural operations.
A6.3 Understand how to identify and electronically access public and private agricultural organizations.
A7.0 Students understand agricultural marketing systems:
A7.1 Understand how marketing functions in a free market society.
A7.2 Understand the advantages and disadvantages of the various marketing options for agricultural products and services.
A7.3 Understand how the law of comparative advantage affects agricultural production.
A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.
A7.5 Understand how promotion trends for agricultural products influence individuals.
A7.6 Understand how to develop a marketing plan for an agricultural product or service.
A8.0 Students understand the sales of agricultural products and services:
A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.
A8.3 Examine the physiological and psychological factors that influence motivation to purchase, including the fundamental steps in making a purchase.
A9.0 Students understand local, national, and international agricultural markets and how trade affects the economy:
A9.1 Understand how the importance of agricultural imports and exports affects state and national economies.
A9.2 Know how governmental, economic, and cultural factors affect international trade.
A9.3 Compare and contrast United States trade policies with those of other important trading partners.
A9.4 Understand how biotechnology affects trade and global economies.
A9.5 Understand how different cultural values affect agricultural production and marketing.
A9.6 Understand how negotiations and bargaining agreements affect trade agreements.
A9.7 Analyze agricultural marketing strategies in other parts of the world.

C. Agriscience Pathway
C1.0 Students understand the role of agriculture in the California economy:
C1.1 Understand the history of the agricultural industry in California.
C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
C2.1 Understand important agricultural environmental impacts on soil, water, and air.
C2.2 Understand current agricultural environmental challenges.
C.3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, communication, and so forth.

C.3.4 Understand the laws and regulations concerning biotechnology.

C.4.4 Understand various points of view regarding the use of animals.

E. Forestry and Natural Resources Pathway

E.1.4 Compare the effects on air and water quality of using different forms of energy.

E.2.0 Students understand air and water use, management practices, and conservation strategies.

E.2.1 Understand the government's role in regulating air, soil, and water use management practices and conservation strategies.

E.3.3 Understand the role of public and private property rights and how they affect agriculture.

E.3.4 Understand the role of government in managing public and private property rights.

G. Plant and Soil Science Pathway

G.8.1 Understand California water history, current issues, water rights, water law, and water transfer through different distribution projects throughout the state.

G.8.2 Understand the local, state, and federal agencies that regulate water quality and availability in California.

Principles of American Democracy

12.1 Students explain the fundamental principles and moral values of American democracy as expressed in the U.S. Constitution and other essential documents of American democracy.

1. Analyze the influence of ancient Greek, Roman, English, and leading European political thinkers such as John Locke, Charles-Louis Montesquieu, Niccolò Machiavelli, and William Blackstone on the development of American government.

2. Discuss the character of American democracy and its promise and perils as articulated by Alexis de Tocqueville.

3. Explain how the U.S. Constitution reflects a balance between the classical republican concern with promotion of the public good and the classical liberal concern with protecting individual rights; and discuss how the basic premises of liberal constitutionalism and democracy are joined in the Declaration of Independence as "self-evident truths."

4. Explain how the Founding Fathers' realistic view of human nature led directly to the establishment of a constitutional system that limited the power of the governors and the governed as articulated in the Federalist Papers.

5. Describe the systems of separated and shared powers, the role of organized interests (Federalist Paper Number 10), checks and balances (Federalist Paper Number 51), the importance of an independent judiciary (Federalist Paper Number 78), enumerated powers, rule of law, federalism, and civilian control of the military.

6. Understand that the Bill of Rights limits the powers of the federal government and state governments.

12.2 Students evaluate and take defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.

1. Discuss the meaning and importance of each of the rights guaranteed under the Bill of Rights and how each is secured (e.g., freedom of religion, speech, press, assembly, petition, privacy).

2. Explain how economic rights are secured and their importance to the individual and to society (e.g., the right to acquire, use, transfer, and dispose of property; right to choose one's work; right to join or not join labor unions; copyright and patent).

3. Discuss the individual's legal obligations to obey the law, serve as a juror, and pay taxes.

4. Understand the obligations of civic-mindedness, including voting, being informed on civic issues, volunteering and performing public service, and serving in the military or alternative service.

5. Describe the reciprocity between rights and obligations; that is, why enjoyment of one's rights entails respect for the rights of others.

6. Explain how one becomes a citizen of the United States, including the process of naturalization (e.g., literacy, language, and other requirements).
12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their interdependence, and the meaning and importance of those values and principles for a free society.

1. Explain how civil society provides opportunities for individuals to associate for social, cultural, religious, economic, and political purposes.
2. Explain how civil society makes it possible for people, individually or in association with others, to bring their influence to bear on government in ways other than voting and elections.
3. Discuss the historical role of religion and religious diversity.
4. Compare the relationship of government and civil society in constitutional democracies to the relationship of government and civil society in authoritarian and totalitarian regimes.

12.4 Students analyze the unique roles and responsibilities of the three branches of government as established by the U.S. Constitution.

1. Discuss Article I of the Constitution as it relates to the legislative branch, including eligibility for office and lengths of terms of representatives and senators; election to office; the roles of the House and Senate in impeachment proceedings; the role of the vice president; the enumerated legislative powers; and the process by which a bill becomes a law.
2. Explain the process through which the Constitution can be amended.
3. Identify their current representatives in the legislative branch of the national government.
4. Discuss Article II of the Constitution as it relates to the executive branch, including eligibility for office and length of term, election to and removal from office, the oath of office, and the enumerated executive powers.
5. Discuss Article III of the Constitution as it relates to judicial power, including the length of terms of judges and the jurisdiction of the Supreme Court.
6. Explain the processes of selection and confirmation of Supreme Court justices.

12.5 Students summarize landmark U.S. Supreme Court interpretations of the Constitution and its amendments.

1. Understand the changing interpretations of the Bill of Rights over time, including interpretations of the basic freedoms (religion, speech, press, petition, and assembly) articulated in the First Amendment and the due process and equal-protection-of-the-law clauses of the Fourteenth Amendment.
2. Analyze judicial activism and judicial restraint and the effects of each policy over the decades (e.g., the Warren and Rehnquist courts).
3. Evaluate the effects of the Court's interpretations of the Constitution in Marbury v. Madison, McCulloch v. Maryland, and United States v. Nixon, with emphasis on the arguments espoused by each side in these cases.

12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.

1. Analyze the origin, development, and role of political parties, noting those occasional periods in which there was only one major party or were more than two major parties.
2. Discuss the history of the nomination process for presidential candidates and the increasing importance of primaries in general elections.
3. Evaluate the roles of polls, campaign advertising, and the controversies over campaign funding.
4. Describe the means that citizens use to participate in the political process (e.g., voting, campaigning, lobbying, filing a legal challenge, demonstrating, petitioning, picketing, running for political office).
5. Discuss the features of direct democracy in numerous states (e.g., the process of referendums, recall elections).
6. Analyze trends in voter turnout; the causes and effects of reapportionment and redistricting, with special attention to spatial districting and the rights of minorities; and the function of the Electoral College.

12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.

1. Explain how conflicts between levels of government and branches of government are resolved.
2. Identify the major responsibilities and sources of revenue for state and local governments.
3. Discuss reserved powers and concurrent powers of state governments.

4. Discuss the Ninth and Tenth Amendments and interpretations of the extent of the federal government's power.

5. Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.

6. Compare the processes of lawmaking at each of the three levels of government, including the role of lobbying and the media.

7. Identify the organization and jurisdiction of federal, state, and local (e.g., California) courts and the interrelationships among them.

8. Understand the scope of presidential power and decision making through examination of case studies such as the Cuban Missile Crisis, passage of Great Society legislation, War Powers Act, Gulf War, and Bosnia.

12.8 Students evaluate and take and defend positions on the influence of the media on American political life.

1. Discuss the meaning and importance of a free and responsible press.

2. Describe the roles of broadcast, print, and electronic media, including the Internet, as means of communication in American politics.

3. Explain how public officials use the media to communicate with the citizenry and to shape public opinion.

12.9 Students analyze the origins, characteristics, and development of different political systems across time, with emphasis on the quest for political democracy, its advances, and its obstacles.

1. Explain how the different philosophies and structures of feudalism, mercantilism, socialism, fascism, communism, monarchies, parliamentary systems, and constitutional liberal democracies influence economic policies, social welfare policies, and human rights practices.

2. Compare the various ways in which power is distributed, shared, and limited in systems of shared powers and in parliamentary systems, including the influence and role of parliamentary leaders (e.g., William Gladstone, Margaret Thatcher).

3. Discuss the advantages and disadvantages of federal, confederal, and unitary systems of government.

4. Describe for at least two countries the consequences of conditions that gave rise to tyrannies during certain periods (e.g., Italy, Japan, Haiti, Nigeria, Cambodia).

5. Identify the forms of illegitimate power that twentieth-century African, Asian, and Latin American dictators used to gain and hold office and the conditions and interests that supported them.

6. Identify the ideologies, causes, stages, and outcomes of major Mexican, Central American, and South American revolutions in the nineteenth and twentieth centuries.

7. Describe the ideologies that give rise to Communism, methods of maintaining control, and the movements to overthrow such governments in Czechoslovakia, Hungary, and Poland, including the roles of individuals (e.g., Alexander Solzhenitsyn, Pope John Paul II, Lech Walesa, Vaclav Havel).

8. Identify the successes of relatively new democracies in Africa, Asia, and Latin America and the ideas, leaders, and general societal conditions that have launched and sustained, or failed to sustain, them.

12.10 Students formulate questions about and defend their analyses of tensions within our constitutional democracy and the importance of maintaining a balance between the following concepts: majority rule and individual rights; liberty and equality; state and national authority in a federal system; civil disobedience and the rule of law; freedom of the press and the right to a fair trial; the relationship of religion and government.

**Principles of Economics**

12.1 Students understand common economic terms and concepts and economic reasoning.

1. Examine the causal relationship between scarcity and the need for choices.

2. Explain opportunity cost and marginal benefit and marginal cost.

3. Identify the difference between monetary and non-monetary incentives and how changes in incentives cause changes in behavior.

4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.

5. Analyze the role of a market economy in establishing and preserving political and personal liberty (e.g., through the works of Adam Smith).

12.2 Students analyze the elements of America's market economy in a global setting.
1. Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand.
2. Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
3. Explain the roles of property rights, competition, and profit in a market economy.
4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.
5. Understand the process by which competition among buyers and sellers determines a market price.
6. Describe the effect of price controls on buyers and sellers.
7. Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
8. Explain the role of profit as the incentive to entrepreneurs in a market economy.
9. Describe the functions of the financial markets.
10. Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

12.3 Students analyze the influence of the federal government on the American economy.
1. Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights.
2. Identify the factors that may cause the costs of government actions to outweigh the benefits.
3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.
4. Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).

12.4 Students analyze the elements of the U.S. labor market in a global setting.
1. Understand the operations of the labor market, including the circumstances surrounding the establishment of principal American labor unions, procedures that unions use to gain benefits for their members, the effects of unionization, the mini-mum wage, and unemployment insurance.
2. Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.
3. Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.
4. Explain the effects of international mobility of capital and labor on the U.S. economy.

12.5 Students analyze the aggregate economic behavior of the U.S. economy.
1. Distinguish between nominal and real data.
2. Define, calculate, and explain the significance of an unemployment rate, the number of new jobs created monthly, an inflation or deflation rate, and a rate of economic growth.
3. Distinguish between short-term and long-term interest rates and explain their relative significance.

12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States's borders.
1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.
2. Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.
3. Understand the changing role of international political borders and territorial sovereignty in a global economy.
4. Explain foreign exchange, the manner in which exchange rates are determined, and the effects of the dollar's gaining (or losing) value relative to other currencies.
5.
E: **STUDENT EVALUATION STANDARDS**

Homework/Class work **
Supervised Agriculture Experience Program **
FFA – Leadership **
Quizzes & Tests **
Participation/Career Readiness **

**Weighting is based on individual school sites.**

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SEMESTER BREAKDOWN:

Quarter 1 = 40%
Quarter 2 = 40%
Final = 20%

F: **SUGGESTED INSTRUCTIONAL ACTIVITIES**

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Prepared By: Elizabeth Bledsoe, Clay Freeman, Amy Mertz
District Wide Course of Study Title:

Agriculture Economics P

A. COURSE INFORMATION

Grade Level: 12
Length of Course: 1 semester
Maximum Credit: 5
Type: SS/4/5
Recommendation for Enrollment: Completion of 2-3 years of agriculture or consent of the instructor.

COURSE DESCRIPTION This class is a survey and basic understanding of the economics of the agriculture industry. It is an introduction to the economic aspects of agriculture and their implications to the agricultural producer, consumer and the food system. The management principles encountered in the day to day operation of an agricultural enterprise are stressed as they relate to the decision making process. Students will study and discuss agricultural issues and what role economic systems play in the agricultural industry.

B. INSTRUCTIONAL MATERIALS
Economics Principles in Action: Prentice Hall 2001

Supplemental Materials
The U.S. Farm Bill latest revised Edition
Exploring Farm Cooperatives Agric. Council of CA 2003

C. COURSE OUTLINE

Ag. Economics
A) Definition of Economics
1) Economic goods and services
2) Opportunity costs
3) Goals of the American Economy
B) Role of Economics
1) Historical development of the role of agricultural economic policy in the U.S.
2) Relationships of the agricultural economy to the general U.S. economy
C) Introduction to Economics, Agricultural Economics, and Economic Growth
1) Scarcity
2) Role of labor
3) Role of Capital
4) Role of technology
D) Role of Natural Resources in Economic Growth
   1) Land
   2) Water
   3) Minerals
E) Production Principles
   1) Elements of the production process
   2) Differences between agriculture and industrial production
   3) Efficiency
F) Economic Systems
   1) Market
   2) Traditional
   3) Command
      a) Influences on the system
      b) Technology
      c) Values
      d) Population
      e) Government Policy
G) Microeconomics
   1) Demand
      a) Utility
      b) Consumer Behavior
      c) Food Products
   2) Supply
      a) Types of input costs
      b) Effect of technology on costs
      c) Revenue considerations
   3) Business Organization
      a) Single Proprietorship
      b) Partnerships
      c) Corporations
      d) Cooperatives
   4) Markets and Their Structure
      a) Commodities
      b) Futures
   5) Distribution of Income
      a) Differences
      b) Determining Factors
      c) Governmental role
   6) Market Structure
      a) Monopolistic competition
      b) Perfect competition
      c) Role of government
      d) Planning and zoning
H) Macroeconomics
   1) Indicators
      a) Consumer price index
      b) Gross Nat’l product deflator
      c) Employment
      d) Cost of living
      e) Inflation
      f) Trade Balance
      g) Cycles of Production
   2) Government Programs and Policies
      a) Budget process
b) Spending/taxing

c) Monetary policy
   (1) money
   (2) Federal Reserve

d) Financial Intermediaries/

e) Agriculture Programs
   (1) loans
   (2) subsidies
   (3) alternatives

I) International Economics
   1) Agriculture trade and economic development
   2) Foreign trade policy
   3) Tariffs
      a) Quotas
      b) Food as a weapon

J) Importance of exports
   1) Goals of policy
   2) Criteria of policy formulation
   3) Problem solving environment
   4) Problem solving approach

K) The problem solving approach and policy formulation

L) Problems in Resources Development
   1) United States
      a) Rural
      b) Urban
   2) Developing countries

**COURSE OBJECTIVES FOR**

After completion of this course students will:

1. Understand the activities that lead to the development of our government, the evolution of the Constitution, and the essential principles of the structure of our government.

2. Students will be able to distinguish between the branches of government and identify the duties of each branch.

3. Students will be able to identify the social context and public opinion of our government system.

4. Students will be able to outline the process of election.

5. Students will understand the Bill of Rights and explain the meaning and implication of each right in our society.

6. Students will be able to distinguish between the powers of state government and the national government.

7. Students will recognize the role of tariffs and quotas as they relate to international agriculture trade and economic development.

8. Students understand how government organizations affect agriculture and the characteristics of and differences between national and international trade.

9. Students understand how government organizations affect agriculture and the characteristics of and differences between national and international trade.

10. Students will understand economic principles as they relate to agribusiness.

11. Students will be able to make management decisions based on their analysis and interpretation of economic information using the appropriate technology.

12. Student should be able to distinguish the differences between agricultural and industrial production.

13. Students will recognize the role of tariffs and quotas as they relate to international agriculture trade and economic development.

14. Students will distinguish between rural and urban problems in resource development.
Foundation Standards

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.
(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Geometry standards (grades eight through twelve):
(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):
(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):
(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
(1.d) Formulate explanations by using logic and evidence.
(1.f) Distinguish between hypothesis and theory as scientific terms.
(1.j) Recognize the issues of statistical variability and the need for controlled tests.
(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.
(1.m) Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2) Students analyze the elements of America's market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
(12.4) Students analyze the elements of the U.S. labor market in a global setting.
(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)
2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.1) Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.
(2.5) Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.
   d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.
(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
d. Anticipate readers’ problems, mistakes, and misunderstandings.

**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.

c. Modify the tone to fit the purpose and audience.

d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:

a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).

b. Select an appropriate medium for each element of the presentation.

c. Use the selected media skillfully, editing appropriately and monitoring for quality.

d. Test the audience’s response and revise the presentation accordingly.

### 2.3 Written and Oral English Language Conventions:

Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

(1.3) Reflect appropriate manuscript requirements in writing.

### 2.4 Listening and Speaking:

Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:

a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

b. Convey information and ideas from primary and secondary sources accurately and coherently.

c. Make distinctions between the relative value and significance of specific data, facts, and ideas.

d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.

e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.

f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:

a. Prepare and ask relevant questions.

b. Make notes of responses.

c. Use language that conveys maturity, sensitivity, and respect.

d. Respond correctly and effectively to questions.

e. Demonstrate knowledge of the subject or organization.

f. Compile and report responses.

g. Evaluate the effectiveness of the interview.

### Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:

a. Informal expressions for effect

b. Standard American English for clarity
3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

6.3 Understand how to locate important information on a material safety data sheet.

6.4 Maintain safe and healthful working conditions.

6.5 Use tools and machines safely and appropriately.

6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:

7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.

7.3 Understand the need to adapt to varied roles and responsibilities.

7.4 Understand that individual actions can affect the larger community.

7.5 Understand the importance of time management to fulfill responsibilities.

7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.

8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.

8.3 Understand the role of personal integrity and ethical behavior in the workplace.

8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:

10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.

10.2 Manage and actively engage in a career-related, supervised agricultural experience.

10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.

10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Business Pathway: In the Agricultural Business Pathway, students learn about agricultural business operation and management. Topics include accounting, finance, economics, business organization, marketing, and sales.

A1.0 Students understand decision-making processes within the American free enterprise system:

A1.1 Differentiate among the components of the American free enterprise system and other forms of economic systems.

A1.2 Distinguish among the main characteristics of individual proprietorships, partnerships, corporations, and cooperatives.

A1.3 Understand the advantages and disadvantages of the four types of business ownership.

A1.4 Analyze appropriate decision-making tools and financial records to make key management decisions.

A1.5 Analyze physical production relationships to determine optimum use levels.

A1.6 Understand how to calculate the fixed and variable costs associated with the production of agricultural products and determine the output level that will yield maximum profit.

A2.0 Students understand the fundamental economic principles of agribusiness and agricultural production:

A2.1 Understand how basic economic factors affect agricultural production and agribusiness management decisions.
A2.2 Know basic agricultural economic terminology.
A2.3 Understand the law of supply and demand as it effects price determination.
A2.4 Analyze how agriculture uses scarce resources to meet the needs and demands of its consumers.
A2.5 Differentiate between elastic and inelastic supply and demand.
A2.6 Understand the law of diminishing returns and its impact on agricultural production.

A3.0 Students understand the role of credit in agribusiness and agricultural production:
A3.1 Analyze the factors that determine the cost of credit in order to select optimum credit sources (e.g., the advantages and disadvantages of borrowing from the various types of credit providers and sources for short-, intermediate-, and long-term credit).
A3.2 Know the criteria lenders use to evaluate repayment capacity.
A3.3 Analyze balance sheets and cash-flow statements to determine the ability to repay loans.

A4.0 Students understand proper accounting principles and procedures used in business management and tax planning:
A4.1 Understand the differences between cash and accrual accounting systems.
A4.2 Understand the use and importance of budgets, income statements, balance sheets, and financial statements.
A4.3 Understand the basis of taxation within the tax system and its impact on the economy, including the role of taxes in agribusiness.
A4.4 Analyze the role of depreciation and purchasing in tax planning and liability.
A4.5 Understand how to determine property values and how to complete a depreciation schedule.
A4.6 Understand how to determine the tax obligations for an agribusiness.

A5.0 Students understand basic risk management principles and their impact on economic viability:
A5.1 Understand environmental responsibility and its impact on agribusiness.
A5.2 Understand the concept of responsibility and the economic impact of being held liable.
A5.3 Understand the concept and process of risk management, including the use of risk management tools such as insurance.
A5.4 Understand how recordkeeping, farm plans, and an analysis of best practices affect risk management decisions.
A5.5 Understand the role of contingency plans in risk management.

A6.0 Students understand the role and value of agricultural organizations:
A6.1 Understand the benefits of private, public, and governmental organizations, including the value and impact of cooperatives.
A6.2 Understand how participation within organizations would be beneficial in supporting various agricultural operations.
A6.3 Understand how to identify and electronically access public and private agricultural organizations.

A7.0 Students understand agricultural marketing systems:
A7.1 Understand how marketing functions in a free market society.
A7.2 Understand the advantages and disadvantages of the various marketing options for agricultural products and services.
A7.3 Understand how the law of comparative advantage affects agricultural production.
A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.
A7.5 Understand how promotion trends for agricultural products influence individuals.
A7.6 Understand how to develop a marketing plan for an agricultural product or service.

A8.0 Students understand the sales of agricultural products and services:
A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.
A8.3 Examine the physiological and psychological factors that influence motivation to purchase, including the fundamental steps in making a purchase.

A9.0 Students understand local, national, and international agricultural markets and how trade affects the economy:
A9.1 Understand how the importance of agricultural imports and exports affects state and national economies.
A9.2 Know how governmental, economic, and cultural factors affect international trade.
A9.3 Compare and contrast United States trade policies with those of other important trading partners.
A9.4 Understand how biotechnology affects trade and global economies.
A9.5 Understand how different cultural values affect agricultural production and marketing.
A9.6 Understand how negotiations and bargaining agreements affect trade agreements.
A9.7 Analyze agricultural marketing strategies in other parts of the world.

C. Agriscience Pathway
C1.0 Students understand the role of agriculture in the California economy:
C1.1 Understand the history of the agricultural industry in California.
C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
C2.1 Understand important agricultural environmental impacts on soil, water, and air.
C2.2 Understand current agricultural environmental challenges.
C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, communication, and so forth.
C3.4 Understand the laws and regulations concerning biotechnology.
C4.4 Understand various points of view regarding the use of animals.

E. Forestry and Natural Resources Pathway
E1.4 Compare the effects on air and water quality of using different forms of energy.
E2.0 Students understand air and water use, management practices, and conservation strategies:
E2.1 Understand the government’s role in regulating air, soil, and water use management practices and conservation strategies.
E13.3 Understand the role of public and private property rights and how they affect agriculture.
E13.4 Understand the role of government in managing public and private property rights.

G. Plant and Soil Science Pathway
G8.1 Understand California water history, current issues, water rights, water law, and water transfer through different distribution projects throughout the state.
G8.2 Understand the local, state, and federal agencies that regulate water quality and availability in California.

Principles of American Democracy
12.1 Students explain the fundamental principles and moral values of American democracy as expressed in the U.S. Constitution and other essential documents of American democracy.

1. Analyze the influence of ancient Greek, Roman, English, and leading European political thinkers such as John Locke, Charles-Louis Montesquieu, Niccolò Machiavelli, and William Blackstone on the development of American government.
2. Discuss the character of American democracy and its promise and perils as articulated by Alexis de Tocqueville.
3. Explain how the U.S. Constitution reflects a balance between the classical republican concern with promotion of the public good and the classical liberal concern with protecting individual rights; and discuss how the basic premises of liberal constitutionalism and democracy are joined in the Declaration of Independence as "self-evident truths."
4. Explain how the Founding Fathers' realistic view of human nature led directly to the establishment of a constitutional system that limited the power of the governors and the governed as articulated in the Federalist Papers.
5. Describe the systems of separated and shared powers, the role of organized interests (Federalist Paper Number 10), checks and balances (Federalist Paper Number 51), the importance of an independent judiciary (Federalist Paper Number 78), enumerated powers, rule of law, federalism, and civilian control of the military.
6. Understand that the Bill of Rights limits the powers of the federal government and state governments.

12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.
1. Discuss the meaning and importance of each of the rights guaranteed under the Bill of Rights and how each is secured (e.g., freedom of religion, speech, press, assembly, petition, privacy).
2. Explain how economic rights are secured and their importance to the individual and to society (e.g., the right to acquire, use, transfer, and dispose of property; right to choose one's work; right to join or not join labor unions; copyright and patent).
3. Discuss the individual's legal obligations to obey the law, serve as a juror, and pay taxes.
4. Understand the obligations of civic-mindedness, including voting, being informed on civic issues, volunteering and performing public service, and serving in the military or alternative service.
5. Describe the reciprocity between rights and obligations; that is, why enjoyment of one's rights entails respect for the rights of others.
6. Explain how one becomes a citizen of the United States, including the process of naturalization (e.g., literacy, language, and other requirements).

12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their interdependence, and the meaning and importance of those values and principles for a free society.

1. Explain how civil society provides opportunities for individuals to associate for social, cultural, religious, economic, and political purposes.
2. Explain how civil society makes it possible for people, individually or in association with others, to bring their influence to bear on government in ways other than voting and elections.
3. Discuss the historical role of religion and religious diversity.
4. Compare the relationship of government and civil society in constitutional democracies to the relationship of government and civil society in authoritarian and totalitarian regimes.

12.4 Students analyze the unique roles and responsibilities of the three branches of government as established by the U.S. Constitution.

1. Discuss Article I of the Constitution as it relates to the legislative branch, including eligibility for office and lengths of terms of representatives and senators; election to office; the roles of the House and Senate in impeachment proceedings; the role of the vice president; the enumerated legislative powers; and the process by which a bill becomes a law.
2. Explain the process through which the Constitution can be amended.
3. Identify their current representatives in the legislative branch of the national government.
4. Discuss Article II of the Constitution as it relates to the executive branch, including eligibility for office and length of term, election to and removal from office, the oath of office, and the enumerated executive powers.
5. Discuss Article III of the Constitution as it relates to judicial power, including the length of terms of judges and the jurisdiction of the Supreme Court.
6. Explain the processes of selection and confirmation of Supreme Court justices.

12.5 Students summarize landmark U.S. Supreme Court interpretations of the Constitution and its amendments.

1. Understand the changing interpretations of the Bill of Rights over time, including interpretations of the basic freedoms (religion, speech, press, petition, and assembly) articulated in the First Amendment and the due process and equal-protection-of-the-law clauses of the Fourteenth Amendment.
2. Analyze judicial activism and judicial restraint and the effects of each policy over the decades (e.g., the Warren and Rehnquist courts).
3. Evaluate the effects of the Court's interpretations of the Constitution in Marbury v. Madison, McCulloch v. Maryland, and United States v. Nixon, with emphasis on the arguments espoused by each side in these cases.

12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.

1. Analyze the origin, development, and role of political parties, noting those occasional periods in which there was only one major party or were more than two major parties.
2. Discuss the history of the nomination process for presidential candidates and the increasing importance of primaries in general elections.
3. Evaluate the roles of polls, campaign advertising, and the controversies over campaign funding.
4. Describe the means that citizens use to participate in the political process (e.g., voting, campaigning, lobbying, filing a legal challenge, demonstrating, petitioning, picketing, running for political office).
5. Discuss the features of direct democracy in numerous states (e.g., the process of referendums, recall elections).
6. Analyze trends in voter turnout; the causes and effects of reapportionment and redistricting, with special attention to spatial districting and the rights of minorities; and the function of the Electoral College.

12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.
   1. Explain how conflicts between levels of government and branches of government are resolved.
   2. Identify the major responsibilities and sources of revenue for state and local governments.
   3. Discuss reserved powers and concurrent powers of state governments.
   4. Discuss the Ninth and Tenth Amendments and interpretations of the extent of the federal government's power.
   5. Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.
   6. Compare the processes of lawmaking at each of the three levels of government, including the role of lobbying and the media.
   7. Identify the organization and jurisdiction of federal, state, and local (e.g., California) courts and the interrelationships among them.
   8. Understand the scope of presidential power and decision making through examination of case studies such as the Cuban Missile Crisis, passage of Great Society legislation, War Powers Act, Gulf War, and Bosnia.

12.8 Students evaluate and take and defend positions on the influence of the media on American political life.
   1. Discuss the meaning and importance of a free and responsible press.
   2. Describe the roles of broadcast, print, and electronic media, including the Internet, as means of communication in American politics.
   3. Explain how public officials use the media to communicate with the citizenry and to shape public opinion.

12.9 Students analyze the origins, characteristics, and development of different political systems across time, with emphasis on the quest for political democracy, its advances, and its obstacles.
   1. Explain how the different philosophies and structures of feudalism, mercantilism, socialism, fascism, communism, monarchies, parliamentary systems, and constitutional liberal democracies influence economic policies, social welfare policies, and human rights practices.
   2. Compare the various ways in which power is distributed, shared, and limited in systems of shared powers and in parliamentary systems, including the influence and role of parliamentary leaders (e.g., William Gladstone, Margaret Thatcher).
   3. Discuss the advantages and disadvantages of federal, confederal, and unitary systems of government.
   4. Describe for at least two countries the consequences of conditions that gave rise to tyrannies during certain periods (e.g., Italy, Japan, Haiti, Nigeria, Cambodia).
   5. Identify the forms of illegitimate power that twenty-first-century African, Asian, and Latin American dictators used to gain and hold office and the conditions and interests that supported them.
   6. Identify the ideologies, causes, stages, and outcomes of major Mexican, Central American, and South American revolutions in the nineteenth and twentieth centuries.
   7. Describe the ideologies that give rise to Communism, methods of maintaining control, and the movements to overthrow such governments in Czechoslovakia, Hungary, and Poland, including the roles of individuals (e.g., Alexander Solzhenitsyn, Pope John Paul II, Lech Walesa, Vaclav Havel).
   8. Identify the successes of relatively new democracies in Africa, Asia, and Latin America and the ideas, leaders, and general societal conditions that have launched and sustained, or failed to sustain, them.

12.10 Students formulate questions about and defend their analyses of tensions within our constitutional democracy and the importance of maintaining a balance between the following concepts: majority rule and
individual rights; liberty and equality; state and national authority in a federal system; civil disobedience and the rule of law; freedom of the press and the right to a fair trial; the relationship of religion and government.

**Principles of Economics**

12.1 Students understand common economic terms and concepts and economic reasoning.
1. Examine the causal relationship between scarcity and the need for choices.
2. Explain opportunity cost and marginal benefit and marginal cost.
3. Identify the difference between monetary and non-monetary incentives and how changes in incentives cause changes in behavior.
4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.
5. Analyze the role of a market economy in establishing and preserving political and personal liberty (e.g., through the works of Adam Smith).

12.2 Students analyze the elements of America's market economy in a global setting.
1. Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand.
2. Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
3. Explain the roles of property rights, competition, and profit in a market economy.
4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.
5. Understand the process by which competition among buyers and sellers determines a market price.
6. Describe the effect of price controls on buyers and sellers.
7. Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
8. Explain the role of profit as the incentive to entrepreneurs in a market economy.
9. Describe the functions of the financial markets.
10. Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

12.3 Students analyze the influence of the federal government on the American economy.
1. Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights.
2. Identify the factors that may cause the costs of government actions to outweigh the benefits.
3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.
4. Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).

12.4 Students analyze the elements of the U.S. labor market in a global setting.
1. Understand the operations of the labor market, including the circumstances surrounding the establishment of principal American labor unions, procedures that unions use to gain benefits for their members, the effects of unionization, the minimum wage, and unemployment insurance.
2. Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.
3. Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.
4. Explain the effects of international mobility of capital and labor on the U.S. economy.

12.5 Students analyze the aggregate economic behavior of the U.S. economy.
1. Distinguish between nominal and real data.
2. Define, calculate, and explain the significance of an unemployment rate, the number of new jobs created monthly, an inflation or deflation rate, and a rate of economic growth.
3. Distinguish between short-term and long-term interest rates and explain their relative significance.
12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States's borders.

1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.

2. Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.

3. Understand the changing role of international political borders and territorial sovereignty in a global economy.

4. Explain foreign exchange, the manner in which exchange rates are determined, and the effects of the dollar's gaining (or losing) value relative to other currencies.

E. **STUDENT EVALUATION STANDARDS**

Homework/Class work

Supervised Agriculture Experience Program

FFA – Leadership

Quizzes & Tests

Participation/Career Readiness

**Weighting is based on individual school sites.

SEMESTER BREAKDOWN:

Quarter 1 = 40%

Quarter 2 = 40%

Final = 20%

F. **SUGGESTED INSTRUCTIONAL ACTIVITIES**

Prepared By: Elizabeth Bledsoe, Clay Freeman, Amy Mertz
Agriculture Welding Courses of Study
A. COURSE INFORMATION

Grade Level: 10-12
Length of Course: 1 year
Maximum Credit: 10
Type: Elective

Recommendation for Enrollment:

B. COURSE DESCRIPTION (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific gradation requirement.) A basic course in general welding with both oxyacetylene and arc medias explained. It is an Introduction of welding equipment, safety, and development of welding knowledge, skills, and techniques dealing basically with oxyacetylene welding.

C. INSTRUCTIONAL MATERIALS (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

Welding Technology Fundamentals, Bowditch/Bowditch, Goodheart-Wilcox, 1991
Welding Print Reading, John R. Walker, Goodheart-Wilcox, 1991
Math for Welders, Nino Marion, Goodheart-Wilcox, 1990

Arc process - welding electrodes: 6010, 7018, 7024
MIG process - welding wire: .035 bare wire, .045 duel shield
Various sizes of flat metal and pipe

Wheels of Learning: Welding, National Center for Construction Education and Research, 1996.
D. **COURSE OUTLINE.** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

**FIRST SEMESTER**

I. Course Introduction
   A. Orientation of course outline for coming year
   B. Course expectations of students
      1. Student evaluations and grading systems
      2. Student conduct in class of shop area
   C. Class rules

II. Shop Safety
   A. General shop safety
      1. Proper use and care of hand and power tools
      2. Proper handling and set-up of oxyacetylene cutting and welding equipment
      3. Introduction to safety in arc welding
   B. Personal safety habits
      1. Use of safety equipment
      2. Proper clothing required for welding shop
   C. Proper use and care of various types of power equipment in the community classroom

III. Beginning Arc Welding
   A. Proper set-up and adjustment of arc welding equipment
   B. Practical welding assignments
      1. Use of 6010, 6011, 6013 welding electrodes on various joints on steel plates in all positions
      2. Use of 7018 welding electrodes on various joints on steel plates in all positions
      3. Open butt on steel plate with 6010 root and 7018 fill and cap
      4. Use of 7024 electrodes in flat and horizontal positions on steel plate

IV. Metal Cutting Processes
   A. Oxy-acetylene cutting
   B. Manual Plasma Cutting
   C. CNC Plasma Cutting
   D. Abrasive Saw
   E. Cold Cutting Saw
   F. Ironworker
   G. Manual and Hydraulic shear
   H. Carbon arc gauging
   I. Bandsaw

**SECOND SEMESTER**

V. Advanced Arc Welding
   A. Pipe welding
1. Use of 6010 electrodes on pipe in all positions
2. Welding of pipe with 6010 root and 7018 fill and cap
3. Welding of pipe with .035 wire root and .045 duel shield fill and cap

VI. Gas Metal Arc Welding (G.M.A.W.)
   A. Proper set-up and adjustment of G.M.A.W.
      welding equipment
   B. Practical welding assignments on steel plate
   C. Practical welding assignments of steel plate

VII. Gas Tungston Arc Welding (G.T.A.W.)
   A. Proper set-up and adjustment of G.T.A.W.
      welding equipment
   B. Practical welding assignments
      1. G.T.A.W. welding of steel plate and pipe
      2. G.T.A.W. welding of stainless steel (when available)
      3. G.T.A.W. welding of aluminum (when available)

VIII. Blueprint Reading
   A. How to read blueprints
   B. Basic layout exercises
      1. Layout on plate
      2. Layout on pipe

E. COURSE OBJECTIVES FOR (The objectives area to include the specific, major skills or
understandings which students will be able to demonstrate or acquire instruction in the course.
A minimum of eight to twelve objectives should be identified for each semester of the course.
Each objective is to be clearly linked to the Board adopted standards for the course or subject
area; indicate the link by placing the number of the appropriate standards (s) after each
objective. Minimum length: one page)

Behavior Objective for Intro to Ag Welding

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and
employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses
the numbering as specified in the mathematics, science, and history—social science content standards adopted by
the State Board of Education.)

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep
problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and
reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both
computationally and conceptually challenging problems by using these techniques.
(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture
problems.

Specific applications of Geometry standards (grades eight through twelve):
(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral
area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi,
parallelograms, and trapezoids.
(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common
geometric figures and solids.
(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to
classify figures and solve problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):
(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):
   (1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
   (1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
   (1.d) Formulate explanations by using logic and evidence.
   (1.f) Distinguish between hypothesis and theory as scientific terms.
   (1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
   (12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
   (12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
   (12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
   (12.2.6) Describe the effect of price controls on buyers and sellers.
   (12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
   (12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
   (12.4) Students analyze the elements of the U.S. labor market in a global setting.
   (12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
   (2.3) Generate relevant questions about readings on issues that can be researched.
   (2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
   (2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
   (2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
   (2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
   (2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
   (1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
   (2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
       a. Report information and convey ideas logically and correctly.
       b. Offer detailed and accurate specifications.
       c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
       d. Anticipate readers’ problems, mistakes, and misunderstandings.
Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
   e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.
(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly.

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in
**diverse and changing personal, community, and workplace environments:**
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

**5.0 Problem Solving and Critical Thinking:** Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

**6.0 Health and Safety:** Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

**7.0 Responsibility and Flexibility:** Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

**8.0 Ethics and Legal Responsibilities:** Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

**9.0 Leadership and Teamwork:** Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Mechanics Pathway: The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic welding skills and safety, standards B1.0, B5.0, B7.0, B8.0, B9.0, cold metal work and welding technology.

B1.0 Students understand personal and group safety:
- B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
- B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
- B1.3 Know how to safely secure loads on a variety of vehicles, shaping, joining, and finishing.

B5.0 Students understand agricultural cold metal processes:
- B5.1 Know how to identify common metals, sizes, and shapes.
- B5.2 Know basic tool-fitting skills.
- B5.3 Know layout skills.
- B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
- B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
- B7.1 Understand the role of heat and oxidation in the cutting process.
- B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
- B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
- B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
- B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:
- B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
- B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
- B8.3 Weld a variety of joints in various positions.
- B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:
- B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
- B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
- B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
- B9.4 Understand how to design project plans by using mechanical drawing techniques.
- B9.5 Understand how to finish a metal project by implementing proper sequencing.
- B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9:7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

F. **STUDENT EVALUATION STANDARDS** *(List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)*

1. Essay type or subjective tests 15%
2. Objective tests 10%
3. Actual test of ability in shop skills 15%
4. Shop performance and cleanup 10%
5. Project completion and quality 40%
6. Participation in co-curricular activities (FFA) and SAE 10%

The following range is used to determine what grade a student will receive at the quarter and semester.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89%</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79%</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>F</td>
<td>0% - 59%</td>
</tr>
</tbody>
</table>

G. **SUGGESTED INSTRUCTIONAL ACTIVITIES** *(This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)*

Career Development Events: Ag Mech team and Ag Welding Team
Kern county Fair
World Ag Expo
Guest Speakers
Industry demonstrations

Prepared by: **Hector Jimenez, Richard Goodding, Mark Morales**
COURSE OF STUDY

Ag Welding 2 10-12 Ag 10
Course Title Grade Level Department Max. Credit
(Title must correlate with Course Code Catalog)

Does this course satisfy a graduation Requirement in another subject area? NO
If so, what subject area?

Prepared by: Mike Battistoni Bakersfield School 3/20/08

Approval of Site Administrator: ____________________________ Date

Signature Date

A. COURSE INFORMATION

Grade Level: 10-12
Length of Course: 1 year
Maximum Credit: 10
Recommendation for Enrollment: Completion of Ag Welding 1 with a grade of a C or better.

B. BRIEF DESCRIPTION OF THE COURSE

A basic course in general and advanced welding with both oxyacetylene and arc medias explained. It is a continuation of instruction dealing with welding equipment, safety, and development of welding knowledge, skills, and techniques dealing basically with oxyacetylene welding.

C. BOARD – ADOPTED TEXTBOOKS


D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Farm Shop, Wakeman and McCoy, McMillan.
Wiring Simplified, H.P. Richter, et. al.
Various handouts provided by the instructor
Oxyacetylene welding equipment in the welding shop
Filmstrips
Arc Welding Machinery
Various Hand Tools

E. BRIEF OUTLINE OF COURSE CONTENT
A. Orientation
B. Shop Safety
C. Orientation of: tools, equipment, and welding careers
D. Oxyacetylene and arc welding
E. Demonstration of 3 types of flames and torch manipulation
F. Welding practice and projects
G. Flame cutting with the oxyacetylene cutting torch
H. Arc welding practice
I. Completion of predesigned and student manufactured projects

F. BEHAVIORAL OBJECTIVES FOR (TITLE OF COURSE)

BHS Expected School-wide Learning Results (ESLRs):

A. Our students will be competent self-directed learners who
   1. plan in order to achieve reasonable short-term as well as long-term goals.
   2. use reading, writing, mathematics, and effective problem-solving strategies in
      accomplishing daily tasks.
   3. distinguish between fact and opinion, gather information, and draw inferences.
B. Our students will be effective communicators who:
   1. use written and spoken English to reach minimum proficiencies.
   2. consider audience and occasion in framing messages in a socially acceptable
      manner.
   3. use technologies to meet their education and vocational needs
C. Our students will be involved citizens who:
   1. understand and accept responsibilities of citizenship and work to improve the
      conditions of their society.
   2. recognize and appreciate multiculturalism.
   3. use accumulated knowledge and skills to enter the world of work or pursue higher
      education.

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):

(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
13.0 Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

15.0 Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Geometry standards (grades eight through twelve):

8.0 Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

10.0 Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.

11.0 Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

12.0 Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):

8.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):

1.2.a Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

1.2.c Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

1.2.d Formulate explanations by using logic and evidence.

1.2.f Distinguish between hypothesis and theory as scientific terms.

1.2.l Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

History-Social Science: Specific applications of Principles of Economics standards (grade twelve):

12.2.2 Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

12.2.3 Explain the roles of property rights, competition, and profit in a market economy.

12.2.5 Understand the process by which competition among buyers and sellers determines a market price.

12.2.6 Describe the effect of price controls on buyers and sellers.

12.2.7 Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

12.2.10 Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

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2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):

2.3 Generate relevant questions about readings on issues that can be researched.

2.6 Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.7 Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

2.8 Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s
intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

**Specific applications of Reading Comprehension standards (grades eleven and twelve):**

(3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

**2.2 Writing:** Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.

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**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

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a. Provide clear and purposeful information and address the intended audience appropriately.

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d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

**2.3 Written and Oral English Language Conventions:** Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

**2.4 Listening and Speaking:** Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

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a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

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e. Use technical terms and notations accurately.

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a. Prepare and ask relevant questions.

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d. Respond correctly and effectively to questions.

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f. Compile and report responses.

g. Evaluate the effectiveness of the interview.

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a. Informal expressions for effect
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Differentiate among, select, and apply appropriate tools and technology.

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8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Mechanics Pathway: The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
   B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
   B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
   B1.3 Know how to safely secure loads on a variety of vehicles.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
   B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
   B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
   B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
   B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
B3.5 Interpret basic agricultural electrical plans.

B5.0 Students understand agricultural cold metal processes:
   B5.1 Know how to identify common metals, sizes, and shapes.
   B5.2 Know basic tool-fitting skills.
   B5.3 Know layout skills.
   B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
   B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting
       materials, shaping, fastening, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
   B7.1 Understand the role of heat and oxidation in the cutting process.
   B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
   B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
   B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
   B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfaceing.

B8.0 Students understand electric arc welding processes:
   B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment
       (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
   B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to
       fusion-weld mild steel with appropriate welding electrodes and related equipment.
   B8.3 Weld a variety of joints in various positions.
   B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and
       distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:
   B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
   B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
   B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
   B9.4 Understand how to design project plans by using mechanical drawing techniques.
   B9.5 Understand how to finish a metal project by implementing proper sequencing.
   B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe,
       mill, CNC plasma, shears, press break).
   B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and
       positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing
       a clear and concise fabrication contract.

G. **ASSESSMENT PROCEDURES**

Quality, quantity and range of shop work done 20%
Attitude, effort, sincerity of purpose and cooperative ability 20%
Leadership Participation 10%
Mastery of subject matter as measured by projects 50%

1st quarter  =45%  of semester grade
2nd quarter  =45%  of semester grade
Final  =10%  of semester grade

To receive credit in Ag Welding each student must satisfactorily complete the following:
1. Pass safety test with 100% correct answers before working in the shop.
2. Two manipulative skills with oxyacetylene torch.
3. Five manipulative skills with arc welding electrode.
4. Learn shop practice techniques and identify and appreciate craftsman-like methods on
   written tests.
5. Develop and manufacture three welding projects.
6. Examine career opportunities in the welding field.
Kern High School District
Office of Instruction

COURSE OF STUDY

Ag Welding 3  11-12  Ag  10

Course Title  Grade Level  Department  Max. Credit

>Title must correlate with Course Code Catalog

Does this course satisfy a graduation Requirement in another subject area?  NO
If so, what subject area?

Prepared by:  Mike Battistoni  Bakersfield School  3/20/08

Approval of Site Administrator:  

Signature  Date

A.  COURSE INFORMATION

Grade Level:  11-12
Length of Course:  1 year
Maximum Credit:  10

Recommendation for Enrollment:  Completion of Ag Welding 2 with a C grade or better.

B.  BRIEF DESCRIPTION OF THE COURSE

A basic course in general and advanced welding with both oxyacetylene and arc medias explained. It is a continuation of instruction dealing with welding equipment, safety, and development of welding knowledge, skills, and techniques dealing basically with oxyacetylene welding.

C.  BOARD – ADOPTED TEXTBOOKS


D.  SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Farm Shop, Wakeman and McCoy, McMillan.
E. **BRIEF OUTLINE OF COURSE CONTENT**

A. Orientation  
B. Shop Safety  
C. Orientation of: tools, equipment, and welding careers  
D. Oxyacetylene and arc welding  
E. Demonstration of 3 types of flames and torch manipulation  
F. Welding practice and projects  
G. Flame cutting with the oxyacetylene cutting torch  
H. Arc welding practice  
I. Completion of predesigned and student manufactured projects  

F. **BEHAVIORAL OBJECTIVES FOR (TITLE OF COURSE)**

BHS Expected School-wide Learning Results (ESLRs):

A. Our students will be competent self-directed learners who  
   1. plan in order to achieve reasonable short-term as well as long-term goals.  
   2. use reading, writing, mathematics, and effective problem-solving strategies in accomplishing daily tasks.  
   3. distinguish between fact and opinion, gather information, and draw inferences.  

B. Our students will be effective communicators who:  
   1. use written and spoken English to reach minimum proficiencies.  
   2. consider audience and occasion in framing messages in a socially acceptable manner.  
   3. use technologies to meet their education and vocational needs  

C. Our students will be involved citizens who:  
   1. understand and accept responsibilities of citizenship and work to improve the conditions of their society.  
   2. recognize and appreciate multiculturalism.  
   3. use accumulated knowledge and skills to enter the world of work or pursue higher education.  

FOUNDATION STANDARDS  

1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.1 Mathematics: **Specific applications of Algebra I standards (grades eight through twelve):**

1.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.  

12.0 Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

**Specific applications of Geometry standards (grades eight through twelve):**

(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.

(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

**Specific applications of Probability and Statistics standards (grades eight through twelve):**

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

**1.2 Science:** Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.f) Distinguish between hypothesis and theory as scientific terms.

(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

**3 History–Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(12.2.6) Describe the effect of price controls on buyers and sellers.

(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

(12.4) Students analyze the elements of the U.S. labor market in a global setting.

(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

**2.0 Communications:** Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English-language arts content standards adopted by the State Board of Education.)

**2.1 Reading:** Specific applications of Reading Comprehension standards (grades nine and ten):

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's
intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(1.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
   e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.
(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
b. Standard American English for clarity
c. Technical language for specificity
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience’s response and revise the presentation accordingly

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

**8.0 Ethics and Legal Responsibilities:** Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms.

8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

**9.0 Leadership and Teamwork:** Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution.
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

**10.0 Technical Knowledge and Skills:** Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

**11.0 Demonstration and Application:** Students demonstrate and apply the concepts contained in the foundation and pathway standards.

**Agricultural Mechanics Pathway:** The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
   B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
   B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
   B1.3 Know how to safely secure loads on a variety of vehicles.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
   B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
   B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
   B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
   B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
B3.5 Interpret basic agricultural electrical plans.

B5.0 Students understand agricultural cold metal processes:

B5.1 Know how to identify common metals, sizes, and shapes.
B5.2 Know basic tool-fitting skills.
B5.3 Know layout skills.
B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:

B7.1 Understand the role of heat and oxidation in the cutting process.
B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:

B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
B8.3 Weld a variety of joints in various positions.
B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:

B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
B9.4 Understand how to design project plans by using mechanical drawing techniques.
B9.5 Understand how to finish a metal project by implementing proper sequencing.
B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

G. **ASSESSMENT PROCEDURES**

Quality, quantity and range of shop work done 20%
Attitude, effort, sincerity of purpose and cooperative ability 20%
Leadership Participation 10%
Mastery of subject matter as measured by projects 50%
1st quarter =45% of semester grade
2nd quarter =45% of semester grade
Final =10% of semester grade

To receive credit in Ag Welding each student must satisfactorily complete the following:
1. Pass safety test with 100% correct answers before working in the shop.
2. Two manipulative skills with oxyacetylene torch.
3. Five manipulative skills with arc welding electrode.
4. Learn shop practice techniques and identify and appreciate craftsman-like methods on written tests.
5. Develop and manufacture four welding projects.
6. Examine career opportunities in the welding field.
Kern High School District
Office of Instruction

COURSE OF STUDY

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Grade Level</th>
<th>Department</th>
<th>Max. Credit</th>
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<tbody>
<tr>
<td>Ag Welding 4</td>
<td>11-12</td>
<td>AG</td>
<td>10</td>
</tr>
</tbody>
</table>

(Title must correlate with Course Code Catalog)

Does this course satisfy a graduation requirement in another subject area? NO

Prepared by: Mike Battistoni
Bakersfield School

3/20/08 Date

Approval of Site Administrator: ____________________________
Signature ____________________________ Date ____________________________

A. COURSE INFORMATION

Grade Level: 11-12
Length of Course: 1 year
Maximum Credit: 10

Recommendation for Enrollment: Completion of Ag Welding 3 with a C grade or better.

B. BRIEF DESCRIPTION OF THE COURSE

A basic course in general and advanced welding with both oxyacetylene and arc medias explained. It is a continuation of instruction dealing with welding equipment, safety, and development of welding knowledge, skills, and techniques dealing basically with oxyacetylene welding.

C. BOARD - ADOPTED TEXTBOOKS


D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Farm Shop, Wakeman and McCoy, McMillan.
Wiring Simplified, H.P. Richter, et. al.
Various handouts provided by the instructor
Oxyacetylene welding equipment in the welding shop
Filmstrips
Arc Welding Machinery
Various Hand Tools

E. BRIEF OUTLINE OF COURSE CONTENT

A. Orientation
B. Shop Safety
C. Orientation of: tools, equipment, and welding careers
D. Oxyacetylene and arc welding
E. Demonstration of 3 types of flames and torch manipulation
F. Welding practice and projects
G. Flame cutting with the oxyacetylene cutting torch
H. Arc welding practice
I. Completion of predesigned and student manufactured projects

F. BEHAVIORAL OBJECTIVES FOR (TITLE OF COURSE)

BHS Expected School-wide Learning Results (ESLRs):

A. Our students will be competent self-directed learners who
   1. plan in order to achieve reasonable short-term as well as long-term goals.
   2. use reading, writing, mathematics, and effective problem-solving strategies in accomplishing daily tasks.
   3. distinguish between fact and opinion, gather information, and draw inferences.
B. Our students will be effective communicators who:
   1. use written and spoken English to reach minimum proficiencies.
   2. consider audience and occasion in framing messages in a socially acceptable manner.
   3. use technologies to meet their education and vocational needs
C. Our students will be involved citizens who:
   1. understand and accept responsibilities of citizenship and work to improve the conditions of their society.
   2. recognize and appreciate multiculturalism.
   3. use accumulated knowledge and skills to enter the world of work or pursue higher education.

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.
Specific applications of Geometry standards (grades eight through twelve):

(10.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.f) Distinguish between hypothesis and theory as scientific terms.

(1.1) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(12.2.6) Describe the effect of price controls on buyers and sellers.

(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

(12.4) Students analyze the elements of the U.S. labor market in a global setting.

(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).
Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
   e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.
(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)
(8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

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c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience’s response and revise the presentation accordingly

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using logical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.
8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Mechanics Pathway: The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
B1.3 Know how to safely secure loads on a variety of vehicles.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
B3.5 Interpret basic agricultural electrical plans.

B5.0 Students understand agricultural cold metal processes:
B5.1 Know how to identify common metals, sizes, and shapes.
B5.2 Know basic tool-fitting skills.
B5.3 Know layout skills.
B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
B7.1 Understand the role of heat and oxidation in the cutting process.
B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:
B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
B8.3 Weld a variety of joints in various positions.
B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:
B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
B9.4 Understand how to design project plans by using mechanical drawing techniques.
B9.5 Understand how to finish a metal project by implementing proper sequencing.
B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

G. **ASSESSMENT PROCEDURES**

Quality, quantity and range of shop work done 20%
Attitude, effort, sincerity of purpose and cooperative ability 20%
Leadership Participation 10%
Mastery of subject matter as measured by projects 50%
1st quarter =45% of semester grade
2nd quarter =45% of semester grade
Final =10% of semester grade

To receive credit in Ag Welding each student must satisfactorily complete the following:
1. Pass safety test with 100% correct answers before working in the shop.
2. Two manipulative skills with oxyacetylene torch.
3. Five manipulative skills with arc welding electrode.
4. Learn shop practice techniques and identify and appreciate craftsman-like methods on written tests.
5. Develop and manufacture four welding projects.
6. Examine career opportunities in the welding field.
Agriculture Mechanics Courses of Study
District Wide Course of Study Title:

Agriculture Mechanics 1

A. COURSE INFORMATION

Grade Level: 9-12
Length of Course: One Year
Maximum Credit: 10
Type: Misc.
Recommendation for Enrollment: None

B. COURSE DESCRIPTION (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific gradation requirement.)

Ag Mechanics I (Beginning Ag Mechanics) is a course designed to fulfill the student's elective requirements from KHSD. The course is a year long course which is designed to introduce the student to basic shop skill necessary to develop a well rounded agricultural mechanics program. The course is also a pre-requisite to Ag Mechanics 2.

C. INSTRUCTIONAL MATERIALS (List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

Basic Text:


*2nd and 5th editions acceptable*

D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS (List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

**Farm Shop**, Wakeman and McCoy, McMillan.


**Wiring Simplified**, H.P. Richter, et. al.


**E. BRIEF OUTLINE OF COURSE CONTENT**

A. FFA – 1 week
   1. History, Leadership, Involvement
   2. SAEs

B. Exploring Careers in Agricultural Mechanics – 1 week
   1. Mechanics in the World of Agriculture
   2. Career Options in Ag. Mechanics

C. Using the Ag. Mech. Shop – 4 weeks
   1. Shop Orientation and Procedures
   4. Shop Clean-up and Orientation
   5. Measurements

D. Woodworking – 3 weeks
   1. Hand tools, fasteners and hardware
   2. Layout, tools, measurement and procedures
   3. Selecting, cutting, and shaping wood
   4. Fastening wood
   5. Finishing wood
   6. Woodworking with power tools
   7. Preparing wood and metal for painting
   8. Selecting and applying coating materials

E. Tool Fitting – 1 week
   1. Repairing and reconditioning tools
   2. Sharpening tools

F. Metal Working – 3 weeks
   1. Hand tools, fasteners and hardware
   2. Layout, tools and procedures
   3. Selecting, cutting, and shaping metal
   4. Fastening metal
   5. Finishing metal
6. Identifying, marking, cutting, and bending metal
7. Fastening metal
8. Metal working with power tools
9. Preparing metal for painting
10. Selecting and applying coating materials

G. Gas Heating, Cutting, Brazing and Welding – 3 weeks
   1. Using Oxyacetylene
   2. Gas welding joints
   3. Brazing joints
   4. Oxy-fuel cutting

H. Electric Welding & Cutting Processes – 5 weeks
   1. Selecting and using arc welding
   2. SMAW welding mild steel
   3. SMAW welding positions
   4. SMAW welding joints
   5. MIG welding
   6. TIG welding
   7. Plasma Arc Cutting

I. Electricity – 3 weeks
   1. Electrical principles and wiring material
   2. Installing branch circuits

J. Plumbing – 3 weeks
   1. Plumbing materials and tools
   2. Irrigation and sprinkler systems
   3. Household plumbing

K. Concrete and Masonry – 1 week
   1. Concrete and masonry

L. Rope Work – 1 week
   1. Knots and hitches

M. Surveying – 1 week
   1. Surveying skill
   2. GPS and laser leveling

N. Construction of Personal Projects – 8 weeks
   1. Project selection and planning
   2. Bill of material and cost estimation
   3. Project construction

F. Behavioral Objectives for Beginning Ag Mechanics (standards)

FOUNDATION STANDARDS

1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history-social science content standards adopted by the State Board of Education.)
1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.
(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Geometry standards (grades eight through twelve):
(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):
(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):
(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
(1.d) Formulate explanations by using logic and evidence.
(1.f) Distinguish between hypothesis and theory as scientific terms.
(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
(12.4) Students analyze the elements of the U.S. labor market in a global setting.
(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):

(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(2.4) Make warranted and reasonable assertions about the author's arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.

b. Offer detailed and accurate specifications.

c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).

d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.

c. Modify the tone to fit the purpose and audience.

d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:

a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

b. Make distinctions between the relative value and significance of specific data, facts, and ideas.

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e. Demonstrate knowledge of the subject or organization.
f. Compile and report responses.
g. Evaluate the effectiveness of the interview.

**Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)**

1.8 Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

**3.0 Career Planning and Management**

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3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

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6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

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7.3 Understand the need to adapt to varied roles and responsibilities.
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8.4 Understand how to access, analyze, and implement quality assurance information.

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10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

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B1.0 Students understand personal and group safety:
B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
B1.2 Know the relationship between accepted shop management procedures and a safe working environment.

B1.3 Know how to safely secure loads on a variety of vehicles.

B2.0 Students understand the principles of basic woodworking:
B2.1 Know how to identify common wood products, lumber types, and sizes.
B2.2 Know how to calculate board feet, lumber volume, and square feet.
B2.3 Know how to identify, select, and implement basic fastening systems.
B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
B3.5 Interpret basic agricultural electrical plans.

B4.0 Students understand plumbing system practices commonly used in agriculture:
B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC (polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).
B4.2 Understand the environmental influences on plumbing system choices (e.g., filter systems, water disposal).
B4.3 Know how various plumbing and irrigation systems are used in agriculture.
B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, joining, and testing.

B5.0 Students understand agricultural cold metal processes:
B5.1 Know how to identify common metals, sizes, and shapes.
B5.2 Know basic tool-fitting skills.
B5.3 Know layout skills.
B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Students understand concrete and masonry practices commonly used in agriculture:
B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project.
B6.2 Know proper bed preparation, concrete forms layout, and construction.
B6.3 Complete a concrete or masonry project, including developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
B7.1 Understand the role of heat and oxidation in the cutting process.
B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:
B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
B8.3 Weld a variety of joints in various positions.
B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:

B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
B9.4 Understand how to design project plans by using mechanical drawing techniques.
B9.5 Understand how to finish a metal project by implementing proper sequencing.
B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press brake).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

B10.0 Students understand small and compact engines:

B10.1 Understand engine theory for both two- and four-stroke cycle engines.
B10.2 Know different types of small engines and their applications.
B10.3 Know small engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, lubrication systems).
B10.4 Know how to troubleshoot and solve problems with small engines.
B10.5 Know how to disassemble, inspect, adjust, and reassemble a small engine.
B10.6 Know how to look up parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Students understand the principles and applications of various engines and machinery used in agriculture:

B11.1 Understand how to identify common agricultural machinery.
B11.2 Operate and maintain equipment safely and efficiently.
B11.3 Know the various types of engines found on agricultural machinery and understand the theory and safe operation of their systems (e.g., cooling, electrical, fuel).
B11.4 Know the theory and operation of mobile hydraulic systems and power take-off systems.
B11.5 Troubleshoot common problems with engines and agricultural equipment.
B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).

B12.0 Students understand land measurement and construction techniques commonly used in agriculture:

B12.1 Understand common surveying techniques used in agriculture (e.g., leveling, land measurement, building layout).
B12.2 Know how to draw and interpret architectural plans.
B12.3 Know how to install single- and three-phase wiring and control systems found in agricultural structures, pumps, and irrigation systems.
B12.4 Install plumbing in agricultural structures (e.g., potable water, sewer, irrigation).
B12.5 Form, place, and finish concrete or masonry (e.g., concrete block).
B12.6 Understand how to construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).
B12.7 Develop clear and concise agricultural construction contracts.

G. **ASSESSMENT PROCEDURES**

The criteria on which students will be graded in the course will be based on tests and student evaluations which include:

1. Essay type or subjective tests 15%
2. Objective tests 10%
3. Actual test of ability in shop skills 15%
4. Shop performance and cleanup 10%
5. Project completion and quality 40%
6. Participation in co-curricular activities (FFA) 10%

The following range is used to determine what grade a student will receive at the quarter and semester.

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COURSE OF STUDY

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<tr>
<th>Ag Mechanics II</th>
<th>Grade Level</th>
<th>Agriculture</th>
<th>Max Credit</th>
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<tbody>
<tr>
<td>Course Title</td>
<td>9-12</td>
<td>Department</td>
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</table>

Does this course satisfy a graduation requirement in another subject area? **NO**

If so, what subject area?

Prepared by: Mike Battistoni School: Bakersfield HS Date: 3-20-08

Approval of Site Administrator: Date: __________

(This form should be used by school sites for all courses of study other than “District-wide” courses)

A. **COURSE INFORMATION**

Grade Level: 9-12

Length of Course: One Year

Maximum Credit: 10

Type: Elective

Recommendation for Enrollment: Completion of Ag Mechanics I with a C grade or better.

B. **BRIEF DESCRIPTION OF THE COURSE**

Ag Mechanics II is a course designed to fulfill the students' elective requirements from K.H.S.D. The course is a year long course which is designed to introduce the student to basic and advanced shop skills necessary to develop a well rounded agricultural mechanics program. The course is also a pre-requisite to Ag Mechanics III.

C. **BOARD-ADOPTED TEXTBOOKS**

Basic Text:


D. **SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

Farm Shop, Wakeman and McCoy, McMillan.


Wiring Simplified, H.P. Richter, et. al.

Leveling and Land Management Practices for Agriculture, Agriculture Education Dept., University of Arizona or Hobar Publications.

E. BRIEF OUTLINE OF COURSE CONTENT

A. Exploring Careers in Agricultural Mechanics – 1 week
   1. Mechanics in the World of Agriculture
   2. Career Options in Ag. Mechanics

B. Using the Ag. Mech. Shop – 2 weeks
   1. Shop Orientation and Procedures
   4. Shop Clean-up and Orientation

C. Hand Woodworking and Metal Working – 4 weeks
   1. Hand tools, fasteners and hardware
   2. Layout, tools and procedures
   3. Selecting, cutting, and shaping wood
   4. Fastening wood
   5. Finishing wood
   6. Identifying, marking, cutting, and bending metal
   7. Fastening metal

D. Power Tools in the Ag. Mech. Shop – 3 weeks
   1. Portable power tools
   2. Woodworking with power tools
   3. Metal working with power tools

E. Tool Fitting – 2 weeks
   1. Repairing and reconditioning tools
   2. Sharpening tools

F. Gas Heating, Cutting, Brazing and Welding – 3 weeks
   1. Using propane and Oxyacetylene
   2. Gas welding joints
   3. Brazing joints
   4. Oxy-fuel cutting

G. Electric Welding Processes - 4
   1. Selecting and using arc welding
2. SMAW welding mild steel
3. SMAW welding positions
4. SMAW welding joints
5. MIG welding

H. Coatings – 1 week
   1. Preparing wood and metal for painting
   2. Selecting and applying coating materials

I. Electricity – 2 weeks
   1. Electrical principles and wiring material
   2. Installing branch circuits

J. Plumbing – 1 week
   1. Plumbing materials and tools
   2. Irrigation and sprinkler systems
   3. Household plumbing

K. Concrete and Masonry – 1 week
   1. Concrete and masonry

L. Rope Work – 2 weeks
   1. Knots and hitches

M. Surveying – 1 week
   1. Surveying skill

N. Construction of Personal Projects – 9 weeks
   1. Project selection and planning
   2. Bill of material and cost estimation
   3. Project construction

F. BEHAVIORAL OBJECTIVES FOR Beginning Ag Mechanics (standards)

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history-social science content standards adopted by the State Board of Education.)

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
   (10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
   (12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
   (13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.
   (15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

   Specific applications of Geometry standards (grades eight through twelve):
   (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.

(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

**Specific applications of Probability and Statistics standards (grades eight through twelve):**

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

**1.2 Science:** Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.f) Distinguish between hypothesis and theory as scientific terms.

(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

**1.3 History–Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(12.2.6) Describe the effect of price controls on buyers and sellers.

(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

(12.4) Students analyze the elements of the U.S. labor market in a global setting.

(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

**2.0 Communications:** Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

**2.1 Reading:** Specific applications of Reading Comprehension standards (grades nine and ten):

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

**Specific applications of Reading Comprehension standards (grades eleven and twelve):**

(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

**Writing:** Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers’ problems, mistakes, and misunderstandings.

**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

**2.3 Written and Oral English Language Conventions:** Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

**2.4 Listening and Speaking:** Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
   d. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
   e. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

**Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)**

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity
   d. Use the selected media skillfully, editing appropriately and monitoring for quality.
   e. Test the audience’s response and revise the presentation accordingly
3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

1. Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
2. Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3. Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
4. Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
5. Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
6. Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

1. Understand past, present, and future technological advances as they relate to a chosen pathway.
2. Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
3. Understand the influence of current and emerging technology on selected segments of the economy.
4. Understand geographic information systems (G.I.S.).
5. Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
6. Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

1. Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
2. Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
3. Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

1. Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
2. Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
3. Understand how to locate important information on a material safety data sheet.
4. Maintain safe and healthful working conditions.
5. Use tools and machines safely and appropriately.
6. Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:

1. Understand the qualities and behaviors that constitute a positive and professional work demeanor.
2. Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
3. Understand the need to adapt to varied roles and responsibilities.
4. Understand that individual actions can affect the larger community.
5. Understand the importance of time management to fulfill responsibilities.
6. Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.
8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
   8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
   8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
   8.3 Understand the role of personal integrity and ethical behavior in the workplace.
   8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
   9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
   9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
   9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
   9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
   9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
   9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
   10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
   10.2 Manage and actively engage in a career-related, supervised agricultural experience.
   10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
   10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Mechanics Pathway: The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
   B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
   B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
   B1.3 Know how to safely secure loads on a variety of vehicles.

B2.0 Students understand the principles of basic woodworking:
   B2.1 Know how to identify common wood products, lumber types, and sizes.
   B2.2 Know how to calculate board feet, lumber volume, and square feet.
   B2.3 Know how to identify, select, and implement basic fastening systems.
   B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture.
B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.

B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
B3.5 Interpret basic agricultural electrical plans.

B4.0 Students understand plumbing system practices commonly used in agriculture:
B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC (polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).
B4.2 Understand the environmental influences on plumbing system choices (e.g., filter systems, water disposal).
B4.3 Know how various plumbing and irrigation systems are used in agriculture.
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B5.0 Students understand agricultural cold metal processes:
B5.1 Know how to identify common metals, sizes, and shapes.
B5.2 Know basic tool-fitting skills.
B5.3 Know layout skills.
B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending,). 
B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Students understand concrete and masonry practices commonly used in agriculture:
B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project.
B6.2 Know proper bed preparation, concrete forms layout, and construction.
B6.3 Complete a concrete or masonry project, including developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
B7.1 Understand the role of heat and oxidation in the cutting process.
B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:
B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
B8.3 Weld a variety of joints in various positions.
B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:
B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
B9.4 Understand how to design project plans by using mechanical drawing techniques.
B9.5 Understand how to finish a metal project by implementing proper sequencing.
B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

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B10.1 Understand engine theory for both two- and four-stroke cycle engines.
B10.2 Know different types of small engines and their applications.
B10.3 Know small engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, lubrication systems).
B10.4 Know how to troubleshoot and solve problems with small engines.
B10.5 Know how to disassemble, inspect, adjust, and reassemble a small engine.
B10.6 Know how to look up parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Students understand the principles and applications of various engines and machinery used in agriculture:
B11.1 Understand how to identify common agricultural machinery.
B11.2 Operate and maintain equipment safely and efficiently.
B11.3 Know the various types of engines found on agricultural machinery and understand the theory and safe operation of their systems (e.g., cooling, electrical, fuel).
B11.4 Know the theory and operation of mobile hydraulic systems and power take-off systems.
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B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).

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B12.4 Install plumbing in agricultural structures (e.g., potable water, sewer, irrigation).
B12.5 Form, place, and finish concrete or masonry (e.g., concrete block).
B12.6 Understand how to construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).
B12.7 Develop clear and concise agricultural construction contracts.

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The criteria on which students will be graded in the course will be based on tests and student evaluations which include:

1. Essay type or subjective tests  
   15%
2. Objective tests  
   10%
3. Actual test of ability in shop skills  
   15%
4. Shop performance and cleanup  
   10%
5. Project completion and quality  
   40%
6. Participation in co-curricular activities (FFA)  
   10%
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COURSE OF STUDY

Ag Mechanics III 9-12 Agriculture 10
Course Title Grade Level Department Max Credit

Does this course satisfy a graduation requirement in another subject area? NO
If so, what subject area?

Prepared by: Mike Battistoni School: Bakersfield HS Date: 3-20-08

Approval of Site Administrator: Date: 

(This form should be used by school sites for all courses of study other than "District-wide" courses)

A. COURSE INFORMATION

Grade Level: 9-12
Length of Course: One Year
Maximum Credit: 10
Type: Elective
Recommendation for Enrollment: Completion of Ag Mechanics II with a C grade or better.

B. BRIEF DESCRIPTION OF THE COURSE

Ag Mechanics III is a course designed to fulfill the students’ elective requirements from K.H.S.D. The course is a year long course which is designed to introduce the student to basic and advanced shop skills necessary to develop a well rounded agricultural mechanics program. The course is also a pre-requisite to Ag Mechanics IV.

C. BOARD-ADOPTED TEXTBOOKS

Basic Text:


D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Farm Shop, Wakeman and McCoy, McMillan.


Wiring Simplified, H.P. Richter, et. al.

Leveling and Land Management Practices for Agriculture, Agriculture Education Dept., University of Arizona or Hobar Publications.

E. BRIEF OUTLINE OF COURSE CONTENT

A. Exploring Careers in Agricultural Mechanics – 1 week
   1. Mechanics in the World of Agriculture
   2. Career Options in Ag. Mechanics

B. Using the Ag. Mech. Shop – 2 weeks
   1. Shop Orientation and Procedures
   4. Shop Clean-up and Orientation

C. Hand Woodworking and Metal Working – 4 weeks
   1. Hand tools, fasteners and hardware
   2. Layout, tools and procedures
   3. Selecting, cutting, and shaping wood
   4. Fastening wood
   5. Finishing wood
   6. Identifying, marking, cutting, and bending metal
   7. Fastening metal

D. Power Tools in the Ag. Mech. Shop – 3 weeks
   1. Portable power tools
   2. Woodworking with power tools
   3. Metal working with power tools

E. Tool Fitting – 2 weeks
   1. Repairing and reconditioning tools
   2. Sharpening tools

F. Gas Heating, Cutting, Brazing and Welding – 3 weeks
   1. Using propane and Oxyacetylene
   2. Gas welding joints
   3. Brazing joints
   4. Oxy-fuel cutting

G. Electric Welding Processes - 4
   1. Selecting and using arc welding
2. SMAW welding mild steel  
3. SMAW welding positions  
4. SMAW welding joints  
5. MIG welding

H. Coatings – 1 week  
   1. Preparing wood and metal for painting  
   2. Selecting and applying coating materials

I. Electricity – 2 weeks  
   1. Electrical principles and wiring material  
   2. Installing branch circuits

J. Plumbing – 1 week  
   1. Plumbing materials and tools  
   2. Irrigation and sprinkler systems  
   3. Household plumbing

K. Concrete and Masonry – 1 week  
   1. Concrete and masonry

L. Rope Work – 2 weeks  
   1. Knots and hitches

M. Surveying – 1 week  
   1. Surveying skill

N. Construction of Personal Projects – 9 weeks  
   1. Project selection and planning  
   2. Bill of material and cost estimation  
   3. Project construction

F. **BEHAVIORAL OBJECTIVES FOR Beginning Ag Mechanics (standards)**  

**FOUNDATION STANDARDS**  
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

**1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):**  
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.  
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.  
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.  
(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

**Specific applications of Geometry standards (grades eight through twelve):**  
(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

Specific applications of Probability and Statistics standards (grades eight through twelve):
(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science: Specific applications of Investigation and Experimentation standards (grades nine through twelve):
(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
(1.d) Formulate explanations by using logic and evidence.
(1.f) Distinguish between hypothesis and theory as scientific terms.
(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
(12.4) Students analyze the elements of the U.S. labor market in a global setting.
(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Specific applications of Reading Comprehension standards (grades eleven and twelve):
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.
(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

**Writing:** Specific applications of Writing Strategies and Applications standards (grades 9-10)

(2.5) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers’ problems, mistakes, and misunderstandings.

**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 **Written and Oral English Language Conventions:** Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

2.4 **Listening and Speaking:** Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(2.2) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
   d. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
   e. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

**Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)**

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity
   d. Use the selected media skillfully, editing appropriately and monitoring for quality.
   e. Test the audience’s response and revise the presentation accordingly.
3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.
8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

- Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.

8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

Agricultural Mechanics Pathway: The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
B1.3 Know how to safely secure loads on a variety of vehicles.

B2.0 Students understand the principles of basic woodworking:
B2.1 Know how to identify common wood products, lumber types, and sizes.
B2.2 Know how to calculate board feet, lumber volume, and square feet.
B2.3 Know how to identify, select, and implement basic fastening systems.
B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.

B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).

B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).

B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.

B3.5 Interpret basic agricultural electrical plans.

B4.0 Students understand plumbing system practices commonly used in agriculture:

B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC (polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).

B4.2 Understand the environmental influences on plumbing system choices (e.g., filter systems, water disposal).

B4.3 Know how various plumbing and irrigation systems are used in agriculture.

B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, joining, and testing.

B5.0 Students understand agricultural cold metal processes:

B5.1 Know how to identify common metals, sizes, and shapes.

B5.2 Know basic tool-fitting skills.

B5.3 Know layout skills.

B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending).

B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Students understand concrete and masonry practices commonly used in agriculture:

B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project.

B6.2 Know proper bed preparation, concrete forms layout, and construction.

B6.3 Complete a concrete or masonry project, including developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:

B7.1 Understand the role of heat and oxidation in the cutting process.

B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.

B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.

B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.

B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:

B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).

B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.

B8.3 Weld a variety of joints in various positions.

B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:

B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.

B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.

B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.

B9.4 Understand how to design project plans by using mechanical drawing techniques.

B9.5 Understand how to finish a metal project by implementing proper sequencing.

B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

B10.0 Students understand small and compact engines:
B10.1 Understand engine theory for both two- and four-stroke cycle engines.
B10.2 Know different types of small engines and their applications.
B10.3 Know small engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, lubrication systems).
B10.4 Know how to troubleshoot and solve problems with small engines.
B10.5 Know how to disassemble, inspect, adjust, and reassemble a small engine.
B10.6 Know how to look up parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Students understand the principles and applications of various engines and machinery used in agriculture:
B11.1 Understand how to identify common agricultural machinery.
B11.2 Operate and maintain equipment safely and efficiently.
B11.3 Know the various types of engines found on agricultural machinery and understand the theory and safe operation of their systems (e.g., cooling, electrical, fuel).
B11.4 Know the theory and operation of mobile hydraulic systems and power take-off systems.
B11.5 Troubleshoot common problems with engines and agricultural equipment.
B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).

B12.0 Students understand land measurement and construction techniques commonly used in agriculture:
B12.1 Understand common surveying techniques used in agriculture (e.g., leveling, land measurement, building layout).
B12.2 Know how to draw and interpret architectural plans.
B12.3 Know how to install single- and three-phase wiring and control systems found in agricultural structures, pumps, and irrigation systems.
B12.4 Install plumbing in agricultural structures (e.g., potable water, sewer, irrigation).
B12.5 Form, place, and finish concrete or masonry (e.g., concrete block).
B12.6 Understand how to construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).
B12.7 Develop clear and concise agricultural construction contracts.

G. **ASSESSMENT PROCEDURES**

The criteria on which students will be graded in the course will be based on tests and student evaluations which include:

1. Essay type or subjective tests 15%
2. Objective tests 10%
3. Actual test of ability in shop skills 15%
4. Shop performance and cleanup 10%
5. Project completion and quality 40%
6. Participation in co-curricular activities (FFA) 10%
The following range is used to determine what grade a student will receive at the quarter and semester.

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# COURSE OF STUDY

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<td>9-12</td>
<td>Agriculture</td>
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Does this course satisfy a graduation requirement in another subject area? **NO**

Prepared by: Mike Battistoni  
School: Bakersfield HS  
Date: 3-20-08

**A. COURSE INFORMATION**

- **Grade Level:** 9-12
- **Length of Course:** One Year
- **Maximum Credit:** 10
- **Type:** Elective
- **Recommendation for Enrollment:** Completion of Ag Mechanics III with a C grade or better.

**B. BRIEF DESCRIPTION OF THE COURSE**

Ag Mechanics IV is a course designed to fulfill the students' elective requirements from K.H.S.D. The course is a year long course which is designed to introduce the student to basic and advanced shop skills necessary to develop a well rounded agricultural mechanics program.

**C. BOARD-ADOPTED TEXTBOOKS**

Basic Text: 

D. **SUPPLEMENTARY INSTRUCTIONAL MATERIALS**


*Farm Shop*, Wakeman and McCoy, McMillan.


*Wiring Simplified*, H.P. Richter, et. al.


E. **BRIEF OUTLINE OF COURSE CONTENT**

A. Exploring Careers in Agricultural Mechanics – 1 week
   1. Mechanics in the World of Agriculture
   2. Career Options in Ag. Mechanics

B. Using the Ag. Mech. Shop – 2 weeks
   1. Shop Orientation and Procedures
   4. Shop Clean-up and Orientation

C. Hand Woodworking and Metal Working – 4 weeks
   1. Hand tools, fasteners and hardware
   2. Layout, tools and procedures
   3. Selecting, cutting, and shaping wood
   4. Fastening wood
   5. Finishing wood
   6. Identifying, marking, cutting, and bending metal
   7. Fastening metal

D. Power Tools in the Ag. Mech. Shop – 3 weeks
   1. Portable power tools
   2. Woodworking with power tools
   3. Metal working with power tools

E. Tool Fitting – 2 weeks
   1. Repairing and reconditioning tools
   2. Sharpening tools

F. Gas Heating, Cutting, Brazing and Welding – 3 weeks
   1. Using propane and Oxyacetylene
   2. Gas welding joints
   3. Brazing joints
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G. Electric Welding Processes - 4
   1. Selecting and using arc welding
   2. SMAW welding mild steel
   3. SMAW welding positions
   4. SMAW welding joints
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H. Coatings – 1 week
   1. Preparing wood and metal for painting
   2. Selecting and applying coating materials

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   1. Electrical principles and wiring material
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   1. Plumbing materials and tools
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   3. Household plumbing

K. Concrete and Masonry – 1 week
   1. Concrete and masonry

L. Rope Work – 2 weeks
   1. Knots and hitches

M. Surveying – 1 week
   1. Surveying skill

N. Construction of Personal Projects – 9 weeks
   1. Project selection and planning
   2. Bill of material and cost estimation
   3. Project construction

F. BEHAVIORAL OBJECTIVES FOR Beginning Ag Mechanics (standards)

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history – social science content standards adopted by the State Board of Education.)

1.1 Mathematics: Specific applications of Algebra I standards (grades eight through twelve):
(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.
(14.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Specific applications of Geometry standards (grades eight through twelve):
(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

(10.0) Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.

(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

**Specific applications of Probability and Statistics standards (grades eight through twelve):**

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

**1.2 Science:** Specific applications of Investigation and Experimentation standards (grades nine through twelve):

(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.f) Distinguish between hypothesis and theory as scientific terms.

(1.1) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

**1.3 History–Social Science:** Specific applications of Principles of Economics standards (grade twelve):

(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(12.2.6) Describe the effect of price controls on buyers and sellers.

(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

(12.4) Students analyze the elements of the U.S. labor market in a global setting.

(12.4.3) Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.

**2.0 Communications:** Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

**2.1 Reading:** Specific applications of Reading Comprehension standards (grades nine and ten):

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

(2.8) Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author’s content affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

**Specific applications of Reading Comprehension standards (grades eleven and twelve):**
(2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.

(4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.

b. Offer detailed and accurate specifications.

c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).

d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.

c. Modify the tone to fit the purpose and audience.

d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:

a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.

c. Make distinctions between the relative value and significance of specific data, facts, and ideas.

d. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.

e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.

f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:

a. Prepare and ask relevant questions.

b. Make notes of responses.

c. Use language that conveys maturity, sensitivity, and respect.

d. Respond correctly and effectively to questions.

e. Demonstrate knowledge of the subject or organization.

f. Compile and report responses.

g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1) Use effective and interesting language, including:

a. Informal expressions for effect

b. Standard American English for clarity

c. Technical language for specificity
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience's response and revise the presentation accordingly

Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

1. **Ethics and Legal Responsibilities:** Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
   8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
   8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
   8.3 Understand the role of personal integrity and ethical behavior in the workplace.
   8.4 Understand how to access, analyze, and implement quality assurance information.

2. **Leadership and Teamwork:** Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
   9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
   9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
   9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
   9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
   9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
   9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

3. **Technical Knowledge and Skills:** Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
   10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
   10.2 Manage and actively engage in a career-related, supervised agricultural experience.
   10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
   10.4 Maintain and troubleshoot equipment used in the agricultural industry.

4. **Demonstration and Application:** Students demonstrate and apply the concepts contained in the foundation and pathway standards.

**Agricultural Mechanics Pathway:** The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:
   - B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
   - B1.2 Know the relationship between accepted shop management procedures and a safe working environment.
   - B1.3 Know how to safely secure loads on a variety of vehicles.

B2.0 Students understand the principles of basic woodworking:
   - B2.1 Know how to identify common wood products, lumber types, and sizes.
   - B2.2 Know how to calculate board feet, lumber volume, and square feet.
   - B2.3 Know how to identify, select, and implement basic fastening systems.
   - B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.
B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:
   B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
   B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).
   B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
   B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.
   B3.5 Interpret basic agricultural electrical plans.

B4.0 Students understand plumbing system practices commonly used in agriculture:
   B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC (polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).
   B4.2 Understand the environmental influences on plumbing system choices (e.g., filter systems, water disposal).
   B4.3 Know how various plumbing and irrigation systems are used in agriculture.
   B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, joining, and testing.

B5.0 Students understand agricultural cold metal processes:
   B5.1 Know how to identify common metals, sizes, and shapes.
   B5.2 Know basic tool-fitting skills.
   B5.3 Know layout skills.
   B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
   B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Students understand concrete and masonry practices commonly used in agriculture:
   B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project.
   B6.2 Know proper bed preparation, concrete forms layout, and construction.
   B6.3 Complete a concrete or masonry project, including developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:
   B7.1 Understand the role of heat and oxidation in the cutting process.
   B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
   B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
   B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
   B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:
   B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
   B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
   B8.3 Weld a variety of joints in various positions.
   B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:
   B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
   B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
   B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
   B9.4 Understand how to design project plans by using mechanical drawing techniques.
   B9.5 Understand how to finish a metal project by implementing proper sequencing.
   B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).
B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

B10.0 Students understand small and compact engines:
B10.1 Understand engine theory for both two- and four-stroke cycle engines.
B10.2 Know different types of small engines and their applications.
B10.3 Know small engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, lubrication systems).
B10.4 Know how to troubleshoot and solve problems with small engines.
B10.5 Know how to disassemble, inspect, adjust, and reassemble a small engine.
B10.6 Know how to look up parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Students understand the principles and applications of various engines and machinery used in agriculture:
B11.1 Understand how to identify common agricultural machinery.
B11.2 Operate and maintain equipment safely and efficiently.
B11.3 Know the various types of engines found on agricultural machinery and understand the theory and safe operation of their systems (e.g., cooling, electrical, fuel).
B11.4 Know the theory and operation of mobile hydraulic systems and power take-off systems.
B11.5 Troubleshoot common problems with engines and agricultural equipment.
B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).

B12.0 Students understand land measurement and construction techniques commonly used in agriculture:
B12.1 Understand common surveying techniques used in agriculture (e.g., leveling, land measurement, building layout).
B12.2 Know how to draw and interpret architectural plans.
B12.3 Know how to install single- and three-phase wiring and control systems found in agricultural structures, pumps, and irrigation systems.
B12.4 Install plumbing in agricultural structures (e.g., potable water, sewer, irrigation).
B12.5 Form, place, and finish concrete or masonry (e.g., concrete block).
B12.6 Understand how to construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).
B12.7 Develop clear and concise agricultural construction contracts.

G. ASSESSMENT PROCEDURES

The criteria on which students will be graded in the course will be based on tests and student evaluations which include:

1. Essay type or subjective tests 15%
2. Objective tests 10%
3. Actual test of ability in shop skills 15%
4. Shop performance and cleanup 10%
5. Project completion and quality 40%
6. Participation in co-curricular activities (FFA) 10%
The following range is used to determine what grade a student will receive at the quarter and semester.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
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<tbody>
<tr>
<td>A</td>
<td>90%</td>
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Floral Courses of Study
District Wide Course of Study Title:

Ag Floral Design 1 P

A. **COURSE INFORMATION**

   Grade Level: 9-12
   Length of Course: One Year
   Maximum Credit: 10
   Type: FNA
   Recommendation for Enrollment: Freshmen enrollment is subject to site approval in accordance with the school site career pathways.

B. **COURSE DESCRIPTION** *(Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific gradation requirement.)*

The Art of Floral Design is intended to introduce the student to theories and principles of artistic design and their influence on floral artistry. The course emphasizes the knowledge and skills needed to understand artistic perception, creative expression, historical and cultural context(s); aesthetic valuing, and practical application of the visual arts. Students will analyze, interpret, create and judge various types of artwork and apply what is learned to floral art. Students will be introduced to the basic elements of visual art such as line, balance, color and form and apply this knowledge to floral designs as well as two dimensional projects using other art media. Through hands on practice the student will become familiar with material selection, design mechanics, maintenance and design evaluation. Students will achieve this through creating, designing, identifying, explaining and evaluating their own work. Other projects will include two and three dimensional design that serve to reinforce the students’ instruction in historical and cultural influence, color theory and creative expression. Concepts will be reinforced by using appropriate design vocabulary in conjunction with development of technical skills in floral art, cut flower identification and care and will serve as a foundation for more complex works such as multi-part floral design, design challenges and creating art based on client specifications.
C. **INSTRUCTIONAL MATERIALS** (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

**BOARD-ADOPTED TEXTBOOKS**
The Art of Floral Design, by Norah T. Hunter; pub Delmar

**SUPPLEMENTARY INSTRUCTIONAL MATERIALS**
Art Talk, by Rosalind Ragans; pub Glencoe & McGraw-Hill
Fifty Centuries of Art, Pamela Taylor, Francis Henry Taylor
Paint, Brush & Palette, Harvey Weiss
Fast Flower Arranging, Jane Packer, DK Publishing
Art in Everyday Life, Goldsteins, The MacMillan Company
Color, Ruth Heller, The Putnam & Grosset Group
A Concise History of Painting from Prehistory to the Thirteenth Century, David Talbot Rice,
Floriculture: From Greenhouse Production to Floral Design, Delmar Publishing
California Department of Education Career Technical Standards
California Department of Education Content Standards Visual & Performing Arts
Basic Floral Design Workbook
Discovering Art History, by Gerald F. Bromer; pub Davis
Exploring Visual Design: The Elements & Principles; pub Davis
The Visual Experience; pub Delmar
Essential Impressionist; pub Parragon
The Natural Way to Draw, by Kimon Nicolaides
Elements of Design (video); pub Crystal Productions
Fresh Cut Florist Flowers- Interactive CD-ROM
Delmar's Handbook of Flower, Foliage and Creative Design- Norah Hunter

D. **COURSE OUTLINE** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
<th>VPA Standards</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
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<tbody>
<tr>
<td><strong>Unit I: Introduction to Art</strong></td>
<td>Aesthetic Valuing</td>
<td>Agriscience</td>
<td>• Students will write an art evaluation on one of the below: Ikebana Design, Vincent Van Gogh, Pablo Picasso, Edouard Monet, Klaus Wagner, Gregor Lersch, Els and George Hazenberg, Georgia O'Keefee, Pierre Renoir</td>
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<td>A. The Variety of Art</td>
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<td>1. Artistic perception</td>
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<td>B. When is it Art?</td>
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<td>• Students will create an Interactive Notebook that will contain class notes from</td>
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<td>3. Artistic Inspirations</td>
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<td>5. The Art World</td>
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<td><strong>C. Floral Symbolism</strong></td>
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<td><strong>Unit II: Historical Contributions and Cultural Dimensions</strong></td>
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<tr>
<td><strong>Unit III: Aesthetic Valuing and Making Judgments on Individual Works of Art</strong></td>
<td><strong>Creative Expression</strong>&lt;br&gt;2.2, 2.5, 2.6 Connections, Relationships, Applications 5.3, 5.4</td>
<td>• Foundation 1.1, 1.3&lt;br&gt;• Agriscience C1.1&lt;br&gt;• AgBusiness A7.4, A7.5, A8.1</td>
<td>• Complete a floral art three-dimensional Critique Sheet for historical periods&lt;br&gt;• Create floral design arrangements with emphasis on elements and principles of design&lt;br&gt;• Create verbal and written reflections for floral design project utilizing student's <em>Interactive Notebook</em>&lt;br&gt;• Develop a portfolio including two-dimensional drawings, three-dimensional sculptures, and artworks' critiques. Minimum of five pieces required.&lt;br&gt;• Demonstrate knowledge of influential art periods through a cultural and historical 3-5 page research paper.&lt;br&gt;• Analyze and interpret student and others' work through critiques and rubrics.&lt;br&gt;• Develop and convey floral art knowledge using visual art terminology in an oral presentation for floral art.</td>
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<tr>
<td>A. <strong>Works of Art and Aesthetic Value</strong></td>
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<td>1. Critique works of art using appropriate visual arts terms</td>
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<td>2. Analyze art works in terms of art elements and design principles</td>
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<td>3. Apply sensory qualities to works of floral art</td>
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<td>4. Explores various styles and periods of viewed art</td>
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<td>5. Evaluate and critique art elements and art principles used in others and own works of art</td>
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<tr>
<td><strong>Unit IV: Art Elements of Design</strong></td>
<td><strong>Creative Expression</strong>&lt;br&gt;2.3, 2.6</td>
<td>• Foundation 11.0&lt;br&gt;• OH-F1.4,</td>
<td>• Complete worksheet for elements and principles of design</td>
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<td>A. <strong>Lines</strong></td>
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1. Implied and expressive use of line in visual art works  
2. Vertical, horizontal, and diagonal use of line in floral art works

**B. Shapes/Forms**
1. Shape and form in visual art works  
2. Visual art elements of shape and form in design through

**C. Colors**
1. The origin of color through visual art  
2. Color harmony in various art works  
3. Use of monochromatic, analogous, complementary, and triadic schemes in student and other visual art works

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<tr>
<th>Unit of Instruction/Objectives</th>
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<tr>
<td><strong>Unit IV: Art Elements of Design-continued</strong></td>
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<td>Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes</td>
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**D. Textures**
1. Visual and tactile components in floral art using fine, medium, and course-textured media  
2. Container and material components of floral art  
3. Flower and foliage use through arrangements

**E. Value**
1. Light and dark in visual art designs  
2. Light and dark change in floral art

**F. Space and Depth**
1. The use of space in two and three-dimensional visual art designs  
2. Interpret space in our environment  
3. The use of space in visual designs by applying angling and overlapping media in floral art designs  
4. Significance of size and color of media in Floral Art

**Unit V: Principles of Art Design**

| Artistic | Foundation | Complete worksheet | Aesthetic Valuing |
|----------|------------|--------------------|------------------|-----------------|
| 4.2, 4.3 | F1.5, F11.2 |                    |                  |
### A. Balance
1. Symmetrical and asymmetrical balance in floral art
2. Asymmetrical or symmetrical balance through developing floral art works
3. Radial and open balance in visual art designs

### B. Proportion/Scale
1. Proportion and scale through application of floral art designs using the following techniques: flower to container, flower to flower, and flower to foliage, and arrangement to environment
2. Geometrical techniques in floral art and visual art designs

### C. Emphasis
1. Visual floral art works
2. Other visual art works: convey understanding of location, size, pattern, framing, and isolation in floral art designs
3. Emphasis in floral designs by using line direction and directional facing

### D. Rhythm
1. Floral art using repetition and eye movement
2. Transition and radiating line in floral art works

### Perception
- 1.1, 1.2, 1.3, 1.4
- Creative Expression
- 2.3
- Aesthetic Valuing
- 4.2, 4.3

### Key Assignments
- Create a design project utilizing all elements and principles of design
- Emotions and color influence project
- Create a Color Wheel
- Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes
- Classroom Color Display Board
- Additions to student art and floral Portfolio Projects: applying focal point to student works

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<tr>
<td><strong>Unit V: Principles of Art Design-continued</strong></td>
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<td><strong>E. Harmony and Unity</strong></td>
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<td>1. Harmony and unity through applying color combinations to visual designs</td>
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<td>2. Placement, transition, and proximity in visual art works and critique student works in floral design</td>
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<td><strong>F. Contrast</strong></td>
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<tr>
<td>1. Color schemes in floral art design using various media</td>
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## A. Two-Dimensional Media
1. Basic drawing and layout: simple perspective drawing, sketching original art works, and project layout
2. Painting techniques for floral art through developing a color wheel and still life floral artwork
3. Mosaic art designs for floral art using paper and tile
4. Printmaking to floral art using pressed flowers
5. Photographic and graphic design through computer art

## B. Three-Dimensional Sculptures
1. Display flower and foliage media techniques for specific floral art: mass flower and foliage, filler flower and foliage, line flower and foliage, form flower and foliage, fresh flower and foliage, dry flower and foliage, and artificial flower and foliage
2. Mechanics, materials, and media through an introduction to proper care and proper usage of floral equipment and media
4. Demonstrate the process of evaluation and refining floral art projects

### Creative Expression
- 2.1, 2.3, 2.6
- Historical & Cultural Context
  - 3.1, 3.4, 3.5
- Aesthetic Valuing
  - 4.1, 4.2, 4.3, 4.4

### Foundations
- OH F5.5
- OH F11.1, F11.2, 11.3
- AgBusiness A8.1, A8.2

### Key Assignments
- Create a presentation board displaying basic drawing and layout skills
- Create mosaic art designs for floral art using paper and tile.
- Create and display flower and foliage media techniques for specific floral art: Mass Flower and Foliage, Filler Flower and Foliage, Line Flower and Foliage, Form Flower and Foliage, Fresh Flower and Foliage, Dry Flower and Foliage, and Artificial Flower and Foliage.
- Create a floral project applying mechanics, materials, and media through an introduction to proper care, proper usage, equipment and media.
- Create a floral project displaying specific artists' styles and techniques using Oriental, European, and Exhibition Styles
- Student will evaluate his/her floral art project and support a position regarding the aesthetic value of the project and either change or defend position after considering views of others

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<td><strong>Unit VII: Connections, Relationships, and Applications Learned in Visual Art</strong></td>
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<td><strong>A. Relationships to Other Disciplines</strong></td>
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<td>1. <strong>Creative Expression</strong></td>
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<tr>
<td>• Create a mosaic art design utilizing geometric shapes</td>
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<td>• Emotional poetic, color influenced project designed visually for floral art</td>
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<td>• Historical time periods and artistic works written three page report</td>
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<td>• Design a floral advertisement using art elements, principles, and techniques to display student’s work at an art exhibition.</td>
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<td>• Create a two-dimensional or three-dimensional design incorporating elements and principles as applied to a specific theme and culture.</td>
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<th><strong>Unit VIII: Career Opportunities, Marketing Original Works of Art</strong></th>
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<tr>
<td><strong>A. Career Pathways within Floral Design &amp; Floral Art</strong></td>
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<td><strong>B. Importance of Marketing the Final Product</strong></td>
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<td><strong>C. Professional Organizations and Resources for Floral Design</strong></td>
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<td>• Foundation 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 5.0, 5.1, 5.2, 5.3, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 8.0, 8.1, 8.2, 8.3, 8.4</td>
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<td>• OH F11.4</td>
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E. **COURSE OBJECTIVES FOR** (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)

- Employ senses to perceive and apply the elements and principles of visual design through works of art, objects in nature, events, and the environment
- Explore the role of floral design in human history and culture through creative design concepts in two and three dimensional media, based on floral arranging
- Derive meaning from artworks and floral art designs, including floral symbolism, through analyzing, interpretations, and judgment of various pieces developed by renown artists of different historical and contemporary periods
- Demonstrate skills in utilizing the language of visual arts design as the foundation for creating and analyzing the visual structures and functions of art
- Develop and create original artwork based on relating visual art design concepts and processes to their own personal experiences and lifelong learning

**Course Objectives**

**ARTISTIC PERCEPTION**

- **Develop Perceptual Skills and Visual Arts Vocabulary**
  - 1.1 Identify and use the principles of design to discuss, analyze, and write about visual aspects in the environment and in works of art, including their own.
  - 1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.

- **Analyze Art Elements and Principles of Design**
  - 1.3 Research and analyze the work of an artist and write about the artist's distinctive style and its contribution to the meaning of the work.
  - 1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

- **Impact of Media Choice**
  - 1.5 Analyze the material used by a given artist and describe how its use influences the meaning of the work.
  - 1.6 Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

**2.0 CREATIVE EXPRESSION**

- **Skills, Processes, Materials, and Tools**
  - 2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.
  - 2.2 Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.
  - 2.3 Develop and refine skill in the manipulation of digital imagery (either still or video).
  - 2.4 Review and refine observational drawing skills.

- **Communication and Expression Through Original Works of Art**
  - 2.5 Create an expressive composition, focusing on dominance and subordination.
  - 2.6 Create two or three-dimensional work of art that addresses a social issue.

**3.0 HISTORICAL AND CULTURAL CONTEXT**

- **Role and Development of the Visual Arts**
  - 3.1 Identify similarities and differences in the purposes of art created in selected cultures.
3.2 Identify and describe the role and influence of new technologies on contemporary works of art.

- Diversity of the Visual Arts
  - 3.3 Identify and describe trends in the visual arts and discuss how the issues of time, place, and cultural influence are reflected in selected works of art.
  - 3.4 Discuss the purposes of art in selected contemporary cultures.

4.0 AESTHETIC VALUING

- Derive Meaning
  - 4.1 Articulate how personal beliefs, cultural traditions, and current social, economic, and political contexts influence the interpretation of the meaning or message in a work of art.
  - 4.2 Compare the ways in which the meaning of a specific work of art has been affected over time because of changes in interpretation and context.

- Make Informed Judgments
  - 4.3 Formulate and support a position regarding the aesthetic value of a specific work of art and change or defend that position after considering the views of others.
  - 4.4 Articulate the process and rationale for refining and reworking one of their own works of art.
  - 4.5 Employ the conventions of art criticism in writing and speaking about works of art.

5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

- Connections and Applications
  - 5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

- Visual Literacy
  - 5.3 Compare and contrast the ways in which different media (television, newspapers, magazines) cover the same art exhibition

- Careers and Career-Related Skills
  - 5.4 Demonstrate an understanding of the various skills of an artist, art critic, art historian, art collector, art gallery owner, and philosopher of art (aesthetcian).

The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

FOUNDATION STANDARDS

1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):

(12.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.
2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English—language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):

(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)

(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers' potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.
(2.5) Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.
   d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.
(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
   a. Report information and convey ideas logically and correctly.
   b. Offer detailed and accurate specifications.
   c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
   d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.
(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).
(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).
(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.
(2.5) Write job applications and résumés:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. Modify the tone to fit the purpose and audience.
   d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
   a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions:
   Specific applications of English Language Conventions standards (grades eleven and twelve):
   (1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
   (1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
   (1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking:
   Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
   (1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
   (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
   (2.2) Deliver expository presentations:
      a. Convey information and ideas from primary and secondary sources accurately and coherently.
      b. Make distinctions between the relative value and significance of specific data, facts, and ideas.
      c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
      e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
      f. Use technical terms and notations accurately.
   (2.3) Apply appropriate interviewing techniques:
      a. Prepare and ask relevant questions.
      b. Make notes of responses.
      c. Use language that conveys maturity, sensitivity, and respect.
      d. Respond correctly and effectively to questions.
      e. Demonstrate knowledge of the subject or organization.
      f. Compile and report responses.
      g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

Career Technical Standards

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:
4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.3 Understand the influence of current and emerging technology on selected segments of the economy.
4.4 Understand geographic information systems (G.I.S.).
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.

A. Agricultural Business Pathway
A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.
A7.5 Understand how promotion trends for agricultural products influence individuals.

A8.0 Students understand the sales of agricultural products and services:
A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.

C. Agriscience Pathway
The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C1.0 Students understand the role of agriculture in the California economy:
C1.1 Understand the history of the agricultural industry in California.
C1.2 Understand how California agriculture affects the quality of life.
C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
C1.4 Understand the economic impact of leading California agricultural commodities

C11.0 Students understand plant growth and development:
C11.1 Understand the anatomy and functions of plant systems and structures.
F. Ornamental Horticulture Pathway

The Ornamental Horticulture Pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture as well as landscaping design, installation, and maintenance.

F1.0 Students understand plant classification and use principles:

F1.4 Understand how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.
F1.5 Understand plant selection and identification for local landscape applications.
F5.5 Know the components of soilless media and the use of those media in various types of containers.
F8.4 Understand marketing and merchandising principles used in nursery production.

F11.0 Students understand basic floral design principles:

F11.1 Understand the use of plant materials and tools.
F11.2 Apply basic design principles to products and designs.
F11.3 Handle, prepare, and arrange cut flowers appropriately.
F11.4 Understand marketing and merchandising principles used in the floral industry.

STUDENT EVALUATION STANDARDS (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

The students will be assessed on the following:
1) Class/Lab **%  
2) Participation/Career Readiness **%  
3) Test/Quizzes **%  
4) Supervised Agricultural Experience **%  
5) FFA 10%  

** These percentages are to be determined by the specific school site

Semester Grades are based on the following:

Quarter 1 40%
Quarter 2 40%
Final 20%
G. SUGGESTED INSTRUCTIONAL ACTIVITIES (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

**Prepared by: Emily Keverline, Donald Mills, Katy Neiblas, Matt Riley, Jennifer Wilke**
District Wide Course of Study Title:

Ag Floral Design 2 P

A. COURSE INFORMATION

Grade Level: 10-12
Length of Course: One Year
Maximum Credit: 10
Type: FNA
Recommendation for Enrollment: Enrollment is subject to site approval in accordance with the school site career pathways.

B. COURSE DESCRIPTION (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific gradation requirement.)

The Floral Design 2 course is intended to further continue student exposure to and application of theories and principles of artistic design in the individualized expression of their floral pieces. The course emphasizes the knowledge and skills needed to understand artistic perception, creative expression, historical and cultural context(s); aesthetic valuing, and practical application of the visual arts. Students will analyze, interpret, create and judge various types of artwork and apply what is learned to floral art. Students will be utilize the basic elements of visual art such as line, balance, color and form and apply this knowledge to floral designs and floral events as well as two dimensional projects using other art media. Through hands on practice the student will become familiar with material selection, design mechanics, maintenance and design evaluation. Students will achieve this through creating, designing, identifying, explaining and evaluating their own work. Other projects will include two and three dimensional design that serve to reinforce the student instruction in historical and cultural influence, color theory and creative expression. Concepts will be reinforced by using appropriate design vocabulary in conjunction with development of technical skills in floral art, cut flower identification and care and will serve as a foundation for more complex works such as multi-part floral design, design challenges and creating art based on client specifications.
C. **INSTRUCTIONAL MATERIALS** (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

**BOARD-ADOPTED TEXTBOOKS**

The Art of Floral Design, by Norah T. Hunter; pub Delmar

**SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

Art Talk, by Rosalind Ragans; pub Glencoe & McGraw-Hill  
Fifty Centuries of Art, Pamela Taylor, Francis Henry Taylor  
Paint, Brush & Palette, Harvey Weiss  
Fast Flower Arranging, Jane Packer, DK Publishing  
Art in Everyday Life, Goldsteins, The MacMillan Company  
Color, Ruth Heller, The Putnam & Grosset Group  
A Concise History of Painting from Prehistorv to the Thirteenth Century, David Talbot Rice,  
Floriculture:From Greenhouse Production to Floral Design, Delmar Publishing  
California Department of Education Career Technical Standards  
California Department of Education Content Standards Visual & Performing Arts  
Basic Floral Design Workbook  
Discovering Art History, by Gerald F. Bromer; pub Davis  
Exploring Visual Design: The Elements & Principles; pub Davis  
The Visual Experience; pub Delmar  
Essential Impressionist; pub Parragon  
The Natural Way to Draw, by Kimon Nicolaides  
Elements of Design (video); pub Crystal Productions  
Fresh Cut Florist Flowers- Interactive CD-ROM  
Delmar's Handbook of Flower, Foliage and Creative Design- Norah Hunter

D. **COURSE OUTLINE** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
<th>VPA Standards</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit I: Introduction to Art</strong></td>
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<tr>
<td><strong>A. The Variety of Art</strong></td>
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<tr>
<td>1. Artistic perception</td>
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<td><strong>B. When is it Art?</strong></td>
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<tr>
<td>1. Philosophy of Arts</td>
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<td>2. Aesthetic Value of Objects</td>
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<td>3. Artistic Inspirations</td>
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<td>4. Art Appreciation</td>
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<td>5. The Art World</td>
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</table>

- Agriscience C1.2
- Students will write an art evaluation on one of the below: Ikebana Design, Vincent Van Gogh, Pablo Picasso, Edouard Monet, Klaus Wagner, Gregor Lersch, Els and George Hazenberg, Georgia O'Keeffe, Pierre Renoir
- Students will create an Interactive Notebook that will contain: class
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<tbody>
<tr>
<td><strong>Unit I: Introduction to Art-continued</strong></td>
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<tr>
<td>C. Floral Symbolism</td>
<td>Artistic Perception 1.5</td>
<td>Agriscience C1.1, 1.3, 11.1 OH11.1</td>
<td>Students will research and write a description of the historical symbolism of specific flowers and foliage. Students will choose a flower or foliage, find the symbolism and from it create a floral design. Add information, lecture notes, and drawings to Interactive Notebook on historical flower symbolism</td>
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<td></td>
<td>Historical &amp; Cultural Context 3.1, 3.3, 3.4</td>
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<td></td>
<td>Aesthetic Valuing 4.1</td>
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<tr>
<td><strong>Unit II: Historical Contributions and Cultural Dimensions</strong></td>
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<tr>
<td>A. Interpretation</td>
<td>Artistic Perception 1.3, 1.5, 1.6</td>
<td>Agriscience C1.1, C1.4 OH F11.1, 11.2, 11.4</td>
<td>Evaluation of art examples from various time periods. Create a visual presentation on history of Floral Design. Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles. Create a two and three dimensional visual display of floral art: Freeform Expression,</td>
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<tr>
<td>2. The meaning of art</td>
<td>Creative Expression 2.4, 2.5, 2.6</td>
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<tr>
<td>3. Elements of Art History</td>
<td>Historical &amp; Cultural Context 3.1, 3.2, 3.3, 3.4</td>
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<tr>
<td>B. History of Floral Art</td>
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<tr>
<td>1. The Floral Art Designs of Ancient Civilizations</td>
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<tr>
<td>2. Floral visual art design styles and their origination</td>
<td>Aesthetic Valuing 4.1, 4.2, 4.3, 4.5</td>
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<tr>
<td>C. Research the Influences of Floral Artists of the 20th and 21st Century</td>
<td>Connections, Relationships, Applications 5.2</td>
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<tr>
<td>1. Styles and techniques</td>
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<td>2. Artistic Inspirations</td>
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<tr>
<td>3. Visual themes used in various cultures</td>
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<tr>
<td>4. Artistic components of various time periods and cultures</td>
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<tr>
<td>5. Time periods in floral art history</td>
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<tr>
<td>6. Historical style and periods</td>
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<tr>
<td>7. Floral art design: culture, ethnicity, time periods, and media</td>
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<td>8. Cultural Themes: religious,</td>
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</tbody>
</table>
9. Cultural Design  
10. Design alternatives

<table>
<thead>
<tr>
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</thead>
</table>
| **Unit III: Aesthetic Valuing and Making Judgments on Individual Works of Art** | **Creative Expression**  
2.2, 2.5, 2.6  
**Connections, Relationships, Applications**  
5.3, 5.4 | **Foundation**  
1.1, 1.3  
**Agriscience**  
C1.1  
**AgBusiness**  
A7.4, A7.5, A8.1 | **Complete a floral art three-dimensional Critique Sheet for historical periods**  
**Create floral design arrangements with emphasis on elements and principles of design**  
**Create verbal and written reflections for floral design project utilizing student’s Interactive Notebook**  
**Develop a portfolio including two-dimensional drawings, three-dimensional sculptures, and artworks’ critiques. Minimum of five pieces required.**  
**Demonstrate knowledge of influential art periods through a cultural and historical 3-5 page research paper.** |
## Unit IV: Art Elements of Design

<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
<th>VPA Standards</th>
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</thead>
<tbody>
<tr>
<td><strong>A. Lines</strong></td>
<td>Creative Expression</td>
<td>Foundation 11.0, OH-F1.4, F1.5, F11.2</td>
<td>• Analyze and interpret student and others' work through critiques and rubrics. • Develop and convey floral art knowledge using visual art terminology in an oral presentation for floral art.</td>
</tr>
<tr>
<td>1. Implied and expressive use of line in visual art works</td>
<td>2.3, 2.6</td>
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<tr>
<td>2. Vertical, horizontal, and diagonal use of line in floral art works</td>
<td>Aesthetic Valuing</td>
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<tr>
<td><strong>B. Shapes/Forms</strong></td>
<td></td>
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<td>Complete worksheet for elements and principles of design</td>
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<tr>
<td>1. Shape and form in visual art works</td>
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<td></td>
<td>• Create a design project utilizing all elements and principles of design</td>
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<tr>
<td>2. Visual art elements of shape and form in design through</td>
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<td>• Emotions and color influence project</td>
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<tr>
<td><strong>C. Colors</strong></td>
<td></td>
<td></td>
<td>• Create a Color Wheel</td>
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<tr>
<td>1. The origin of color through visual art</td>
<td></td>
<td></td>
<td>• Additions to student art and floral Portfolio Projects: application using triangular, circular, vertical, and horizontal floral art designs and applying hue, primary, secondary, tertiary, warm, cool, value, tint, tone, and shades to floral artworks</td>
</tr>
<tr>
<td>2. Color harmony in various art works</td>
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<tr>
<td>3. Use of monochromatic, analogous, complementary, and triadic schemes in student and other visual art works</td>
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</tbody>
</table>
**Unit IV: Art Elements of Design—continued**

**D. Textures**
1. Visual and tactile components in floral art using fine, medium, and course-textured media
2. Container and material components of floral art
3. Flower and foliage use through arrangements

**E. Value**
1. Light and dark in visual art designs
2. Light and dark change in floral art

**F. Space and Depth**
1. The use of space in two and three-dimensional visual art designs
2. Interpret space in our environment
3. The use of space in visual designs by applying angling and overlapping media in floral art designs
4. Significance of size and color of media in Floral Art

**Unit V: Principles of Art Design**

**A. Balance**
1. Symmetrical and asymmetrical balance in floral art
2. Asymmetrical or symmetrical balance through developing floral art works
3. Radial and open balance in visual art designs

**B. Proportion/Scale**
1. Proportion and scale through application of floral art designs using the following techniques: flower to container, flower to flower, and flower to foliage, and arrangement to environment
2. Geometrical techniques in floral art and visual art designs

**C. Emphasis**
1. Visual floral art works
2. Other visual art works: convey understanding of location, size, pattern, framing, and isolation in floral art designs
3. Emphasis in floral designs by using line direction and directional facing

**D. Rhythm**
1. Floral art using repetition and eye movement
2. Transition and radiating line in floral art works

<table>
<thead>
<tr>
<th>Artistic Perception</th>
<th>Foundation 11.0</th>
<th>Complete worksheet for elements and principles of design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1, 1.2, 1.3, 1.4</td>
<td>OH F1.1, F1.4, F1.5</td>
<td>Create a design project utilizing all elements and principles of design</td>
</tr>
<tr>
<td>Creative Expression 2.3</td>
<td>OH F1.5</td>
<td>Emotions and color influence project</td>
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<td>Aesthetic Valuing 4.2, 4.3</td>
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<td>Create a Color Wheel</td>
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<td>Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes</td>
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<td>Classroom Color Display Board</td>
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<td></td>
<td>Additions to student art and floral Portfolio Projects: applying focal point to student works</td>
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<tr>
<td>Unit of Instruction/Objectives</td>
<td>VPA Standards</td>
<td>CTE Standards</td>
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<tr>
<td><strong>Unit V: Principles of Art Design-continued</strong></td>
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<tr>
<td><strong>E. Harmony and Unity</strong></td>
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<tr>
<td>1. Harmony and unity through applying color combinations to visual designs</td>
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<tr>
<td>2. Placement, transition, and proximity in visual art works and critique student works in floral design</td>
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<tr>
<td><strong>F. Contrast</strong></td>
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<tr>
<td>1. Color schemes in floral art design using various media</td>
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</tbody>
</table>
Unit VI: Creative Expression Through Applying Artistic Processes and Skills to Original Works of Art

A. Two-Dimensional Media

1. Basic drawing and layout: simple perspective drawing, sketching original art works, and project layout
2. Painting techniques for floral art through developing a color wheel and still life floral artwork
3. Mosaic art designs for floral art using paper and tile
4. Printmaking to floral art using pressed flowers
5. Photographic and graphic design through computer art

B. Three-Dimensional Sculptures

1. Display flower and foliage media techniques for specific floral art: mass flower and foliage, filler flower and foliage, line flower and foliage, form flower and foliage, fresh flower and foliage, dry flower and foliage, and artificial flower and foliage
2. Mechanics, materials, and media through an introduction to proper care and proper usage of floral equipment and media
4. Demonstrate the process of evaluation and refining floral art projects

Creative Expression
2.1, 2.3, 2.6

Historical & Cultural Context
3.1, 3.4, 3.5

Aesthetic Valuing
4.1, 4.2, 4.3, 4.4

- Foundations
  4.0, 4.1, 4.2, 4.3, 4.6
  OH F5.5
  OH F11.1, F11.2, 11.3
  AgBusiness
  A8.1, A8.2

- Create a presentation board displaying basic drawing and layout skills
- Create mosaic art designs for floral art using paper and tile.
- Create and display flower and foliage media techniques for specific floral art: Mass Flower and Foliage, Filler Flower and Foliage, Line Flower and Foliage, Form Flower and Foliage, Fresh Flower and Foliage, Dry Flower and Foliage, and Artificial Flower and Foliage.
- Create a floral project applying mechanics, materials, and media through an introduction to proper care, proper usage, equipment and media.
- Create a floral project displaying specific artists' styles and techniques using Oriental, European, and Exhibition Styles
- Student will evaluate his/her floral art project and support a position regarding the aesthetic value of the project and either change or defend position
### Unit VII: Connections, Relationships, and Applications Learned in Visual Art

**A. Relationships to Other Disciplines**

1. Compare and contrast works of art to other discipline areas

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<thead>
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<td></td>
<td>Creative Expression 2.3 Historical &amp; Cultural Context 3.4</td>
<td>•</td>
<td>• Create a mosaic art design utilizing geometric shapes • Emotional poetic, color influenced project designed visually for floral art • Historical time periods and artistic works written three page report • Design a floral advertisement using art elements, principles, and techniques to display student's work at an art exhibit after considering views of others</td>
</tr>
</tbody>
</table>
E. **COURSE OBJECTIVES FOR** (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards(s) after each objective. Minimum length: one page)

- Employ senses to perceive and apply the elements and principles of visual design through works of art, objects in nature, events, and the environment
- Explore the role of floral design in human history and culture through creative design concepts in two and three dimensional media, based on floral arranging
- Derive meaning from artworks and floral art designs, including floral symbolism, through analyzing, interpretations, and judgment of various pieces developed by renown artists of different historical and contemporary periods
- Demonstrate skills in utilizing the language of visual arts design as the foundation for creating and analyzing the visual structures and functions of art
- Develop and create original artwork based on relating visual art design concepts and processes to their own personal experiences and lifelong learning

**Course Objectives**

**ARTISTIC PERCEPTION**

- Develop Perceptual Skills and Visual Arts Vocabulary
  - 1.1 Identify and use the principles of design to discuss, analyze, and write about visual aspects in the environment and in works of art, including their own.
  - 1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.
• Analyze Art Elements and Principles of Design
  o 1.3 Research and analyze the work of an artist and write about the artist's distinctive style and its contribution to the meaning of the work.
  o 1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

• Impact of Media Choice
  o 1.5 Analyze the material used by a given artist and describe how its use influences the meaning of the work.
  o 1.6 Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

2.0 CREATIVE EXPRESSION

• Skills, Processes, Materials, and Tools
  o 2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.
  o 2.2 Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.
  o 2.3 Develop and refine skill in the manipulation of digital imagery (either still or video).
  o 2.4 Review and refine observational drawing skills.

• Communication and Expression Through Original Works of Art
  o 2.5 Create an expressive composition, focusing on dominance and subordination.
  o 2.6 Create two or three-dimensional work of art that addresses a social issue.

3.0 HISTORICAL AND CULTURAL CONTEXT

• Role and Development of the Visual Arts
  o 3.1 Identify similarities and differences in the purposes of art created in selected cultures.
  o 3.2 Identify and describe the role and influence of new technologies on contemporary works of art.

• Diversity of the Visual Arts
  o 3.3 Identify and describe trends in the visual arts and discuss how the issues of time, place, and cultural influence are reflected in selected works of art.
  o 3.4 Discuss the purposes of art in selected contemporary cultures.

4.0 AESTHETIC VALUING

• Derive Meaning
  o 4.1 Articulate how personal beliefs, cultural traditions, and current social, economic, and political contexts influence the interpretation of the meaning or message in a work of art.
  o 4.2 Compare the ways in which the meaning of a specific work of art has been affected over time because of changes in interpretation and context.

• Make Informed Judgments
  o 4.3 Formulate and support a position regarding the aesthetic value of a specific work of art and change or defend that position after considering the views of others.
  o 4.4 Articulate the process and rationale for refining and reworking one of their own works of art.
  o 4.5 Employ the conventions of art criticism in writing and speaking about works of art.

5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

• Connections and Applications
  o 5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

• Visual Literacy
  o 5.3 Compare and contrast the ways in which different media (television, newspapers, magazines) cover the same art exhibition

• Careers and Career-Related Skills
  o 5.4 Demonstrate an understanding of the various skills of an artist, art critic, art historian, art collector, art gallery owner, and philosopher of art (aesthete).
The course objectives are designed to help the students achieve the following Bakersfield High School ESLR's: 1a, b, c, 2a, b, c, d, e, f, and 3 a, b, c, d.

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history-social science content standards adopted by the State Board of Education.)

1.3 History-Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2) Students analyze the elements of America's market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English-language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas,
d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.

e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.

f. Use technical terms and notations accurately.

(2.5) Write business letters:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.

c. Highlight central ideas or images.

d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.

b. Offer detailed and accurate specifications.

c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).

d. Anticipate readers’ problems, mistakes, and misunderstandings.

**Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):**

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.

c. Modify the tone to fit the purpose and audience.

d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:

a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).

b. Select an appropriate medium for each element of the presentation.

c. Use the selected media skillfully, editing appropriately and monitoring for quality.

d. Test the audience’s response and revise the presentation accordingly.

**2.3 Written and Oral English Language Conventions:** Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

(1.3) Reflect appropriate manuscript requirements in writing.

**2.4 Listening and Speaking:** Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:

a. Convey information and ideas from primary and secondary sources accurately and coherently.

b. Make distinctions between the relative value and significance of specific data, facts, and ideas.

c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.

e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

Career Technical Standards

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.
6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.
A. **Agricultural Business Pathway**

A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.

A7.5 Understand how promotion trends for agricultural products influence individuals.

A8.0 **Students understand the sales of agricultural products and services:**

A8.1 Determine the most effective methods for assessing customer needs and wants.

A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.

C. **Agriscience Pathway**

The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C1.0 **Students understand the role of agriculture in the California economy:**

C1.1 Understand the history of the agricultural industry in California.

C1.2 Understand how California agriculture affects the quality of life.

C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.

C1.4 Understand the economic impact of leading California agricultural commodities

C11.0 **Students understand plant growth and development:**

C11.1 Understand the anatomy and functions of plant systems and structures.

F. **Ornamental Horticulture Pathway**

The Ornamental Horticulture Pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture as well as landscaping design, installation, and maintenance.

F1.0 **Students understand plant classification and use principles:**

F1.4 Understand how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.

F1.5 Understand plant selection and identification for local landscape applications.

F5.5 Know the components of soilless media and the use of those media in various types of containers.

F8.4 Understand marketing and merchandising principles used in nursery production.

F11.0 **Students understand basic floral design principles:**

F11.1 Understand the use of plant materials and tools.

F11.2 Apply basic design principles to products and designs.

F11.3 Handle, prepare, and arrange cut flowers appropriately.

F11.4 Understand marketing and merchandising principles used in the floral industry.
STUDENT EVALUATION STANDARDS (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

The students will be assessed on the following:
1) Class/Lab  **%
2) Participation/Career Readiness  **%
3) Test/Quizzes  **%
4) Supervised Agricultural Experience  **%
5) FFA  10%

** These percentages are to be determined by the specific school site

Semester Grades are based on the following:

<table>
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<tr>
<th>Quarter</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quarter 1</td>
<td>40%</td>
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<tr>
<td>Quarter 2</td>
<td>40%</td>
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<tr>
<td>Final</td>
<td>20%</td>
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G. SUGGESTED INSTRUCTIONAL ACTIVITIES (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Cultural Celebration Project
Event Coordination and Design for Clients- including wedding, corporate events
Judging and Evaluation of Floral Designs
Marketing and promotion of Floral Businesses/Services
Arrangements Influenced by major works of art.
Instruction and mentoring of peers in design, critique and construction of floral designs.
Job Shadowing opportunities

**Prepared by: Emily Keverline, Donald Mills, Katy Neiblas, Matt Riley, Jennifer Wilke
District Wide Course of Study Title:

Ag Floral Design 3 P

A. COURSE INFORMATION

Grade Level: 11-12
Length of Course: One Year
Maximum Credit: 10
Type: FNA
Recommendation for Enrollment: Enrollment is subject to site approval in accordance with the school site career pathways.

B. COURSE DESCRIPTION (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific graduation requirement.)

The Floral Design 3 course is intended to culminate the student’s career pathway experiences. It is a project based capstone course where students demonstrate their knowledge of the concepts and objectives from Floral Design 1 and Floral Design 2. It will enable them to refine their portfolio in order to use it for job shadowing, placement in floral careers and utilization in a college setting. Participation in the California FFA Floral Career Development Event is a key component to completion of this course.

C. INSTRUCTIONAL MATERIALS (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

BOARD-ADOPTED TEXTBOOKS

The Art of Floral Design, by Norah T. Hunter; pub Delmar

SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Art Talk, by Rosalind Ragans; pub Glencoe & McGraw-Hill
Fifty Centuries of Art, Pamela Taylor, Francis Henry Taylor
Paint, Brush & Palette, Harvey Weiss
Fast Flower Arranging, Jane Packer, DK Publishing
Art in Everyday Life, Goldsteins, The MacMillan Company
Color, Ruth Heller, The Putnam & Grosset Group
A Concise History of Painting from Prehistory to the Thirteenth Century, David Talbot Rice,
Floriculture:From Greenhouse Production to Floral Design, Delmar Publishing
California Department of Education Career Technical Standards
California Department of Education Content Standards Visual & Performing Arts
Basic Floral Design Workbook
D. **COURSE OUTLINE.** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
<th>VPA Standards</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
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<tbody>
<tr>
<td><strong>Unit I: Introduction to Art</strong></td>
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<tr>
<td>A. The Variety of Art</td>
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<td>1. Artistic perception</td>
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<td>B. When is it Art?</td>
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<tr>
<td>1. Philosophy of Arts</td>
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<td>2. Aesthetic Value of Objects</td>
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<td>3. Artistic Inspirations</td>
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<td>4. Art Appreciation</td>
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<td>5. The Art World</td>
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<td></td>
<td>Aesthetic Valuing</td>
<td>Agriscience C1.2</td>
<td>Students will write an art evaluation on one of the below: Ikebana Design, Vincent Van Gogh, Pablo Picasso, Edouard Monet, Klaus Wagner, Gregor Lersch, Els and George Hazenberg, Georgia O'Keeffe, Pierre Renoir</td>
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<td>Connections, Relationships, Applications</td>
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<tbody>
<tr>
<td><strong>Unit I: Introduction to Art-continued</strong></td>
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<tr>
<td>C. Floral Symbolism</td>
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<tr>
<td>1. Identify flowers and foliage and their symbolism in art.</td>
<td>Artistic Perception</td>
<td>Agriscience C1.1, 1.3, 11.1</td>
<td>Students will research and write a description of the historical symbolism of specific flowers and foliage.</td>
</tr>
<tr>
<td>a. Historical and modern works of art</td>
<td>1.5</td>
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<td>b. Cultural</td>
<td>Historical &amp; Cultural Context</td>
<td>OH11.1</td>
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<td>3.1, 3.3, 3.4</td>
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Unit II: Historical Contributions and Cultural Dimensions

A. Interpretation
2. The meaning of art
3. Elements of Art History

B. History of Floral Art
1. The Floral Art Designs of Ancient Civilizations
2. Floral visual art design styles and their origination

C. Research the Influences of Floral Artists of the 20th and 21st Century
1. Styles and techniques
2. Artistic Inspirations
3. Visual themes used in various cultures
4. Artistic components of various time periods and cultures
5. Time periods in floral art history
6. Historical style and periods
7. Floral art design: culture, ethnicity, time periods, and media
8. Cultural Themes: religious, holiday, funeral and wedding
9. Cultural Design
10. Design alternatives

<table>
<thead>
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<th>Unit of Instruction/Objectives</th>
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<tr>
<td>Aesthetic Valuing 4.1</td>
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<td>Artistic Perception 1.3, 1.5, 1.6</td>
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<td>Creative Expression 2.4, 2.5, 2.6</td>
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<td>Historical &amp; Cultural Context 3.1, 3.2, 3.3, 3.4</td>
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<td>Connections, Relationships, Applications 5.2</td>
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- Students will choose a flower or foliage, find the symbolism and from it create a floral design.
- Add information, lecture notes, and drawings to Interactive Notebook on historical flower symbolism
- Evaluation of art examples from various time periods
- Create a visual presentation on history of Floral Design
- Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles
- Create a two and three dimensional visual display of floral art: Freeform Expression, Geometric Mass, Art Deco, Art Noveau, and Modern Contemporary through the use of various media
- Practicum using a given theme: two dimensional layouts, three-dimensional arrangements, fresh and dry cut flower designs, and container arrangements

- Agriscience C1.1, C1.4
- OH F11.1, 11.2, 11.4
## Unit III: Aesthetic Valuing and Making Judgments on Individual Works of Art

### A. Works of Art and Aesthetic Value

1. Critique works of art using appropriate visual arts terms
2. Analyze art works in terms of art elements and design principles
3. Apply sensory qualities to works of floral art
4. Explores various styles and periods of viewed art
5. Evaluate and critique art elements and art principles used in others and own works of art

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<thead>
<tr>
<th>Creative Expression</th>
<th>Creative Expression</th>
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<td>2.2, 2.5, 2.6</td>
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<td>5.3, 5.4</td>
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**Foundation**
- 1.1, 1.3
- Agriscience C1.1
- AgBusiness A7.4, A7.5, A8.1

- Complete a floral art three-dimensional Critique Sheet for historical periods
- Create floral design arrangements with emphasis on elements and principles of design
- Create verbal and written reflections for floral design project utilizing student's Interactive Notebook
- Develop a portfolio including two-dimensional drawings, three-dimensional sculptures, and artworks' critiques. Minimum of five pieces required.
- Demonstrate knowledge of influential art periods through a cultural and historical 3-5 page research paper.
- Analyze and interpret student and others' work through critiques and rubrics.
- Develop and convey floral art knowledge using visual art terminology in an oral presentation for floral art.

## Unit IV: Art Elements of Design

### A. Lines

1. Implied and expressive use of line in visual art works
2. Vertical, horizontal, and diagonal use of line in floral art works

<table>
<thead>
<tr>
<th>Creative Expression</th>
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<td>2.3, 2.6</td>
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<th>Aesthetic Valuing</th>
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<td>11.0</td>
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<td>OH-F1.4, F1.5, F11.2</td>
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**Foundation**
- Complete worksheet for elements and principles of design
- Create a design
### C. Colors
1. The origin of color through visual art
2. Color harmony in various art works
3. Use of monochromatic, analogous, complementary, and triadic schemes in student and other visual art works

### Unit of Instruction/Objectives | VPA Standards | CTE Standards | Key Assignments
--- | --- | --- | ---
**Unit IV: Art Elements of Design-continued** |  | - OH F1.5, 11.2, 11.4 | - Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes

#### D. Textures
1. Visual and tactile components in floral art using fine, medium, and course-textured media
2. Container and material components of floral art
3. Flower and foliage use through arrangements

#### E. Value
1. Light and dark in visual art designs
2. Light and dark change in floral art

#### F. Space and Depth
1. The use of space in two and three-dimensional visual art designs
2. Interpret space in our environment
3. The use of space in visual designs by applying angling and overlapping media in floral art designs
4. Significance of size and color of
| Unit V: Principles of Art Design | Artistic Perception 1.1, 1.2, 1.3, 1.4 | Creative Expression 2.3 | Aesthetic Valuing 4.2, 4.3 | Foundation 11.0 | OH F1.1, F1.4, F1.5 | Complete worksheet for elements and principles of design | Create a design project utilizing all elements and principles of design | Emotions and color influence project | Create a Color Wheel | Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes | Classroom Color Display Board | Additions to student art and floral Portfolio Projects: applying focal point to student works |

## A. Balance
1. Symmetrical and asymmetrical balance in floral art
2. Asymmetrical or symmetrical balance through developing floral art works
3. Radial and open balance in visual art designs

## B. Proportion/Scale
1. Proportion and scale through application of floral art designs using the following techniques: flower to container, flower to flower, and flower to foliage, and arrangement to environment
2. Geometrical techniques in floral art and visual art designs

## C. Emphasis
1. Visual floral art works
2. Other visual art works: convey understanding of location, size, pattern, framing, and isolation in floral art designs
3. Emphasis in floral designs by using line direction and directional facing

## D. Rhythm
1. Floral art using repetition and eye movement
2. Transition and radiating line in floral art works
# Unit V: Principles of Art Design—continued

## E. Harmony and Unity
1. Harmony and unity through applying color combinations to visual designs
2. Placement, transition, and proximity in visual art works and critique student works in floral design

## F. Contrast
1. Color schemes in floral art design using various media

## Unit VI: Creative Expression Through Applying Artistic Processes and Skills to Original Works of Art

### A. Two-Dimensional Media
1. Basic drawing and layout: simple perspective drawing, sketching original art works, and project layout
2. Painting techniques for floral art through developing a color wheel and still life floral artwork
3. Mosaic art designs for floral art using paper and tile
4. Printmaking to floral art using pressed flowers
5. Photographic and graphic design through computer art

### B. Three-Dimensional Sculptures
1. Display flower and foliage media techniques for specific floral art: mass flower and foliage, filler flower and foliage, line flower and foliage, form flower and foliage, fresh flower and foliage, dry flower and foliage, and artificial flower and foliage
2. Mechanics, materials, and media through an introduction to proper care and proper usage of floral equipment and media
4. Demonstrate the process of evaluation and refining floral art projects

<p>| Creative Expression | Foundations 4.0, 4.1, 4.2, 4.3, 4.6 | OH F5.5 | OH F11.1, F11.2, 11.3 | AgBusiness A8.1, A8.2 | Create a presentation board displaying basic drawing and layout skills | Create mosaic art designs for floral art using paper and tile. | Create and display flower and foliage media techniques for specific floral art: Mass Flower and Foliage, Filler Flower and Foliage, Line Flower and Foliage, Form Flower and Foliage, Fresh Flower and Foliage, Dry Flower and Foliage, and Artificial Flower and Foliage. | Create a floral project applying mechanics, materials, and media through an introduction to proper care, proper usage, equipment and media. | Create a floral project displaying specific artists'... |</p>
<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
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<th>CTE Standards</th>
<th>Key Assignments</th>
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<tbody>
<tr>
<td>Unit VII: Connections,</td>
<td></td>
<td></td>
<td>• Create a mosaic art design utilizing geometric shapes</td>
</tr>
<tr>
<td>Relationships, and Applications Learned in Visual Art</td>
<td></td>
<td></td>
<td>• Emotional poetic, color influenced project designed visually for floral art</td>
</tr>
<tr>
<td>A. Relationships to Other Disciplines</td>
<td></td>
<td></td>
<td>• Historical time periods and artistic works written three page report</td>
</tr>
<tr>
<td>1. Compare and contrast works of art to other discipline areas</td>
<td><strong>Creative Expression</strong> 2.3</td>
<td></td>
<td>• Design a floral advertisement using art elements, principles, and techniques to display student's work at an art exhibition</td>
</tr>
<tr>
<td></td>
<td><strong>Historical &amp; Cultural Context</strong> 3.4</td>
<td></td>
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</tbody>
</table>

styles and techniques using Oriental, European, and Exhibition Styles

- Student will evaluate his/her floral art project and support a position regarding the aesthetic value of the project and either change or defend position after considering views of others.
E. **COURSE OBJECTIVES FOR** *(The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)*

- Employ senses to perceive and apply the elements and principles of visual design through works of art, objects in nature, events, and the environment
- Explore the role of floral design in human history and culture through creative design concepts in two and three dimensional media, based on floral arranging
- Derive meaning from artworks and floral art designs, including floral symbolism, through analyzing, interpretations, and judgment of various pieces developed by renowned artists of different historical and contemporary periods
- Demonstrate skills in utilizing the language of visual arts design as the foundation for creating and analyzing the visual structures and functions of art
- Develop and create original artwork based on relating visual art design concepts and processes to their own personal experiences and lifelong learning

Course Objectives

**ARTISTIC PERCEPTION**

- Develop Perceptual Skills and Visual Arts Vocabulary
  - 1.1 Identify and use the principles of design to discuss, analyze, and write about visual aspects in the environment and in works of art, including their own.
  - 1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.
• Analyze Art Elements and Principles of Design
  - 1.3 Research and analyze the work of an artist and write about the artist's distinctive style and its contribution to the meaning of the work.
  - 1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

• Impact of Media Choice
  - 1.5 Analyze the material used by a given artist and describe how its use influences the meaning of the work.
  - 1.6 Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

2.0 CREATIVE EXPRESSION

• Skills, Processes, Materials, and Tools
  - 2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.
  - 2.2 Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.
  - 2.3 Develop and refine skill in the manipulation of digital imagery (either still or video).
  - 2.4 Review and refine observational drawing skills.

• Communication and Expression Through Original Works of Art
  - 2.5 Create an expressive composition, focusing on dominance and subordination.
  - 2.6 Create two or three-dimensional work of art that addresses a social issue.

3.0 HISTORICAL AND CULTURAL CONTEXT

• Role and Development of the Visual Arts
  - 3.1 Identify similarities and differences in the purposes of art created in selected cultures.
  - 3.2 Identify and describe the role and influence of new technologies on contemporary works of art.

• Diversity of the Visual Arts
  - 3.3 Identify and describe trends in the visual arts and discuss how the issues of time, place, and cultural influence are reflected in selected works of art.
  - 3.4 Discuss the purposes of art in selected contemporary cultures.

4.0 AESTHETIC VALUING

• Derive Meaning
  - 4.1 Articulate how personal beliefs, cultural traditions, and current social, economic, and political contexts influence the interpretation of the meaning or message in a work of art.
  - 4.2 Compare the ways in which the meaning of a specific work of art has been affected over time because of changes in interpretation and context.

• Make Informed Judgments
  - 4.3 Formulate and support a position regarding the aesthetic value of a specific work of art and change or defend that position after considering the views of others.
  - 4.4 Articulate the process and rationale for refining and reworking one of their own works of art.
  - 4.5 Employ the conventions of art criticism in writing and speaking about works of art.

5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

• Connections and Applications
  - 5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

• Visual Literacy
  - 5.3 Compare and contrast the ways in which different media (television, newspapers, magazines) cover the same art exhibition

• Careers and Career-Related Skills
  - 5.4 Demonstrate an understanding of the various skills of an artist, art critic, art historian, art collector, art gallery owner, and philosopher of art (aestheteician).
The course objectives are designed to help the students achieve the following Bakersfield High School ESLR’s: 1a, b, c, 2a, b, c, d, e, f, and 3a, b, c, d.

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history-social science content standards adopted by the State Board of Education.)

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2) Students analyze the elements of America’s market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshall evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.5) Write business letters:
a. Provide clear and purposeful information and address the intended audience appropriately.
b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
c. Highlight central ideas or images.
d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
a. Report information and convey ideas logically and correctly.
b. Offer detailed and accurate specifications.
c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
d. Anticipate readers’ problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.
(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).
(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).
(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:
a. Provide clear and purposeful information and address the intended audience appropriately.
b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
c. Modify the tone to fit the purpose and audience.
d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:
a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
b. Select an appropriate medium for each element of the presentation.
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience’s response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):
(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.
(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
(2.2) Deliver expository presentations:
a. Convey information and ideas from primary and secondary sources accurately and coherently.
b. Make distinctions between the relative value and significance of specific data, facts, and ideas.
c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
e. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

**Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)**

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

**Career Technical Standards**

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.
6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:
6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.
6.4 Maintain safe and healthful working conditions.
6.5 Use tools and machines safely and appropriately.
6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:
7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to varied roles and responsibilities.
7.4 Understand that individual actions can affect the larger community.
7.5 Understand the importance of time management to fulfill responsibilities.
7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:
8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
8.3 Understand the role of personal integrity and ethical behavior in the workplace.
8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:
9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.
A. Agricultural Business Pathway

A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.
A7.5 Understand how promotion trends for agricultural products influence individuals.

A8.0 Students understand the sales of agricultural products and services:

A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.

C. Agriscience Pathway

The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C1.0 Students understand the role of agriculture in the California economy:

C1.1 Understand the history of the agricultural industry in California.
C1.2 Understand how California agriculture affects the quality of life.
C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
C1.4 Understand the economic impact of leading California agricultural commodities

C11.0 Students understand plant growth and development:

C11.1 Understand the anatomy and functions of plant systems and structures.

F. Ornamental Horticulture Pathway

The Ornamental Horticulture Pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture as well as landscaping design, installation, and maintenance.

F1.0 Students understand plant classification and use principles:

F1.4 Understand how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.
F1.5 Understand plant selection and identification for local landscape applications.
F5.5 Know the components of soilless media and the use of those media in various types of containers.
F8.4 Understand marketing and merchandising principles used in nursery production.

F11.0 Students understand basic floral design principles:

F11.1 Understand the use of plant materials and tools.
F11.2 Apply basic design principles to products and designs.
F11.3 Handle, prepare, and arrange cut flowers appropriately.
F11.4 Understand marketing and merchandising principles used in the floral industry.
F. **STUDENT EVALUATION STANDARDS** (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student’s grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

The students will be assessed on the following:
1) Class/Lab ****
2) Participation/Career Readiness **
3) Test/Quizzes **
4) Supervised Agricultural Experience **
5) FFA 10%

** These percentages are to be determined by the specific school site

Semester Grades are based on the following:

Quarter 1 40%
Quarter 2 40%
Final 20%

G. **SUGGESTED INSTRUCTIONAL ACTIVITIES** (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Cultural Celebration Project
Event Coordination and Design for Clients- including wedding, corporate events
Judging and Evaluation of Floral Designs
Marketing and promotion of Floral Businesses/Services
Arrangements influenced by major works of art.
Instruction and mentoring of peers in design, critique and construction of floral designs.
Job Shadowing opportunities
California FFA CDE

**Prepared by: Emily Keverline, Donald Mills, Katy Neiblas, Matt Riley, Jennifer Wilke**
Floral Design 4 P

A. **COURSE INFORMATION**

Grade Level: 12

Length of Course: One Year

Maximum Credit: 10

Type: FNA

Recommendation for Enrollment: Enrollment is subject to site approval in accordance with the school site career pathways.

B. **COURSE DESCRIPTION** (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific gradation requirement.)

The Floral Design 4 course is intended for those students with a career plan in the floral industry. It is a project-based course where students demonstrate their knowledge of the concepts and objectives from 3 years of floral design courses through active planning and implementation of projects of their own design. It will enable them to further refine their portfolio in order to use it for job shadowing, placement in floral careers, and utilization in a college setting. Participation in the California FFA Floral Career Development Event is a requirement to completion of this course.

C. **INSTRUCTIONAL MATERIALS** (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

BOARD-ADOPTED TEXTBOOKS

*The Art of Floral Design*, by Norah T. Hunter; pub Delmar

SUPPLEMENTARY INSTRUCTIONAL MATERIALS

*Art Talk*, by Rosalind Ragans; pub Glencoe & McGraw-Hill

*Fifty Centuries of Art*, Pamela Taylor, Francis Henry Taylor

*Paint, Brush & Palette*, Harvey Weiss

*Fast Flower Arranging*, Jane Packer, DK Publishing

*Art in Everyday Life*, Goldsteins, *The MacMillan Company*

*Color, Ruth Heller, The Putnam & Grosset Group*

*A Concise History of Painting from Prehistory to the Thirteenth Century*, David Talbot Rice,

*Floriculture:From Greenhouse Production to Floral Design*, Delmar Publishing

*California Department of Education Career Technical Standards*
California Department of Education Content Standards Visual & Performing Arts
Basic Floral Design Workbook
Discovering Art History, by Gerald F. Bromer; pub Davis
Exploring Visual Design: The Elements & Principles; pub Davis
The Visual Experience; pub Delmar
Essential Impressionist; pub Parragon
The Natural Way to Draw, by Kimon Nicolaides
Elements of Design (video); pub Crystal Productions
Fresh Cut Florist Flowers- Interactive CD-ROM
Delmar's Handbook of Flower, Foliage and Creative Design- Norah Hunter

D. **COURSE OUTLINE.** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
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<tbody>
<tr>
<td><strong>Unit I: Introduction to Art</strong></td>
<td>Aesthetic Valuing</td>
<td>Agriscience C1.2</td>
<td>• Students will write an art evaluation on one of the below: Ikebana Design, Vincent Van Gogh, Pablo Picasso, Edouard Monet, Klaus Wagner, Gregor Lersch, Els and George Hazenberg, Georgia O'Keeffe, Pierre Renoir</td>
</tr>
<tr>
<td><strong>A. The Variety of Art</strong></td>
<td>4.1, 4.3</td>
<td>Applications</td>
<td>• Students will create an <em>Interactive Notebook</em> that will contain: class notes from lectures, drawings, and class exercises. Students will build upon this notebook through each unit of instruction utilizing both sides of the brain.</td>
</tr>
<tr>
<td>1. Artistic perception</td>
<td>Connections, Relationships</td>
<td>Artistic Perception</td>
<td>1.1, 1.3, 11.1</td>
</tr>
</tbody>
</table>
Unit II: Historical Contributions and Cultural Dimensions

**A. Interpretation**
- 2. The meaning of art
- 3. Elements of Art History

**B. History of Floral Art**
- 1. The Floral Art Designs of Ancient Civilizations
- 2. Floral visual art design styles and their origination

**C. Research the Influences of Floral Artists of the 20th and 21st Century**
- 1. Styles and techniques
- 2. Artistic Inspirations
- 3. Visual themes used in various cultures
- 4. Artistic components of various time periods and cultures
- 5. Time periods in floral art history
- 6. Historical style and periods
- 7. Floral art design: culture, ethnicity, time periods, and media
- 8. Cultural Themes: religious, holiday, funeral and wedding
- 9. Cultural Design
- 10. Design alternatives

<table>
<thead>
<tr>
<th>Artistic Perception</th>
<th>1.3, 1.5, 1.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Expression</td>
<td>2.4, 2.5, 2.6</td>
</tr>
<tr>
<td>Historical &amp; Cultural Context</td>
<td>3.1, 3.2, 3.3, 3.4</td>
</tr>
<tr>
<td>Aesthetic Valuing</td>
<td>4.1, 4.2, 4.3, 4.5</td>
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<thead>
<tr>
<th>Cultural Context</th>
<th>3.1, 3.3, 3.4</th>
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<tbody>
<tr>
<td>Aesthetic Valuing</td>
<td>4.1</td>
</tr>
</tbody>
</table>

- Agriscience C1.1, C1.4
- OH F11.1, 11.2, 11.4

- Evaluation of art examples from various time periods
- Create a visual presentation on history of Floral Design
- Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles
- Create a two and three dimensional visual display of floral art: Freeform Expression, Geometric Mass, Art Deco, Art Noveau, and Modern Contemporary through the use of various media
- Practicum using a given theme: two dimensional layouts, three-dimensional arrangements, fresh and dry cut flower designs, and container arrangements

- Students will choose a flower or foliage, find the symbolism and from it create a floral design.
- Add information, lecture notes, and drawings to Interactive Notebook on historical flower symbolism
<table>
<thead>
<tr>
<th>Unit of Instruction/Objectives</th>
<th>VPA Standards</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
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<tbody>
<tr>
<td><strong>Unit III: Aesthetic Valuing and Making Judgments on Individual Works of Art</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>A. Works of Art and Aesthetic Value</strong></td>
<td>Creative Expression</td>
<td>• Foundation 1.1, 1.3</td>
<td>• Complete a floral art three-dimensional Critique Sheet for historical periods</td>
</tr>
<tr>
<td>1. Critique works of art using appropriate visual arts terms</td>
<td>2.2, 2.5, 2.6</td>
<td>• Agriscience C1.1</td>
<td>• Create floral design arrangements with emphasis on elements and principles of design</td>
</tr>
<tr>
<td>2. Analyze art works in terms of art elements and design principles</td>
<td>Connections, Relationships, Applications</td>
<td>• AgBusiness A7.4, A7.5, A8.1</td>
<td>• Create verbal and written reflections for floral design project utilizing student’s Interactive Notebook</td>
</tr>
<tr>
<td>3. Apply sensory qualities to works of floral art</td>
<td>5.3, 5.4</td>
<td></td>
<td>• Develop a portfolio including two-dimensional drawings, three-dimensional sculptures, and artworks’ critiques. Minimum of five pieces required.</td>
</tr>
<tr>
<td>4. Explores various styles and periods of viewed art</td>
<td></td>
<td></td>
<td>• Demonstrate knowledge of influential art periods through a cultural and historical 3-5 page research paper.</td>
</tr>
<tr>
<td>5. Evaluate and critique art elements and art principles used in others and own works of art</td>
<td></td>
<td></td>
<td>• Analyze and interpret student and others’ work through critiques and rubrics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit IV: Art Elements of Design</th>
<th>Creative Expression</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Lines</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Implied and expressive use of line in visual art works</td>
<td>2.3, 2.6</td>
<td>• Foundation 11.0</td>
<td>• Complete worksheet for elements and principles of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• OH-F1.4, F1.5, F11.2</td>
<td></td>
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</tbody>
</table>
### Unit of Instruction/Objectives

<table>
<thead>
<tr>
<th>D. Textures</th>
<th>VPA Standards</th>
<th>CTE Standards</th>
<th>Key Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visual and tactile components in floral art using fine, medium, and course-textured media</td>
<td></td>
<td>• OH F1.5, 11.2, 11.4</td>
<td>• Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes</td>
</tr>
<tr>
<td>2. Container and material components of floral art</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Flower and foliage use through arrangements</td>
<td></td>
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</tr>
</tbody>
</table>

### Aesthetic Valuing

| 4.2, 4.3 |

- Create a design project utilizing all elements and principles of design
- Emotions and color influence project
- Create a Color Wheel
- Additions to student art and floral Portfolio Projects: application using triangular, circular, vertical, and horizontal floral art designs and applying hue, primary, secondary, tertiary, warm, cool, value, tint, tone, and shades to floral artworks
Unit V: Principles of Art Design

A. Balance
1. Symmetrical and asymmetrical balance in floral art
2. Asymmetrical or symmetrical balance through developing floral art works
3. Radial and open balance in visual art designs

B. Proportion/Scale
1. Proportion and scale through application of floral art designs using the following techniques: flower to container, flower to flower, and flower to foliage, and arrangement to environment
2. Geometrical techniques in floral art and visual art designs

C. Emphasis
1. Visual floral art works
2. Other visual art works: convey understanding of location, size, pattern, framing, and isolation in floral art designs
3. Emphasis in floral designs by using line direction and directional facing

D. Rhythm
1. Floral art using repetition and eye movement
2. Transition and radiating line in floral art works

<table>
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<tbody>
<tr>
<td>Artistic Perception</td>
<td></td>
<td></td>
<td>*Complete worksheet for elements and principles of design</td>
</tr>
<tr>
<td>1.1, 1.2, 1.3, 1.4</td>
<td></td>
<td></td>
<td>*Create a design project utilizing all elements and principles of design</td>
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<tr>
<td>Creative Expression</td>
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<td></td>
<td>*Emotions and color influence project</td>
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<tr>
<td>2.3</td>
<td></td>
<td></td>
<td>*Create a Color Wheel</td>
</tr>
<tr>
<td>Aesthetic Valuing</td>
<td></td>
<td></td>
<td>*Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes</td>
</tr>
<tr>
<td>4.2, 4.3</td>
<td></td>
<td></td>
<td>*Classroom Color Display Board</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Additions to student art and floral Portfolio Projects: applying focal point to student works</td>
</tr>
</tbody>
</table>

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### Unit V: Principles of Art Design—continued

**E. Harmony and Unity**
1. Harmony and unity through applying color combinations to visual designs
2. Placement, transition, and proximity in visual art works and critique student works in floral design

**F. Contrast**
1. Color schemes in floral art design using various media

### Unit VI: Creative Expression Through Applying Artistic Processes and Skills to Original Works of Art

#### A. Two-Dimensional Media
1. Basic drawing and layout: simple perspective drawing, sketching original art works, and project layout
2. Painting techniques for floral art through developing a color wheel and still life floral artwork
3. Mosaic art designs for floral art using paper and tile
4. Printmaking to floral art using pressed flowers
5. Photographic and graphic design through computer art

#### B. Three-Dimensional Sculptures
1. Display flower and foliage media techniques for specific floral art: mass flower and foliage, filler flower and foliage, line flower and foliage, form flower and foliage, fresh flower and foliage, dry flower and foliage, and artificial flower and foliage
2. Mechanics, materials, and media through an introduction to proper care and proper usage of floral equipment and media
4. Demonstrate the process of evaluation and refining floral art projects

#### Creative Expression
- 2.1, 2.3, 2.6
- Historical & Cultural Context
  - 3.1, 3.4, 3.5
- Aesthetic Valuing
  - 4.1, 4.2, 4.3, 4.4

- Foundations
  - 4.0, 4.1, 4.2, 4.3, 4.6
  - OH F5.5
  - OH F11.1, F11.2, 11.3
  - AgBusiness A8.1, A8.2

- Create a presentation board displaying basic drawing and layout skills
- Create mosaic art designs for floral art using paper and tile
- Create and display flower and foliage media techniques for specific floral art: Mass Flower and Foliage, Filler Flower and Foliage, Line Flower and Foliage, Form Flower and Foliage, Fresh Flower and Foliage, Dry Flower and Foliage, and Artificial Flower and Foliage.
- Create a floral project applying mechanics, materials, and media through an introduction to proper care, proper usage, equipment and media.
- Create a floral project displaying specific artists'
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<tbody>
<tr>
<td>Unit VII: Connections, Relationships, and Applications Learned in Visual Art</td>
<td></td>
<td></td>
<td>• Create a mosaic art design utilizing geometric shapes</td>
</tr>
<tr>
<td>A. Relationships to Other Disciplines</td>
<td>Creative Expression 2.3</td>
<td>•</td>
<td>• Emotional poetic, color influenced project designed visually for floral art</td>
</tr>
<tr>
<td>1. Compare and contrast works of art to other discipline areas</td>
<td>Historical &amp; Cultural Context 3.4</td>
<td></td>
<td>• Historical time periods and artistic works written three page report</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>• Design a floral advertisement using art elements, principles, and techniques to display student's work at an art exhibit</td>
</tr>
</tbody>
</table>
### E. COURSE OBJECTIVES FOR

(The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)

- Employ senses to perceive and apply the elements and principles of visual design through works of art, objects in nature, events, and the environment
- Explore the role of floral design in human history and culture through creative design concepts in two and three dimensional media, based on floral arranging
- Derive meaning from artworks and floral art designs, including floral symbolism, through analyzing, interpretations, and judgment of various pieces developed by renowned artists of different historical and contemporary periods
- Demonstrate skills in utilizing the language of visual arts design as the foundation for creating and analyzing the visual structures and functions of art
- Develop and create original artwork based on relating visual art design concepts and processes to their own personal experiences and lifelong learning

#### Course Objectives

**ARTISTIC PERCEPTION**

- Develop Perceptual Skills and Visual Arts Vocabulary
  - 1.1 Identify and use the principles of design to discuss, analyze, and write about visual aspects in the environment and in works of art, including their own.
  - 1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.
• Analyze Art Elements and Principles of Design
  o 1.3 Research and analyze the work of an artist and write about the artist’s distinctive style and its contribution to the meaning of the work.
  o 1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

Impact of Media Choice
  o 1.5 Analyze the material used by a given artist and describe how its use influences the meaning of the work.
  o 1.6 Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

2.0 CREATIVE EXPRESSION
• Skills, Processes, Materials, and Tools
  o 2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.
  o 2.2 Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.
  o 2.3 Develop and refine skill in the manipulation of digital imagery (either still or video).
  o 2.4 Review and refine observational drawing skills.

• Communication and Expression Through Original Works of Art
  o 2.5 Create an expressive composition, focusing on dominance and subordination.
  o 2.6 Create two or three-dimensional work of art that addresses a social issue.

3.0 HISTORICAL AND CULTURAL CONTEXT
• Role and Development of the Visual Arts
  o 3.1 Identify similarities and differences in the purposes of art created in selected cultures.
  o 3.2 Identify and describe the role and influence of new technologies on contemporary works of art.

Diversity of the Visual Arts
  o 3.3 Identify and describe trends in the visual arts and discuss how the issues of time, place, and cultural influence are reflected in selected works of art.
  o 3.4 Discuss the purposes of art in selected contemporary cultures.

4.0 AESTHETIC VALUING
• Derive Meaning
  o 4.1 Articulate how personal beliefs, cultural traditions, and current social, economic, and political contexts influence the interpretation of the meaning or message in a work of art.
  o 4.2 Compare the ways in which the meaning of a specific work of art has been affected over time because of changes in interpretation and context.

• Make Informed Judgments
  o 4.3 Formulate and support a position regarding the aesthetic value of a specific work of art and change or defend that position after considering the views of others.
  o 4.4 Articulate the process and rationale for refining and reworking one of their own works of art.
  o 4.5 Employ the conventions of art criticism in writing and speaking about works of art.

5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS
• Connections and Applications
  o 5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

• Visual Literacy
  o 5.3 Compare and contrast the ways in which different media (television, newspapers, magazines) cover the same art exhibition

• Careers and Career-Related Skills
  o 5.4 Demonstrate an understanding of the various skills of an artist, art critic, art historian, art collector, art gallery owner, and philosopher of art (aesthetcian).
The course objectives are designed to help the students achieve the following Bakersfield High School ESLR's: 1a, b, c, 2a, b, c, d, e, f, and 3a, b, c, d.

FOUNDATION STANDARDS
1.0 Academics - Students understand the academic content required for entry into postsecondary education and employment in the Agriculture and Natural Resources sector. (The standards listed below retain in parentheses the numbering as specified in the mathematics, science, and history–social science content standards adopted by the State Board of Education.)

1.3 History–Social Science: Specific applications of Principles of Economics standards (grade twelve):
(12.2) Students analyze the elements of America's market economy in a global setting.
(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.
(12.2.3) Explain the roles of property rights, competition, and profit in a market economy.
(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.
(12.2.6) Describe the effect of price controls on buyers and sellers.
(12.2.7) Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
(12.2.10) Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. (The standards listed below retain in parentheses the numbering as specified in the English-language arts content standards adopted by the State Board of Education.)

2.1 Reading: Specific applications of Reading Comprehension standards (grades nine and ten):
(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.
(2.3) Generate relevant questions about readings on issues that can be researched.
(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.2 Writing: Specific applications of Writing Strategies and Applications standards (grades 9-10)
(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.
(1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
(1.5) Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
(2.3) Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
e. Anticipate and address readers' potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.5) Write business letters:

a. Provide clear and purposeful information and address the intended audience appropriately.
b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
c. Highlight central ideas or images.
d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

a. Report information and convey ideas logically and correctly.
b. Offer detailed and accurate specifications.
c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.6) Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).

(1.7) Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:

a. Provide clear and purposeful information and address the intended audience appropriately.
b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
c. Modify the tone to fit the purpose and audience.
d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:

a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
b. Select an appropriate medium for each element of the presentation.
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience's response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions: Specific applications of English Language Conventions standards (grades eleven and twelve):

(1.1) Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.

(1.2) Produce legible work that shows accurate spelling and correct punctuation and capitalization.

(1.3) Reflect appropriate manuscript requirements in writing.

2.4 Listening and Speaking: Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):

(1.1) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.2) Deliver expository presentations:

a. Convey information and ideas from primary and secondary sources accurately and coherently.
b. Make distinctions between the relative value and significance of specific data, facts, and ideas.
c. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
e. Anticipate and address the listener's potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

(2.3) Apply appropriate interviewing techniques:
   a. Prepare and ask relevant questions.
   b. Make notes of responses.
   c. Use language that conveys maturity, sensitivity, and respect.
   d. Respond correctly and effectively to questions.
   e. Demonstrate knowledge of the subject or organization.
   f. Compile and report responses.
   g. Evaluate the effectiveness of the interview.

Specific applications of Listening and Speaking Strategies and Applications standards (grades 11-12)

(1.8) Use effective and interesting language, including:
   a. Informal expressions for effect
   b. Standard American English for clarity
   c. Technical language for specificity

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles’ radio broadcast “War of the Worlds”).

(2.4) Deliver multimedia presentations:
   a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
   b. Select an appropriate medium for each element of the presentation.
   c. Use the selected media skillfully, editing appropriately and monitoring for quality.
   d. Test the audience’s response and revise the presentation accordingly

Career Technical Standards

3.0 Career Planning and Management
Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology: Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand geographic information systems (G.I.S.).

4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking: Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.
6.0 Health and Safety: Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

6.3 Understand how to locate important information on a material safety data sheet.

6.4 Maintain safe and healthful working conditions.

6.5 Use tools and machines safely and appropriately.

6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 Responsibility and Flexibility: Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:

7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.

7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.

7.3 Understand the need to adapt to varied roles and responsibilities.

7.4 Understand that individual actions can affect the larger community.

7.5 Understand the importance of time management to fulfill responsibilities.

7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 Ethics and Legal Responsibilities: Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.

8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.

8.3 Understand the role of personal integrity and ethical behavior in the workplace.

8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:

10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.

10.2 Manage and actively engage in a career-related, supervised agricultural experience.

10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.

10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application: Students demonstrate and apply the concepts contained in the foundation and pathway standards.
A. Agricultural Business Pathway

A7.4 Understand the impact of advertising and promotion on the marketing of agricultural products and services.

A7.5 Understand how promotion trends for agricultural products influence individuals.

8.0 Students understand the sales of agricultural products and services:

A8.1 Determine the most effective methods for assessing customer needs and wants.

A8.2 Understand the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.

C. Agriscience Pathway

The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C1.0 Students understand the role of agriculture in the California economy:

C1.1 Understand the history of the agricultural industry in California.

C1.2 Understand how California agriculture affects the quality of life.

C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.

C1.4 Understand the economic impact of leading California agricultural commodities.

C11.0 Students understand plant growth and development:

C11.1 Understand the anatomy and functions of plant systems and structures.

F. Ornamental Horticulture Pathway

The Ornamental Horticulture Pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture as well as landscaping design, installation, and maintenance.

F1.0 Students understand plant classification and use principles:

F1.4 Understand how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.

F1.5 Understand plant selection and identification for local landscape applications.

F5.5 Know the components of soilless media and the use of those media in various types of containers.

F8.4 Understand marketing and merchandising principles used in nursery production.

F11.0 Students understand basic floral design principles:

F11.1 Understand the use of plant materials and tools.

F11.2 Apply basic design principles to products and designs.

F11.3 Handle, prepare, and arrange cut flowers appropriately.

F11.4 Understand marketing and merchandising principles used in the floral industry.


**STUDENT EVALUATION STANDARDS** (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

The students will be assessed on the following:

1) Class/Lab ****%
2) Participation/Career Readiness ****%
3) Test/Quizzes ****%
4) Supervised Agricultural Experience ****%
5) FFA 10%

** These percentages are to be determined by the specific school site

Semester Grades are based on the following:

- Quarter 1 40%
- Quarter 2 40%
- Final 20%

**SUGGESTED INSTRUCTIONAL ACTIVITIES** (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Cultural Celebration Project
Event Coordination and Design for Clients- including wedding, corporate events
Judging and Evaluation of Floral Designs
Marketing and promotion of Floral Businesses/Services
Arrangements Influenced by major works of art.
Instruction and mentoring of peers in design, critique and construction of floral designs.
Job Shadowing opportunities
California FFA CDE
Floral Unit Development and Implementation

**Prepared by: Emily Keverline, Donald Mills, Katy Neiblas, Matt Riley, Jennifer Wilke**
Agriscience Courses of Study
Agriculture Soil Science

A. COURSE INFORMATION

Grade Level: 9th Grade
Length of Course: 2 semesters
Maximum Credit: 10
Type: Physical Science Area “D”
Recommendation for Enrollment: Recommended for Freshman level students, but can be applied to all levels.
Prerequisites:
Co-Requisites:

B. COURSE DESCRIPTION (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific graduation requirement.)

Three-fourths of the world’s food and nearly all of its fiber come from the fragile, thin skin of the land’s surface—the soil. This course explores the physical and chemical nature of soil as well as the relationships between soil, plants, animals and agricultural practices. Students will examine properties of soil and land and their connections to plant and animal production. Using knowledge of scientific protocols as well as course content, students will develop an Agriscience research project to be conducted throughout the first semester of the course. To complete that whole project each student will investigate and test an Agriscience research question by formulating a scientific question related to the course content, formulating a hypothesis based on related research, conducting an experiment to test the hypothesis, collecting quantitative data, and forming a conclusion based on analysis of the data. The result of this research program will be an in depth research and experimentation paper that is technically written, based on scientific protocol, and cited using APA formatting. Additionally, students will develop and present a capstone soil management plan for agricultural producers, using the content learned throughout the course. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

C. INSTRUCTIONAL MATERIALS (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

Miller and Levine, EARTH SCIENCE, Prentice Hall, copyright (2007)

**Supplemental Materials**


How to Write a Scientific Paper by Robert A. Day

National FFA Agriscience Fair Handbook


National FFA Research Report Template

https://www.ffa.org/programs/awards/agrisciencefair/Pages/default.aspx


http://learnaboutag.org/resources/lesson/stem.pdf


D. **COURSE OUTLINE** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

**Introduction Unit:**

**Career Technical Agriculture Education**

The students will be introduced to what it means to be involved in an Agriculture class and FFA. Students will gain an understanding of the three components to Agriculture Education: academics, FFA, and supervised agriculture experiences (SAE’s). This will include, but is not limited to, understanding the history of the FFA, FFA traditions and leadership roles, record keeping, and project management. Throughout the year students will explore leadership opportunities within FFA and career opportunities within Agriculture.

**Unit One:**

**Agriscience Practices**

**Unit Description**

This introductory unit will focus on proper methods of agriscience inquiry. Through a series of minilab experiences based on the course content, students will learn to ask questions and define problems, conduct research to form a hypothesis, determine the experimental design and conduct experimentation, analyze and interpret data, develop conclusions and then communicate their findings in lab reports. Not only will the students learn to utilize proper scientific method protocol through conducting these minilabs, they will also learn what topics will be taught throughout the year in order to guide them in selecting the problem/question for their individual Agriscience Project. Through these minilab experiences and unit content, students will be provided with the skills and knowledge to successfully establish the idea they will pursue in their Agriscience Project. By the end of this unit, students will complete the Agriscience Project Research Proposal for their ongoing science experiment that will be conducted throughout the first semester of the course.
Key Assignment

1. Soil Structure and Composition Mini-Lab Calgon Testing
Students will learn that soil is composed of different size particles at varying percentages by conducting an experiment where students separate, examine and identify the major components of soil to better understand how these components give soil its unique physical characteristics. Students will learn to measure the percentage of sand, silt, and clay in a soil sample. Soil samples should be collected in the course of a walking field trip where students will take samples from varying locations on the walk. Students will mix one cup of soil sample with laundry detergent powder in a mason jar in order to dissolve the soil aggregates and keep the individual particles separated. Once the soil sample mixture sits for three days, students will measure and determine the percentage of each particle within their specific soil sample. Students will write a lab report to summarize what occurred throughout the experiment, their data, and analysis/conclusion.

2. Water and Soil Management Mini-Lab Water Percolation
Students will learn how to design a scientific experiment through proper scientific method and how to develop a research proposal. Students will be put into groups to produce a mini proposal which will include the specific water percolation problem/question they will research for this lab, three literary research references, a hypothesis and scientific procedure. Students will also learn how soil composition impacts the speed of water percolation or amount of water absorption by conducting the experiment they designed. Students will create a lab report that includes their data and analysis/conclusion. The lab not only develops students ability to write a proposal and a scientific experiment, but exposes them to the relationship between water and soil management.

3. Plant and Soil Management Mini-Lab Nutrient Uptake
Students will learn that plants utilize nutrients in soil to grow and develop. Each student will bring in a soil sample from their yard to utilize in this lab. They will divide the sample into two pots, one that will be a control sample and the other will be amended with animal manure compost. They will test the nutrients of these two pots of soil with a standard soil testing kit in order to record the levels of Nitrogen, Phosphorus, and Potassium in their control and amended samples. A bean seed will be planted in each pot of soil to germinate and grow over the course of a two week period. Throughout the two weeks, students will be recording quantitative data on seed germination, plant growth, and soil nutrients. After analyzing their data, students will determine how much of each nutrient was utilized by the bean plant. A lab report will be written to summarize what occurred throughout the experiment, their data, and analysis/conclusion.

4. Animal and Soil Management Mini-Lab Animal Manure Amendment
To build on to the learning of nutrient uptake in the previous lab, students will extend their data analysis to make conclusions on why the bean plant in the amended soil sample had more optimal growth over the past two weeks than the bean plant in the controlled soil sample. This extended analysis of their data will allow the students to learn that animal waste can be composted and used as a soil amendment to increase soil nutrients for optimal plant growth. A lab report will be written to summarize what occurred throughout the experiment, their data, and analysis/conclusion.

5. Technology Mini-Lab Soil Moisture Testing
Building on the learning of soil composition in the Calgon lab, in this minilab, students will learn that the moisture levels in soil vary depending on the soil composition through the use of soil moisture sensing equipment. Students will learn how to operate a soil moisture sensor by testing the moisture levels in various soils. Students will return to the locations where soil samples were collected for the Calgon testing lab in order to test the moisture levels of those specific soils. They will use their data from the Calgon testing lab alongside the data from the soil moisture tests to determine how the composition of the soil impacts the soil moisture levels. A lab report will be written to summarize what occurred throughout the experiment, their data, and analysis/conclusion.

6. Chemistry, Fertilizer, and the Environment
Modern farmers face real life challenges while producing our food, fiber, and fuel. Supplying one nutrient while ignoring other plant needs, including other nutrients and environmental factors such as temperature, water, and light, may have little benefit or even be detrimental to the crop. In this lesson, students will learn about solutes and solvents and will use serial dilution while investigating parts per million—a term used to describe the nutrient concentration of a fertilizer solution. Students will use their knowledge of solutes, solvents, and parts per million to analyze fertilizer options that meet plant nutrient requirements while evaluating costs associated with managing plant nutrients. Most importantly, students will look at the role of nitrogen and show how various forms of nitrogen cycle through the environment. Students will look at how the different forms of nitrogen undergo various chemical and physical transformations that are all critical to the global nitrogen cycle. Students will measure the pH of a soil sample and learn how pH affects the availability of nutrient uptake by plants. Students will determine if and how their soil pH should be modified through the application of soil amendments. In this lesson, students will test for plant-available soil nitrogen and learn how farmers use this test to precisely match fertilizer application to meet crop needs and reduce the amount of nitrogen left in the soil in order to minimize nutrient loss and environmental impact.

7. Agriscience Research Project Proposal
The key assignment for this introductory unit will be writing a research proposal for the student’s planned Agriscience Project. To guide the students in deciding their agriscience research questions/problem, the mini lab experiences completed in this nit should be utilized. The written proposal will include their chosen problem/question that they will be researching and investigating, five pieces of literary references, and the steps to complete for their research project. This assignment marks the first in a series of assignments that will be necessary for students to complete in order to successfully complete their agriscience research project.

Unit Two: The Nature of Soil

Unit Description
Students will use the methods of scientific inquiry, developed in the previous unit, to investigate the composition of the physical world, and discover how matter and energy change forms through biogeochemical cycles. This unit will focus on geomorphology as it relates to soil formation and management practices. Students will understand where soil originates by investigating the role of the rock cycle in soil formation, sea floor spreading, volcanic activity, and mountain building. Students will learn how the electron configurations of different elements, present in the parent material, give them unique physical and chemical properties, and will further investigate how these properties impact soil characteristics. Students will identify how the climate, weather, natural resources and hazards, and environment impact the soil properties, and will examine the role erosion plays in soil science as influenced by human activity. Students will collect soil samples from a variety of sources, and will use industry methods to determine the chemical composition of the soil and how this composition affects its physical and chemical characteristics. Students will connect to prior knowledge of life science by looking at how biotic factors impact soil type, composition and texture through investigation and experimentation. Students will use the results of their soil testing and the locations from which they took their samples to create a soil map of their local area. Students will compare their map to existing soil maps and analyses, and analyze the similarities and differences with the previous research

Key Assignments

1. Classifying Rocks and Rock Formation
The students will explore the internal and external processes that form igneous, sedimentary, and metamorphic rocks. The students will identify how natural resources and hazards such as earthquakes, volcanism, erosion, and weathering drive the rock cycle. Students will learn about seafloor spreading and mountain building in plate tectonics as it relates to the formation of new parent material for soil and rock formation. Using charts, magnifying lenses, streak plates, hardness tests, and various rock and mineral samples the students will be able to identify rocks and minerals by their physical characteristics. Students will turn in a lab report identifying the provided rock and mineral samples. The report will
include a description of how the rocks formed, parent material type, effect of climate and erosion on rock formations and how this influences human activity and soil management concerns.

2. Sedimentary Rock Lab
In this activity students will model how sedimentary rock is formed by simulating weathering and erosion. Because sedimentary rock is the parent material for major components of many high quality soils, students will investigate the physical and chemical processes which create sedimentary rock. In this lab, students will use brown sugar to simulate the effect of water on soluble rock, show how water can dissolve various minerals, show how freezing water can crack porous rock, show the effects of water's impact by pouring water on sand, and use a hairdryer and sand to simulate wind erosion on copper sulfate crystals. Students will turn in a lab report that details the results of the lab and that identifies which processes are examples of physical change (water expanding in cracks to break rocks, sand particles wearing away rock, etc.), and which processes are examples of chemical change (slightly acidic water dissolving limestone, oxidation of minerals to create metal oxides, etc.).

(http://www.rsc.org/education/teachers/resources/jesei/weather/home.htm)

3. Collect and Test Soil Samples: Physical & Biological Properties (figure out what elements might be in them based on chemical properties)
In this lab, students will learn how to test the physical characteristics of soil, so that they can learn how these characteristics affect a soil's capabilities in later units. They will be able to assess and amend a soil to achieve a specific agricultural application. Students will collect soil samples from a variety of locations around their community. After receiving instruction in lab safety protocols, students will choose appropriate lab testing and safety equipment, and will carry out a battery of industry standard tests to determine what physical and biological characteristics the soil samples possess. After receiving instruction in what physical properties of matter are measured in soil testing, students will use the ribbon test, and also look at physical factors such as soil texture, composition, and particle size. Students will examine the soil for presence of living organisms, such as nematodes. Based on these properties, students will hypothesize what chemical elements are present in the soil. Students will research what chemicals are prominent in the soil in their test areas, and check their hypotheses against this research. Students will turn in an annotated bibliography detailing the major findings of their research. Students will give a presentation on their annotated bibliography, and give details on where their soil came from, the lab tests they performed, the results of the tests, their data analysis, and how that analysis compared to their research.

4. Background Scholarly Research and Forming a Hypothesis
As they begin work on their semester long research project, students use skills in research and forming hypotheses developed in the previous units to develop a hypothesis for their agriscience research project. Students will use credible sources to conduct background research on the agricultural issue they are investigating by reading and deconstructing scholarly journal articles to identify the key components of their agriscience research project. They will use this research to generate a testable hypothesis related to the scientific problem they have identified. The hypothesis developed by the student will be constructed with the independent and dependent variables in mind, and ultimately reviewed by the instructor.

5. Test Soil Samples: Chemical Properties
In this lab, students will learn how to test the chemical characteristics of soil, so that as they learn how these characteristics affect a soil's capabilities in later units, they will be able to assess and amend soil to achieve a specific agricultural application. Students will test the soil samples that they collected for the previous lab to determine the chemical properties of the samples. After receiving instruction in lab safety protocols, students will choose appropriate lab testing and safety equipment. After learning what chemical characteristics of soil are commonly tested, what reactions occur in the testing process, and how these tests are performed, students will carry out a battery of industry standard tests to determine chemical characteristics, such as pH, nitrogen levels, potassium levels, phosphorus levels and presence of micronutrients. Students will use their chemical tests to compare what chemical elements they found in the soil with what they hypothesized based on physical characteristics, and what they found in their research. Students will turn in a lab report which details where their soil came from, the
6. Experimental Design and Conducting Experimentation
Students continue work on their semester long agriscience project by constructing an experimental design to test the hypothesis they developed in earlier in this unit. A written experimental design should be constructed consistent with scientific protocols using the systematic approach outlined in the previous units. Students will have their experimental designs reviewed by professional contacts (industry experts, agricultural instructors, local growers/producers, researchers or university representatives). After validating the design using the peer review process, students will move to the experimentation phase of their research. Experimental designs should include replicates, control groups, and determine the variables to be controlled and how. Additionally, a determination should be made as to the type of data that will be collected and in what ways, with the emphasis placed on quantitative data or quantifying data that is qualitative in nature. Students will use their experimental design to test their hypothesis. Raw data should be recorded using a field book or electronic device.

7. Creating Soil Maps
Students will take the soil analysis results from the previous assignments to construct a soil map of their local area. Based on the physical properties, such as soil texture, composition and particle size, the chemical properties, such as pH, nitrogen levels, micronutrient levels, etc., and the specific location from which the soils came, students will categorize the soil samples and the class will construct a comprehensive soil map of the local area. Students will then compare their map to existing soil maps, and analyze the similarities and differences with the previous USDA NRCS maps.

8. Soil Management Project
The soil management project, which students begin in unit 2, will be ongoing throughout the length of the course. Students will develop best practices for agriculture soil use. The teacher will procure samples of soil from a variety of local farms and these samples will be kept as individual soil plots, or can be kept in plastic containers. Students will perform a variety of tests on these soil samples throughout the course in order to determine the characteristics that the individual samples possess, to analyze how these characteristics impact agricultural outcomes, and how amendments can be made to the soil samples in order to achieve a desired outcome. Students will also look at the cost-benefit ratios of the different soil characteristics and amendments on desired outcome. In this unit students will use the skills they learned in the previous labs to test and record the physical and chemical characteristics of the soil, and identify organisms living in the soil. Students will keep ongoing records of the data they collect during each of the units learning labs. This data will include information about the physical and chemical characteristics of their soil sample, results from testing pH, moisture, nutrient levels, water holding capacity, ability to grow target crops, and other factors in subsequent units.

Unit Three:

Water and Soil Management Unit Description
Using knowledge accessed from previous units on the physical and chemical properties of soil, students will analyze how the water cycle impacts soil based on its soil type (sand, silt, clay) soil location (geographic and topographic), vegetative state and natural slope of land. In order to understand how water becomes available for plant growth, students will explain the movement of water through soil with respect to how intermolecular forces impact percolation, capillary action, pore size, cohesion and adhesion. Furthermore, students will address how the concentration of organic matter in soil impacts the movement of water. Students will explain the impact that soil has on the quality of their water and will use water analysis tests to determine the safe and appropriate levels for potable water. Students will also be able to provide solutions to possible contaminations and/or toxic levels of residues/nutrients in the water samples. Students will determine how different irrigation, tillage and planting practices will impact the soil and surrounding area by testing water quality, pH and checking for possible contaminants due to leaching. Students will determine proper and efficient irrigation practices based on the chemistry behind the soil and the way water moves through the soil particles. Students will use GPS
to enable students to more accurately analyze watersheds in their area and rationalize how the drought can impact both water quality and quantity as well as soil composition.

Key Assignments

1. Soil Erosion and Runoff Lab
Using soil plots from the previous labs, students will analyze how soils with vegetation (including organic matter) have a greater water holding capacity and less runoff than soils without vegetation by collecting runoff water from each plot and testing not only the amount of water collected from each plot, but also the percent of solids collected from runoff from each of those plots. Students will complete their lab write up to emphasize their understanding of these key concepts. They should discuss climate, natural hazards, and human activity that can influence the potential for soil erosion and runoff as it impacts soil nutrient availability and crop production. Students’ lab reports should include qualitative and quantitative observations of the composition of runoff from the soil plots. They should analyze this data to draw conclusions about the water holding capacity of the soils and should discuss the intermolecular interactions which allow soil to hold water at the molecular level. This assignment prepares them for decisions that will be made in their capstone project of creating a soil management plan.

2. Water Quality Testing
Students will begin by examining properties of subatomic particles and will create models to illustrate bonding of hydrogen and oxygen, accounting for the polarity of the water molecule. The focus of this unit will continue to develop an understanding of how hydrogen bonds give water a number of properties that allow it to percolate through soil, adhere to pollutants and transpire through plants. https://www.lcmm.org/education/resource/onwaterecology/worksheetwaterqualitytesting.pdf

Above is the link to the lab where students will test water samples from various sources throughout their community to determine the quality of the water. They will test and record data on pH, phosphates, nitrates, dissolved oxygen, and turbidity. Students will then analyze this data to draw conclusions on what can be done to improve the quality of the water. Students should also indicate what steps can be made in agriculture to protect water quality and ensure a safe water source for the community. Students will make a presentation to the class that summarizes their lab procedure, results, and conclusions. To extend learning, the group that has the most thorough presentation can present their findings to the School Board, local Farm Bureau, or any other local organization.

3. Analyzing data, interpreting data and forming conclusions.
Students will determine the best methods for organizing the data from their semester long Agriscience Project by creating data tables. The skills in analyzing and interpreting data used during Key Assignments One and Two in this unit will be applied to the final agriscience research project. Students will make similar determinations on their Agriscience research. Students will use mathematical principles to synthesize their data, calculating a mean. Furthermore, a statistical analysis of the data will help the student determine if the results are due to chance or the independent variable that was tested. Students will choose the best way to present their data using graphs they believe will most effectively demonstrate their findings, and will further summarize what each graph shows. Finally, students will interpret the data and formulate conclusions based on the results. In the written conclusion, students will use their data to either accept or reject the original hypothesis. Conclusions should be directly supported by the data and by previous research. Students will also identify the limitations of their research, improvements that could be made to the experimental design, as well as future studies that may be conducted that relate the study at hand.

4. Tillage Practices and the Impact they have on Runoff, Erosion and Soil Chemistry
Students will explore how chemical bonding, chemical reactions and chemical equilibrium are demonstrated through the relationship between tilled soil and water runoff. Students build upon their knowledge of atomic structure to explore the various forms of chemical bonding that takes place between atoms of different elements as well as the role of valence electrons. To deepen understanding of chemical interactions, students will investigate both the physical and chemical changes that take
place during tillage. Students will utilize locally sourced soil samples at both pretillage and posttillage intervals to compare the effects of tillage on the physical and chemical nature of soil. Ideally, multiple tillage types will be examined including conventional tillage, deep ripping tillage and conservation tillage. Soil pH, effective cation exchange capacity, soil organic carbon, and soil nutrient levels will be measured in addition to an analysis of the physical structure of the soil. Examination of the physical structure can allow students to predict potential erosion and runoff issues. Students will then develop suggestions for best tilling practices by using GPS and topographic maps to determine the natural slope of a given plot of land. They will be asked to design the most efficient "tillage" for this plot to conserve water, prevent soil erosion and cause the least disturbance to soil and water bonding. Students must explain in a written report, including a detailed diagram, why they selected the design they did and how it will be the most beneficial for the environment using conservation techniques for the soil and water as learned in this unit. They will also explain why the alternative designs would be poor choices.

5. Ground Water Contamination and Aquifer Lab
Students will demonstrate how aquifers filter different contaminants by constructing a model of an aquifer and testing how groundwater contamination occurs by using common agricultural contaminants. They will analyze two different types of aquifers and determine which type they would want to place a well into and why. Students will explain how the size of the pores affects the intermolecular interactions between contaminated water and the rock, and how this in turn impacts how well an aquifer can filter out contaminants. Students will examine how the pH of different solutions is directly affected by soil type and aquifer porosity. Students will model this by capturing water that comes through their aquifer model. Students will then determine the concentration of this type of solution through a standardized titration experiment. Once they have used their models as a means of understanding how easily groundwater can be contaminated, they will complete their conclusion and create a multimedia production in the form of a TED talk or Infomercial that educates their community on what agriculturists do and can do to improve water quality in their local area. They will present their productions to a panel of judges and the winners will have their video/multimedia presentation broadcast schoolwide.

6. Irrigation Practices in Agriculture
Students will understand how evaporation (due to temperature) and soil type plays a huge role in the irrigation methods and practices employed in the agriculture industry. Students will be given 3 different soil types. Students will divide these 3 soil types into 9 different samples; 3 of each in a different setting, but they will receive the same amount of water to simulate "irrigation". Students will hypothesize what they think will happen based on soil type and temperature with regard to moisture retention and how this will impact decisions in irrigation selection. In the control group the 3 soil samples will be placed outside. In test group #1, 3 samples will be placed under a heat lamp to simulate an environment with a hotter ambient temperature. In test group #2, 3 samples will be placed in a location cooler than your outside temperature. In all 3 of the test locations students will water all of the samples with equal amounts of water. The following day students will test the moisture content of all soil samples using a Kelway Soil Acidity and Moisture Meter to determine the effects that temperature and soil type had on moisture retention. Using this data, students will then complete the lab write up and finish a conclusion by summing up how this lab impacts irrigation practices.

7. Semester One Capstone Project

Land Planning Model
Land use can be defined as how land is utilized. Examples include "Park", "Intermediate Density Residential", and "Industrial". Decisions about land use and land cover can affect how much our climate will change and what kind of vulnerabilities humans and natural systems will face as a result. Humans affect climate through changes in land use activities taking place on land, like growing food, cutting trees, or building cities and land cover, the physical characteristics of the land surface, including grain crops, trees, or concrete. In addition, climate changes can be caused by emissions of heat-trapping greenhouse gases from energy, industrial, agricultural, and other activities.

Purposes of the term project:
• To explore the selection of land for a specific purpose based on how soil properties influence different land uses.
• To challenge you to demonstrate creativity in a rigorous academic planning exercise.
• To foster your ability to communicate, delegate, lead, and share responsibility in a peer group.
• To provide an opportunity for you to develop public speaking skills through presentation of your projects in front of your class.

Your group is required to “purchase” a complete tract of land of the 20 tracts (from soil surveys) “for sale”. A minimum of 6 acres must be used for agriculture either crops or livestock the rest of the land use is up to your group. You do not have to use all of the tract for your specific land use, but you must include all the entire tract in your inventory of soils, describe why you are not using some land, and how the unused portion of your tract will be managed (i.e., left in forest, pasture, etc.). The purchase and specified land use you choose must be reasonable, in economic terms (i.e., if you buy a 50-acre lot for a 30-acre farm, explain what will be done with the other 20 acres and how your business will be able to afford the extra land). Final management plans will be developed and a written report will be turned in as well as groups will give an oral presentation to the class.

Your method for choosing your site should be logical and clearly articulated in your written and oral reports. The way you choose your site should demonstrate that you based your land planning decisions on all the information available, general and specific. i.e., look at the capability class descriptions, soil series descriptions (including slope) as well as land use classifications. Students will provide a soil inventory which lists all the soil series and then organizes them into a smaller number of groups that have practical significance for your planned use of the land (e.g. you could group 10 soil series by drainage class, three poorly drained, three moderately well drained and four well drained, OR you could group them into those that have severe, moderate and slight limitations for streets and roads). The soil survey may not rate soil for exactly the use you intend. For example, a campground project might include a category of suitability for paths and trails, but probably not a category for suitability of land for homes with basements (except for construction of the office or shower rooms).

Groups will construct soil maps. One of your maps must combine at least two types of soil characteristics (e.g., suitability for habitat elements and slopes) which together present a clearer view of why certain areas may or may not be suitable for various uses that you specify. Your project should also consider texture at the depths appropriate for your land use. In the soil survey, suitability for “topsoil” pertains to the removal of the top layer for use in landscaping elsewhere. Therefore, a soil which is a good source of topsoil might have a restrictive layer beneath, making it poorly suited for farming. You are also expected to use other suitability classes, which are in the soil survey report.

In your land planning project include natural resources access such as access to fresh water, regions of fertile soils, and minerals and fossil fuels. Explain how the availability of these natural resources has influenced the purchase of your land tract and the specified land use you choose. Lastly your group should look at climate, severe weather if applicable, and surface processes such as soil erosion and how that can affect the types of crops and livestock that can be raised. Also does the land use your group chose affect the climate either positively or negatively in any way. For example, cities are warmer than the surrounding countryside because the greater extent of paved areas in cities affects how water and energy are exchanged between the land and the atmosphere. This increases the exposure of urban populations to the effects of extreme heat events.

Unit Four
Plants and Soil Management

Unit Description
Building on knowledge acquired from the previous units on the physical and chemical properties of water and soil, students will begin to determine the effects of plant, soil and water interactions with respect to maintaining or restoring environmental health and structure. Students will model how carbon, water, and nitrogen cycle through the environment, providing a foundation for plants and animals. In addition, the students will learn about nutrients necessary for plant growth and will analyze how pH
affects nutrient availability by changing chemical equilibrium, determine water holding capacity with respect to water availability for plant growth, and identify possible nutrient deficiencies based on plant observations. Students will apply this learning to developing knowledge of soil nutrients and their role in the environment by testing and analyzing soil samples for optimal soil structure, nutrient value and availability and determining possible soil amendments and practices to improve soil quality.

Key Assignments
1. Biogeochemical Cycles
The students will model how water, nitrogen, and carbon cycle through the atmosphere, biosphere, geosphere, and hydrosphere, providing conditions that are necessary for plant growth. Students should investigate an agriculture ecosystem, such as forestry, rangeland, vineyard, annual crops, orchards, etc., to determine what cycle is being affected to the greatest degree. Students must be able to explain the changes that are taking place, the extent humans have an impact on these changes, and what is being done to alleviate potential problems. Students will complete a report that details their agriculture ecosystem and includes a model of the biogeochemical cycles.

2. Plant Requirements from Soil Lab
Students will demonstrate their knowledge of plant growth requirements by creating a controlled experiment to compare the difference between natural and synthetic fertilizers on plant growth. Students will make qualitative and quantitative observations of plant growth and analyze their data in order to draw conclusions regarding the availability of nutrients and the practical application for crop growers. Fertilizers are identified with particular isotopes and as part of the assignment, students will describe nuclear processes and radiation, describing their methods of use in determining fertilizer application in commercial agriculture. Students will then create a written recommendation to a local crop producer regarding which type of fertilizer to use for their farm in order to achieve production goals, highlighting chemistry concepts as a fundamental part of the assignment. Optional extension: Students can analyze the amounts of fertilizers needed in order to reach the desired amount necessary for plant growth and determine whether the addition of fertilizers is cost effective.

3. Soil Management Project
Students will analyze their data collected from unit 2 and determine which crops can be grown based on the current physical and chemical properties of the soil. Students will make recommendations for soil amendments which would increase the nutrient availability of the soil in order to grow a desired crop. Students should consider how pH, and chemical equilibrium will impact the availability of nutrients in the soil in their recommendations. Students will then plant a crop from a given list of cover crops (clover, grasses and legumes) in their soil test plot, allow it to grow and then retest the soil to see if there is a difference in the nutrient concentrations. Students will incorporate their knowledge of biogeochemical cycles into their lab report and will provide an explanation of how nutrients are being transferred from the soil to the plants. The research and experimentation conducted in this project will be added to their Soil Management Capstone Project.

4. Plant and Soil Interactions
Students will compare their nutrient values from the previous project with other groups during a classroom discussion. Students will analyze the data and develop explanations for why there is a difference in the amount of nutrients the plants extracted from the soil. Students will then revisit the Soil Erosion and Runoff Lab from Unit 3 and measure the amount of runoff and soil erosion that occurs on each of the cover crops and compare the data to the data collected from Unit 3. Students will communicate their results in a lab write up.

Unit Five: Animals and Soil Management

Unit Description
Using knowledge from previous units about soil nutrient content, students will identify the key macrominerals and microminerals necessary for normal livestock growth and reproduction. The students will correlate the minerals present in soil with the nutrient content of typical livestock concentrate and roughage feeds. Using local resources, the students will identify mineral deficiencies or toxicities in the soil and relate the deficiencies or toxicities to livestock health. Students will identify crop and range management practices to improve the nutrient content of soil, and will explain what reactions take place at the molecular level to improve nutrient content. Students will identify various methods of using animal waste and the environmental impacts including the use of animal waste as soil amendments and fertilizers. Students will relate the units of concentration used in agriculture practice to units used in chemistry labs, as they identify problems and contaminants associated with livestock waste disposal and related health and safety regulations.

Key Assignments

1. Nutrient Deficiencies in Livestock
Students will examine the correlation between soil and plant nutrient levels with health problems in livestock. Using their knowledge of solutions and concentration, students will identify soil nutrient deficiencies in a geographic area. They will relate the nutrient deficiencies with livestock diseases. For example, if an area has a deficiency in selenium, students will identify problems such as white muscle disease in calves and lambs. Working in groups, the students will analyze a case study on selenium deficiencies in cattle and offer a solution and/or design a system to prevent or correct a mineral deficiency in livestock caused by a soil deficiency. Their analysis will be presented in a written report. An optional extension to this assignment could include testing other nutrient deficiencies, such as copper toxicity, and reporting these findings in a group oral presentation using the case study as an example.

2. Livestock and Water Quality
Students will examine the nutrients present in animal waste and identify possible environmental contaminate in the waste. To examine the effects of water runoff from livestock facilities, students will design a controlled experiment to test water samples from soils exposed to livestock for nitrates, phosphate, heavy metals, pH, dissolved oxygen and other factors. Students will utilize their previously collected soil samples or soil plot and design a model to simulate water runoff from a livestock production facility. Alternately, students will test water runoff samples from existing livestock facilities. At the conclusion of the experiment, students will provide a written recommendation to a county land use commission with a protocol for the optimal use of the animal effluent.

3. Livestock Waste Management
Students will examine the challenges involved with livestock waste management. The problems may include ammonia emissions, phosphorus runoff, nitrate leaching and heavy metal runoff. The instructor will provide a problem and scenario that relates to livestock waste management from an agricultural operation. Students will research the problem and design a system or solution. For example, if a school builds a school farm and raises 10 head of cattle in confinement, how will the waste be handled? The students will consider factors such as environmental concerns, health and safety regulations, amount of waste produced, reactivity of the waste products, uses for the waste, possible cost and labor requirements.

4. Soil Management Project
The soil management project, which students begin in unit 2, will be ongoing throughout the length of the course. In this unit, students will identify the nutrient deficiencies or toxicities present in the soil samples that might influence livestock production. Students will develop a written proposal for the tested soil, including soil amendments, fertilizers and application of animal waste or changes in livestock management practices to address these deficiencies or toxicities. As part of the recommendation process, students will examine the use of animal waste as a method of enhancing soil quality, using background knowledge of nuclear processes to describe variability in nutrient availability in uptake. For
any toxicities present, students will examine the chemical profiles of the elements and recommend strategies for resolving agricultural issues for those elements. Students will use these soil management profiles as a component of their final course project as well as use them for subsequent units.

Unit Six: Soil Sustainability

Unit Description
Based on the accumulation of knowledge, examples and research conclusions from throughout the year, students will develop an understanding of sustainable agriculture by employing a Sustainability evaluation tool, “The 3Pillars of Sustainability, economic, environmental and social impacts” of agriculture. Students will critically evaluate and justify perspectives and determine benefits/concerns based on research and credible information. Students will investigate and evaluate the sustainability of agricultural practices. Students will design and conduct a phytoremediation lab to analyze the efficacy of salt tolerant accumulators to remove saline from the soil. Students will formulate potential solutions using the three pillars of sustainability to soil and land management problems based on agricultural scenarios and debate agricultural issues.

Key Assignments

1. Phytoremediation Lab
Students will learn about the remediation effects of plants in the uptake of soil contaminants, in this example, reducing soil salinity. Students will research saltwater intrusion causes and implications, research phytoremediation, develop a hypothesis, design an experimental procedure, identify safety procedures specific to this experiment, collect and analyze data, and formulate conclusions. Through these steps, students will determine which types of plants are best in phytoremediation of saline ("halophytic" or salt loving plants) and the maximum amount of saline which can be removed from the soil in this way. Possible extension: Compare efficacy of procedure with different soil types. Students will complete a formal lab write-up.

2. Tillage Protocols: Impact on Soil Structure and Soil Sustainability Lab
The purpose of this lab is to determine the effects of tillage practices on soil sustainability and plant growth. Using a prepared miniplot with all three tillage examples (conventional, no till, and low till) soil structure, students will measure and compare soil fertility, water holding capacity, and percolation. Students will analyze and graph their data, explain the implications of the each of these tillage systems with respect to soil and water sustainability and extrapolate those results to the effect of tillage practices effect on plant health. Students will create a poster to illustrate the benefits and drawbacks of each tillage system with respect to Soil Plants Water.

3. Land Use Planning Model
Student groups will make soil/land management decisions based on specific agriculture and land use restrictions on pieces of land such as large urban gardens, range management, forest management, and farmlands. Students will use their knowledge of physical and chemical properties of soil in regards to plants, animals and water to highlight the importance of sustainable agriculture. Getting a land use plan approved and in place with multiple interest groups is complicated and relies on the checks and balances to determine the success of the project. Each student in the group needs to take on a specific role in order to determine their Land Use Plan (such as conservationist, developer, owner, law enforcement, Department of Public Works, Anthropologist, City Planner, etc.). Each role will highlight their concerns with the Land Use Plan in relation to the impact on Earth’s atmosphere, water, land, plant/animal populations, or human population. Groups will then prepare a presentation to present their plan. This presentation could be presented to the class and instructor or even community/local industry members.

4. Agriculture Issue Debate and Policy Proposal
Students will begin by conducting secondary research using industry journals into the global use of methyl bromide as a chemical soil sterilant. Students will examine the pros and cons of the use of
methyl bromide in terms of manipulations to the chemical profile of soil, microbiology, effects on groundwater, effects on the environmental ecosystem, runoff challenges and effects on agricultural productivity. Research should highlight chemical reactions as the primary point of focus. Students will then be assigned a perspective related to the methyl bromide investigation (runoff or microbiology, for example) to represent in the debate, using their list of chemistry and agriculturally focused pros and cons to inform their contributions. Students will end the debate with a comprehensive analysis of the issue of methyl bromide use in agriculture from multiple angles in order to develop a model policy for their county regarding the possible use of methyl bromide in agricultural applications.

5. Soil Management Project

The soil management project, which students began in semester 1, has continued throughout the length of the course. At the end of Unit 6, students will incorporate knowledge gained from all previous labs, and the conclusions drawn from the Phytoremediation and Tillage Protocols: Impact on Soil Structure and Soil Sustainability Labs to test, analyze, treat and/or modify soil structure and fertility for specific usage/ in order to achieve desired outcomes. This work will be used as evidence in the Soil Management Capstone Project and will also aid in drawing the final conclusions of the yearlong research and experimentation.

6. Effects of Climate Change

Students will research scientific journal articles, laws, regulations, case studies or other scientific evidence that illustrates the Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. The students will be completing a literature review report and make a presentation to the class. Valuable website for students to use is http://nca2014.globalchange.gov/report/sectors

Capstone Project and Portfolio

1. Soil Management Capstone Project

As the final course capstone project, students will be given a scenario and soil sample designed around their local agriculture industry. The given scenario will provide students with specific information about the topography and climate/rainfall data of the location where the soil sample was collected. Students will use knowledge and skills learned in previous units to physically and chemically analyze the soil sample. Their soil analysis should include the composition and nutrient, pH, and salinity levels. The data collected from their soil sample analysis and the provided land information should be included in the soil management plan that the students create. The student’s Soil Management Plan will recommend soil amendments, proper tillage practices, optimal irrigation methods, crop recommendations, and animal use suggestions. They should identify and evaluate a technological solution that reduces human impact on the environment including, but not limited to: water pollution, air quality, run-off, nutrient depletion, soil amendments, erosion, etc. Their recommendations and suggestions should be justified in terms of the 3 pillars of sustainable agriculture.

2. Course Portfolio

The course portfolio will provide evidence of real world agriculture application of scientific research done throughout this course. The portfolios will highlight student work from throughout the course to show a progression of learning, experimentation, and application of course content. Items that will be included in the portfolio are student lab reports, the Agriscience Research paper, and their Soil Management Plan.

E. COURSE OBJECTIVES FOR (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)

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13 | Page
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<tr>
<th>Unit</th>
<th>NGSS Standard</th>
<th>Science and Engineering Practices</th>
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| 1. Agriculture and Agricultural Research Skills | **C1.0 Evaluate the role of agriculture in the California economy.**<br>**C1.2 Describe how California agriculture affects the quality of life.**<br>**C1.4 Research the economic impact of leading California agricultural commodities.**<br>**C1.5 Assess the economic impact of major natural resources in California.**<br>**C3.1 Describe how technology affects the logistics of moving an agricultural commodity from producer to consumer.**<br>**C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, and communication.**<br>**C3.5 Integrate the use of technology when collecting and analyzing data.**<br>**C13.1 State the steps of the scientific method.**<br>**C13.2 Analyze an agricultural problem and devise a solution based on the scientific method.**<br> | **HS-ETS1-1**: Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.**<br>**HS-ETS1-2**: Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.**<br>**HS-ETS1-3**: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.**<br> | **Planning and Carrying Out Investigations**: Planning and carrying out in 9-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.**<br>**Constructing Explanations and Designing Solutions**: Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly. (HS-LS1-3)**<br> |}

<p>| 2. The Nature of Soil | <strong>C10.1 Recognize the major soil components and types.</strong>&lt;br&gt;<strong>C10.2 Summarize how soil texture, structure, pH, and</strong> | <strong>HS-PS1-1</strong>: Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.**&lt;br&gt; | <strong>Using Mathematics and Computational Thinking</strong>: Mathematical and computational thinking in 9-12 builds on K-8 experiences and progresses to |</p>
<table>
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<tr>
<th>3. Soil and Water</th>
<th>E6.1 Summarize the different types of aquatic resources.</th>
<th>HS-PS1-1: Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</th>
<th>Asking Questions and Defining Problems: Asking questions and defining problems in 9-12 builds on K-8 experiences and progresses to explanations and designs.</th>
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<td>salinity affect plant growth.</td>
<td>C10.3 Assess water delivery and irrigation system options.</td>
<td>HS-PS1-3: Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</td>
<td>using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions. Use mathematical and/or computational representations of phenomena or design solutions to support explanations. (HS-LS2-1) Use mathematical representations of phenomena or design solutions to support and revise explanations. (HS-LS2-2) § Create or revise a simulation of a phenomenon, designed device, process, or system. (HS-LS4-6)</td>
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<td>C10.4 Differentiate among the types, uses, and applications of amendments and fertilizers.</td>
<td>E3.1 Demonstrate techniques used to classify soils.</td>
<td>HS-ESS2-2: Analyze geoscience data to make the claim that one change to Earth’s surface can create feedbacks that cause changes to other Earth systems.</td>
<td>Constructing Explanations and Designing Solutions: Constructing explanations and designing solutions in 9-12 builds on K-8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories.</td>
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<td>E3.2 Explain the reasons for, and importance of, soil conservation.</td>
<td>E3.3 Analyze soils found in the different natural resource management areas.</td>
<td>HS-ESS2-1: Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.</td>
<td>Obtaining, Evaluating, and Communicating Information: Obtaining, evaluating, and communicating information in 9-12 builds on K-8 and progresses to evaluating the validity and reliability of the claims, methods, and designs.</td>
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<td>F5.3 Prepare and amend soils, implement soil conservation methods, and compare results.</td>
<td>HS-ESS2-3. Develop a model based on evidence of Earth’s interior to describe the cycling of matter by thermal convection.</td>
<td>HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate.</td>
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<td>E6.4 Analyze the relationship between water quality and aquatic species habitat.</td>
<td>the patterns of electrons in the outermost energy level of atoms. <strong>HS-PS1-3</strong>: Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</td>
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<td>F2.4 Experiment with the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.</td>
<td><strong>HS-PS1-3</strong>: Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. <strong>HS-PS1-2</strong>: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</td>
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<td>F5.1 Explain how basic soil science and water principles affect plant growth.</td>
<td><strong>HS-PS1-2</strong>: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. <strong>HS-PS1-4</strong>: Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.</td>
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<td>F5.2 Illustrate basic irrigation design and installation methods.</td>
<td><strong>HS-PS1-6</strong>: Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.*</td>
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<td>F5.3 Prepare and amend soils, implement soil conservation methods, and compare results.</td>
<td><strong>HS-PS1-6</strong>: Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.* <strong>HS-PS1-7</strong>: Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.</td>
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<td>F5.4 Research major issues related to water sources and water quality.</td>
<td>Developing and Using Models: Modeling in 9–12 builds on K–8 experiences and progresses to using, synthesizing, and developing models to predict and show relationships among variables between systems and their components in the natural and designed worlds.</td>
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<td>F5.5 Explain the components of soilless media and test the use of those media in various types of containers.</td>
<td>Analyzing and Interpreting Data: Analyzing data in 9–12 builds on K–8 experiences and progresses to introducing more detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data.</td>
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<td>G6.4 Research how soil biology affects the environment and natural resources.</td>
<td>Engaging in Argument from Evidence: Engaging in argument from evidence in 9–12 builds on K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or</td>
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<td>G8.2 Research and describe the local, state, and federal agencies that regulate water quality and availability in California.</td>
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* This standard is new in grades 9–12.
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<th>G8.3 Define the definition of a watershed and explain how it is used to measure water quality.</th>
<th><strong>HS-PS1-7</strong>: Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.</th>
<th><strong>Planning and Carrying Out Investigations</strong>: Planning and carrying out investigations in 9-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.</th>
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<td>G8.4 Explain effective water management and conservation practices, including the use of tailwater ponds.</td>
<td><strong>HS-ESS3-1</strong>: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</td>
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<td>G8.5 Use water-testing standards and perform bioassay and macro-invertebrate protocols to assess water quality.</td>
<td><strong>HS-ESS3-2</strong>: Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.*</td>
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<td><strong>Using Mathematics and Computational Thinking</strong>: Mathematical and computational thinking in 9-12 builds on K-8 experiences and progresses to using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and...</td>
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<td>G10.1 Practice local cultural techniques, including monitoring, pruning, fertilization, planting, irrigation, harvest treatments, processing, and packaging practices for various tree, grain, hay, and vegetable classes.</td>
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<td>G11.1 Research how changing technology, such as micro-propagation, biological pest controls, plant production, yields, and management.</td>
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<td>G6.1 Understand soil types, soil texture, structure, and bulk density and explain the U.S. Department of Agriculture (USDA) soil-quality rating procedure.</td>
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<td>G6.2 Analyze soil properties necessary for successful plant production, including pH, electrical conductivity (EC), and essential nutrients.</td>
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<td>G6.3 Explain soil biology and diagram the cycles in nature as related to the soil food chain.</td>
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<td>HS-PS1-5: Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</td>
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<td>HS-ESS2-6: Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.</td>
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**Computational Tools for Statistical Analysis**

- Analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions. § Use mathematical and/or computational representations of phenomena or design solutions to support explanations. (HS-LS2-1) § Use mathematical representations of phenomena or design solutions to support and revise explanations. (HS-LS2-2) § Create or revise a simulation of a phenomenon, designed device, process, or system. (HS-LS4-6)

**Constructing Explanations and Designing Solutions:**

- Constructing explanations and designing solutions in 9–12 builds on K–8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories.

**Engaging in Argument from Evidence:**

- Engaging in argument from evidence in 9–12 builds from K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science.
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<tr>
<th>5. Soil and Animals</th>
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<tr>
<td><strong>D7.1 Evaluate a rangeland and identify methods of rangeland improvement used in an effective animal production program.</strong></td>
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<td><strong>HS-PS1-3:</strong> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. <strong>HS-PS1-4:</strong> Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.</td>
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<td><strong>D7.2 Summarize how rangeland management practices affect pasture production, erosion control, and the general balance of the ecosystem.</strong></td>
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<td><strong>HS-PS1-6:</strong> Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.*</td>
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<td><strong>D7.4 Evaluate a plan to balance rangeland use for animal grazing and for wildlife habitat.</strong></td>
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<td><strong>HS-ESS3-3:</strong> Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
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<td><strong>D8.1 Assess treatment and disposal management systems for animal waste.</strong></td>
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<td><strong>D8.2 Compare various methods for using animal waste and the environmental impacts associated with each method.</strong></td>
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<td><strong>D8.3 Research the health and safety regulations that are an integral part of properly managed animal waste systems.</strong></td>
</tr>
<tr>
<td><strong>HS-LS2-4:</strong> Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</td>
</tr>
<tr>
<td><strong>D10.1 Formulate and implement optimum requirements for diet, genetics, habitat, and behavior in the production of large and small animals.</strong></td>
</tr>
<tr>
<td><strong>D2.1 Assess the flow of nutrients from the soil,</strong></td>
</tr>
</tbody>
</table>
| **Planning and Carrying Out Investigations:** Planning and carrying out investigations in K-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.
### 6. Soil Sustainability & Agricultural Technology

<p>| | | |</p>
<table>
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<tbody>
<tr>
<td><strong>G9.3 Differentiate among the components of “whole-system management.”</strong></td>
<td><strong>HS-LS1-6.</strong> Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</td>
<td><strong>Using Mathematics and Computational Thinking:</strong> Mathematical and computational thinking in 9-12 builds on K-8 experiences and progresses to using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions. § Use mathematical and/or computational representations of phenomena or design solutions to support explanations. (HS-LS2-1) § Use mathematical representations of phenomena or design solutions to support and revise explanations. (HS-LS2-2) § Create or revise a simulation of a phenomenon, designed device, process, or system. (HS-LS4-6)</td>
</tr>
<tr>
<td><strong>C3.5 Integrate the use of technology when collecting and analyzing data.</strong></td>
<td><strong>HS-LS1-6.</strong> Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</td>
<td></td>
</tr>
<tr>
<td><strong>C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, and communication.</strong></td>
<td><strong>HS-LS4-6.</strong> Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</td>
<td></td>
</tr>
<tr>
<td><strong>C2.1 Identify important agricultural environmental impacts on soil, water, and air.</strong></td>
<td><strong>HS-LS2-7.</strong> Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*</td>
<td></td>
</tr>
<tr>
<td><strong>C2.2 Explain current environmental challenges related to agriculture.</strong></td>
<td><strong>HS-LS2-7.</strong> Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*</td>
<td></td>
</tr>
<tr>
<td><strong>C2.3 Summarize how natural resources are used in agriculture.</strong></td>
<td><strong>HS-LS2-2.</strong> Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</td>
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<tr>
<td><strong>C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.</strong></td>
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<tr>
<td>E3.4 Develop and implement a soil management plan for a natural resource management area.</td>
<td>HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</td>
<td></td>
</tr>
<tr>
<td>G9.1 Identify and classify the plants and animals in an agricultural system (as producers, consumers, or decomposers).</td>
<td>HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</td>
<td></td>
</tr>
<tr>
<td>E3.5 Understand how to analyze existing soil surveys to develop effective management plans.</td>
<td>HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</td>
<td></td>
</tr>
<tr>
<td>G9.2 Compare and contrast the elements of conventional, sustainable, and organic production systems.</td>
<td>HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</td>
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</tr>
</tbody>
</table>

**Engaging in Argument from Evidence:** Engaging in argument from evidence in 9–12 builds from K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science.

**Constructing Explanations and Designing Solutions:**

Constructing explanations and designing solutions in 9–12 builds on K–8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories.
F. **STUDENT EVALUATION STANDARDS** (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Labs</td>
<td>30%</td>
</tr>
<tr>
<td>Assessments</td>
<td>30%</td>
</tr>
<tr>
<td>FFA and SAE Participation</td>
<td>10%</td>
</tr>
</tbody>
</table>

G. **SUGGESTED INSTRUCTIONAL ACTIVITIES** (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Prepared by Elizabeth Bledsoe, Carolee Trimble
A. **COURSE INFORMATION**

Grade Level: 9
Length of Course: One Year
Maximum Credit: 10
Type: SCI
Recommendation for Enrollment: Highly recommended for Freshman level students

B. **COURSE DESCRIPTION** *(Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific graduation requirement.)*

Agriculture Earth Resources is a course that meets the graduation requirement for Earth Science and is the first phase for students interested in the agriculture education program. The purpose of this course is to introduce students to the world of agriculture through the exploration of Earth Science. Students enrolled in this course will gain a deep understanding of scientific investigation and experimentation while exploring such topics as California Agriculture, Plate Tectonics, California Geology, Bio-geochemical Cycles, Earth's Atmosphere, Energy, Heat, Climate, and Astronomy. This course will also focus on leadership development, business management through the principles of accounting and computer applications, and an overview of the seven industry sectors of agriculture. Students enrolled in this course will be encouraged to participate in leadership training activities, public speaking events and become active members in the California Association Future Farmers of America (FFA). Participation in the FFA is part of their overall semester grade.

C. **INSTRUCTIONAL MATERIALS** *(List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)*


Earth Science; Geology, the Environment, and the Universe, Glencoe/McGraw Hill, 2002


**Supplemental Materials**
Additional materials that are not limited to, but may include:
- Computer hardware and software
- California State Agriculture Core Curriculum
- National FFA Official Manual
- FFA Student Handbooks
- California Agriculture Teacher's Association (CATA) Curricular Code
- Internet access for scientific journals and research information and interactive agriculture sites.
- Prentice Hall Earth Science Website
- Calculators
- School Farm Laboratories
- Audio / visual materials (Materials used will be those that accompany the text as well as publications by NOVA, Discovery, National Geographic, PBS, etc.)

**D. COURSE OUTLINE** *(List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)*

<table>
<thead>
<tr>
<th>Unit</th>
<th>Topic</th>
<th>Time Frame</th>
<th>Standards Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>California Agriculture</td>
<td>2 weeks</td>
<td>APS C1.1-6</td>
</tr>
<tr>
<td>II.</td>
<td>Scientific Process</td>
<td>2 weeks</td>
<td>APS C13.1-3, APS 1.2a-m, C1.1-3, APS 1.2a-m</td>
</tr>
<tr>
<td>III.</td>
<td>Plate Tectonics: ocean floor features, plate boundaries, rocks</td>
<td>5 weeks</td>
<td>APS 4.4, ES 3.3abc</td>
</tr>
<tr>
<td>IV.</td>
<td>FFA</td>
<td>3 week</td>
<td>AFS 1.1(10.0), AFS 2.1-4, AFS 7.0-6, AFS 9.0-6, AFS 10.1</td>
</tr>
<tr>
<td>V.</td>
<td>Plate Tectonics: earthquakes, volcanoes</td>
<td>2 weeks</td>
<td>AFS 1.1(10.0), APS C3.1-4, APS 3.1-4, APS 10.3</td>
</tr>
<tr>
<td>VI.</td>
<td>Record Keeping</td>
<td>2 weeks</td>
<td>AFS 1.1(10.0), APS C3.1-4, APS 3.1-4, APS 10.3</td>
</tr>
<tr>
<td>VII.</td>
<td>California Geology</td>
<td>2 week</td>
<td>APS C10.1, ES 3.5ae</td>
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<tr>
<td>VIII.</td>
<td>Agriculture Resources</td>
<td>1 week</td>
<td>APS C2.1-5, ES 3.5c</td>
</tr>
<tr>
<td>IX.</td>
<td>Bio-Geochmical Cycles</td>
<td>2 week</td>
<td>APS C11.5-6, ES 7.1abc</td>
</tr>
<tr>
<td>X.</td>
<td>Earth's Atmosphere</td>
<td>2 weeks</td>
<td>APS C10.3, ES 3.5abc</td>
</tr>
<tr>
<td>XI.</td>
<td>Energy and Agriculture</td>
<td>1 week</td>
<td>APS E6.1&amp;4, ES 3.4babc</td>
</tr>
<tr>
<td>XII.</td>
<td>Heating the Earth's Surface</td>
<td>2 weeks</td>
<td>ES 3.5 &amp; 6</td>
</tr>
<tr>
<td>XIII.</td>
<td>Earth's Climate</td>
<td>1 week</td>
<td>APS E2.1-6, APS F2.4, ES 3.5a, ES 3.5b, ES 3.5c, ES 3.5d, ES 3.5e</td>
</tr>
<tr>
<td>XIV.</td>
<td>Astronomy</td>
<td>2 weeks</td>
<td>ES 1.1a-f, ES 2.1a-d</td>
</tr>
<tr>
<td>XV.</td>
<td>Soils: formation, texture, structure, erosion, and conservation of</td>
<td>4 weeks</td>
<td>APS E3.2&amp;4</td>
</tr>
<tr>
<td>XVII</td>
<td>Supervised Agriculture Experience</td>
<td>2 weeks</td>
<td>APS C4.1-5, C6.1-2, C8.1-3, C9.1-5, C11.1, APS 10.2</td>
</tr>
<tr>
<td>XVIII</td>
<td>Agricultural Careers and</td>
<td>2 weeks</td>
<td>APS 3.1-6, AF8.5.0-3,</td>
</tr>
</tbody>
</table>
E. **COURSE OBJECTIVES FOR** (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standard(s) after each objective. Minimum length: one page)

- Specific applications of Algebra I standards (grades eight through twelve): AFS 1.1
  
  10.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

- Specific applications of Investigation and Experimentation standards (grades nine through twelve): AFS 1.2

  1.a Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

  1.c Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

  1.d Formulate explanations by using logic and evidence.

  1.f Distinguish between hypothesis and theory as scientific terms.

  1.j Recognize the issues of statistical variability and the need for controlled tests.

  1.l Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

  1.m Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

- Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. AFS 2.0-2.4

- Students understand how to make effective decisions, use career information, and manage personal career plans: AFS 3.0

  3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.

  3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

  3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.

  3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

  3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

  3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

- Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques: AFS 5.0

  5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.

- Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings: AFS 7.0

  7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
  7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
  7.3 Understand the need to adapt to varied roles and responsibilities.
  7.4 Understand that individual actions can affect the larger community.
  7.5 Understand the importance of time management to fulfill responsibilities.
  7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

- Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution: AFS 9.0

  9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
  9.2 Understand the ways in which pre-professional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
  9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
  9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
  9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
  9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

- Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector: AFS 10.0

  10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
  10.2 Manage and actively engage in a career-related, supervised agricultural experience.
  10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
  10.4 Maintain and troubleshoot equipment used in the agricultural industry.

- Students understand the role of agriculture in the California economy: APS C1.0

  C1.1 Understand the history of the agricultural industry in California.
  C1.2 Understand how California agriculture affects the quality of life.
  C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
  C1.4 Understand the economic impact of leading California agricultural commodities.
  C1.5 Understand the economic impact of major natural resources in California.
• Students understand the inter-relationship between agriculture and the environment: APS C2.0
  C2.1 Understand important agricultural environmental impacts on soil, water, and air.
  C2.2 Understand current agricultural environmental challenges.
  C2.3 Understand how natural resources are used in agriculture.
  C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.
  C2.5 Understand how new energy sources are developed from agricultural products (e.g., gas-cogeneration and ethanol).

• Students understand the importance of animals, the domestication of animals, and the role of animals in modern society: APS C4.0
  C4.1 Understand the evolution and roles of domesticated animals in society.
  C4.2 Know the differences between domestication and natural selection.
  C4.3 Understand the modern-day uses of animals and animal by-products.
  C4.4 Understand various points of view regarding the use of animals.
  C4.5 Understand unique and alternative uses of animals (e.g., Handi-Riders and companion animals).

• Students understand animal anatomy and systems: APS C6.0
  C6.1 Know the names and locations of the external anatomy of animals.
  C6.2 Know the anatomy and major functions of vertebrate systems, including digestive, reproductive, circulatory, nervous, muscular, skeletal, respiratory, and endocrine systems.

• Students understand fundamental animal nutrition and feeding: APS C8.0
  C8.1 Know types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water).
  C8.2 Analyze suitable common feed ingredients, including forages, roughages, concentrates, and supplements, for ruminant, monogastric, equine, and avian digestive systems.
  C8.3 Understand basic animal feeding guidelines and evaluate sample feeding programs for various species, including space requirements and economic considerations.

• Students understand basic animal health: APS C9.0
  C9.1 Assess the appearance and behavior of a normal, healthy animal.
  C9.2 Understand the ways in which housing, sanitation, and nutrition influence animal health and behavior.
  C9.3 Understand the causes and control of common animal diseases.
  C9.4 Understand how to control parasites and why.
  C9.5 Understand the legal requirements for the procurement, storage, methods of application, and withdrawal times of animal medications and know proper equipment handling and disposal techniques.

• Students understand soil science principles: APS C10.0
  C10.1 Recognize the major soil components and types.
  C10.3 Understand water delivery and irrigation system options.

• Students understand plant growth and development: APS C11.0
  C11.1 Understand the anatomy and functions of plant systems and structures.
C11.5 Understand the photosynthesis process and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.
C11.6 Understand the respiration process in the breakdown of food and organic matter.

- Students understand the scientific method: APS C13.0
  C13.1 Understand the steps of the scientific method.
  C13.2 Analyze an animal or plant problem and devise a solution based on the scientific method.
  C13.3 Use the scientific method to conduct agricultural experiments.

- Students understand air and water use, management practices, and conservation strategies: APS E2.0
  E2.1 Understand the government’s role in regulating air, soil, and water use management practices and conservation strategies.
  E2.2 Understand air and water conservation issues.
  E2.3 Understand appropriate water conservation measures.
  E2.4 Understand the component of a plan that monitors water quality.
  E2.5 Understand the component of a plan that monitors air quality.
  E2.6 Analyze the way in which water management affects the environment and human needs.

- Students understand soil composition and soil management: APS E3.0
  E3.2 Understand the reasons for and importance of soil conservation.
  E3.4 Understand how to develop and implement a soil management plan for a natural resource management area.

- Students understand aquatic resource use and management: APS E6.0
  E6.1 Understand the different types of aquatic resources.
  E6.4 Analyze the relationship between water quality and aquatic species habitat.

- Students understand plant physiology and growth principles: APS F2.0
  F2.4 Understand the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.

- The evidence from Earth and moon rocks indicates that the solar system was formed from a nebular cloud of dust and gas approximately 4.6 billion years ago. ES 1.b
- The evidence from geological studies of Earth and other planets suggest that the early Earth was very different from Earth today. ES 1.c
- The evidence indicating that the planets are much closer to Earth than the stars are. ES 1.d
- The Sun is a typical star and is powered by nuclear reactions, primarily the fusion of hydrogen to form helium. ES 1.e
- The evidence for the dramatic effects that asteroid impacts have had in shaping the surface of planets and their moons and in mass extinctions of life on Earth. ES 1.f
- The solar system is located in an outer edge of the disc-shaped Milky Way galaxy, which spans 100,000 light years. ES 2.a
- Galaxies are made of billions of stars and comprise most of the visible mass of the universe. ES 2.b
- The evidence indicating that all elements with an atomic number greater than that of lithium have been formed by nuclear fusion in stars. ES 2.c
- That stars differ in their life cycles and that visual, radio, and X-ray telescopes may be used to collect data that reveal those differences. ES 2.d
- Features of the ocean floor (magnetic patterns, age, and sea-floor topography) provide evidence of plate tectonics. ES 3.a
- The principal structures that form at the three different kinds of plate boundaries. ES 3.b
- How to explain the properties of rocks based on the physical and chemical conditions in which they formed, including plate tectonic processes. ES 3.c
- Why and how earthquakes occur and the scales used to measure their intensity and magnitude. ES 3.d
- There are two kinds of volcanoes: one kind with violent eruptions producing steep slopes and the other kind with voluminous lava flows producing gentle slopes. ES 3.e
- The relative amount of incoming solar energy compared with Earth's internal energy and the energy used by society. ES 4.a
- The fate of incoming solar radiation in terms of reflection, absorption, and photosynthesis. ES 4.b
- The different atmospheric gases that absorb the Earth's thermal radiation and the mechanism and significance of the greenhouse effect. ES 4.c
- How differential heating of Earth results in circulation patterns in the atmosphere and oceans that globally distribute the heat. ES 5.a
- The relationship between the rotation of Earth and the circular motions of ocean currents and air in pressure centers. ES 5.b
- The origin and effects of temperature inversions. ES 5.c
- Properties of ocean water, such as temperature and salinity, can be used to explain the layered structure of the oceans, the generation of horizontal and vertical ocean currents, and the geographic distribution of marine organisms. ES 5.d
- Rain forests and deserts on Earth are distributed in bands at specific latitudes. ES 5.e
- Weather (in the short run) and climate (in the long run) involve the transfer of energy into and out of the atmosphere. ES 6.a
- The effects on climate of latitude, elevation, topography, and proximity to large bodies of water and cold or warm ocean currents. ES 6.b
- How Earth's climate has changed over time, corresponding to changes in Earth's geography, atmospheric composition, and other factors, such as solar radiation and plate movement. ES 6.c
- The carbon cycle of photosynthesis and respiration and the nitrogen cycle. ES 7.a
- The global carbon cycle: the different physical and chemical forms of carbon in the atmosphere, oceans, biomass, fossil fuels, and the movement of carbon among these reservoirs. ES 7.b
- The movement of matter among reservoirs is driven by Earth's internal and external sources of energy. ES 7.c
- The thermal structure and chemical composition of the atmosphere. ES 8.a
- How the composition of Earth's atmosphere has evolved over geologic time and know the effect of outgassing, the variations of carbon dioxide concentration, and the origin of atmospheric oxygen. ES 8.b
- The location of the ozone layer in the upper atmosphere, its role in absorbing ultraviolet radiation, and the way in which this layer varies both naturally and in response to human activities. ES 8.c
- The resources of major economic importance in California and their relation to California's geology. ES 9.a
• The principal natural hazards in different California regions and the geologic basis of those hazards. ES 9.b
• The importance of water to society, the origins of California's fresh water, and the relationship between supply and need. ES 9.c
• Select and use appropriate tools and technology (such as microscopes, computer-linked probes, computer software, and scientific calculators) in a safe manner. I & E 1a
• Select and use appropriate tools and technology (such as microscopes, computer-linked probes, computer software, and scientific calculators) in a safe manner. I & E 1a
• Develop hypotheses, perform tests, collect data, display data, analyze relationships, and draw conclusions in order to solve problems. I & E 1a, d, l, j
• Analyze situations and solve problems that require combining concepts from more than one area of science. I & E 1l
• How the differences and similarities among the sun, the terrestrial planets, and the gas planets may have been established during the formation of the solar system. ES 1.a

F. STUDENT EVALUATION STANDARDS (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

Assignments and labs 60%
Assessments 30%
FFA Participation 10%

G. SUGGESTED INSTRUCTIONAL ACTIVITIES (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Prepared by Craig Davidson, Ralph Mendes, Travis Wyrick, and Ric Lemucchi
Agriculture Earth Resources - General

A. COURSE INFORMATION

Grade Level: 9-12
Length of Course: 2 semesters
Maximum Credit: 10
Type: SC2/10
Recommendation for Enrollment: Recommended for Freshman level students, but can be applied to all levels

B. COURSE DESCRIPTION. (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific graduation requirement.)

Agriculture Earth Resources is a course that meets the graduation requirement for Earth Science and is a continuing course in the agriculture education framework. The purpose of this course is to introduce students to the world of agriculture through the exploration of Earth Science. Students enrolled in this course will gain an understanding of scientific investigation and experimentation while exploring such topics as California Agriculture, Plate Tectonics, California Geology, Bio-geochemical Cycles, Earth's Atmosphere, Energy, Heat, Climate, and Astronomy. This course will also focus on an overview of the seven industry sectors of agriculture. Students enrolled in this course will be encouraged to participate in leadership training activities, public speaking events and become active members in the California Association Future Farmers of America (FFA). Participation in the FFA is part of their overall semester grade.

C. INSTRUCTIONAL MATERIALS (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)

Miller and Levine, EARTH SCIENCE, Prentice Hall, copyright (2007)

Earth Science; Geology, the Environment, and the Universe, Glencoe/McGraw Hill, 2002


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- California State Agriculture Core Curriculum
- National FFA Official Manual
- FFA Student Handbooks
- California Agriculture Teacher's Association (CATA) Curricular Code
- Internet access for scientific journals and research information and interactive agriculture sites.
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D. **COURSE OUTLINE.** (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

AFS = Agriculture Foundation Standards
APS = Agriculture Pathway Standards
[California Adopted Earth Science Standards](#)

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<thead>
<tr>
<th>Unit</th>
<th>Topic</th>
<th>Time Frame</th>
<th>Standards Addressed</th>
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<tr>
<td>I.</td>
<td>California Agriculture</td>
<td>2 week</td>
<td>APS C1.1-6</td>
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<td>II.</td>
<td>Scientific Process</td>
<td>2 weeks</td>
<td>APS C13.1-3, APS 1.2a-m, ES3.4.a-b</td>
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<td>III.</td>
<td>Plate Tectonics: ocean floor features, plate boundaries, rocks</td>
<td>5 weeks</td>
<td>AFS 4.4, ES.3.a-c</td>
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<td>IV.</td>
<td>FFA</td>
<td>3 week</td>
<td>AFS 1.1(10.0), AFS 2.1-4, AFS 7.0-6, AFS 9.0-6, AFS 10.1</td>
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<td>V.</td>
<td>Plate Tectonics: earthquakes, volcanoes</td>
<td>2 weeks</td>
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<td>VI.</td>
<td>Record Keeping</td>
<td>2 weeks</td>
<td>AFS 1.1(10.0), APS C3.1-4, APS 10.3</td>
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<td>VII.</td>
<td>California Geology</td>
<td>2 week</td>
<td>APS C10.1, ES 9.1.a-c</td>
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<td>VIII.</td>
<td>Agriculture Resources</td>
<td>1 week</td>
<td>APS C2.1-5, ES 9.1.c,d</td>
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<td>IX.</td>
<td>Bio-Geochmical Cycles</td>
<td>2 week</td>
<td>APS C11.5-6, ES 7.1.a-c</td>
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<td>X.</td>
<td>Earth’s Atmosphere</td>
<td>2 weeks</td>
<td>APS C10.3, ES 9.1.a-c</td>
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<td>XI.</td>
<td>Energy and Agriculture</td>
<td>1 week</td>
<td>APS E6.1&amp;4, ES 4.1.b-c</td>
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<td>XII.</td>
<td>Heating the Earth's Surface</td>
<td>2 weeks</td>
<td>ES 5.2.a-c, ES 7.1.a-b,c</td>
</tr>
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<td>XIII.</td>
<td>Earth's Climate</td>
<td>1 week</td>
<td>APS E2.1-6, APS F2.4, ES 6.0.a-5</td>
</tr>
<tr>
<td>XIV.</td>
<td>Astronomy</td>
<td>2 weeks</td>
<td>ES 1.1.a-f &amp; 2.a-c</td>
</tr>
<tr>
<td>XV.</td>
<td>Soils: formation, texture, structure, erosion, and conservation of</td>
<td>4 weeks</td>
<td>APS E3.2&amp;4</td>
</tr>
<tr>
<td>XVII</td>
<td>Supervised Agriculture Experience</td>
<td>2 weeks</td>
<td>APS C4.1-5, C6.1-2, C8.1-3, C9.1-5, C11.1, APS 10.2</td>
</tr>
<tr>
<td>XVIII</td>
<td>Agricultural Careers and Development Events</td>
<td>2 weeks</td>
<td>AFS 3.1-6, AFS 5.0-3, AFS 11.0</td>
</tr>
</tbody>
</table>
E. **COURSE OBJECTIVES FOR** (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)

- Specific applications of Algebra I standards (grades eight through twelve): AFS 1.1
  
  10.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

- Specific applications of Investigation and Experimentation standards (grades nine through twelve): AFS 1.2
  
  1.a Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
  
  1.c Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
  
  1.d Formulate explanations by using logic and evidence.
  
  1.f Distinguish between hypothesis and theory as scientific terms.
  
  1.j Recognize the issues of statistical variability and the need for controlled tests.
  
  1.l Analyze situations and solve problems that require combining and applying concepts from more than one area of science.
  
  1.m Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

- Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. AFS 2.0-2.4

- Students understand how to make effective decisions, use career information, and manage personal career plans: AFS 3.0
  
  3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
  
  3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.
  
  3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
  
  3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
  
  3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
  
  3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

- Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques: AFS 5.0
  
  5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
  
  5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
5.3 Use critical thinking skills to make informed decisions and solve problems.

- Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings: AFS 7.0
  
  7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
  7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
  7.3 Understand the need to adapt to varied roles and responsibilities.
  7.4 Understand that individual actions can affect the larger community.
  7.5 Understand the importance of time management to fulfill responsibilities.
  7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

- Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution: AFS 9.0
  
  9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
  9.2 Understand the ways in which pre-professional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
  9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.
  9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
  9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
  9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

- Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector: AFS 10.0
  
  10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
  10.2 Manage and actively engage in a career-related, supervised agricultural experience.
  10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
  10.4 Maintain and troubleshoot equipment used in the agricultural industry.

- Students understand the role of agriculture in the California economy: APS C1.0
  
  C1.1 Understand the history of the agricultural industry in California.
  C1.2 Understand how California agriculture affects the quality of life.
  C1.3 Understand the interrelationship of California agriculture and society at the local, state, national, and international levels.
  C1.4 Understand the economic impact of leading California agricultural commodities.
  C1.5 Understand the economic impact of major natural resources in California.
  C1.6 Know the economic importance of major agricultural exports and imports.
• Students understand the inter-relationship between agriculture and the environment: APS C2.0

  C2.1 Understand important agricultural environmental impacts on soil, water, and air.
  C2.2 Understand current agricultural environmental challenges.
  C2.3 Understand how natural resources are used in agriculture.
  C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.
  C2.5 Understand how new energy sources are developed from agricultural products (e.g., gas-cogeneration and ethanol).

• Students understand the importance of animals, the domestication of animals, and the role of animals in modern society: APS C4.0

  C4.1 Understand the evolution and roles of domesticated animals in society.
  C4.2 Know the differences between domestication and natural selection.
  C4.3 Understand the modern-day uses of animals and animal by-products.
  C4.4 Understand various points of view regarding the use of animals.
  C4.5 Understand unique and alternative uses of animals (e.g., Handi-Riders and companion animals).

• Students understand animal anatomy and systems: APS C6.0

  C6.1 Know the names and locations of the external anatomy of animals.
  C6.2 Know the anatomy and major functions of vertebrate systems, including digestive, reproductive, circulatory, nervous, muscular, skeletal, respiratory, and endocrine systems.

• Students understand fundamental animal nutrition and feeding: APS C8.0

  C8.1 Know types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water).
  C8.2 Analyze suitable common feed ingredients, including forages, roughages, concentrates, and supplements, for ruminant, monogastric, equine, and avian digestive systems.
  C8.3 Understand basic animal feeding guidelines and evaluate sample feeding programs for various species, including space requirements and economic considerations.

• Students understand basic animal health: APS C9.0

  C9.1 Assess the appearance and behavior of a normal, healthy animal.
  C9.2 Understand the ways in which housing, sanitation, and nutrition influence animal health and behavior.
  C9.3 Understand the causes and control of common animal diseases.
  C9.4 Understand how to control parasites and why.
  C9.5 Understand the legal requirements for the procurement, storage, methods of application, and withdrawal times of animal medications and know proper equipment handling and disposal techniques.

• Students understand soil science principles: APS C10.0

  C10.1 Recognize the major soil components and types.
  C10.3 Understand water delivery and irrigation system options.

• Students understand plant growth and development: APS C11.0

  C11.1 Understand the anatomy and functions of plant systems and structures.
  C11.5 Understand the photosynthesis process and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.
C11.6 Understand the respiration process in the breakdown of food and organic matter.

- Students understand the scientific method: APS C13.0  
  C13.1 Understand the steps of the scientific method.  
  C13.2 Analyze an animal or plant problem and devise a solution based on the scientific method.  
  C13.3 Use the scientific method to conduct agricultural experiments.

- Students understand air and water use, management practices, and conservation strategies: APS E2.0  
  E2.1 Understand the government's role in regulating air, soil, and water use management practices and conservation strategies.  
  E2.2 Understand air and water conservation issues.  
  E2.3 Understand appropriate water conservation measures.  
  E2.4 Understand the component of a plan that monitors water quality.  
  E2.5 Understand the component of a plan that monitors air quality.  
  E2.6 Analyze the way in which water management affects the environment and human needs.

- Students understand soil composition and soil management: APS E3.0  
  E3.2 Understand the reasons for and importance of soil conservation.  
  E3.4 Understand how to develop and implement a soil management plan for a natural resource management area.

- Students understand aquatic resource use and management: APS E6.0  
  E6.1 Understand the different types of aquatic resources.  
  E6.4 Analyze the relationship between water quality and aquatic species habitat.

- Students understand plant physiology and growth principles: APS F2.0  
  F2.4 Understand the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.

- The evidence from Earth and moon rocks indicates that the solar system was formed from a nebular cloud of dust and gas approximately 4.6 billion years ago. ES 1.b
- The evidence from geological studies of Earth and other planets suggest that the early Earth was very different from Earth today. ES 1.c
- The evidence indicating that the planets are much closer to Earth than the stars are. ES 1.d
- The Sun is a typical star and is powered by nuclear reactions, primarily the fusion of hydrogen to form helium. ES 1.e
- The evidence for the dramatic effects that asteroid impacts have had in shaping the surface of planets and their moons and in mass extinctions of life on Earth. ES 1.f
- The solar system is located in an outer edge of the disc-shaped Milky Way galaxy, which spans 100,000 light years. ES 2.a
- Galaxies are made of billions of stars and comprise most of the visible mass of the universe. ES 2.b
- The evidence indicating that all elements with an atomic number greater than that of lithium have been formed by nuclear fusion in stars. ES 2.c
- That stars differ in their life cycles and that visual, radio, and X-ray telescopes may be used to collect data that reveal those differences. ES 2.d
• Features of the ocean floor (magnetic patterns, age, and sea-floor topography) provide evidence of plate tectonics. ES 3.a
• The principal structures that form at the three different kinds of plate boundaries. ES 3.b
• How to explain the properties of rocks based on the physical and chemical conditions in which they formed, including plate tectonic processes. ES 3.c
• Why and how earthquakes occur and the scales used to measure their intensity and magnitude. ES 3.d
• There are two kinds of volcanoes: one kind with violent eruptions producing steep slopes and the other kind with voluminous lava flows producing gentle slopes. ES 3.e
• The relative amount of incoming solar energy compared with Earth's internal energy and the energy used by society. ES 4.a
• The fate of incoming solar radiation in terms of reflection, absorption, and photosynthesis. ES 4.b
• The different atmospheric gases that absorb the Earth's thermal radiation and the mechanism and significance of the greenhouse effect. ES 4.c
• How differential heating of Earth results in circulation patterns in the atmosphere and oceans that globally distribute the heat. ES 5.a
• The relationship between the rotation of Earth and the circular motions of ocean currents and air in pressure centers. ES 5.b
• The origin and effects of temperature inversions. ES 5.c
• Properties of ocean water, such as temperature and salinity, can be used to explain the layered structure of the oceans, the generation of horizontal and vertical ocean currents, and the geographic distribution of marine organisms. ES 5.d
• Rain forests and deserts on Earth are distributed in bands at specific latitudes. ES 5.e
• Weather (in the short run) and climate (in the long run) involve the transfer of energy into and out of the atmosphere. ES 6.a
• The effects on climate of latitude, elevation, topography, and proximity to large bodies of water and cold or warm ocean currents. ES 6.b
• How Earth's climate has changed over time, corresponding to changes in Earth's geography, atmospheric composition, and other factors, such as solar radiation and plate movement. ES 6.c
• The carbon cycle of photosynthesis and respiration and the nitrogen cycle. ES 7.a
• The global carbon cycle: the different physical and chemical forms of carbon in the atmosphere, oceans, biomass, fossil fuels, and the movement of carbon among these reservoirs. ES 7.b
• The movement of matter among reservoirs is driven by Earth's internal and external sources of energy. ES 7.c
• The thermal structure and chemical composition of the atmosphere. ES 8.a
• How the composition of Earth's atmosphere has evolved over geologic time and know the effect of outgassing, the variations of carbon dioxide concentration, and the origin of atmospheric oxygen. ES 8.b
• The location of the ozone layer in the upper atmosphere, its role in absorbing ultraviolet radiation, and the way in which this layer varies both naturally and in response to human activities. ES 8.c
• The resources of major economic importance in California and their relation to California's geology. ES 9.a
• The principal natural hazards in different California regions and the geologic basis of those hazards. ES 9.b
• The importance of water to society, the origins of California’s fresh water, and the relationship between supply and need. ES 9.c
• Select and use appropriate tools and technology (such as microscopes, computer-linked probes, computer software, and scientific calculators) in a safe manner. I & E 1a
• Select and use appropriate tools and technology (such as microscopes, computer-linked probes, computer software, and scientific calculators) in a safe manner. I & E 1a
• Develop hypotheses, perform tests, collect data, display data, analyze relationships, and draw conclusions in order to solve problems. I & E 1a, d, l, j
• Analyze situations and solve problems that require combining concepts from more than one area of science. I & E 1l
• How the differences and similarities among the sun, the terrestrial planets, and the gas planets may have been established during the formation of the solar system. ES 1.a

F. STUDENT EVALUATION STANDARDS (List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student’s grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

Assignments and labs 60%
Assessments 30%
FFA Participation 10%

G. SUGGESTED INSTRUCTIONAL ACTIVITIES (This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Prepared by Craig Davidson, Ralph Mendes, Travis Wyrick, and Ric Lemucchi
Sustainable Agriculture: A Biological Approach to Industry Practices

A. **COURSE INFORMATION**

Grade Level: 9-10 Grade

Length of Course: 2 semesters

Maximum Credit: 10

Type: Lab Science Life Science

Recommendation for Enrollment: Recommended for Sophomore level students, but can be applied to all levels

B. **COURSE DESCRIPTION.** (Include a brief explanation of the course; mention any prerequisites, including standardized test scores; and indicate whether the course satisfies a specific graduation requirement.)

Sustainability is based on a simple principle: Everything that we need for our survival and wellbeing depends, either directly or indirectly, on our environment. Sustainability creates and maintains the conditions under which humans and the biotic world can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment. (adapted from http://www.epa.gov/sustainability/basicinfo.htm)

Sustainable Agriculture is a one year course designed to integrate biological science practices and knowledge into the practice of sustainable agriculture. The course is organized into four major sections, or units, each with a guiding question. Unit one addresses the question, What is sustainable agriculture? Unit two sustainable agriculture fit into our environment? Unit three, What molecular biology principles guide sustainable agriculture? Unit four, How do we make decisions to maximize sustainable agricultural practices within a functioning ecosystem? Within each unit specific life science principles will be identified with agricultural principles and practices guiding the acquisition of this knowledge, culminating in the development of a sustainable farm model and portfolio of supporting student research.

C. **INSTRUCTIONAL MATERIALS.** (List the basic text – include title, edition, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)


**Supplemental Materials**

COURSE OUTLINE. (List the major content areas of the course and divide them according to the semester in which they fall. Designate the approximate amount of time given to each of the content areas. Suggested length: one page.)

Unit One: Driving Question: What is sustainable agriculture?
This introductory unit will focus on the biological classifications of agriculture and their associated industry sectors, what sustainability is, and how the scientific method is the driving force behind advancements and developments in sustainable biological practices within agriculture. Students develop an overview of agricultural industries and biologic practices through research projects on facets of California agriculture, and identify what sustainability and sustainable practices are through individualized lab experiments relating to current practices. Ultimately, students will be able to use the scientific method to complete an extensive laboratory experiment that is designed to evaluate potential feed source varieties for sustainable success within their local community.

Assignment Summaries:
"What is sustainable agriculture?"
Students groups will research the various biological divisions of what constitutes agriculture. (Plant science, animal science, forestry, horticulture, etc.) Within their research they will identify the sub categories of industry that fall within their topic, what career paths are available within each, what are currently identified as “best practices” (such as the three E’s of sustainability economics, ecology and equity) and what are some of the sustainability issues and biologic concerns within each of these divisions. Students will then develop a multimedia presentation to introduce their particular area of agriculture to the class and identify the most prevalent issues facing their particular field of interest.
"That's Ag - The Science Behind Agriculture"
Categorical Based MiniLabs:

Student groups will design and complete an inquiry based minilab experiment to expand on their knowledge of the particular industry sector they researched from the previous activity. Choosing a focus from one of the areas of concern or issues within their sector, students will then design and implement an experiment that tests factors contributing to the issue and potential impacts they have on the population using scientific method learned in class. Examples might include a lab on animal production and energy flow, a lab on soil degradation and plant germination, a lab on food processing practices, a lab on postharvest preservation, etc. The labs will introduce the application of inquiry within the agriculture sectors and the importance of the implementation of research in the industry. Design protocols, data, and analysis will be submitted in lab report format. As part of their analysis, students must use their data to make suggestions on how to improve efficiency or yield, or lessen the impact of processing, relevant to their finding of their particular experiment.

Scientific Method and Sustainability Lab "Work Like a Scientist"
In this lab students are introduced to the scientific method, the basis for all scientific decision making. The native grasses research will provide students with the foundation of scientific investigation application as well providing key research that will be used in the final unit project as well as the end of course project. Students will research the difference between native grasses versus invasive grasses including specific species. Using this knowledge they will hypothesize germination rates between these two variable groups. Students will then design and implement an experiment incorporating quantitative data collection, analysis, and draw conclusions reflective to their hypothesis, and evaluate the grasses for potential sustainability within their communities.

As a continuation of the germination experiment, given that the two variables have differing germination rates, students can identify other measures of "success" of a potential feed crop. They will then sample the community environment for the potential factors affecting the continued growth and development of grasses. Samples would include soil testing, (pH, nutrient composition, structure and texture, and water capacity), water availability, and ambient temperatures. Combining this information with the initial background research regarding natives versus invasive, students will hypothesize on the continued success of their germinating grasses, then transplant their seeds into test plots or fodder trays, and allow for continued growth. After a predetermined amount of time, sample plots will be analyzed for percent coverage and measurements of species biomass will be completed. Using this information students will determine the most biologically suitable grass species to plant that would be the most sustainable within the local community through a written lab completed in their lab notebook and a PowerPoint presentation of their hypothesis, design, data and conclusion.

Unit Two:

Driving Question: How does sustainable agriculture fit into our environment?
While unit one examined whole systems, unit two takes a closer look at components within that system. Students will use evidence gathered from a series of laboratory exercises to be able to describe the transfer of energy from one trophic level to another as well as the cycling of nutrients and energy through ecosystems. Students will be able to draw conclusions about these biogeochemical cycles and how they apply to sustainability of production agriculture. Specifically, students will conduct primary research in the areas of photosynthesis and chemical energy creation, nutrient cycling, transpiration and water use, ecological relationships and global farming practices in order to draw biologically sound conclusions regarding the effects of agriculture on the natural environment. The students learning will culminate in a synthesis of concepts applied to the development of a three year sustainable crop rotation plan. Students will evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
Assignment Summaries:

"Bacteria at Work" Nitrogen Fixation

Students will analyze the effects of nitrogen fixation on plants initially by examining prior studies as well as industry publications regarding the role of nitrogen in plant growth and the methods by which farmers enhance nitrogen levels in soil. This should include a thorough look at the microbiology of nitrogen fixing bacteria, plant and root physiology, nutrient cycling and uptake in plants, chemical processes and cellular respiration in plants and fertilization methods. After garnering that background information, students will conduct an experiment that compares the effects of added nitrogen fertilizer versus nitrogen fixing bacteria on the growth of clover. Students will grow clover plants in soil with no nitrogen added, in soil with nitrogen fertilizer added, and in soil containing nitrogen fixing bacteria (in this case, a species of rhizobia called Rhizobium leguminosarum, or R. leguminosarum). Students will monitor the nitrogen levels in each type of soil using a nitrogen testing kit. The students will observe the effects of nitrogen on the health of the clover plants by measuring the increase in biomass of each plant during the experiment. Plants should be harvested, soil washed away, and weights taken on plant material produced. Students will use the data collected to create a graph showing the relationship between nitrogen availability in the soil and crop sustainability. This allows students to not only experience agriculture's role in the nitrogen cycle, but also provides necessary supporting data for decision making in the final end of course project.

"Morning Jolt!" Photosynthesis Lab

Photosynthesis is the basis for the creation of chemical energy in the natural world. Plants require light in order to transform one type of energy into another, and the quantity and type of light determine the optimal photosynthesis rates. Students will conduct a laboratory exercise that examines the effects of shade on the growth of plants and the rates of photosynthesis and will develop a written memorandum to the International Coffee Growers Association regarding optimal shade levels for the growth of coffee trees, including information regarding ecological sustainability involved in the practice. The process will begin by using industry journals to examine coffee production methods; primarily comparing and contrasting industrial coffee production with shade grown, sustainable coffee production. Students should come up with the following information: arabica coffee has the highest yields under 35 to 65% shade. In addition, growing coffee under shade also discourages weed growth, may reduce pathogen infection, protect the crop from frost, and helps to increase numbers of pollinators which results in better fruit set. However, in order to produce faster, higher yields and prevent the spread of coffee leaf rust (Hemileia vastatrix), many coffee plantations began to grow coffee under sunnier conditions. The fewer shade trees that are in coffee plantations, the less biodiversity there is in those plantations.

The laboratory exercise will use several small coffee plant starts (available for purchase online as seeds or a houseplant) and will grow them for a series of days under varying shade levels. Students will conduct visual assessments of plant health and growth, then conduct a traditional floating leaf disc assay protocol to assess photosynthesis levels under varying light conditions. Students will use both the previously gathered background information regarding industry practices, sustainability and plant growth as well results of the primary research to develop the memorandum regarding optimal shade levels for sustainable coffee growth.

"Move on Through" Transpiration Lab

Students will initially conduct background research into water use in agriculture and the demands placed on farmers to be efficient and careful with this scarce natural resource. Students will then investigate transpiration as part of the hydrologic system, based on different genetic variations of plant structure (leaf type and shape, for example). Students will conduct a research exercise by examining transpiration in plants with various leaf structures. This can occur using locally grown crops or by using exotic crops and adding a component regarding appropriate plant selection. In this lab, students will use the plant weight protocol to measure the transpiration rates of individual plants. Students give plants a predetermined amount of water, reweigh the plants, and continue weighing the plants over time to contrast weight differentials and determine water loss through
transpiration. Students will monitor observable physical changes in the different plants’ condition as water is depleted, collecting qualitative data and measuring the diurnal transpiration rates. Students will apply the individual plant water usage data to larger scale acreage to analyze water usage. Students will create a written case study to justify plant selection within the context of the sustainability of the hydrologic system.

Optional extension: include in the case study how trends in daily transpiration rates change if water losses were replenished through different irrigation management techniques (drip, flood, etc.).

“From Trash to Gas” Sustainable Waste Management
Students will use both primary and secondary research to discover that food scraps, dead plants, manure, and other decaying organic matter, called biomass are a rich source of energy. Energy can be procured from biomass by turning it into a gas called biogas. The process will begin by students examining agricultural examples of biogas production (small scale composting, dairy lagoon gas extraction, codigestion, etc.) as well as the microbiological basis for biogas production, including aerobic and anaerobic fermentation, cellular respiration, lignocellulosic breakdown, etc. As part of this analysis, students will compare the amounts of biogas produced by different types of biomass. In order to quantify their findings, students will conduct an experiment with three soda bottles filled to the same volume with various types of biomass commonly used in biogas production. Bottle one will contain cow manure, bottle two will contain cow manure and household kitchen scraps, and bottle three will contain cow manure and a biological waste product of the students choosing (teacher approved). Bottles will be topped with a small balloon. Students will record the circumference of each of the balloons at the same time of day over a period of 10 days as well as record observations of the biomass inside of the bottles. Students will create a graph representing the circumference of balloons and the number of days. Students will compare graphs to determine which biomass type produced the fastest inflation of the balloon. Upon completion of the experiment, the students will then need to develop a written plan for how this naturally occurring byproduct can be harnessed to benefit a farming situation. In addition to incorporating their data, this plan should include: research on how the gas is used, the scientific processes behind biogas creation (fermentation, anaerobic digestion, etc.), biomass feedstocks that can be used to create efficient quantities of biogas, potential uses of biogas, and potential economic and sustainable benefits of instituting a biomass digester.

“Composting, Do the Rot Thing”
Students will examine the principle of composting organic material, and the process of converting complex organic matter into the basic nutrients needed by living organisms. Prior to conducting the experiment, students will use industry and extension publications to learn the processes of composting, as well as the benefits and challenges of compost production (available nutrient levels, community perceptions, hazardous materials, smell, storage, etc.). Following the background research, students will conduct a laboratory exercise that will examine the utilization of organic wastes (household) as nutrients for plants. It will allow students to investigate which waste products can be composted and best utilized by plants. Based on prior knowledge of an ecosystem and how ecosystems regenerate as well as the interaction of food and fiber systems with natural cycles, students will justify specific nutrient requirements, as well as renewable and nonrenewable natural resources. Students will prepare three test plots, one plot with just soil, one with soil and household waste products collected by students, and one plot with animal waste products. Students will then monitor plant growth and development to graph their results. Students will create an informational, six paneled brochure that explains a waste management plan using compost. Included in the brochure should be information regarding the microbiology of compost production in addition to the practical household application of the research. Additionally, the brochure should outline the removal of organic matter to increase ecological sustainability while having the least environmental impact on the farm and community.
"Population Pressures and Succession in a Lab Community"
Students will evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. Emphasis is on: (1) distinguishing between group and individual behavior, (2) identifying evidence supporting the outcomes of group behavior, and (3) developing logical and reasonable arguments based on evidence. Examples of group behaviors could include flocking, schooling, herding, and cooperative behaviors such as hunting, migrating, and swarming. Students will determine whether the number of individuals in a lab community of plants and animals is governed by food supply and living space. Students will also determine whether populations will change from one kind of organism to another if competition for limited food and room favors one organism over another.

"STEM Connections, Energy and Agriculture: Careers in Sustainable Energy" (California Foundation for Agriculture in the Classroom)
At the conclusion of this unit, students will be able to: Explain how energy is generated and distributed. Develop a model demonstrating the flow of energy from generation to use. Describe the domestic food supply chain. Identify the use and types of energy involved in the growth, harvest, processing, transportation and marketing of an agricultural commodity. Describe the benefits and drawbacks of renewable energy. Analyze data comparing different forms of renewable energy, drawing conclusions about cost and feasibility of each type under variable circumstances. Determine the amount of energy released from biodiesel through a laboratory exercise. Compare the energy released from biodiesel to other energy sources. Evaluate the renewable energy strategies of individual farms by examining real-life case studies.

Unit Assessment
Plant, Grow, Rotate, Repeat Sustainable Crop Management Plan
Students will apply concepts of the biogeochemical cycles as well as waste management to create a 3 year sustainable crop rotation plan that produces the highest crop yields for any given location with the least environmental impact. Students must analyze current soil conditions as well as community needs when considering their crops for production. Student focus should be on nitrogen fixation of specified crops. Students will use previous knowledge of ecosystems, invasive species, and producer and consumer relationships as well as research current market prices and local demands, to assess the environmental contribution and the economic impact from each crop. When creating the 3 year crop rotations students will defend their selections and the ecological impacts of their decisions. The synthesis of the students’ research will culminate in written proposal to a local producer.

Unit Three:
Driving Question: What molecular biology principles guide sustainable agriculture?
In this unit, students will examine the science of agriculture and evaluate the efficiency and sustainability of current methods. Students will explore the concepts of taxonomy of plants and nomenclature of animals, cell structure, cellular division, DNA, and chromosomes. Students will apply this knowledge to evaluate desirable inheritable traits in each species to artificially select characteristics to breed more efficient and productive offspring as a part of their created breeding plan. Students will be introduced to genetic markers, genetically modified organisms, and biotechnology. With this knowledge students will examine and evaluate biotechnology, the ethics of genetic manipulation, and its implication on the sustainability of agriculture and our ability to feed a growing population. As a culminating project for the first two units students will design, conduct, and interpret their own agricultural research project on a biological issue facing agriculture and present their findings with a visual, written, and oral report.

Assignment Summaries:
"Breed For The Need" Sustainable Breeding Evaluation
Animal genetics play a role in sustainability. An animal that is genetically predicted to become heavier muscled in a shorter period of time will utilize less pasture and nutritive resources than one that takes
longer to reach the same weight. A female who produces more milk to feed her offspring will utilize less resources for both her and her progeny. Therefore, summative phenotypic traits are important to evaluate in a sustainable ecosystem in order to efficiently utilize natural resources. By analyzing these traits students can determine the probability of the trait expression in an animal’s offspring.

After instruction on chromosomal physiology, multicellular organization, animal anatomy, basic heredity, and genetic expression, students will identify desirable characteristics from a group of four animals of the same species to create a sustainable breeding plan that will include: hybrid vigor, genetic efficiency and other genetic traits. Students will use three components to evaluate the group of four animals that include the farmer’s sustainability scenario, expected progeny difference data and phenotypic valuation of the animals. First students will read an agricultural producer’s written scenario that describes the targeted phenotypic traits a farmer desires based on the environment that must sustain the health and nutrition of the specific animals while not depleting the natural resources within that biological system. The parameters of the traits the students will evaluate include milk production (the weight of the weaned offspring that was contributed to the amount of milk the mother produced), weaning weight (the weight of the offspring when removed from the mother), yearling weight (the weight of the offspring at eighteen months of age and birth weight (the weight of the offspring at birth). Next, the students will read and analyze Expected Progeny Difference (Summative phenotype expression) data. Finally, students will perform visual observations of the phenotypic traits in those four animals. Students will assess and prioritize the three analyzed components based on importance and collectively use them to place the four animals in phenotypic order from the most desirable for the environment to the least desirable according to the farmer’s sustainability scenario. Students will give an oral defense with evidence to support reasoning.

“Battle of the Seeds” Biotechnology Use in Agriculture
Crop decisions made by agricultural producers are often predicated on understanding the climate, rainfall and topography needs of their growing area. These decisions often prioritize crop yield, but also must take into account the biological health of each system. The previous lab focused on evaluating the efficiency of specific animals introduced into an ecosystem where the biological components were predetermined and consistent. In this activity, students explore the introduction of new plants into predetermined, consistent ecosystems by investigating how germination, growth and efficiency of plants (crops) can be affected by genetic and environmental changes. Prior to the experiment, students should be instructed in cell division and structure as functions of organism growth, genotypic traits and variable expression, traditional hybridization methods and modern genetic manipulation. For the primary research exercise, students will set up three demonstration plots to compare growth and yield rates of plants. Half of the class will grow un-weeded plots of plants, manually weed controlled beds, and chemically controlled beds with plants that have been genetically modified to withstand the effects of a widely used herbicide. The other half of the class will grow hybrid seed, non-hybrid seed, and genetically enhanced seed of the same plant. Upon analyzing data of plant growth and yield rates students will calculate the cost in time and money for the methods demonstrated. Students will formulate a written opinion/thesis and defend from evidence the most sustainable method of growing food based on their experiment. Students determine the statistical, economical and biological differences of genetically modified organisms as compared to natural organisms. Students will then research public concern of genetically modified organisms to prepare for a class debate. Utilizing their experimental results and research students debate the use of biotechnology and genetically modified organisms playing one of four following roles; a leader of a developing nation where hunger is a problem among their citizens, a biotechnology company specializing in producing genetically modified plants, a farmer, or a parent who primarily purchases organic produce. Students will reflect on their original opinion and write what they learned as a result of this experience.

Unit Assessment:
“Hypothesize, Analyze, Repeat” Formal Research Project
Labs and activities have been done in this unit that represent the common applications of biological factors such as genetic potential and variability of plants and animals, the symbiosis of animals and
plants within an ecosystem and the impact of new species introduced into an established environment. Students will utilize the science of nature they learned in unit three, how that science fits into the biological systems from unit two and how those systems contribute to sustainability in unit one to develop a comprehensive agriscience experimental research project. Students will identify a problem related to agriculture that is the result of completing the first three units of the course (plant science, animal science, natural resources). Students will utilize the empirical method to design an experiment that will test their own authentic hypothesis using the skills and processes learned throughout the course that include dissecting published research and studies, testing the hypothesis, collecting, synthesizing, analyzing and interpreting data, accepting or rejecting the hypothesis based upon the data, technical reading and writing, and scientific collaboration.

Specific expectations for the written research project are outlined below:

1. Forming a Hypothesis Students will use credible sources to conduct background research on the agricultural issue they are investigating, and they will use this research to generate a testable hypothesis related to the scientific problem they have identified. The hypothesis developed by the student will be constructed with the independent and dependent variables in mind.

2. Experimental design and conducting experimentation Students will construct an experimental design to test their hypothesis. A written experimental design should be constructed consistent with scientific protocol using a systematic approach outlined in the previous units. Students will have their experimental designs reviewed by industry experts, agricultural instructors, local growers/producers, researchers or university representatives. After validating the design using the peer review process, students will move to the experimentation phase of their research. Experimental designs should include replicates, control groups, and determine the variables to be controlled and how. Additionally, a determination should be made as to the type of data that will be collected and in what ways, with the emphasis placed on quantitative data or quantifying data that is qualitative in nature. Students will use their experimental design to test their hypothesis. For example, in a study of primed versus non-treated seeds, seeds would be planted in identical environments, multiple test groups would be established and compared to a control group, and the number of germinated seeds would be counted and recorded to quantify the outcome. Raw data should be recorded using a field book or electronic device.

3. Analyzing data, interpreting data and forming conclusions. Students will determine the best methods for organizing their data using tables. Students will use mathematical principles to synthesize their data, calculating a mean, for example. Furthermore, a statistical analysis of the data will help the student determine if the results are due to chance or the independent variable that was tested. Students will choose the best way to present their data using graphs they believe will most effectively demonstrate their findings, and will further summarize what each graph shows. Finally, students will interpret the data and formulate conclusions based on the results. In the written conclusion, students will use their data to either accept or reject the original hypothesis. Conclusions should be directly supported by the data and supported by previous research. Students will also identify the limitations of their research, improvements that could be made to the experimental design, as well as future studies that may be conducted that relate the study at hand.

4. Evidence of Performing the AgriScience Research Project Students will submit their research in a written paper, and it will include the following components: problem/purpose, background research, hypothesis, methodology, results/data, and discussion/conclusion. The paper will be written using skills associated with technical and scientific writing, for example, refraining from the use of personal pronouns or keeping discussion limited to what the research and data suggest rather than personal opinion and bias. APA format will be utilized to reference and cite sources. Students will create a visual display board, using a digital format that mirrors the use of research posters in higher education, which will also include all of the components of the paper, but in a condensed form. The peer group that reviewed the original experimental design will review the final research paper. The project and its findings will be shared with the class in an oral presentation, with the research board on display to aid in communicating the results of the research.
Unit Four:
Driving Question: How has the agricultural industry used evolutionary principles to develop practices and commodities?

Description of Topic: Students will understand that even with the advent of fertilizers, pesticides, and biotechnology our ability to produce crops should be limitless, but biological systems continue to evolve. Insects and diseases evolve as new technologies are introduced. Varieties of plants and animals change over time through descent with modification due to various practices in agriculture. Almost daily, evolution-related stories are reported in the press. Some of these reports, like the story about antibiotic-resistant strains of TB, depict serious problems that need to be understood and solved. Clearly, the ubiquitous presence of antibiotics in our environment—antibiotics in animal feed, over-prescribing by doctors, and rampant use in hospitals—has created a crisis in the evolution of drug-resistant pathogens. At the same time, we regularly see how knowledge gleaned from evolution is providing very practical applications to real-world concerns: finding oil fields by analyzing fossils or understanding how coevolution of organisms and their natural parasites contribute to disease and recovery. But sciences such as geology and medicine are not the only arenas where an understanding of evolutionary processes is valuable. Selective breeding of food crops and domesticated animals has created many valuable new varieties and breeds: “burpless” cucumbers, larger tomatoes with fewer seeds, cows that produce ten times more milk than cows of a century ago, and hens that lay four times as many eggs. All have been bred by the process of artificial selection, which is evolution guided by humans. Students will explore current issues facing agriculture through the lens of evolution and attempt to answer the following questions: How does evolution affect the world’s food supply? How can a lack of genetic variation harm crops? Why is it important to understand the evolutionary history of domestic crops? How do pests evolve to resist pesticides?

Assignment Summaries:

"Why Does Evolution Matter Now?" (pbs.org/evolution)
Students will go online to pbs.org to discover how evolutionary theory helps us reap greater harvests, fight disease, and protect the Earth. Students will understand how natural selection creates antibiotic-resistant bacteria and recognize the applications of evolutionary principles for medicine, agriculture, and conservation. This lesson consists of 2 parts:

“Back to the Future”
1. Photojournalists can tell vivid stories through photo essays. Ask students to create a pictorial representation (using magazine pictures, photographs, drawings, paintings, video, or downloaded photos) depicting a chain of events impacting a particular species because of changes in the environment (e.g., habitat destruction; introduction of non-native predator, pest, or competitor). Have students base their representation on research and evidence about the species and environmental change they have chosen. Ask students to include a prediction of how the environmental change might affect future evolution of the species and ultimately the future of agriculture.
2. Before students’ presentations are final, ask students to pair up and review each other’s presentations. Each partner will write or tell a story that describes what he or she sees in the other’s work. Then students will compare their partner’s story to their intended result and revise their picture if the meaning was unclear.
3. Finally, have students put their pictures on display, presenting to each other key highlights of their story.

“Evolution in the News”
1. Evolution is in the news more often than most people realize. Many news stories based on evolutionary concepts never mention the word evolution. Ask students to collect newspaper and magazine articles related to evolution. Before they do, brainstorm the kinds of topics that might be related to evolution so they will know what to look for. Examples include:
   Dinosaur fossils
Human fossils
Antibiotic-resistant pathogens
Habitat destruction
Oil spills
Endangered species
Biotech corn in food
Genetically modified animals
Comets and dinosaur extinction
Domestication of animals
Breeding new plant varieties

2. Ask each student to select a single article and to write an essay describing how it is related to evolution. Have students make as many links as possible and be specific in their explanations, using the vocabulary of science and evolution (e.g., mutation, evidence, natural selection, variation, common ancestor, etc.).

3. Discuss the articles in class.

4. Post students’ articles on a bulletin board and have students cluster articles with like topics and then give the category a title.

5. Have students create a class concept map of the evolutionary concepts they are finding in the news, showing the links and relationships between topics. (See Online Teacher Course Session 1 for information on creating concept maps.)

6. Have students continue to bring in and discuss evolution articles over a month’s time to help them understand the relevance of evolution to their daily lives.

"Evolutionary change in agriculture: the past, present and future" Research Project
Students will explore a series of diverse studies to provide a sample of some of the ways in which evolution has been driven by both conscious and unconscious selection by humans thus shaping the development of modern agriculture. Agriculture has been a crucible of evolutionary change ever since its inception thousands of years ago, and this change permeates agricultural endeavors at all levels of biological organization, ranging from the individual gene to whole communities. Agro-ecosystems then provide one of the most cogent examples of situations where anthropogenic effects are major determinants of biotic interactions within and among species and communities, suggesting a central role for the application of evolutionary principles. This is particularly the case, given global concerns regarding food production and food security, and increasingly, the expectation that agricultural productivity gains must be achieved with greater efficiencies, and reduced environmental impact.

"Evolution in Agriculture: The Domestication of Wheat"
When humans understand a phenomenon that occurs in nature, they often gain increased control over it or can adapt it to new uses. The domestication of wheat is a good example for students to research. Students will gather information of recovered seeds from different archaeological sites and notice changes in their characteristics over the centuries and how scientists have hypothesized how wheat was altered by humans over time. About 11,000 years ago, people in the Middle East began growing plants for food rather than relying entirely on the wild plants and animals they could gather or hunt. These early farmers began saving seeds from plants with particularly favorable traits and planting those seeds in the next growing season. Through this process of "artificial selection," they created a variety of crops with characteristics particularly suited for agriculture. For example, farmers over many generations modified the traits of wild wheat so that seeds remained on the plant when ripe and could easily be separated from their hulls. Over the next few millennia, people around the world used similar processes of evolutionary change to transform many other wild plants and animals into the crops and domesticated animals we rely on today. In recent years, plant scientists have begun making hybrids of wheat with some of their wild relatives from the Middle East and elsewhere. Using these hybrids, they have bred wheat varieties that are increasingly resistant to droughts, heat, and pests. Most recently, molecular biologists have been identifying the genes in the DNA of plants that are responsible for their advantageous traits so that these genes can be incorporated into other
These advances rely on an understanding of evolution to analyze the relationships among plants and to search for the traits that can be used to improve crops.

**Using BLAST to compare the Evolutionary Relationships of Modern Grains and Create a Cladogram.**

Scientists have determined that certain gene sequences are conserved, which just means shared among species. In this activity students will examine various DNA sequences from modern grain varieties and compare each letter to determine the differences in the amino acid sequences. Students will then create a cladogram to illustrate the evolutionary relationships among the various grains.

**“Differential Survival of Organisms” EEI lessons**

In this unit students explore how natural selection determined the differential survival of groups of organisms. Understanding natural and artificial selection and evolution will allow students to understand that changing agricultural practices can influence evolutionary processes. Students will explore how natural factors and human activities in the area of agriculture influence the differential survival of organisms within a population of a given species. Students learn how the differential survival of groups of organisms forms the basis of natural selection and evolution.

**“Anatomical Evidence of Evolution Lab”**

In this lab students will learn about homologous, analogous, and vestigial structures and their value as evidence for evolution and how that has affected modern animals used in agriculture today. In this study students will look at the anatomy and development of animals to discover that many living creatures look quite different on the surface, but have similarities underneath their skin that might suggest they are related to each other. Students will compare embryonic pictures and place them in order from earliest to latest development.

**“Geometric Fossil Evolution Lab”**

Scenario: You are a paleontologist and are given a box of animal fossils that were dug up by a friend. Your friend did not keep the fossils from different layers separate so your task is to arrange them according to their evolutionary changes over time. You know that life begins small and simple and slowly becomes larger and more complex. Using this information you will arrange the animal fossils on a vertical timeline.

**Unit Assessment: Big Decisions**

Science must work in the context of society. No matter what the scientific evidence, people make decisions based on a variety of criteria, including economics, health, aesthetics, politics, and ethics. These decisions can ultimately affect the evolution of organisms. Objective: Students learn different perspectives in a situation that can have possible evolutionary implications. Materials: Resource materials related to topic you choose, Copies of the “Evaluating Internet Information” pages available at http://www.lib.vt.edu/, research/libinst/idle/evaluating.html, Copies of story “A Sound of Thunder” by Ray Bradbury (in his book R is for Rocket). Also available at www.sba.muchio.edu/snively/415/thunder. Preparation: Gather resources relevant to the topic you choose. Make copies of the “Evaluating Internet Information” pages and “A Sound of Thunder.” 1. Divide students into teams of four or five. 2. Give students a situation (such as pesticide use on lawns or crops, use of biotech foods, habitat destruction and endangered species, introduction of a non-native predator competitor, etc.). 3. Give each student in the team a different role (e.g., environmental activist, farmer, parent with young children, doctor, biotech company CEO, politician). Ask each student to define the point of view for his or her role and to seek out scientific arguments and evidence that might support or refute it. 4. As students find information to support their role’s point of view, have them consider the evolutionary, economic, health/medical, environmental, political, and ethical implications of the situation. Students may use the Web, library, and other resources. Give students pointers on evaluating the reliability of sources. (See “Evaluating Internet Information” Web site referenced above.) 5. Have students dress in their roles for a “town meeting” to
discuss the implications of the situation from each point of view. Have the town make a decision on the situation after listening to all sides. 6. Ask students to write an article for a newspaper that compares and weighs each point of view. (Or have students write a paper that describes what they learned and what their actual point of view is now.) 7. Have students read the short story “A Sound of Thunder” by Ray Bradbury and have a class discussion about how this story (which describes how the ripple effect can have major impact over time) relates to human intervention and the effect on future evolution.

Unit Five:
Driving Question: How do we make decisions to maximize sustainable agricultural practices within a functioning ecosystem?

Description of Topic: Students will understand common practices in the agriculture industry that promote sustainability. They will evaluate and/or refine technological solutions that reduce impacts of human activities on natural systems by using practices that utilize cellular biology, genetics, energy cycles, biological systems, plant and animal nomenclature and how these units collectively create ecosystems that were covered in the previous units. Students will conduct production practices in the areas of animal science, horticulture, and natural resources. Students will experience how the biological systems can be changed at the cellular level, promoting the emergence of new energy cycles that produce useful, recyclable products that have a positive impact on the environment, thus decreasing the impact of agriculture on the environment and promoting sustainability. Students will investigate positive sustainable approaches to changing negative impacts agriculture has on the land by testing methods of efficiency in laboratory work. This experience will give students perspective on production costs and resource needs in relation to animal welfare, mechanization versus labor, and use of chemicals to nonuse of chemicals. Students will utilize this hands on production experience to develop their own sustainable farm as a culminating final project to illustrate the management of agricultural systems, management of natural resources, the sustainability of an ecosystem for the future while preserving biodiversity.

“Show Me You Care” Practice in Animal Health Management
Common animal production practices are done to ensure multisystem homeostasis and to foster productive animal growth and general welfare. Prior to conducting a laboratory exercise, students will engage in secondary research that seeks to correlate common livestock production practices to maintaining system health in animals. For example, castration, tail banding, hoof trimming and vaccinations prevent pathogen (viral, bacterial, fungal and parasitic) infections and thereby ensuring the health of the immune system, lymphatic system and respiratory system, among others. Shearing, clipping and dehorning are noninvasive procedures that provide recycling opportunities of animal byproducts but are also designed to maintain homeostasis and to protect vital organs throughout multiple systems (shearing reduces overall stress on the circulatory system, for example). Animal identification requires animals to have a traceable number like the scrapie tag that traces the animal to the breeder in case an animal tests positive for the genetic disease and ensure herd health (preventing disease outbreaks that can stress multiple systems).

After the conclusion of the background research, students will engage in a laboratory experience where they will conduct common livestock production procedures practiced in the United States through the application of: castration methods, dehorning practices, vaccination protocols, identification systems and shearing techniques. Students will divide into groups to demonstrate one or more of the common livestock production practices within several species of livestock and small animals. After the conclusion of each of these demonstrations, students will choose one method they demonstrated and write an explanatory position paper that correlates the production practice to physiological health in the animal, highlighting homeostatic mechanisms and system nomenclature.

“If You Root It, They Will Grow” Sustainable Practices in Horticulture

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The ability to graft, increase growth rates and clone species of plants, trees and crops is an option that can increase the number of organisms that can be planted in a shorter amount of time. Using one plant to create many or the ability to grow different varieties of fruit on one tree maximizes the efficiency of each organism within an ecosystem. The ability to utilize this technology increases species diversity while positively affecting land biomass. Students will experience a laboratory activity, conducting propagation techniques that make plants more efficient and in return contribute to the energy cycles within the ecosystem potentially maximizing sustainability of the plant and its production. This laboratory lets students use asexual propagation through the application of auxins directly onto plants used as a common practice in the horticultural industry. Students will also research the role of auxins and make predictions on its effectiveness on their assigned mother stock plant. Through teacher demonstration, students will learn the proper steps of asexual propagation and make cuttings of their plant. Each student will test the effectiveness of auxins (rooting growth hormone) with one row in a flat being a different concentration of hormone and one control. After two weeks students will collect data every three days and record the rate at which their plant cutting roots. Students will calculate the cost of hormone treatment versus the time for cuttings to root to recommend the use or nonuse of auxins on their assigned plant in their lab report.

In the next step of the laboratory students will practice the proper steps of transplanting and fertilizer use as regular practice in the horticultural industry. Students will take their rooted cuttings and transplant them to a larger container. After direct instruction on types of fertilizers, students will make predictions on the most effective type of fertilizer for their rooted cuttings; liquid, slow release, and organic. Students will be assigned a growing area (landscape plot, or one gallon containers) to conduct their experiment. Students will test each type of fertilizer with four rows of plants. One row will be the control, without fertilizer application and the other three rows will have liquid, slow release, and organic fertilizer applications. Students will take daily measurements and make final conclusions of fertilizer effectiveness for their plant. Students will also compare cost of fertilizer to effectiveness to determine final recommendations in their lab report.

“*It’s Easy Being Green Growing Green Communities*” Landscaping
Students will utilize the Horticulture report and experience to create a landscape plan in groups. Students will utilize the original cuttings from the previous activity which are now grown plants. Each group will use those plants in designing a landscape for a specific area designated by the teacher that could include areas around the school and/or community. Students must consider plant growth requirements, resources such as water, soil quality, and fertilization needs. Students must address the long term needs of their landscape and write a reflection on the positive and negative aspects with recommendations for more sustainable qualities. The students will submit their designs in a written proposal to the school and or community organizations for approval. Those approved will be planted and maintained by the group for the rest of the year.

“*Use Me Responsibly or Lose Me Forever*” Using Nature’s Natural Resources
Students will delve deeper into natural resources conducting research on bioprospecting. They will use the knowledge gained within this unit regarding the potential to change the future through bioprospecting and the need to prevent the exploitation of those resources to preserve the biospheres for future generations. Students will read articles about the use of plants and animals in nature like coral producing a natural sunscreen named, “Sunscreen 855”. To prevent the harvest of coral in order to save the barrier reef they isolated the compound and produced it in a lab that will be the most naturally occurring sunscreen developed. Students will discuss the importance of bioprospecting, as well as how the prospect of products from plants and animals argues for the continued maintenance of biodiversity and sustainability as long as the resources are not exploited. (Biology, Prentice Hall)

After the discussion students will research other types of bioprospecting happening in agriculture. They will choose one material (natural resource) being prospected and find the following information from their research: what research is being done on the material, how are they utilizing the material and how does the research and use of the material play a role in sustainability. The information accumulated on the material bioprospecting will be utilized in a flyer created by each student.
flyers will be Setup in a walking gallery where the students will use a bioprospecting rubric to score the importance of each natural resource presented as a valuable material for continued research. The students will have a class discussion about which three natural resources are the most valuable source of bioprospecting to contribute to sustainability of the human population.

Bioprospecting “Motoring with Microbes”
Discovering Cellulose Microbes for Biofuel Efficiency
The students will then conduct a research lab on Bioprospecting for Cellulose Degrading Microbes: Filter Paper Assay Method where Students collect samples that they predict will contain communities of cellulose degrading microbes and test for the ability of microorganisms in their samples to break down pure cellulose (filter paper). In the process, groups collect evidence to test predictions about which environmental microbial samples will be the most effective for degrading cellulose. By comparing results across groups, students can begin to uncover patterns and develop explanations about the types of environments that support cellulose degrading microbes. This lab method is nearly identical to that used by researchers and student results could help scientists discover new enzymes for efficient biofuel production that is key in agriculture’s ability to remain sustainable in the next century. https://www.glbrc.org/education/classroommaterials Students will turn in a completed lab using scientific method and write an abstract of their research to send to the Great Lakes Bioenergy Research Center as part of their ongoing research on biofuel.

“Where Should I Make My Home?” Sustainable Production Plan
The students will be put into groups and collectively evaluate the same animals from the previous activity with summative phenotypic traits for each of the bio geological growing zones in California which are desert and high desert, coastal, valley, foothills and mountains. Instruction should occur on plant taxonomy and livestock anatomical suitability (large animals in areas with poor biomass production, genetic hardiness factors, etc.) prior to the secondary research being done. Research done on each zone will provide information on the possible sustainability plans in which the four animals could be raised. Students will research the ecosystem of each area, analyzing what crops, pasture and range can be grown and the effects of climate and rainfall on the availability of nutrients for the animals’ sustainability. Based on the data accumulated from the research they will reevaluate the four animals from the previous lab including EPD data. For each zone they will place the animals in order from the one most suited and efficient to the least. Students construct a written defense for their decision in the placing of those animals in each zone based on their data and research. They will argue the merits of their placing based on the data from their zone research: native and nonnative grass and crop survivability in each zone that provides nutrition to the animals, biological merits and disadvantages of each zone on the animals. They will then use the zone information to reevaluate the EPD data and how it can be best utilized to meet the animal’s biological needs. Using the research and accumulated data students can determine a class placing for each region of California.

“Ecosystem Change in California” EEI Lesson
Students will study how stability in an ecosystem is a balance between competing effects. Students will know how to analyze changes in an ecosystem resulting from changes in climate, human activity, introduction to non-native species and GMOs, or changes in population size.

Unit Assessment and End of Course Project
“I Believe in the Future of Agriculture” Sustainable Farming Project
Students will design a solution for developing, managing, and utilizing energy and resources through the development of a completely sustainable farm on 400 acres that must include a minimum of three crops and two species of animals. A comprehensive farming portfolio will be created. The portfolio will include data and research done from each unit within the course to be used to create their farm as well as provide evidence to defend the sustainability of that farm and thus, the best representative of sustainability. The students must research genetic varieties of crops and species of animals based on genetic efficiency and commensalism. Attention to how soil nutrients and deficiencies affect vegetative reproduction, germination, plant growth and crop adaptation within an environment must
be utilized in the research. Based on the data the students will determine the crops to be produced. They will research and evaluate the species of animals that will have a symbiotic relationship with the crops they have chosen above. Phenotypic and genotypic traits, hybrid vigor, commensalism, and other variables should be used to determine the two species of animals that will be best suited for the designed environment while providing for the welfare of the animals' health and nutrition. Animal welfare must be addressed in the decisions made to create a farm that is positive and biodiversity in nature. Environmental impacts based on the crops and animals raised on the farm need to be identified dealing with biological magnification, depletion of soil/plant nutrients, use of natural resources, pollution issues dealing with waste and desertification. The students will use this information as well as the data and labs from the previous units to determine the carrying capacity of livestock and acres of crops to be grown on the farm. Biological methods of reducing the identified environmental impacts will then be designed by the student, which could include methane digesters, aquaculture, CO2 collectors and irrigation water recycling. Finally, students will address the management decisions made to reduce the farm's carbon footprint over a decade of production. The portfolio and presentations will be presented to the local farm bureau as well as other agriculture associations and businesses.

E. **COURSE OBJECTIVES FOR** (The objectives area to include the specific, major skills or understandings which students will be able to demonstrate or acquire instruction in the course. A minimum of eight to twelve objectives should be identified for each semester of the course. Each objective is to be clearly linked to the Board adopted standards for the course or subject area; indicate the link by placing the number of the appropriate standards (s) after each objective. Minimum length: one page)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Ag Standard</th>
<th>NGSS Standard</th>
<th>Science and Engineering Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture and Agricultural Research Skills</td>
<td>C1.0 Evaluate the role of agriculture in the California economy.</td>
<td>HS-ETS1-1: Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</td>
<td>Planning and Carrying Out Investigations: Planning and carrying out in 9-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.</td>
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<tr>
<td></td>
<td>C1.1 Understand the history of the agricultural industry in California.</td>
<td>HS-ETS1-2: Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</td>
<td>Constructing Explanations and Designing Solutions: Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly. (HS-LS1-3)</td>
</tr>
<tr>
<td></td>
<td>C1.2 Describe how California agriculture affects the quality of life.</td>
<td>HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.</td>
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<td>C1.3 Analyze the interrelationship of California agriculture and society at the local, state, national, and international levels.</td>
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<td></td>
<td>C1.4 Research the economic impact of leading California agricultural commodities.</td>
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<tr>
<td></td>
<td>C1.5 Assess the economic impact of major natural resources</td>
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</tbody>
</table>

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in California.

| C1.6 Distinguish between the economic importance of major agricultural exports and imports. |
| C1.7 Explore factors that affect food safety and producers’ responsibilities to consumers. |
| C3.1 Describe how technology affects the logistics of moving an agricultural commodity from producer to consumer. |
| C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, and communication. |
| C3.5 Integrate the use of technology when collecting and analyzing data. |
| C13.1 State the steps of the scientific method. |
| C13.2 Analyze an agricultural problem and devise a solution based on the scientific method. |

| 2. Environment, Energy and Agriculture | C2.1 Identify important agricultural environmental impacts on soil, water, and air. |
| C2.2 Explain current environmental challenges related to agriculture. |
| C2.3 Summarize how natural resources are used in agriculture. |
| C2.4 Compare and contrast practices for conserving renewable and nonrenewable |

| HS-LS1-5: Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy. |
| HS-LS1-6: Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from |

| Using Mathematics and Computational Thinking: |
| Mathematical and computational thinking in 9-12 builds on K-8 experiences and progresses to using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions. § Use mathematical and/or computational representations of phenomena or design solutions to support |

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<table>
<thead>
<tr>
<th>C2.5 Research how new energy sources are developed from agricultural products (e.g., gascogeneration and ethanol).</th>
<th>sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. [Clarification Statement: Emphasis is on using evidence from models and simulations to support explanations.]</th>
<th>explanations. (HS-LS2-1) § Use mathematical representations of phenomena or design solutions to support and revise explanations. (HS-LS2-2) § Create or revise a simulation of a phenomenon, designed device, process, or system. (HS-LS4-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4.3 Compile the modern-day uses of animals and animal by-products.</td>
<td>HS-LS1-7: Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</td>
<td><strong>Constructing Explanations and Designing Solutions</strong>: Constructing explanations and designing solutions in 9–12 builds on K–8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories.</td>
</tr>
<tr>
<td>C3.5 Integrate the use of technology when collecting and analyzing data.</td>
<td>HS-LS2-3: Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</td>
<td><strong>Engaging in Argument from Evidence</strong>: Engaging in argument from evidence in 9–12 builds from K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science.</td>
</tr>
<tr>
<td>C3.1 Describe how technology affects the logistics of moving an agricultural commodity from producer to consumer.</td>
<td>HS-LS2-4: Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</td>
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</tr>
<tr>
<td>C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, and communication.</td>
<td>HS-LS2-5: Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.</td>
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<tr>
<td>C2.1 Identify important agricultural environmental impacts on soil, water, and air.</td>
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<tr>
<td>C2.2 Explain current environmental challenges related to agriculture.</td>
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<tr>
<td>C2.3 Summarize how natural resources are used in agriculture.</td>
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<tr>
<td>C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.</td>
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<tr>
<td>C2.5 Research how new energy sources are developed from agricultural products (e.g., gascogeneration and ethanol).</td>
<td>HS-LS2-1: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</td>
<td></td>
</tr>
<tr>
<td>C11.1 Understand the anatomy and functions of plant systems and structures.</td>
<td>HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and</td>
<td></td>
</tr>
<tr>
<td>C11.2 Identify plant growth requirements.</td>
<td>HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</td>
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</tr>
<tr>
<td>C11.3 Discern between annual, biennial, and perennial life cycles.</td>
<td>HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</td>
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<tr>
<td>C11.4 Examine sexual and asexual reproduction in plants.</td>
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<tr>
<td>C11.5 Understand photosynthesis and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.</td>
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<tr>
<td>C11.6 Summarize the respiration process in the breakdown of food and organic matter.</td>
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<tr>
<td>C5.1 Identify the function of cells.</td>
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<tr>
<td>C5.2 Analyze the anatomy and physiology of cells.</td>
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</tbody>
</table>

| 3. Molecular Biology and Agriculture | C5.3 Understand various cell actions, such as osmosis and cell division. | HS-LS1-1: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. |
| C5.4 Compare and contrast plant and animal cells, bacteria, and viruses. | HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. |
| C7.1 Differentiate between genotype and phenotype and describe how dominant and recessive genes function. | HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. |
| C7.2 Compare genetic characteristics among cattle, sheep, swine, and horse breeds. | Asking Questions and Defining Problems: Asking questions and defining problems in 9-12 builds on K-8 experiences and progresses to formulating, refining, and evaluating empirically testable questions and design problems using models and simulations. |
| | Developing and Using Models: Modeling in 9–12 builds on K–8 experiences and progresses to using, synthesizing, and developing models to predict and show relationships. |
| C.7.3 Predict phenotype and genotype ratios by using a Punnett Square. | HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. | among variables between systems and their components in the natural and designed worlds. |
| C.7.4 Explain the fertilization process. | HS-LS3-1: Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring. | Analyzing and Interpreting Data: Analyzing data in 9-12 builds on K-8 experiences and progresses to introducing more detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data. |
| C.7.5 Distinguish between the purpose and processes of mitosis and meiosis. | HS-LS3-2: Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. | Engaging in Argument from Evidence: Engaging in argument from evidence in 9-12 builds on K-8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science. |
| C.8.1 Identify types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water). | HS-LS3-3: Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population. | |
| C.8.2 Analyze suitable common feed ingredients, including forages, roughages, concentrates, and supplements for ruminant, monogastric, equine, and avian digestive systems. | HS-LS4-3: Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. | |
| C.8.3 Understand basic animal feeding guidelines and evaluate sample feeding programs for various species, including space requirements and economic considerations. | HS-LS4-1: Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. | |

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4. The Roll of Agriculture in Directing Evolution

<p>| C.3.3 Communicate public concern for technological advancements in agriculture, such as genetically modified organisms. | HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. | Obtaining, Evaluating, and Communicating Information: Obtaining, evaluating, and communicating information in 9-12 builds on K-8 experiences and progresses to evaluating the validity and reliability of the claims, methods, and designs. Communicate scientific information |</p>
<table>
<thead>
<tr>
<th>C4.1 Understand the evolution and roles of domesticated animals in society.</th>
<th>HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</th>
<th>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena: A scientific theory is a substantiated explanation of some aspect of the natural world, based on a body of facts that have been repeatedly confirmed through observation and experiment and the science community validates each theory before it is accepted. If new evidence is discovered that the theory does not accommodate, the theory is generally modified in light of this new evidence. (HS-LS4-1)</th>
</tr>
</thead>
</table>
| C4.2 Differentiate between domestication and natural selection. | HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. | Constructing Explanations and Designing Solutions: Constructing explanations and designing solutions in 9–12 builds on K–8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories. 

Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students’ own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (HS-LS4-2),(HS-LS4-4) |
<p>| C12.3 Analyze the major principles, advantages, and disadvantages of integrated pest management. | HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations. | Engaging in Argument from Evidence Engaging in argument from evidence in 9-12 builds on K-8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from... |</p>
<table>
<thead>
<tr>
<th>5. Agriculture’s relationship with technology and the natural world</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C9.1 Assess the appearance and behavior of a normal, healthy animal.</strong></td>
</tr>
<tr>
<td><strong>C9.2 Explain the ways in which housing, sanitation, and nutrition influence animal health and behavior.</strong></td>
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<tr>
<td><strong>C9.3 Analyze the causes and controls of common animal diseases.</strong></td>
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<tr>
<td><strong>C9.4 Summarize effective techniques for controlling parasites and explain why controlling parasites is important.</strong></td>
</tr>
<tr>
<td><strong>C9.5 Research the legal requirements for the procurement, storage, methods of application, and withdrawal times of animal medications, and current or historical episodes in science. Evaluate the evidence behind currently accepted explanations or solutions to determine the merits of arguments. (HS-LS4-5)</strong></td>
</tr>
<tr>
<td><strong>Obtaining, Evaluating, and Communicating Information</strong></td>
</tr>
<tr>
<td>Obtaining, evaluating, and communicating information in 9–12 builds on K–8 experiences and progresses to evaluating the validity and reliability of the claims, methods, and designs. Communicate scientific information (e.g., about phenomena and/or the process of development and the design and performance of a proposed process or system) in multiple formats (including orally, graphically, textually, and mathematically). (HS-LS4-1)**</td>
</tr>
<tr>
<td><strong>HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</strong></td>
</tr>
<tr>
<td><strong>HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</strong></td>
</tr>
<tr>
<td><strong>HS-LS2-6: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</strong></td>
</tr>
<tr>
<td><strong>HS-ETS1-1: Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</strong></td>
</tr>
<tr>
<td><strong>HS-ETS1-2: Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</strong></td>
</tr>
<tr>
<td><strong>HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost,</strong></td>
</tr>
<tr>
<td><strong>Using Mathematics and Computational Thinking:</strong> Mathematical and computational thinking in 9–12 builds on K–8 experiences and progresses to using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data. Simple computational simulations are created and used based on mathematical models of basic assumptions. § Use mathematical and/or computational representations of phenomena or design solutions to support explanations. (HS-LS2-1) § Use mathematical representations of phenomena or design solutions to support and revise explanations. (HS-LS2-2) § Create or revise a simulation of a phenomenon, designed device, process, or system. (HS-LS4-6)**</td>
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<tr>
<td>know proper equipment handling and disposal techniques.</td>
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<tr>
<td><strong>C11.1 Understand the anatomy and functions of plant systems and structures.</strong></td>
</tr>
<tr>
<td><strong>C11.3 Discern between annual, biennial, and perennial life cycles.</strong></td>
</tr>
<tr>
<td><strong>C11.5 Understand photosynthesis and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.</strong></td>
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<tr>
<td><strong>F5.1 Explain how basic soil science and water principles affect plant growth.</strong></td>
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<tr>
<td><strong>F5.3 Prepare and amend soils, implement soil conservation methods, and compare results.</strong></td>
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<tr>
<td><strong>F5.5 Explain the components of soilless media and test the use of those media in various types of containers.</strong></td>
</tr>
<tr>
<td><strong>Engaging in Argument from Evidence:</strong> Engaging in argument from evidence in 9–12 builds from K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science.</td>
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<tr>
<td>F9.1 Use different types of containers and demonstrate how to maintain growing containers in controlled environments.</td>
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<tr>
<td>F9.2 Operate and maintain selected hand and power equipment safely and appropriately.</td>
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<tr>
<td>F9.3 Select proper tools for specific horticultural jobs.</td>
</tr>
<tr>
<td>F9.4 Install landscape components and electrical, land, and water features.</td>
</tr>
<tr>
<td>F10.1 Utilize terms associated with landscape and design in appropriate context.</td>
</tr>
<tr>
<td>F10.2 Produce a residential design, including how to render design to scale using design technology and principles.</td>
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<tr>
<td>F10.3 Use proper landscape planting and maintenance practices.</td>
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<tr>
<td>F10.4 Prune ornamental shrubs, trees, and fruit trees.</td>
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</tbody>
</table>

### F. STUDENT EVALUATION STANDARDS
(List the criteria on which students will be graded in the course. Give the approximate weight for each of the grading criteria in determining the student's grade, such as tests, homework, labs, class participation. Also indicate the weight given to quarter grades and semester final in tabulating the final grade.)

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments and labs</td>
<td>60%</td>
</tr>
<tr>
<td>Assessments</td>
<td>30%</td>
</tr>
<tr>
<td>FFA Participation</td>
<td>10%</td>
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</tbody>
</table>

### G. SUGGESTED INSTRUCTIONAL ACTIVITIES
(This item is optional and is not required of the course of study. If it is completed, it should include teacher and/or student activities such as field trips, demonstrations, speakers, or special procedures that will assist the students in learning the course objectives.)

Prepared by Elizabeth Bledsoe and LeAnn Riley
A. **COURSE INFORMATION**

Grade Level: 9-10  
Length of Course: One Year  
Maximum Credit: 10  
Type: SC  
Recommendation for Enrollment: Freshman level science course or equivalent.

B. **COURSE DESCRIPTION**

Biology is a one-year laboratory-based course designed to provide students with a basic understanding of the characteristics and functions of living organisms as well as provide students with the opportunity to develop their skills in scientific investigation, which will include projects requiring research. This course satisfies one half of the science requirements for graduation as well as the UC “A-G” requirement for laboratory science. It is designed to give advanced students a greater in-depth look into the characteristics and functions of living organisms. Topics include scientific methodology, cellular structure and function, evolutionary processes, genetics, ecology, anatomy and physiology. The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C. **BOARD-ADOPTED TEXTBOOKS**


D. **SUPPLEMENTARY INSTRUCTIONAL MATERIALS**

### E. COURSE OUTLINE

<table>
<thead>
<tr>
<th>Unit/Quarter</th>
<th>Topic</th>
<th>California State Standards</th>
<th>CTE/Agriculture Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Quarter 1</td>
<td>Scientific Process</td>
<td>I&amp;E c,d,f,j,l; Bio 4e,5a,9a</td>
<td>1.a,c,d,f,j,l,m C13.0; C13.1; C13.2; C13.3</td>
</tr>
<tr>
<td>II. Quarter 3</td>
<td>Ecology</td>
<td>Bio 6a-f</td>
<td>C2.1; C2.3; G1.0; G1.4; D7.0; D7.2; E1.0</td>
</tr>
<tr>
<td>III. Quarter 1</td>
<td>Cellular Structure and Process</td>
<td>Bio 1c,e,f,g,h,l,j,2a</td>
<td>C5.0; C5.1; C5.2; C5.3; C5.4 C11.5; C11.4; C11.0</td>
</tr>
<tr>
<td>IV. Quarter 2</td>
<td>Genetics</td>
<td>Bio 1d, 2a-g, 3a-b, 4a-e, 5a-c, 7b</td>
<td>C7.0; D5.0; D5.4; D5.5; C3.3; C3.4</td>
</tr>
<tr>
<td>V. Quarter 3</td>
<td>Evolution</td>
<td>Bio 7a-d, 8a-e</td>
<td>C4.1; C4.2</td>
</tr>
<tr>
<td>X. Quarter 3-4</td>
<td>Human Anatomy and Physiology</td>
<td>Bio 9b-e, 10a-e</td>
<td>C6.0; C11.5;</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>Independent Lab Based Projects, CTE</td>
<td>Bio 9a-l, I&amp;Ea,b,c,d,f,g,k,l,m</td>
<td>2.0 - Communication:2.1, 2.2, 2.3, 2.7, 2.8, Writing: 1.3, 1.5, 2.3, 2.5, 2.6, Writing Strategies &amp; Applications: 1.6, 2.6 Listening &amp; Speaking Skills: 1.1, 1.7, 9.0 - Leadership &amp; Team Work: 9.1, 9.2, 9.3, 10.0 - Technical Knowledge &amp; Skills: 10.2, 10.3,</td>
</tr>
</tbody>
</table>

### F. COURSE OBJECTIVES FOR Biology

As part of the California State Standards for Biology/Life Science and Investigation and Experimentation, students will:

- Select and use appropriate tools and technology (microscopes, computer-linked probes, computer software, and scientific calculators) in a safe manner. I&E 1a.
- Develop hypotheses, perform tests, collect data, display data, analyze relationships, and draw conclusions in order to solve problems. I&E 1a,d,l,j.
- Analyze situations and solve problems that require combining concepts from more than one area of science. I&E 1l.
- Use the Periodic Table of the Elements to develop models of the atoms important to living organisms. Chem1a,d, Cell Bio KHSD.
- Know that the bonding characteristics of carbon lead to a large variety of structures ranging from simple hydrocarbons to complex biological molecules such as carbohydrates, proteins, enzymes, lipids, and nucleic acids. Bio 1h, Chem 2b.
- Know that the cell is the structural unit of life. Bio 1a-h, 5a-b.
- Know that fundamental life processes of plants and animals depend on a variety of chemical reactions that are carried out by various organelles in cells. Bio 1b,f,g,i.
- Know that cells are enclosed within semi-permeable membranes that regulate their interaction with their surroundings. Bio 1a.
- Know how energy is obtained and utilized by the cell and how the processes of photosynthesis and respiration are important to living organisms. Bio 1a.
Know how prokaryote and eukaryote cells and viruses differ in complexity, and how plant and animal cells and bacteria differ in their general structure. Bio 1f,g.

Know that there are important differences between bacteria and viruses, with respect to their requirements for growth and replication, the primary defense of host organisms against them, and the effective treatment of infections they cause. Bio 1c, 10a-e.

Understand that genes are a set of instructions, encoded in the DNA sequence of each organism, which specify the sequence of amino acids in proteins characteristic of that organism. Bio 1d, 4a-e, 5a-b.

Know how cells grow and reproduce through the processes of mitosis and meiosis. Bio 2a-b.

Understand basic DNA technology, such as recombination DNA procedures, forensic science, and gel electrophoresis. Bio 1d, 4a-f.

Analyze both the positive and negative impacts of genetic engineering on society. Bio 2a-b, 5c.

Know the basic principles of Mendelian genetics used to predict the phenotype and genotype of offspring in genetic crosses. Bio 2a-g, a-b.

Know how living organisms interrelate with one another and their non-living environment. Bio 6a-f.

Know how water, carbon, and nitrogen cycle between abiotic resources and organic matter in the ecosystem and how oxygen cycles via photosynthesis and respiration. Bio 1f, 6d-f.

Know how to analyze changes in an ecosystem as a result of ecological disrupters such as natural disasters, human activity, and introduction of non-native species. Bio 6b-c.

Know how changing environments and evolutionary processes result in genetic change. Bio 6b, 7a-d, 8a-e.

Know how to determine if genetic change had occurred in a population using the Hardy-Weinberg equation. Bio 7e-f.

Know the interrelationships among tissues, organs, and systems of plants and animals. Bio 9a-e, 10a-e.

Know the structure and function of the major systems, their role in homeostasis, and comparisons between organisms. Bio 9a-e.

Understand the various mechanisms organisms have for combating disease by developing a knowledge of the human immune response. Bio 10a-e.

Know the biodiversity is the sum total of different kinds of organisms and is affected by alterations of habitats. Bio 6a.

CTE Course Objectives for AG Biology

Foundation Standards

2.0 Communications: Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts.

2.1 Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.

2.2 Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.

2.3 Generate relevant questions about readings on issues that can be researched

2.6 Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

2.7 Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

2.8 Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).
2.2 Writing:

1.3 Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

1.5 Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).

2.3 Write expository compositions, including analytical essays and research reports:
   a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
   b. Convey information and ideas from primary and secondary sources accurately and coherently.
   c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
   d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
   e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.
   f. Use technical terms and notations accurately.

2.5 Write business letters:
   a. Provide clear and purposeful information and address the intended audience appropriately.
   b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
   c. Highlight central ideas or images.

2.6 Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting meeting, minutes of a meeting): Report information and convey ideas logically and correctly. Offer detailed and accurate specifications. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide). Anticipate readers’ problems, mistakes, and misunderstandings.

2.4 Listening and Speaking:

1.1. Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.

1.7 Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

9.0 Leadership and Teamwork: Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.2 Understand the ways in which pre-professional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

10.0 Technical Knowledge and Skills: Students understand the essential knowledge and skills common to all pathways in the Agriculture and Natural Resources sector:

10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.

10.2 Manage and actively engage in a career-related, supervised agricultural experience.

10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.
Agriculture Standards

The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C2.0 Students understand the interrelationship between agriculture and the environment:
   C2.1 Understand important agricultural environmental impacts on soil, water, and air.
   C2.3 Understand how natural resources are used in agriculture.

C3.0 Students understand the effects of technology on agriculture:
   C3.3 Understand public concern for technological advancements in agriculture, such as genetically modified organisms.
   C3.4 Understand the laws and regulations concerning biotechnology.

C4.0 Students understand the importance of animals, the domestication of animals, and the role of animals in modern society:
   C4.1 Understand the evolution and roles of domesticated animals in society.
   C4.2 Know the differences between domestication and natural selection.

C5.0 Students understand the cell structure and function of plants and animals:
   C5.1 Understand the purpose and anatomy of cells.
   C5.2 Know how cell parts function.
   C5.3 Understand various cell actions, such as osmosis and cell division.
   C5.4 Understand how plant and animal cells are alike and different.

C6.0 Students understand animal anatomy and systems:
   C6.1 Know the names and locations of the external anatomy of animals.
   C6.2 Know the anatomy and major functions of vertebrate systems, including digestive, reproductive, circulatory, nervous, muscular, skeletal, respiratory, and endocrine systems

C7.0 Students understand basic animal genetics:
   C7.1 Differentiate between genotype and phenotype, and describe how dominant and recessive genes function.
   C7.2 Compare genetic characteristics among cattle, sheep, swine, and horse breeds.
   C7.3 Understand how to display phenotype and genotype ratios (e.g., by using a Punnett Square).
   C7.4 Understand the fertilization process.
   C7.5 Understand the purpose and processes of mitosis and meiosis.

C11.0 Students understand plant growth and development
   C11.4 Examine plant sexual and asexual reproduction.
   C11.5 Understand the photosynthesis process and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.
   C11.6 Understand the respiration process in the breakdown of food and organic matter.

C13.0 Students understand the scientific method:
   C13.1 Understand the steps of the scientific method.
   C13.2 Analyze an animal or plant problem and devise a solution based on the scientific method.
   C13.3 Use the scientific method to conduct agricultural experiments.

D5.0 Students understand animal inheritance and selection principles, including the structure and role of DNA:
   D5.4 Understand how to predict phenotypic and genotypic results of a dominant and recessive gene pair.
   D5.5 Understand the role of mutations (both naturally occurring and artificially induced) and hybrids in animal genetics.
D7.0 Students understand common rangeland management practices and their impact on a balanced ecosystem.

D7.2 Know how rangeland management practices affect pasture production, erosion control, and the general balance of the ecosystem.

E1.0 Students understand the importance of energy and energy cycles:

E1.1 Understand the oxygen, carbon, nitrogen, and water cycles.

G1.0 Students understand plant classification principles:

G1.4 Understand the differences between and uses of native and nonnative plants.

G2.0 Students understand cell biology:

G2.1 Understand the differences between prokaryotic cells and plant and animal eukaryotic cells and how viruses differ from them in complexity and general structure.

G. STUDENT EVALUATION STANDARDS

a. Common unit pre/post testing
b. KHSD benchmark assessments
c. Teacher’s tests and quizzes
d. Standardized tests (state, federal)
e. Class assignments, activities, and research projects
f. Check lists
g. Homework/classwork
h. Laboratory assessment and analysis
i. Audio/visual media presentations

Assessment Criteria
Grading Scale
A = 90-100%
B = 80-90%
C = 70-79%
D = 60-69%
F = 0-59%

Quarter Grade Determination

All class activities and assignments 30%
CTE (FFA, SAE) 10%
Labs and research projects 30%
Quizzes/Tests 30%

Semester Grade Determination

Quarter 1 Grade 40%
Quarter 2 Grade 40%
Semester Exam 20%
District Wide Course of Study Title:

Agriculture Chemistry P

A. COURSE INFORMATION

Grade Level: 10-12
Length of Course: One Year
Maximum Credit: 10
Type: SC
Recommendation for Enrollment: Sophomore-Junior level science course or equivalent.

B. COURSE DESCRIPTION

Chemistry is a one-year laboratory-based course designed to provide students with a basic understanding of the characteristics of physical changes resulting from chemical interactions, as well as providing students with the opportunity to develop their skills in scientific investigation, which will include projects requiring research. This course satisfies one half of the science requirements for graduation as well as the UC “A-G” requirement for laboratory science. It is designed to give advanced students a greater in-depth look into the characteristics and functions physical reactions through highlighting chemical and atomic interaction. The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students investigate California agriculture, agricultural technologies, natural resources, and animal, plant, and soil sciences.

C. BOARD-ADOPTED TEXTBOOKS

General Text: World of Chemistry
Zumdahl, Zumdahl amd DeCoste
McDougal Littell
A Houghton Mifflin Company
2002
D. SUPPLEMENTARY INSTRUCTIONAL MATERIALS

Supplementary text and laboratory manual:
World of Chemistry
Teacher's Guide
Laboratory Guide

Teacher resources test bank, worksheets and group activities charts, models, supplemental reading materials (including magazines and journals), multiple audio-visual materials, computer hardware and software, Internet access, demonstration materials, living and preserved specimens, various laboratory equipment, and PowerPoint Presentations.

E. COURSE OUTLINE

<table>
<thead>
<tr>
<th>Unit/Quarter</th>
<th>Topic</th>
<th>California State Standards</th>
<th>CTE/Agriculture Standards</th>
</tr>
</thead>
</table>
| I. Quarter 1 | • Scientific Process  
• Atomic Structure and Processes  
• Chemical equations  
• Mathematics of science | 1a – e, 3a-e | Health and Safety 6.2, 6.3  
Communications 2.1, 2.2  
Technology 4.2, 4.5  
Leadership 9.2  
Alg 12.0, 13.0, 15.0  
Geom 8.0, 11.0  
Stats 8.0  
Agriscience C13 - 13.1, 13.3 |
| II. Quarter 2 | • Energy  
• Gases  
• Stoichiometry  
• Percent Yield  
• Limiting Reactant | 4a-f, 7a-d | Career Planning 3.1, 3.2  
Agriscience C8.0, C10.0  
C13.1, 13.3 |
| III. Quarter 3 | • Ionic and covalent bonds  
• Solution chemistry  
• Gas properties  
• Nuclear Chemistry  
• Acids Bases | 2a-e, 6a-d, 11a-e | Communications 2.1, 2.2  
Technology 4.2, 4.5  
Leadership 9.2  
Alg 12.0, 13.0, 15.0  
Geom 8.0, 11.0  
Agriscience C13 - 13.1, 13.3  
Technical Knowledge 10.1, 10.2, 10.3 |
| IV. Quarter 4 | • Rates of reactions  
• Solution Chemistry  
• Chemical concentration  
Independent Lab Based Projects,  
• CTE | 5a-d, 8a-c, 9a-b | Communication: 2.1, 2.2  
9.0 - Leadership & Team Work: 9.1, 9.2, 9.3,  
10.0 - Technical Knowledge & Skills: 10.2, 10.3 |
CTE Course Objectives for AG Chemistry

Course Objectives for Chemistry

1. Students will know and understand that the periodic table displays the elements in increasing atomic number and shows how periodicity of the physical and chemical properties of the elements relates to atomic structure (Standard 1).
2. Students will know and understand that the conservation of atoms in chemical reactions leads to the principle of conservation of matter and the ability to calculate the mass of products and reactants (Standard 3).
3. Students will know and understand that the kinetic molecular theory describes the motion of atoms and molecules and explains the properties of gases (Standard 4).
4. Students will know and understand that energy is exchanged or transformed in all chemical reactions and physical changes of matter (Standard 7).
5. Students will know and understand that the biological, chemical and physical properties of matter result from the ability of atoms to form bonds from electrostatic forces between electrons and protons and between atoms and molecules (Standard 2).
6. Students will know and understand that solutions are homogenous mixtures of two or more substances (Standard 6).
7. Students will know and understand that nuclear processes are those in which an atomic nucleus changes, including radioactive decay of naturally occurring and human-made isotopes, nuclear fission, and nuclear fusion (Standard 11).
8. Students will know and understand that acids, bases, and salts are three classes of compounds that form ions in water solutions (Standard 5).
9. Students will know and understand that chemical reaction rates depend on factors that influence the frequency of collision of reactant molecules (Standard 8).
10. Students will know and understand that chemical equilibrium is a dynamic process at the molecular level (Standard 9).

Foundation Standards

1.1 Mathematics

Algebra I standards:

(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.

(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems

Geometry standards:

(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
Probability and Statistics standards:
(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

Science 1.2
Investigation and Experimentation
(1.a) Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
(1.d) Formulate explanations by using logic and evidence.
(1.f) Distinguish between hypothesis and theory as scientific terms.
(1.j) Recognize the issues of statistical variability and the need for controlled tests.
(1.l) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.
(1.m) Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

Communications
Reading
2.1, Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve
2.2, Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents
2.3 Generate relevant questions about readings on issues that can be researched

Writing
1.3 Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.

2.3, Write expository compositions, including analytical essays and research reports:
a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
b. Convey information and ideas from primary and secondary sources accurately and coherently.
c. Make distinctions between the relative value and significance of specific data, facts, and ideas.
d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
e. Anticipate and address readers' potential misunderstandings, biases, and expectations.
f. Use technical terms and notations accurately.

2.6 Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
a. Report information and convey ideas logically and correctly.
b. Offer detailed and accurate specifications.
c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
d. Anticipate readers' problems, mistakes, and misunderstandings
Career Planning
3.1 Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

Technology
4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.

Problem Solving
5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
5.3 Use critical thinking skills to make informed decisions and solve problems.

Health and Safety
6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
6.3 Understand how to locate important information on a material safety data sheet.

Leadership and Teamwork
9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

Technical Knowledge
10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.
10.2 Manage and actively engage in a career-related, supervised agricultural experience.
10.3 Understand the importance of maintaining and completing the California Agricultural Record Book

Agriscience Pathway
Agriculture Standards

The Agriscience Pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

Ag and Environment
C2.0 Students understand the interrelationship between agriculture and the environment:
C2.1 Understand important agricultural environmental impacts on soil, water, and air.
C2.2 Understand current agricultural environmental challenges.
C2.3 Understand how natural resources are used in agriculture.
C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.
C2.5 Understand how new energy sources are developed from agricultural products (e.g., gas cogeneration and ethanol).

Animal Nutrition
C8.1 Know types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water).
Soil Science
C10.2 Understand how soil texture, structure, pH, and salinity affect plant growth

Scientific Method
C13.1 Understand the steps of the scientific method.
C13.2 Analyze an animal or plant problem and devise a solution based on the scientific method.
C13.3 Use the scientific method to conduct agricultural experiments.

5. Student Evaluation Standards
Students will be able to care for and use agriculture equipment as related to the labs. Students will receive points for projects/laboratories, agricultural projects, leadership, homework and class work, and quizzes, reports and midterms and finals. A grade will be determined by computing the total number of points the student acquires out of the total points possible. Semester grades will reflect the following grading system:

<table>
<thead>
<tr>
<th>Area</th>
<th>Percent of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership activities (FFA)</td>
<td>10</td>
</tr>
<tr>
<td>Homework</td>
<td>10</td>
</tr>
<tr>
<td>Quizzes, Midterm and Final</td>
<td>40</td>
</tr>
<tr>
<td>Reports/SAE</td>
<td>20</td>
</tr>
<tr>
<td>Laboratories</td>
<td>20</td>
</tr>
</tbody>
</table>

Prepared by:  James Selgrath               Date: 02/29/2012
Section F

Program Completion Standards
Completion of the following standards identifies an agriculture program completer:

**FFA Participation**
- Involved in five activities per year.
- Served as a chairperson for a major activity identified in the Chapter's Program of Activities.
- While involved in the FFA for a minimum of three years, the student must earn a total of 700 points according to the Bakersfield's Point System.
- Earned and received the Greenhand and Chapter FFA Degrees.

**Supervised Agriculture Experience (SAE)**
- Minimum of $1,000 project earnings.
- Minimum of 500 hours of self-labor.
- Individual SAE increased in scope and/or diversity each year and is related to the student's individual career plan.
- The SAE must be at least 4 months in duration each year during the 10th, 11th, and 12th grade years.

**Classroom Instruction**
- Completed a minimum of 720 classroom hours of course work in Agriculture Education.
- Maintained at least a 2.0 grade point average in all course work at the high school.
- Earned a "C" or better in all agriculture courses.

**General Considerations**
- Developed attitudes and characteristics which are desirable for employment.
- Participated in at least one mock or actual job interview.
- Proficient in at least 70% of the proficiency standards in the chosen area of instruction.
Section G

Description of Facilities and Major Equipment
Section G
Description of Facilities and Major Equipment

Seven years ago the agriculture department was renovated. The main agriculture classroom and ag welding shop were modernized. Mrs. Wilke’s classroom originally consisted of a classroom, a single stall bathroom, and indoor greenhouse. Her classroom did not have air conditioning and the bathroom plumbing did not function correctly. In the ag welding shop, the welding booths and equipment needed updating. Mrs. Wilke’s classroom was refitted to include an office for the ag teachers, two classrooms, separate men’s and women’s bathrooms, and an agriscience lab. The Ag office provides ample space for storage of student records and paper supplies. There is a desk and computer for each ag teacher in the ag office as well as a desk for the officer team. Other FFA supplies and equipment are stored in cabinets in the hallway between the two ag classrooms. All floral supplies are stored in a room located above Mrs. Wilke’s classroom. Air conditioning and heating were also installed in all areas. In the ag welding shop, a new ventilation system was installed. Air conditioning and heating were installed in the shop. All of the windows were replaced to decrease the amount of noise from the train. The metal doors on the original booths were replaced with welding curtain. Eight new booths were added and equipped with new welders.

Currently Mrs. Wilke and Mrs. Eyraud are in both of the new classrooms in the ag department and share the agriscience lab between their agriscience classes. Last year Mrs. Wilke updated the chemistry equipment in the agriscience lab through a Donors Choose grant. This allows the ag chemistry students to have access to lab equipment during class but also when they are absent. Until Mrs. Wilke obtained the new equipment, the ag chemistry class was sharing equipment with the regular chemistry classes which made make up labs difficult for students who were absent. The agriscience lab is outfitted to have 8 stations with enough lab equipment for three to four students.

Mr. Eyraud has a classroom in the IT building as well. In addition to his classroom, Mr. Eyraud has two ag shops for his ag mechanics classes. For the last two years he has been in the process of retooling the shops to have all the tools necessary to teach ag mechanics according to the pacing guide adopted by the Ag Mechanics teachers in the Kern High School District. He has cleaned out and reorganized the ag mechanics shop.

The Bakersfield High School Ag Department has access to their own ag truck and ag van to transport

<table>
<thead>
<tr>
<th>Description of Major Equipment</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers, Keyboards, and Monitors</td>
<td>8</td>
</tr>
<tr>
<td>Chromebook Cart (School’s cart, but housed in the Ag Department)</td>
<td>1 cart with 39 chromebooks</td>
</tr>
<tr>
<td>Printers</td>
<td>4</td>
</tr>
<tr>
<td>TV</td>
<td>1</td>
</tr>
<tr>
<td>Floral Display Cases</td>
<td>2</td>
</tr>
<tr>
<td>Floral Refrigerator</td>
<td>1</td>
</tr>
<tr>
<td>Floral Shears</td>
<td>30</td>
</tr>
<tr>
<td>Misc. Floral Equipment- glue guns, vases, compotes, etc</td>
<td></td>
</tr>
<tr>
<td>Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Camera for Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Laptops</td>
<td>2</td>
</tr>
<tr>
<td>Surface Pro 3 Tablets</td>
<td>2</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>1</td>
</tr>
<tr>
<td>Timeclock Machine</td>
<td>3</td>
</tr>
<tr>
<td>DVD/VHS Player</td>
<td>1</td>
</tr>
<tr>
<td>Trout Tanks</td>
<td>2</td>
</tr>
<tr>
<td>Photocopy Machine</td>
<td>1</td>
</tr>
<tr>
<td>Document Cameras</td>
<td>2</td>
</tr>
<tr>
<td>Projectors</td>
<td>5</td>
</tr>
</tbody>
</table>

*See the department’s comprehensive plan for a full list of equipment
students to FFA events and all SAE activities. The program also owns their own livestock trailer to haul animals during the summer and to the Kern County Fair. The ag van was only obtained in 2015 and will not be replaced for a while.

The Bakersfield Ag Department also has two facilities off campus for SAE purposes. The first is the school farm. The ag program is lucky enough to have its own school farm located on land borrowed from alumni of the program. Students are able to keep their pig and sheep SAE projects out there for the duration of the summer. Students pay rent to help cover water costs and cost of using the land. Students also have access to a district wide school farm located at the Regional Occupation Center. If for some reason a student needs to keep their animal there, they are able too. Also the Bakersfield High Ag Department has a locked storage unit to store all of the fair equipment there.
Section H

Five Year Facility and Equipment Acquisition Schedule
### Section H – Program Plan

**Five Year Facility and Equipment Acquisition Schedule**

*Bakersfield Agriculture Department*

*2018-2023*

<table>
<thead>
<tr>
<th>2018-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchase a plasma cam and its software.</td>
</tr>
<tr>
<td>2. Purchase an additional livestock trailer.</td>
</tr>
<tr>
<td>3. Update/repair/replace welding units.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2019-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hand held plasma cutter.</td>
</tr>
<tr>
<td>2. Update/repair/replace welding units.</td>
</tr>
<tr>
<td>3. Lab Equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2020-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchase a new ag truck</td>
</tr>
<tr>
<td>2. Update/repair/replace welding units.</td>
</tr>
<tr>
<td>3. Lab equipment.</td>
</tr>
<tr>
<td>4. Fork Lift.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2021-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Update/repair/replace welding units.</td>
</tr>
<tr>
<td>2. Lab equipment.</td>
</tr>
<tr>
<td>3. Update Farm pens.</td>
</tr>
<tr>
<td>4. Tractor.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2021-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Greenhouse</td>
</tr>
<tr>
<td>2. Purchase soil sterilizer and a batch mixer.</td>
</tr>
</tbody>
</table>
Section I

Staff Assignments
### Section I
Bakersfield High School Agriculture Department
Staff Assignment Chart

<table>
<thead>
<tr>
<th>General Assignments</th>
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Section J

FFA Program of Activities
Bakersfield FFA

2018-2019
PROGRAM OF ACTIVITIES
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INTRODUCTION

The Future Farmers of America is a national organization of, by, and for students studying agriculture in public secondary schools under the provision of the National Vocational Education Act in 1917. It is a non-profit, non-political youth organization designed to help students strive for excellence through the development of leadership, advancement of agriculture technology, and improvement of life. The FFA is also an intra-curricular activity providing opportunities for students to participate in. The foundation upon which the FFA organization is modeled is leadership, service, thrift, scholarship, agricultural advancements, organized recreation, citizenship, and patriotism.

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success. For more than 81 years, the FFA has complemented agricultural instruction by making classroom lessons come to life through realistic applications. Organized in November 1928 it serves to motivate and vitalize effective instruction offered to students in agriculture and provide further training in citizenship and agricultural business.

The Bakersfield High School Agriculture Department dates back to 1905 with the chapter being established in 1929. It was the 15th chapter to earn its charter. At one point in the department’s history, eleven agriculture teachers taught at Bakersfield High School with their own agriculture building located just west of the current science building. The Bakersfield High School Agriculture Department is one of the oldest agriculture departments in California. Since the 1950s, the rapid growth of Bakersfield forced the district to open new high schools. The agriculture teachers at Bakersfield High School moved to teach at the new schools. Currently Bakersfield High School has three agriculture teachers advising over 400 FFA members who currently represent the urban characteristics of the school.

THE MISSION AND STRATEGIES OF THE FFA

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

To accomplish this mission, FFA:

- Develops competent and assertive agricultural leadership.
- Increases awareness of the global and technological importance of agriculture and its contribution to our well-being.
- Strengthens the confidence of agriculture students in themselves and their work.
- Promotes the intelligent choice and establishment of an agricultural career.
- Encourages achievement in supervised agricultural experience programs.
- Develops interpersonal skills in teamwork, communications, human relations and social interaction.
- Builds character and promotes citizenship, volunteerism and patriotism.
- Promotes cooperation and cooperative attitudes among all people.
- Promotes healthy lifestyles.
- Encourages excellence in scholarship.
The National emblem of the FFA is significant and meaningful in every detail. Used by members in all recognized units of the organization, it is made up of five symbols: the owl, the plow, and the rising sun within the cross section of the ear of corn, which is surmounted by the American eagle.

**The FFA Motto**

Learning to do,
Doing to learn,
Earning to live,
Living to serve

**FFA Colors**

National Blue and Corn Gold
The FFA Creed

I believe in the future of agriculture, with a faith born not of words but of deeds - achievements won by the present and past generations of agriculturalists; in the promise of better days through better ways, even as the better things we now enjoy have come to us from the struggles of former years.

I believe that to live and work on a good farm, or to be engaged in other agricultural pursuits, is pleasant as well as challenging; for I know the joys and discomforts of agricultural life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of progressive agriculturalists to serve our own and the public interest in producing and marketing the product of our toil.

I believe in less dependence on begging and more power on bargaining; in the life abundant and enough honest wealth to help make it so – for others as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

I believe that American agriculture can and will hold true to the best traditions of our national life and that I can exert an influence in my home and community which will stand solid for my part in that inspiring task.

The creed was written by E.M. Tiffany, and adopted at the 3rd National FFA Convention. It was revised at the 38th and 63rd National FFA Conventions.
BHS FFA Chapter Officers
2018-2019

President
Morgan Wilke

Vice President
Renee Rodriguez

Secretary
Joebel Marcelino

Treasurer
Jesse Shelbourne

Reporter
Isaiah Ruiz

Sentinel
Montera Womack

Committee Chairs
Healthy Lifestyles
Selma Alvarez
Financial
Wendy Becerra
Human Resources
Kirstyana Avila

Advisors
Mr. Eyraud
Mrs. Eyraud
Mrs. Wilke
PROGRAM OF ACTIVITIES
Division 1: Growing Leaders

LEADERSHIP  To provide leadership development opportunities for all members.

Activity: Region Boot Camp
Description: The Region Boot Camp is hosted by the Regional FFA Officers and State FFA Officers. Team building activities, personal reflection, goal setting and team bonding experiences are core experiences of this leadership experience. Officers are put into time sensitive situations faced with a problem to solve together; how they accomplish that is up to them. Where they start and end that process usually changes from the start of the camp and the end of camp.

Goal #1  100% of the chapter officer team attend the boot camp.

Goal #2  Have the chapter officer team complete all of the challenge courses in the allotted time given. Having attended for the first time last year it was evident that our students had a hard time with the challenge courses and communication as they did not complete a single task in the assigned time period. Returning officers stressed to new officers how to stay on task.

Goal #3  Have the officers keep a positive attitude towards one another for the duration of the event. With the start of school pending and other extra-curricular activities creating stress the physical stress of this event created strain and exhaustion that at the end of the day pushed the team to their breaking point. At the weakest time the team needed to be the strongest by not giving into verbal attacks but lifting on another up.

Activity: Chapter Officer Leadership Conference
Description: A day event intended to provide officers with leadership training provided by the section officer team and provide a social atmosphere for section members.

Goal #1 Have 100% of the chapter officers attend the Chapter Officer Leadership Conference.

Goal #2 Have the officers participate in the section competition activity and be competitive.

Goal #3 Have the officer team look professional in the afternoon session during “casual” wear session by wearing officer polos and matching pants that they will wear throughout the year at lunch activities.

Activity: Chapter Officer Retreat
Description: The Chapter Officer Retreat is a four day camping retreat at a State Beach Park. Most of the members in the chapter have never camped, so the experience is a unique one for most everyone involved. The trip is filled with planning activities for the year, goal setting, team building, and of course, free time for recreation.

Goal #1 Have 100% of the officer team and the advisors attend the camping retreat.

Goal #2 Everyone sleeps in a tent, so the students are responsible for setting up and taking down their own tents. The chapter supplies the tents for the students. The tents must fit in their original bag at the end of the trip.

Goal #3 Students set the menu before leaving for the camping trip. The menu is divided up so that each officer brings an equal share on the trip. Students then draw for cooking/cleaning duties during the campout. They each must experience equal cooking and cleaning experiences.
LEADERSHIP, continued...

Name of Activity: National FFA Week – Chapter leadership activities
Activity Description During National FFA Week lunch time activities are conducted to promote FFA Week and encourage/engage member involvement.

Goal #1 Form committees for each of the activities early in the month of January, so that students get the opportunity to run the daily activities. This helps promote the activities and encourage greater participation. Committees need to meet regularly to organize and have supplies ready one week prior.

Goal #2 Plan activities that include all types of skills such that it appeals to all members in the chapter. Activities such as nail pounding or hay bucking might be more appealing to the Ag Mechanics students who tend to not participate as much as our other students.

Goal #3 Include a Teacher Appreciation lunch as one of our activities and allow only those students that have been on the committee to serve during lunch. Students must be dressed in chapter t-shirts, and officers will be in their officer polos and pants.

Activity: Integrated Leadership Development Conferences (Greenhand, MFE, ALA, SLE)
Description Leadership series conferences that students participate in to develop leadership skills each year as they progress through the FFA program.

Goal #1 Take 50 students to the Greenhand Conference. Promote conference with posters to encourage kids to sign up.

Goal #2 Take up to 27 total students to MFE and ALA and encourage seniors to apply for the SLE conference.

Goal #3 Take up to 27 students to the State FFA Leadership Conference in Anaheim, CA.

Goal #4 Take up to 9 students to the National FFA Leadership Conference in Indianapolis, Indiana.

HEALTHY LIFESTYLES To improve mental & physical health of members through healthy lifestyle choices.

Activity: Water Balloon Dodgeball
Description Much like the game of dodgeball this game is played with water balloons in our school’s grass quad area after our first chapter meeting. It is played on a court similar to the size of a volleyball court. Teams are divided based on the number that show up to the meeting. Balloons are prepared prior to the meeting, and placed in buckets that surround the court.

Goal #1 Attract a high number of students to the first meeting with this fun activity. Have students sign up by forming teams, but also allow add-ons for those that are able to come at the last minute to the meeting.

Goal #2 Be prepared with the balloons and court long before the meeting starts. Purchase quick filling balloon sets from Costco, and mark the court with chalk or paint.

Goal #3 Practice a concise set of rules so that they are simple and easier to manage the large group for this activity.

Goal #4 Keep this first chapter meeting agenda short so that the focus of the time is spent on the activity.
HEALTHY LIFESTYLES, continued...

Activity: Frito Boat/Hot Cheetos Boat Social

Description: To kick off the first chapter meeting there is a Frito Boat/Hot Cheetos Boat lunch social on the same day that is free to all members. Students cannot go off campus, so the free lunch is a great way for them to see the other students that are in the program as well.

Goal #1: Serve the students as quickly as possible. Have a committee of older students sign up to help serve to allow officers to run activities. Typically there are almost 250 that attend the lunch activity.

Goal #2: Plan activities (Ninja, Concentration, music, etc…) that keep the students in the ag department area, so they will mingle with other students. Officers will run these activities and get to know the members.

Goal #3: Make sure there is enough food for everyone, and that they are not left hungry afterwards. To do this have sign ups for 1 week prior to the event to get an accurate count.

Activity: Movie Night

Description: After our chapter meeting in January we offer a movie night for our members with refreshments. As it is winter and many do not go want to go outside for activities, this is fun activity just before our three day weekend when the teachers have their in-service day.

Goal #1: Keep the students engaged in chapter meetings throughout the winter months by offering a fun activity, such as movie night, to participate in.

Goal #2: Peak interest by creating a voting list of the top five movies for those coming to the meeting. Unveil the result at the meeting.

Goal #3: Provide refreshments and a lounge type atmosphere for students to enjoy the movie. Refreshments recommended include hot chocolate and smores as well as popcorn. To create the lounge type atmosphere the officers will rearrange the tables and chairs so that students will be able to sit on blankets and pillows.

Goal #4: When discussing the movie at the executive meeting officers should choose between movies they own. After the ballot is official the officers should know as soon as possible so we are ready with the movie by the time of the meeting.

Activity: Morning, Lunch and Evening Meetings rotated

Description: Many chapters offer meetings at one time only. Due to the fact that many of our students have single parent families, we rotate when the meetings are held to provide students with opportunities to attend some of the chapter meetings.

Goal #1: Offer at least one chapter meeting before school. This is held the day after Back to School Night, and we call it the Breakfast Buddy meeting.

Goal #2: Offer at least three chapter meetings at lunch during the school year as well trying to offer at least one lunch activity per month.

Goal #3: Offer chapter meetings that occur after school at 6:00 pm, and if possible, coordinate the meetings to be held at the same time as the BHS Ag Alumni meetings, so that the BHS FFA members’ parents do not have to leave when they drop their kids off (if they choose).
SCHOLARSHIP To enhance the development of scholastic achievement to improve the qualities and abilities of each member.

Activity: Quarterly Academic Progress

Description At the end of each quarter when report cards are sent out students are able to show their report cards to their advisor/teacher. Each student will receive FFA Points for showing their report card, and those with the established GPA are invited to a GPA pizza party.

Goal #1 Set an attainable GPA, which the committee determined to be a 3.0, for 3 quarters, in order to qualify for the pizza party.

Goal #2 Have at least half of our membership show their report card each quarter for 10 FFA points in order to promote academic success regardless of their GPA. The hope is that it will spark some conversation to motivate them for the next quarter.

Goal #3 Provide a two week time period for students to show their report card and/or Synergy on their phones (since some kids do not get printed report cards)

Activity: College Board Corner

Description Create and post a college and career information board regarding post-secondary agriculture material.

Goal #1 Post information in the fall about upcoming SAT, PSAT and college application deadlines.

Goal #2 Post information about scholarship applications and deadlines. Also post award recipients after the Kern Scholarship Dinner and Senior Financial Awards Nights in May.

Goal #3 Post ag career information and opportunities.

Goal #4 Print a list of current seniors and the ag scholarships available and check off the scholarships they submit. Also check off if they complete FAFSA.

Activity: Officer Tutoring

Description Have the officers and/or older members with strong academic provide tutoring opportunities during the first semester to help students improve their GPA. (first semester only: promote by making posters that are put in ag classes throughout the first semester)

Goal #1 Offer tutoring to ag students twice per week before school, at lunch, and after school as it works for each individual officer.

Goal #2 Offer tutoring for core subjects.

Goal #3 Track the students that attend the tutoring to determine success rate of tutoring.

Goal #4 Advertise the tutoring opportunity better in all classrooms. Make a signup card for interested students to complete and turn in to the ag teachers who can then distribute to the officers.

Activity: HS Alumni in College and/or Supporters as Guest Speakers at Banquet

Description Invite BHS FFA alumni and/or supporter to speak the Fall and/or Spring banquet as a guest speaker.

Goal #1 Provide at least one month’s notification/invitation.

Goal #2 Provide the invitee(s) with the theme of the banquet and length of time for the presentation.

Goal #3 Announce the Alumni/Supporter on the invitation.
Personal Growth To improve the identity and self-awareness of members.

Activity: Haunted House
Description As a safe alternative in the month of October we offer a Safe Halloween Haunted House after our chapter meeting.

Goal #1 Have 80% of our Greenhand members present at the chapter meeting. Have students sign up to make sure that they will attend. Provide them with a ticket for entrance into the Haunted House.

Goal #2 Form a Haunted House Committee comprised of 2nd-4th year members in September that meets weekly.

Goal #3 They will develop a list of their top five unique themes (chapter-friendly so that all can participate and differs from previous years) that the greenhands will vote on. The theme will be revealed the night of the Haunted House so as to provide a

Goal #4 Promote the Haunted House with posters and flyers as well as classroom announcements. Make a short video to promote it as well.

Goal #5 Close the ag shop to Homecoming Float building so that their supplies are not in our way. Plan a set up day the weekend prior to the event.

Activity: Host Section Opening and Closing Ceremonies Contest
Description The Kern Inyo Section FFA Opening and Closing Ceremonies Contest is the largest section activity. This year will be our second year to host it (2018).

Goal #1 Have the following teams compete: 1 Freshmen, 1 Novice, 1 Open A, 1 Open B, 1 Open C, 1 Officer, and 1 Spanish. Make sure to promote the Spanish team more since we had interested members but not enough to know that there was a full team.

Goal #2 Give priority to students who need an activity above the chapter level to help them for their State FFA Degree requirement, but encourage all members that want to help so that they can get the same above the chapter level activity credit. Conduct a meeting for all volunteers one week prior to the event to make sure they know their responsibilities and attire to wear.

Goal #3 Conduct the event efficiently, correctly and on time so that all participants are able to leave by 8:30 pm.

Goal #4 Have facilities unlocked and set up one hour prior to the event with a supervisor present in each.

Goal #5 Have registration and orientation ready one hour prior with all materials.

Activity: Lunchtime Activities
Description These are activities offered during lunch each month as an opportunity to earn FFA points. Since there are students who cannot earn leadership points by attending chapter meetings after school due to transportation, lunch activities were created as an option for those students to participate.

Goal #1 Provide a minimum of one/two lunchtime activity per month. During the month of February there will be three student lunch activities and one staff lunch appreciation activity at which the students will be servers.

Goal #2 Well planned Lunchtime activities will be aimed at drawing 80-100 members or more for each lunch period.

Goal #3 Activities will rotate in variety and/or two types will be offered at the same lunchtime to draw attention from all groups in the ag department.
Personal Growth, continued...

**Activity: Fall Banquet**

*Description* In the fall the first year members are required to attend the fall banquet where they are awarded their Greenhand Degree certificate and pin.

**Goal #1** Have 80% of the first year members attend the banquet.

**Goal #2** Have all first year members complete the greenhand degree application and learn how to receive an award on stage.

**Goal #3** Complete the awards ceremony and greenhand auction (volunteer hours of service) in two hours so everyone can get home early. To have dinner, awards, and the auction end in this time frame it will leave a favorable impression.

**Goal #4** Provide awareness of the multiple opportunities for greenhands to develop their leadership, personal growth, and career success in upcoming chapter events and activities.

**Activity: Chapter T-shirts**

*Description* Chapter t-shirt days will be held every Tuesday to promote chapter spirit and leadership.

**Goal #1** Design a chapter t-shirt that can be worn by both boys and girls.

**Goal #2** Have the t-shirts purchased and ready to sell the first week of school. Offer the standard t-shirt and v-neck shirts. Also purchase chapter t-shirts in pink for the month of October for cancer awareness.

**Goal #3** Have three t-shirts as door prizes at chapter meetings.

**Goal #4** Send out a Google Form link on the Chapter’s Remind to request input for the upcoming year’s chapter t-shirt.

**Goal #5** Provide FFA points for purchasing the chapter t-shirt (10 points) and for wearing the shirt on the designated day(s) (5 points). This helps promote the chapter as well.

**Goal #6** Offer an alternative for those students who cannot afford to purchase a chapter t-shirt. During our Tri-tip dinner to go fundraiser, if the student sells $80 (or more) in dinner tickets, they can earn a chapter t-shirt. Limit is 1 chapter t-shirt per student.

**Goal #7** Provide a chapter t-shirt for every staff member during National FFA week.

**CAREER SUCCESS** To help members achieve lifelong success during high school and after.

**Activity: World Ag Expo**

*Description* This is the largest international agriculture career show, which we commonly call the Tulare Farm Show. It is a marketplace and celebration of all things ag. Students are exposed to how farmers can transform their operation, and consumers all over the world are positively impacted by the increased efficiency and the continuous re-evaluation of ‘what we’ve always done.’

**Goal #1** Take 50 students representing all parts of the department on the field trip using a shared google sheet for sign ups.

**Goal #2** Get the tickets donated if possible since more than 85% of our school is on free and reduced lunch.

**Goal #3** Transport students on a Charter Bus since other programs in the school also attend the same event and also transport students using a Charter Bus. If we want to keep kids in our program, we have to be as desirable to them as the other programs since they transport them on a charter bus as well.
CAREER SUCCESS, continued...

Activity: LA Flower Market

Description The Los Angeles Flower District is the premiere wholesale L.A. flower market resource for flower growers, shippers, suppliers, floral wholesalers, distributors, floral designers, event planners and retail florists. It is on Wall Street between 7th and 8th streets, the Flower District and Los Angeles flower markets* welcome both the floral trade and the public.

It is known as the Los Angeles Flower Mart, Los Angeles Flower Market, LA Flower Mart and Los Angeles Flower District. The large walk-through flower markets offers a spectacular and unequalled array of the freshest flowers, greens and fillers available, many of them California grown, along with an impressive, overwhelming selection of floral supplies. This field trip offers the best possible exposure to the extreme volume of wholesale flowers, plants and media used in the floral industry.

Goal #1 Take 50 floral students, but have a waiting list of approximately 5 students. We leave at 3:00 am, so if they do not arrive on the day of the field trip, the waiting list students can take their place.

Goal #2 Provide students with an ID list of flowers, plants and tools. They are to take ID pictures and submit them via google slides that can be utilized for the floral team and class purposes.

Goal #3 Have the badge program at the floral market provide complimentary badges to admit the students into all part of the flower market so that students have access to plants, flowers and tools for identification.

Goal #4 Have the students find three different flower designs that they might try to create in a future arrangement and take a picture of it. Have them identify the principles of design.

Activity: CDE Fair

Description In order to better promote Career Development Events (CDEs), the officer team decided that a CDE Fair needed to be held in the fall. This event is held during lunch before Back to School Night and at the Breakfast Buddy Meeting. A parent meeting will also be incorporated in October.

Goal #1 Provide a poster board presentation explaining each of the CDEs our chapter offers, where it competes, who competes, etc. Create flyers about each competition, the field days and the dates of the competitions; include the parent meeting date as well.

Goal #2 Set up a schedule of CDE representatives to work/talk during lunch with members and hand out the flyers.

Goal #3 Promote the CDE fair with a short video clip, posters, and announcements. Use balloons, decorations, and candy at the booths to make it more appealing for students to coming and participate.

Goal #4 Provide a parent message by flyer, email and Remind App to inform them of the CDE meeting which will explain more details about CDEs and the commitment required.

Activity: Log Cabin Florist

Description To provide a real world industry experience, students are able to volunteer at Log Cabin during the holiday season to get volunteer hours and more floral experience.

Goal #1 Provide hands-on experience in the floral industry where the students can put the skills that they have learned in the classroom to the test.

Goal #2 Provide students with exposure to a variety of plants and flowers that our department cannot purchase due to budgetary constraints.

Goal #3 Provide a unique learning opportunity to see floral design from a different perspective and learn from very talented designers while still learning the most basic skills and making industry connections.
Division 2: Building Communities

ENVIRONMENTAL  To ensure good stewardship of the land and develop individuals who have good environmental practices.

**Activity: Recycling Wars**

**Description**  As a trial in our first year we did a recycle war between class periods for aluminum cans and plastic bottles for two weeks. It was very successful, and though we did not continue with recycling because our Academy program was recycling, we plan to have ongoing recycling collection in class and two recycling wars - one in the fall and one in the spring to match our service projects.

**Goal #1**  Create multiple lined boxes identified by periods and types (bottles and cans) for each teacher for the two week collection as part of the environmentally responsible contribution and the human resources projects. Bottles/cans are checked/collected every 2-3 days based on officer assignments to advisors’ rooms.

**Goal #2**  All money collected would go toward the designated human resource project.

**Goal #3**  Separate and weigh all cans/bottles by period and provide results within one week of the event. Take recycling to local recycling center and deposit money into account until it can be distributed for our human resource project.

**Goal #4**  Incorporate recycling wars each semester.

**Activity: Trout Release with Department of Fish and Game**

**Description**  Through the Department of Fish and Game our department is given a contract to raise trout eggs from the egg state to the fry state. These are then released into the Kern River in the biologist approved site with the students that were on the project for the duration of the project.

**Goal #1**  Of the 90 eggs delivered to each of the two classrooms, the goal is to raise 90% of them to the fry stage.

**Goal #2**  Take 27 of the most active members on the project to the trout release.

**Goal #3**  Have the students participate in a fly fishermen presentation, demonstration, try fly fishing, release the fry into the river, and visit the fish hatchery.

**Activity: Campus Clean Up**

**Description**  Unfortunately not all students take responsibility for their own garbage at lunch. Campus Clean Up is a voluntary activity where FFA members help beautify the campus instead of creating extra work for the custodial staff. As a follow up to National FFA week, we plan to take 2 days to clean up the campus after both lunches.

**Goal #1**  Enlist 40 members per lunch period to assist with garbage clean up.

**Goal #2**  Clean up the campus area in 10 minutes or less by breaking up into teams of 10 or more students and assigning them sections of campus to pick up.

**Goal #3**  Provide students with proper equipment (gloves, garbage bags, etc.) to pick up the litter left behind.

**Activity: Outdoor Recreation - Camping (Officer Retreat)**

**Description**  Many students in the program have never been camping in a tent, and for some, they have never been to the beach. For the officer retreat the teamwork and bonding that our students find from this activity is invaluable as bond during the learning process of “camping in the outdoors.”

**Goal #1**  Set up and take down the tents as a team.

**Goal #2**  Prepare, cook, and clean up meals at the campsite.

**Goal #3**  Conduct team building activities that they have brought with them.

**HUMAN RESOURCES**  Follow the FFA Creed by offering members opportunities to exert an influence in their homes and communities.
Activity: Clothing Collection for Nonprofit Organization
Description In the month of October just as everyone is pulling out their winter clothes from last year, and sorting through what still fits and what can be donated. To put those donations to good use and provide a beneficial outlet for families that sometimes do not know where to donate these items, we held a clothing drive this year.

Goal #1 Officers will kick start donations by bringing items to each classroom to be donated. When others see donations, they are more likely to follow the example. Also, the officers will provide more promotional posters to provide information about the event.

Goal #2 Collect donations of men’s, women’s, and children’s clothing appropriate for winter wear that were new or very gently used. Garments could include pants, shirts, sweaters, and jackets. Undergarments and socks needed to be new donations.

Goal #3 Provide donation boxes for each classroom so that students and advisors had a place to put the donated items once brought to the classroom. This would help with the organization of the items collected during the process.

Goal #4 Sort through the donated items to verify that the items were new/gently used as well as sort them by men, women and children. Once sorted and folded the items would be donated to the local Salvation Army on behalf of the chapter.

Activity: Tie Blankets
Description The chapter makes tie blankets for the two SPCAs, patients at the AIS, CBCC, Lauren Small Children’s Medical Center, Grossman Burn Center, and the Homeless Shelter.

Goal #1 Apply for the year long Living to Serve Grant by June 15 to get funding for part of the tie blanket material.

Goal #2 Have a tie blanket making activity with the entire KI Section at the KC Fair.

Goal #3 Have two activities with multiple ASB groups on campus in December and February.

Goal #4 Donate 100 blankets to the Homeless Shelter/hospitals and 50 to the SPCAs.

Activity: Easter Egg Hunt and Activities for Homeless Shelter
Description The chapter provides an annual Easter Egg Hunt at the Homeless Shelter located on East Truxton Avenue, providing Easter Baskets and activities for kids.

Goal #1 Collect plastic Easter eggs, baskets, stuffed animals, candy, bubbles, Easter grass, and chalk to provide for the Easter Egg hunt and activities for 60 kids at the Homeless Shelter.

Goal #2 Reach out to staff for donations beyond what our FFA chapter provides. Send out an email, and provide a donation box in the staff lounge.

Goal #3 Provide 60 Easter baskets filled with goodies, an Easter Egg hunt, sidewalk chalk art, and face painting for a two hour window during Spring Break on a day that does not conflict with other free community Easter programs.

HUMAN RESOURCES, continued…

Activity: Adopt a Family Christmas
Description The Adopt a Family Christmas program identifies a family in need through our counseling staff at school or through a local community service agency. The chapter provides a reasonable Christmas celebration for the adopted family that they might not otherwise be able to celebrate.

Goal #1 Identify a medium size family, and the individual wants/needs of each individual. Provide an anonymous list of the family (just gender, age, and wants/needs) to the members with a due date.

Goal #2 Secure Christmas dinner donations from the members

Goal #3 Deliver the gifts wrapped and the dinner in time for Christmas.

Citizenship To encourage members to become active, involved citizens of their school, community, and country.

Activity: Military Letter Writing
**Description** We owe a debt of gratitude to our military members. Most of our students do not have a connection to military members, so they do not have a way to express their gratitude. Hosting a military letter writing campaign once a semester is a small way to show our thanks.

**Goal #1** Host a letter writing campaign every semester at lunch.

**Goal #2** Provide the guidelines and paper for students to write with, but allow the students to write the message they want so long as it is a positive message.

**Goal #3** Try to make our own cards that look both patriotic and professional to show a bit more care and consideration.

**Activity: Love for Thanksgiving**

**Description** Love for Thanksgiving is a community wide program providing meals for families in need at Thanksgiving. Community members are able to participate in the preparation of the turkeys and food boxes, and then deliver the meals on Thanksgiving Day. Since this is held during Thanksgiving week which is a holiday week, we do not anticipate a high number our first year.

**Goal #1** Involve 30% of our membership for the preparation night.

**Goal #2** Involve 10% of our membership for the delivery day.

**Activity: 9/11 Commemorative Wreath**

**Description** On 9/11, or the designated school day observed before or after the 9/11 weekend, our school observes Patriot’s Day with a 9/11 ceremony complete with our Jr. Air force ROTC and a wreath laying ceremony. The advanced floral students are responsible for the design and creation of the wreath that will be used in the ceremony.

**Goal #1** Identify the students that will be creating the design, and approve their creation and flower order three weeks prior to the event.

**Goal #2** Secure funding for the budgeted amount, and order the flowers needed to create the design two weeks in advance.

**Goal #3** Deliver the wreath and demonstrate how to properly set it up as most people are unaware to how to set up a floral wreath.

**STAKEHOLDER ENGAGEMENT** To develop teamwork and cooperation between the local chapter and stakeholders.

**Activity: Ag Advisory Committee**

**Description** The Ag Advisory Committee is made of Ag Industry partners, parents, administrators, and ag teachers. Its job is to advise the department regarding curriculum, finances, support, industry standards, and local matters.

**Goal #1** Have the Chapter Officers provide a presentation of our FFA Program of Activities at the fall meeting.

**Goal #2** Invite Ag Alumni officers to attend the meeting to provide input and be active members of the Ag Advisory Committee to better understand the requirements of the Ag Department, Ag Incentive Grant, and the department’s review process.

**Goal #3** Meet a minimum of twice per year with the Ag Advisory Committee.
STAKEHOLDER ENGAGEMENT, continued...

Activity: Harvest Hall at the local county fair

Description Harvest Hall is the still exhibits hall for all junior organizations at the local county fair. As a large number of our students enter exhibits, we volunteer to help with receiving entries, setting them up/placement, and any other tasks that are asked of our members.

Goal #1 Obtain a work schedule with a number of responsible students and one responsible officer for each shift from the Harvest Hall Staff. Fill the schedule with responsible students available to work and that have transportation to and from the fairgrounds.

Goal #2 Check with the Harvest Hall staff to verify that shift workers have shown up for assigned shifts and are meeting the expectations.

Goal #3 Have students help run Harvest Hall activities that are run during the fair as assigned by the Harvest Hall staff. Make sure that the Harvest Hall staff provide the fair gate entry passes beforehand.

Activity: Teacher Appreciation Lunch

Description During National FFA Week each year the chapter members make homemade chili for the 100+ staff members to be served during lunch as a thank you for their support.

Goal #1 Send out an email invitations (including all kitchen and custodial staff) with all information and obtain RSVPs for the event two weeks prior to the event

Goal #2 Prepare four varieties of homemade chili (mild, medium and spicy as well as vegetarian) for the staff. It will be served during both lunches by the students that are on the National FFA Week Committee that is formed in January. Refreshments and dessert are also provided as well as delivery service for staff members unable to attend.

Goal #3 Provide a note of thanks in each of the staff members’ boxes signed by a minimum of 10 members (no photocopies) that provides an individual note of thanks for their support.

ECONOMIC DEVELOPMENT To improve the economic welfare of the community.

Activity: Canned Food Drive

Description Collect as much canned food as possible amongst the Ag classes as possible during November- December to be donated to the local food bank.

Goal #1 Work with Interact Club as a cooperative activity on campus as they do a canned food drive for the local food bank.

Goal #2 Set a goal of 300 cans as a minimum to collect for chapter members over a two week period.

Goal #3 Deliver the canned food to the local food bank.

Activity: Soup Kitchen

Description St Francis Parish offers a free soup kitchen to anyone in need to the local community near our high school. It gladly welcomes the members of our high school FFA program to volunteer serving at the soup kitchen on Monday nights during the school year.

Goal #1 Set up an opportunity for students to participate in a soup kitchen community service night for FFA members during the Fall and Spring semester.

Goal #2 Provide supervision for the first night so that parents and students can get an idea of what the event is like and ask questions for future nights should they wish to volunteer for more community service hours.

Goal #3 Promote more in class, with video and at meetings for community service hours so that students remember to attend.
Activity: SPCA Animal Shelters

Description There are more than 16,000 animals each year that go through the SPCA each year that need help. Animals that are surrendered or picked up must be cared for until they are adopted or otherwise taken care of. Until that time we know that the limited budget constraints require assistance from outside organizations.

Goal #1 Collect donations from students in the form on blanket making kits or fabric, pet toys, and dog/cat food.

Goal #2 Hold one drive in December (with Christmas stockings for each pet) and one drive in March.

Goal #3 Take two groups of students to deliver- one to each of the SPCA locations.
Division 3: Strengthening Agriculture

SUPPORT GROUP  To maintain good relationships with our supporters.

Activity: Livestock Parent Informational Meetings
Description One of the most beneficial practices put in place is the requirement of a beginning meeting for livestock exhibitors and parents. Budgets, project visits, time management, feeding and showing expectations, grooming, and overall expectations as well as any changes from previous years are covered in this meeting.

Goal #1 Host the meeting in March and/or April to provide an opportunity for parents and students to attend; usually the first meeting follows a chapter meeting in March, and the second meeting is after 8th grade students have registered for their freshmen classes.

Goal #2 Provide the exhibitor handbook with the rules and expectations complete with the acknowledgement forms.

Goal #3 Have everyone understand the expectations and rules prior to starting the project(s), so as to avoid any consequences and/or inability to show at the fair.

Activity: Ag Alumni
Description Ag Alumni are made of parents, advisors and alumni. They meet each month at the same time as the FFA chapter meeting. These individuals are responsible for providing the physical and monetary support for the chapter activities, fair, and scholarship fund.

Goal #1 Have the officers invite the Ag Alumni officers to the Ag Advisory Committee meetings to provide input.

Goal #2 Invite past FFA members and the parents of current FFA members to each meeting via a variety of social media, flyers and copies of calendars at the first few meetings.

Goal #3 Have the Ag Alumni coordinate the dinner for the Opening and Closing Ceremonies contest.

Activity: Principal Partners Day
Description The Kern High School District brings community stakeholder to the district to tour schools and see programs and classrooms each year in October. These stakeholders are the supporters that tie us to the industry for our department.

Goal #1 Have powerful lesson plans ready for Principal Partners Day to demonstrate student knowledge, hands-on learning, and the Driller Way.

Goal #2 Have ag facilities set up with current awards and clean so are in top form.

Goal #3 Have officers wearing their polos and pants, and FFA members wearing chapter t-shirts.

CHAPTER RECRUITMENT  To interest incoming freshmen in joining the FFA Program.

Activity: Recruitment Presentations at Jr. High Schools
Description To educate Jr. High students about what the Bakersfield Highs School agriculture program is, has to offer, and provide an assortment of student led leadership activities designed to engage students in an effort to encourage them to sign up for one or more of the ag classes when they register at Bakersfield High School.

Goal #1 Contact 3-5 of the biggest feeder Junior Highs in January to set up times to make presentations to eighth grade students about our ag programs.

Goal #2 Take videos during the school year during class that show the variety of interesting activities in each of the ag classes. Then compile a final video that can be sent to the junior highs that do not have a time slot for presentations similar to a Youtube video.

Goal #3 Form teams of presenters so that we avoid having cliques at the presentations. We want the student to see FFA as young leaders.
CHAPTER RECRUITMENT, continued...

Activity: Orientation Night Presentation

Description This is presentation night in Harvey Auditorium for all organizations to incoming freshmen and their parents. Each group is theoretically given two minutes (though some take longer) to make their presentation about the value of their program and what class(es) to take.

Goal #1 Have members from each grade represented that are good speakers and that have practiced their parts ready to present a concise presentation. We are generally toward the end, and so staying in the two minute time frame and being polished yields better enrollment results.

Goal #2 Need lots of video from throughout the year versus pictures that can be included in the video that is shown. Use music that is upbeat and has no words so it does not violate the KHSD policies.

Goal #3 Be sure videos are directed to learn by doing and student travels to the various colleges and other field trips.

Activity: Incoming Freshmen Registration Night

Description To sign up students for the upcoming school year for agriculture classes and have them complete student interest sheets with both the parent and student signatures.

Goal #1 Get more people/recruiters with clipboards recruiting papers to expand the number of FFA members.

Goal #2 Assign groups of 2 people per recruiting group that goes around doing the recruiting.

Goal #3 Have a lightheartedly professional booth/members that attracts future members. Purchase new banners that reflect the classes offered in our program.

SAFETY To promote activities that enhance safety in the community.

Activity: Monthly Safety Tips

Description Provide a safety tip at each of the chapter meetings that is appropriate for that month. Common sense seems to evade most of the world, so bringing safety to the forefront is an easy task and so simple to incorporate.

Goal #1 Give one safety tip on the calendar each month.

Goal #2 Provide holiday statistics about how people get hurt, and how to prevent getting hurt.

Goal #3 Announce farm safety facts during National Farm Safety and Health Week (Sept 16-22, 2018) and Ag Safety Awareness Program (ASAP in March 2019).

Activity: Chapter Newsletter Safety Tip of the Month

Description Provide a safety tip of the month in the chapter newsletter.

Goal #1 For every chapter newsletter, a Safety article will be included.

Goal #2 The safety tips for the month and during National Farm Safety and Health Week (Sept 16-22, 2018) and Ag Safety Awareness Program (ASAP in March 2019) will be included on the chapter’s Instagram.
Agricultural Advocacy To articulate and promote agricultural programs, practices, policies and/or education to elicit action.

Activity: Kern County Fair "Free" Public Days
Description: To educate the kids and elderly about the proper care taking needs of the animals our members are raising.

Goal #1 Group in class make Poster Boards for barns with information about the animals and how to properly pet the animals.

Goal #2 Have the barns be accessible to the people we are helping especially the pens are members are in so that it makes it easier for the people to get around.

Goal #3 Have the members that are showing at the fair help facilitate this activity.

Activity: From Gate to Plate - Learning How to Address the Public
Description: To inform the public about how the food industry works in order to ensure that they are fully aware of the process from harvesting to the grocery store.

Goal #1 Have all member write a 6-8 minute speech about the food processing industry and present it to the class.

Goal #2 Have 1 or 2 students present part or all of their speech at the Teacher Appreciation Lunch and/or present a video at the Teacher appreciation lunch about ag facts from gate to plate.

Goal #3 Have 2-3 students participate in prepared public speaking contest at section level.

Activity: Bits and Pieces - School Newsletter
Description: The Bits and Pieces is newsletter from the principal and counselling office about upcoming events and recent awards. We are able to include information about the Ag Department and FFA program to let parents know of important dates and how to contact us.

Goal #1 Keep it simple and to the point, but make sure that the reader understands the explanation; place an emphasis on explaining any current issues that might be controversial that the principal would want supported by research.

Goal #2 Promote our Ag Alumni group for anyone interested in supporting and/or joining.

Goal #3 Recognize specific students that have excelled in recent months, i.e. State FFA Degree, proficiency, etc.

AGRICULTURAL LITERACY To inform the people about how agriculture affects their daily lives.

Activity: Ag Literacy Week
Description: Our chapter puts on its own agriculture literacy week during April 1-5, where members are educated on the importance of agriculture in our nation.

Goal #1 Educate our members about the importance of agriculture with lunch time activities during the week

Goal #2 Have Officers create a video about different SAEs and how students have been successful with them.

Goal #3 Write at least one fun fact about agriculture on the classroom boards to keep members interested.

Goal #4 Provide at least one fun ag fact about ag to be read in the daily bulletin each day.
AGRICULTURAL LITERACY, continued...

**Activity:** Farm Day in the City

*Description:* In the month of March the Kern County Farm Bureau puts on an event that helps educate elementary students about agriculture in the state of California.

*Goal #1* Have members sign up to help work the day of the event.

*Goal #2* Have students wear their chapter t-shirts on the day of the event so they are easy to spot and teachers can recognize the leadership skills of our students.

*Goal #3* Hold a meeting to educate our members before they attend so they are aware of what to expect.

**FINANCIAL** To promote adequate financing and budgeting for fiscal operations and to stress the importance of thrift.

**Activity:** Tri Tip Dinner To Go

*Description:* A fundraiser within the chapter that is held every quarter to help earn money for activities and other charity events the chapter is involved in.

*Goal #1* Have 50% of our members sell $80 worth of tri tip tickets at the first tri tip dinner.

*Goal #2* Have those members that sell $80 worth of tickets earn their chapter t-shirt while establishing their clientele for the school year. This will help them for the last two tri tip dinners to go.

*Goal #3* Have 20 students sign up to help with each hourly shift on the night of the fundraiser.

**Activity:** Wooden Christmas Tree Sales

*Description:* A December Christmas fundraiser incorporated into the chapter to help with the budget and increase the amount of FFA points students can receive throughout the school year.

*Goal #1* Conduct a presale from October to November with specific sizes and colors of trees. All money and forms are due by the deadline on the calendared date.

*Goal #2* Have 30% of the students sell at least one Christmas tree.

*Goal #3* Once the trees are completed at the end of November, a committee of students will be formed to paint and distribute them by the end of the first week of December.

**Activity:** Penny Wars

*Description:* Jars are created and labeled for each class period for each teacher with a narrow slot for money to enter easily but not to be removed until the last day. The lids are placed on and secured. Pennies are positive points; all other coins and dollar bills are negative points. The class with the best point value at the end of the “war” wins the prize that the teacher or chapter sets up at the start.

*Goal #1* Have all classes participate in the fundraiser trying to sabotage the other classes while earning the best score for their class by developing the best strategy they can.

*Goal #2* Raise the most amount of money between all of the classes by providing incentive to want to win the war.

*Goal #3* Meet the goal of the fundraiser, which is generally for a community service project, so that it proceeds as planned without additional fundraising being required.
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<thead>
<tr>
<th>Activity</th>
<th>Income</th>
<th>Expense</th>
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<tbody>
<tr>
<td>2 Tri Tip Dinners</td>
<td>8000</td>
<td>4000</td>
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<tr>
<td>FFA T-Shirts</td>
<td>1000</td>
<td>1000</td>
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<tr>
<td>Welcome Back Frito/Cheetos Boats</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Monthly Activities</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Fall Banquet</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>FFA Week</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Spring Banquet</td>
<td>1700</td>
<td>1500</td>
</tr>
<tr>
<td>Points Award Trip</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Officer Leadership Retreat</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Judging Teams</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10700</strong></td>
<td><strong>10700</strong></td>
</tr>
</tbody>
</table>

**Judging Teams**

Bakersfield FFA encourages students to participate in at least one of the following teams. Students are able to travel to different colleges throughout the state of California as they learn critical thinking, speaking, and leadership skills.

<table>
<thead>
<tr>
<th>Impromptu</th>
<th>Job Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Informed Greenhand</td>
<td>Floriculture</td>
</tr>
<tr>
<td>Creed Speaking</td>
<td>AET</td>
</tr>
<tr>
<td>Cooperatives</td>
<td>Nursery/Landscape</td>
</tr>
<tr>
<td>Banking Contest</td>
<td>Opening &amp; Closing Ceremonies</td>
</tr>
<tr>
<td>Prepared Public Speaking</td>
<td>Extemporaneous Public Speaking</td>
</tr>
<tr>
<td>Parliamentary Procedure &amp; Debate</td>
<td>Welding</td>
</tr>
<tr>
<td>Citrus</td>
<td>Cotton</td>
</tr>
</tbody>
</table>

**PUBLIC SPEAKING**

Public speaking contests are major leadership activities in the FFA. They promote speaking skills to large and small crowds alike. These skills are vital to any field of business students may be entering in the future. Public speaking is not limited to the “traditional” contests such as:

- Creed Speaking
- Prepared Public Speaking
- Extemporaneous Speaking
- Parliamentary Procedure & Debate
- Job Interview
- Impromptu Public Speaking
Possible FFA Awards

There are many FFA awards possible to achieve in the FFA. The following is a short list of possible awards.

<table>
<thead>
<tr>
<th>Award Description</th>
<th>Award Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhand Degree (First year Ag students)</td>
<td>Outstanding Ag Student Awards</td>
</tr>
<tr>
<td>Star Greenhand Degree (First year Ag students)</td>
<td>Top Ten Awards (FFA points)</td>
</tr>
<tr>
<td>Chapter FFA Degree (2nd year Ag students)</td>
<td>Bronze, Silver and Gold FFA Leadership Awards</td>
</tr>
<tr>
<td>Star Chapter FFA Degree (2nd year Ag students)</td>
<td>Scholarships</td>
</tr>
<tr>
<td>State FFA Degree (3rd/4th year Ag students)</td>
<td>Proficiency Awards (local, section, region, state, &amp; national)</td>
</tr>
<tr>
<td>Judging Team Awards</td>
<td></td>
</tr>
</tbody>
</table>

FFA POINT AWARD SYSTEM

Students may accumulate their 30 FFA points per quarter in any fashion they choose. In order to be recognized at the Spring Awards Banquet, students must have earned 120 FFA points. These points CANNOT be solely from one category. The categories can be identified below by the bold and capitalized headings.

General FFA Activities List

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter T-Shirt Purchase</td>
<td>10</td>
</tr>
<tr>
<td>Chapter T-Shirt Day</td>
<td>5</td>
</tr>
<tr>
<td>Lunchtime Activities</td>
<td>5</td>
</tr>
<tr>
<td>Chapter Meetings</td>
<td>10</td>
</tr>
<tr>
<td>Committee Chairperson</td>
<td>15</td>
</tr>
<tr>
<td>Committee Member</td>
<td>10</td>
</tr>
<tr>
<td>FFA Jacket Purchase</td>
<td>25</td>
</tr>
</tbody>
</table>

FUNDRAISING AND COMMUNITY SERVICE

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundraisers (Points per item TBA)</td>
<td>Max. of 60</td>
</tr>
<tr>
<td>Community Service- FFA Approved Activities</td>
<td></td>
</tr>
<tr>
<td>- Donating Items (Points per item TBA)</td>
<td>Max. of 60</td>
</tr>
<tr>
<td>- Donating Time (1 hour)</td>
<td>10</td>
</tr>
</tbody>
</table>

CAREER DEVELOPMENT EVENTS (CDE)

- Students wishing to earn these points must be enrolled in the 8th period Public Speaking and Leadership Class during the Spring Semester. Students must maintain a C grade in this class.
- Students traveling with a CDE team should participate in a minimum of TWO fund-raisers.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring CDE Team Member</td>
<td>15</td>
</tr>
<tr>
<td>Field Days and/or Qualifying Contest</td>
<td>15</td>
</tr>
<tr>
<td>State Finals</td>
<td>20</td>
</tr>
</tbody>
</table>

PUBLIC SPEAKING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Speaking: Prepared or Extemporaneous</td>
<td>15</td>
</tr>
<tr>
<td>Section Contest</td>
<td>15</td>
</tr>
<tr>
<td>Region Contest</td>
<td>20</td>
</tr>
<tr>
<td>State Contest</td>
<td>25</td>
</tr>
<tr>
<td>Public Speaking: Creed or Job Interview</td>
<td>15</td>
</tr>
<tr>
<td>Section Contest</td>
<td>15</td>
</tr>
<tr>
<td>Region Contest</td>
<td>20</td>
</tr>
<tr>
<td>State Contest</td>
<td>25</td>
</tr>
</tbody>
</table>
LEADERSHIP ABOVE THE CHAPTER

<table>
<thead>
<tr>
<th>Event</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section Meetings/Conferences</td>
<td>15</td>
</tr>
<tr>
<td>Section Contests</td>
<td>15</td>
</tr>
<tr>
<td>Region Meetings/Conferences</td>
<td>15</td>
</tr>
<tr>
<td>State Conference **</td>
<td>15</td>
</tr>
<tr>
<td>National Conference ***</td>
<td>15</td>
</tr>
<tr>
<td>National Contest Participant</td>
<td>25</td>
</tr>
<tr>
<td>Section Officer</td>
<td>15</td>
</tr>
<tr>
<td>Region Officer</td>
<td>15</td>
</tr>
<tr>
<td>Leadership Applications at/or above region</td>
<td>25</td>
</tr>
</tbody>
</table>

** State Conference Participants will be selected by an application process.

*** National FFA Convention Participants will be invited to attend based on FFA points earned, SAE records, CDE involvement, and scholastic achievement.

AGRICULTURE PROJECTS (SAES)

<table>
<thead>
<tr>
<th>Event</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Exhibitor</td>
<td>15</td>
</tr>
<tr>
<td>Proficiency Application</td>
<td>15</td>
</tr>
<tr>
<td>Section Winner</td>
<td>15</td>
</tr>
<tr>
<td>Region Winner</td>
<td>15</td>
</tr>
<tr>
<td>State Winner</td>
<td>25</td>
</tr>
</tbody>
</table>

If you are unable to participate in FFA activities, which generally occur outside of class time, students may fulfill their FFA points by the following option:

*Give an oral speech about any aspect of the FFA. The speech must be (a) 4-6 minutes in length, (b) have a typed outline in correct format (Introduction, Body, and Conclusion), and (c) be scheduled one week in advance. Each speech must meet all of the criteria and be genuinely different to be given a full 10 points. There is a limit of one speech per week, and a maximum of three per quarter. No speeches during finals week.*
Section K

School and Department Policies Pertaining to:

- Student Eligibility to Participate in Out-of-Class Activities
- Leadership Development Integration into Program
- SOE Integration into Program and other Policies
Section K
School and Department Policies Pertaining to:
- Student Eligibility to Participate in out-of-town Activities
- Leadership Development Integrations into Program
- SOE Integrations into Program and other Policies

FFA is accepted as an integral part of the agricultural program at Bakersfield High School. FFA is taught in conjunction with classroom information and supervised agriculture experience projects.

**Student Expectations for FFA Participation**
Students enrolled in agriculture classes are required to participate in FFA activities throughout the school year. Each student is required to participate in enough activities to earn a minimum of 60 FFA points per semester. There are many activities and events available to the students to participate to fit individual preferences and schedules. FFA involvement ranges from chapter activities, meeting, leadership conference, public speaking contests, and Career Development Events. The FFA portion of our program seeks to reinforce instruction while giving the students practice in self-government and building confidence. These activities also allow our students to build a sense of community and home.

**Student Expectations for SAE Participation**
Each student in our program is expected to have a Supervised Agriculture Experience (SAE) Project. Through the use of an assignment called “My Story” and class discussions about SAEs, first year members select an SAE project. Each student is required to keep records for his or her project. We are currently transiting all of our students to the online recordbook system Agriculture Experience Tracker (AET). All first year members will work only on this program. Each student is graded on their SAE project throughout the semester.

**Eligibility to Participate in Out-Of-Town Activities**
To participate in off campus FFA activities, student must maintain a minimum of a 2.0 GPA which is set by our school district. Students are reminded that participating in FFA trips is a privilege and is earned by their actions.

**General Guidelines for Participation**
All participation in FFA events is under the consent of a BHS Agriculture Instructor. Participation in Sectional, Regional, or State Activities is by sign up or application and must be met with the Ag Instructors approval.

**Eligibility to Participate in the Kern County Fair**
Students are able to participate in the Kern County Fair after completing the “BHS Fair Packet” which outlines the rules and expectations. Students are also required to attend project meeting and complete homework prior to obtaining their animals. Students are required to have a 2.0 GPA. Prior to fair, they must attend a mandatory Fair Meeting with his or her parents and complete the necessary paperwork.

**Eligibility to Participate in Career Development Events**
To participate in Career Development Events, members must complete the CDE Team Contract that is signed by both the student and his or her parent. This contract outlines expectations and contest dates the student is able to attend. Students must maintain a 2.0 GPA and attend CDE Team practices and meetings on a regular basis.
My Story
What's Your SAE (Supervised Agriculture Experience)?

**Directions:** In order to help you select the best possible ag project for you to complete this year, I need some background information on you. ☺

On other sheet of paper, you will answer the following questions. These answers will not be shared with anyone else in the class. They can be handwritten or typed. When asked for pictures, you may draw them or have actual pictures. Provide enough detail that I have a clear picture of the information.

**DUE DATE: **

1. **Family**
   a. Who do you live with?
   b. Who transports you to and from events?
   c. Do you have "other" people you call family in town?
   d. Do you visit family out of town frequently? How frequently?

2. **Where I Live**
   a. Describe in detail your home- INSIDE and OUT
   b. Provide pictures of all rooms
   c. Provide a picture that shows the "outside"

3. **What I do Every Day During the School Year**
   a. Provide a schedule (generalized) through the seasons. Include sports and other extracurricular activities you are a part of.

4. **What I do Every Day During the Summer**
   a. When does your day start?
   b. Do you go to summer school?
   c. Do you have a job? How much do you get paid? What do you do for that job? (list as many details as possible)
   d. Do you have chores? What types of chores do you have? (Provide detail)
   e. When does your day end?
   f. Do you have any animals that you take care of?
   g. Do you have a garden? Or any vegetable plants? Fruit trees? Rose bushes?
Bakersfield High FFA

Fair Exhibitor Handbook
Kern County Fair

This belongs to: [blank space]
Showing Requirements for 2016

1. Students planning on attending the Kern County Fair MUST have a 2.00 GPA on the report card prior to the purchase of the animals.

2. Exhibitors from last year must also show a 2.00 GPA from the first semester.

3. Exhibitors from last year must have turned in their thank you letters within two weeks of the fair to be eligible to show in the upcoming fair. If late by more than one week, the student will be ineligible to show.

4. As printed in the current FFA activities calendar, exhibitors must have attended five chapter meetings during the current school year. Students entering at the spring semester are only required to have attended three meetings. Those who are incoming to the program as new members in the upcoming year are exempt from this rule.

5. Graduates may exhibit under the following conditions:
   a. They must be eligible and apply for their State and/or American FFA Degree which must be applied for and qualify for in the year they intend to show. If eligible to have received the State Degree during high school and did not apply, then they are not eligible to exhibit under the BHS FFA program;
   b. Keep their animals penned with the BHS FFA animals at the fairgrounds during the Kern County Fair;
   c. May only exhibit at the fair directly after their graduation and the ONE following year provided that criteria (a) will be met and no other rules during previous fairs have been violated;
   d. Must be studying agriculture at a community or a four-year college (provide a copy of transcripts) and/or be working in the agriculture industry.

6. Students MUST have a “C” or higher in their agriculture class(es).

7. Prior approval by the advisor is required for all students and their fair projects.

8. Students in high school for the fall will also be required to enroll in the Agriculture Production Class, which is an 8th period class. The grade will be based on the following items.

   Record Book: 20%; Project Visitations: 40%; Positive Exhibition at County Fair: 40%

   **Positive Exhibition means that there are no problems experienced at the fair.**

9. Any attempt to enter an animal without the advisor's permission and signature will result in automatic removal from the chapter and its activities permanently.

10. Students need to own the official livestock uniform by fair time which includes:
    - FFA jacket and tie or scarf
    - White pants
    - White button-up shirt
    - Show boots (neutral colored) or black or white tennis shoes
    - Orders must be placed by August 1st at the latest. $70.00
    - Please contact the advisor if you would like to purchase it directly from the National FFA using your credit card.

11. The money to purchase the animal, feed, entry fees, medication, other needed supplies or equipment, and veterinary services (personal sources or bank loan) are to be provided by the exhibitor and/or with the assistance of the parents/guardians.

12. Facilities to house the animal — personal or pen at BHS school farm (agreement must be on file).
   a. All students will be required to pay $100 for every 4 month period due prior to the animal starts and every 4 months thereafter payable to the BHS Ag Boosters who in turn will make payment(s) to the owner of the property.

13. Students must regularly update the AET record book. It is also due on the second Friday of September completely up to date.

Students must care for, manage and be in possession of the animal in Kern County for the ownership period required by the fair.
Showmanship

Showmanship is how well you can exhibit your animal. During your project visits, the student and advisor will go over showmanship techniques. It is the student’s responsibility to practice showmanship between project visits.

Exhibitors will start with 5-10 minutes per day and work up to ½ hour per day. This should be done in the cooler hours of the day.

***COOL OFF YOUR PIG BEFORE YOU BEGIN PRACTICE.
***Do NOT overstress your animal! Showmanship practice should not be detrimental to weight gain.

Project Visitations

- Project visitations will be on Mondays from 6:00-7:30 pm. Please make arrangements to attend AND stay for the entire project visit. (Please plan this time as you would a sports practice – meaning that you stay until we are done.)
  - In the event that you will be tardy, you must notify the ADVISOR beforehand. DO NOT SEND A MESSAGE WITH ANOTHER STUDENT OR INDIVIDUAL.
  - At the time of the visit, the student and/or parent need to be present. Animals will not be handled if the student/parent is not there for liability reasons.
    - Missed visits without proper notification result in a warning.

The visit will consist of:

✓ weighing the animal
✓ determining rate of gain
✓ observation of handling skills
✓ checking pen cleanliness
✓ discussing feeding strategies
✓ going over recommendations and commendations

A copy of all items discussed will be given to the student/parent at the end of the visit.

IMPORTANT: If you have questions/concerns between visits, please do not hesitate or wait to call.

Fair Entries

- A fair premium catalog can be obtained from the Kern County Junior Livestock Office (located south of the Bud Pavilion at the Fairgrounds – little red building), the Main Office on South P Street, or online.
- It is the exhibitor’s responsibility to complete these forms, get the appropriate signatures and submit the paperwork/items to the livestock office at the Kern County Fairgrounds by the specified due date(s).
- Under NO circumstance will any person be given permission to sign the forms for the advisor. Please plan in advance.
- Also, please read the rules in the premium book regarding your specie. Ask questions you may have early.
- All students will sign up for their respective exhibit-market classes as well as showmanship. Showmanship is mandatory.
CONSEQUENCES

- Students will be given a total of two warnings during the course of the project for not following the guidelines set forth in this packet. On the third warning, regardless of whether the animal is at school or at home, fair entries will not be signed. If it has already been signed, it will be pulled from the Kern County Livestock Office.

- Other reasons an exhibitor may not end up showing include:
  
  - Failing to turn in entries on time;
  - Failing to get animal(s) ear tagged/nose printed/hair sample for DNA/pictures, etc. on the correct date;
  - Failing to attend the mandatory parent AND exhibitor meeting;
  - Failing to attend the fair pen set up day at the fair;
  - Receiving 3 warnings during the summer for non-compliance of the rules;
  - Receiving 3 warnings during the fair for non-compliance of the rules.

- Parents/Guardians are to ensure that they and/or their child will handle any disagreement/dispute for the duration of the project as well as at the fair in a professional and discreet manner that is respectful of the advisor’s profession so as not to undermine the advisor’s authority. Any occurrences that are conflict with this rule will result in the child/children not exhibiting at subsequent fairs.
We agree to the terms set forth in this packet by the Agriculture Department at Bakersfield High School for the Bakersfield High School FFA Kern County Fair Projects. Further, we understand the consequences related to the Kern County fair project(s) while conducting the project under the supervision of the Bakersfield High School Agriculture Department. Through this signature, you are ensuring that the parent(s)/guardian(s) will handle any disagreement/dispute for the duration of the project as well as at the fair in a professional and discreet manner that is respectful of the advisor’s profession so as not to undermine the advisor’s authority. We also are acknowledging receipt of the Exhibitor Handbook, the Rules and Expectations While at the Fair, and Auction Papers/Buyer Forms.

Printed Student Name ___________________________________ Student Signature ______________ Date ____________

Printed Parent Name ___________________________________ Parent Signature ______________ Date ____________

Email Address(es): ____________________________________

Home Phone: ________________________________________

Cell Phone – exhibitor _________________________________

Cell Phone – parent _________________________________ Name: ______________________

Cell Phone – parent _________________________________ Name: ______________________

Please check the animal(s) you intend to exhibit at the Kern County Fair.

____ Market Sheep  ____ Rabbits  ____ Market Goats

____ Market Swine  ____ Poultry

____ I need help finding my fair animal(s).

____ I do not need help finding my fair animal(s).

____ I will keep my animal(s) at the following location: ________________________________

____ I will keep my animal(s) at the BHS school farm. (Need to complete School Farm Agreement.)

WE UNDERSTAND THAT BOTH A Parent and THE Exhibitor MUST ATTEND THE FAIR Meeting ON August 15 from 6:30-7:30 pm in IT 109.
Bakersfield High School FFA
Kern County Fair Livestock Exhibits
Rules & Expectations While at the Fair

The following includes, but is not limited to, the summation of the rules and expectations for members of the Bakersfield FFA group at the Kern County Fair.

Please note that students will be supervised on show and auction days by their specie advisor. If the advisors make arrangements for another advisor to supervise, it is at their discretion. On non-show days, advisors are available to supervise students from 7:35 am - 2:30 pm during the weekdays. Any deadlines and paperwork that are to be met by exhibitors must be handled during those hours on the assigned day OR prior to that day OR by arrangement with the exhibitor's specie advisor. Ag advisors are not required to stay after contractual hours or on the weekends, but if they choose to do so, it is voluntary.

I. Attendance
1. All members will be excused for ONLY those days that they show and/or sell their animal at the fair.
2. Students on the fairgrounds on non-cleared days during school hours will be reported as a cut to the attendance office. In addition, students will be asked to leave their exhibit until after school hours.
3. Additionally, some members will be excused on non-show and/or non-sale days with the assignment of "Barn Duty" during the hours of 7:45 a.m. to 3:00 p.m. Only those members approved to be on "barn duty" will have a cleared absence.
   a. Those people assigned to barn duty will be responsible during the hour's 8:00 a.m. to 3:00 p.m. only (and only after the other individual's have taken care of their own animals and pens). They are responsible to:
      a. Arrive on time and stay for the duration of their assigned barn duty.
      b. Clean soiled bedding out of the pens as it happens during the day.
      c. Make sure water is clean and available to animals.
      d. Make sure animals are cool and comfortable.
      e. Make sure equipment is put away neatly.
      f. Make sure the tack box is organized and clean.
      g. Make sure the aisles around our pens are kept clear and clean. They usually require being swept every half hour.
      h. Complete homework.
      i. Answer the public's questions.

II. Livestock Barns
A. All members will be responsible to show up on time to the fair grounds for feeding, cleaning, showing, and auction.
B. All animals in ALL barns must be clean and have their bedding clean in the morning by 7:45 a.m. and in the evening between 5:30-7:30 p.m.
   1. There will be a sign in board in each barn. All exhibitors are expected to SIGN IN upon completion of feeding and cleaning in the morning and evening.
   2. As there are many exhibitors in all barns, it is difficult to see when all exhibitors come and go. Failure to sign in will result in a warning.
C. Members are expected to work together as a team.
D. Personal differences need to be set-aside for the duration of the fair. If you are unable to do so, please consider finding an alternative group for exhibiting livestock, i.e. 4-H.
a. **THIS RULE IS IN THE PREMIUM BOOK.** If the student cannot groom at least half of their animal without adult help, they need to find another organization.

2. The advisor will make the final decision regarding which animals will be selected for the pen of six in sheep and swine and pen of three in beef.

3. Sale declaration (Sell or No Sale) must be made by 3:00 p.m. on the Monday after market classes. Failure to do so will result in the animal not being sold through the Kern County Junior Livestock Auction.
   a. The Monday following Market Classes during the fair is when the ag teachers in charge of their specie(s) must declare which animal is selling. At the PARENT & EXHIBITOR MEETING in August, a SALE DESIGNATION FORM is provided to all parents and exhibitors. The SALE DESIGNATION FORM is due to your specie advisor by 3 pm on Monday following the Market Classes during the fair. Failure to submit it by that time (or a handwritten version that provides the same details) will result in “NO SALE” being marked for ALL animals. It will be up to the parent and/or exhibitor to contact the livestock office to make any changes. It is at the livestock office’s discretion after 5 p.m. as to whether or not they will charge the $75 fee (or the current rate set by the fair).

4. Only the exhibitor is allowed to show and sell THEIR animal.

5. Only one animal may be sold.

6. Kern County Fair animal identification tags **ARE NOT** to be removed from any animal’s ears by an individual for any reason. They are required for release and/or auction.

7. All BHS FFA exhibitors selling through the Jr. Livestock Auction are required to work at any of the three auctions for a total of two complete hours. An advisor must see you working. Check in AND out with them. **This does not include your sale time.** Do not wait until the last day in the afternoon to do your hours. Failure to find a place to work is not the department’s responsibility.

8. Fair thank you letters will be due within two weeks of receipt of buyer list. Thank you letters must all be handwritten and presented to the advisor BEFORE they are mailed.

**E. Fair Passes**

1. Each exhibitor will receive only one fair pass.

2. To receive the fair pass and family-parking permit, students must provide the advisor with an updated record book.

3. It is recommended that exhibitors laminate their fair passes as the fair will not replace washed, lost, etc. fair passes.

4. Parents and family members can purchase 7 day or entire fair passes in the livestock office before the fair starts – usually in September.

5. Only one gate 39 pass is issued per family.

**F. Fair Time Warnings**

1. A total of three warnings will be giving for any infractions of the rules above.

2. After the second warning is given, on the third warning, the exhibitor will be dismissed from the show and/or auction.

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**Auction**

1. If there are any questions concerning the paperwork, auction process, or sale of an animal, please ask an ag teacher before the fair during one of the project visits. Please do not wait until the fair.

2. Every student who would like to secure a good profit must find a buyer no later than the mid-August, and certainly before the last Wednesday of fair. Please do not procrastinate about doing this!!! Start early. Those who have not done this before need to start asking questions early! We are not guaranteed that Buyer #9 is coming back. However, in the unfortunate event that you do not have a buyer, please talk to us as there are options.
Auction Papers - Buyer Forms

The process may be a little different this year, so please bear with us as we learn how it will work. The Livestock Office has taken over the auction, so things may be similar or completely different. If they are the same/similar, the following information will be applicable.

1. The Sponsor form is the same as the buyer form. Buyers and sponsors are given the same title in the auction office. There is only one distinction in filling them out—whether you check the buyer or donation (sponsor).
2. Make sure all information is COMPLETELY filled in and is legible on ALL copies.
3. Make sure that the appropriate specie is marked.

MONEY – Collection & Requirements

1. All buyers/sponsors that are new must pay by the day of the auction regardless of the amount.
2. All returning buyers/sponsors at $100 or less must pay by the day of the auction.
3. All returning buyers/sponsors at $101 or greater can be billed or pay by the day of the auction.
4. YOU ARE NOT TO COLLECT ANY CHECKS MADE OUT TO YOU, OR USE ANY CASH THAT IS PAID TO YOU FOR YOUR SPONSORSHIPS! All money is to go through the auction office.

Buying the Animal

1. There are two ways to sell your animal. You can have someone buy the whole animal or two parties each buy 1/2 of the animal. (Steers can sell in ¼, but will need to talk to the beef advisor.) The price that you ask for is not necessarily the “total bid” price. Any donations that you receive can be added to the “bid” BEFORE you sell.

3. Options for buyers:
   a. Resale: The buyer wants to help you out, but they don’t want the meat or the animal. What will happen is that animal will go across the auction block and then be sent to another market to be sold again. If your buyer chooses this option, they only pay for the difference between their agreed price and the market price that day.
   b. Custom Processing: The buyer wants the animal for their freezer. An example is Farmer’s Wholesale located off Taft Hwy. It is a custom processing facility. Your buyer will have to pay the agreed price per pound + the kill charge (about $35) + the cut and wrap fees ($60-$100+). Please let them know this up front, otherwise they will be shocked when the auction bill comes, or when they pick the meat up from the butcher.
   c. Live Pick Up: The buyer wants to take it home. Or they can ask you to take it home to feed it out for the next month to 1 ½ months. You will need to factor that additional time, travel and feed cost into your price that you ask for your animal. You will also need to factor in the cost of the cut and wrap as well as the kill charge if they ask you to pay that.

Figuring Out Bid Price

1. Your parent or the signed representative MUST be present at auction to do the actual bidding as specified in your fair packet.
2. The price is the total amount of all money collected. Need help? Ask your advisor in advance of the fair.
HOW TO GET BUYERS/SPONSORS

Here are some tips to get buyers/sponsors.

➢ Make a list.
  o Businesses, family members, friends of the family – anybody that will pay their bill is a potential buyer/sponsor.
  o Don’t force people to help you – they have to want to help!
➢ Draft a letter – ALL LETTERS MUST BE APPROVED BY THE ADVISOR!!
  o Do a rough draft of a buyer/sponsor letter that requests/solicits help from businesses, family, friends, etc.
  o Paragraph 1 – introduce yourself
  o Paragraph 2 - introduce your project; tell about it; what have you learned; what do you hope to learn from this project? How does that help you in the future?
  o Paragraph 3: How does this tie to the FFA? What do you do in the FFA? What do you plan as a future career? How will this project help toward that overall goal?
  o Paragraph 4: what will you do with the money that you earn from this project?
➢ Go IN PERSON and be prepared.
  o It is harder to tell someone “no” in person than over the phone.
  o Many businesses will be asked to make donations for the fair. Don’t feel hurt if they tell you “no” or are somewhat abrupt with you.
  o Be prepared with:
    ▪ what you are going to say,
    ▪ a buyer/sponsor form filled out with all of your information,
    ▪ a picture of what your project animal looks like,
    ▪ your record book to show your accounting of hours and expenses,
    ▪ and what you plan on using the money for – college, future ag projects, etc. (NOT a car or play money!)
➢ Dress appropriately.
  o I recommend dressing in official uniform (black pants, socks and shoes for boys, black skirt and shoes + neutral nylons for girls, white collared shirt, FFA jacket and FFA tie/scarf.
    ▪ If you don’t have an FFA jacket and FFA tie/scarf, you need to order one. Pay $35 when you place the order, and $35 when it comes in. You can always pay the $70 upfront too.
  o Groom yourself respectfully.
➢ Introduce yourself.
  o Remember to introduce yourself and give a firm handshake!
  o Look people in the face, not the ground or the ceiling.
  o Remember to SMILE!!!!

Do the best you can! If you are having trouble, see your advisor. Good luck!
Figuring Out Bid Price

1. If you are new at selling an animal at the fair, and/or would like help, please bring your forms to your advisor no later than the last Wednesday of fair.
2. Be sure to set aside enough time to go through the figuring of the final bid price and distribution of paperwork.
3. Your parent or the signed representative MUST be present at auction to do the actual bidding as specified in your fair packet.

Distribution of Forms

1. So what do you do with these forms when they are completed? Here is where the copies go:
   a. White – Auction Office
   b. Yellow – buyer/sponsor
   c. Pink – Exhibitor/parent

2. If you are requesting help, any cash or checks that accompany paperwork are turned in to your advisor along with the forms.
3. If you are handling your own paperwork, PLEASE do not wait until the day before or day of auction. Procrastination on your part does not constitute an emergency on their part – plan ahead! You have ALL summer! The lines are LONG on Auction Days!
Bakersfield High School
School Farm Agreement

The following agreement is entered on _________________, 20__ by and between
______________________________ (student name) and ______________________ (advisor) and
Larry and/or Helen Ordway. The location for this agreement is at 6933 Wilson Rd, Bakersfield, CA. This
agreement covers the time period of _________________, 20__ until _________________, 20___. If at
the end of this contract the student wishes to continue with another project(s), a new contract must be completed. At
no time can the student switch projects without the consent of the advisor.

The following rules constitute an agreement designed to assist the students, parents, owners (Larry and Helen Ordway), and
advisors to fully utilize the farm and understand common expectations.

1. $100 for the lease agreement to cover water and electricity is expected by June 15 for all summer projects. All year
round projects must pay $100 for every four month term. It is due on the 15th starting from the start date of the
project. Cash or checks are submitted to the advisor. Checks need to be made payable to the BHS Ag Boosters.
One check will be provided to Larry and/or Helen Ordway by the 1st of the month following the payment.

2. Animal projects will be fed between the hours of 6:00 a.m. – 8:30 a.m. and 4:30 p.m. – 8:30 p.m.
   a. Students are not to use the residence on the property as a facility of any type. There are NO restrooms at
      this facility. DO NOT interact with the tenants of the residence on the premises.

3. Animal projects will be cared for, i.e. clean pens, clean the animal, exercise, practice showmanship, etc. between
   6:00 a.m. and 8:30 p.m. SPECIAL CAUTION should be taken during hot summer hours. DO NOT work your
   animals during the midday and mid-afternoon. It is extremely dangerous to your animal as well as yourself.

4. Each student must keep his/her pen and surrounding area clean/neat. All garbage must be taken with you daily.

5. There will be NO smoking, No use of illegal or recreational drugs, No use of prescription drugs out of compliance
   with the original prescription, and NO use of alcohol by any student, parent, friend, or acquaintance who may visit
   these premises.

6. Each student MUST sign up for the feeding and cleaning schedule under the direction of the advisor. Students must
   strictly adhere to the schedule and notify any/all exhibitors of any problem(s) as well as the advisor(s).

7. Each student MUST complete the pen journal entries.

8. Each student MUST plan enough time to check the feed and feeders, get all animals up and moving to observe
   behavior, eating, respiratory rate, and determine if the water is working properly.

9. Each student must provide their own plastic OR metal garbage can to store feed. The lid MUST be able to be
   secured tightly and/or lock.

10. All students participating must have feed present for their animals. Animals that go without feed will be charged
    $15 for the first infraction, $25 for the second infraction, and $50 on the third infraction. Any infractions thereafter
    will forfeit the feed purchase program MUST pay for feed by the 1st of the month. A $10 late fee will be applied
    for every five days the bill is late.

11. Animals must be kept in pens at all times except when led with a halter or otherwise under full control. Students
    and/or their parents will be charged for damage caused by loose animals if found to be by negligence.

12. Animals approved by the advisor(s) and Larry and/or Helen Ordway are the only animals permitted. Pens are
    assigned by the advisor(s).
Student Name: ____________________________ 6 DIGIT UID: __________

Public Speaking & Ag Leadership – 8th Period

A career development event (CDE) is an opportunity to develop agriculture based skills and public speaking skills. Those offered for the current school year, which are dependent on available funding and coaching staff, include:

- Mr. Eyraud: Welding, Job Interview
- Mrs. Ou: Creed, Job Interview & Poultry
- Mrs. Wilke: Parliamentary Procedure & Debate, Impromptu, Extemporaneous & Prepared Speaking, Nursery/Landscape

As this is a commitment of substantial time (90+ hours), students interested must read, sign and have their parents sign this document entering into an agreement with the Bakersfield High School Agriculture Department to practice and compete with their team. **Enrollment in 8th period is mandatory.** It does not take the place of your regular ag class.

A tentative practice and competition schedule is provided by the advisor/coach when practices commence. Some start in the first semester, and other start in the second semester. Students are responsible for sharing the schedule with their parents. Parents agree that they will schedule, to the best of their ability, any doctor visits or similar type appointments, outside of the designated practice days/times. Additionally, students and parents agree that the student will attend the tentative field days/competitions that they initial, AND all team members must be able to attend the state finals for their respective team/event. Not all team members will participate in the state finals.

Students enrolled in this course will receive a passing grade for attendance and participation in assigned competitions and class participation. Please plan all personal appointments around this schedule. Urgent matters will be handled on a case by case basis. Every three absences from class will result in a letter grade reduction. Every two tardies will be treated the same as an absence from class. Students are able to “make up” absences and/or tardies at the discretion of the advisor/coach.

**Requirements for Participation**

1. Student must be grade eligible to enroll and throughout the semester for the team(s) they wish to participate.
   a. A bi-weekly grade check, according to the counseling office approved grade check schedule, must be completed. With a parent signature, that grade sheet must be signed by the parents and submitted to Mrs. Wilke. Copies will be provided to the coaches as well as kept on file.

2. On average, there will be 2-3 practices per week. Some teams may require Saturday practices. Practice length varies, but will be provided with at least 2 days notice if it changes from the tentative schedule.

3. Student must come to practice prepared and focused on the curriculum for the day. Homework/study material may be assigned and is expected to be completed. Failure to come prepared can be cause for dismissal from the team/dropped from the class.

4. Student must attend and participate in activities with the intent being to compete at state finals. In the event that the team wins the state competition, the original team members MUST go to the National FFA Convention to compete in the fall. Failure to do so will disqualify the team from the competition.

5. Student must follow all school rules at practice and at competitions.

6. Student must have completed parent permission form on file with coach for practices and field days.

7. If there are more members on the team than allowed at state finals, a tally will be kept throughout the season on performance. The top individuals during the season will be the state finals team or per the discretion of the coach.

8. Students may only participate in events approved by the coach/FFA Advisor. Participation without consent results in automatic removal from the team and all events above the chapter level for the remainder of the year.

9. Student must acquire the official FFA uniform prior to the first judging event.

10. There is a NO TOLERANCE policy for cheating. If caught cheating by a judge, host, or otherwise, the student will be removed from the team AND must write letters of apology to the school principal, host school of the contest, and the chapter for their unethical participation. The letter will be read at the following chapter meeting to the members present. The letter must be sincere apology and consist of at least 3 paragraphs that are each a minimum of five sentences.

11. Student will respect the coach and the FFA Advisor at all times.
Student Name: __________________________ 6 DIGIT UID: __________

Acknowledgment Form for Public Speaking and Leadership Class

Year in 8th Period Public Speaking & Leadership Class: 1 2 3 4 (Circle one)

We understand the terms, conditions, and requirements set forth by the Bakersfield High School Ag Department as outlined on the previous page.

Please sign the contract below to acknowledge your receipt and acceptance of the terms for the 8th period Public Speaking and Leadership Class.

______ YOUR COPY TO KEEP _______ ____________
Student Signature Date

______ YOUR COPY TO KEEP ____
Printed Parent/Guardian Name

______ YOUR COPY TO KEEP ____________
Parent/Guardian Signature Date

Please place an X next to the team(s) that the above listed student intends to participate in this year:

<table>
<thead>
<tr>
<th>Select</th>
<th>One – Limitations Apply – Only if continuing to regionals</th>
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</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Interview</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impromptu</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Participation AT Judging Field Days/Competitions:** Parents please initial those competitions that your son/daughter is able to attend this year. They must be able to attend a minimum of THREE (if there are that many) for their competition to receive credit for this class.

<table>
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<tr>
<th>Initials</th>
<th>Date</th>
<th>Competition</th>
<th>Competing Teams</th>
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</thead>
<tbody>
<tr>
<td>XXXXX</td>
<td>1/21</td>
<td>Section Speech Contest @ North HS</td>
<td>Creed, Impromptu, Job Interview, Prepared, Extemporaneous</td>
</tr>
<tr>
<td>XXXXX</td>
<td>1/28</td>
<td>Minarets Parli Pro</td>
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</tr>
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Student Signature ____________________________ Date __________

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Section L

Proficiency Standards for Program Completers
Section L
Proficiency Standards for Program Completers

Providing our students with the opportunity to earn certifications that can be used in the work force has been the focus of agriculture education for the last few years. Historically we have provided our students with a check list evaluation system to prove these competencies. However with the influence of technology growing in our everyday lives, we have started to move towards computer based evaluations. Last year all of the ag departments in the Kern High School District were provided a subscription to the program iCEV by the district office under CTE. iCEV is a web-based program that has curriculum that can be used in the classroom as well as for Career Development Events (CDEs). iCEV also provides students the ability to earn certificates by completing online tests. In our ag department, we will offer the following tests to our students to earn certificates in:

- Bayer CropScience Plant Science Certification
- Benz School of Floral Design Principles of Floral Design Certification
- EETC Fundamentals of Small Engine Technology Certification
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medicine Applications Certification

This will be the first year we are offering our students the ability to test for these certifications, so we are currently in the planning stages of how we would test our students and pay for the certifications.
Section M

Teacher Data Sheets
Section M
Teacher Data Sheet

Name: Jacob Eyraud
Number of Years Teaching High School Agriculture: 3
Number of Years at BHS: 3
Number of years at previous schools: 0

Education (Post Secondary)

<table>
<thead>
<tr>
<th>Years</th>
<th>School</th>
<th>Master/Degree</th>
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</thead>
<tbody>
<tr>
<td>2001-2004</td>
<td>Bakersfield College</td>
<td>Crop Science, A.S.</td>
</tr>
</tbody>
</table>

Teaching Credentials:
Career Technical Education Teaching Credential

Name: Jenna Eyraud
Number of Years Teaching Agriculture: 10
Number of Years at BHS: 1
Number of years at previous schools: 0

Education (Post Secondary)

<table>
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<tr>
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<th>Master/Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-2004</td>
<td>Bakersfield College</td>
<td>Ag Education</td>
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<tr>
<td>2004-2006</td>
<td>Chico State University</td>
<td>Agriculture Education, B.S. Credential</td>
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<tr>
<td>2013</td>
<td>Cal Poly, SLO</td>
<td>Ag Ed Masters</td>
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</table>

Teaching Credentials:
Single Subject Agriculture
Single Subject Specialist in Agriculture
CLAD Certificate

Name: Jennifer Wilke
Number of Years Teaching Agriculture: 23
Number of Years at BHS: 20
Number of years at previous schools: 3

Education (Post Secondary)

<table>
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<tr>
<th>Years</th>
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<th>Master/Degree</th>
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<tr>
<td>1991-1995</td>
<td>University of California, Davis</td>
<td>Agricultural Education, B. S.</td>
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<tr>
<td>1995-1996</td>
<td>Cal Poly, SLO</td>
<td>Ag. Ed. Credential</td>
</tr>
<tr>
<td>2008</td>
<td>Cal Poly, SLO</td>
<td>Ag Ed Masters</td>
</tr>
</tbody>
</table>

Teaching Credentials:
Single Subject Agriculture
Single Subject Specialist in Agriculture
Sciences Supplemental
CLAD Certificate
By virtue of the authority vested in the Commission on Teacher Credentialing
in recognition of preparation to serve in California public schools

JACOB EYRAUD

is hereby awarded a

Preliminary Career Technical Education Teaching Credential: First Time

AUTHORIZED SUBJECT(S):
Agriculture and Natural Resources

SUBJECT MATTER AUTHORIZATION(S):
Agriculture and Natural Resources

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 07/07/2016 to 08/01/2019

This is not an official document. The official record of credentials, permits, and certificates is the Commission's website at www.ctc.ca.gov
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

JACOB EYRAUD

is hereby awarded a

Waiver Certificate of Completion of Staff Development: First Time

AUTHORIZED SUBJECT(S):

SUBJECT MATTER AUTHORIZATION(S):

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 08/15/2016 to 06/05/2017

This is not an official document. The official record of credentials, permits, and certificates is the Commission's website at www.ctc.ca.gov
Note: If you have any questions, please view the CTC Online - Written Instructions for Application and Payment page.

Last Name: EVRAUD
First Name: JENNA
Middle Name: E.

Adverse and Commission Actions Indicator:

Document Number | Term | Document Title | Status | Issue Date | Expiration Date |
--- | --- | --- | --- | --- | --- |
150088121 | Clear | Specialist Instruction Credential (Agriculture) | Valid | 6/1/2015 | 6/1/2020 |
150088122 | Clear | Single Subject Teaching Credential | Valid | 6/1/2015 | 6/1/2020 |

Authorization/Subjects

Authorization Code | Authorization Description | Subject Code | Subject Description | Major |
--- | --- | --- | --- | --- |
R3A1 | This credential authorizes the holder to teach agriculture in grades twelve and below, including preschool, and in classes organized primarily for adults. It also authorizes the holder to develop and coordinate curriculum, develop programs, and deliver staff development for agriculture education programs coordinated by school districts or county offices of education. | AGRI | Agriculture | MAJ |

Renewal Requirements

Please disregard any # signs you may see below and refer to the "Additional Description" column to the right for specific renewal requirements.

Renewal Code Renewal Description | Additional Description |
--- | --- |
R16P | The term of this credential is limited by the term of the prerequisite credential. To renew this credential, the holder must also renew the prerequisite credential. | TC Code Not Required |

Employment Restrictions

Organization Type | Organization | County |
--- | --- | --- |
<table>
<thead>
<tr>
<th>Document Number</th>
<th>Document Title</th>
<th>Term</th>
<th>Status</th>
<th>Issue Date</th>
<th>Expiration Date</th>
<th>Original Issue Date</th>
<th>Subject Code</th>
<th>Subject Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>160129279</td>
<td>Single Subject Teaching Credential</td>
<td>Clear</td>
<td>Valid</td>
<td>7/1/2016</td>
<td>7/1/2021</td>
<td>3/4/1996</td>
<td>IS1</td>
<td>Introductory Science</td>
</tr>
<tr>
<td>160129278</td>
<td>Specialist Instruction Credential (Agriculture)</td>
<td>Clear</td>
<td>Valid</td>
<td>7/1/2016</td>
<td>7/1/2021</td>
<td>6/20/1996</td>
<td>AGRX</td>
<td>Agriculture (Examination)</td>
</tr>
<tr>
<td>060108130</td>
<td>Crosscultural Language and Academic Development Certificate</td>
<td>Clear</td>
<td>Valid</td>
<td>8/15/2005</td>
<td></td>
<td>8/15/2005</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Renewal Requirements**

Please disregard any # signs you may see below and refer to the "Additional Description" column to the right for specific renewal requirements.

Renewal Code | Renewal Description
---|---
R20 | To renew this credential, the holder needs to submit only an application and fee to the Commission no earlier than 12 months before the expiration date. The renewal period is five years.

**Employment Restrictions**
Section N

Roster of Agriculture Advisory Committee
### Section N

**BHS AG ADVISORY COMMITTEE ROSTER**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. David Reese</td>
<td>BHS Principal</td>
<td>BHS Principal 1241 G Street Bakersfield, CA 93301 Home phone: n/a Work phone: 324-9841 e-mail: <a href="mailto:david_reese@khsd.k12.ca.us">david_reese@khsd.k12.ca.us</a></td>
</tr>
<tr>
<td>Mrs. Cheyenne Bell</td>
<td>BHS Vice Principal - Instruction</td>
<td>BHS Vice Principal 1241 G Street Bakersfield, CA 93301 Home phone: n/a Work phone: 324-9841 e-mail: <a href="mailto:Cheyenne_bell@kernhigh.org">Cheyenne_bell@kernhigh.org</a></td>
</tr>
<tr>
<td>Mr. Roger Williams</td>
<td>Arysta Life Science</td>
<td>Arysta Life Science 7908 Selkirk Bakersfield, CA 93301 Work Phone: 221-3840 e-mail: <a href="mailto:rwilliam8@bak.rr.com">rwilliam8@bak.rr.com</a></td>
</tr>
<tr>
<td>Mr. Aaron Coelho, Ag Engineer</td>
<td>Bolthouse Farms</td>
<td>Bolthouse Farms 7200 East Brundage Lane Bakersfield, CA 93307 Work Phone: 410-9524 Email: <a href="mailto:acoelho@bolthouse.com">acoelho@bolthouse.com</a></td>
</tr>
<tr>
<td>Mrs. Dawn Baumgarten, Owner</td>
<td>Log Cabin Florist</td>
<td>Log Cabin Florist 800 19th Street Bakersfield, CA 93301 Work Phone: 327-8646 Cell Phone: 301-1571 e-mail: <a href="mailto:florist@agtinternet.com">florist@agtinternet.com</a></td>
</tr>
<tr>
<td>Mr. Jared Britschgi, Grower Representative</td>
<td>Pearl Crop</td>
<td>Pearl Crop 1550 Industrial Drive Stockton, CA 95206 Work: 209-808-7575 Cell: 661-289-5154 Email: <a href="mailto:jared.britschgi@pearlcrop.com">jared.britschgi@pearlcrop.com</a></td>
</tr>
<tr>
<td>Mrs. Mike Chase, Jr.</td>
<td><strong>Chairperson</strong></td>
<td>3404 State Road Bakersfield, CA 93301 Home Phone: 496-4619 Work Phone: 201-1176 Email:</td>
</tr>
<tr>
<td>Mr. Ken Whitney</td>
<td>Rancher</td>
<td>Rancher 5543 Buena Vista Bakersfield, CA 93311 Cell Phone: 809-4330 e-mail: <a href="mailto:WhitneySheep@atg1.com">WhitneySheep@atg1.com</a></td>
</tr>
<tr>
<td>Mr. Lindsay Ono</td>
<td>Bakersfield College</td>
<td>Bakersfield College Phone: Email: <a href="mailto:lono@bakersfieldcollege.edu">lono@bakersfieldcollege.edu</a></td>
</tr>
<tr>
<td>Mr. and Mrs. Zachary and Jacie Green</td>
<td>Willits &amp; Newcomb</td>
<td>Willits &amp; Newcomb PO Box 297 Edison, CA 93220 Work Phone: 310.651.4010 Cell Phone: 310.651.4010 Email: <a href="mailto:ZacharyG@wncitrus.com">ZacharyG@wncitrus.com</a></td>
</tr>
<tr>
<td>Mrs. Ana Williams, Science Teacher</td>
<td>7908 Selkirk</td>
<td>7908 Selkirk Bakersfield, CA 93309 Phone: 747-9242 Email: <a href="mailto:anaawilliams@bak.rr.com">anaawilliams@bak.rr.com</a></td>
</tr>
<tr>
<td>Mr. Mike Battistoni, Retired Ag Teacher</td>
<td>3819 Harvard Drive</td>
<td>3819 Harvard Drive Bakersfield, CA 93306 Phone: 619-6485 Email: <a href="mailto:mike_battistoni@kernhigh.org">mike_battistoni@kernhigh.org</a></td>
</tr>
<tr>
<td>Mr. Derek Yurosek, Vice President</td>
<td>Bolthouse Properties, LLC</td>
<td>Bolthouse Properties, LLC 11601 Bolthouse Drive Bakersfield, CA Work: 661-323-4005 Cell: 661-330-2610 Email: <a href="mailto:dererk_yurosek@bolthouse.com">dererk_yurosek@bolthouse.com</a></td>
</tr>
<tr>
<td>Mr. Dan Wilke, Irrigation Manager</td>
<td>Bolthouse Farms</td>
<td>Bolthouse Farms 7200 East Brundage Lane Bakersfield, CA 93307 Work Phone: 330-2617 Email: <a href="mailto:dwilke@bolthouse.com">dwilke@bolthouse.com</a></td>
</tr>
</tbody>
</table>
Ag Advisory Committee Charter and By-laws.

The Kern High School District does not require the advisory committees to have a charter or by-laws. The procedure for appointing these members is to provide a list of potential industry partner names to the principal. Upon their forwarding the names to the board and the subsequent approval, these committee members are appointed in an advisory capacity to the designated department that has invited them. As they have been approved by the principal and the board, their voice carries more weight when recommendations are made. However, there are no charters or by-laws with which they operate.
Section O

Agriculture Advisory Committee Minutes
BHS Ag Advisory Meeting Agenda  
November 28, 2017

I. Welcome
II. Introductions
III. Dinner
IV. FFA
   a. Program of Work Highlights
V. Ag Incentive Grant Review – Self Review © - will be conducted next week on Monday
VI. Election of Ag Advisory Committee Chair
VII. Next Ag Advisory Meeting
    a. Tuesday, March 6, 2017
VIII. Ag Program Update
    a. Enrollment Numbers – 388 students in the program (391 last year)
    b. Specialized Incentive Grant: Proposed idea for Ag Mechanics Shop to be converted and still have Greenhouse in the plans
       i. Still have Specialized Grant money to spend as well
IX. Other
X. Adjourn
BHS Ag Advisory Committee  
Minutes of November 28, 2017

The BHS Ag Advisory Committee meeting was called to order on November 28, 2017 at 6:05 p.m. by chairperson, Dawn Baumgarten. Members present were: Mrs. Dawn Baumgarten, Mr. Ken Whitney, Mr. Zach Green, Mrs. Jacie Green, Mr. Roger Williams, Mrs. Ana Williams, Mr. Dan Wilke, Mrs. Audrea Estrada, Mr. Joey Estrada, Mrs. Mary Moreno, Mrs. Jennifer Wilke, and Mr. Eyraud were present. FFA members present included Naomi Samuel, Julian Portillo, Kim Rodriguez, Grecia Camorlinga, and Morgan Wilke.

Minutes from the March meeting were moved to be approved by Roger. Seconded and passed by voice vote. The first item on the agenda was the FFA Program of Activities presentation by the Chapter Officers.

The next item was the announcement of the Ag Incentive Grant Self Review that will be conducted Monday by the department at their regular meeting. It is open for the committee to review at any time.

The election of the Ag Advisory Committee Chair was next. Dawn nominated Dan Wilke to be the chairperson. Audrea seconded it. Motion was approved by voice vote. Dan nominated Joey Estrada as co-chair. It was seconded by Roger. Passed by unanimous consent.

The ag teachers then provided the committee with a program update. There are currently 388 members enrolled. We discussed the proposed idea for the Ag Mechanics shop renovation for the Specialized funding grant as well as the greenhouse plans. We still have the money from the last grant spend as well for the greenhouse project.

The meeting was adjourned at 7:08 p.m.

Respectfully submitted,

Jennifer Wilke
Ag Teacher
BHS Ag Advisory Meeting
Agenda
March 21, 2018

I. Welcome
II. Introductions
III. Update/provide information card
IV. Dinner
V. Approve minutes from November
VI. FFA Update
   a. 15 State FFA Degrees & 3 Section Proficiencies
   b. Judging Teams –
      i. Floral
      ii. Livestock
      iii. Novice & Advanced Parli Pro
      iv. Nursery/Landscape
      v. Poultry
      vi. Welding
   c. 2 regional speech finalists (1 prepared and 1 job interview)
   d. State Convention – 22 going
   e. Tri Tip Dinner To Go – moved to May
   f. Easter Egg Hunt at Homeless Shelter– March 29
VII. Ag Program
    a. 8th grade recruitment
    b. District pathways
VIII. Other Business
IX. Adjourn
The BHS Ag Advisory Committee meeting was called to order on March 21, 2018 at 6:10 p.m. by chairperson, Dan Wilke. Members present were: Mr. Dan Wilke, Mr. Ken Whitney, Mr. Lindsay Ono, Mr. Roger Williams, Mrs. Ana Williams, Mr. Stan Shelbourne, Mrs. Mary Moreno, Mrs. Jennifer Wilke, and Mr. Eyraud were present. FFA members present included Naomi Samuel, Justin Wilke, Joebel Marcelino, Isaiah Ruiz, Kim Rodriguez, Morgan Wilke, and Jesse Shelbourne.

Minutes from the November meeting were moved to be approved by Roger. Seconded and passed by voice vote.

The first item on the agenda was the FFA update presentation by the FFA members including the judging teams, regional speech finalists, State Convention, Tri Tip Dinner To Go in May, and Easter Egg Hunt for the Homeless Shelter.

The next item was an update on the Ag Program with regards to the 8th grade recruitment and district pathways (need to ask Mr. Ono for BC curriculum). Lindsay made us aware that we can contact the BC Ag Ambassador program for presentations. He also shared information about the San Joaquin Air Pollution Control District Grant for gators. Ag Alumni – Stan talked about ideas for fundraising and corporate sponsors as well as a benefit concert. Finally Ana talked about the Kern County Fair Harvest Hall changes that were being made for the still exhibit entries divisions.

The meeting was adjourned at 7:10 p.m.

Respectfully submitted,

Jennifer Wilke
Ag Teacher
Section P

Current Year Budget
### BUDGET

#### 2018-2019 Bakersfield High School Ag Dept.

<table>
<thead>
<tr>
<th>Ag Incentive</th>
<th>16400</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Start</strong></td>
<td>16400</td>
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<tr>
<td>Fall Region Mtg, Roadshow, Spring Mtg</td>
<td>300.00</td>
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<tr>
<td>Planners</td>
<td>3,600.00</td>
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<tr>
<td>Ag Advisory Meetings</td>
<td>575.00</td>
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<td>Flowers &amp; Supplies</td>
<td>4,400.00</td>
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<td>State FFA Conference</td>
<td>1,350.00</td>
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<td>Office Supplies</td>
<td>800.00</td>
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<td>Copy machine contract</td>
<td>800.00</td>
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<td>Lab Supplies</td>
<td>850.00</td>
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<tr>
<td>CATA Conference</td>
<td>2,000.00</td>
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<tr>
<td>Conference/FFA activity registration</td>
<td>200.00</td>
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<tr>
<td>San Diego Floral</td>
<td>1,500.00</td>
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<td><strong>TOTAL</strong></td>
<td><strong>16,375.00</strong></td>
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<td>Balance</td>
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<table>
<thead>
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<tr>
<td>Leadership packets</td>
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<tr>
<td>Flowers</td>
<td>1300.00</td>
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<tr>
<td>MFE/ALA (35)</td>
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<tr>
<td>Ag Chemistry lab</td>
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<tr>
<td><strong>TOTALS</strong></td>
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Section Q

Signed Articulation Agreements and/or

Evidence of Articulation
COURSE DESCRIPTION: Ag Mechanics I (Beginning Ag Mechanics) is a course designed to fulfill the student's elective requirements from KHSD. The course is a year long course which is designed to introduce the student to basic shop skills necessary to develop a well rounded agricultural mechanics program. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program. The course is also a pre-requisite to the second course in the Ag Mechanics Pathway.

PREREQUISITES: In order to maintain enrollment in this course student must pass the Shop Laboratory Safety Assessment.

High School Name: All High Schools with AG Mechanics  
Site Prerequisite: a designated shop area
**DISTRICT OFFICE USE ONLY:  KHSD COURSE CODE #: 5527  APPROVED BY BOARD:**

**KHSD Career Technical Education Course of Study**

<table>
<thead>
<tr>
<th>High School Name:</th>
<th>College Name:</th>
<th>College Course Title:</th>
<th>Articulation or DE:</th>
</tr>
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<tbody>
<tr>
<td>KHSD: All High schools with Ag Mechanics</td>
<td>Bakersfield College</td>
<td>Introduction to Mechanized Agriculture (MCAG B2)</td>
<td>Articulates</td>
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**LEVEL:** [ ] Introductory [ ] Concentrator [ ] Capstone

**INDUSTRY RECOGNIZED CERTIFICATION:**

<table>
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<tr>
<th>High School Name:</th>
<th>Name of Certification</th>
<th>Description:</th>
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<tbody>
<tr>
<td>KHSD: All High schools</td>
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<td></td>
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</tbody>
</table>

**METHOD OF STUDENT EVALUATION:**

- [ ] Pre and Post test
- [ ] Student Projects
- [ ] Written work
- [ ] Observation record of student performance
- [ ] Completion of assignments and worksheets

**METHOD OF INSTRUCTION:**

- [ ] Lecture
- [ ] Group and individual applied projects
- [ ] Demonstration
- [ ] Field Trips
- [ ] Guest Speaker

**RECOMMENDED TEXTS:**

A. *Instructional Materials* *(List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)*

**Basic Text:**


2nd and 5th editions acceptable
B. **Supplementary Instructional Materials** (List the basic text – include title, author, and copyright – and other essential supplementary materials or instructional resources/materials used in the course.)


*Farm Shop*, Wakeman and McCoy, McMillan.


*Wiring Simplified*, H.P. Richter, et. al.


---

**CALIFORNIA CAREER TECHNICAL EDUCATION MODEL CURRICULUM STANDARDS**


<table>
<thead>
<tr>
<th>Agriculture Mechanics</th>
<th>KNOWLEDGE AND PERFORMANCE ANCHOR STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Academics</td>
<td>Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Agriculture and Natural Resources academic alignment matrix for identification of standards.</td>
</tr>
<tr>
<td>2.0 Communications</td>
<td>Acquire and accurately use Agriculture and Natural Resources sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats. (Direct alignment with LS 9-10, 11-12.6)</td>
</tr>
<tr>
<td>2.1 Recognize the elements of communication using a sender–receiver model.</td>
<td></td>
</tr>
<tr>
<td>2.2 Identify barriers to accurate and appropriate communication.</td>
<td></td>
</tr>
<tr>
<td>2.3 Interpret verbal and nonverbal communications and respond appropriately.</td>
<td></td>
</tr>
<tr>
<td>2.4 Demonstrate elements of written and electronic communication, such as accurate spelling, grammar, and format.</td>
<td></td>
</tr>
<tr>
<td>2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.</td>
<td></td>
</tr>
<tr>
<td>2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.</td>
<td></td>
</tr>
<tr>
<td>3.0 Career Planning and Management</td>
<td>Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)</td>
</tr>
<tr>
<td>3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.</td>
<td></td>
</tr>
</tbody>
</table>
| 3.2 Evaluate personal character traits, such as trust, respect, and responsibility, and understand the impact they
can have on career success.
3.3 Explore how information and communication technologies are used in career planning and decision making.
3.4 Research the scope of career opportunities available and the requirements for education, training,
certification, and licensure.
3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.7 Recognize the importance of small business in the California and global economies.
3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate candidates.
3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options

4.0 Technology
Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Agriculture and Natural Resources sector workplace environment. (Direct alignment with WS 11-12.6)
4.1 Use electronic reference materials to gather information and produce products and services.
4.2 Employ Web-based communications responsibly and effectively to explore complex systems and issues.
4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.
4.4 Discern the quality and value of information collected using digital technologies, and recognize bias and intent of the associated sources.
4.5 Research past, present, and projected technological advances as they impact a particular pathway.
4.6 Assess the value of various information and communication technologies to interact with constituent populations as part of a search of the current literature or in relation to the information task.
4.7 Demonstrate the use of appropriate tools and technology used in the Agriculture and Natural Resources sector.

5.0 Problem Solving and Critical Thinking
Conduct short as well as more sustained research to create alternative solutions to answer a question or solve a problem unique to the Agriculture and Natural Resources sector, using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)
5.1 Identify and ask significant questions that clarify various points of view to solve problems.
5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.
5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.
5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety
Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Agriculture and Natural Resources sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)
6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
DISTRIBUTION:  USE ONLY:  

KHSD COURSE CODE #: 5527  
APPROVED BY BOARD:  

KHSD Career Technical Education Course of Study

6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
6.5 Demonstrate how to prevent and respond to work-related accidents or injuries; this includes demonstrating an understanding of ergonomics.
6.6 Maintain a safe and healthful working environment.
6.7 Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 RESPONSIBILITY AND FLEXIBILITY
Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Agriculture and Natural Resources sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)
7.1 Recognize how financial management impacts the economy, workforce, and community.
7.2 Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to changing and varied roles and responsibilities.
7.4 Practice time management and efficiency to fulfill responsibilities.
7.5 Apply high-quality techniques to product or presentation design and development.
7.6 Demonstrate knowledge and practice of responsible financial management.
7.7 Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
7.8 Explore issues of global significance and document the impact on the Agriculture and Natural Resources sector.

8.0 ETHICS AND LEGAL RESPONSIBILITIES
Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms. (Direct alignment with SLS 11-12.1d)
8.1 Access, analyze, and implement quality assurance standards of practice.
8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Agriculture and Natural Resources industry sector.
8.3 Demonstrate ethical and legal practices consistent with Agriculture and Natural Resources sector workplace standards.
8.4 Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
8.5 Analyze organizational culture and practices within the workplace environment.
8.6 Adhere to copyright and intellectual property laws and regulations, and use and appropriately cite proprietary information.
8.7 Conform to rules and regulations regarding sharing of confidential information, as determined by Agriculture and Natural Resources sector laws and practices.

9.0 LEADERSHIP AND TEAMWORK
Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Future Farmers of America (FFA) career technical student organization. (Direct alignment with SLS 11-12.1b)
9.1 Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills, as applied in groups, teams, and career technical student organization activities.
9.3 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school.
community, and workplace setting.
9.4 Explain how professional associations and organizations and associated leadership development and competitive career development activities enhance academic preparation, promote career choices, and contribute to employment opportunities.
9.5 Understand that the modern world is an international community and requires an expanded global view.
9.6 Respect individual and cultural differences and recognize the importance of diversity in the workplace.
9.7 Participate in interactive teamwork to solve real Agriculture and Natural Resources sector issues and problems.
9.8 Define the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
9.9 Identify the ways in which pre-professional associations, such as the Future Farmers of America (FFA), and competitive career development activities enhance academic skills, promote career choices, and contribute to employability.
9.10 Understand how to organize and structure work, individually and in teams, for effective performance and the attainment of goals.
9.11 Explain multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
9.12 Demonstrate how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.
9.13 Participate in group or team activities, including those offered by the student organization, that develop skills in leadership, cooperation, collaboration, and effective decision making.

10.0 Technical Knowledge and Skills
Apply essential technical knowledge and skills common to all pathways in the Agriculture and Natural Resources sector, following procedures when carrying out experiments or performing technical tasks. (Direct alignment with WS 11-12.6)
10.1 Interpret and explain terminology and practices specific to the Agriculture and Natural Resources sector.
10.2 Comply with the rules, regulations, and expectations of all aspects of the Agriculture and Natural Resources sector.
10.3 Construct projects and products specific to the Agriculture and Natural Resources sector requirements and expectations.
10.4 Collaborate with industry experts for specific technical knowledge and skills.
10.5 Interpret and explain the aims, purposes, history, and structure of the FFA student organization and know the opportunities it makes available.
10.6 Manage, and actively engage in, a career-related, supervised agricultural experience.
10.7 Understand the importance of maintaining and completing the California Agricultural Record Book.
10.8 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 Demonstration and Application
Demonstrate and apply the knowledge and skills contained in the Agriculture and Natural Resources anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and through the FFA career technical student organization.
11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Agriculture and Natural Resources sector program of study.
11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued
11.3 Demonstrate entrepreneurship skills and knowledge of self-employment options and innovative ventures.
11.4 Employ entrepreneurial practices and behaviors appropriate to Agriculture and Natural Resources sector opportunities.
11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.
### I. INTRODUCTION

<table>
<thead>
<tr>
<th>CR</th>
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<th>STANDARDS</th>
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</table>

#### A. FFA
- a. History
- b. Leadership
- c. Involvement
- d. CDE's

#### B. SAEs
- a. Placement
- b. Research
- c. Entrepreneur
- d. Keeping Records

### II. Exploring Careers in Agricultural Mechanics

<table>
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<tr>
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</table>

#### A. Mechanics in the world of Agriculture
1. The advantage of mechanics
2. Areas that mechanics improves

#### B. Career Options in Ag Mechanics
1. Employment, Business owner, and Researcher
2. Employable skills and traits
3. Resume building
4. Interview skills
5. Communication

### III. Using the Ag Mechanics Laboratory/Shop (Safety)

<table>
<thead>
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</table>

#### A. Shop Orientation and procedures
1. Starting
2. Working

#### B. Personal Safety in Ag Mechanics
1. PPE
2. Proper attire
3. MSDS
4. Working near others

#### C. Reducing Hazards in Ag Mechanics
5. Look, Think, and Act
6. First aid protocol

#### D. Shop Clean up and Orientation
7. Ending work
8. Clean up

#### E. Safety
9. General

### IV. Ag Construction

<table>
<thead>
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### KHSD Career Technical Education Course of Study

#### b. Tool ID
   - i. Specific to wood and construction

#### c. Tool Safety
   - i. General uses and practices

#### B. Measurement and Layout
   - a. Tools
   - b. Procedure

#### C. Bill of materials
   - a. Calculating expenses
   - b. Ordering the correct amount
   - c. Recording expenses

#### D. Basic woodworking skills
   - a. Selecting
   - b. Cutting
   - c. Shaping
   - d. Joining
   - e. Finishing
     - i. Preparing wood and metal for painting
     - ii. Selecting and applying coating materials

#### E. Types of fasteners
   - a. Metal and wood

#### F. Loads
   - a. Hitching
   - b. Loading/Unloading
   - c. Tying and securing a load
   - d. Towing laws

### V. Principles of Electricity

<table>
<thead>
<tr>
<th>CR</th>
<th>LAB/CC</th>
<th>STANDARDS</th>
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<tbody>
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</tbody>
</table>

#### A. Introduction
   - a. Careers
   - b. Tool ID
     - i. Use of tools and ID
   - c. Safety
   - d. Principles
     - i. AC
     - ii. DC
     - iii. Ohm's Law
     - iv. Reading Plans

### VI. Principles of Plumbing

<table>
<thead>
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<th>LAB/CC</th>
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</table>

#### A. Introduction
   - a. Careers
   - b. Tool ID
     - i. Use of tools and ID
   - c. Safety

---

CTE Anchor:
- 3.1, 3.4, 3.7, 4.5, 5.2, 7.4, 11.2, 11.5

CTE Pathway:
- B3.1, B3.2, B3.4, B3.6

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Academic:
- RLST9-10.4, RLST11-12.3, WS9-10.9, SEP2, PS3

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Academic:
- RLST11-12.3, WS9-10.9, WS11-12.7, M-GM-2, SEP-1, SEP-2

---

CTE Anchor:
B. Commercial/Agricultural.
   a. Types of pipe
      i. Copper
      ii. Steel
      iii. Galvanized
      iv. Plastic
         1. PVC, CPVC, ABS, & PE
      v. Connecting pipe
         1. Fittings
         2. Cutting
   b. Plumbing Lab

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<th>Introduction to Small Engines</th>
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<td>c. Different Applications</td>
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<td>d. Using the manual</td>
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<td>C. Identification: Engine</td>
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<tr>
<td></td>
<td>cutting, and bending metal</td>
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<td></td>
<td>D. Fastening metal</td>
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<td>E. Metal working with power</td>
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<td>F. Finishing Metal Surfaces</td>
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<td>a. Preparing metal for</td>
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<td>G. Lab</td>
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<td>H. Tool Fitting</td>
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<td></td>
<td>a. Repairing and reconditioning tools</td>
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### IX. Welding and Cutting Metal

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</table>

- **A. Introduction**
  - a. Careers
  - b. Tool ID
    - i. Use of tools and ID
    - 1. Gas
    - 2. Electric
    - ii. Machinery and equipment
  - c. Safety

- **B. Principles of welding**
  - a. Oxidation
  - b. Welding plans
    - i. Symbols

- **C. Oxy-Fuel**
  - a. Setup/Break down
  - b. Safety
  - c. Metal Fusion Processes

- **D. Cutting: Oxy-fuel or Plasma**

- **E. Electrical Arc Welding Process-**
  - To include SMAW or GMAW or TIG
    - a. Setup/Break down
    - b. Safety
    - c. Read Electrodes
    - d. Welding mild steel
    - e. Welding positions
    - f. Welding joints

### X. Construction of Personal Projects

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- **A. Project Selection and Planning**
  - a. Bill of Materials
    - i. Cost estimation
  - b. Project Construction

### XI. Employment Portfolio

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- **A. Students will prepare a professional portfolio.**
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<th>Portfolio showcases best professional level work</th>
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<tr>
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<td>2. Job application</td>
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<td>3. Resume</td>
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<td>4. References</td>
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</table>
A. COLLEGE COURSE DESCRIPTION:
This course covers basic mechanical skills in woodworking, cold metal, electricity, plumbing, concrete, and project construction skills as related to farm maintenance and repair. The use of hand and power tools skills as well as emphasis on safety practices for all mechanical areas are covered. A laboratory course is required.

B. UNITS: 3

C. PREREQUISITES: None

D. REQUIRED CONTENT FOR ARTICULATION:

Lecture
- Farm Construction work
- Measuring, marking
- Hand tools, their care, proper use and operation
- Power tools-how to operate, adjust, and repair
- Surveying, squaring and leveling tools
- Safety rules and considerations
- Blueprints
- Sketching
- Reading blueprints
- Construction materials
  - Properties of metals, woods, etc.
  - Figuring bills of materials
  - Fasteners of all types
- Wood work
  - Use and care of tools and machines used in wood working
• Selection and characteristics of different woods
• Paints
  • Types
  • Mixing
  • Application and clean up
• Sheetmetal
  • Layout
  • Cutting and bending
  • Soldering
  • Operation and care of sheetmetal tools
• Cold Metal
  • Use and sharpening of hand tools such as chisels, punches, scribers, taps, and dies
  • Operation and care of power metal working tools
  • Bending, drilling, marking, threading, and sawing metal
• Plumbing
  • Operation and care of plumbing tools
  • Types of fittings
  • Layout and measuring
• Concrete
  • Physical properties
  • Estimating quantities, figuring costs
• Electrical
  • Splices and connections
  • Lighting circuit, receptacle circuits
  • Safety with electricity

Lab
• Safety Standards
  • We will take a look at general shop safety including basic safety actions, safety colors, and emergency fire control.
• Tool and Equipment Safety
  • Students take a look at all the tools and equipment used in the laboratory, including proper use.
• Measurement and Blueprint Reading
  • Students will demonstrate basic measurement skills, blueprint reading as well as plan drawing.
• Wood Construction Project
  • Class will review all wood tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Wood Construction Project
  • Wood construction project continues.
• Sheet Metal Project
  • Class will review all sheet metal tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Sheet Metal Project
  • Sheet metal project continues.
• Cold Metal Project
  • Class will review all cold metal tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Cold Metal Project
  • Cold metal project continues
• Plumbing Project
  • Class will review all plumbing tool safe and proper use. Students will read plans and develop project according to supplied plans.
• Plumbing Project
  • Plumbing project continues.
• Concrete Project
  • Class will review all plumbing tool safe and proper use. Students will read plans and develop a project according to supplied plans.
• Concrete Project
  • Concrete project continues.
• Electrical Project
  • Electrical project class will review all plumbing tool safe and proper use. Student will read plans and develop project according to supplied plans.
• Electrical Project
  • Electrical project continues.

E. COMPETENCIES AND SKILL REQUIREMENTS REQUIRED FOR ARTICULATION:
• Develop an accurate construction plan that includes a bill of materials, project measurements, machine setups and material types for a given project to be constructed in class.
• Identify safe shop practices and potentially hazardous safety conditions in the work environment.
• Illustrate knowledge of concrete by forming, pouring, screeding, and finishing a slab to a proper size and slope.
• Assemble an electrical wiring board or display as per instructions.

F. MEASUREMENT METHODS (include any industry certification or licensure):
• Comprehensive Quizzes and Exams
• Written Critical Thinking Scenarios
• Problem Analysis and Solution
• Research and Term Papers
• Performance Evaluation

G. TEXTBOOKS OR OTHER SUPPORT MATERIALS (including Software)
H. PROCEDURES AND/OR CRITERIA FOR COURSE ARTICULATION:

Bakersfield College is committed to a comprehensive articulation program linking secondary and post-secondary instruction and learning outcomes to ensure high school students make a smooth transition from high school to college without experiencing delay or duplication of learning. Tech Prep articulated courses offer students the opportunity to earn college credit for eligible career and technical education (CTE) courses while still in high school. These courses are designed to give the student the same skills they would gain by taking a similar course at Bakersfield College. The articulated course applies toward high school graduation and a college degree or certificate while also preparing the student for a career.

This Articulation Agreement is approved based on the following criteria:

1. The College faculty in the appropriate discipline has determined this course to be comparable to a specific college course and have signed the agreement.
2. This agreement will remain valid for 3 years as long as there are no changes to course content by either party involved.
3. High school students must successfully satisfy all required course competencies at the "B" or better grade level as certified by the appropriate high school designee.
4. With respect to articulated high school courses, credit by examination will only be granted when the final examination for the high school course has the approval of knowledgeable college faculty in the same field, and the student passes this examination with a satisfactory grade ("A", "B", or "C" level).
5. The final exam requirement will be met by the high school final exam as approved by the College faculty in the appropriate discipline.
6. The student receives college credit using the high school grade, if a full year course the second semester grade will be posted to his/her college transcript.
7. The College credit will only be transcripted if a Bakersfield College application is completed when the student enrolls in the articulated course.
8. Articulated college credit may be awarded, up to three years after completion of the course, to those students that did not complete step 7.

In addition,
9. High school teachers teaching an articulated course will advise students to complete an on-line Bakersfield College application, so college credit can be awarded.
10. Students desiring college credits will identify themselves through the CATEMA system.
11. Bakersfield College will create CRN's for the BC courses to be awarded.
12. At conclusion of the course, semester or year depending on course duration, course grades are submitted to College via CATEMA system. Students who have met all course and the articulation requirements and whom high school teachers recommend will receive college credit.

Agreement was based on Statewide Career Pathway Project Template: ☐ Yes  ☐ No

Name of Template Used: ______________________________________________________________

This Articulation Agreement will be reviewed if there is a change to course content by either party and/or not to exceed 3 years.

HIGH SCHOOL SIGNATURES:

Teacher/Department Chair Date

Assistant Principal/Designee Date

COLLEGE SIGNATURES:

Faculty Date

Department Chair Date

Dean of Instruction Date

Executive VP, Academic Affairs/Designee Date

Page 4 of 4 569
Section R

Graduate Follow-Up System
BAKERSFIELD HIGH SCHOOL AG. DEPARTMENT

GRADUATE FOLLOW UP FORM for the Class of 20_____

Graduate Name: ________________________________

Physical Mailing Address: ________________________________ 933____

Cell phone: __________________________

E-mail address: __________________________

Number of Years in the BHS Ag Program 1 2 3 4

Were you in another High School's Ag Program? Yes No

If yes, which school? __________________________

Years in that school’s program? 1 2 3

Highest Degree Received in the FFA Greenhand Chapter State

After graduation, what do you plan to do right now?

____ Attend a trade/technical school (write name of school): ________________________________

Studying what trade? ________________________________

____ Attend a Junior College/Community College: ________________________________

Studying what subject area/major? ________________________________

____ Attend a Four Year University: ________________________________

What will your major be? ________________________________

____ Go get a job so that you can begin your career. (Do not want to go to school anymore.)

____ Go get a job. You do not want to go to school right now, but possibly you will go to school later.

____ Go directly into Armed Forces: Army Navy Air Force Marines Coastguard National Guard
California Ag Ed Online

Post Graduate Follow-Up

Students by Graduation Year (36 Students) 2018

Only students with 3 or more years in Ag Ed will be shown in this list.

Save Changes

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<th>YEARS IN AG</th>
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<tbody>
<tr>
<td>Arvizu, Brendan</td>
<td>601273593</td>
<td>2018</td>
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<tr>
<td>Barnes, Joanne</td>
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<td>Brantley, Conner</td>
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<td>2018</td>
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<td>2018</td>
<td>3</td>
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<tr>
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<td>Carrasco, Taylor</td>
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<td>Castillo, Ashlie</td>
<td>601273919</td>
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https://www.calaged.org/connect/roster/students_graddata.aspx
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<th>NAME</th>
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<td>Isidoro, Pedro</td>
<td>601274291</td>
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<td>Jackson, Amoria</td>
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<td>Lawrence, Loren</td>
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<td>Manriquez, Sarai</td>
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<td>Samuel, Naomi</td>
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573
### Post Graduate Follow-Up

<table>
<thead>
<tr>
<th>NAME</th>
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<th>GRAD YEAR</th>
<th>YEARS IN AG</th>
<th>GRAD STATUS</th>
</tr>
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<tbody>
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<td>Villalpando, Aaron</td>
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<tr>
<td>Wilke, Justin</td>
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<td>Wilson, Patrick</td>
<td>601640969</td>
<td>2018</td>
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<td>Location or Position Unknown</td>
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**Our Mission**

Agricultural Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resources systems.

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Explore | Participate | Teach | Support

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https://www.calaged.org/connect/roster/students_graddata.aspx
Section S

List of Active Placement Sites
Section S
List of Active Placement Sites

We are establishing some connections in the community for students to obtain some work experience, either paid or unpaid. The following are some of the cooperating businesses.

1. Log Cabin Florist
2. Whitney Sheep Ranch
3. Wm. Bolthouse Farms
4. Mike Battistoni- Shop Projects for local teachers at BHS
AGRICULTURAL EDUCATION
PROGRAM SELF REVIEW
DOCUMENTATION

School Site: ________________________________  Year: __________

ACTIVE PLACEMENT SITES IN WORK EXPERIENCE

<table>
<thead>
<tr>
<th>Work Site</th>
<th>Student's Name</th>
<th>Animal Science</th>
<th>Plant and Soil Science</th>
<th>Ag Business</th>
<th>OH</th>
<th>Ag Mechanics</th>
<th>Forestry and Natural Resources</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>
Section T

Recruitment Activities and Materials
AGRICULTURAL STUDENT PLANNING HANDBOOK

Once a Driller, Always a Driller!

Learning to Do,
Doing to Learn,
Earning to Live,
Living to Serve.

Where Leaders Begin!
Freshmen Agriculture Classes

The following classes are available to incoming freshmen:

• Ag Soils – CP Lab Science

• Floral Design I – CP Fine Arts

• Ag Mechanics I
### CAREER PATHS

<table>
<thead>
<tr>
<th>Grade</th>
<th>College Preparatory</th>
<th>Floral Design</th>
<th>Ag Mechanics</th>
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<tbody>
<tr>
<td>9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Ag Soils (CP)</td>
<td>Floral Design 1</td>
<td>Ag Mech 1</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Sustainable Ag (CP)</td>
<td>Floral Design 2</td>
<td>Ag Mech 2</td>
</tr>
<tr>
<td>11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Ag Chemistry (CP)</td>
<td>Floral Design 3</td>
<td>Projects 3</td>
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<tr>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Ag Econ/Ag Govt (CP)</td>
<td>Floral Design 4</td>
<td>Projects 4</td>
</tr>
</tbody>
</table>

### COURSE DESCRIPTIONS

**Ag Soils**—This is a COLLEGE PREPARATORY class for FRESHMAN. It meets the University of California “D”-Lab Science requirement and will cover soil science concepts, leadership, and ag natural resources.

**Sustainable Ag**—This COLLEGE PREPARATORY class will cover many of the same aspects of a regular biology class with an emphasis in agriculture. Sustainable Ag is also a Freshman level class for AVID students, but is available to Sophomores if they didn’t take biology Freshman year.

**Ag Chemistry**—This is a COLLEGE PREPARATORY class for students in Algebra II or higher. It meets the University of California “D”-Lab Science chemistry requirement with an emphasis on agriculture.

**Ag Sales & Marketing**—This class is designed to teach students about agriculture sales techniques, marketing, advertising and entrepreneurship. Ag Sales and Marketing is offered to Third Year Ag students that do not take Ag Chemistry.

**Ag Econ/Ag Govt**—These COLLEGE PREPARATORY classes focuses on types of agricultural business ownership, economics, supply and demand, marketing cooperatives, finances, computers in agriculture, agriculture law, and the structure and history of government. These are each a semester long and meet graduation requirements for seniors.

**Floral Design 1-4**—These classes fulfill the COLLEGE PREPARATORY UC fine arts credit requirement. Floral design teaches the art of floral design, construction, sales, flower identification, and leadership. This class is for first to fourth Year Ag students.

**Ag Mechanics/Projects**—This class fulfills the general elective requirements and is in the process of getting approved for UC elective credit. The courses offers experience in welding, woodworking, electrical, plumbing and small engines. Welding techniques in Arc, Oxyacetylene, and MIG welding will be covered. Students in the advanced classes design and build projects as well.
Benefits of Being in the Agriculture Program

Through the FFA, students have opportunities to these three keys elements.

- Learn Leadership Skills while travelling across California and meeting new friends!
- Earn Money!
- Qualify for Ag Scholarships! Thousands of dollars in Ag Scholarships have few to NO applicants EACH year!

Who can be in the Ag Program/FFA?

Everyone in grades nine through twelve that take a high school agriculture class.

What is an AG project and do you need to have one?

Yes! An Ag (agriculture) project is required. This is a “learning by doing” tool in agricultural education. All students are required to conduct a project, which reflects their agricultural interests and career goals. Through these individual programs, members receive hands on training in goal setting, planning and record keeping.

What are some EXAMPLES of the different types of projects that can be conducted?

| Home Improvement (Placement) | Sheep (Ownership) |
| Gardening (Ownership)       | Cattle (Ownership) |
| Yard Work (Placement)       | Goats (Ownership) |
| Landscaping (Placement)     | Pigs (Ownership) |
| Plant Care (Placement)      | Working in a feed store (Placement) |
| Small Animal Care (Placement) | Working in a floral shop (Placement) |
| Rabbits (Ownership)         |                   |

What is the FFA?

The FFA is known in California as Future Farmers of America. The FFA makes a positive difference in the lives of students by developing their potential for premiere leadership, personal growth and career success. It is the largest rural youth organization in the United States, with over 500,000 members in the national organization.

Does 4-H and FFA Differ?

Yes, 4-H and FFA differ. FFA is an intra-curricular program – one that is an extension of the classroom. Students participate in FFA activities under the supervision of the agriculture instructor. The 4-H club is a county activity and is optional and operated under the supervision of interested adults.
Bakersfield High School Agriculture Program
Student Interest Sheet

Incoming Freshman Name: ____________________________

Jr. High School attending: __________________________

Which part of the agriculture program interests you the most?

<table>
<thead>
<tr>
<th>Travel</th>
<th>Making New Friends</th>
<th>Making $$$</th>
<th>Plants &amp; Flowers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Scholarships</td>
<td>Competition</td>
<td>Visiting Colleges &amp; Universities</td>
<td>Animals / Vet Science</td>
</tr>
<tr>
<td>Engines/Motors/Electrical/Welding</td>
<td>Public Speaking</td>
<td></td>
<td></td>
</tr>
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</table>

Email address: ____________________________  Cell Phone: ____________________________

Which of the following agriculture classes interests you the most?

<table>
<thead>
<tr>
<th>Check Class(es)</th>
<th>Classes Offered</th>
<th>Course Credit</th>
<th>UC Credit</th>
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<tbody>
<tr>
<td></td>
<td>Ag Soils</td>
<td>UC Approved Course</td>
<td>D – Lab Science</td>
</tr>
<tr>
<td></td>
<td>Floral Design I</td>
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<td>F – fine arts</td>
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<tr>
<td></td>
<td>Ag Mechanics I</td>
<td>CTE Course – Graduation</td>
<td>G – pending</td>
</tr>
</tbody>
</table>

__________________________
Student Signature

Parent Name: ____________________________

Physical Mailing Address: ____________________________

City: Bakersfield  State: CA  Zip Code: ____________________________

Email address: ____________________________  Cell Phone: ____________________________

__________________________
Parent Signature
Section U

Staff In-Service Record
INCENTIVE GRANT IN-SERVICE ACTIVITIES DOCUMENTATION

**CRITERIA 4.B**  
**School Year**  
2017-18  
**School**  
Bakersfield

Based on the previous year's record, every agriculture teacher, teaching at least ½ time agriculture, attends a minimum of four of the following professional development activities:

Qualified and Competent Personnel

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Jacob Eyraud</th>
<th>Mary Moreno</th>
<th>Jenny Wilke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Region Meeting</td>
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<tr>
<td>Region In-service Day</td>
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<tr>
<td>Spring Region Meeting</td>
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<tr>
<td>Section In-service*</td>
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<td>X</td>
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<td>Section In-service*</td>
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<td>Summer Conference</td>
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<td>University AgEd Skills Week</td>
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<tr>
<td>Professional Development **</td>
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</tbody>
</table>

* Four Section In-service Meetings equals one Professional Development Activity

** Can utilize a *maximum* of two other "Agriculturally Related" Professional Development activities than those listed above. Explain the Professional Development:

1. New Professionals
2. Externship
3. 
4. 
5. 


Section V

Staff Minutes
Staff Minutes
2017-2018
BHS Learning Team AGENDA

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud

8/21/17

Announcements:
We need to do our information on calaged.org and have our students enter their codes to update their information on AET.

COLC is this next weekend. We will leave at 6:30 am.

Recap of Last Meeting:
Went to San Joaquin Region Boot Camp with Chapter FFA Officers at Camp San Luis two weekends ago.

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
We had our fair meeting with parents last week and project visits last week. Most of the kids need to practice showmanship more than they are now and get their buyers and sponsors. Follow through and getting some up to weight is also an issue.

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – We will be focusing on the ag projects from the very beginning.
Ag Mech 1: Working on measurements
Ag Mech 2 & Projects: Working on Safety.
Ag Soil & Ag Sustainability: Still with the sub for the sub because of district politics. ☹
Ag Chem: Followning the Chemistry calendar – lab safety, measurement, density.
Ag Econ: colleges/research project
Floral: intro to drawing.

** Planners give out to all ag students in Wilke’s classes. Eyraud’s classes should be getting the copies this week. They were sent in last week. Parents will also be given copies at the parent meeting this Wednesday night.

FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
Tomorrow there is a free science lab pick up (per an email sent via Lynn). Going to see if we can get some lab equipment.

Profession Development/Needs from Administration:
LEARNING TEAM RE-BOOT

Team Name: Ag

Team Members: Jacob Eyraud, Mary Moreno, Jenny Wilke

Use the following scale to indicate the extent to which each statement is true of your learning team: (Recommended that you evaluate your team as individuals before your evaluate yourself as a whole team. Singletons can still use this rubric)

1  2  3  4  5  6  7  8  9  10
NOT TRUE OF OUR TEAM  OUR TEAM IS ADDRESSING THIS  TRUE OF OUR TEAM

1. __8___ We have identified team norms and protocols to guide us in working together.
2. __7___ Each member of our team is clear on the knowledge, skills, essential learnings, that students will acquire as a result of our course level units.
3. __7___ We have aligned the essential learnings with state/national/common core/district standards.
4. __6 (0 w/o book)__ We have identified course content and topics that we can eliminate from our textbooks that do not align to our agreed upon essential learnings.
5. __6___ We have agreed on how to best sequence the content of our course and have established pacing guides to help students achieve the intended essential learning.
6. __7___ We have identified the prerequisite knowledge and skills students need in order to master the essential learning of each unit of instruction.
7. __8___ We have developed strategies and systems to assist students in acquiring prerequisite knowledge and skills when they are lacking in those areas.
8. __8___ We have developed frequent common formative assessments that help us determine each students mastery of essential learning.
9. __7___ We have developed I CAN statements for each of our essential learnings.
10. __7___ We use the results of our common formative and summative assessment to assist each of our team members in building our strengths and addressing our weaknesses as part of an ongoing process of continuous improvement as professionals
11. __8___ We have agreed on the criteria we will use in judging the quality of student work related to essential learnings (Common Grading Policy)
12. __9___ We have instructed our student as to what our common grading policy will be.
13. __9___ We have developed or utilized common summative assessments that help us assess the strengths and weaknesses of our program.
14. __9___ We have effectively integrated our course vertically with course below and above us.
Team Norms:

1. Be on time.
2. Be professional.
3. Be prepared.
BHS Learning Team AGENDA

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

Announcements:
We need our students enter their codes to update their information on AET.
Fair starts this week.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – We are going to do a test run on registering on AET.
Ag Mech 1: Working on fractions and measurements
Ag Soil & Ag Sustainability: Finishing history of FFA and Ag Careers and what Ag is
Ag Chem: Calorimetry Lab Part I done last Friday; revisited by students in groups today; tested tomorrow; heat energy
transfer and mathematical calculations
Ag Econ: Chapter 1 and business plan
Floral: Lab safety test corrections; Color
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
MFE/ALA letter of intent goes out. Due back by 9/13 w/partial payment. We will keep the $50 co-pay for this
conference.
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to
the students. We will start telling the kids in October so they can make appropriate plans. Our maximum total is 27.

Tri Tri Dinner To Go Pre Sale continues.

Specialized Incentive Grant- meeting with Cheyenne tomorrow

Profession Development/Needs from Administration:
BHS Learning Team AGENDA

Subject/Team: Agriculture

Members:
Jennifer Wilke, Jacob Eyraud, Mary Moreno

Announcements:
9/25 – at the fair.
10/2 I was out of school.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – We are registering all students on AET as required for our R-2 report.
Ag Mech 1: safety test
Ag Mech 2 & Projects: working in the shop.
Ag Soil: Power points on ag issues of soils
Ag Sustainability: power points on issues facing ag
Ag Chem: convection and plate tectonics; quarter 1 review and test
Ag Econ: business plan; committee assignments
Floral: opening ceremonies/public speaking
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. We will start telling the kids in October so they can make appropriate plans. Our maximum total is 27.

Tri Tri Dinner To Go is on October 18. That is the same day as Principal’s Partner Day.
Need to go shopping on Monday and do prep on Tuesday instead.

Professional Development/Needs from Administration:
Specialized Incentive Grant- meeting with Cheyenne – met with her about the initial idea. Need to follow up to see where we are at with this.
# BHS Learning Team AGENDA

**10/16/17**

<table>
<thead>
<tr>
<th>Subject/Team:</th>
<th>Members:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Jennifer Wilke, Jacob Eyraud, Mary Moreno</td>
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</table>

## Announcements:
- Career Symposium is this Friday.
- Prepared and Job Interview papers – 1st rough draft due this Thursday
- Haunted house next Monday.
- See’s Xmas Candy Pre-Sale starts tomorrow.
- Duck and Cover on Thursday.
- Recruitment committee meets tomorrow at lunch tomorrow.

## Recap of Last Meeting:

## Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

### Our Learning Team Cycle:
- SAE (Supervised Ag Experience) – R-2 report is done. Need to do the AIG department self review and POA.
- Ag Mech 2 & Projects: working in the shop.
- Ag Soil: Power points on ag issues of soils – still presenting
- Ag Sustainability: power points on issues facing ag – still presenting
- Ag Chem: electron configuration; periodic table
- Ag Econ: business plan; committee assignments
- Floral: making bows
- FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

### Other Business:
- State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. We will start telling the kids in October so they can make appropriate plans. Our maximum total is 27.

- Tri Tri Dinner To Go is on October 18. That is the same day as Principal’s Partner Day.

### Profession Development/Needs from Administration:
- Specialized Incentive Grant- meeting with Cheyenne – met with her about the initial idea. Need to follow up to see where we are at with this. At KHSD Ag PLC it looks like we have to wait till next year now due to architect since we waited so long.

## Team Norms:
- 1. Be on Time.
- 2. Do what is expected.
- 3. Be professional.
BHS Learning Team AGENDA

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

Announcements:
Prepared and Job Interview papers revised due date 1st rough draft due this Friday
Haunted house tonight.
See’s Xmas Candy Pre-Sale starts tomorrow.
Tri Tip #1 recap – report from cafeteria.
Report cards from Tuesday until 11/7
Floral Market Field Trip on 11/30 – due to chaperone requirement we will need 4 chaperones. Can start paying Thursday.
Halloween lunch activities on 10/31. Need to have the officers rethink their idea as the original ideas might not work due to time constraints.
Banquet staff assignments
  Set Up/Decorations: Jen
  Dinner: Mary
  Registration: Jake
  Auction: Jake
  Program: Jen
** Need phonetic pronunciation of names so our officers can say the names correctly.
MFE/ALA 2nd payment due on 11/3
McKinley Elementary community service on 11/2 – they need list tomorrow
Costume Drive – total of 8 costumes collected – None from our officer team.
Fair thank you letters – rough drafts – only received 3 so far. Sent out a second notice.

Recap of Last Meeting:
See previous minutes.

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
Career Symposium was last Friday. Sign up for becoming adjunct teacher at BC site.

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – R-2 report is done. Need to do the AIG department self-review and POA.
Ag Mech 1: wood working
Ag Mech 2 & Projects: welding projects
Ag Soil: importance of soil and finishing presentations
Ag Sustainability: power points on issues facing ag – still presenting; cycles (water, nitrogen and carbon)
Ag Chem: atomic models; atomic structure; periodic table
Ag Econ: business plan; elasticity
Floral: bows due; history of floral design & shapes of arrangements
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. We will start telling the kids in October so they can make appropriate plans. Our maximum total is 27.

Professional Development/Needs from Administration:
Specialized Incentive Grant- need to get the architect portion going for our idea
Counseling: Met with a counselor today to clarify misconceptions about ag program. Counselor told a potential student they had to take a fair animal and would not have time to do so with their Academy classes and other commitments. That is what the Academy teacher had told the counselor as well as the fact that she did not want her kids in other programs because it took too much time away and they wanted them in all four classes. Yikes!
Announcements:
Penny wars & Blanket kit drive
See’s Xmas Candy Pre-sale – goal is each student sells one; ends on Monday.
Order will be placed on Tuesday. Any order(s) after Tuesday will have to be returned.
Report cards shown to teachers till 11/7 for 5 FFA points.
Floral Market Field Trip on 11/30.
Open/Close staff assignments
  Set Up/registration/Judges: Jen
  Dinner: Mary
  Rooms/ Paraphernalia: Jake
  Student Organization: Jenny
  36 kids as helpers (21 with rooms/registration + 15 with dinner)
Clothing Drive – need officers to follow up.
MFE/ALA 2nd payment due on 11/3 – please post on board. Need to put it on the whiteboard in all classrooms.
Fair thank you letters – rough drafts – only received 5 so far. Sent out a second notice.
Recap of Last Meeting:
McKinley Elementary community service on 11/2 – if we do it again, we need to be present.

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
Sign up for becoming adjunct teacher at BC site. Dual enrollment can help pay for

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – Need to do the AIG department self-review and POA. Schedule an Ag Advisory
Meeting for November 28.
Ag Mech 1: wood working
Ag Mech 2 & Projects: welding projects
Ag Soil: physical properties of soil and soil testing
Ag Sustainability: water cycles
Ag Chem: atomic structure
Ag Econ: business agreements
Floral: first arrangement greening; cleaning flowers
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to
the students. Our maximum total is 27.

Profession Development/Needs from Administration:
Specialized Incentive Grant- need to get the architect portion going for our idea
BHS Learning Team AGENDA

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

11/13/17

Team Norms
1. Be on Time.
2. Do what is expected.
3. Be professional.

Announcements:
Penny wars & Blanket kit drive
See’s Xmas Candy Pre-sale – goal is each student sells one; ends today – grace period till tomorrow.
Floral Market Field Trip on 11/30.
Clothing Drive – need officers to follow up.
MFE/ALA 2nd payment due on 11/3 – please post on board. Need to put it on the whiteboard in all classrooms.
Fair thank you letters – notices sent out about grades being dropped in 8th period. Talking to kids individually now.
Roadshow this Friday.
State Convention Applications available tomorrow. Reviewed and approved.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
Open/Close – reviewed event.
Sign up for becoming adjunct teacher at BC site. Dual enrollment can help pay for

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – Need to do the AIG department self-review and POA. Schedule an Ag Advisory Meeting for November 28.
Ag Mech 1: wood working
Ag Mech 2 & Projects: welding projects
Ag Soil: physical properties of soil and soil testing
Ag Sustainability: invasive species
Ag Chem: electron configuration of transition metals/germanium lab
Ag Econ: AET
Floral: flowering arrangements; evaluations; portfolios
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. Our maximum total is 27. Apps go out tomorrow

Profession Development/Needs from Administration:
Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that.

In our post event review of the Open/Close Ceremonies Contest, we discussed the cafeteria issue. The night shift lady locked it down. I already sent Sydney my report on the incident; however in our discussion today it came up that we were expected to sweep and mop the floors of the cafeteria as well after the event. If the items are locked up because she closes the area off, how are we supposed to do all of that? We are more than happy to do our share of the work, and certainly we don’t want to ever add to the custodians workload in any way. This put us in a jam though in and created tension. 😞
Announcements:
Penny wars – need to count and roll ourselves
Blanket kit drive - we are going to have to purchase these w/ December penny wars
See’s Xmas Candy : Order should be in on 12/5
Wooden Xmas Tree Sales – Plain $15 or painted $20 (38” tall for standard; can do a set of 3 custom with varying heights -3 for $40; painted 3 for $50)
Floral Market Field Trip is Thursday.
Clothing Drive – need officers to follow up.
MFE/ALA 2nd payment due on 11/3 – please post on board. Need to put it on the whiteboard in all classrooms.
Fair thank you letters – final drafts are due tomorrow.
State Convention Applications available.
Executive Meeting on Monday.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:
SAE (Supervised Ag Experience) –Do AIG department self-review and POA. Ag Advisory meeting for November 28.
Officers coming tomorrow: Naomi, Kim, Morgan, Julian
Ag Mech 1: wood working
Ag Mech 2 & Projects: welding projects (6010, wire feed, and projects)
Ag Soil: soil horizons and pH
Ag Sustainability: cells - structure
Ag Chem: stoichiometry
Ag Econ: farm credit system
Floral: holiday arrangements – sketches of five; materials; cost breakdown
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. Our maximum total is 27. Apps go out tomorrow

Profession Development/Needs from Administration:
Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that please 😊
BHS Learning Team AGENDA

Subject/Team: Agriculture

Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

12/4/17

Team Norms
1. Be on Time.
2. Do what is expected.
3. Be professional.

Announcements:
- Penny wars – Dec starts on 12-6
- See’s Xmas Candy: Order should be in tomorrow
- Wooden Xmas Tree Sales –
  Plain $15 or painted $20 (38” tall for standard; can do a set of 3 custom with varying heights -3 for $40; painted 3 for $50)
- MFE/ALA 2nd payment due on 11/3 – please post on board. Need to put it on the whiteboard in all classrooms.
- Fair thank you letters – still need some final drafts.
- State Convention Applications available; due 12/15.
- Executive Meeting was held today; meeting Wednesday at lunch

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:
- SAE (Supervised Ag Experience) – conducted self-review; typing up POA. Had Ag Advisory meeting on November 28.
- Ag Mech 1: wood working; finishing this week
- Ag Mech 2 & Projects: welding projects (6010, wire feed, and projects)
- Ag Soil: soil nutrients/plant nutrients
- Ag Sustainability: cells - structure
- Ag Chem: stoichiometry & types of reactions
- Ag Econ: farm credit system and banking math
- Floral: holiday arrangements – sketches of five; materials; cost breakdown; starting arrangements
- FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
- State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. Our maximum total is 27. Apps go out tomorrow

Profession Development/Needs from Administration:
- Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that please 😊

Mary did not receive any of the emails regarding progress report grade deadlines or missing report pages.
### BHS Learning Team AGENDA

**Subject/Team:** Agriculture  

**Members:** Jennifer Wilke, Jacob Eyraud, Mary Moreno

#### Team Norms
1. Be on Time.  
2. Do what is expected.  
3. Be professional.

#### Announcements:
- MFE/ALA – payments due Friday
- Fair – 2018 meeting on Tuesday and Wednesday at lunch
- State Convention Applications – need to go through them today.
- CDE Contract for 8th period – due tomorrow; will put out on remind

#### Recap of Last Meeting:

#### Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
Need to work on WASC questions for CTE

#### Our Learning Team Cycle:
- SAE (Supervised Ag Experience) – State Degrees and Proficiency Apps are due on Monday; need to review them on Monday
- Ag Mech 1: working on electrical.
- Ag Mech 2 & Projects: 7018 & stick welding for ag mech 2; projects is working on projects
- Ag Soil: Diffusion and Osmosis
- Ag Sustainability: Diffusion and Osmosis
- Ag Chem: stoichiometry & limiting reactants; AET/state degree/proficiency
- Ag Govt: types of government/NAFTA/ AET-state degree/proficiency
- Floral: Rose Parade

FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

#### Other Business:
- State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. Our maximum total is 27. Apps were already due;

Report cards – 5 FFA points to show report cards; some kids are saying they don’t get them via mail. Ok for them to show us by Synergy.

**Star Awards**
- [https://www.calaged.org/Star-Adult-Award-Programs](https://www.calaged.org/Star-Adult-Award-Programs)

**Assignments:**
- Administrators: Jenny
- Counselors: Jake
- Supporting Staff: Mary
- National Chapter & State Superior Chapter: Jenny

Free FFA Jacket: Student we want to designate is –Kirstyana Barraza-Avila

**Ag Career Exploration Day at BC is on Friday, February 9**
- Do we want to take students? yes
- If yes, there is a form that needs to be filled out? 2 of us for sure
- Need to do a field trip form, request to be absent, etc.. see if there is another van in case there is greater demand

**Profession Development/Needs from Administration:**
- Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that please 😊
BHS Learning Team AGENDA

2/5/18

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

Announcements:
MFE/ALA – need any outstanding payments by this Friday or they don’t go; memo
To go out on Friday
Fair – 2018 – students who forgot to come have been asking about an opportunity
To makeup
State Convention – need to send out a memo for students with medical release/rules
Contract for 8th period – sent in to Cheyenne

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
Need to work on WASC questions for CTE

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – State Degrees and Proficiency Apps – scoring tomorrow; have 13 State Degrees and 6 proficiencies so far
Ag Mech 1: finishing electrical.
Ag Mech 2 & Projects: 7018 & stick welding for ag mech 2; projects is working on projects
Ag Soil: Cell transport & photosynthesis; trout
Ag Sustainability: Cell transport & photosynthesis; trout
Ag Chem: stoichiometry & limiting reactants – wrapping up/test; AET/state degree/proficiency
Ag Govt: types of government/ cooperatives
Floral: Hershey kiss roses and corsages
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State conference registration will be $185; we will pay $125 of that cost. Hotel will be $140. Total cost will be $200 to the students. Our maximum total is 27. Apps were already due;

Free FFA Jacket: Student we want to designate is – Kirstyana Barraza-Avila approved

Ag Career Exploration Day at BC is on Friday, February 9 – decided not to go because of time out of school this week and next week

Professional Development/Needs from Administration:
Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that please ☺

Team Norms
1. Be on Time.
2. Do what is expected.
3. Be professional.
**BHS Learning Team AGENDA**

**Subject/Team:** Agriculture

**Members:** Jennifer Wilke, Jacob Eyraud, Mary Moreno

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**2/20/18**

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**Team Norms**

1. Be on Time.
2. Do what is expected.
3. Be professional.

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**Announcements:**

Gone to World Ag Expo on 2/13/18
State Convention—need to send out a memo for students with medical release/rules
8th period—sent in to Cheyenne and to be added soon

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**Recap of Last Meeting:**

**Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):**

Need to work on WASC questions for CTE

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**Our Learning Team Cycle:**

SAE (Supervised Ag Experience) – 14 State Degrees and 3 Section Proficiency winners + Star Admin and counselors
Ag Mech 1: welding/engines
Ag Mech 2 & Projects: MIG/projects is working on projects
Ag Soil: photosynthesis/cellular respiration
Ag Sustainability: photosynthesis/cellular respiration
Ag Chem: chemical bonds
Ag Govt: cooperatives
Floral: finishing the 1st 3 flower corsages & starting the second 3 flower corsage
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

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**Other Business:**

Wrapping up State Conference paperwork. Final payment is due by 3/9.
Chapter meeting tomorrow night.
Career Expo on Thursday.
Shopping and Chili Prep on Thursday.
Regional meeting Saturday.
Tri Tip Dinner on Tuesday.
Coops and BIG Wednesday next week.
Leave for Davis on Thursday next week.

**Profession Development/Needs from Administration:**

Specialized Incentive Grant—need to get the architect portion going for our idea—want to know when we can get started on that please ☺
Announcements:

Tri Tip Dinner To Go tomorrow
BIG, Co-ops & AET Wednesday
Leave Thursday for UC Davis this weekend
8th period – sent in to Cheyenne and to be added soon; need to get any revisions in ASAP
Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started on that please
Worked on Perkins Purchase Orders and backup list in event that the others do not spend their money.
  • On that list is 2 chapter sets of FFA jackets (10 come in a set) as ours look very old and ragged.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:

Ag Mech 1: welding/engines
Ag Mech 2 & Projects: MIG/projects is working on projects
Ag Soil: photosynthesis/ cellular respiration
Ag Sustainability: photosynthesis/ cellular respiration
Ag Chem: chemical bonds; Lewis Structures
Ag Govt: cooperatives
Floral: working on second 3 flower corsage – due Tuesday of next week
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:
State Conference final payment is due by 3/9.

Profession Development/Needs from Administration:
CTE Grant money – is the spending date approaching??
BHS Learning Team AGENDA

Subject/Team: Agriculture

Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

3/5/18

Announcements:
Monthly calendars completed to end of the school year
Need to plan farm work days & what we want to have done out there + plan a sit down
With the Ordways to confirm the changes

Chapter Meeting on March 14 –
Sports Awards Banquet was moved to this night. So our kids will not have to choose, we will move our meeting
to a lunch meeting. The planned fair meeting for parents will be pushed to the April meeting

Worked on Perkins Purchase Orders and backup list in event that the others do not spend their money.
- On that list is 2 chapter sets of FFA jackets and pants/skirts (10 come in a set) as ours look very old and ragged.
- These are for students that cannot afford FFA jackets and need to borrow them. The cost is approximately
  $2000.

Easter Community Service Project – have a call into the Homeless Shelter as to the date that will work best for them
Tri Tip Dinner To Go #3 – changed date to Tuesday, May 15
8th grade recruitment-Jake is taking charge of these committees
Ag Advisory Meeting – date change to March 21; RSVP is for this week
Went over Region Parli Pro – only need one to go with me that day; the other can come after school with the rest of the
students
Camping for Point Awards Trip
Camping for Officer Retreat
PP to Foothill Tuesday – Jake to help transport
Spring Banquet – will be required for all 2nd and 3rd year members (alternative assignment is a research paper); seniors
who are second year members are excluded.
Trout Release – Tuesday – meet here to leave by 7 am; we have 3 vans going

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:

Ag Mech 1: welding/engines
Ag Mech 2 & Projects: MIG/projects is working on projects
Ag Soil: reading fertilizer bags
Ag Sustainability: plant systems; mini research paper with Hollister’s class (poetry & plants – 4 week program)
Ag Chem: Evaporation lab CER argumentation; close out unit
Ag Govt: cooperatives; test
Floral: working on 5 flower corsage – due Tuesday; AET
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:

Professional Development/Needs from Administration:
CTE Grant money – is the spending date approaching??

Specialized Incentive Grant- need to get the architect portion going for our idea – want to know when we can get started
on that please

Team Norms
1. Be on Time.
2. Do what is expected.
3. Be professional.
Announcements:
Need to plan farm work days
  Have penciled out ideas of what we want to have done out there
Chapter Meeting on April 17 with parent alumni meeting and mandatory fair meeting to follow
Wed – State Degree Banquet – arrive at 5:30 pm
GPA Lunch is Thursday during both lunches
Tri Tip Dinner To Go #3 – changed date to Tuesday, May 15
8th grade orientation – Monday and registration is on Wednesday and Thursday
Camping for Point Awards Trip
Camping for Officer Retreat – going to be 3 days
Spring Banquet – will be required for all 2nd and 3rd year members (alternative assignment is a research paper); seniors who are second year members are excluded. RSVP due by 4/27 for regular amount; $5 increase from 4/28 to 5/3.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:

Ag Mech 1: 6010 welding/engines
Ag Mech 2 & Projects: 6010 downhill /projects is working on projects
Ag Soil: soil pH
Ag Sustainability: ecosystems
Ag Chem: energy
Ag Govt: early formation of government
Floral: working on banquet center pieces and then symmetrical arrangements for beginners and asymmetrical arrangements for advanced.
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:

Profession Development/Needs from Administration:
CTE Grant money – if not spending it on greenhouse, did we get ok to spend it on textbooks?

Next CTE Grant – when can we get the architect portion going for our idea – want to know when we can get started on that please. Thanks.
BHS Learning Team AGENDA

Subject/Team: Agriculture
Members: Jennifer Wilke, Jacob Eyraud, Mary Moreno

Announcements:
Need to plan farm work days
   Have penciled out ideas of what we want to have done out there

GPA for 3rd quarter – need to plan for one of the last week’s – see when Batt is available
Camping for Point Awards Trip
Camping for Officer Retreat – going to be 3 days
Spring Banquet – will be required for all 2nd and 3rd year members (alternative assignment is a research paper). RSVPs are $15 through 5/3.
SLO state finals are this weekend. Jenny is working on getting the Welding team registered as she did not get them registered with Cuesta College like she should have.

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:

Ag Mech 1: 6010 welding/engines
Ag Mech 2 & Projects: 6010 downhill /projects is working on projects/ position welds
Ag Soil: soil conservation
Ag Sustainability: populations
Ag Chem: energy – finishing lab write up and wrapping up chapter
Ag Govt: constitution & presentations
Floral: finishing symmetrical arrangements; halos; starting vase arrangements
FFA activities will count for 20% in all classes; all students need to do 3 or more activities per quarter.

Other Business:

Profession Development/Needs from Administration:
CTE Grant money – if not spending it on greenhouse, did we get ok to spend it on textbooks?

Next CTE Grant – when can we get the architect portion going for our idea – want to know when we can get started on that please. Thanks.
BHS Learning Team AGENDA

Subject/Team: Agriculture

Members: Jacob Eyraud, Jenna Eyraud, Jennifer Wilke

8/20/18

Team Norms

1. Be on Time.
2. Do what is expected.
3. Be professional.

Announcements:
We need to do our information on calaged.org and then have the kids enter their information as well on the student roster.

Talked about the Harvest Hall Entries.

Chapter t-shirts are on sale and we started signups for the frito/hot Cheetos lunch on Tuesday.

Need to get water balloons for the chapter meeting for Tuesday. Maybe Costco or Party City.

Recap of Last Meeting:
Went to San Joaquin Region Boot Camp with Chapter FFA Officers at Camp San Luis two weekends ago.

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):
We had our fair meeting with parents last week and project visits last week. Most of the kids need to practice showmanship more than they are now and get their buyers and sponsors. Follow through and getting some up to weight is also an issue.

Our Learning Team Cycle:
SAE (Supervised Ag Experience) – We will be focusing on ag projects from the very beginning as we are registering them in ag before Fair.
** Planners will be given out to all ag students this year.

Other Business:
Planning for National Convention.

Professional Development/Needs from Administration:
**Announcements:**
We need to do our information on calaged.org – all teachers have updated their Personal information. The student roster portion is still being worked on.

Talked about the Harvest Hall Entries – being picked up today.

Pink t-shirts will be mailed on Friday.

Jake said that nothing was mentioned about the opening and closing script changing. Have copies left over from last year to be handed out. Tryouts are next week.

SLE/Nom Comm/Comm Chair Apps – available online – due November 1.

Banquet – What did they need from the kids/committees?
  - Need spring pictures.
  - Ok to sell t-shirts at the banquet.

**Recap of Last Meeting:**
Been at the KC Fair for the past two weeks and not present for the meetings.

**Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):**

**Our Learning Team Cycle:**
AET – all have registered on AET. Verifying that they have their classes registered and information is correct. Next step is to make sure that they all have a SAE (Supervised Ag Experience).

** Planners will be given out to all ag students this year.

Turn in the Quarter 1 tests to Cheyenne/plans for 2nd quarter.

**Other Business:**
Planning for National Convention.

**Professional Development/Needs from Administration:**
BHS Learning Team AGENDA

10/15/18

Subject/Team: Agriculture

Members: Jacob Eyraud, Jenna Eyraud, Jennifer Wilke

Announcements:
Oct 15 documents posted; Mr Parker emailed about the AIG check-list as to whether or not we can wait until the Ag Advisory meeting to complete it.

Opening and closing scripts and scorecards emailed. Five votes sent back. Asked Amber O’Connor to share Curricular Code today.

- Tryouts – do just lunch tomorrow maybe?

SLE/Nom Comm/Comm Chair Apps – available online – due November 1.

Wooden Xmas Trees –
Unpainted Singles $15, Trio $40; Painted Single $20, Trio $50 (red, green, combo/alternating)

Flower Market Field Trip Sign ups start on Wednesday
Haunted House Work Day Thursday after school

Shopping for Tri Tip Monday after school
- Costco and Smart and Final – will be shifting some items to Costco because of the PO since Smart and Final does not accept it anymore.

Tri Tip Dinner- Tuesday

Prep:
1st period – meat (Wilke)
2nd period – salsa (Jenna)
2nd period – bread (Wilke)
3rd period – salad (Jacob)

Dinner: Workers
1 hour shifts 3-4 runners
2 ticket takers
3-4 baggers
3-4 beans
3-4 in kitchen
2-3 at meat station
16-21 (8 kids per teacher per shift)

Recap of Last Meeting:
End of quarter

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:
AET – all have registered on AET. Verifying that they have their classes registered and information is correct. 370 students registered. Next step is to make sure that they all have an SAE (Supervised Ag Experience).

Other Business:
Planning for National Convention – next week.
Sent up items for National Convention – registration. Sent up last week to Rachel. Hopefully will be paid.

Profession Development/Needs from Administration:
BHS Learning Team AGENDA

Subject/Team: Agriculture

Members:
Jacob Eyraud, Jenna Eyraud, Jennifer Wilke

Team Norms
Be on Time.
Do what is expected.
Be professional.

Announcements:
Haunted House today after Chapter Meeting.

What would we like to do with the extra food from the Tri Tip Dinner to Go?
   Needs to be gone by tomorrow....
   23 tri tips left

Ag Advisory meeting – RSVP is due this week for the 11/6 meeting
   Only two have responded yes to coming to the meeting
   Reschedule?
      If yes, when?

Opening and Closing Ceremonies
   Votes received so far seem to be for Version 2
   Teams – need to start practice this week
      Officer -
      Freshmen -
      Novice -
      Open A -
      Open B -
      Spanish -

   Committee Sign Ups – Start on Thursday, November 1
      Meeting November 9
   Types of Committee Assignments
      Room Leaders/Monitors/Helpers
      Runners for Questions/Supplies
      Dinner Set Up/Serving/Clean Up
      Tabulations
      Decorations
      Check In/Registration

State Officer Visit
   - Need two male students to host our male state officers that are visiting
   - Probably a conversation with the student and parent
   - Dinner at Woolgrowers with officers
      * Do we want to invite others?
      * Are we having them contribute some money toward the dinner?
      * What are we doing for lunch the next day?

SLE/Nom Comm/Comm Chair Apps – available online – due November 1.

Wooden Xmas Trees – PreSale Due this Friday
   Are we sending this out to staff this week in an email?
   Unpainted Singles $15, Trio $40; Painted Single $20, Trio $50 (red, green, combo/alternating)
See's Candy Pre-Sale started --- need to really push the end date of November 13th since we have a LOT of kids that are not meeting deadlines

Flower Market Field Trip Sign ups continue till Friday for Floral students only & then open up on Google Docs for all others Monday

Skateland – signups start Monday, November 5

Recap of Last Meeting:

Reflections since last meeting (Driller Way/Celebrations/Concerns/Data):

Our Learning Team Cycle:

Next step is to make sure that they all have an SAE (Supervised Ag Experience). SAE Grants are due November 15th. Up to $1000 can be awarded. https://www.ffa.org/participate/grants-and-scholarships/sae-grants/

Other Business:
Planning for National Convention – next week.
Sent up items for National Convention – registration. Sent up last week to Rachel. Hopefully will be paid.

Profession Development/Needs from Administration:
Section W

Department Inventory
The Bakersfield Ag Department has the following equipment.

<table>
<thead>
<tr>
<th>Description of Major Equipment</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Mechanics and Ag Welding Shop</td>
<td></td>
</tr>
<tr>
<td>Lincoln Idealarc Welder</td>
<td>17</td>
</tr>
<tr>
<td>Miller Wire Feed Welder</td>
<td>6</td>
</tr>
<tr>
<td>Miller Multimatic Welder</td>
<td>4</td>
</tr>
<tr>
<td>Miller Plasma</td>
<td>1</td>
</tr>
<tr>
<td>Oxyacetylene Torch Set</td>
<td>3</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>1</td>
</tr>
<tr>
<td>Dewalt Chop Saw</td>
<td>3</td>
</tr>
<tr>
<td>Delta Drill Press</td>
<td>2</td>
</tr>
<tr>
<td>Dewalt 4.5 in Grinder</td>
<td>3</td>
</tr>
<tr>
<td>Dewalt 7 in Grinder</td>
<td>1</td>
</tr>
<tr>
<td>Welding Helmets</td>
<td>32</td>
</tr>
<tr>
<td>Honda Motors</td>
<td>30</td>
</tr>
<tr>
<td>Table Saw</td>
<td>1</td>
</tr>
<tr>
<td>Jointer</td>
<td>2</td>
</tr>
<tr>
<td>Router</td>
<td>1</td>
</tr>
<tr>
<td>Vices</td>
<td>4</td>
</tr>
<tr>
<td>Cold Metal Saw</td>
<td>1</td>
</tr>
<tr>
<td>Push Brooms</td>
<td>10</td>
</tr>
<tr>
<td>Angle Broom</td>
<td>10</td>
</tr>
<tr>
<td>Dust Pan</td>
<td>10</td>
</tr>
<tr>
<td>Counter Brush</td>
<td>6</td>
</tr>
<tr>
<td>M12 Fuel Cordless Drill</td>
<td>3</td>
</tr>
<tr>
<td>M18 Fuel Cordless Drill</td>
<td>2</td>
</tr>
<tr>
<td>Circular Saw</td>
<td>3</td>
</tr>
<tr>
<td>Jig Saw</td>
<td>3</td>
</tr>
<tr>
<td>Miter Saw</td>
<td>1</td>
</tr>
<tr>
<td>Sawsall</td>
<td>2</td>
</tr>
<tr>
<td>Router</td>
<td>2</td>
</tr>
<tr>
<td>Pipe Thresher</td>
<td>3</td>
</tr>
<tr>
<td>Heat Gun</td>
<td>1</td>
</tr>
<tr>
<td>Cutmaster 42 Plasma</td>
<td>2</td>
</tr>
<tr>
<td>14” Metal Cold Saw</td>
<td>1</td>
</tr>
<tr>
<td>3/8 Drill</td>
<td>1</td>
</tr>
<tr>
<td>½ Driller</td>
<td>3</td>
</tr>
<tr>
<td>14” Chop Saw</td>
<td>2</td>
</tr>
<tr>
<td>Die Grinder</td>
<td>2</td>
</tr>
<tr>
<td>Journeryman Kit</td>
<td>3</td>
</tr>
<tr>
<td>Die Grinder 1 ½</td>
<td>1</td>
</tr>
<tr>
<td>Horizontal Band Saw</td>
<td>1</td>
</tr>
<tr>
<td><strong>Floral</strong></td>
<td></td>
</tr>
<tr>
<td>Display Case Refrigerator</td>
<td>2</td>
</tr>
<tr>
<td>Large Floral Refrigerator</td>
<td>1</td>
</tr>
<tr>
<td>Item</td>
<td>Quantity</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Floral Shears</td>
<td>30</td>
</tr>
<tr>
<td>Misc. Floral Supplies- ribbon, glassware, floral foam, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Agriscience Lab</strong></td>
<td></td>
</tr>
<tr>
<td>9 stations equipped with lab glassware and equipment for 3-4 students</td>
<td></td>
</tr>
<tr>
<td>Trout Tanks</td>
<td>2</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td></td>
</tr>
<tr>
<td>Computers, Keyboards, and Monitors</td>
<td>8</td>
</tr>
<tr>
<td>Chromebook Cart (School’s Cart but housed in Ag Department)</td>
<td>1 cart with 39 Chromebooks</td>
</tr>
<tr>
<td>Printers</td>
<td>4</td>
</tr>
<tr>
<td>Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Camera for Smart Board</td>
<td>1</td>
</tr>
<tr>
<td>Laptops</td>
<td>2</td>
</tr>
<tr>
<td>Surface Pro 3 Tablets</td>
<td>2</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>1</td>
</tr>
<tr>
<td>Timeclock Machine</td>
<td>3</td>
</tr>
<tr>
<td>DVD/VHS Player</td>
<td>1</td>
</tr>
<tr>
<td>Photocopy machine</td>
<td>1</td>
</tr>
<tr>
<td>Document Cameras</td>
<td>2</td>
</tr>
<tr>
<td>Projectors</td>
<td>5</td>
</tr>
</tbody>
</table>
Section X

List of Courses that Qualify for

Alternative Credit
### Section X

**List of Courses that Qualify for Alternative Credit**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Alternative Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Soil Science</td>
<td>UC Earth Science Credit- Lab Science Credit (Area D)</td>
</tr>
<tr>
<td>Sustainable Ag</td>
<td>UC Biology Credit-Lab Science Credit (Area D)</td>
</tr>
<tr>
<td>Ag Chemistry</td>
<td>UC Chemistry Credit- Lab Science Credit (Area D)</td>
</tr>
<tr>
<td>Floral Design</td>
<td>UC Fine Arts- Area F</td>
</tr>
<tr>
<td>Ag Economics</td>
<td>CP Graduation Credit</td>
</tr>
</tbody>
</table>
Section 3
AGED 539 Project
Project Proposal
(to be completed in conjunction with AGED 539)

Quality Criteria Number Addressed: ______ 5 ______.

Goal or Purpose of the Project:
Three years ago we switched to teaching the freshmen Agriculture Soil Science from the Ag Earth Science class that was being taught. While this course does share some similarities to the Ag Earth Science class, its focus on soil created a need for new lab equipment. It is time that the agriculture lab at Bakersfield High School is equipped with the soil lab equipment needed. I will be working with the current teacher to ensure that the necessary equipment is obtained using Donors Choose to fund the cost of equipment.

Specific Objectives to Accomplish (Be as detailed as possible):
1. First I will need to work with the current Ag Soil Science teacher to create a list of equipment needed for the Ag Soils class. Examples of equipment are soil science test kits, nutrient test kits, and soil sample probe.
2. After composing the list, I will find a company that works with the district to find prices for the equipment.
3. The next step is to complete the Donors Choose write up and post the project to be funded.
4. Once the project is funding, I will make sure the equipment is purchased.
5. Once the equipment is purchased, a thank you letter will be written to the donors.

Estimated number of hours on this project: __________ 25 _________.

Estimated expenditures ($) on this project (your costs) : ________ $0 _________.

Proposed timeline for completion of the project:
October 2018- Create list of equipment needed. Research prices and companies. Write up proposal for Donors Choose.
November 2018- Project funded. Equipment purchased and received. Thank you letter written.

Progress Report: How will you inform the Cal Poly faculty of your progress on a regular basis? My progress will be reported by email to Dr. Flores as each objective is completed.

For Office Use Only:
Project Approved By: ____________________________.
Date of Approval: ______________________________.
Quarter student will enroll in AGED 539: Fall 2018.
<table>
<thead>
<tr>
<th>Unit</th>
<th>Ch. #</th>
<th>Chapter</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td>Lab Safety &amp; the Scientific Method</td>
<td>Intro to Scientific Method Lab</td>
</tr>
<tr>
<td>8</td>
<td>Physical Properties of Soil</td>
<td>Texture Calagon Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ribbon Test Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Density and Percolation Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil Moisture Testing Lab</td>
<td></td>
</tr>
<tr>
<td>10,12</td>
<td>Soil Fertility &amp; Plant Nutrients</td>
<td>Plant Requirement Lab</td>
<td></td>
</tr>
<tr>
<td>6,15</td>
<td>Organic Matter &amp; Amendments</td>
<td>Nutrient Deficiency Lab</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Fertilizers</td>
<td>Animal Manure Lab</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Rocks &amp; Minerals</td>
<td>Chemistry, Fertilizers, and the Environment Lab</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Soil Classification &amp; Surveys</td>
<td>Soil Testing Labs- Relates to Capstone Project</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Life in the Soil</td>
<td>Soil Map Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commodities Project</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>pH &amp; Salinity</td>
<td>pH Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Salinity &amp; pH Soil Testing Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil Mgt Lab</td>
<td></td>
</tr>
<tr>
<td>18,19</td>
<td>Soil Conservation</td>
<td>Soil Erosion &amp; Runoff Lab</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Water Conservation</td>
<td>Groundwater Contamination &amp; Aquifer Lab</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Tillage &amp; Cropping Systems</td>
<td>Tillage Protocols Impact on Structure &amp; Soil Lab</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Irrigation &amp; Drainage</td>
<td>Irrigation Practices Lab</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Life in the Soil &amp; Biochem. Cycles</td>
<td>Water Cycle Lab?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nitrogen Cycle Lab?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carbon Cycle Lab?</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Plant Nutrients</td>
<td>Plant Requirement Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fertilizer Lab</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Govt Agencies &amp; Programs</td>
<td>Phytoremediation Lab</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Impact on Soil Structure &amp; Soil Sustainability</td>
<td>Tillage Practices Lab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weather, Climate, and Effect on Climate</td>
<td>Weather &amp; Climate Labs</td>
<td></td>
</tr>
<tr>
<td>Item #</td>
<td>Description</td>
<td>Price</td>
<td>Quantity</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>WA31273H</td>
<td>Electric glass-top hot plate is extremely versatile, with 10 temperature settings from 140°F to 660°F in increments of 6. Features a child-lock button to prevent accidentally turning the hot plate on. Glass top measures 10-1/8&quot; x 8-5/16&quot;. Unit stands at 3-1/8&quot; tall. 110V.</td>
<td>$69.95</td>
<td>10</td>
</tr>
<tr>
<td>C14572M</td>
<td>Soil Test Kit</td>
<td>$17.95</td>
<td>10</td>
</tr>
<tr>
<td>C34288M</td>
<td>Refill Pack for Soil Test Kit</td>
<td>$9.50</td>
<td>10</td>
</tr>
<tr>
<td>SRSO480M</td>
<td>Easy-to-use soil test kit featuring a water extraction process and encapsulated reagent powders. Tests for four key soil elements: pH, nitrogen, potash, and phosphorus. Provides the ability to easily test and read soil pH, fertility, and temperature. Function allows you to find out when the soil is the optimal temperature for planting. The fertility function reads the combined levels of nitrogen, phosphorus, and potassium to determine the nutrient health of the soil. Results are compensated based on soil temperature. Included guides and instructions for all three functions. Requires three #357 silver oxide batteries, 1.5V (included). The latest technology in soil test kits. Quickly and easily tests soil samples measuring levels of pH, nitrogen, phosphorus, and potassium. Advanced LED digital technology and optical calibration systems. Kit reads soil solution color chart. Ready to use and includes all components and instructions needed to test all four variables (pH, N, P, K).</td>
<td>$20.50</td>
<td>10</td>
</tr>
<tr>
<td>C33018N</td>
<td>Digital Soil Test Kit</td>
<td>$26.25</td>
<td>10</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Details</td>
<td>Price</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>C22060N</td>
<td>Soil Analyzer</td>
<td>This dual-purpose meter tests soil pH and fertilizer levels. Has a convenient slide switch. Directions include ideal pH range for 350 plants and easy-to-follow guidelines. Both tests can be completed in about a minute. Requires one “AA” battery (not included).</td>
<td>$21.50</td>
</tr>
<tr>
<td>C08999N</td>
<td>21&quot; Hoffer Soil Sampler</td>
<td>The world’s most widely used soil sampler. Exclusive drawn probe cup gives an accurate profile; a true sample of the soil for the entire depth of the sampler. Quick and easy to use, just push, turn slightly, then pull. Made from top-quality steel tubing, electroplated with copper, then chromed. This special finish not only gives complete corrosion resistance, but also keeps soil from sticking to the sampler as it is withdrawn. Sampler is tempered to tool steel hardness to increase rigidity and strength so cutting edge won’t bind when it strikes hard objects. The exclusive drawn probe cup cuts a soil core slightly smaller than the diameter of the tube, enabling the core to rise in the tube without breakage as the sampler is pushed into the soil. Profile opening 14-1/2&quot;.</td>
<td>$67.50</td>
</tr>
</tbody>
</table>
| PE06385E | 6-Color Accusplit® AX725 PRO 15 Memory Stopwatch Set | • Exclusive no-fail, million-cycle button  
• 2-line display with cumulative and lap splits  
• Durable and ergonomic case design  
• 10-hour to 1/100 second  
• 16 dual-split memory  
• Accuracy: +/- 0.01 second/hour  
• Breakaway lanyard  
• Split counter  
• 1 button rapid split and reset  
• Five-year lithium battery  
• Five-year warranty  
<p>| $116.95 | 3 | $350.85 |
| SB50371M | pH Test Strips                    | All-in-one pH test strips are convenient for testing, since the pH indicator and reference colors are all on one strip. Any sample color has the same effect on both the reference colors and the reactive pad, ensuring accurate, unadulterated readings in colored solutions. An invisible hydrophobic barrier just above the top color field prevents capillary action of the test solution beyond. Handle will remain dry and clean regardless of the sample, ensuring safety. Single strips can be used instead of complete packs with color chart to determine pH values. Gradations range from 1-12. Box of 200 strips, 11 x 100 mm. | $25.95 | 2        | $51.90  |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>C34457N</td>
<td>Soil Horizons Bring the ground beneath us into the classroom with this 16 in. x 12 in. exhibit. From the organic layer of humus that creates fertile topsoil, all the way down to the bedrock, each layer of soil is clearly presented and defined (organic, topsoil, eluviation, subsoil, regolith, bedrock). This display is topped off with a stem of grass showing the roots feeding into the upper layers, as well as a mushroom with its mycelium extending into the topsoil.</td>
<td>1</td>
<td>$162.50</td>
</tr>
<tr>
<td>9734945A</td>
<td>Surebonder® Ergonomic Design Low-Temp Mini Glue Gun Features comfort grip and stand that keeps the gun from falling over. Built-in side stand lifts the gun to the proper angle, avoiding glue back flow, which causes glue feed failure. Safety fuse shuts the gun off if it shorts out or malfunctions to prevent injury. 10 watts.</td>
<td>5</td>
<td>$20.50</td>
</tr>
<tr>
<td>9731442A</td>
<td>Surebonder® 40-Watt Full-Size Glue Gun - High Temperature The higher the temperature, the better the bond. Heats at 380°F. Ideal for repairs, home decor, hobbies, and crafts. Safety fuse feature makes these the safest glue guns on the market. Features a removable base stand. Glue gun can rest safely on its side. Use 4 in. or 10 in. x 7/16 in. dia. glue sticks.</td>
<td>5</td>
<td>$39.15</td>
</tr>
</tbody>
</table>
Build momentum for your project. Share it with your friends and family!

Tell donors to double donations up to $50 by adding the promo code LIFTOFF at checkout for the next 2 days.

Can You Dig It? Lab Equipment For Soil Science Class

Help me give my students hot plates and soil test kits to help them complete hands on labs!

My Students

Agriculture is a word that does not mean a lot to our freshmen when they step into the Ag Soil Science class even though they live in a county that prides itself on its agriculture production. As first year agriculture students or “Greenhands,” they have no concept that their UC and CSU approved physical science course is going to open their eyes to the world that exists under their feet.

My students are new to the world of agriculture for the most part simply because they live in the urban portion of our growing city.

The purpose of the Ag Soil Science class is to introduce them to the chemical and physical properties of soil while teaching them the relationships between soil, plants, animals, and agricultural practices. This agriculture based science course was created to help prepare our students for college and beyond. To be prepared, they need access to the proper lab equipment in our ag lab.

My Project

A couple of years ago we switched from teaching our freshmen Ag Earth Science to Ag Soil Science. Not only was new curriculum and textbooks...
with soil science equipment has not been possible until now.

Students have access to basic lab equipment that is shared with our Ag Chemistry students; however, they need equipment that will let them focus on testing the physical and chemical characteristics of soil.

The soil science lab equipment such as soil testing kits and soil probes will help our students focus on hands-on learning while also learning how to conduct proper research in a laboratory setting. My students will be able to complete multiple labs in each unit with this equipment to better understand the interactions that occur beneath their feet on a daily basis.

Where Your Donation Goes

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>COST</th>
<th>QUANTITY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOTPLATE DUAL ELEMENT 1650 WATTS - WARD'S SCIENCE</td>
<td>$70.99</td>
<td>8</td>
<td>$567.92</td>
</tr>
<tr>
<td>21 Hoffer Soil Sampler - NASCO</td>
<td>$67.50</td>
<td>3</td>
<td>$202.50</td>
</tr>
<tr>
<td>Soil Test Kit - NASCO</td>
<td>$17.95</td>
<td>8</td>
<td>$143.60</td>
</tr>
<tr>
<td>Refill Pack for Soil Test Kit - 10 Capsules for Each Test - NASCO</td>
<td>$9.50</td>
<td>5</td>
<td>$47.50</td>
</tr>
<tr>
<td>PEHANON pH Test Strips - NASCO</td>
<td>$25.95</td>
<td>1</td>
<td>$25.95</td>
</tr>
<tr>
<td>Surebonder Ergonomic Design Low-Temp Mini Glue Gun - NASCO</td>
<td>$4.10</td>
<td>6</td>
<td>$24.60</td>
</tr>
</tbody>
</table>

Materials cost | $1,012.07
Vendor shipping charges | $44.42
State sales tax | $92.60
3rd party payment processing fee | $15.18
Fulfillment labor & materials | $30.00
Total project cost | $1,194.27
Suggested donation to help DonorsChoose.org reach more classrooms | $210.75
Total project goal | $1,405.02
Still needed | $1,306.02

Our team works hard to negotiate the best pricing and selections available.
Amanda Ou from California gave with help from James Ou.

James surprised me with a donation to the project, so now I have a gift code to use. :)

Thank this donor

Tracey, a volunteer at DonorsChoose.org, verified the cost of the requested resources and posted this project.

Tracey, a volunteer at DonorsChoose.org, reviewed the project essay and sent follow-up questions if needed.

Mrs. Eyraud submitted this project.

Supporting teachers and students since 2000
DonorsChoose.org makes it easy for anyone to help a classroom in need. Public school teachers from every corner of America create classroom project requests, and you can give any amount to the project that inspires you.

3,535,386 SUPPORTERS
1,308,267 PROJECTS FUNDED
31,728,130 STUDENTS REACHED

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2 DONORS $1,307 STILL NEEDED $1,406 GOAL expires Mar 25
Three years the Bakersfield High School Ag Department decided to adopt a new course and curriculum for the freshman ag students. This course is called Agriculture Soil Science and was approved by the district to be taught as an acceptable course to meet Area D in the A-G requirements. For the last few years, the department had been teaching their freshmen Ag Earth Science. While Ag Earth Science helped the students to learn both agriculture and science, teaching Ag Soils Science enabled the program to really teach agriscience concepts. This course provides the opportunity to be more agriculture focused and fit in with teaching FFA and SAE too. One of the neat aspects of this class is that is research and hands on focused. It provides the students a way to research about agriculture while at the same time completing labs that are hands on and directly connected to agriculture. The research component of the class allows the student to develop their own SAE projects based on the curriculum because they have to design and execute agriscience fair projects. Another benefit of teaching the students this class, it is teaches them about basic agriculture practices that are common in the industry.

However, in the three years that this class has been taught, it has been taught by three different agriculture teachers. This course has not received the love it really needs to be successful. While materials have been provided by me to the long term substitute and the now current teacher, the lab equipment for this class has not been purchased. The ag lab at Bakersfield High School has all of the basic lab equipment needed to do labs. All of the agriscience classes share lab stations that are equipped with glassware, safety equipment, clamps, thermometers, tubes, corks, and other necessary equipment. To do ag soil labs, the students would have to make do with what equipment was available. There were some ag soil test kits that have been used for the last two years, but they are about depleted now. There are some water test kits and the like, but there is not a full stocked lab with the equipment needed for the ag soils classes. The purpose of this project is to start to stock that lab with the equipment needed.

After this project was approved, I started to brainstorm what equipment would be needed to make the labs successful for the students. I went back to the pacing guide and made a list of all of the labs. After making this list, I emailed it to the current ag teacher teaching this course, Jenna Eyraud. I also added a series of
questions to find out what equipment she liked or wanted for the Ag Soils classes. Using the information she gave me, I created a proposed list of materials using the Donors Choose vendors. After she approved and gave feedback on the list, I used the vendors on Donors Choose to create a project list of materials. However, our first list was very expensive, so I cut it down to make it more reasonable. This list includes hot plates, soil test kits, soil samplers, pH test strips and hot glue guns. The amount for the project is $1,306.02. The two vendors we used for this project are Ward Science and Nasco.

While I was working on determining equipment with her, I was also logging into Donors Choose to find out how to complete a proposal. The proposal process is broken down in an easy to use format. The website also provides examples of what to write for each section. There are three sections to the proposal: an explanation of your students, an explanation of the project, and the materials that you would like funded. You are also asked to provide a personal photo and a classroom photo. For this project, we choose to use a photo of an ag soils horizon lab. I wrote up the explanations for each section and had them approved by Jenna since I was posting a project on her behalf. I also had her give final approval on the materials list. This project did hit some bumps in the road since I discovered I could not post the project because I was no longer a regular teacher. I had to repost the project under Jenna’s account last week.

The project is still currently waiting funding. I have posted the project through social media to try and obtain funding through family and friends. The next step for this project is to send out individual emails to family and friends to try to fund the project. Other things I am going to try is looking to industry for donations. The project has until March to be funded. When the project is funded, I will be responsible for making sure the materials are ordered and the thank you letter is written.