Heritage High School

Agriculture Education

Part One:
Responses to Quality Criteria 1 – 12
Quality Criteria 1
Curriculum and Instruction

The Heritage High School Agriculture Department addresses the quality criteria in a myriad of ways: the use of agriculturally-related core curriculum and CTE standards, integration of technology into every day learning, utilization of various texts, incorporation of state of the art facilities and equipment during both lab and supervised agricultural experience projects, offerings of various courses with multiple hands-on learning experiences and projects undertaken during the school year, bringing in guest speakers from our community and colleges, and much more. Below are descriptions in more detail of how the department meets each quality indicator.
Quality Criteria 1A

The curriculum includes the components required under Section 52454 of the Education Code: organized classes in the study of agriculture science and technology; student supervised agricultural experience; and a program of leadership, organization, and personal development.

Heritage High School Agriculture Department addresses this first criterion with its use of multiple pathways that students can follow once they enroll in our program as freshmen. In all three circles, students have the opportunity to experience the full three-circle model of agriculture education with various opportunities for projects and involvement in the FFA open to them outside of the classroom. While our district has a full six pathways that are on the books, so to speak, that are written for students in our agriculture programs, at our school site, we only offer three out of the six, largely because of the push from our administration and counseling staff for courses that are UC-approved in areas a through g. We currently offer a Veterinary and Animal Science pathway, an Agricultural Sciences pathway, and a Floriculture pathway. In each of these pathways, our students are required to complete a rigorous curriculum that encompasses both state science standards and curriculum of our own development. Plant and Animal Science courses offered at Heritage, as an example, follow Life Science and Career Technical Education standards at different times throughout the year, as seen in our pacing calendar.

All students in our program are expected to have a supervised agricultural experience project of some shape or form. State-of-the-art facilities are available for our students to use, not only as a working laboratory, but also as an area to house all livestock projects, as well as horticulture projects if they are unable to keep them at their individual homes. This portion of their grade counts for ten percent of their overall grade in each agriculture class.

Students in all pathways of Heritage's program have access monthly to a plethora of FFA leadership development activities, which vary in size and scope from our monthly chapter meetings where we select students not on the officer team to give short presentations on past events, social activities, multiple fundraisers, large-scale community service projects, and in public speaking and career development events. Participation in FFA activities counts for ten percent of students’ overall grade in each agriculture class offered.

Examples: Agriculture Course Outlines, Pacing Calendar for Plant and Animal Science, Program of Activities
Quality Criteria 1B

The Career Technical Education Model Curriculum Standards for the Agriculture and Natural Resources Industry Sector are the basis for content of courses offered. Curriculum addresses “Foundation” and “Pathway” standards within the program pathway(s) and course sequences.

The units in the courses taught in Heritage’s Agriculture Department follow the state standards for Career Technical Education and California State Science Standards. This is very evident from both the pacing calendars for our classes and the syllabi for each course. Our department is in the process of integrating Next Generation Science standards into our courses slowly but surely, especially in classes in our Agriscience pathway, and is also looking to borrow pieces of (but not quite adopt yet) the three courses from the Vision 2030 curriculum developed this year.

Example: Pacing Calendar and Course Syllabi
Quality Criteria 1C

Career paths in agriculture have been identified and can be found on a chart or diagram in the Program Plan.

When placing students in our classes, our counseling staff, and sometimes administration, utilizes our Career Pathway Flowchart developed as a framework for the multiple agricultural departments present in our district. The pathway diagram has a list of every single agricultural course that Perris Union High School District offers, and also lists prerequisites to each course and states whether that course is UC-approved or not. Many of our students complete multiple pathways because of the overlap of courses in the three pathways Heritage offers (for example, Ag. Biology is a required course for any student in any of the three Ag. pathways before they can take some of the more advanced classes). Our aim is for our students to have a great deal of knowledge in basic science concepts as well as versatility and a well-roundedness to their knowledge of different agricultural fields.

Within the past year, it became apparent to the teachers in the Heritage Agriculture Department that there was a need to accommodate the pace of learning for honors-level freshmen in our program, and we created an Ag. Biology course with deliberate tweaks in curriculum and pacing to include units on the FFA and on the scientific method to fit a freshmen-level course, rather than the typical sophomore level. Instead of taking Plant and Animal Science (which is our basic, introductory course that normally all freshmen must take their first year in our program), these students skip straight to Ag. Biology, and are then able to move on to other courses after their first year. This way, we hope to retain more students between their first and second years in the program.

Example: Agriculture Pathways Flowchart
Quality Criteria 1D

The school master schedule allows students to follow the recommended sequence of agriculture courses to complete the selected career path(s).

Students that enroll in our program have the opportunities to complete multiple pathways during their time with us. Once they enter the program, they must complete a first-year introductory course of Plant and Animal Science (or, if they are designated as honors-track students, they are placed in Freshman Ag. Biology). Once completing this course, students may then branch out to start on pathways depending on their interests within our program. Our Course Pathway Flowchart for our agriculture course offerings helps our counselors piece together students’ schedules when considering which classes in our department might be the best for them to take. This flowchart also shows very neatly at which grade level each class will be most appropriate for. Every freshman enrolling in Heritage fills out a form requesting the classes that they want for the next year during their individual meetings with counselors prior to the start of the school year.

Prior to 2015, Heritage High School had 55-minute periods nearly every day; however, as of the 2015-2016 school year, we have converted to having, on average, 45-minute periods during the day and an extended school day of about 20 minutes. With this change, students are now able to fit in a seventh period during the day and another class that they wouldn’t have been able to otherwise. This allows students more flexibility in their class schedules and gives them opportunities to take agriculture classes, even non-UC approved coursework. As our administration is firmly of the point of view that every student can go to college and should be able to have access to certain level of course offering, many of our classes that we offer are UC-approved. With this new period addition to our schedule, however, we are expanding our horizons and are in the process of finally adding an Introduction to Ag. Mechanics class, which is an area our program has sorely needed for a long time.

Examples: Career Pathways Flowchart, Targeted Occupations List from Comprehensive Program Plan
Quality Criteria 1E

Agriculture Career Awareness information is included in every course.

With each class that is taught in Heritage’s Agriculture Department, there are multiple opportunities and ways the instructors integrate information about careers into the curriculum. Since 10% of our students’ overall grades are based on agriculturally related science lab activities and projects (including SAEs), we use this as a vehicle to discuss careers during those labs and teach them applicable skills they can use during jobs. For instance, in the Plant and Animal Science class (which is an introductory course designed for freshmen), we teach them basic horticultural skills like transplanting, pruning, garden design, and maintenance, and we discuss job opportunities in that industry as well. We also do a poultry feed study with our freshmen early in the year. Not only is there a very strong emphasis on the scientific method and thinking like an agricultural researcher in this project, there is also room in the curriculum for discussion on both the feed production and meat production industries. In the floral design classes, students create projects and professional portfolios of their work for real-world scenarios, and learn how to create a budget for a large-scale project as if they were a real designer. The veterinary science class has guest speakers from the vet, breeding, and companion animal industries come in to work with the students during their laboratories. Upperclassmen involved in some of our more capstone classes have the opportunity to get involved with vegetable crop production in the spring, and the Ag. Leadership class constantly makes repairs around the farm which teaches students very technical Ag. Mechanics skills. We also have student farmhands that assist with prepping and administering medications for animals, taking care of animals on our farm, and assisting in artificially inseminating breeding animals and delivering baby animals when they are born.

In the past, the Plant and Animal Science classes have also done research presentations on different careers in agriculture as an eye-opening experience for freshmen who may not have known what kind of opportunities were available to them in the field of agriculture. Ag. Chemistry classes have also done similar types of projects in the past, with students researching and writing final reports on agricultural careers that utilize skills and knowledge that they acquired in chemistry.

Finally, Heritage prides itself on its very all-encompassing chapter website, which has a plethora of resources on careers in agriculture as well as links to universities where agriculture programs are strong. This is a great resource to students when they craft their final drafts of any research their projects on agricultural careers, as well as a useful tool for students planning a career after high school in agriculture.

Example: Pathway Course Flowchart, Pacing Calendar, and Course Outlines
Quality Criteria 1F

The agriculture department utilizes computer hardware and software as an instructional tool.

Heritage is fortunate to be in a one-to-one technology district. Perris Union High School has supplied every student in our district with a Chromebook to take home and to school to use every day, if they need it. Because the Chromebooks are Google products, there is a strong integration and presence of Google Drive and associated programs on our campus. In agriculture classes, we do our best to teach students how to use these programs and tools to submit their work and to make them marketable for future jobs with a strong body of technological skills. The staff of the agriculture department utilizes Google applications frequently, and assign students work via these programs (like Google Classroom) in an effort to bring our instruction into the twenty-first century.

Most of the teachers in our department also have a website for each of their different courses on the Haiku Learning platform, where we post daily agendas, assignments, videos, and resources for our students to access throughout the year. Students access Haiku frequently as a way of catching up if they miss class, and can use it to access notes or even flipped-instruction style videos. Haiku can also be learned to administer quizzes and tests, which makes grading multiple choice and true or false questions easy for the teacher and a faster process for students to receive feedback on their assessments. There is also another program created by our district, EADMS, which can also be utilized for students to take tests, using their Chromebooks, with a variety of questions on it.

Every student in our program has, and updates with regularity, their iRecordbook. Whether or not students have large-scale projects, every student is instructed in how to keep records, make budgets, and write business agreements using mock problems as a vehicle.

Our chapter website is quite comprehensive and has all the resources a student in agriculture could need, whether it is information on how to fill out fair registration forms, links and tips on how to work on their iRecordbook, links to course syllabi and outlines, links to our chapter Facebook, Instagram, and Twitter feeds, and complete access to our chapter Program of Activities and monthly calendars of FFA and school activities.

Each staff member in the department has a MacBook Air from the school, and several instructors also have iPads. Each teacher also has projectors and printers in their rooms; one instructor even has a SmartBoard. The teacher office in our Agricultural Research Center (which we call the farm) also has a technology room with a printer/scanner and five large Mac desktop computers.

Examples: Computer Hardware and Software and Student Projects
Room J102
- 1 Dell Desktop
- 1 HP Printer
- 1 EPSON Projector
Room L114
- 1 SmartBoard
- 1 Mounted EPSON Projector
- 1 Portable Department EPSON Projector
- 1 MacBook Air – Teacher Use
- 1 Apple TV
- 1 Mac Desktop – Teacher and T.A. Use
- 1 iPad – Teacher Use
- 15 Dell Desktops – Student Use
- 1 HP Printer

Room L113
- 1 EPSON Projector
- 1 MacBook Air – Teacher Use
- 1 Apple TV
- 1 HP Printer

Room W126
- 1 EPSON Projector
- 1 MacBook Air – Teacher Use
- 1 Apple TV
- 1 iPad – Teacher Use
- 1 HP Printer

Room W121
- 1 EPSON Projector
- 1 MacBook Air – Teacher Use
- 1 Apple TV
- 1 HP Printer/scanner/copier
Quality Criteria 1G

The agriculture curriculum includes the use of computer-aided instruction by utilizing at least one of the following:

- Computerized Record Book
- Agriscience Fair Report
- Agriculture Term Paper
- Agriscience/FFA Speech Manuscript
- Job Resume
- Job Cover Letter
- Portfolio Letter of Introduction
- Other Agriculture Related Project

Currently, the Heritage Agriculture curriculum utilizes computer-aided instruction in the following areas: writing and submitting portions of Agriscience Fair reports on Google Classroom in Veterinary Science and Ag. Chemistry, writing and preparing job resumes, cover letters, and portfolio letters of introduction, on their Chromebooks, for senior projects in both Floral Design and Ag. Government/Economics, various Google presentations in Plant and Animal Science, FFA Speech manuscripts for speaking contests throughout the year (students share manuscripts with advisors via Google Documents so teachers can write instantaneous feedback), and agriculture term papers on current agricultural issues in Ag. Leadership. Students in our classes use technology in the classroom to do web-based research and activities. Every student in our program also uses and frequently updates their iRecordbooks during class and receives instruction on how to use them and fill them out.

Example: Screenshots of Google Classroom Agriscience Project Assignments, FFA speech manuscript
Quality Criteria 1H

Recordkeeping is taught in all agriculture classes. Every student maintains and completes (closes out) either an actual SAE Project or Mock Problem.

Every student in the Heritage Agriculture Department has an iRecordbook, and record keeping is mandatory in classes for a portion of each teacher’s grade. Record keeping, writing business agreements, and developing budgets are taught throughout the year, with time set aside in class for students to update their records in class. Students without strong projects still get the opportunity to practice and develop these skills through mock problems and scenarios, which they can look back at to use as examples once they obtain bigger projects. All students are required by the Ag. teachers to record their FFA activities in their iRecordbooks as a way of comparing what we have in our records in terms of how many “FFA Points” they have versus what they say they have. In all of our classes, students must have 300 FFA points by the end of each semester, need to have an ownership agreement (whether it is based on a mock project or a real one), a budget, and a journal for their project with at least one or two entries every month.

Examples: Agriculture Course Syllabi
Quality Criteria 11

Record books of all students are maintained in the Department files until one year following graduation.

Heritage’s students’ iRecordbooks are on file electronically through the iRecordbook program, which we can conveniently access for years after every student graduates (and even use in our classes as examples for students for our record book units). All students that receive their State FFA Degree are kept on our R2 forms for another two years after their graduation, so we can monitor their progress towards acquiring their American FFA Degree. Because every iRecordbook is stored in a virtual cloud, this makes storage of the books very easy. We are currently looking into ways in which we can incorporate and teach students how to use the AET record book, however, if California FFA decides to switch to that system of record keeping.

Examples: See Files in the Agriculture Department
Quality Criteria 1J

Agriculture courses have been submitted to meet high school graduation requirements and/or University of California a-g credit.

Being a newer agriculture program, our program was designed from its inception to have as many of our courses as possible aligned to UC a-g standards so as to better cater to the needs of students who both want to go to four-year universities and are interested in what a comprehensive agriculture program can do for them in terms of skills and knowledge. All of the agriculture classes at Heritage are UC approved, with the exception of Ag. Leadership, which just counts as an elective. We are currently looking to expand our course offerings to include the newly-created UC-approved Ag. Mechanics course. Floral Design counts for a college prep fine arts course (Area F), Plant and Animal Science is an elective (Area G), Ag. Biology, Ag. Chemistry, Veterinary Science, and Ag. Earth Science are laboratory sciences (Area D), and Ag. Government/Economics is a UC-approved social science (Area A). All courses meet the requirements for high school graduation, and providing these alternatives to our students to the traditional core classes is a great way to enforce the mission of FFA and Agricultural Education.

Example: Course Syllabi and Course Descriptions
Quality Criteria 2
Leadership and Citizenship Development

Heritage High School has already distinguished itself in its short tenure as a chapter with its outstanding track record of leadership development and student performance. Students in our program are required to participate in multiple FFA activities per semester, earning up to a total of 300 "FFA Points." This reflects 10% of their overall grade in our classes. We encourage all of our students to participate in whatever manner best suits their schedule or needs, and we try to accommodate for that in the variety of events we provide for our students, as well as the times the events occur, as many students in our program cannot go to after school activities due to responsibilities to their families at home. The activities students can get involved in can range from judging teams to prepare for future careers, public speaking to develop their professional confidence and poise in front of an audience, or marketing their SAE projects to expand their comprehension of agribusiness. Additionally, Heritage FFA offers many opportunities for our students to get involved with giving back to their community. We do a canned food drive as well as a Christmas tree drive for local families who cannot afford to buy their own trees during the holiday season. It is our collective goal to create a culture of servant leadership among our students through the opportunities available to them through FFA leadership development activities.
Quality Criteria 2A

An FFA Chapter has been chartered by the State Association or has been applied for.

Heritage FFA is chapter number CA0536, and the Heritage High School Agriculture Department is located in the Perris Union High School District in Menifee, California. Our original charter document from 2007 is framed and on display in a large display case around the corner from several of our agriculture classrooms, along with several other awards and accolades the department has received over the years.

Quality Criteria 2B

A chapter Program of Work is developed annually and a copy is furnished to the Regional Supervisor by December 15th.

The Heritage FFA Program of Activities is developed each year to include information on our program for students, administrators, and community members. It covers detailed information about fair projects and SAE projects, program goals, FFA teams and leadership opportunities, and explains what agriculture education and FFA are. It includes an updated calendar for the entire school year, which is developed by the chapter officers over the summer (and overseen by the advisors) at officer meetings. The officers take notes from the previous team to devise what kind of events will better suit the needs of each student group each year. The Program of Activities has been printed in the past, but as Heritage FFA is a very technologically-savvy chapter, most of the components of a good Program of Activities are available to everyone on our chapter website. Any last-minute updates to the calendar that are deemed beneficial by the advisors or officers are made via our Facebook page, which many students and staff members utilize.

Examples: Program of Activities and our chapter website, menifeeheritageffa.com
Quality Criteria 2C

Every student is given a grade based upon participation in leadership activities.

All Heritage High School Agriculture students are responsible for participating in enough FFA activities to give them at least a total of 300 “FFA Points” per semester. This accounts for 10% of their overall grade. Many students participate in more than five activities, and we try to accommodate students who have constrictions on their time after school by providing in-school activities and ways to earn points each week. At the end of the year, we give awards at our banquet to students with the highest participation; we also give out Star Awards and special awards to recognize students that are outstanding in one area of our program or another. A large percentage of the students earn 250 points or more every semester.

Example: Screenshot of gradebook, Activity Calendar, and Course Syllabi
Quality Criteria 2D

*All students enrolled in agriculture classes are affiliated with the State FFA Association.*

Heritage High School Agriculture Department courses have 100% affiliation with the FFA. Each student must earn 300 FFA Points per semester by participating in various activities. Each student is an official member according to the FFA Roster for Heritage High School. We currently have 790 members registered; a good percentage of these students also take more than one agriculture class during the school year.

Example: Current FFA Roster
Quality Criteria 2E

*Based on previous year's records, the department participated in a minimum of 12 activities as listed on the FFA Activities Check Sheet.*

Heritage FFA participated in far more than the minimum of 12 FFA activities in the 2014-2015 school year alone. Currently, more activities are planned for this school year with a focus on increased community service, as well as the addition of several new FFA teams. Our chapter is engaged in our community, and has a very strong presence at the section, region, and state levels in FFA, and is looking to further expand into the national arena in the very near future.

Example: Annual Chapter FFA Activities Check Sheet
Quality Criteria 2F

A minimum of 80% of the students participate in at least three leadership development activities annually as verified by department records. Activities could include any three of the following intra-curricular activities:

- Local Best Informed Greenhand Contest
- Local Opening & Closing Contest
- Local Program of Work Committee(s)
- Local Agriscience Fair Exhibition
- Local Parliamentary Procedure Contest
- Any Section, Region, or State Activity
- Local Creed Speaking Contest
- Local COOP Quiz Contest
- Local Demonstration Fair
- Local Public Speaking Contest
- Chapter Meeting or Activity
- Other Local Activities

Heritage High School students have participated in most of the activities listed above. Our participation can be verified by documentation within the Heritage Agriculture Department and the Sectional Advisor. Students are required to participate in multiple FFA events every semester, adding up to a total of 300 FFA points. A large percentage of students have 250 or more points, according to teacher records. We currently have our own local Agriscience Fair Exhibition, we host our own sectional Best Informed Greenhand contest (and often have enough students to make up two teams), participate competitively in local Opening & Closing Ceremonies contests, we have multiple students participate in Creed Speaking contests, public speaking contests, and other judging team contests at multiple levels of competition. We have monthly chapter meetings and we usually have anywhere to 100 to 300 students come for the meetings and the activities after the meetings. We are also looking to create Parliamentary Procedure teams within the next year.

Example: FFA Annual Activities Check Sheet and Class Charts
Quality Criteria 3
Practical Application of Agricultural Skills

Heritage Agriculture Department and courses provide many ways for students to learn and apply practical skills through classroom and lab simulation of work and industry experiences, whether they are in the form of a supervised agricultural experience project or hands-on lab activity. These experiences are coordinated between all of the teachers in the department and are developed to make the most impact on student learning during classroom instruction and experiential growth.
Quality Criteria 3A

*Student participation in Supervised Agricultural Experience (SAE) is part of the grading criteria for every agriculture student in the program.*

Every student in the Heritage High School FFA program is expected to develop and understand how to keep records for a project in his or her iRecordbook. If students do not have S.A.E.s, when every advisor teaches a unit on record books in their class, students are able to work through a mock problem or scenario and make entries in their record books that they can reference once they develop a concrete plan for a project. We strive to have every student have an S.A.E. Many students have projects at home that they take care of that are not necessarily traditional or career-based, but take responsibility for on a regular basis. We encourage them to create plans to further develop the size and scope of those projects for the future. Heritage’s agriculture facilities, the Agricultural Research Center (ARC), can house hundreds of student projects for those students that are interested in horticulture or livestock production, and in the case of livestock, we house all student projects on-site, rather than at individual homes.

Students have many possibilities for livestock projects in our department, including egg production, breeding and market rabbits, breeding swine, and poultry, swine, goat, sheep, cattle, and dairy production. Students also have the opportunities to get involved with nursery and vegetable crop production as well. Finally, many classes utilize agriscience fair projects as student projects, as these students pick an area of agricultural inquiry and spend time researching and compiling data on their own experiments outside of class time. Freshmen have a dual animal production and agriscience fair experiment, where they are able to work with poultry on a weekly basis by caring for, feeding, and weighing several different pens of chickens that are all given different types of feed. Students then compile data on a weekly basis on weights and analyze the feed for its nutritive qualities, and develop a hypothesis as to which feed will work best and create a graded science fair project outside of class time. Student record books are evaluated periodically and are a portion of each student’s grade in their agriculture class. We use these records as a basis to help students to apply for proficiency awards.

Example: Agriculture Course Syllabi and Outlines
Quality Criteria 3B

First year students have either been engaged in an SAE project(s) or have a plan in place for a SAE, as verified by the Student Data-Career Plan.

Freshmen students in our program are involved in a multi-class, cross-curricular feed study. Every week for six weeks, students in each freshman class take care of broiler chickens from the age of just hatched to six weeks old. They are responsible for feeding and taking care of the animals, and then weighing the chickens each week to measure their weight gain and calculate feed efficiency. Each class period has a different feed that their chickens are fed. This project teaches students basics about animal nutrition, animal production, and enables them to think like scientists and develop a hypothesis and write-up of the experiment for an agriscience research project, which each student must work on outside of class time and present in our local agriscience fair competition. Freshmen students should also have a plan in place to develop an S.A.E. project, and practice record keeping skills in their record books during class time. Their individual agriculture instructors grade each student’s progress on their record book.

Example: Student work samples, Agriscience Research Project Packet
Quality Criteria 3C

A minimum of 80% continuing students are engaged in SAE project(s) as verified by Department records.

Heritage FFA meets this criterion typically, but this can fluctuate from year to year. Because of our large numbers, not all students have large projects outside of the classroom. However, we make every possible effort to have students get experiential and career technical learning inside the classroom whether it is through horticulture or animal science projects and labs, and as our program has grown in the past few years, our facilities have greatly increased in size to give room for many students to keep projects. All students in our program should have a plan for a project and should have completed practice problems and scenarios in their record books to hone their skills in that arena. We are currently exploring ways to engage more students with S.A.E. projects at home, including purchasing plants for all freshmen students to plant and take care of for the four years they are in the program. The existing projects we have, from market and breeding animals, to plant projects, to egg production, to agriscience fair projects, to placement opportunities as student farmhands are very desired-after and provide excellent opportunities for students looking to get further involved with our program and learning skills associated with those industries.

Example: Agriculture Course Syllabi
Quality Criteria 3D

*Students with SAE projects are visited by their agriculture teacher at least twice per year as documented by Department records.*

As all of our student livestock projects are housed at our school farm, the Heritage FFA advisors don’t do traditional project visits. Each instructor is responsible for one area and one or more different types of projects on our school farm, and is responsible for visually inspecting and meeting with students regarding the progress of their project. The reason we house so many projects at our farm is so that students can receive proper guidance and management, and many of our students do not have room at their houses to keep projects in the first place. Our advisors check in on projects on an every-day or every-other-day basis to assure that certain quality standards of care are being met, whether the project is livestock, horticulture, or a student farmhand taking care of duties in a specific area of the farm.

Example: Ag. Teacher Extended Contract Stipend time cards
Quality Criteria 3E

A school vehicle is readily available to each agriculture teacher for all SAE activities associated with the program, or each teacher is adequately compensated for using their own personal vehicle.

The Heritage Agriculture Department has two department vehicles, a large dually Ford F450 truck and a 9-passenger Ford van, that are available for use at any time. There are five advisors, and each advisor communicates with the department ahead of time when they will need which vehicle for and for what purpose they need it. Times when the vehicles are being used are additionally recorded on our department Google Calendar, which all of us have access to. We also have access to vans that our athletics department has acquired, and we can check these out several weeks in advance. We can also check out vans from the school district office. If a teacher must use his or her own vehicle, they may submit forms for reimbursement through the district; teachers may also drive their own personal vehicles with students in them, if necessary, as long as they have proper insurance and clearance forms from the DMV and district in place.

Examples: See Heritage Agriculture Department vehicles in department inventory
Quality Criteria 4
Qualified and Competent Personnel

All instructors in the Heritage High School Agriculture Department are fully credentialed agriculture teachers. Several members of the department have their Master’s in addition to the proper credentialing and Bachelor’s degrees. The instructors regularly attend industry functions and in-services to enhance their knowledge in given areas and to increase their subject matter competencies.
Quality Criteria 4A

Every agriculture teacher has the appropriate credential for teaching the subject(s) assigned. Copy of authorizing credential(s) is in the Comprehensive Program Plan.

All Agriculture teachers at Heritage High School are appropriately credentialed for the courses they teach. All five instructors have his or her agriculture specialist credential in addition to clear credentials and single subject credentials in Agriculture. Several instructors in the department also have professional experience in the areas they specialize in. Maggie Maratsos has several years’ worth of experience working in commercial nurseries and fruit crop production, and oversees both the Nursery/Landscape judging team and all horticulture and plant science projects in the department. Our department’s teacher data sheets are up to date for all instructors, which include all of our individual credentials.

Examples: Credentials and Agriculture teacher data sheets
Quality Criteria 4B

*Based on the previous year's records, every agriculture teacher, teaching at least ½ time agriculture, attends a minimum of four professional development activities.*

Every Agriculture teacher in our department attends at least four professional development events within the course of the year through Heritage High School, Perris Union High School District, CATA, or individually. Most of the teachers in our department attend the summer CATA conference every year, and the two younger members of the department take “Agriskills” courses to increase their competence in multiple subjects. The teachers in our department also attend educational development workshops at the beginning of every school year, before classes start, through Perris Union High School, with special focus on differentiating instruction and using technology in the classroom. Heritage High School offers many opportunities for professional development which our teachers have taken advantage of, including the AVID Summer Institute conference and multiple technology conferences. A few members of our department attend professional trade seminars and conferences (including conferences on heirloom vegetables and weeklong courses on artificial insemination), to improve our subject matter competency. Each teacher also attends the Regional Road Shows, Sectional Meetings, and Regional Meetings to obtain up-to-date information on the goings on in our local area. Heritage High School Agriculture teachers inform the school site and the district well in advance of any professional development trips that we are taking.

Example: AIG Incentive Grant In-Service Activities Documentation Sheet
Quality Criteria 4C

_The agriculture staff meets a minimum of twice a month. (This criterion does not apply to single person departments.)_

The Heritage High School Agriculture teachers meet at least twice a month (sometimes on Mondays, during Professional Learning Community meetings from 7:45 to 8:30 a.m., and sometimes on Wednesdays, during Collaboration time from 1:30 to 3:00 p.m.) to discuss upcoming events, farm maintenance, making intradepartmental decisions, and reflections on past events. This is a much needed addition to our department; prior to the 2015-2016 school year, we actually weren’t allowed to meet as a department, because of decisions made by administration and because members of our department did not want to meet outside of allotted school hours.

Example: Calendar of scheduled department meetings and Heritage High School Agriculture Department meeting minutes
Quality Criteria 4D

*A written record of minutes is kept of action taken during agriculture staff meetings and is kept in Department files or the Comprehensive Program Plan. (This criterion does not apply to single person departments.)*

Heritage High School Department members meet weekly to discuss any upcoming events that the department is hosting or is attending. We also meet to discuss concerns we have with students or on-goings within the department. We can use the time also to collaborate with each other and strategize on instruction, and reflect on the positives and negatives on events that recently occurred. The minutes are kept on Google Drive, and are in a folder that is shared with all of the Agriculture teachers, as well as the principal and the regional supervisor. There are also copies available in the Comprehensive Program Plan.

Example: Heritage High School Ag. Department Meeting Minutes
Quality Criteria 4E

Teachers are reimbursed for personal expenses they incur while participating in all approved integral activities associated with FFA, SAE, and professional CATA in-service activities.

The teachers in the Heritage High School Agriculture Department are reimbursed for personal expenses incurred while participating in various FFA and SAE activities. Receipts are given to the proper clerks at the school site or at the district, depending on which account the funding is coming out of (this includes our FFA ASB club account, Perkins monies, and Ag. Incentive Grant monies). Instructors are reimbursed for professional development registration and travel costs. Reimbursement forms are available from the district to cover travel costs, including meals, transportation, hotel fees, and other miscellaneous expenses. The Perris Union High School District provides credit cards meant for use on gasoline purchases while using agriculture department vehicles. Any expenses on the cards must have accompanying receipts when reimbursement forms are submitted.

To be approved for reimbursement through our FFA ASB club account, we must first write an open purchase order, which then has to be approved by a majority of the students present at the chapter meeting the month before the purchase. This must be written up in the chapter Secretary’s minutes, and must be sent to the school and district for approval. For large projects for use in the classroom or on our farm, we must again write open purchase orders, and discuss amongst ourselves which account the money will come out of before forms are submitted.

Example: Reimbursement and travel forms for the FFA and Agriculture Incentive accounts at Heritage High School
Quality Criteria 5
Facilities, Equipment, and Materials

Heritage High School’s Agriculture Department has come a long way since the chapter was founded in 2007. From a humble dirt lot with simple fences for animal pens, the now state-of-the-art 2 ½ acre farm is the pride of the Heritage campus. The facilities, equipment, and materials now present for our students’ use provide them with a myriad of opportunities to have an immersive experience with agricultural education. The agriculture teachers attend many different trade shows and conferences and are constantly making important industry and community connections in an attempt to bring positive business relations and donations back to our farm for our students. Our facility includes a large outdoor market hog barn that could hold up to 100 hogs, a large outdoor partitioned dirt pen area for our breeding sows, breeding ewes, market lambs, and market goats, a large cattle and dairy cow pasture, a livestock show arena with bleachers, a rabbit barn, a large greenhouse and shade house, several pens for laying hens, and a 7,000 square foot farm operations and storage facility. We currently have many students who do not have the opportunity or ability to raise their own projects at home, and this facility provides them with the means to do so. We are continuing to expand this year with the addition of over 20 wooden raised beds at the front of the property, plantings of grape vines along the side of the cattle pasture, and worm beds for composting. Every couple of months, the facilities are heavily cleaned with a strong workforce of student volunteers and classes, and new equipment is purchased every year to help the farm function fully. We have plant sales every year to fundraise, and our students typically do very well at our local fair; we are looking forward to future successes with the expansion of our S.A.E.s to include dairy cows and, possibly next year, Ag. Mechanics projects.
Quality Criteria 5A

Modification of facilities and equipment has occurred when necessary, based on the needs of students, including special populations.

Heritage High School is located in a socio-economically depressed area, and our department does our utmost to cater to the needs of all types of students. Therefore, we put in for, and received, significant amounts of grant money to expand and improve our facilities and equipment to provide for said needs. We have many students who do not have room at their house for an S.A.E. project. Therefore, we have expanded both our livestock and horticulture facilities in order to accommodate a large number of students projects. Our department chair frequently attends industry conferences to get ideas for projects and to make contacts for possible donations and expansions to our program. With the addition of over 20 large planter beds this year, there is the opportunity for students to start more projects in production agriculture and many hands-on experiences growing plants. Our livestock facilities can hold hundreds of animals, small and large, and the entire Agricultural Research Center area spans 2 ½ acres and houses many pieces of equipment, including a tractor, pallet jacks, carts, and a wide variety of tools. PJHM Architects, along with NEFF Construction worked with the Perris Union High School District to create this facility, following all state guidelines, requirements, and laws for construction of school and workable farm facilities. The original plan for the facility did not have a hog barn at all, but due to the popularity of swine projects in our chapter, we expanded to add a hog barn, that, at capacity, can hold up to 100 market hogs, along with 10 farrowing crates to start our own breeding program and produce quality show hogs in-house.

Examples: Pictures of current facilities, plans, and modifications since 2007
Quality Criteria 5B

*There is adequate storage space for materials, records, equipment, and supplies.*

The Heritage High School Agricultural Resource Center (ARC) has more than adequate space for storing supplies, records, and equipment. We keep supplies for labs in our individual classrooms, but tools and equipment for SAE projects are stored in the ARC. We have a small office inside the ARC where we can access all of our digital files, and each teacher has ample file room and cabinet space in their classrooms to store paper records. We recently purchased a large seatrain trailer for storage of supplies and equipment in the farm to reduce clutter in the main ARC building. There are locations at each area of the ARC, such as wash racks and shelving units, to house specialized tools for animal and horticulture projects. Part of the ARC is used to store tack, medicines, and artificial insemination equipment, as well as poultry incubators, egg cartons, poultry cages, rabbit boxes, and rabbit cages. The few pieces of Ag. Mechanics equipment that our department currently has are stored in the main ARC building as well. Overall, the ARC's main building stretches over 7,000 square feet, and our entire farm facility covers 2 ½ acres.

Examples: See pictures of agriculture storage areas within the facilities.
Quality Criteria 5C

At least one of the below listed community or school-based laboratory facilities has been provided to accommodate students who have no place for their SAE project(s):

- School Farm Laboratory
- Growing Area
- Greenhouse
- Agriculture Shop

All of these areas for school-based laboratory or community facilities for students are present at the Heritage High School Agriculture Research Center (ARC). Our farm is ever-expanding and improving to meet a wide variety of student interests in different projects. Students use this facility frequently in all of our classes for labs and hands-on activities. The greenhouse and growing areas are available for students to learn techniques in nursery and crop production, and we are looking to add more projects in this area in this current year. The agriculture shop area in the main ARC building provides the essentials for a space a class like Ag. Mechanics would need, once we officially add it to our curriculum in the near future.

Example: See facilities and pictures of Heritage High School ARC
Quality Criteria 5D

*The Agriculture Department has e-mail capabilities.*

Our Agriculture Department has email capabilities for all of our instructors. Each teacher has a work email address through Google (which is what our students have as well, through our district's one-to-one technology movement) that is accessible from any location. Each teacher is provided with either a laptop or a desktop (a choice that is up to the individual teacher) for their use in the classroom. This enables better communication with parents, students, community members, and agricultural contacts that we may have. We also have a small office inside the main Agricultural Research Center building with five Mac desktop computers, all of which have internet and email access for students and instructors.

Examples: See computer facilities, agriculture office, and classrooms in facility plans
Quality Criteria 5E

The reviewer verifies by visual observation that the agriculture facilities are neat, clean, and orderly.

The students in our department, as well as the advisors, are responsibly for cleaning and maintaining the facilities regularly. Each teacher is in charge of a designated area on the farm and overseeing its up-keeping. We also each have student farmhands that aid us in a lot of these tasks. A solid effort is made on all of our parts to keep the facilities orderly and presentable, especially because administrators often use the Agricultural Research Center as a main stop on tours of our school that they give to important guests, we give tours to local school groups with some frequency, and we host multiple FFA contests and meetings throughout the year. Some of the newest additions to our department facilities, like the shade area in the cattle pasture and the wooden planter boxes at the front of the farm, were even created by students themselves. This ensures that the students take pride in the facilities, because they had a contribution to its expansion. It is exciting to see how our program continues to grow, despite having quite a few great facilities already at our fingertips.

Examples: See agriculture facilities: planter beds, shade area, greenhouse, livestock barns, mechanics shop, and agriculture department. Also see ARC Teacher Responsibilities List.
Quality Criteria 5F

*Facilities and equipment are regularly maintained, repaired, or replaced.*

Our farm facilities are regularly maintained, repaired, or replaced as the need arises, sometimes by our Heritage facilities crew, sometimes even by students in our classes (under teacher supervision). Our vehicles, trailers, and golf carts go in more than once annually for tune-ups. In order to keep the livestock facility in good working order, our students participate in clean up days so animal projects can be housed humanely and comfortably. By teaching students to take pride in the facilities, we are able to keep a current, running list of tasks that need to be taken care of on the farm as students notice problems or areas to improve. Each year, the main building of the Agricultural Research Center is cleaned out fully, and the greenhouse and barns get cleaned out fully every few months. If any equipment or tools wear out, we swiftly replace them or rebuild them, depending on the need.

One area of need for our department is technology updates. All of the technology in our classrooms is currently up-to-date; however, some of the computers purchased for students use in several of our classrooms were purchased with Ag. Incentive Grant funds, rather than district monies, so when the time comes times for district-wide updates, our technology will not be updated, like our personal laptops or desktops, every four years. We bought these computers for student use before the district shifted to its one-to-one technology initiative, and the Dell computers we have now need updates.

Examples: See agriculture department facilities plans and Five-Year Acquisition Plan.
Quality Criteria 6
Community, Business, and Industry Involvement

Heritage High School’s Advisory Committee represents the communities of Nuevo, Romoland, and Menifee, with members from local agricultural businesses, college instructors, and local government, combined with experts in different areas of the agriculture industry.

The Advisory Committee’s bi-annual meetings follow an agenda that focuses on short-term and long-term plan development for our program. Having industry professionals insures that our program keeps a finger on the pulse of current agricultural trends. The committee discusses any of the following: instructional content, program budget, program promotion, FFA, S.A.E. projects, facilities, current enrollment, equipment and facilities, technology, and any concerns they may have. There are written minutes for each meeting we have in our Comprehensive Program Plan.
Quality Criteria 6A

The Agriculture Advisory Committee is operational and reflects the committee membership as outlined in the “Agricultural Education Advisory Committee Manual.”

Heritage’s Advisory Committee is operational, and contains several members from local businesses, higher education institutions, and local government; however, we have struggled in the past with finding key members of our community and agriculture industry to commit regularly to attending meetings or contributing. We aim to do two meetings every year. In addition, individual committee members lend their support to the program at different times throughout the year. The purpose of the committee is made clear to the department, members of the committee, and officers. We have also had difficulty in the past with individual members trying to take on a more managerial attitude towards our program, rather than an advisory attitude, and therefore, strong distinctions have to had to be made between the recommendations of the committee and the ultimate decisions of the agriculture teachers to implement them. Members are selected and rotated on and off of the committee regularly, with the advisors looking constantly for people who can bring new opinions and insight to the committee, with one member taking the lead as committee chair. In the meetings, we discuss topics that are found in the quality criteria of the Agricultural Incentive Grant to make improvements to the program.

Examples: Advisory Committee Minutes and Roster
Quality Criteria 6B

The Agriculture Advisory Committee meets at least twice each year. (Minutes are available to verify meetings.)

The Agriculture Advisory Committee at Heritage meets twice a year. In the past, we have invited local business owners, local agricultural professionals, advisors, college professors, and local government officials to our meetings. We are currently undergoing efforts to improve the structure of our committee and improve attendance at our meetings. We are meeting with other Ag. teachers to gain a better understanding on how to utilize and maintain a more effective committee, as well as how to generate more, and maintain, interest on being on the committee. When we have our meetings, we typically meet for several hours in an evening on a weeknight. We discuss topics like recruitment and student retention, FFA, curriculum, funding concerns, and program direction. These meetings are a great opportunity to bring updates to our program in agricultural knowledge and industry connections, which we can then share with our administration and our students.

Examples: Advisory Committee Minutes
Quality Criteria 6C

The Agricultural Advisory Committee has assisted in the development or revision of the Comprehensive Program Plan, as evidenced in the Ag. Advisory Committee minutes.

- Job Market Description - Targeted Occupations
- Total Program Goals & Objectives - Program Description – Courses, SAE, FFA
- Course Subject Matter Outlines - Program Completion Standards
- 5 Year Facility & Equipment Acquisition - Current Year Budget
- Graduate Follow Up - List of active placement sites

The Heritage Agricultural Advisory Committee is presented with the current Program Plan, and through discussion, helps us develop our overarching program goals. Our committee members have helped us obtain ideas for new curriculum, project ideas, and funding for new facilities and implementations in our department. The advice we receive when we have these meetings is a valuable, outsider's perspective that as advisors, we often need as we sometimes get set in our ways for developing our plans for our program. We have had great success with building our program because of the contributions of our committee members in the past. In recent years, however, we find ourselves striving to improve member attendance and commitment.

Examples: See Advisory Committee Minutes
Quality Criteria 6D

The contact information of the Advisory Committee has been provided on the cover of this checklist.

Please see the Committee roster, which includes the areas and industries that our members represent. Our committee members come from a variety of jobs and backgrounds, from local junior colleges, to members of the fruit crop production industry, to local government, to large animal production. We feel that this is an invaluable resource for our program to have a wide variety of members with many different experiences, which will ultimately trickle down to our students in the form of increased on-trend vocational instruction.

Example: Advisory Committee Roster
Quality Criteria 7
Career Guidance

Heritage’s Agriculture teachers, other staff members, counselors, and career center all provide students with the services and advice they need when considering their interests in different careers and higher education, as well as their abilities and goals. We are fortunate to have a very supportive counseling department who understands the mission and purpose of agricultural education, and several staff members who lend their support to our program through cross-curricular projects or even FFA events. Every student meets with their counselors on at least an annual basis to evaluate their progress towards graduation and taking classes that will maximize their potential to reach their educational or career goals. We as a department are looking into ways to incorporate the AET online programming, as well as My Journey, in terms of informing students what is available to them job-wise in the industries of agriculture.

We have many students take multiple agriculture courses with us to fulfill their normal science, elective, and fine arts credits for graduation. There is also a large number of students who take multiple agriculture classes in the same year, and therefore, we have many students that complete multiple pathways within our program.

While we only have a couple classes in our department that focus more heavily on job and employment skills, all of our classes cover career opportunities within agriculture. One of the classes that our district has curriculum for, that we are potentially going to be offering in the next couple of years, is a horticulture course that is articulated with our local junior college, Mt. San Jacinto Junior College. Many of our graduates attend this college after leaving Heritage High School, and having these kind of credits already would give them a head start on their college education.

All of the courses, with the exception of Ag. Leadership, that we offer are aligned to the UC A-G requirements. Ag. Biology, Ag. Chemistry, Veterinary Science, and Ag. Earth Science are all aligned for lab science credit, Floral Design is a fine arts credit, Ag. Government and Economics is a history credit, and Plant and Animal Science is an elective credit. We are looking to add the newly-approved Ag. Mechanics course to our class offerings next year as well, to expand our program in new and exciting directions.
Quality Criteria 7A

Students are counseled regarding:
- Career opportunities in Agriculture and Agribusiness
- Agriculture and academic courses necessary to complete career pathway offerings
- Post-secondary education and training options

When we first recruit students to our program at the local middle schools, we provide them with brochures about our program and our course offerings, so that they can get a better understanding of the fact that our courses meet all of the same standards and requirements that a normal science course would, but students also get the added benefits of learning in a hands-on manner and get the opportunities to do an S.A.E project and participate in FFA. Our counselors also keep copies of our course pathways handy so they can advise students best on which classes to take within our department, based on the students’ needs and strengths. Students meet with counselors annually to check in on their progress towards graduation, and there is a strong emphasis from our administration on student success and academics. We begin each year with a focused day that teaches students lessons on school culture, study skills, college readiness, how to fill out college and job applications, and much more, all depending on students’ grade levels. We also had a district-wide college “kick-off” day, where students were grouped by grade level and either given several focus lessons on how to prepare for college or careers, or were able to take the PSAT or SAT, free of charge. Each course that our department has components to it on instruction on career opportunities in agriculture.

Example: Camp Legacy Focus Lessons and counseling planning forms from Heritage Student Handbook
Quality Criteria 7B

All students have a completed career plan (Student Data Sheet) and it is updated annually.

Each student in our agriculture program has a Student Data Sheet that they fill out at the beginning of each year on file within the department, both on paper and digitally. These sheets cover our student’s basic and background information, and also have information on the areas of agriculture that they find interesting. These sheets help students get a good idea of what pathways they should take within our program and which projects they should get involved with to best suit their interests, as well as what career opportunities might be available to them after they graduate.

Examples: Student Data Sheets
Quality Criteria 7C

Efforts have been made, or completed, to articulate with Community Colleges and/or Universities (i.e., 2+2 articulation agreements).

The horticulture class that we are looking to add to our course offerings is articulated with our local junior college, Mt. San Jacinto Junior College (MSJC). It is currently not offered because of administrative decisions (largely because it is not approved through the UC A-G articulation program). Hopefully, however, soon, this class will be added to our offerings due to recent switches in administration. In an effort to further improve our efforts in this arena, we are adding a professor from the CTE department at MSJC to our advisory committee, and hopefully, that collaboration will lead to more ideas on how to further align and articulate more of the classes we offer, since so many of our students go to this college after graduation.

Examples: Evidence of Articulation Agreement
Recruitment for our program is very strong at Heritage. We are surrounded by several local middle schools from a variety of different communities. We generally commit several full or half-days with a recruitment team of several Ag. Leadership students that have projects and experience in different areas of our program and other school activities. We present our recruitment speeches and information booths on scheduled days with other large programs at our school, such as athletics, AVID, Robotics and STEM, and Link Crew, as an annual joint project of our counseling department. Part of the reason why we have such a large program is because of our large-scale recruitment efforts. Once students are selected to be in our program, we hold a before-school orientation to our program to any freshmen and parents that want more information or would like a tour of our department and facilities. All of our programs are available to students with ways in which to overcome any financial barriers to participation.

On our recruitment days, we bring brochures that discuss course offerings, FFA opportunities, and potential S.A.E. projects. We also bring live animals, plants for students to transplant, materials for students to make their own floral boutonnieres, and several awards and ribbons from the various activities our FFA chapter has participated in within the past year, so students gain an idea that they can find success within our program in a variety of ways. We are happy that we have a good relationship with our counseling department, who is supportive of capping our numbers at a certain point and really assuring that the students we get in our classes have a desire to be in the types of classes we teach. Overall, we find tremendous success with our recruitment every year.
Quality Criteria 8A

An Agricultural Education program recruitment brochure or similar document is used to promote the program.

Heritage High School’s agriculture department has a brochure that we use to recruit at local middle schools. We also have flow charts that our counselors use during course enrollments at the beginning of each school year. This helps both students and counselors see what courses are available and which ones need certain prerequisites to enrollment. This also helps freshmen students see which pathways in our program they are intrigued by and which ones they may want to complete. Additionally, our program’s website is incredibly detailed, and is a consistently reliable resource for students and parents on FFA chapter activities, curriculum, career opportunities through agriculture, and much more, and we show students this website during recruitment trips. Also, our Facebook, Instagram, and Twitter accounts are incredibly informative, up-to-date, and are a great source of promotion for us as well.

Example: Recruitment Materials
Quality Criteria 8B

Students have alternate means of overcoming financial barriers to participate in program activities. (Includes FFA, SAE, and Leadership Activities.)

Students can comfortably complete their activity requirement for their agriculture classes outside of time; we schedule many different activities during school time, and all of our activities are free (anything that requires money is completely optional for students). If students so choose, and they wish to get more involved, they may apply to be a student farmhand, which lets them have the opportunity to earn "FFA bucks," in which they are reimbursed for their work with a paid-for livestock project, an FFA jacket, or a trip to an FFA conference, or any combination of those options. This way, they can participate in FFA activities and do not have to spend any money of their own. Sometimes, on a case-by-case basis, our chapter purchases animals for students and are reimbursed by the student once they receive their check from the fair and their livestock project is complete. We also have breeding projects available on campus that students can participate in at no cost, and also allows students in the classroom to get hands-on experience with animal science. We have a large farm facility where students can keep projects if they have no room at home. Finally, we actively fundraise throughout the year in order to provide opportunities for our students. For example, we have a large-scale geese and duck production project that makes us quite a bit of money; students on the project learn valuable project management skills and are also able to do a service to the chapter in the process. We also use some of the funding we receive from the state of California to go towards taking as many students as possible on FFA trips.

Example: FFA Chapter Calendar
Quality Criteria 8C

The Agriculture Department conducts recruitment activities with local feeder schools.

Our high school participates in a large recruitment effort, along with several other large programs at our school, in the weeks leading up to high school registration for eighth graders. This includes presentations at the local middle schools as well as a type of “club rush” activity after the presentations, where each organization has a booth that students can come up to and ask questions of the students and teachers running the booth. During our presentations at Mountain Shadows Middle School, Ethan A. Chase Middle School, Hans Christiansen Middle School, and Bell Mountain Middle School, we explain to students that FFA is an intra-curricular program that offers many academic and hands-on experiences for our students. We bring live animals, plants for students to transplant, ribbons and trophies from past FFA contests, and materials for students to make floral boutonnieres, as well as brochures on our program for students to take home. The student team we take with us for recruitment often speaks during our presentation about their involvement experience within our program and about their participation in other clubs and organizations outside of FFA.

In addition to recruiting at middle schools, we also try to start recruiting even earlier on, as we do farm visits for both local elementary schools and a local church preschool. Hopefully, these students will remember the experiences they had as young children and will be enticed to join our program later on in their lives.

Example: Recruitment Materials
Quality Criteria 9
Program Accountability & Planning

The Heritage Agriculture Department expanded from three to four teachers in 2014, and then again from four to five teachers in 2015. We have been on a continual streak of growing since our creation in 2007, and this expansion has helped catapult us to position as one of the best departments in the Southern Region. Our constant and underlying goal as instructors is to provide the best opportunities for our students to experience leadership development, personal growth, and career success.

Our Comprehensive Program Plan is complete as of this year, which was a review year for us with our regional supervisor. We submit all of our required paperwork to the Regional Supervisor by the due dates they are expected. Every year, there is a strong emphasis on getting input from our program completers (four year members) on what we can improve and expand upon in our department; they are also able to do some projects that prepare them for life beyond high school and career readiness. We have the students complete a graduate follow-up survey, the responses to which we submit to the Regional Supervisor on time. We keep these responses on file with our Comprehensive Program Plan.

Student retention is something that Heritage does very well with students in their sophomore, junior, and senior years. We set the bar high for our freshmen students, and if students are earning failing grades and have not been to any FFA activities throughout their first year in our program, our counseling department transitions them to a regular science class, where their needs are more likely to be met. We usually have double-digits of sections of freshmen classes, and after their first year, normally that number is just about halved. It is definitely competitive to get a spot in one of our freshmen classes, and it definitely means something at our school to be kept as a student in our department. As our program has continued to expand with the addition of more teachers every few years, we have been able to increase involvement with FFA and S.A.E. projects. This year alone, we had ten students earn their State FFA Degree, one earn a silver medal at National Convention for her Swine Placement Proficiency, and one become a National Delegate for California. This shows the true commitment our students have to their involvement with our program. We are continuing, however, to find more ways to recognize more students in our program for their various efforts and successes.
Quality Criteria 9A

*A Comprehensive Program Plan is on file with the Regional Supervisor and a copy is retained in the local department files.*

Our Comprehensive Program Plan is filed annually with the Regional Supervisor, and we have both a digital copy in possession of all of the agriculture teachers, as well as a hard copy. The revisions to the Program Plan this year was truly a collaborative effort between all five teachers, as we divided the sections of the plan up amongst ourselves and updated all of the information inside. This is now a useful resource for our department, and gives us better ideas of where we can grow.

The Agriculture Advisory Committee has aided us in the creation of this Program Plan in the sense that they have been able to give us direction on where the needs of our program are in order to better serve the students and the community. This plan will be updated annually and submitted, on time, as required.

Example: See Comprehensive Program Plan
Quality Criteria 9B

*Updates of the Program Plan are sent to the Regional Supervisor by November 15th.*

These updates include: (1) Five Year Acquisition Schedule; (2) Chart of Staff Responsibilities; (3) FFA Program of Work; (4) Advisory Committee Roster; and (5) Advisory Committee Minutes.

These documents are edited every year at different points in time; some are even completed during our department collaboration times. Each of the members of our department took different parts of the entire plan and were responsible for updating the information found in that chunk. This was then given to our Regional Supervisor on the day of his program visit. By reviewing the items in the plan, we as a team can get a better sense of what adjustments we need to make to different parts of our department. Currently, all five of the above items are being utilized and updated annually. These documents are useful to keep around for when we turn in requesting for Perkins funding, as well as different program reviews from our school.

Examples: See Comprehensive Program Plan
Quality Criteria 9C

A follow-up system is used which gathers the following information from program completers:

- Status of employment or school enrolled within
- Opinion regarding the value and relevance of the agriculture program
- Suggestions for improving the agriculture program.

The most consistent way our program follows up with program completers is through exit interviews, conducted in our senior Ag. Government and Economics class. Students are asked, in a forum-type setting, what their opinion of their experience in our classes is, and how we can make improvements in the future in our program. We keep in contact with a core group of about twenty students after their graduation, because they are on track to earn either their State or American Degrees, or are continuing their S.A.E. projects. Many of these students serve as judges or assistants to teachers at our annual FFA contest that we put on every year. One area we could improve this effort for feedback would be to develop a written evaluation form that all graduating senior complete. We currently just compile data given from student exit interviews and class discussions about improvements we could make to the program. We have developed a small bank of questions that we ask students upon leaving the program.

Examples: Graduate follow-up survey questions
Quality Criteria 9D

*The graduate follow-up data collected was entered with the online R2/FFA Roster Data Entry by October 15th.*

As is evidenced by our R2 report, our graduate information is properly entered. This information is gathered from personal and class discussions with students. We have a very small number of fifth year members, but that small number of individuals tends to be very involved in some way or another with our program; they tend to assist our current FFA members by helping out with coaching teams, facilitating contests, or helping with S.A.E projects, and many have designs to earn higher degrees or awards after graduation.

Example: See R2 roster.
Quality Criteria 9E

The Agriculture Department analyzes their student retention numbers each year and develops strategies to help increase retention within the program.

Heritage High School does a very good job at recruiting freshmen students to our program every year. Our retention tends to drop off at the end of each school year as some students are dropped from our program. Our department’s philosophy is that, if students have a failing grade and have not done any FFA activities during their time with our program, that we are not meeting their needs and that they would be better served by being moved to a regular science class. So, our counseling department works with us to identify and place these students in situations that will be more beneficial to them. We analyze these numbers every year to make sure that we have a solid number for our sophomore class every year. After students’ sophomore years, our retention is generally very high, because we have so many classes that count for UC A-G credit.

With the move to seven period day this year, as opposed to a six period day last year, we have even more opportunities for students to take more of our classes during one year’s schedule. We are interested to see how this will affect our retention, and if we will see an even high increase in retention. Students may be able to complete more than one pathway and do more classes than they had originally planned in our department.

Example: FFA R2 Roster
Quality Criteria 9F

The R2, AIG Expenditure Reports, and FFA Roster have been received by the Regional Supervisor and/or State FFA Financial Coordinator on or before October 15th.

Every year, our department submits our R2 and AIG Expenditure reports, as well as our FFA Roster to the Regional Supervisor and state officials on time; we are very conscientious about the punctuality of our paperwork, and will ensure that this habit continues into the future. We have made sure that our administration, as well as our district officials, understand the urgency of getting this paperwork through to the proper people, and they are very supportive of our program and ensuring its continued success by approving paperwork and sending payment for our R2 invoice from the state organization in a timely manner.

Example: R2 Report, AIG Expenditure Report, and FFA Roster
Quality Criteria 10
Student-Teacher Ratio

Heritage High School currently does not meet the requirements of the student-teacher ratio in classroom instruction, as each teacher typically has between 30-36 students in each class section. This means that each teacher also has an imbalanced total contact number, since we teach six classes a year, with an average, 36 students per class period. This is well over the 75 students per teacher figure outlined in the criteria. For the most part, this works well for us; at times, it can be chaotic, especially with outdoor labs on our farm, but with proper classroom management, it can be controllable.

The instructors in our department do not receive a project supervision period, which also increases the number of students each teacher works with per year. We hope to minimize this problem in the future, but our school has a very large student body, and it may prove tricky to do.

With the addition of a fifth teacher this year, our class sizes have gone down by about five students per teacher, but we still find ourselves over the ideal 25 figure in most class sections.
Quality Criteria 10A

*Shop and laboratory-based classes have no more than 20 students enrolled. Classroom-based classes have no more than 25 students enrolled.*

At this point, our department does not meet this criterion, but our teachers are very conscious about safe working spaces for our students, and we are very vigilant about monitoring potentially hazardous situations, especially when out on the farm with large groups of students. We are very quick about communicating with our administration when potentially unsafe scenario arises. All of our laboratory-based classes have more than 25 students enrolled in them (as do all science classes on our campus); we currently do not offer any shop-based classes. The reason for such large class sizes is because of the current contracts in our district that were voted into place by a majority of the teachers in our union; these allow a maximum class size of 36.

Example: R2 Teacher Schedules & Data
Quality Criteria 10B

The total number of students enrolled in agriculture classes does not exceed 75 students per teacher. First year students enrolled in agriculture courses will be counted as .5 for purpose of determining the total count only. (This does not pertain to class size.)

Our ratio currently does not match the 75-student ideal figure. We currently have about 180 to 216 students per teacher. Even with the addition of a new teacher to the department this year, because our student population is so large, we are well over 75 students per teacher. We have twelve sections of freshmen-level classes in our department alone. We also do not have the opportunity for a project supervision period, which increases the number of students each teacher is responsible for each year.

Example: R2 Student Report
Quality Criteria 11
Full Year Employment

Our department understands the importance of having our staff being employed full-time to better benefit our students and their S.A.E. projects.

That being said, unfortunately, due to on oversight by counseling and administration, our newest agriculture teacher only teaches 5 agriculture courses and teaches one non-agriculture class. This will be changed next year so that all five of us have a full schedule of agriculture classes. The rest of the members of our department currently have a full schedule of agriculture classes. Additionally, all five of us have an extended summer contract, which is a percentage of our annual salaries, as well as an FFA stipend, so that we can work effectively year-round overseeing FFA and S.A.E. activities. Currently, we are not provided with a project supervision period during our class schedules. So, we earn our extended contract money through supervision of fair animals, plant projects, and FFA activities before and after school hours.
Quality Criteria 11A

*An full-time equivalent teacher is employed year-round for each 75 students enrolled in the agriculture program and is compensated no less than $2,000.*

Agriculture teachers at Heritage High School are compensated with a 30-day summer contract in addition to their annual salary, as well as a $2,500 FFA advisor stipend, which surpasses the minimum $2,000 of the criterion. However, we all teach and work with more than 75 students daily, so we technically do not fulfill all aspects of this criterion. Four out of the five agricultural teachers teach agriculture full-time, due to an oversight by counseling and administration. This will be corrected next year so that each teacher will have a full-time agriculture teaching schedule. All five of us work throughout the summer to provide adequate supervision of S.A.E. projects. We divide responsibilities of program management amongst ourselves equally.

Example: R2 Teacher Information form & Chart of Staff Responsibilities
Quality Criteria 11B

During the school year, one teaching period for Supervision is assigned to each agriculture teacher. This project supervision period is in addition to the preparation period normally assigned to all teachers in the school. This requirement may also be met if a period is not available by financially compensating the agriculture teacher(s) at the equivalent cost of providing one period for supervision.

Heritage High School does not provide project supervision for its agriculture instructors. However, we are properly financially compensated with an extended 30-day contract for the summer months, which comes out as a percentage of our annual income. We also receive an FFA advisor stipend for compensation of supervision of FFA activities outside of class time. These are both in addition to the existing 10-month salaries all five of us receive.

Example: R2 Teacher Information form & Teacher Schedules
Quality Criteria 12
Program Achievement

The staff of Heritage High School's Agriculture Department firmly believes in the benefit of offering a variety of activities to our students to increase the number of ways in which they can find success. It is our goal to offer a way for every member to find their strength and capture their interest, if they so choose.

All agriculture instructors in our department firmly believe in the mission of the FFA, and believe that if students attain success in areas that they find interesting, that our program has been successful. Program Achievement is a difficult thing to define, but we believe it is evident in many ways: when students earn several degrees in FFA, obtain awards for leadership, high attendance of many different FFA conferences, career development event success, an instilled attitude of servant leadership, and overall student retention and satisfaction with our program.

Every teacher brings different strengths and qualities to the table that contribute to our department success. When combined with the amount of community service that we do annually (and community support that we receive), we find that our success reaches an even higher level of success.
Quality Criteria 12A

The Agriculture Program meets the requirements of Program Achievement.

There is a minimum requirement that a chapter must meet twelve different areas on the Activities checklist, and Heritage usually far surpasses that number, being involved in twenty-three areas. Four of our instructors coach at least one judging team and one public speaking event, and also advises many other activities. We all collaboratively assist our students on their S.A.E. projects, and encourage them to complete award and higher degree applications. Last year, we had ten students earn their State FFA Degrees, which is proportionately a very small percentage of our membership, but was 6% of those “eligible” in terms of how many years they have completed in our program, according to our roster. Many that were mostly qualified last year will be obtaining their degree this year, because they have now met the exact dollar amount or certain leadership requirements for the degree. If everything goes to plan, will also have several students attain their American Degrees at next year’s National Convention. We are steadily making progress in getting more students to attain recognition at higher levels.

We regularly compete in judging contests and public speaking contests, and there is a high emphasis on leadership development in our program. We try to provide multiple opportunities to our students for them to find a way to participate that speaks to them personally.

We found great success this past year alone with proficiency awards, with several students gaining recognition at the sectional and regional levels; one student even made it as far as the national contest, where she earned a silver medal for her Swine Placement project. As we currently do not have a project supervision period, supervision of the work on these applications must be completed outside of class time. We also participate in our local project competition, and all nine of our participants last year received gold awards for their efforts. Three students in our chapter applied to be national delegates this past year, and one of them was selected to be a representative for California.

We have high participation from members of our chapter in many different leadership conferences, including the Greenhand Conference, Made for Excellence, Advanced Leadership Academy, State FFA Conference, and National Convention. We are also going to have a couple students apply to go to the Sacramento Leadership Experience this year. These trips can be expensive for our students, so students can apply to be student farmhands and earn a paid-for trip as a reimbursement for their hard work. We also try to reduce the overall cost of these trips for everyone through exhaustive fundraising efforts throughout the year for our FFA ASB account. Last year, we had two sectional officers in our chapter, and one was slated for regional office. We hope to have more continued success with this in years to come.

Our Career Development Events have had a tremendous amount of success, and through all of the hard work of the individual students on our teams, we have been able to set ourselves up as one of the most competitive chapters in our region. This past year, all of our teams place in the top ten at state finals, with several of our teams winning our regional contest, and placing in the top five at the Fresno State Field Day. Every year, our main teams, Nursery/Landscape, Vegetable Crops, Veterinary Science, and Best
Informed Greenhand, perform consistently well. As our students experience this high amount of success, it provides us with an incredible opportunity to teach our students humility and dedication. It also provides our students with the motivation to keep succeeding and pushing themselves, and encourages them to seek out new talent for their teams. We have had a decent amount of success in the past year with our public speakers, with one student getting to State Public Speaking Finals for Impromptu Speaking, and several students getting to the regional level of Prepared and Extemporaneous Public Speaking.

We provide many ways for all of our members to get involved in community service, and the idea of teaching students to be “servant leaders” is an integral thought process behind every community service project we develop and put on. It is a chance for our students to give back to their community. We conduct around five to seven community service projects each year.

We also have a strong showing at our local county fair, and our students consistently do well, especially in showmanship, as we begin working with our animals months in advance to our fair. This past year alone, Heritage’s novice swine showmen completely swept their category in showmanship, an accomplishment that we are extremely proud of. Our animals are also highly sought after, as we have established a strong breeding stock on our farm and we breed all of our fair animals ourselves. Several local 4-H groups and schools buy animals from us, and our students take pride in their animal projects. We also have students participate in the landscape installation contest and potted plant contests at the fair, and found great success especially in getting new freshmen involved with those undertakings.

Our chapter is successful in a number of areas; we believe that our chapter is very active because of the fact that it assists in accomplishing the mission of the FFA, to develop leadership, career success, and personal growth in our students. We firmly believe in FFA’s potential to give students the tools they need to be successful later on in life.

Example: See Activity Chart.
Heritage High School

Agriculture Education

Part Two: Supplementary Materials for Comprehensive Program Plan
Supporting Documentation

1. Student Data Sheets
2. Permanent Student Files
3. Course Outlines
4. Gradebook
5. SAE Visit Forms
6. Board Policy for SAE
7. Board Policy for FFA
8. Program of Activities
9. Recruitment
10. FFA Chapter Scrapbook
11. Summer Calendar
12. Graduate Follow-Up Survey
13. Graduate Follow-Up Results
14. Comprehensive Program Plan
15. Advisory Committee Agendas
16. Advisory Committee Minutes
17. Advisory Committee Constitution & By-Laws
18. Proficiency Standards
19. Teacher Credentials
20. Activities Calendar
21. Professional Development
22. Current R-2 Report
23. Travel Request
24. CATA Membership Card
25. Professional Development Report
26. Five-Year Acquisition List
27. Current Budget
28. Budget Description
29. N/A (Department Chair)
30. Chart of Responsibilities
31. Substitute Teacher Procedures & Plans
32. Program Completer Description
33. Reimbursement Process
1. Student Data Sheets
3. Go into Military Service

x Non-Agriculture Major
x Agriculture Major

x Part-Time Student
x Full-Time Student
x Four Year College
x Community College

2. Go to College

x Some College Later
x No Further Education

1. Go to Work Full-Time

K. Please indicate below your plans after graduation from high school:

x Agriculture (470)

x Forestry & Natural Resources (490)

x Agricultural Business (494)

x Agricultural Mechanics (493)

x Animal Science (492)

x Plan & Soil Science (410)

Problem of Instruction Being Pursued: (Select Only One)

Miss/Sir/Mrs. Curtis Shaver
Parent/Guardian Name (Fill in Full Name for Each):
Email: Shaver@Shavermail.com

Phone Number: 951-437-3223
City Zip: 92571
Street Address: 850 North Perri Rd.
Located Near:

H. Date: 9/1/15

Revised 7/16/10

AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET
Agricultural Teacher

1. Go to Work Full-Time
2. Go to College Later
3. Go into Military Service

Non-Agriculture Major
Part-Time Student
Full-Time Student
Now College
Community College

A. Name
    Ashley

B. Gender: Male

C. Ethnicity/Race: Asian Indian

D. Year in Agriculture Program:
    4th

E. Grade Level in School:
    12

F. I am Taking This Course Because:
    (Select One)
    (9/10/11)

G. When you eventually take your place in this world, what would you like
   to do? If your dream is not related to agriculture, please explain in parentheses:
   (Select One)

H. Date:
    9/1/12

I. Program of Instruction Being Pursued (Select Only One)

    Agricultural (470)
    Forestry and Natural Resources (490)
    Animal Science (490)
    Animal Science (401)

J. Personal Qualifications (Put full Name for Each)

    Brenda Reilly
    Miss Reilly

K. Please indicate below your plans after graduation from high school:

    White
    Ukrainian
    Salvadoran
    Filipino
    Black or African American
    Vietnamese
    Japanese
    Chinese
    American Indian or Alaska Native
    Or other

    Phone Number: 156-249-5580
    City/Zip: 92584
    Street Address: 2601 Breeze Rd
2. Permanent Student Files
Budget Entries

Make budget entries for your enterprise. You may budget both expenses and income. You may compare actual to budget (see reports). More...

Transaction ID:
Date: (mm/dd/yy)
Enterprise: [Market Goat]
Category: [None]
Description:
No Units: [Unit Description]
Price/Unit:
Amount: Will be calculated if blank and both units and price unit are entered
Type: Expense or Income
Save and Clear Total Amount: 0
Add Comment

Current Book: All Books

Tran ID | Date Description | No units | Price/Unit | Expense | Income | Action
--- | --- | --- | --- | --- | --- | ---
79515 | 1/21/2014 Purchase Animal | 1 | Market Goat | $175.00 | edit | delete
79517 | 1/21/2014 Buy Feed | 1 | | $100.00 | edit | delete
79518 | 1/21/2014 Vaccinations | 1 | | $15.00 | edit | delete
79519 | 1/21/2014 Entry Fees | 1 | | $10.00 | edit | delete
79521 | 1/21/2014 Sale of Animal | 1 | | $350.00 | edit | delete

Market Goat TOTAL: $300.00

Heritage FFA
Permanent Student iRecordbooks

Student iRecordbooks are all stored online. Each student in our program has an account on that calaged.org iRecordbook system, and creates a new book at the beginning of each calendar year. Students that are going to be eligible for their American Degree remain on our rosters, and we pull up records each year for students applying for either their State or American Degrees. Each teacher has a digital copy of every student’s login credentials for easy access.
L. Planned course of study to meet occupational goal. By school year, list all classes previously taken, currently taking, and planned to be taken in the future.

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<th>JUNIOR YEAR</th>
<th>SENIOR YEAR</th>
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M. Supervised Agricultural Experience Plan (Project Program should be related to career goal).

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N. Planned Department Activity (FFA)

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Parents/Guardians Signature: ___________________________
3. Course Outlines
The Art History of Floral Design  Syllabus

Text: The Art of Floral Design; Delmar Publishing

Course Description: This course gives the student a practical look at the floriculture industry in California. The major emphasis will be on floral design principles and corsage construction as well as culture, cars, and processing. The course is designed to lay the foundation for an entry level position in the floriculture industry or as the prerequisite for an advanced class. Participation in the FFA will be required and graded.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work, as described in the “How To Organize Your Notebook” sheet.
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Three Ring binder either for floral or a portion of a larger one.
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Lots of college ruled line paper.
e. 8 gig Thumb Drive

GRADING CRITERIA:

Tests and quizzes 40%
Floral Projects 40%
Homework 10%
FFA Participation 10% (300 points per semester)

Floral Design students produce many quality arrangements that can be found in retail flower shops costing hundreds of dollars. There is a $15 per semester lab fee to help pay for a portion of the flowers we use. Checks are made payable to HHS FFA and are to be given to the ASB Office. Students who do not pay the $15 lab fee per semester will make basic designs. Please contact Mr. Maddalena if you have any questions.
Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Class work and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S.O.E.P. (Project)

100% - 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 60% = D
Below 60% = Failing Grade

Make – Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within one week of your absence. See another student to copy their Daily Activity. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. All assignments are posted online at my website. You will also be registered for the online textbook. Please check my website daily so you do not get behind. Please go to the school website, Teachers, Maddalena and then sign in with your sign-in name and password in order to have access. Students are responsible to check the website and get all assignments missed from there.

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Floriculture contained above.

STUDENT NAME (please print)_________________________________________
STUDENT SIGNATURE

PARENT/GUARDIAN NAME (please print)________________________________
PARENT/GUARDIAN SIGNATURE________________________________________
Agriculture Chemistry Course Syllabus

Text Book: The World of Chemistry, Zumdahl

Course Description: Agriculture Chemistry is a one-year, laboratory science course, aligned to the chemistry science content standards, and designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:
1. Atomic and molecular structure
2. Chemical bonds
3. Conservation of matter and stoichiometry
4. Gases and their properties
5. Acids and bases
6. Solutions
7. Chemical thermodynamics
8. Reaction rates
9. Chemical equilibrium
10. Organic and biochemistry
11. Investigation and experimentation

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work.
c. NEVER THROW ANYTHING AWAY UNTIL THE END OF THE YEAR.
d. Maintain a running record of your daily work and attendance.
e. Hand in all work the day it is due.
f. Chromebooks are REQUIRED to be fully charged every day; however, they are NOT to be taken out unless directed by the teacher.
g. Videos, email, games, etc. are never permitted in class on Chromebooks unless directed by the teacher.
h. Use of Chromebook without direction of the teacher may result in a referral and/or suspension from the class, taking failing grades on any assignments missed.
i. Display the proper attitude in class at all times.
j. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Spiral notebook- Either specifically for Ag. (highly recommended) or a portion of a larger one for Ag.
b. Black or blue ballpoint pen.
c. #2 pencil and eraser.
d. Lots of EXTRA notebook paper (A.K.A. loose paper that is NOT from your class notebook.)

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S. A. E. (Project)

Grading Criteria: 

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<th>Activities</th>
<th>Percentages</th>
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<tr>
<td>Assessments</td>
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<td>Classwork, Labs, Homework</td>
<td>40%</td>
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<tr>
<td>Agri-Science Project</td>
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<tr>
<td>FFA Activities</td>
<td>10% (300 points per semester)</td>
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</table>

100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60% = D
59.9% and below = Failing Grade

Make - Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Late work is NOT accepted. **Work is due at the end of each week (or a different day designated by Ms. Maratsos) in the form of a notebook check.**

Consequences:

If one or more of the classroom or school rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Ag. Chemistry contained above.

STUDENT NAME (please print)________________________________________
STUDENT SIGNATURE ________________________________________________

PARENT/GUARDIAN NAME (please print)______________________________
PARENT/GUARDIAN SIGNATURE_____________________________________
PARENT/GUARDIAN EMAIL _________________________________________
Plant and Animal Science - Syllabus

Text Book: Life Science, Glencoe, 2008

Course Description: Plant and Animal Science is a one year course aligned to meet the graduation requirements in Life Science. This course is also the required first course in the agriculture pathway at Heritage High School. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Using the Scientific Method.
2. Understanding the Math process.
3. Demonstrating writing skills.
4. Comparative relationships of plant and animal nutrition, diseases and health.
5. Evolution of plants and animals.
7. Comparative analysis of major body organs.
9. Appreciates the role of the FFA and its opportunities.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. College ruled notebook- For this class only.
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Color: Markers, Crayons, or color pencils
e. School Planner

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write- ups.
6. FFA Activities.
7. S.O.E.P. (Project)
Grading Criteria: | Activities                      | Percentages |
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<td>Assessments</td>
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<tr>
<td>Agri-Science Projects</td>
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<tr>
<td>FFA Activities</td>
<td>10% (300 points per semester)</td>
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100% - 90% = A;  89.9% - 80% = B;  79.9% - 70% = C;  69.9% - 60 % = D
59.9% and Below = Failing Grade

Make – Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you.

Work is due at the end of each week.

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for the Ag Course contained above.

STUDENT NAME (please print)__________________________________________

STUDENT SIGNATURE_________________________________________________

PARENT/GUARDIAN NAME (please print)________________________________

PARENT/GUARDIAN SIGNATURE_________________________________________

PARENT/GUARDIAN E-MAIL_____________________________________________
Plant and Animal Science
UC Area G Course Approved
Course Description: Plant and Animal Science is a one year course aligned to meet the graduation requirements in Life Science. This course is also the required first course in the agriculture pathway at Heritage High School. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Using the Scientific Method.
2. Understanding the Math process.
3. Demonstrating writing skills.
4. Comparative relationships of plant and animal nutrition, diseases and health.
5. Evolution of plants and animals.
7. Comparative analysis of major body organs.
9. Appreciates the role of the FFA and its opportunities.

Agriculture Biology
UC Area D Course Approved
Course Description: Agriculture Biology is a one year, laboratory science course, aligned to the biology science content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. The molecular and cellular aspects of life.
2. Energetics of life, growth, and reproduction in plants and animals.
3. Evolution of modern plants and domestic livestock species.
4. Plant and animal genetics.
5. Taxonomy of modern agricultural plants and animals.
6. Animal behavior.
7. Ecological relationships among plants, animals, humans, ands the environment.
8. Nutrition in animals.
9. Health and diseases in animals, and similarities between animals and humans.
**Agriculture Earth and Physical Science**

**UC Area D Course Approved**

**Course Description:** Agriculture Earth and Physical Science is a one year, science course, aligned to the Earth science content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Investigate Scientific phenomenon's.
2. Identify elements using properties and characteristics.
3. Understand Plate Tectonics.
4. Analyze soils for macro and micro elements and nutrients.
5. Understand tidal influences and climatic changes.
6. Identify the sun, stars and planets of our solar system.
7. Solve equations to understand velocity, distance and time.

**The Art and History of Floral Design/Advanced Floral design**

**UC Area F Approved Course**

**Course Description:** This course gives the student a practical look at the floriculture industry in California. The major emphasis will be on floral design principles and corsage construction as well as culture, care, and processing. The course is designed to lay the foundation for an entry level position in the floriculture industry or as the prerequisite for an advanced class. Participation in the FFA will be required and graded.
Mt. San Jacinto Community College District
Secondary and Community College
Course Articulation Agreement

Statement of Intent

This agreement enables students to receive college credit and/or a waiver of a prerequisite for coursework at the secondary level comparable to courses offered by Mt. San Jacinto Community College District. The granting of college "credit-by-examination" is based upon achievement of competencies, as defined in Attachment B, which specifies the conditions of the articulation agreement.

Terms of Agreement

This agreement between Mt. San Jacinto Community College District and high schools or ROP shall remain in force for an indefinite period of time but shall be reviewed for consideration of continuation every three years. This review will include an examination of up-to-date course outlines and a discussion of current teaching methodologies and stated competencies. Either party to the agreement may terminate this agreement at the close of any school year by proper written notice delivered to the Superintendent/President of Mt. San Jacinto College or to the Superintendent of the secondary or ROP educational institution.

Mt. San Jacinto Community College District

Name and Number of Course/MSJCCCD

Horticulture Science 442

Name & Number of Course/High School/ROP

Secondary/ROP Educational Institution

Principal/Program Administrator Date

12-7-10

Superintendent Date

6/3/10
MT. SAN JACINTO COLLEGE
HIGH SCHOOL/ROP AND COMMUNITY COLLEGE
COURSE ARTICULATION AGREEMENT COVER SHEET

STATEMENT OF INTENT
This agreement enables students to receive college credit and/or a waiver of a prerequisite for coursework at the secondary level comparable to courses offered by Mt. San Jacinto College District. The granting of college "credit-by-examination" is based upon achievement of competencies through a course or courses as defined in Attachment C, which specifies the conditions of the articulation agreement.

TERMS OF AGREEMENT
This agreement between Mt. San Jacinto College District and high schools or ROP shall remain valid for three years for all disciplines except child development education which are valid for two years. After this time period the agreement will be reviewed and updated as needed for renewal. This review will include an examination of up-to-date course outlines and a discussion of current teaching methods, stated competencies and measurement methods. Either party to the agreement may terminate this agreement at the close of any school year by proper written notice delivered to the Superintendent/President of Mt. San Jacinto College or to the Superintendent of the secondary or R.O.P. educational institution. This agreement will be reviewed periodically. This agreement was created using a Statewide Career Pathways Project articulation agreement template.

<table>
<thead>
<tr>
<th>MT. SAN JACINTO COLLEGE DISTRICT</th>
<th>HIGH SCHOOL/ROP/DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME AND NUMBER OF COURSE:</strong></td>
<td><strong>NAME &amp; NUMBER OF COURSE:</strong></td>
</tr>
<tr>
<td>tight 107</td>
<td>Perris Union School District</td>
</tr>
<tr>
<td>AGRONOMCULTURE</td>
<td>AGRONOMCULTURE 441</td>
</tr>
<tr>
<td><strong>COLLEGE SIGNATURES</strong></td>
<td><strong>HIGH SCHOOL/ROP/DISTRICT SIGNATURES</strong></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>DEPARTMENT CHAIR/PROGRAM COORDINATOR</strong></td>
<td><strong>INSTRUCTOR</strong></td>
</tr>
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</tr>
<tr>
<td><strong>DEAN, CAREER EDUCATION/INSTRUCTION</strong></td>
<td><strong>PRINCIPAL/PROGRAM ADMINISTRATOR</strong></td>
</tr>
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</tr>
<tr>
<td><strong>CURRICULUM COMMITTEE (INFORMATION ITEM)</strong></td>
<td><strong>SUPERINTENDENT</strong></td>
</tr>
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<tr>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>VICE PRESIDENT</strong></td>
<td></td>
</tr>
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<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRESIDENT/SUPERINTENDENT</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>HS District/Name</td>
<td>School</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Murrieta Valley USD</td>
<td>Medical Terminology</td>
</tr>
<tr>
<td>Murrieta Valley USD</td>
<td>Our Sustainable Future</td>
</tr>
<tr>
<td>Murrieta Valley USD</td>
<td>TV/Digital Video Production</td>
</tr>
<tr>
<td>Murrieta Valley USD</td>
<td>Gamma Design and Development</td>
</tr>
<tr>
<td>Murrieta Valley USD</td>
<td>Java Programming - 7556</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Medical Terminology (690)</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Arboriculture 441</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Computer Application</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Video Studio Production I</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Keyboarding/Word Processing</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>Intro to Multimedia # 729</td>
</tr>
</tbody>
</table>
**Heritage High School**  
**Counseling at a Glance**  
http://www.puhsd.org/hhs (select departments, Counseling)  
Telephone (951) 940-5447 (select Option 2)  
FAX (951) 325-5448  

<table>
<thead>
<tr>
<th>WHO'S MY COUNSELOR</th>
<th>EMAIL ADDRESS</th>
<th>EXTENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. Prendergast A-Ga</td>
<td><a href="mailto:coral.prendergast@puhsd.org">coral.prendergast@puhsd.org</a></td>
<td>20116</td>
</tr>
<tr>
<td>Mr. Washburn Gb-O</td>
<td><a href="mailto:ben.washburn@puhsd.org">ben.washburn@puhsd.org</a></td>
<td>20113</td>
</tr>
<tr>
<td>Ms. Adame P - Z</td>
<td><a href="mailto:cheri.adame@puhsd.org">cheri.adame@puhsd.org</a></td>
<td>20118</td>
</tr>
<tr>
<td>Mrs. Fierros IEP students</td>
<td><a href="mailto:guadalupe.fierros@puhsd.org">guadalupe.fierros@puhsd.org</a></td>
<td>20115</td>
</tr>
<tr>
<td>Mrs. Gonzalez AVID/ELD</td>
<td><a href="mailto:melina.gonzalez@puhsd.org">melina.gonzalez@puhsd.org</a></td>
<td>20117</td>
</tr>
</tbody>
</table>

**High School Graduation Requirements:**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits Required</th>
<th>Credits Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Geography*</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>World History*</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>US History*</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Government/Economics*</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>English*</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Math**(*)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Science* (must include)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>1 life and 1 physical</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Language* or</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Fine Arts*</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>225</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Meets the A-G Requirement  
** Must include Integrated I

**Classes Available for 9th Grade Students:**

- **English:** English I or Advanced English  
- **Social Studies:** World Geo, AP Geography, Health  
- **Math:** Math Pathways, Integrated Math I, Integrated Math II, and Integrated Math III  
- **Science:** Ag Plant/Animal, Earth Science CP, Biology, Principals of Biomedical  
- **PE:** Physical Education, Marching Band  
- **Foreign Language:** Spanish I, II, AP Spanish IV, Spanish for Spanish Speakers I, II, and French I  
- **Fine Art:** Art, Choir, Symphonic Winds, Percussion Ensemble, Drama, Flags/Color Guard, CTE Photography, CTE Video Productions  
- **Electives:** Introduction to Engineering Design, AVID, ASB

**Parent Portal Login to Infinite Campus**

The Campus Portal establishes a line of communication between parents and the school. Using the Portal, parents can track student progress and participation, and monitor such aspects as Attendance and Grades. An activation key is required in order to setup a Username and Password. A mass distribution of portal instructions will occur after school is in session. Please provide your email address on registration paperwork. The link to the portal is: [https://campus.puhsd.org/campus/portal/perris.jsp](https://campus.puhsd.org/campus/portal/perris.jsp)

**Helpful Websites**

- University of California general info: [www.universityofcalifornia.edu](http://www.universityofcalifornia.edu)  
- Detailed info on UC’s “a-g” requirements: [www.ucop.edu/doorways](http://www.ucop.edu/doorways)  
- California State University System: [www.csumentor.edu](http://www.csumentor.edu)  
- CSU Early Start Program: [www.csusuccess.org](http://www.csusuccess.org)  
- Athletics / NCAA: [https://web1.ncaal.org/eligibilitycenter/common/](https://web1.ncaal.org/eligibilitycenter/common/)  
- College/Career Search: [www.bridges.com](http://www.bridges.com), [www.californiacolleges.edu](http://www.californiacolleges.edu)  
## College Prep Four-Year Plan

<table>
<thead>
<tr>
<th>College Prep</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 3 Years</td>
<td>World History / AP European History / AP World History</td>
<td>U.S. History / AP U.S. History / MSJC US History</td>
<td>Gov. / Econ. / AP Gov. / AP Econ. / Ag. Gov. / Ag. Econ.</td>
<td></td>
</tr>
<tr>
<td>P.E. 2 Years (No athletic PE for 9th)</td>
<td>PE / Marching Band / PE / Dance 1, 2 / Aerobics / Weights / Athletics</td>
<td>PE / Dance 1, 2, 3 / Aerobics / Weights / Athletics</td>
<td>PE / Dance 1, 2, 3 / Aerobics / Weights / Athletics</td>
<td></td>
</tr>
<tr>
<td>Foreign Language 1 Year</td>
<td>Spanish 1 / 2 / 3 / SSP 1 / SSP 2 / AP Spanish IV / French 1 / 2 / Sign Lang 1</td>
<td>Spanish 1 / 2 / 3 / AP Span IV / SSP 1 / SSP 2 / AP Span IV / French 1 / 2 / 3 / Sign Lang 1 / 2 / Sign Lang 1 / 2 / Sign Lang 1 / 2</td>
<td>Spanish 1 / 2 / 3 Sign Lang 1 / 2 / 3 / SSP 1 / SSP 2 / AP Span IV / V / French 1 / 2 / 3 / AP French IV</td>
<td>Spanish 2 / 3 / SSP 1 / 2 / AP Span IV / Sign Lang 1 / 2 / 3 / French 2 / 3 / AP French IV</td>
</tr>
<tr>
<td>Fine Art 1 Year</td>
<td>Art 1 / II / III / CTE Digital Photography / CTE Video Productions / Ceramics / II / II / III / AP Ceramics IV</td>
<td>Drama 1 / II / Symphonic Winds / Percussion / Choir / Jan Flags / Color Guard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives 55 Credits (11 classes)</td>
<td>ASB / Intro to Psych / Police Leadership / Cinema Studies / MSJC Legal / Child Development</td>
<td>Criminology (S) / Youth and Law (S) / History of the West (S) / Keyboarding (S) / CTE Civil Engin Design</td>
<td>Web Design / Comp Science / Computer Applications (S) / AVID (must complete app)</td>
<td></td>
</tr>
<tr>
<td><strong>Space is limited for some fine art classes their 9th grade year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All bolded courses are college preparatory and A-G approved.
All courses are subject to change pending student grades, assessments, and teacher recommendation
An alternative pathway is necessary if the student shows a need for it.
Advanced Placement is available upon request and or assessment scores may be required.
Being A Good GREAT Student

What is a good student?
Introduction Video
Tips for a successful year

Essential Question
What can I do to prepare myself for this school year, and what can I do to ensure that I will be successful in my academic classes?

Split into groups!
The teacher will come assign you a number 1-6 and you will then you will find your group with like numbers and move with them!

What you need!
Butcher Paper
Markers
CREATIVITY!

What you're doing!!!
- You will be creating “Perfect Notes”
- Design a template of what your notes would look like.
- Then list the key features of
Example

Building a Class Template

Now let's take your templates and hang them up here!

Now let's build a whole class template together.
Dear Student:

Using your school transcript and this worksheet, you can track your progress toward meeting minimum entrance requirements to California State University (CSU) and University of California (UC) schools. This worksheet can help you plan what courses you need to take during high school to achieve your college goals.

**STUDENT NAME:**

**CURRENT SCHOOL YEAR:**

**CURRENT GRADE:**

**SCHOOL NAME:**

**DATE:**

---

**Your Progress in Meeting College Entrance Requirements**

**Your College-Prep Coursetaking**

1. With your counselor, circle and count every college preparatory course you have completed with a ‘C’ or better.

2. In the chart below, draw and shade in the bar for each subject up to the number of courses in that subject that you have completed with a ‘C’ or better. If you have only completed one semester with a ‘C’ or better, fill in half the course line.

3. If you have remaining a-g courses in which you earned a ‘C’ or better that you have not applied to any other subject area, plot them on the College-Prep Elective line.

4. The space between the bar you drew and the black vertical line represents the remaining courses you need to meet that subject requirement. Remember, not all college preparatory courses will meet the UC and CSU criteria for a-g courses. You can find a list of approved courses for your school at [www.ucop.edu/doorways](http://www.ucop.edu/doorways).

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th># COURSES:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Science (d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Other Than English (e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History/Social Science (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual and Performing Arts (f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College-Prep Elective (g)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Your College-Prep Grade Point Average (GPA)**

1. Find your current GPA on your school transcript and write it here: _____

2. Mark your current GPA on the figure below. Shade in the bar up to the mark you made for your GPA.

3. Is your current GPA UC/CSU eligible or CSU eligible? (check one) [ ] UC/CSU eligible  [ ] CSU eligible

**GPA for “a-g” courses**

<table>
<thead>
<tr>
<th>GPA</th>
<th>0.0</th>
<th>1.0</th>
<th>2.0</th>
<th>3.0</th>
<th>4.0</th>
<th>5.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSU Minimum (2.0)</td>
<td>UC Minimum (3.0)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**NOTE:** UC and CSU GPAs count only a-g courses. The GPA on your transcript might not reflect that. Check with your college advisor if you have questions about calculating your UC and CSU GPA. CSU and UC admissions decisions are also based upon SAT/ACT scores as well as other factors, but the benchmarks of 2.0 (CSU) and 3.0 (UC) must be achieved in order to be eligible for admissions consideration.

The above minimum course and GPA requirements apply to most 4-year colleges, including CSU and UC. Completing these courses is also good general preparation for 2-year colleges. Plan to check on the specific entrance requirements at the schools that interest you. Remember, your high school's graduation requirements may differ from these college entrance requirements.
## Planning for College

### Your Coursertaking Progress

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>Total Courses Required for CSU/UC</th>
<th>Courses Completed</th>
<th>Current Courses</th>
<th>Courses Needed by Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (b)</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math (c)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Science (d)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Other Than English (e)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History/Social Science (a)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual and Performing Arts (f)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College-Prep Elective (g)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>15</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⇒ One (1) course stands for one full-year course or two half-year courses. *The college-prep elective requirement can be satisfied by extra “a-f” courses.

### Your Coursertaking Plans

Write in the names of the remaining courses you need and when you plan to take them.

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>Summer</th>
<th>Next Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math (c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Science (d)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Other Than English (e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History/Social Science (a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual and Performing Arts (f)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College-Prep Elective (g)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⇒ Remember, not all of the courses offered by your school satisfy the CSU and UC entrance requirements. You can find a list of approved courses for your school at www.acopeu/drtywqys.

### Where to Find More Information

For more information on CSU and UC admissions requirements and recommendations, visit www.csu mentor.edu and www.universityofcalifornia.edu/students/. To find out more about the many other California colleges, including both public and private as well as 2-year and 4-year colleges, visit www.california colleges.edu. To explore the California Community Colleges, visit www.cccapply.org. Be sure to check the specific admissions requirements for the schools that interest you.

### Paying for College

Financial aid for college is available for those who qualify. Eligibility is based on your family’s income. For general information about financing your college education visit www.california colleges.edu/financial-aid/. For information on eligibility for the Cal Grants “Cash for College” programs, go to www.calgrants.org or visit the California Student Aid Commission site at www.csac.ca.gov.

### What You Can Do Next

Fulfilling the CSU/UC coursertaking and GPA requirements shown here will not guarantee you are accepted at these institutions. To help your chances of getting into and succeeding in college, admissions officers recommend that you:

⇒ Take more than the minimum number of courses.

⇒ Aim for A’s and B’s in all your classes.

⇒ Develop good study skills.

⇒ Join clubs, play sports, and volunteer.

Remember, the criteria shown here represent minimum entrance requirements. Both the CSU and UC systems recommend additional courses. Moreover, students who apply to the most competitive schools often exceed both the minimum and recommended coursework and GPA requirements. Most 4-year colleges also require standardized tests for admission. Visit the CSU and UC web sites listed at left for their test requirements.
<table>
<thead>
<tr>
<th>Topics Covered</th>
<th>Instructional Time</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant and Animal Science, Pace Calendar, Semester 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A, B, C, and D</th>
<th>3 weeks</th>
<th>Cell Reproduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>and DNA, (California State Standards for Biology) #2, Areas A, B, C, E, and H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual/asexual propagation, mitosis, meiosis, Also basics of chromosomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell Processes</td>
<td>3 weeks</td>
<td></td>
</tr>
<tr>
<td>(California State Standards for Biology), #1, Areas B, C, D, E, and H.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metabolism, Photosynthesis, Cellular Respiration, Fermentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proteins, and Lipids, Active/passive transport, Inducing diffusion, Osmosis,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basics of atoms and molecules, (Inducing definitions of carbohydrates,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and J as well as #10, Areas A – F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viruses and Disease, (California State Standards for Biology), #1, Areas A, C, E,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parts of the cell and their jobs, Prokaryotic vs eukaryotic cells, Cell theory</td>
<td></td>
<td></td>
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<tr>
<td>Cells</td>
<td>3 weeks</td>
<td></td>
</tr>
<tr>
<td>School Agriculture and Natural Resources Standards, FL(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific Investigation and Experimentation, Areas A – N, (California State Standards for Biology), High School</td>
<td></td>
<td></td>
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<tr>
<td>Classification of Living Things, Biodiversity, (California State Standards for Biology), High School</td>
<td></td>
<td></td>
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<tr>
<td>Scientific method, what makes an organism, Chromosomes Keys and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>3 weeks</td>
<td>Introduction to Life</td>
</tr>
<tr>
<td>Experimentation, and Intro to Life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books</td>
<td>3-4 weeks</td>
<td>What is the FF?</td>
</tr>
<tr>
<td>FF A history, officers and duties, levels (chapter 3 state), 3 circle model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science safety test (district test)</td>
<td>1/2 - 2 weeks</td>
<td>Safety</td>
</tr>
<tr>
<td>Class rules and expectations, syllabus, Farm safety, Science safety rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Instructional Unit</td>
<td>Topics Covered</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>2 weeks</td>
<td>Plant processes and responses</td>
<td></td>
</tr>
<tr>
<td>1 week</td>
<td>Plant reproduction</td>
<td></td>
</tr>
<tr>
<td>1 week</td>
<td>Intro to Plants</td>
<td></td>
</tr>
<tr>
<td>5 weeks</td>
<td>Livestock Breeds and Basics</td>
<td></td>
</tr>
<tr>
<td>3 weeks</td>
<td>Genetics</td>
<td></td>
</tr>
<tr>
<td>1 week</td>
<td>Record Book Refresher</td>
<td></td>
</tr>
</tbody>
</table>

Plant and Animal Science pacing Calendar, Semester 2

**California Agriculture and Natural Resources Standards, PZ.0**
- Photosynthesis and respiration review, photosynthesis, photosynthesis.

**California Agriculture and Natural Resources Standards, PZ.0, F8.0, F9.0, F3.0, D1.0:**
- Lab included planning, studies day coloring bowls and flower dissection.
- Parts of the flower and the plant pollination, germination.

**California Agriculture and Natural Resources Standards, PZ.0:**
- What makes a plant different between seedless plants and seed plants.

**Showmanship, etc. (California High School Agriculture and Natural Resources Standards, D2.0, D5.0, D7.0):**
- Labs included each morning on pigs, beef identification, demo on animal commodities, each animal provides us with.
- Also discuss animal nutrition.
- Cover poultry, bees, dairy, swine, sheep, goat husbandry, (and which)
- Gender chromosome for common animals, breed names, basic anatomy.

**State Standards for Biology #2, areas C - G, #3, areas A - C, #4, areas B - E:**
- Gene's dominant and recessive traits, phenotypes and genotypes, Punnett squares, pedigrees, breeding for traits in livestock and plants (California Agriculture and Natural Resources Standards, PZ.0, F8.0, F9.0, F3.0, D1.0).

- Books for the new year:
  - Updating and reviewing record books after winter break, creating new
## Plant and Animal Science Planning Calendar, Semester 2 (continued)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poster Reviewing topics discussed during the week. Students pick a week from this semester and create an illustrated, colorful final review.</td>
<td>1 week</td>
</tr>
<tr>
<td>Prepare a final Power Point presentation to share within the class. Students pick a career in agriculture and research the career with a partner.</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Resources: Standards PS.0, G6.0. (California Agriculture and Natural Resources) Soil Science: Soil Structure, Soil Ribbons, Soil Testing Lab. Also covers weathering of soil triangle, soil structure, soil ribbons, soil testing, lab.</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Discuss different types of gardens, basic principles of design, irrigation, and crop, and design styles. (California Agriculture and Natural Resources) Tool ID. Student project: Design a Garden Using Specific Types of Irrigation, and Crops, and Design Styles.</td>
<td>1 week</td>
</tr>
<tr>
<td>Careers in Agriculture</td>
<td></td>
</tr>
</tbody>
</table>
Jocelyn Ornelas

Bugs That Will Raid The Future

Menifee-Heritage FFA

January 30, 2015
Imagine yourself walking through a plaza with your friends when you approach a candy stand and one of your friends says to you, “Hey, try this.” Without asking what you are about to ingest, you try it. Suddenly, something gets stuck in your teeth, and as you pull it out you notice it is a grasshopper leg. Yes, a grasshopper leg. However, you do not realize it and put it back in your mouth to eat. After a few seconds of processing, your brain realizes that you are eating an insect. Eating an insect was not what you had in mind when your friend handed you that candy that seemed so appealing. Just the thought of eating an insect is pretty disgusting; however, you would be surprised that these bugs do not taste badly. Suddenly, this moment of bug-tasting will have gone from a sour and unenjoyable one, to a bittersweet memory. Although many are not aware, insects have always been a part of our daily intake of nutrients and have played a minor role in staple diets.

Although the Western World does not practice entomophagy, the consumption of insects as food, there are various cultures around the world in which insects are a primary portion of the daily diet. As a matter of fact, 70% of the world’s population belongs to a culture that consumes insects on a daily basis. There are around 1,900 edible species of insects which do not require nearly as much production cost as livestock does (Holland, 2013).

Insects are a sustainable option to keep up with the demand of food supply for the growing population. For example, the most common species of edible insects are: beetles that turn cellulose into digestible fat and butterflies along with moths that supplement children and pregnant women who are deficient in iron when these are consumed in larval stages. Also, bees and wasps can be consumed as eggs, ants with high protein, calcium, and low carbs and calories (something our generation loves!). The most popular consumed insects are certainly
grasshoppers, crickets and locusts because they are more abundant and easy to catch. Although a little bit less appealing, mosquitos, flies, termites, and lice also join the club (Holland, 2013).

Compared with 200 square meters required to grow one pound of beef, only 15 square meters are required to grow a pound of crickets. Also, while it takes 22,000L of water to produce one kilogram of beef, 3,500L for one kilogram of pork, and 2,300L for one kilogram of chicken, it takes only 1L of water to produce one kilogram of crickets (Moffitt, 2014). Insect consumption could become the next Steel industry of the Industrial Era!

In fact, the UN is currently encouraging the people to consume insects. These tiny creatures might not seem very appealing to you...or many others, but they are surely more digestible than other animal products. In fact, 80% of a cricket is edible and digestible compared to 50% of a chicken and 40% of cattle (Moffitt, 2014). This protein-packed creature would therefore produce more product at a very cheap cost compared to what is produced today. In a few decades, population will skyrocket and the current food industry will not be enough to provide for everyone. Therefore, an alternative food source that does not require as much resources will be needed. Insects are a great choice! Although some people are still quite disgusted by them, it does not take away all the nutrients these creatures provide. Most insects contain high amounts of protein, iron, and calcium, among many other vitamins and minerals. Plus, eating an insect is not bad at all as they have different flavors, many of which we are already accustomed to. For example, stink bugs have an apple flavor, and red agave worms are spicy; and a bite of tree worm apparently brings pork rinds to mind (Holland, 2013).

If you have ever gone to Starbucks, you might find the beverages to be quite enjoyable and possibly, addicting. Just last year the company agreed to stop using cochineal extract, a dye
created from dried bodies of insects used to color Starbucks drinks (Eplett, 2013). That being said, there is no doubt that we eat insects already without even realizing it. In fact, it is estimated that an individual consumes more than two pounds of insects per year on average. Insects are everywhere, from the salad you eat, to the alcoholic beverages you might drink. These bugs are also used in the creation of food coloring that is often found for use in the kitchen. The Food and Drug Administration has created rules that permit certain amounts of insects to exist in different foods due to the fact that it is inevitable to avoid consumption (Eplett, 2013). These little creatures already form a minor part of our daily diet. Why not integrate them into our regular diet?

The only factor that needs to be worked on, is the process of eliminating the "yucky" feeling, or negative associations applied with eating insects. That probably will not be hard to achieve since that has already been done once with a food most Americans enjoy; lobster. 200 years ago lobster was regarded by Americans as filthy. The crustacean was poor people’s food and it was even given to prisoners as cruel treatment. Lobster has now become a gastronomic delicacy and it is no longer considered to be a poor people’s food (Schonwald, 2012). The lobster example is set as a precedent for a hope in the future that the Americans will get over the idea that eating bugs is not good for us, but rather, like the lobster, be installed as an American favorite.

People create phobias for insects by depicting the worst characteristics about the bugs. However, once the public realizes the great taste and nutritional value of insects, they will become as popular as IN-N-OUT. Western civilizations are called to take action to this new insect approach as the U.N. suggests that “micro livestock” (a euphemistic term applied to insect
farming) will aid to eradicate poverty and world hunger. Insect production cost is very low due to the fact that it requires a significantly less amount of land and water than the current livestock production. Insect farming will help to preserve agricultural lands for other necessary crops as well as preserve the limited amounts of freshwater in the world. Again, with a growing population, a change has to be made in order to be able to comply with the future rise in food demand. If insect farming does not become integrated into our daily lives, it is likely that the new population will be fighting against the livestock that will occupy two-thirds of the world’s farmland. If we try and accept it, insects can eventually crawl up the ladder of our food choices.
Works Cited

Schonwald, J. (2012, June 20). Overcoming the Yuckiness of Eating Bugs and Seaweed Can Help

Save the World. Retrieved January 9, 2015, from
http://www.slate.com/articles/technology/future_tense/2012/06/edible_insects_and_seaweed_are_the_perfect_sustainable_foods_.html


Blog Network. Retrieved January 12, 2015, from
http://blogs.scientificamerican.com/guest-blog/2013/06/04/grubs-as-grub/

https://www.youtube.com/watch?v=iM8s1ch5TRw
4. Gradebook
Grade Requirement for SAE / FFA

In each of our Agriculture courses, students are required to participate in several FFA leadership activities to earn a minimum of 300 FFA points per semester; this is worth 10% of their overall grade. Having an SAE and a record book is another component of a student’s overall grade, and is also worth 10% of their total grade. It is our department’s philosophy that all students should be well rounded in each of the three areas of the agriculture program.

Students are informed of this grade breakdown on the first day of class when they receive their syllabi, which students are required to have their parents or guardians sign to signify that they understand these stipulations. FFA activities and SAE/record book opportunities are stressed throughout each semester so students are constantly reminded of these portions of their overall grade.

Evidence of this grade requirement is reflected in the categories in the weighted grade section of our digital grade books. The program we use is Infinite Campus, which students have access to as well through an app on their phones or Chromebooks. They may check their grades at any time.
Grade Book

Attendance

12

Roster

10

Seating Charts

10

Student Groups

10

Class Sere

10

Post Grades

10

Assignment Overview

10

Assignments

10

Lessons

10

Standards and Tests

10

Course Resources

10

Student Course

10

Recommendations

10

Reports (Attendance)

10

Reports (Grade Book)

10

Reports (Planner)

10

Reports (Reader)

10

Custom Links and Reports

10

Account Settings

10

Save

125 Extra Credit Points

0
5. SAE Visitation
## MONTHLY/HOURLY/EXTRA DUTY/OVERTIME HOURS
### Classified/Certificated

**NAME:** Maggie Maratsos

**PAY PERIOD:** July 1 TO July 31, 2015

<table>
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<tr>
<th>Date</th>
<th>Hours Worked</th>
<th>Lunch</th>
<th>Total Hours</th>
<th>Description of work</th>
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<td>10:00 - 11:00</td>
<td></td>
<td>2</td>
<td>Check cage, animals</td>
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<tr>
<td>7/3</td>
<td>5:00 - 6:00</td>
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<td>1:00 - 5:00</td>
<td></td>
<td>4</td>
<td>Greenhouse work</td>
</tr>
<tr>
<td>7/11</td>
<td>2:00 - 4:00</td>
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<td>2</td>
<td>Greenhouse work</td>
</tr>
<tr>
<td>7/15</td>
<td>10:00 - 11:00</td>
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<td>1</td>
<td>Check on animals</td>
</tr>
<tr>
<td>7/17</td>
<td>9:00 - 10:00</td>
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<tr>
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<td>Check on animals</td>
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<tr>
<td>7/28</td>
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<td>2</td>
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<tr>
<td>7/31</td>
<td>5:00 - 8:00</td>
<td></td>
<td>5</td>
<td>Ran erector to CCI</td>
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</table>

**Total Hours:**

I HEREBY CERTIFY that I have worked for the Perris Union High School District on the days and hours stated above.

---

**EMPLOYEE SIGNATURE**

**ADMINISTRATOR**

---

**CATEGORICAL SIGNATURE**

**ASSISTANT SUPERINTENDENT**
Ag. Chemistry 2015-2016 Period 1

Maggie Maratsos

STREAM
STUDENTS
ABOUT

ASSIGNMENT  
Maggie Maratsos  Dec 3

References

Due December 14, or the day of your final exam.

Instructions:

Write a reference list of published articles, books, or other communications that you are using to research your topic, and will be citing in your introduction. Use the APA style guide for proper reference listings and footnotes.

Don't know what a reference list is? Click here: [http://goo.gl/q1X4GR](http://goo.gl/q1X4GR)

When your whole research paper is complete and formatted, this section will go at the very end. You need to include at least 5 references, and all sources should be cited in APA format.

I how do I write references in APA format? Use this handy donkey tool: [http://www.citationmachine.net/apastyle-a-bibliography](http://www.citationmachine.net/apastyle-a-bibliography)

Locate as much information that relates to your research topic as possible. Find information sources and scientific studies related to the topic, not information you read on someone's blog.
Hypothesis
Due Monday, December 14th or the day of your final exam.

Instructions:

You are to write the hypothesis for your experiment; it doesn't need to be longer than one or two sentences.

Remember, a hypothesis is a prediction of the outcome of your experiment based on research you have found out about your topic on your own, or even based on a hunch that you have. The hypothesis should be an "if ________ then ________" statement (NOT a question). If you have to refer to yourself or other people in your hypothesis, it should be written in third-person form.

When writing your hypothesis, keep these questions in mind:
What do I think the result of the experiment will be?
Will the result be positive or negative?

Add class comment...

ANNOUNCEMENT Maggie Maratisos

Here's the packet that we received in class today.
Hypothesis

19

 Faith Baker

Aislynn Tierney

Anthony Rodriguez

Anthony Thomas

Benjamin Martinez

Brandon Harris

Brayan Del Rio

Christopher Boucher

Elizabeth

Gabriel Cabrera

Gavin Morris

Jalene Garcia
Hypothesis - Faith Baker

Last edit was made 3 days ago by Faith Baker

Faith Baker
Perth

Hypothesis

If the horn growth in goats changes depending on gender, then the male goats horns will be longer and grow faster than the females.
Agriscience Research Project

Heritage High School

Agriculture Chemistry
Agriculture Biology
Anatomy & Physiology Vet Science

2015-2016

How to Write an Agriscience Paper

An Agriscience research project is a practical, hands-on project that uses the scientific method to answer a real scientific problem that relates to agriculture. Researchers at universities and private labs use the same format to solve the everyday scientific problems of the world. Just like the researchers of the world this project may span many years and will be viewed by scientific peers all over the United States of America. The project will consist of three parts a research paper, a log book and a display board.

The Agriscience research paper should be no longer than 12 pages written in 12 pt. font double spaced. The entire paper should be written in third person (no “I,” “me,” or “we”). The entire paper should be factual and not include opinion or conjecture. All portions of the paper should be written in comprehensive fluid essay, no bullets or numbered answers to questions (except for the Methods and Materials sections). It is recommended that you save all aspects of your paper on a flash drive for ease in printing and editing because multiple corrections and changes will be made to the paper. Be sure to save a copy to your Google Drive as well, as much of this experiment will be turned in using Google Classroom.

Plagiarism is a violation of the Academic Code of Conduct as set forth by the Perris Union High School District and can result in disciplinary action including but not excluding suspension, detention and or removal of academic awards. Please cite all work used from another source using APA format.
Overview and Order of the Research Paper

Research projects should include the following items in the following order.

**Title Page**
Title of the Project
Student Name
Category and Division
Menifee-Heritage FFA
An image related to your project

**Part I - Introduction:** (About 1 Page Long)

**A) Background**
The background gives the reader a general history and understanding of the project and the research. After reading the background the reader should have enough technical knowledge of the subject to understand the premise of the paper.

**B) Need for study**
The need for study points out the usefulness or importance of the project and its relevance to agriculture.

**C) Experimental Design**
The experimental design is a bolded, bulleted list of the following parts of the experiment.

- Independent Variable
Dependent Variable

Control or Constants

Sample Size - how many subjects were there? (# plants, # different soil types, # animals, etc.)

Number of Repetitions – your experiment needs to be performed AT LEAST twice for it to be considered valid.

F) Hypothesis

A prediction of the outcome of the experiment based on the review of literature conducted.

Part II - Methodology

Materials and Methods should be a numerical, step by step set of directions. As you describe the steps of the methodology of the experiment the materials needed are to be mentioned. This section should be descriptive enough to allow someone else to replicate the experiment. NO BULLET POINTS.

Part III - Results

This should be a factual presentation of the outcomes of the study. The data will be presented in tables and charts, and a written description of the numerical data observed during the experimentation.

Part IV - Discussion

This is where you describe WHY you got the results you did. Was your hypothesis correct? Why or why not? Here you relate it back to your introduction. You will also include recommendations for further studies.

Part V - References

Include a list of published articles, books or other communications cited in the text. Use the APA style guide for proper reference listings and footnotes.
Step by Step “What to Do”

Step 1 - Selecting a Topic

When selecting a topic you will get the best results if you pick a research project that you are interested in or have some background knowledge to use for a basis to build upon.

Criteria for project selection

The project must fit into one of the below six categories.

The project must be agriculturally related.

The topic must be testable.

The topic must be appropriate for school.

The project topic must be approved by your instructor.

100 Biochemistry/Microbiology/Food Science

Biology of microorganisms-bacteriology, virology, protozoology, fungi, bacterial genetics, yeast. This area also can include chemistry of life processes-molecular biology, molecular genetics, enzymes, photosynthesis, protein chemistry, food chemistry, hormones, etc.

200 Environmental Sciences

Study of pollution (air, water and land) sources and their control; ecology.

300 Zoology (Animal Science)
Study of animals-animal genetics, ornithology, ichthyology, entomology, animal ecology, paleontology, cellular physiology, animal husbandry, cytology, histology, animal physiology, invertebrate neurophysiology, studies of invertebrates, etc.

400 Botany (Plant/Soil Science)

Study of plant life-agronomy, horticulture, forestry, plant taxonomy, plant physiology, plant genetics hydroponics, algae, etc

500 Engineering (Mechanical/Agricultural Engineering Service)

Technology; projects that directly apply scientific principles to manufacturing and practical use-mechanical, chemical, electrical, environmental engineering, etc.

600 Social Systems

The study of human behavior and the interaction of individuals in and to society, including agricultural education, agribusiness economic, agricultural communication, agricultural leadership and other social science applications in agriculture, food and natural resources.

Examples:

- Investigate perceptions of community members towards alternative agricultural practices
- Determine the impact of local/state/national safety programs upon accident rates in agricultural/natural resource occupations

Step 2 - Research

Locate as much information that relates to the research topic as possible. Find information sources and scientific studies related to the topic. Studies should originate from reliable, academically relevant
Sources. Universities and private agriculture and scientific companies are what you are looking for. Think Dow Chemical, Forster Farms, or Ford Automotive, not Mrs. Bait’s third grade class or Joe Student’s high school science project.

Any technical diagrams about the project should be included. If it’s an engineering project and there is a set of directions on how to build something to test the hypothesis included it. Any background information that would be helpful in understanding the research topic should be included. Encyclopedias and textbooks are great sources of information. Wikipedia is not an acceptable or credible source of information, please do not include it.

Step 3 - Construct a Title Page

Title page to include:

Title of the Project

Student name(s)

School (Heritage High School)

Division # and name (400 Botany)

Category (Advanced / Team or Individual)

An image related to your project (this can be added later and may be a picture of some aspect of your project)

Step 4 - Write an Introduction (Part I)

There are four parts to the Introduction (A-D):

A) Background (two paragraphs long)

The background gives the reader a general history and understanding of the project and the research. After reading the background the reader should have enough technical knowledge of the subject to understand the premise of the paper and all related terms.
The following questions should be answered for the reader in a continuous fluid third person essay. Do not make a list of the questions and the answers in the paper. It is extremely important at this point to reference (APA) all thoughts and ideas that come from the research in this section. This section should be at least two paragraphs long.

1. Make the reader an expert in the area of the research topic. Define all relative terms and topics. At the end of the background the reader should have a working knowledge of all aspects of the project that will be presented later in the paper.
2. List the agricultural statistics or key information that gives support to the importance to the research project.

B) **Need for study (one to two paragraphs long)**

The need for study points out the usefulness or importance of the project. This portion of the paper should be at least one paragraph long, written in the third person and answer the following questions in a fluid third person essay. Do not make a list of the questions and the answers in the paper. It is extremely important at this point to reference (APA) all thoughts and ideas that come from the research in this section.

1. How does your question affect the agricultural industry or consumers of agricultural products? (economics, safety, product performance)
2. How big of an impact could the study have at a local, state, national or global level?
3. Can the impact be measured in numbers (lives saved, money or time saved)?

C) **Experimental Design**

The experimental design is a bolded, bulleted list of the following parts of the experiment.

- **Independent Variable:** experimental group that is being changed
- **Dependent Variable:** experimental group that is being measured or observed
- **Control:** experimental group that receives no treatment and is used for comparison, (if the experiment does not have a true control list the constants)
- **Constants:** environmental factors that are exactly the same for all experimental groups
- **Sample Size:** number of items being tested
- **Number of Repetitions:** number of times that the experiment is being conducted. Need at least two!
D) Hypothesis

A prediction of the outcome of the experiment based on the review of literature conducted. The Hypothesis should be an, “if ________ then ________ statement”. The hypothesis should be written in the third person. This section should be one or two sentences answer the following questions.

1. What will the result of the experiment or observation be?
2. Will the result be positive or negative?

Step 5 - Write a Reference Page (Part V)

Although this is the last section of the paper it is written during the fifth step because all research should have been completed to write the Part I Introduction portion of the paper. When the paper is complete and formatted this section will go at the end. You need to include at least 5 references and all sources should be cited in APA format.

See APA Reference Page

http://www.bibme.org/citation-guide/apa/

Step 6 - Write the Methodology (Part II)

Think of this as the recipe to complete the experiment! Methodology is a numerical written list of the steps required to conduct the experiment. The instructions should be organized and detailed enough for another person to complete the experiment.

This section should be written in the third person (no: me, us, we or I).

Materials should be imbedded/mentioned in your methodology. Materials are not a separate list.
Example:

**Methodology**

1. Set up pen with brooder ring, 6 self-feeders, 6 waterers, 6 heat lamps and put down shavings for litter six bags in total.
   a. Purchase 100 day old Cornish Cross chicks from hatchery.
2. Place all chicks into circular cardboard brooder.
3. Feed Turkey Starter (150 lbs) free choice for 14 days.
   a. Remove brooder ring at 12 days.
4. After 14 days randomly separate chicks into two groups, 50 birds each, using a lottery system.
5. Feed pen 1 free-choice Game Bird Developer (300 lbs @ 2.5% fat) and feed pen 2 free-choice Meat Bird Grower and Finisher (300 lbs @ 4.5% fat).
6. Weigh birds every week for 4 weeks, and record data. Use digital scale to measure weight.
7. Calculate average weight of each pen of birds.

(Albiani & Daly, 2006)

**Step 7 - Conduct Experimentation**

It is now time to begin the experiment. The sooner that the experimentation begins the better, this allows time to encounter and solve unforeseen problems. Please make sure to take pictures of setting up the experiment and each step of the process.

All pictures should be placed in the log book with a written description of what is occurring in each picture. All photographs should be of the experiment and samples not of the students conducting the experiment.

**Step 8 - Write Results (Part III)**
Tables

1. Each report must contain **2 tables** displaying the data collected from the project.
2. Data should be in numerical form
3. Table should have a title.
4. Table should have categories.
5. Table should have data.
6. Each table should have a written description explaining the data. Description should be at least one sentence long.

**Title of Table**

<table>
<thead>
<tr>
<th>Category</th>
<th>Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td># Data</td>
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<td># Data</td>
</tr>
<tr>
<td># Data</td>
<td># Data</td>
<td># Data</td>
</tr>
</tbody>
</table>

_Underneath the table, give a one sentence description of what the table tells us._

**B) Graphs**

1. Each report must contain **2 graphs**.
2. Graphs should visually illustrate the data from the above tables. (Show data in a visual form).
3. Each graph should have a written description explaining the graph.

**C) Summary of Data** (two paragraphs)

This section is a narrative of information presented in tables and graphs. The projects numerical results should be summarized in two or more paragraphs. This section should be written in the third person and be a fluid essay that answers the following questions.
1. What was the average of the data?
2. What are the mean of the data?
3. What is the median of the data?
4. What is the range (highest and lowest) of the data?
5. Are there any outliers in the data?
6. How many repetitions did the project have?
7. How many samples did the project have?
8. Is there a statistically significant difference in the variables to declare the hypothesis correct?

**Step 9 - Write Discussion (Part IV)**

There are two parts to the Discussion (A and B):

**A) Conclusion (two to three paragraphs)**

A conclusion is a narrative of the implications of the research conducted. This section should be written in the third person and be a fluid essay that answers the following questions. This section should be at least two paragraphs in length.

1. What was proven by the above results?
2. Why do you think you got the results you did?
3. Did you support or contradict the hypothesis?

**B) Recommendations (one paragraph)**

Recommendations summarize and evaluate the scientific procedures making comments about its success and effectiveness. This section should be written in the third person and be a fluid essay that answers the following questions. This section should be at least five sentences in length.

1. Should anything be changed about the experimental design if the experiment was to be repeated?
2. Were there any sources of Unavoidable Experimental Error?
3. Were there any sources of Avoidable Experimental Error?
4. Should anything be changed in the procedure to make it more effective?

5. Does this project lend itself to further research?

Log Book

The log book is a spiral notebook that you will use to write down your data, collect research, and paste pictures, resources, and receipts. Log books should be a 100 page spiral notebook. Staples sell a very simple one that is inexpensive and easy to obtain. No more than $2.00 dollars should be spent.

Agriscience Log Book Set Up

- The purpose of the log book is to prove to the instructor, judges and anyone else that reads the paper that the experimentation was really conducted.
- Data, research and pictures should be recorded in the Log Book.
- All data should be hand-written and cover the entire experiment.
- Please include specific dates, times and measurements.
- Any receipts or expenses should be taped into the book.
- This is a working log book and should look used and abused. Place a tab at each of the specific pages below.

Front Cover - Name Tag (TYPED in 14 font) Taped to front cover in upper right corner

Title of the Project

Student name(s)

School (Heritage High School)

Division # and name (i.e. 400 Botany)

Category (Advanced/ Team or Individual)
Page 1  Title Page (Tab)

Title of paper

Student name(s)

School (Heritage High School)

Division # and name

Category (Advanced or Novice / Team or Individual)

Page 5  Data (Tab)  *written data collected from the experiment*

Should be hand written

Dates and Times should be included

Unit of Measure should be included

After experiment construct a handwritten color graph showing

results of experiment.

Page 20  Pictures (Tab)  *prove that you did the experiment*

Pictures of student setting up and conducting experiment

Pictures to help reader understand process of experiment

A written paragraph description of what is happening in the picture should be included for each picture.

Pictures should be of the project not the student.

Data book should include a minimum of 8 pictures.

Page 35  Research (Tab)  *prove that you did research*

Include any research papers or articles used in your project.

Include a list URL’s from web sites used in the project

Include the Bibliography
Display Board Guidelines

The purpose of the display board is to show the scientific content of your project. The boards that have scored the highest in state and national competition are the most precise clean boards with straight lines and equal spacing. Conservative colors without busy patterns are preferred. This is a contest about the scientific content of your project, not how “cute” your board is. When in doubt, think conservative.

The paper part:

Items should be 20 to 24 font single spaced.

Things that should be printed to be cut and pasted:

§ Background
§ Need For Study
§ Experimental design
§ Hypothesis
§ Methodology
§ Graphs (in color)
§ Tables (in color)
§ Summary of Data
§ Conclusion
§ Color pictures- (photographs 6-8) with descriptive caption. This could be your photo methodology if you did one.
§ Titles and Sub titles for each category done in a larger text.
§ Board is neat, organized, free of errors and clean looking

Materials for the board

Something to cover the board with.
(Option #1) **Fabric.** Thicker fabric covers better with fewer wrinkles. Felt is recommended. Fabric should be a solid color. When in doubt be conservative. Try to avoid seems with the fabric if possible a 50" X 50" piece would be the best. This option has yielded excellent results in previous years. This option will also require a can of spray glue to attach the fabric to the board. Corners can be held in place with packing tape.

(Option #2) **Contact paper.** Contact paper with a solid color or a mild pattern can be applied to the display board with professional results.

(Option #3) **Paint.** This is the most difficult of your three options because it is difficult to get a smooth evenly colored board. It would be recommended to use a roller to apply the paint. Several students can share a quart of paint and cover multiple boards. Spray paint is very difficult to apply in a consistent manner.

**Letters for a title.**

(Option #1) **Dye-Cut.** Most scrap booking stores will allow you to use their dye-cutting machine if you purchase the paper at their store. The dye-cut letters are very neat and clean and you can select very inexpensive paper. Letters should be between 2” to 4” tall. This option has yielded excellent results in previous years and is the most cost effective.

(Option #2) **Peel and Stick.** There are synthetic peel and stick letters that can be purchased. The disadvantage with this option is cost and availability.

(Option #3) **Stencils.** Stencils are inexpensive and can be used by multiple students.

**Backimg Paper.**

This paper is used to back up the white paper with the text printed on it. Projects can have a single backing or multiple colors. Colors coordinate backing paper with the overall theme of the board. Since only a ¼ of an inch of paper will be seen do not over spend in this area.

**Rubber Cement.**

Used for applying paper to the board. Two students can split a bottle of rubber cement and have enough for each project.
The Agriscience Project

Directions: After reading the Agriscience packet, fill out the worksheet below. This will prepare you for our future discussions on the project.

1. What is the Agriscience Project?

2. What are the three parts of the entire project (not just the paper)?


4. Why is it important to research your topic before you begin experimenting?

5. What style do you format your references in?

6. What are the different categories you can compete in?

7. How do you get started?

Due Dates

November 16
Review the Agriscience topics, categories and rules

November 20
Formal Topic Due via Google Classroom (20 points)

December 1
Signed Parent Timeline Due (20 points)

December 4
Begin work on Part V (References) and Hypothesis

December 11/Day of semester final exam
Hypothesis and Part V (References) due (50 points)

January 20
Begin work on Part I (Introduction)

January 20
Start Experimentation if you haven’t already

January 27
*cough, cough, do this during Christmas Break, cough*

February 3
Part I (Introduction) due (50 points)

February 10
Begin work on Part II (Methodology)

February 15-19
Methodology (Part II) due (50 points)

February 24
Do your experiment (if you haven’t already)!

March 2
Begin work on Part III (Results) and Part IV

March 11
(Conclusion)

March 14 or 21
Final Paper Due (10% of grade, SAE category)

April 23
Display Board due and Log Book due

March 14 or 21
Heritage Agriscience Fair Competition, 3:30pm at ARC

April 23
Fresno State Finals Field Day (20 Extra credit points)
*Please note that due dates may be modified by instructor in order to facilitate delivery of curriculum
*Save all work on a flash drive and save on Google Drive.

Parent/Guardian Signature: ________________________________
Student Signature: ________________________________
What Type of Feed Works Best?
Gabby Vargas
Period: 6

Observations/Background
- Are known as broiler chickens, are white, feathered, and are known for having high growth rates.
- They are typically raised for their meat as the Cornish Cross.
- The average slaughter weight is reached between 32-49 days.
- They are usually slaughtered after about 14 weeks.

Hypothesis
If we feed Purina Start and Grow MP 0.0125% Medicated to our broiler chickens, then they will grow the fastest, have the best conversion.

Methods, Part 1
1. Order chicks
2. Construct brooder pens; make sure you have lots of feed, pine, water jug, and heat lamp.
3. Order for 60 chicks
4. Put down the bedding

Methods, Part 2
5. Separate the chicks out; put ten chicks in each brooder pen.
6. Feed chicks every day for six weeks.
7. Weigh the chicks every week and record the weight gain.
8. Observe the chicks' health and send the chickens to slaughter if needed.
**Experiment, Part 1**

Week 1: Chicks would peck on each other, and we would try to weigh them without handling them.

**Experiment, Part 2**

Week 3: In this picture, the chicks have grown and we can see they are larger. We can also see that they are more independent. We tried to feed them by hand and they started to move away.

Week 4: By this time, they were not as close to each other and would peck at each other more than before.

**Results, Part 1**

Total weight and gain weight data

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Total Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicks A</td>
<td>30.7 g</td>
<td>46.5 g</td>
<td>60.4 g</td>
<td>119.3 g</td>
</tr>
<tr>
<td>Chicks B</td>
<td>27.9 g</td>
<td>39.4 g</td>
<td>50.3 g</td>
<td>98.6 g</td>
</tr>
<tr>
<td>Chicks C</td>
<td>30.4 g</td>
<td>45.2 g</td>
<td>59.8 g</td>
<td>139.0 g</td>
</tr>
</tbody>
</table>

**Results, Part 2**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Total Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicks A</td>
<td>30.7 g</td>
<td>46.5 g</td>
<td>60.4 g</td>
<td>119.3 g</td>
</tr>
<tr>
<td>Chicks B</td>
<td>27.9 g</td>
<td>39.4 g</td>
<td>50.3 g</td>
<td>98.6 g</td>
</tr>
<tr>
<td>Chicks C</td>
<td>30.4 g</td>
<td>45.2 g</td>
<td>59.8 g</td>
<td>139.0 g</td>
</tr>
</tbody>
</table>

**Results, Part 3**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Total Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicks A</td>
<td>30.7 g</td>
<td>46.5 g</td>
<td>60.4 g</td>
<td>119.3 g</td>
</tr>
<tr>
<td>Chicks B</td>
<td>27.9 g</td>
<td>39.4 g</td>
<td>50.3 g</td>
<td>98.6 g</td>
</tr>
<tr>
<td>Chicks C</td>
<td>30.4 g</td>
<td>45.2 g</td>
<td>59.8 g</td>
<td>139.0 g</td>
</tr>
</tbody>
</table>
Correct. Because the chicks had different ingredient mixtures, which caused the chicks to not grow as much as we wanted them to.

Feeder was changed on week 3.

Baby chick being weighed on week 2.

All ten chicks together before being weighed on week 4.

Chicks being weighed for the last time.
6. Board Policy for SAE
Chapter 9. Vocational Education, Article 1. Regional Occupational Centers

In enacting this article, it is the intent of the Legislature to provide qualified students with the opportunity to attend a technical school or enroll in career technical or technical training program, regardless of the geographical location of their residence in a county or region. The Legislature declares that a regional occupational center will serve the state and national interests in providing career technical and technical education to prepare students for an increasingly technological society in which generalized training and skills are insufficient to prepare high school students and graduates, and out-of-school youth and adults for the many employment opportunities which require special or technical training and skills. The Legislature also declares that regional occupational centers will enable a broader curriculum in technical subjects to be offered, and will avoid unnecessary duplication of courses and expensive training equipment, and will provide a flexibility in operation which will facilitate rapid program adjustments and meeting changing training needs as they arise. It is recognized by the Legislature that career technical programs may achieve greater flexibility of planning, scope and operation by the conduct of these programs in a variety of physical facilities at various training locations. It is the further intent of the Legislature that regional occupational centers and programs provide career technical and occupational instruction related to the attainment of skills so that trainees are prepared for gainful employment in the area for which training was provided, or are upgraded so they have higher level skills required because of new and changing technologies or so that they are prepared for enrollment in more advanced training programs.

(Amended by Stats 2000, Ch. 1058, Sec. 46)
Program components

(a) The curriculum of school districts that choose to participate in the state program of agricultural career technical education shall include all of the following components:

(1) Organized classes in the study of agricultural science and technology.

(2) A student-supervised occupational experience program in agriculture.

(3) A program of leadership, organization, and personal development.

(b) Student learning activity developed to supplement these components shall be considered curricular and shall contribute to the grade of the participating student when those activities are integral to assisting the student to achieve the career objective of the class or course. It is the intent of the Legislature that opportunities are provided for teachers to be employed on a 12-month basis in order to maintain supervised occupational experience on a year-round basis for students enrolled in agricultural career technical programs.

(Amended by Stats 2000, Ch. 1058, Sec. 85)
### Course Description

#### A. COVER PAGE

<table>
<thead>
<tr>
<th>Date of Submission (Please include Month, Day and Year)</th>
<th>9. Subject Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Course Title</td>
<td>History/Social Science</td>
</tr>
<tr>
<td>Plant &amp; Animal Science</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
</tr>
<tr>
<td>2. Transcript Title(s) / Abbreviation(s)</td>
<td>Laboratory Science</td>
</tr>
<tr>
<td></td>
<td>Language other than English</td>
</tr>
<tr>
<td>3. Transcript Course Code(s) / Number(s)</td>
<td>Visual &amp; Performing Arts</td>
</tr>
<tr>
<td></td>
<td>Intro Advanced</td>
</tr>
<tr>
<td>4. School</td>
<td>X College Prep Elective</td>
</tr>
<tr>
<td>Perris Union High School</td>
<td></td>
</tr>
<tr>
<td>5. District</td>
<td>10. Grade Level(s) for which this course is designed</td>
</tr>
<tr>
<td>Perris Union High School District</td>
<td>9 10 x 11 x 12</td>
</tr>
<tr>
<td>6. City</td>
<td>11. Seeking “Honors” Distinction?</td>
</tr>
<tr>
<td>Perris</td>
<td>Yes X No</td>
</tr>
<tr>
<td>7. School / District Web Site</td>
<td>12. Unit Value</td>
</tr>
<tr>
<td><a href="http://www.puhsd.org">www.puhsd.org</a></td>
<td>0.5 (half year or semester equivalent)</td>
</tr>
<tr>
<td></td>
<td>X 1.0 (one year equivalent)</td>
</tr>
<tr>
<td></td>
<td>2.0 (two year equivalent)</td>
</tr>
<tr>
<td></td>
<td>Other: ____________________________</td>
</tr>
<tr>
<td>8. School Course List Contact</td>
<td></td>
</tr>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Title/Position:</td>
<td></td>
</tr>
<tr>
<td>Phone: Ext.:</td>
<td></td>
</tr>
<tr>
<td>E-mail:</td>
<td></td>
</tr>
<tr>
<td>13. Is this an Internet-based course? Yes X No</td>
<td></td>
</tr>
<tr>
<td>If “Yes”, who is the provider? UCCP PASS/Cyber High</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>14. Complete outlines are not needed for courses that were previously approved by UC. If course was previously approved, indicate in which category it falls.</td>
<td></td>
</tr>
</tbody>
</table>

A course reinstated after removal within 3 years. Year removed from list? __________
Same course title? Yes No
If no, previous course title? ________________________________
An identical course approved at another school in same district. Which school? __________
Same course title? Yes No
If no, course title at other school? ________________________________
Approved Advanced Placement (AP) or International Baccalaureate (IB) course
Approved UC College Prep (UCCP) Online course
Year-long VPA course replacing two approved successive semester courses in the same discipline
Approved P.A.S.S./Cyber High course
Approved ROP/C course. Name of ROP/C? ________________________________
Approved CDE Agricultural Education course
Other. Explain: ________________________________
15. Is this course modeled after an UC-approved course from another school outside your district? X Yes No
   If so, which school(s)? Clovis East High School
   Course title at other school Plant & Animal Physiology

16. Pre-Requisites
   Algebra I

17. Co-Requisites
   Algebra I

18. Is this course a resubmission? X Yes No
   If yes, date(s) of previous submission? October 2005
   Title of previous submission? Plant & Animal Physiology

19. Brief Course Description

This course is to provide students with the theories and principles related to plant and animal cultural practices, production, anatomy and physiology. This course is to successfully prepare those students who plan on majoring in agricultural/biological sciences at a college or university. Components will also include Supervised Agricultural Experience Projects, FFA leadership involvement, and Scientific Laboratory Experiences both written and orally presented.

B. COURSE CONTENT
   Please refer to instructions

20. Course Goals and/or Major Student Outcomes

1. Use scientific methods applied to plant and animal anatomy and physiology.
2. Show familiarity with the major physiological systems of plants and animals.
3. To learn the nature of scientific inquiry and incorporate the use of the scientific method in laboratory investigations and agriculture.
4. To identify the basic processes of cellular and organismal growth and reproduction.
5. To recognize the diversity of life and the interrelationships among all organisms.
6. To understand the role of genetics in organismic variation and adaptation.
7. Relate the study of animal structure-form in relation to veterinary arts.
8. To acquire agricultural and biological vocabulary and the reading, writing, and critical thinking skills pertaining to the science.
9. To understand genetic differences in a controlled and non controlled population.
10. To understand that breeds and varieties of domestic animals reproduce like offspring.
21. Course Objectives

1. Intelligently discuss theories on the origins of life.

2. Describe the characteristics of living organisms.

3. Describe the characteristics of plant and animal cells with respect to their structure.

4. Compare and contrast the roles of meiosis and mitosis in cellular reproduction.

5. Understand heredity, Mendelian Genetics, terminology and apply this to animal inheritance.

6. Distinguish between historical and modern taxonomy systems and understand the evolutionary relationships among domestic plants and animals.

7. Understand the structural and functional similarities and differences among major animal, plant and protest phyla.

8. Identify and understand the major organ systems of animals.

9. Recognize the structure and function of ecosystems, populations, and communities and the impact of human society on the natural and agricultural environment.

10. Describe the three cycles that involve abiotic and biotic factors. And explain their interrelationships and importance to the biosphere.

11. Identify the environmental and genetic factors that influence variation among organisms.

12. Demonstrate basic laboratory techniques including the use of microscopes, slides, microorganism examination, and the dissection of representative plants and animals of various species.

22. Course Outline

   1. Meeting Human Needs in a Changing World
      a. Food sources
      b. Human needs
      c. Agricultural industry
      d. Quality of life
      e. Renewable natural resources

   2. Using Science and Technology
      a. The meaning of agri-science and technology
      b. Relation of agriculture to science
         1. Physical Sciences
         2. Biological Sciences
         3. Social Science
      c. Methods of agri-scientist thinking
         1. Scientific method
         2. Practical use
      d. New areas of agri-science
         1. Biotechnology
         2. Genetic engineering
         3. Remote sensing
4. Laser technology
   5. Computer applications
      c. Issues associated with agri-science and technology

3. Using the Earth's Resources
   a. Environmental and natural resources
   b. Renewable resources
      1. Water cycle
      2. Forests
      3. Air
   c. Non-renewable Resources
   d. Environmental Pollution
   e. Agricultural pollution prevention

4. Using the Science of Computation
   a. Measurement systems
   b. Agri-science measurements
   c. Problem solving in measurements

5. Determining the bases of Life
   a. Life processes
   b. Structural basis
      1. Cell structure
      2. Heredity and genetics
      c. Mitosis and Meiosis

6. Classifying and Naming Living Things
   a. A Scientific classification system
   b. Classification kingdoms
   c. Cultural Practices Laboratory work

7. Applying principles of plant Science
   a. Classification and Life cycles
   b. Vegetative plant parts
      1. Leaves
      2. Stems
      3. Roots
      4. Flowers
      5. Seeds
   c. Helpful tropisms

8. Reproducing Plants
   a. Propagation
      1. Sexual
      2. Flowers
         a. Pollination
         b. Fertilization
         c. Germination
      1. Asexual
         a. Methods of vegetative reproduction
9. Understanding Plant Processes
   a. Photosynthesis
   b. Respiration
   c. Transpiration
   d. Plant nutrition
      1. Essential elements
      2. Other essential elements
   e. Using fertilizer
      1. Soil testing
      2. Tissue analysis
      3. Laboratory work

10. Keeping Plants Healthy
    a. Preventing pest problems
    b. Integrated pest management
    c. Safety practices

    a. Reproductive Systems
    b. Digestive Systems
    c. Pulmonary Systems

12. Feeding Animals
    a. Feeding needs
    b. Livestock nutritional needs
    c. Nutrient sources
    d. Feed additives and implants
    e. Feed manufacturing
    f. Feed labeling

13. Breeding Animals
    a. Breeds and bloodlines
    b. Breeding systems
    c. Production systems
    d. Livestock insemination methods
    e. Breeding herd management

14. Keeping Animals Healthy
    a. Good health signs
    b. Environmental influences
    c. Good health maintenance
    d. Diseases - specific kinds

15. Using Biotechnology for Improving Life
    a. Biotechnology
    b. Biotechnology areas
    c. Molecular biotechnology: genetic importance
    d. Growth processes
    e. Genetic engineering
16. Applying Principles of Earth Science in Agriculture
   a. The earth's resources
   b. Earth's changes
   c. Atmospheric importance
   d. Climate succession

17. Applying Principles of Soil Science
   a. Soil classification
   b. Soil make-up
      1) Physical structure
      2) Chemical nature
      3) Biological nature
      4) Soil formation
      5) Soil profile
      6) Water formations

18. Introduction to FFA and Leadership Activities
   a. History and organization structure
   b. Individual opportunities
   c. Chapter structure and operation
   d. Leadership development activities
      1. Career development events (judging contests, individual and team)
      2. Committee organization
      3. Officer Responsibilities
   e. Parliamentary procedure and proper use
   f. Career identification and selection

19. Agriculture Careers
   a. Agriculture in the work place
   b. Present status of agriculture as a career choice
   c. Future outlook for agriculture career
   d. Educational requirements
      1. Technical careers
      2. Colleges and universities
   e. Basic employment requirements
   f. Basic attitudes and personal skills
   g. Resume' construction
   h. Applications
   i. Interviewing skills

20. Computer Applications
   a. Hardware and software
   b. Word processing
23. Texts & Supplemental Instructional Materials

Science Insights. By DiSpezio, Linner-Lube, Lisowski, Sparks and Skoog
Foresmen & Wesley 1999 ISBN 0-201-33281-7


Teacher selected worksheets and study guides.

24. Key Assignments

Laboratory Experiences:

1. Cell identification and function
2. Genetics: Animal reproduction and growth
3. Genetics: Phenotype ratio
4. Scientific Method Research Project
5. Animal adaptation and camouflage
6. Comparative anatomy of digestive systems
7. Comparative anatomy of reproductive systems
8. Microscope identification and applications
9. 3D Cell Project
10. Animal Behavior
11. Food Chains
12. Pulse and breathing rates
   13. Fecal Analysis of parasites
   14. Comparing human anatomy with animals
   15. Pulmonary System Dissection
   16. Cell Chemistry (Periodic Table of elements)
   17. Chick Embryo development
   18. Cloning plants for uniformity
19. Sexual & Asexual Plant propagation
20. Observe Osmosis
21. Testing soil for organic matter
22. Water quality test
23. Taxonomy of living things (Insect Collection)
24. Taxonomy of living things (Weed collection)
25. Flower Dissection
26. Factors effecting Photosynthesis
27. Botanical Identification
28. Effects of rooting hormones
29. Macro/Micro Nutrient Deficiency Testing
30. Effects of chemicals on plants
25. Instructional Methods and/or Strategies

1. Lecture
2. Audio visual materials.
4. Group and individual activities.
5. Laboratory investigations.
6. Discussion.
7. Reading and writing assignments.
8. Homework assignments.
10. Guest Speakers.
11. Field Trips.
12. Agriscience Fair Project.

26. Assessment Methods and/or Tools

Tests, including teacher made and standardized tests developed by authors.
Evaluation of class assignments.
Classroom activities.
Laboratory Research Investigations.
Homework Assignments.

C. HONORS COURSES ONLY
Please refer to instructions

26. Indicate how this honors course is different from the standard course.

D. OPTIONAL BACKGROUND INFORMATION
Please refer to instructions

27. Context for Course (optional)
28. History of Course Development (optional)
7. Board Policy for FFA
Chapter 9. Vocational Education, Article 1. Regional Occupational Centers

In enacting this article, it is the intent of the Legislature to provide qualified students with the opportunity to attend a technical school or enroll in a career technical or technical training program, regardless of the geographical location of their residence in a county or region. The Legislature hereby declares that a regional occupational center will serve the state and national interests in providing career technical and technical education to prepare students for an increasingly technological society in which generalized training and skills are insufficient to prepare high school students and graduates, and out-of-school youth and adults for the many employment opportunities which require special or technical training and skills. The Legislature also declares that regional occupational centers will enable a broader curriculum in technical subjects to be offered, and will avoid unnecessary duplication of courses and expensive training equipment, and will provide a flexibility in operation which will facilitate rapid program adjustments and meeting changing training needs as they arise. It is recognized by the Legislature that career technical programs may achieve great flexibility of planning, scope and operation by the conduct of these programs in a variety of physical facilities at various training locations. It is the further intent of the Legislature that regional occupational centers and programs provide career technical and occupational instruction related to the attainment of skills so that trainees are prepared for gainful employment in the area for which training was provided, or are upgraded so they have the higher level skills required because of new and changing technologies or so that they are prepared for enrollment in more advanced training programs.

(Amended by Stats 2000, Ch. 1058, Sec. 46)
Program components

(a) The curriculum of school districts that choose to participate in the state program of agricultural career technical education shall include all of the following components:

(1) Organized classes in the study of agricultural science and technology.

(2) A student-supervised occupational experience program in agriculture.

(3) A program of leadership, organization, and personal development.

(b) Student learning activity developed to supplement these components shall be considered curricular and shall contribute to the grade of the participating student when those activities are integral to assisting the student to achieve the career objective of the class or course. It is the intent of the Legislature that opportunities are provided for teachers to be employed on a 12-month basis in order to maintain supervised occupational experience on a year-round basis for students enrolled in agricultural career technical programs.

(Amended by Stats 2000, Ch. 1058, Sec. 85)
# Perris Union High School District  
## Course of Study

### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title:</th>
<th>8a. Subject Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture Biology 1.0</td>
<td>History/Social Science</td>
</tr>
<tr>
<td><strong>2. Transcript Title / Abbreviation:</strong> Ag Bio 1.0</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Laboratory Science</td>
</tr>
<tr>
<td></td>
<td>Language other than English</td>
</tr>
<tr>
<td></td>
<td>Visual &amp; Performing Arts</td>
</tr>
<tr>
<td></td>
<td>College Prep Elective</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

Is this course classified as a Career Technical Education: \(\text{x} \) Yes \(\text{ No}\)

If CTE:
- Name of Industry Sector: Agriculture and Natural Resources
- Name of Career Pathway: Agriscience

8b. Credential required to teach this course:

(To be completed by H.R. only)

Signature  

<table>
<thead>
<tr>
<th>9. Grade Level(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 8 9 10 11 12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Meets “AP” Requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (\text{ No})</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Meets “Honors” Requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (\text{ No})</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Course Author/Contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Last Name:</td>
</tr>
<tr>
<td>Position/Title:</td>
</tr>
<tr>
<td>Phone #: (__) ext.:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
<tr>
<td>Date Submitted:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Unit Value / Length of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 (half year or semester equivalent)</td>
</tr>
<tr>
<td>(\text{x} ) 1.0 (one year equivalent)</td>
</tr>
<tr>
<td>2.0 (two year equivalent)</td>
</tr>
<tr>
<td>Other:</td>
</tr>
</tbody>
</table>
### 12. APPROVALS:

<table>
<thead>
<tr>
<th></th>
<th>Name/Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Area Council:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Planning Council:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Approval:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Pre-Requisites
Equivalent to Algebra 1 and/or Integrated Math 1. Plant and Animal Science or equivalent with teacher permission

14. Co-Requisites

15. Brief Course Description
Agricultural Biology is a laboratory science course designed for the college-bound student. The course emphasizes detailed knowledge of the biological principles of the following areas: molecular and cellular aspects of living things, structure and function of agricultural plants and animals, genetics, physiology, plant and animal diversity and principles of classification, ecological relationships, and animal behavior.

B. COURSE CONTENT

16. Course Purpose:
What is the purpose of this course? Please provide a brief description of the goals and expected outcomes. Note: More specificity than a simple recitation of the State Standards is needed.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To learn the nature of scientific inquiry and incorporate the use of the scientific method in laboratory investigations that pertain to biological and agricultural principles.</td>
</tr>
<tr>
<td>2.</td>
<td>To be familiar with the theory of cell biology and its application to the organization of all living organisms</td>
</tr>
<tr>
<td>3.</td>
<td>To identify and understand the processes of cellular and organism growth and reproduction.</td>
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<td></td>
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<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4.</td>
<td>To recognize the diversity of life and the interrelationships among all organisms.</td>
</tr>
<tr>
<td>5.</td>
<td>To understand the role of genetics in organism variation and adaptation.</td>
</tr>
<tr>
<td>6.</td>
<td>To understand the role of genetics as it pertains to the development of multicellular organisms and appreciate how encoded genes specify the characteristics of living organisms.</td>
</tr>
<tr>
<td>7.</td>
<td>To acquire biological and agricultural research vocabulary, and the reading, writing, and critical thinking skills pertaining to scientific inquiry.</td>
</tr>
<tr>
<td>8.</td>
<td>To understand the stability in an ecosystem is a balance between competing effects.</td>
</tr>
<tr>
<td>9.</td>
<td>To understand fundamental cellular and systemic functions and processes.</td>
</tr>
<tr>
<td>10.</td>
<td>To recognize the interrelationships between biotic and physical factors to energy flow in the biosphere.</td>
</tr>
</tbody>
</table>
17. Course Outline

Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

A. Introduction to Agricultural Biology
   1. What is Agricultural Biology and its Importance
   2. Research Uses of Agricultural Biology
   3. The Scientific Method
   4. The Metric System

B. Organisms and Their Ecological Environment
   1. Biodiversity
   2. Conserving Natural Resources
   3. Agricultural Practices Beneficial and Harmful to the Environment
   4. The Ecosystem and Population Fluctuations
   5. The Nitrogen Cycle
   6. The Oxygen Cycle
   7. The Food Web

C. Cell Biology
   1. Plant and Animal Cell Identification and Functions
      2. Plant and Animal Cell Structure and Functions
      3. Cellular Respiration
      4. Cellular Transport
   5. Cell Differentiation
   6. Chemiosmotic Gradients and ATP Production
   7. Macromolecules in Cells

D. Inorganic Foundations that Support Life
   1. Soil and Water: The Chemical Foundation
   2. Atomic and molecular structure and chemical bonding
   3. Basic Soil Components
   4. Soil Formation Factors and Horizons
   5. Soil Texture and Structure
   6. Soil Organisms and Organic Matter
   7. Interrelationships of Plants and Soil
   8. Water Movement Properties
   9. Soil and Water Management

E. Plant & Animal Classifications
   1. Development of the Binomial System of Nomenclature
   2. Classifications of Major Groups of Plants and Animals
   3. Evolutionary Relationships
   4. Development of the Kingdom Concept
   5. Comparisons of Modern Agricultural Plants and Animals

F. Plant Physiology, Reproduction, Photosynthesis and Growth
   1. Plant Structures & the Process of Photosynthesis
   2. Plant Growth Requirements
   3. Monocotyledons and Dicotyledons
   4. Sexual and Asexual Reproduction
   5. Research Applications to Plant Biotechnology
   6. Chemical and Environmental Factors Affecting Plant Growth
G. Animal Physiology and Reproduction

1. Internal Systems of Animals
2. The Digestive Process
3. The Respiratory System
   4. The Reproductive System
   5. The Circulatory System
   6. The Endocrine System
   7. The Nervous System
   8. The Immune System

H. Animal Nutrition

1. Feed Identification and Nutrient Evaluation
2. Feed Additives
3. Ration Formulation
4. Animal Nutrient Requirements
5. Vitamin and Amino Acid Requirements
6. Nutritional Diseases

I. Animal Health & Diseases

1. Disease Agents
2. Causes of Disease
3. Infectious and Noninfectious Diseases
4. Animal Health Practices
5. Common Internal & External Parasites Lifecycles

J. Plant and Animal Genetics

1. Heritability and Genetic Traits
2. Dominant and Recessive Genes
3. Genotype and Phenotype
4. Cellular Reproduction: Mitosis and Meiosis
5. Physical and Chemical Structures Involved in Genetics
6. DNA and Types of DNA
7. DNA Replication
8. Mendel – Independent Assortment and Segregation
9. Biotechnology and Cloning
10. Proteins and RNA
11. Role and Function of Amino Acids in Genetics
12. Mutation and Sexual Reproduction

K. Agricultural Biology Research Project

1. Development and Formulation of Agriscience/Science Fair Project
2. Research Principles & Design
3. Statistical Management & Analysis of Agriscience/Science Fair Project
4. Instructional Supervision & Coordination

L. Leadership & Team Building Development

1. Oral and speaking presentations
2. Critical Thinking Exercises
3. Problem Solving Exercises
18. Writing Assignments

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

<table>
<thead>
<tr>
<th>19 (A) Textbook #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title: Biology</td>
</tr>
<tr>
<td>Edition:</td>
</tr>
<tr>
<td>Publisher: McDougal Littell</td>
</tr>
<tr>
<td>Author(s): Stephen Nowicki</td>
</tr>
<tr>
<td>Usage: X Primary Text Read in entirety or near entirety</td>
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</tbody>
</table>

**Textbook #2 (If applicable)**

<table>
<thead>
<tr>
<th>Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edition:</td>
</tr>
<tr>
<td>Publisher:</td>
</tr>
<tr>
<td>Author(s):</td>
</tr>
<tr>
<td>Usage: Primary Text Read in entirety or near entirety</td>
</tr>
</tbody>
</table>

**19 (B) Supplemental Instructional Materials (please describe)**

FFA Record Book
20. Key Assignments

A. Weekly Reading & Writing Assignments  
B. Weekly laboratory activities & write-ups  
C. Agriculture Biology Term Paper  
D. Supervised Agricultural Experience Project & Record Book  
E. Student Seminar Presentation related to Agriculture Biology Topic  
F. Portfolio of Laboratory Exercises  
G. Leadership Development Activities

21. Instructional Methods and/or Strategies

A. Students will be engaged in a variety of activities that balance direct instruction with project work. Students will be expected to apply the academic and applied concepts and processes learned during direct instruction to their projects. Students will attend lectures, complete labs, become involved with professional mentors, complete real world projects, and make presentations that demonstrate understanding of physical concepts and the application process.

B. Methods of instruction will include, but is not limited to:
   1. Direct instruction (lectures, discussions, readings, and lab activities specific for mastery of content).
   2. Use of community-based research projects and with professional mentors, development of language arts skills while students complete reports, journals, analyses, and essays.
   3. Use of a variety of instructional materials and resources including electronic media, handbooks, professional journals, reference materials, and textbooks.
   4. Self-directed, cooperative, and collaborative learning opportunities to increase responsibility of students for their own learning.
   5. Use of student presentations, exhibits, and competitions
22. Assessment Methods and/or Tools

A. Assessment opportunities that allow continuous evaluation of students' progress should be embedded throughout the course and should be a learning experience. All students will be expected to achieve a high understanding of all topics; often demonstration of knowledge will occur in a public forum. The following strategies, which include both formal and informal assessment techniques, may include, but are not limited to:

1. Performance-based assessments such as demonstrations, discussions, simulations, and projects
2. Presentations, (both team and individual) written assignments, (both team and individual),
3. On-going and cumulative portfolio of investigative accomplishments.
4. Written tests & quizzes with a variety of short answer and essay questions.
5. Written assignments, (such as justifications, investigations, and research, evaluative, or technical), and individual and group assessments including the assessment working relationships.

B. Grading will be based on the following assessment areas:

1. Tests & Quizzes
2. Laboratory Investigation Activities & Write-ups
3. Portfolio & Writing Assignments
4. Leadership & Critical Thinking Activities
5. Research Report and Oral Presentation
6. Supervised Agricultural Experience & Record Book  (Not less than 5%)
7. FFA (Not less that 5%)

23. Course Pacing Guide and Objectives:

<table>
<thead>
<tr>
<th>Day</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Intelligently discuss theories on the origins of life.</td>
</tr>
<tr>
<td>2.</td>
<td>Describe the characteristics of living organisms.</td>
</tr>
<tr>
<td>3.</td>
<td>Describe the characteristics of plant and animal cells with respect to their structure and chemistry.</td>
</tr>
<tr>
<td>4.</td>
<td>Compare and contrast the roles of meiosis and mitosis in cellular and organism reproduction.</td>
</tr>
<tr>
<td>5.</td>
<td>Define the chromosome theory of heredity, Mendelian genetics, gene-enzyme relationships, and apply this knowledge to animal inheritance.</td>
</tr>
<tr>
<td>6.</td>
<td>Distinguish between historical and modern taxonomy systems and scientific nomenclature that demonstrate evolutionary relationships among plants and animals.</td>
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<tr>
<td>7.</td>
<td>Identify the structural and functional similarities and differences among the major animal, plant, and protist phyla.</td>
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<td>8.</td>
<td>Analyze the major organ systems of animals and understand their function.</td>
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<tr>
<td>9.</td>
<td>Recognize the structure and function of ecosystems, populations, and communities, and the impact of human society on the natural and agricultural environment.</td>
</tr>
<tr>
<td>10.</td>
<td>Describe the three cycles that involve biotic and abiotic factors: nitrogen, carbon-oxygen, and water; and explain the importance of their interrelationships to the biosphere.</td>
</tr>
<tr>
<td>11.</td>
<td>Identify the environmental and genetic factors that influence variation among organisms.</td>
</tr>
<tr>
<td>12.</td>
<td>Demonstrate basic laboratory techniques including the use of microscopes, microscope slide preparation, maintenance and examination of micro-organism cultures, tests demonstrating fundamental biochemical reactions, dissection of representatives of plant and animal phyla, and the sharpening of interpretative skills.</td>
</tr>
</tbody>
</table>
C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.

D. BACKGROUND INFORMATION

25. Context for Course (optional)

26. History of Course Development (optional)
8. Program of Activities
Program of Activities

Please also refer to our chapter website, menifecheritageffa.com, as this currently serves as, and contains, all of the information that should be included in a typical Program of Activities.
HERITAGE HIGH SCHOOL

2013-2014 PROGRAM OF ACTIVITIES

“Work Hard, Stay Humble”

Name:__________________

Teacher:________________

Class:__________________

Period:_________________
Greetings Students, Parents, Community Members and Friends:

I am very proud to welcome you all to the Heritage High School Agriculture Department. We are entering another year of our program and each year we have grown significantly in student numbers, support and FFA Awards. This year will bring us well over 700 students enrolled in over 20 sections of Ag Courses; taught by 4th Ag teachers, as well as the largest number of students participating at the fair since our chapter was formed. Our students will be exhibiting over 40 head of market swine, sheep, goats and chickens at the upcoming Southern California Fair in October and many students are currently seeking buyers for their animal.

The Agriculture Research Center which we refer to as the ARC, many of you have heard about at the board meetings and local newspapers. Our facility will include 15 swine breeding and growing pens, pastures for sheep and goat production, a state of the art rabbit breeding barn and poultry breeding barn, egg production barn, steer corrals and shelters, greenhouse, shade house and several areas for students to grow citrus, stone fruits, vegetables, and flowers. At the center will be a nearly 7,000 sq. ft. Ag building that will include 2 Ag Science Labs, storage for trucks and tractors, technology and tool rooms and restrooms with full showers for students to clean up after completing their labs and other school projects each day. This facility was funded by a grant from the state of California and was a collaborative process between Heritage Agriculture Staff, District Administration as well as grant writing and facilities consultants. We all came together for many weeks and late nights of hard work to receive what we believe is best Agriculture facility in southern California.

Our student run flower shop is open twice a week in room J102 twice a week during lunch. This flower shop is to simulate a real world business where students will take orders, be trained in customer service, price points and a full spectrum of design techniques. We will be offering floral arrangements for most major holidays as well as birthdays, anniversaries and other occasions.

As part of the Ag Department we have one the largest FFA chapter in Southern California with over 600 registered members. FFA is a National Agriculture youth organization consisting of nearly 600,000 high school students in every state. These students either plan a career in the growing agriculture industry, or have an interest now in agriculture that will help them continue on to other avenues of higher education. We will be expanding our Career Development opportunities to offer Prepared and Extemporaneous Public Speaking, Novice and Advanced Parliamentary Procedure, Job Interview, Vegetable Crop Judging, Specialty Animal Contest (Veterinary knowledge), Livestock Judging, and Best Informed Greenhand. Not only do these contests develop students’ interest and knowledge in Agriculture, but all are geared to train students in public speaking, inter personal communication, poise and individual presentation, as we all know, you never get a second chance to make a first impression. We hope that you are just as excited about the Ag program at Heritage as we are. If you have any questions, please don’t hesitate to contact us through the Heritage High School website.

Chris.Maddalena@puhsd.org
Ross.Macy@puhsd.org
Shaina.Rushing@puhsd.org
Jeremiah.Perotti@puhsd.org
Career Development Teams

**Mr. Macy:**
- Landscape & Ornamental Horticulture CDE Team
- Extemporaneous Public Speaking
- Opening & Closing (Advanced)
- Market Rabbit & Rabbit Showmanship
- Creed

**Mrs. Rushing:**
- Vegetable Crop CDE Team
- Livestock Judging CDE Team
- Prepared Public Speaking
- Opening & Closing (Officers)
- Market Lamb & Lamb Showmanship
- Market Goat & Goat Showmanship
- Creed

**Mr. Perotti:**
- Specialty Animal CDE Team
- BIG CDE Team
- Livestock Judging CDE Team
- Job Interview
- Opening & Closing (Novice)
- Market Swine & Swine Showmanship
- Market Beef & Beef Showmanship
- Creed

FFA Websites

National FFA: [www.ffa.org](http://www.ffa.org)
California FFA: [www.calaged.org](http://www.calaged.org)
Southern region FFA: [www.srffa.org/ffa](http://www.srffa.org/ffa)
Heritage FFA Chapter: [www.menifeeheritageffa.com](http://www.menifeeheritageffa.com)

**Pledge**

“To practice brotherhood, honor agricultural opportunities and responsibilities, and develop those qualities of leadership which an FFA member should possess.”

*All members recite during opening ceremonies at Chapter meetings*
The FFA Code of Ethics

FFA members conduct themselves at all times to be a credit to their organization, chapter, school, community, and family. As an FFA Member I pledge to:

1. Develop my potential for premier leadership, personal growth, and career success.
2. Make a positive difference in the lives of others.
3. Dress neatly and appropriately for the occasion.
4. Respect the rights of others and their property.
5. Be courteous, honest and fair with others.
6. Communicate in an appropriate, purposeful and positive manner.
7. Demonstrate good sportsmanship by being modest in winning and generous in defeat.
8. Make myself aware of FFA programs and activities and be an active participant.
9. Conduct and value a supervised agricultural experience program.
10. Strive to establish and enhance my skills through agricultural education in order to enter a successful career.
11. Appreciate and promote diversity in our organization.

Official FFA Dress

The uniform worn by the FFA members at local, state, and national functions is called official dress. This provides identity and gives a distinctive and recognizable image to the organization.

The official dress for female members is a knee length black skirt, a collared white shirt, natural color nylons, black dress shoes, official FFA Scarf and official FFA jacket zipped to the top.

The official dress for male members is black slacks, white collared shirt, official FFA tie, black dress shoes, black socks, and official FFA jacket zipped to the top.
Heritage FFA
2013-2014 OFFICER TEAM

President.................................................................Ashley Boucher
Vice President.........................................................Abigail Banks/Amber Thompseen
Secretary.................................................................Ashley Reilly
Treasurer.................................................................Jocelyn Ornelas
Reporter.................................................................Cassidy Steenbock
Sentinel.................................................................Jared Brandt
Parliamentarian.....................................................Hannah Mayes

Advisors..............................................................Mrs. Rushing, Mr. Macy, Mr. Perotti
**FFA Mission Statement**

The Heritage Agriculture Department prepares students for successful careers and a lifetime of informed choices in the global food, fiber and natural resource systems. The Heritage 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.

**FFA Colors**

The official FFA colors are *National Blue* and *Corn Gold*. The blue was taken from the blue field of our nation’s flag and the gold was taken from the golden fields of ripened corn.

---

**The FFA Motto**

*Learning to Do,*

*Doing to Learn,*

*Earning to Live,*

*Living to Serve.*
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 agriculturists; 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 agriculturists 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 in 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 Convention of the FFA. It was revised at the 38th Convention and the 63rd Convention.
The FFA Emblem

The National FFA Emblem consists of five symbols that represent the history, goals, and future of the organization.

- **The cross section of an ear of corn** provides the foundation of the emblem, just as corn served as the foundation crop of American Agriculture. It is a symbol of unity because corn is grown in every state of the union.

- **The plow** signifies labor and tillage of the soil, which is the backbone of agriculture and the foundation of out nation’s strength.

- **The rising sun** is a symbol of progress and holds a promise that tomorrow will bring a new day glowing with opportunities.

- **The owl** is recognized for its wisdom and symbolizes the knowledge necessary to be successful in agriculture.

- **The eagle** is a national symbol that serves as a reminder of our freedom and ability to explore new horizons for the future of agriculture.
Menifee-Heritage FFA Activity Point Chart

300 Total Points Per Semester = 10% of Student’s Semester Grade

Current year’s HHS ID required for check-in to ALL Activities*
Points are not available for students checking in late for any reason

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Events</td>
<td>25 Points</td>
</tr>
<tr>
<td>Spirit Days°</td>
<td>10 Points</td>
</tr>
<tr>
<td>Courtesy Corp – Per Event</td>
<td>10 Points</td>
</tr>
<tr>
<td>Farm Improvements</td>
<td>50 Points</td>
</tr>
<tr>
<td>Leadership Conferences</td>
<td>50 Points</td>
</tr>
<tr>
<td>Field Day Participation</td>
<td>50 Points</td>
</tr>
<tr>
<td>Open House/Back to School Nights</td>
<td>25 Points</td>
</tr>
<tr>
<td>Section Events</td>
<td>50 Points</td>
</tr>
<tr>
<td>Region Events</td>
<td>50 Points</td>
</tr>
<tr>
<td>State Events</td>
<td>50 Points</td>
</tr>
<tr>
<td>Fundraisers/Food Drive/Recycle Drive</td>
<td>TBA</td>
</tr>
</tbody>
</table>

*Original HHS IDs are free to all students. Replacement IDs available for purchase at ASB.
*No other form of ID is allowed - including printed schedules with student picture.
°Spirit Day points require a teacher signature on the day the shirt is worn.
°Spirit Day shirts need to be worn visibly to receive credit.

Points for activities not listed will be announced at time of activity.
Top point-earning individuals will receive awards at the annual awards banquet in May.

For a complete listing of all activities available to students please refer to the program of activities. The Current Year’s Program of Activities is available 24/7 online at:

www.menifeeheritageffa.com

The website also has many other resources including pictures, helpful links, directions to our Facebook page, and more!
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<td>Show Pig Practice @ 5pm</td>
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<td>25 *Christmas Day</td>
<td>19 Finals 3/6 Chapter Holiday Party @ 1pm</td>
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<td>*Start of Riverside Section FFA Project Competition (COM)</td>
<td>6 Spirit Day</td>
<td>7 *State Conference Registration and Money Due * Section STAR and PROF. phase 2 apps due</td>
<td>8 *Southern Region FFA Officer Screening (CSU-Pomona) 9:00 AM</td>
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<td>15 *Southern Region Scholarship App Due (Southern Region Advisor) *CATA Award Apps. Due *State Nominating Committee apps due</td>
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<td>Springs HS) 8:00 AM</td>
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<td>*Riverside Section FFA Bowling</td>
<td>15 *Southern Region FFA State Degree</td>
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<td>&amp; Proficiency Banquet (La Habra-</td>
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<td>* Cesar Chavez Day</td>
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<td>Chapter officer Interviews @ 3 pm Livestock Meeting @ 6:30 pm</td>
<td>Spirit Day</td>
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<td>Southern Region FFA/CATA Meeting (Pomona) *Pomona/Mt Sac Field Day (CSU-Pomona) 7:30 AM</td>
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<td>Chapter Meeting-Speeches and Voting @ 6pm</td>
<td>*State FFA Leadership Finals (Fresno) Spirit Day</td>
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<td>State FFA Finals @ CP - SLO</td>
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<td>*Riverside Section Officer Elections (Hemet HS) 4:30 PM</td>
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<td>*Riverside Section CATA Planning Mtg. &amp; In-service (San Jacinto HS) 9:00 AM</td>
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<td>American Degree apps due in Region Office</td>
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<td>END OF THE YEAR BANQUET AWARDS CEREMONY @5PM</td>
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<td>*Memorial Day -No School</td>
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<td>So Cal Fair Animal Selection</td>
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<td>Pig Sale</td>
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</tbody>
</table>

2014
9. Recruitment
Agriculture Education

www.menifeeheritagefella.weebly.com

Heritage High School

And so much more:
- Public Speaking
- Vegetable Crop ID
- Speciality Animals
- Ornamental Horticulture
- Best Informed Greenhand Program

Projects to come in the future:
- Breeding Projects
- Market Turkeys
- Market Swine
- Market Rabbits
- Market Lambs
- Market Goats
- Poultry
- Dairy Heifers
- Market Beef

Members have the opportunity to compete in events throughout the state of California. Much more

Projects Include:

- Volunteer activities and much more:
  - Workshops, career shows and expos,
  - Educational tours, leadership events, general sessions, competitive FFA conferences allow members to.
Welcome to Heritage High School
Home of the Patriots

Freshmen SUCCESS CAMP

- Freshmen Success Camp: Date TBD (More specific information and Permission Slip is included in your registration packet)
- Student Orientation (Class Assignments, check-out textbooks, Lunch Apps, Bus Pass info, Take yearbook & ID Photos): Date TBD
  Last Name A-L 7:45-10:30 am in GYM
  Last Name M-Z 12:00 – 3:00 pm in GYM
- First Day of School is August 11, 2014

Link Crew

- This is our third year with Link Crew
- Link crew is a Freshman transition program
- Link Crew leaders (Juniors/Seniors) lead new students on orientation day and provide support throughout the school year.
- Link Crew leaders are trained to teach lessons in freshmen classrooms at various times during the year.
- Link Crew Leaders also plan and organize social events for Freshmen.

ATHLETICS by Administration

Boys
- Basketball
- Cross Country
- Football
- Golf
- Soccer
- Tennis
- Track
- Volleyball
- Wrestling
- Swimming
- Water Polo (2014-2015)

Girls
- Basketball
- Cross Country
- Golf
- Soccer
- Tennis
- Track
- Volleyball
- Wrestling
- Swimming
- Water Polo (2014-2015)

HHS COUNSELORS
(By student’s Last Name)

- Coral Prendergast: A-Ga
- Ben Wathum: Ge-O
- Cheil Adams: P-Z
- Guadalupe Fierro: all students with IEPs
- Melina Gonzalez: AVID & ELD

Athletic Participation Requirements

- Completed athletic packet turned in including a current physical and medical insurance prior to participation
- 2.0 GPA
- Check with coaches for summer calendar
- Check school website for individual sport info
  www.hhsозв.org
- Current game schedules at
  www.hhsозв.org/sports
- Facebook page (Heritage Patriot athletics)
HHS DISCIPLINE POLICY

- Attendance (4 tardies or 1 period truancy assigned to After School Detention)
- School ID's are required to be with you at all times!
- General Rules: No gum, No skateboards on school campus, No cell phones during classroom, No electronic devices, No permanent markers and No energy drinks
- Dress Code: Heritage High School hats or college caps or solid red, white or blue hats; clothing should be school appropriate.

ELECTIVES 55 Credits

- Adv. Journalism
- Youth & Law (5)
- Criminology (5)
- Intro to Psychology (5)
- History of the West (5)
- Keyboarding (5)
- Computer applications (5)
- Intro to Engineering Design
- CTE Digital Photography
- CTE Video Productions
- Yearbook
- AVID (Must complete AVID app)
- Child Development
- PLUS Leadership
- ASB/Student Government

Heritage Student Clubs and Activities

- All Club
- Art Club
- ASB
- Bands
- Baseball Club
- Basketball
- Catholic Brotherhood
- Chess Club
- Chinese American Club
- Class of 2018
- Scene Board
- Dance Team
- Dance Show Choir
- Drama
- French Club
- Friday Night Live (FNBL)
- Freshman
- FFA
- GaUGAP Schedules
- Heritage Gear
- Health Club
- Historical Club
- Key Club
- Latin Fusion Dance
- Math Club
- Metric Tennis Society
- Patagonia Press
- Musical Repertoire
- Police
- Spanish Club
- Speech and Debate
- Student Senate
- Yearbook

AVID is looking for students

- Have a 2.0 to 3.5 GPA
- Might be the first in their family to attend college
- Have state test scores that are average to above average
- May qualify for fee reduced lunch
- Attend school regularly
- Want to go to college

How to join AVID at Heritage

- Complete the AVID Application
- Complete and submit the Heritage High School Registration Packet
- Attend AVID interviews at your middle school in May
- Receive AVID notification letter in June
- See you in AUGUST!

Agriculture

- 8 different courses (6 college prep CQA approved science courses)
- 6 million dollar facility - pigs, goats, lambs, rabbits, chickens, turkeys & beef
- 60 members at 25% of school faculty
- Travel all over California to compete with our annual winning and state ranked teams
- Many leadership opportunities and conferences
- Full livestock facilities - pigs, goats, sheep, chickens, rabbits, calves, pigeons and forearm

What is Robotics and FTC

- A program that promotes the STEM pathway
- An opportunity to experience being an engineer
- Friendly competition with students from different schools
- A chance to challenge yourself and your creative capabilities
- Loads of FUN!!!!
A-G Requirements & Grad Requirements

- All courses must be completed with a "C" or better to meet college requirements.

A. History: Social Science - 3 years required
   - High School Graduation: 3 years (World Geography, World History, US History and Government)
B. English - 4 years required
C. Mathematics - 3 years required / 4 years recommended
   - High School Graduation: 3 years
D. Laboratory Science - 2 years required / 3 recommended
   - High School Graduation: 1 year
E. Language other than English - 3 years required / 4 years recommended
   - High School Graduation: 1 year (language and/or The Art)
F. Visual & Performing Arts - 1 year (language and/or Fine Arts)
G. College Preparatory Elective - 1 year required
   - High School Graduation - 4 years

Other high school requirements are 2 years of PE, Health, and must pass both sections of the CAHSEE.

Make Sure to Return the Following:

- All documents in the registration packet:
  - 9th Grade Course Offerings Sheet (Front)
  - Freshman Success Academy Enrollment Form (Front)
  - Emergency Card - Pages 1-2
  - UHSD Signature Form - Page 2
  - Home Language Survey - Page 4
  - Parent Consent Form - Page 5
  - Title 1 Parent Compact - Page 6
  - Residency Verification Form - Page 7
  - Student Health History - Page 8

Other Documents needed:
  - Copy of Birth Certificate
  - Copy of Residency (Copy of a Gas or Electric Bill)
  - Copy of "Yellow" Immunization Card

Thank You for listening

- We will return to meet with all students and select classes for next year. We will be available to collect registration packets and answer any of your individual questions. Dates that we will be at your school sites are as follows:
  - Ethan Chase Middle School on Thursday, March 13th
  - Mountain Shadows Middle School on Monday, March 17th
  - Bell Mountain Middle School on Thursday, March 27th
  - Hans Christensen Middle School on Monday, March 30th
- Deadline to bring your completed registration packet to Heritage Counseling office is May 1st during registration hours: Monday - Friday, 7:30 a.m. - 3:00 p.m.
- Questions?
10. FFA Chapter Scrapbook
Heritage FFA Chapter Scrapbook

Pages Include:

- Officer Pages
- Activities
- CDE teams and awards
- SAE examples
- SoCal Fair
- Community Service
- Fundraisers
- Media coverage
- Accomplishments
11. Summer Calendar
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12. Graduate Follow Up Survey
Heritage High School Agriculture Department
Graduate Follow-Up

Name: ____________________
Address: ____________________
Phone: ____________________

1. What are you doing at the present time/will you do after graduation?
   ______ Attending School
       ______ Full-time     ______ Working
       ______ Part-time
   ______ In the military     ______ Looking for work
   ______ Homemaker     ______ Not looking for work
   ______ Not working

2. In what type of business or industry are you employed?
   ____________________________________________________________

3. What is your job title or job description?
   ____________________________________________________________

4. Which statement best applies to your present occupation?
   ______ I am using most of the skills I learned in the Agriculture program at HHS.
   ______ I am using some of the skills I learned in the Agriculture program at HHS.
   ______ I am not using any of the skills I learned in the Agriculture program at HHS.

5. What type of school are you currently attending and/or planning to attend?
   ______ High School     ______ Trade/technical school
   ______ 4-year college     ______ Private business school
   ______ 2-year college     ______ Adult education
   ______ Other: ____________________

6. What is your major course of study?
   ____________________________________________________________
7. How would you rate the training you received in the HHS Agriculture program?

    _____ Excellent    _____ Good    _____ Fair    _____ Poor

8. How do you rate the career guidance and counseling you received in the Agriculture program?

    _____ Excellent    _____ Good    _____ Fair    _____ Poor

**FFA**

1. Please check the following areas you feel are valuable components of FFA.

    _____ Officer and committee chairman experience
    _____ Judging Teams (Contests)
    _____ Advanced degree and proficiency awards
    _____ Participation in chapter activities, working with others
    _____ Livestock raising, shows, fairs, etc.
    _____ Other—please describe: __________________________

2. What were the most valuable aspects of the SAE (Supervised projects)?

    _____ Learning skills related to future Ag. employment
    _____ Development of responsibility
    _____ Learning record keeping
    _____ Other—please describe: __________________________

3. Please rate the facilities and equipment used at HHS for the Agriculture program:

   **Facilities:**
   
   _____ Overcrowded    _____ Adequate space
   _____ Modern    _____ Out-of-date

   **Equipment:**
   
   _____ Modern    _____ Out-of-date
   _____ Well-maintained    _____ Poorly maintained
   _____ Adequate amount of equipment for all students

   Other—please describe: __________________________

Please note any suggestions you have for improving our instructional program, including the following areas: classroom, the ARC and farm facilities, etc.; FFA; SAE (supervised projects); teaching methods used. Please be open with us, as we want to change and grow—we need your suggestions! Thank you!

________________________________________________________________________

________________________________________________________________________
13. Graduate Follow Up Results
<table>
<thead>
<tr>
<th>Program Completer Status</th>
<th>Details</th>
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<td>3 or more years of AG institution: 63</td>
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<td>Total Seniors having completed: 73</td>
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Mentee, CA 92585
26000 Briggs Rd
Heritage HS #
# CA0356 Mentee - Heritage

Graduate Follow-up Report
14. Comprehensive Program Plan
HERITAGE HIGH SCHOOL
AGRICULTURE DEPARTMENT
COMPREHENSIVE PROGRAM PLAN

2015-2020

COMPiled BY

CHRIS MADDALena- DEPARTMENT CHAIR

JEREmIAH PEROTTI

SHAina RUSHING

MAGGIE MARATSOS

STEPHEn DALY
Program Plan Templates

Introduction and Table of Contents

A. Job Market

B. Targeted Occupations

C. Total Program Goals and Objectives

D. Program Description of included Courses, SOE and Leadership

E. Program and/or Course Subject Matter Content Outline

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 and/or Department Policies

L. Proficiency Standards for Program Completers

M. Teacher Data Sheet 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 Placement Sites

T. Recruitment Activities and Materials
   a. Firebaugh HS Brochure
   b. Sample Newsletter
   c. Washington Union HS Brochure

U. Staff In-service Record

http://www.srfts.org/catat/resources/Programplantemplate/index.html
Program Plan Templates

Introduction and Table of Contents

A. Job Market

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C. Total Program Goals and Objectives

D. Program Description of included Courses, SOE and Leadership

E. Program and/or Course Subject Matter Content Outline

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 and/or Department Policies

L. Proficiency Standards for Program Completers

M. Teacher Data Sheet 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 Placement Sites

T. Recruitment Activities and Materials
   a. Firebaugh HS Brochure
   b. Sample Newsletter
   c. Washington Union HS Brochure

U. Staff In-service Record.
HERITAGE HIGH SCHOOL
AGRICULTURE DEPARTMENT
COMPREHENSIVE PROGRAM PLAN

2015-2020

COMPILED BY

CHRIS MADDALENA- DEPARTMENT CHAIR
JEREMIAH PEROTTI
SHAINA RUSHING
MAGGIE MARATSOS
STEPHEN DALY
V. Staff Minutes

VI. Department Inventory
A.
Job Market Description
Job Market Description

Agriculture is the most important industry in the United States with California being the number one state in production and Riverside County one of the most important areas. As the look of agriculture in this area changes, it is vital that the educational facilities keeps pace with this by supplying students prepared to enter this vast job market.

Heritage is located in Southwest Riverside County. The climate is one of limited rainfall during the winter and the summers are hot and dry. The winter months bring foggy days and nights with mild to cold weather. The extremes have brought freezing temperatures that have caused crop damage.

Crop production dominates the area yet there is livestock production as well. Agriculture enterprises include: potatoes, melons, alfalfa, grains, grapes, citrus, nuts, eggs, and many others. Irrigation is a must during the dry summers. Farmers get their water from irrigation districts and well supplies. Allocation of water has been a continuing problem on the west side.

Heritage High School opened in 2007 with 9th & 10 grade students and added a grade each year. In cursory reviews approximately 70% of our graduating seniors in the Ag program will attend a 2 year or 4 year college immediately after high school with nearly all working full or part time, 10% military, 10% work force alone and the remaining 100% were still undecided when polled. Our site sponsors an annual college night with nearly 50 institutions attending, has an active AVID program to develop academic skills for college success and a myriad of Agriculture courses, in which 7 of the 10 receive UC/CSU credit towards admission and 2 are Articulated with the local Community College. In addition, many will seek employment and it is important that they be taught the necessary skills to make them marketable. These skills are hands-on Career Technical and Problem Solving skills. Agriculture job skills must be taught because that is where the jobs are in our area. A student who has been properly trained but doesn’t have any higher education can still get a job. Such job areas can include, floral designer, secretary, farm manager, maintenance, landscaping, as well as others. It is the job of the Agriculture program to provide these students with the career technical skills necessary for successful employment.
B. Targeted Occupations
**TARGETED OCCUPATIONS**

We train our students to meet competencies in an occupation in one or more of the "Four 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,</td>
</tr>
<tr>
<td></td>
<td>Foreman, Ranch Laborer, Feed</td>
</tr>
<tr>
<td></td>
<td>Lot Hand, Field Crop Grower,</td>
</tr>
<tr>
<td></td>
<td>General Maintenance</td>
</tr>
<tr>
<td>Animal Production</td>
<td>Livestock Handler, Milker,</td>
</tr>
<tr>
<td></td>
<td>Inseminator, Auctioneer, Vet</td>
</tr>
<tr>
<td></td>
<td>Aide, Pet Care, Ranch Laborer,</td>
</tr>
<tr>
<td></td>
<td>Brand Inspector, Farm Hand,</td>
</tr>
<tr>
<td></td>
<td>Pest Control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agriculture Mechanics</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanics</td>
<td>Equipment Operator, Parts Person,</td>
</tr>
<tr>
<td></td>
<td>Shop Foreman</td>
</tr>
</tbody>
</table>

<p>| Equipment Operator           | Tractor Driver, Harvest Equipment Operator, Fork Lift Driver, Mechanic Helper |</p>
<table>
<thead>
<tr>
<th>Ornamental Horticulture</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Management</td>
<td>Greenhouse Worker, Foreman Maintenance,</td>
</tr>
<tr>
<td></td>
<td>Propagator, Tissue Culture</td>
</tr>
<tr>
<td>Nursery &amp; Turf Operator</td>
<td>Nursery Worker, Salesman, Plant</td>
</tr>
<tr>
<td></td>
<td>Propagator, Gardener, Golf Course</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
</tr>
<tr>
<td>Landscape</td>
<td>Grounds Worker, Gardening Business,</td>
</tr>
<tr>
<td></td>
<td>Garden Store Sales</td>
</tr>
<tr>
<td>Floriculture</td>
<td>Floral Design, Floral Sales, Floral</td>
</tr>
<tr>
<td></td>
<td>Delivery</td>
</tr>
<tr>
<td><strong>Agribusiness/Computers</strong></td>
<td><strong>Jobs</strong></td>
</tr>
<tr>
<td>Agribusiness</td>
<td>Ag Sales, Banking, Keyboard Operator,</td>
</tr>
<tr>
<td></td>
<td>Farm Accounting, Ag Secretary/Bookkeeper,</td>
</tr>
<tr>
<td></td>
<td>Inventory Maintenance</td>
</tr>
</tbody>
</table>
C.

Total Program
Goals and Objectives
Agricultural Education Aims

The outcome of achievements derived from courses in agriculture are many even though they are not always realized immediately. The more desirable ones are described below.

1. The student’s interest in agriculture is determined.

2. An appreciation of conversation of our natural resources is developed in the student.

3. The student is given a knowledge of living and growing things.

4. Gives the student the ability to make intelligent selections of farm products for home use.

5. Teaches the student to provide and maintain attractive home surroundings.

6. Develops in the student an appreciation and understanding of the importance of agriculture to all citizens.

7. Acquaints the student with related agricultural fields. (Job prospects)

8. Trains the student for related agricultural fields.

9. Prepares the student to become engaged in an agricultural production enterprise.

10. Prepares the student for higher education in agriculture or its related fields.

PROGRAM GOALS AND OBJECTIVES

AGRICULTURE SCIENCE

A. Agricultural Science

This instructional program is designed to prepare persons employment as well as post secondary education options in an enterprise involved in an area of plant or animal products associated with food, feed, clothing, etc. Occupations served by this program are located on the farm, research laboratory, in
veterinary medicine, plant propagation and culture and any areas related.

The goals of this instructional program are:

1. To supply students with the knowledge and skills required for entry into and successful progress in those agricultural production occupations that may or may not require education beyond the secondary school level.

2. To prepare students for post-secondary level vocational education in agricultural education.

3. To enable students to acquire an understanding of the economic and social impact of the agriculture production industry upon society and its relationship to agriculture in general.

4. To provide the agricultural production industry with appropriate numbers of persons adequately prepared for successful employment in those occupations that now exists and that are developing in the industry.

B. **Ornamental Horticulture**

This instructional program is designed to prepare persons for employment in enterprises associated with floriculture, greenhouse operation, turf production and arboriculture. The occupations in this industry involve both indoor and outdoor work propagating, growing and managing plants.

The goals of this instructional program are:

1. To supply students with the knowledge and skills required for entry into and successful progress in those ornamental horticulture occupations that may or may not require education beyond the secondary school level.

2. To prepare students for post secondary vocational education in agriculture.
3. To enable students to acquire an understanding of the economic and social impact of the ornamental horticulture industry on society and its relationship to agriculture in general.

4. To provide the ornamental horticulture industry with appropriate numbers of persons adequately prepared for successful employment in those occupations that presently exist and that are developing in the industry.
Heritage FFA
Agriculture Department
Goals

1. Install in the hearts of each member confidence in the Heritage FFA as well as in themselves at all times.

2. To develop a competitive attitude as well as a sense of fairness at all FFA activities.

3. To improve communication between Chapter Officers, Advisors, and Members as well as with the Community, Parents, and School Leaders.

4. To improve member involvement in fairs, judging teams, meetings and other FFA related activities.

5. To encourage all members to observe FFA week as a week of honor and celebration.

6. To make the public aware of our chapter's success and activities.

7. To have regular publications in both school and local newspapers.

8. To have a monthly newsletter that is available to all FFA members.

9. To promote the great opportunities of agricultural careers and to instill an interest in members to pursue one.

10. To provide fun and organized recreational activities of interest to FFA members on a regular basis.
D.
Program Description
of included Courses,
SOE and Leadership
A

Institute of Advanced
Radiation Chemistry
# Course Description

## A. COVER PAGE

<table>
<thead>
<tr>
<th>Date of Submission (Please include Month, Day and Year)</th>
<th>9. Subject Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Course Title</td>
<td>□ History/Social Science</td>
</tr>
<tr>
<td>Plant &amp; Animal Science</td>
<td>□ English</td>
</tr>
<tr>
<td></td>
<td>□ Mathematics</td>
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<tr>
<td></td>
<td>□ Laboratory Science</td>
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<td></td>
<td>□ Language other than English</td>
</tr>
<tr>
<td></td>
<td>□ Visual &amp; Performing Arts</td>
</tr>
<tr>
<td></td>
<td>□ Intro   □ Advanced</td>
</tr>
<tr>
<td></td>
<td>X College Prep Elective</td>
</tr>
</tbody>
</table>

| 2. Transcript Title(s) / Abbreviation(s)             |
| 3. Transcript Course Code(s) / Number(s)             |

<table>
<thead>
<tr>
<th>4. School</th>
<th>10. Grade Level(s) for which this course is designed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perris Union High School</td>
<td>□ 9 □ 10  X □ 11  □ 12</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>5. District</th>
<th>11. Seeking “Honors” Distinction?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perris Union High School District</td>
<td>□ Yes   X No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. City</th>
<th>12. Unit Value</th>
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</thead>
<tbody>
<tr>
<td>Perris</td>
<td>□ 0.5 (half year or semester equivalent)</td>
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<tr>
<td></td>
<td>X 1.0 (one year equivalent)</td>
</tr>
<tr>
<td></td>
<td>□ 2.0 (two year equivalent)</td>
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<tr>
<td></td>
<td>□ Other: __________________</td>
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</table>

<table>
<thead>
<tr>
<th>7. School / District Web Site</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.puhsd.org">www.puhsd.org</a></td>
<td></td>
</tr>
</tbody>
</table>

| 8. School Course List Contact                         |                 |
| Name:                                                |                 |
| Title/Position:                                      |                 |
| Phone:                                               |                 |
| Ext.:                                                |                 |
| E-mail:                                              |                 |

| 13. Is this an Internet-based course?                 |                  |
|                                                      | □ Yes   X No      |

| If “Yes”, who is the provider?                       |                  |
|                                                      | □ UCCP   □ PASS/Cyber High  □ Other ____________________ |

| 14. Complete outlines are not needed for courses that were previously approved by UC. If course was previously approved, indicate in which category it falls. |

- A course reinstated after removal within 3 years. Year removed from list? _________
  Same course title? □ Yes   □ No
  If no, previous course title? ______________________

- An identical course approved at another school in same district. Which school? _________
  Same course title? □ Yes   □ No
  If no, course title at other school? ______________________

- Approved Advanced Placement (AP) or International Baccalaureate (IB) course
- Approved UC College Prep (UCCP) Online course
- Year-long VPA course replacing two approved successive semester courses in the same discipline
- Approved P.A.S.S./Cyber High course
- Approved ROP/C course. Name of ROP/C? ______________________
- Approved CDE Agricultural Education course
15. Is this course modeled after an UC-approved course from another school outside your district?  
   [X] Yes  [□] No
   If so, which school(s)? **Clovis East High School**
   Course title at other school **Plant & Animal Physiology**

16. Pre-Requisites
   Algebra 1

17. Co-Requisites
   Algebra 1

18. Is this course a resubmission?  
   [X] Yes  [□] No
   If yes, date(s) of previous submission?  October 2005
   Title of previous submission?  **Plant & Animal Physiology**

19. Brief Course Description

This course is to provide students with the theories and principles related to plant and animal cultural practices, production, anatomy and physiology. This course is to successfully prepare those students who plan on majoring in agricultural/biological sciences at a college or university. Components will also include Supervised Agricultural Experience Projects, FFA leadership involvement, and Scientific Laboratory Experiences both written and orally presented.
20. Course Goals and/or Major Student Outcomes

1. Use scientific methods applied to plant and animal anatomy and physiology.
2. Show familiarity with the major physiological systems of plants and animals.
3. To learn the nature of scientific inquiry and incorporate the use of the scientific method in laboratory investigations and agriculture.
4. To identify the basic processes of cellular and organismal growth and reproduction.
5. To recognize the diversity of life and the interrelationships among all organisms.
6. To understand the role of genetics in organismic variation and adaptation.
7. Relate the study of animal structure-form in relation to veterinary arts.
8. To acquire agricultural and biological vocabulary and the reading, writing, and critical thinking skills pertaining to the science.
9. To understand genetic differences in a controlled and non controlled population.
10. To understand that breeds and varieties of domestic animals reproduce like offspring.

21. Course Objectives

1. Intelligently discuss theories on the origins of life.
2. Describe the characteristics of living organisms.
3. Describe the characteristics of plant and animal cells with respect to their structure.
4. Compare and contrast the roles of meiosis and mitosis in cellular reproduction.
5. Understand heredity, Mendelian Genetics, terminology and apply this to animal inheritance.
6. Distinguish between historical and modern taxonomy systems and understand the evolutionary relationships among domestic plants and animals.
7. Understand the structural and functional similarities and differences among major animal, plant and protest phyla.
8. Identify and understand the major organ systems of animals.
9. Recognize the structure and function of ecosystems, populations, and communities and the impact of human society on the natural and agricultural environment.
10. Describe the three cycles that involve abiotic and biotic factors. And explain their interrelationships and importance to the biosphere.
11. Identify the environmental and genetic factors that influence variation among organisms.
12. Demonstrate basic laboratory techniques including the use of microscopes, slides, microorganism examination, and the dissection of representative plants and animals of various species.

22. Course Outline

1. Meeting Human Needs in a Changing World
   a. Food sources
   b. Human needs
c. Agricultural industry
d. Quality of life
e. Renewable natural resources

2. Using Science and Technology
   a. The meaning of agri-science and technology
   b. Relation of agriculture to science
      1. Physical Sciences
      2. Biological Sciences
      3. Social Science
   c. Methods of agri-scientist thinking
      1. Scientific method
      2. Practical use
   d. New areas of agri-science
      1. Biotechnology
      2. Genetic engineering
      3. Remote sensing
      4. Laser technology
      5. Computer applications
   e. Issues associated with agri-science and technology

3. Using the Earth's Resources
   a. Environmental and natural resources
   b. Renewable resources
      1. Water cycle
      2. Forests
      3. Air
   c. Non-renewable Resources
   d. Environmental Pollution
   e. Agricultural pollution prevention

4. Using the Science of Computation
   a. Measurement systems
   b. Agri-science measurements
   c. Problem solving in measurements

5. Determining the bases of Life
   a. Life processes
   b. Structural basis
      1. Cell structure
      2. Heredity and genetics
   c. Mitosis and Meiosis

6. Classifying and Naming Living Things
   a. A Scientific classification system
   b. Classification kingdoms
   c. Cultural Practices Laboratory work

7. Applying principles of plant Science
   a. Classification and Life cycles
b. Vegetative plant parts
   1. Leaves
   2. Stems
   3. Roots
   4. Flowers
   5. Seeds

c. Helpful tropisms

8. Reproducing Plants
   a. Propagation
      1. Sexual
      2. Flowers
         a. Pollination
         b. Fertilization
         c. Germination
      1. Asexual
         a. Methods of vegetative reproduction

9. Understanding Plant Processes
   a. Photosynthesis
   b. Respiration
   c. Transpiration
   d. Plant nutrition
      1. Essential elements
      2. Other essential elements
   e. Using fertilizer
      1. Soil testing
      2. Tissue analysis
      3. Laboratory work

10. Keeping Plants Healthy
    a. Preventing pest problems
    b. Integrated pest management
    c. Safety practices

    a. Reproductive Systems
    b. Digestive Systems
    c. Pulmonary Systems

12. Feeding Animals
    a. Feeding needs
    b. Livestock nutritional needs
    c. Nutrient sources
    d. Feed additives and implants
    e. Feed manufacturing
    f. Feed labeling

13. Breeding Animals
    a. Breeds and bloodlines
    b. Breeding systems
c. Production systems
  
d. Livestock insemination methods
  
e. Breeding herd management
  
14. Keeping Animals Healthy
  
a. Good health signs
  b. Environmental influences
  c. Good health maintenance
  
d. Diseases - specific kinds
  
15. Using Biotechnology for Improving Life
  
a. Biotechnology
  b. Biotechnology areas
  c. Molecular biotechnology: genetic importance
  
d. Growth processes
  
e. Genetic engineering
  
16. Applying Principles of Earth Science in Agriculture
  
a. The earth's resources
  b. Earth's changes
  c. Atmospheric importance
  
d. Climate succession
  
17. Applying Principles of Soil Science
  
a. Soil classification
  
b. Soil make-up
  1) Physical structure
  2) Chemical nature
  3) Biological nature
  4) Soil formation
  5) Soil profile
  6) Water formations
  
18. Introduction to FFA and Leadership Activities
  
a. History and organization structure
  
b. Individual opportunities
  
c. Chapter structure and operation
  
d. Leadership development activities
  1. Career development events (judging contests, individual and team)
  2. Committee organization
  3. Officer Responsibilities
  
e. Parliamentary procedure and proper use
  
f. Career identification and selection
19. Agriculture Careers
   a. Agriculture in the work place
   b. Present status of agriculture as a career choice
   c. Future outlook for agriculture career
   d. Educational requirements
      1. Technical careers
      2. Colleges and universities
   e. Basic employment requirements
   f. Basic attitudes and personal skills
   g. Resume' construction
   h. Applications
   i. Interviewing skills

20. Computer Applications
   a. Hardware and software
   b. Word processing

23. Texts & Supplemental Instructional Materials

Science Insights. By DiSpezio, Linner-Lube, Lisowski, Sparks and Skoog
Foresmen & Wesley 1999 ISBN 0-201-33281-7

Biological Science Applications in Agriculture. By Buriak, Phillip, and Osborne, Interstate

Agriscience Fundamentals and Applications, Cooper, E.L., Burton, L.D., 3rd Edition,

Agriscience Fundamentals and Applications Laboratory Manual, Cooper, E.L., Burton,

Teacher selected worksheets and study guides.

24. Key Assignments

Laboratory Experiences:

2. Genetics: Animal reproduction and growth
3. Genetics: Phenotype ratio
5. Animal adaptation and camouflage.
6. Comparative anatomy of digestive systems.
7. Comparative anatomy of reproductive systems.
8. Microscope identification and applications.
9. 3D Cell Project.
10. Animal Behavior
11. Food Chains
12. Pulse and breathing rates
   13. Fecal Analysis of parasites
   14. Comparing human anatomy with animals
15. Pulmonary System Dissection
16. Cell Chemistry (Periodic Table of Elements)
17. Chick Embryo Development
18. Cloning plants for uniformity.
19. Sexual & Asexual Plant propagation
20. Observe Osmosis
21. Testing soil for organic matter
22. Water quality test
23. Taxonomy of living things (Insect Collection)
24. Taxonomy of living things (Weed collection)
25. Flower Dissection
26. Factors effecting Photosynthesis
27. Botanical Identification
28. Effects of rooting hormones
29. Macro/Micro Nutrient Deficiency Testing
30. Effects of chemicals on plants

25. Instructional Methods and/or Strategies
1. Lecture
2. Audio visual materials.
4. Group and individual activities.
5. Laboratory investigations.
6. Discussion.
7. Reading and writing assignments.
8. Homework assignments.
10. Guest Speakers.
11. Field Trips.
12. Agriscience Fair Project.

26. Assessment Methods and/or Tools
Tests, including teacher made and standardized tests developed by authors.
Evaluation of class assignments.
Classroom activities.
Laboratory Research Investigations.
Homework Assignments.

C. HONORS COURSES ONLY
Please refer to instructions

26. Indicate how this honors course is different from the standard course.

D. OPTIONAL BACKGROUND INFORMATION
Please refer to instructions
27. Context for Course (optional)
28. History of Course Development (optional)
## A. COURSE INFORMATION

1. **Course Title:**
   - Agriculture Biology 1.0

2. **Transcript Title / Abbreviation:**
   - Ag Bio 1.0

3. **Transcript Course Code / Number:**
   - 402

4. **Required for Graduation?**
   - ☐ Yes  ☑ No

5. **Meets UC/CSU Requirements?**
   - ☑ Yes  ☐ No

   *Was this course previously approved by UC?*
   - ☑ Yes  ☐ No

6. **Meets “AP” Requirements?**
   - ☐ Yes  ☑ No

7. **Course Author/Contact:**
   - First Name: Charlynn
   - Last Name: McNaul
   - Position/Title: Agriculture Teacher
   - Phone #: (951) 657-2171 ext.: 21253
   - Email: charlynn.mcnaul@puhsd.org
   - Date Submitted: Feb. 13, 2014

8a. **Subject Area**
   - ☐ History/Social Science
   - ☐ English
   - ☐ Mathematics
   - ☑ Laboratory Science
   - ☐ Language other than English
   - ☐ Visual & Performing Arts
   - ☐ College Prep Elective
   - ☐ Other

   *Is this course classified as a Career Technical Education?*
   - ☑ Yes  ☐ No

   **If CTE:**
   - Name of Industry Sector: Agriculture and Natural Resources
   - Name of Career Pathway: Agriscience

8b. **Credential required to teach this course:**

   *(To be completed by H.R. only)*

   Signature: [Signature]
   Date: [Date]

9. **Grade Level(s)**
   - 7 8 9 10 11 12

10. **Meets “Honors” Requirements?**
    - ☐ Yes  ☑ No

11. **Unit Value / Length of Course**
    - ☐ 0.5 (half year or semester equivalent)
    - ☑ 1.0 (one year equivalent)
    - ☐ 2.0 (two year equivalent)
    - ☐ Other: [Other]

12. **APPROVALS:**

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Area Council:</td>
<td>Grant Bennett</td>
</tr>
<tr>
<td>Educational Planning Council:</td>
<td>Carrie Waeldin</td>
</tr>
<tr>
<td>Board Approval:</td>
<td>Jonathan Greenberg</td>
</tr>
</tbody>
</table>
13. Pre-Requisites

Plant and Animal Science or equivalent with teacher permission.

14. Co-Requisites

Equivalent to Algebra 1 and/or Integrated Math 1.

15. Brief Course Description

Agricultural Biology is a laboratory science course designed for the college-bound student. The course emphasizes detailed knowledge of the biological principles of the following areas: molecular and cellular aspects of living things, structure and function of agricultural plants and animals, genetics, physiology, plant and animal diversity and principles of classification, ecological relationships, and animal behavior.

B. COURSE CONTENT

16. Course Purpose:

What is the purpose of this course? Please provide a brief description of the goals and expected outcomes.

Note: More specificity than a simple recitation of the State Standards is needed.

| 1. | To learn the nature of scientific inquiry and incorporate the use of the scientific method in laboratory investigations that pertain to biological and agricultural principles. |
| 2. | To be familiar with the theory of cell biology and its application to the organization of all living organisms. |
| 3. | To identify and understand the processes of cellular and organism growth and reproduction. |
| 4. | To recognize the diversity of life and the interrelationships among all organisms. |
| 5. | To understand the role of genetics in organism variation and adaptation. |
| 6. | To understand the role of genetics as it pertains to the development of multicellular organisms and appreciate how encoded genes specify the characteristics of living organisms. |
| 7. | To acquire biological and agricultural research vocabulary, and the reading, writing, and critical thinking skills pertaining to scientific inquiry. |
| 8. | To understand the stability in an ecosystem is a balance between competing effects. |
| 9. | To understand fundamental cellular and systemic functions and processes. |
| 10. | To recognize the interrelationships between biotic and physical factors to energy flow in the biosphere. |
### 17. Course Outline

Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

<table>
<thead>
<tr>
<th>A. Introduction to Agricultural Biology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is Agricultural Biology and its Importance</td>
</tr>
<tr>
<td>2. Research Uses of Agricultural Biology</td>
</tr>
<tr>
<td>3. The Scientific Method</td>
</tr>
<tr>
<td>4. The Metric System</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Organisms and Their Ecological Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Biodiversity</td>
</tr>
<tr>
<td>2. Conserving Natural Resources</td>
</tr>
<tr>
<td>3. Agricultural Practices Beneficial and Harmful to the Environment</td>
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<td>4. The Ecosystem and Population Fluctuations</td>
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<td>5. The Nitrogen Cycle</td>
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<td>6. The Oxygen Cycle</td>
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<td>7. The Food Web</td>
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<th>C. Cell Biology</th>
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<tr>
<td>1. Plant and Animal Cell Identification and Functions</td>
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<td>2. Plant and Animal Cell Structure and Functions</td>
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<td>3. Cellular Respiration</td>
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<td>4. Cellular Transport</td>
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<td>5. Cell Differentiation</td>
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<td>6. Chemiosmotic Gradients and ATP Production</td>
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<td>7. Macromolecules in Cells</td>
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<tr>
<th>D. Inorganic Foundations that Support Life</th>
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</thead>
<tbody>
<tr>
<td>1. Soil and Water: The Chemical Foundation</td>
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<tr>
<td>2. Atomic and molecular structure and chemical bonding</td>
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<td>3. Basic Soil Components</td>
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<td>4. Soil Formation Factors and Horizons</td>
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<td>5. Soil Texture and Structure</td>
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<td>6. Soil Organisms and Organic Matter</td>
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<tr>
<td>7. Interrelationships of Plants and Soil</td>
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<td>8. Water Movement Properties</td>
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<td>9. Soil and Water Management</td>
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</tbody>
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<tr>
<th>E. Plant &amp; Animal Classifications</th>
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<tr>
<td>1. Development of the Binomial System of Nomenclature</td>
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<td>2. Classifications of Major Groups of Plants and Animals</td>
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<td>3. Evolutionary Relationships</td>
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<td>4. Development of the Kingdom Concept</td>
</tr>
<tr>
<td>5. Comparisons of Modern Agricultural Plants and Animals</td>
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<th>F. Plant Physiology, Reproduction, Photosynthesis and Growth</th>
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<tbody>
<tr>
<td>1. Plant Structures &amp; the Process of Photosynthesis</td>
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<td>2. Plant Growth Requirements</td>
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<td>3. Monocotyledons and Dicotyledons</td>
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<td>4. Sexual and Asexual Reproduction</td>
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<tr>
<td>5. Research Applications to Plant Biotechnology</td>
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<tr>
<td>6. Chemical and Environmental Factors Affecting Plant Growth</td>
</tr>
</tbody>
</table>
G. Animal Physiology and Reproduction
1. Internal Systems of Animals
2. The Digestive Process
3. The Respiratory System
4. The Reproductive System
5. The Circulatory System
6. The Endocrine System
7. The Nervous System
8. The Immune System

H. Animal Nutrition
1. Feed Identification and Nutrient Evaluation
2. Feed Additives
3. Ration Formulation
4. Animal Nutrient Requirements
5. Vitamin and Amino Acid Requirements
6. Nutritional Diseases

I. Animal Health & Diseases
1. Disease Agents
2. Causes of Disease
3. Infectious and Noninfectious Diseases
4. Animal Health Practices
5. Common Internal & External Parasites Lifecycles

J. Plant and Animal Genetics
1. Heritability and Genetic Traits
2. Dominant and Recessive Genes
3. Genotype and Phenotype
4. Cellular Reproduction: Mitosis and Meiosis
5. Physical and Chemical Structures Involved in Genetics
6. DNA and Types of DNA
7. DNA Replication
8. Mendel – Independent Assortment and Segregation
9. Biotechnology and Cloning
10. Proteins and RNA
11. Role and Function of Amino Acids in Genetics
12. Mutation and Sexual Reproduction

K. Agricultural Biology Research Project
1. Development and Formulation of Agriscience/Science Fair Project
2. Research Principles & Design
3. Statistical Management & Analysis of Agriscience/Science Fair Project
4. Instructional Supervision & Coordination

L. Leadership & Team Building Development
1. Oral and speaking presentations
2. Critical Thinking Exercises
3. Problem Solving Exercises
18. Writing Assignments

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

19 (A) Textbook #1

Title: Biology

Edition: Publication Date: 2008

Publisher: McDougal Littell

Author(s): Stephen Nowicki

Usage: [X] Primary Text [ ] Read in entirety or near entirety

Textbook #2 (if applicable)

Title:

Edition: Publication Date:

Publisher:

Author(s):

Usage: [ ] Primary Text [ ] Read in entirety or near entirety

19 (B) Supplemental Instructional Materials (please describe)

FFA Record Book

20. Key Assignments

A. Weekly Reading & Writing Assignments
B. Weekly laboratory activities & write-ups
C. Agriculture Biology Term Paper
D. Supervised Agricultural Experience Project & Record Book
E. Student Seminar Presentation related to Agriculture Biology Topic
F. Portfolio of Laboratory Exercises
G. Leadership Development Activities
21. Instructional Methods and/or Strategies

A. Students will be engaged in a variety of activities that balance direct instruction with project work. Students will be expected to apply the academic and applied concepts and processes learned during direct instruction to their projects. Students will attend lectures, complete labs, become involved with professional mentors, complete real world projects, and make presentations that demonstrate understanding of physical concepts and the application process.

B. Methods of instruction will include, but is not limited to:
   1. Direct instruction (lectures, discussions, readings, and lab activities specific for mastery of content).
   2. Use of community-based research projects and with professional mentors, development of language arts skills while students complete reports, journals, analyses, and essays.
   3. Use of a variety of instructional materials and resources including electronic media, handbooks, professional journals, reference materials, and textbooks.
   4. Self-directed, cooperative, and collaborative learning opportunities to increase responsibility of students for their own learning.
   5. Use of student presentations, exhibits, and competitions

22. Assessment Methods and/or Tools

A. Assessment opportunities that allow continuous evaluation of students' progress should be embedded throughout the course and should be a learning experience. All students will be expected to achieve a high understanding of all topics; often demonstration of knowledge will occur in a public forum. The following strategies, which include both formal and informal assessment techniques, may include, but are not limited to:

   1. Performance-based assessments such as demonstrations, discussions, simulations, and projects
   2. Presentations, (both team and individual) written assignments, (both team and individual),
   3. On-going and cumulative portfolio of investigative accomplishments.
   4. Written tests & quizzes with a variety of short answer and essay questions.
   5. Written assignments, (such as justifications, investigations, and research, evaluative, or technical), and individual and group assessments including the assessment working relationships.

B. Grading will be based on the following assessment areas:

   1. Tests & Quizzes
   2. Laboratory Investigation Activities & Write-ups
   3. Portfolio & Writing Assignments
   4. Leadership & Critical Thinking Activities
   5. Research Report and Oral Presentation
   6. Supervised Agricultural Experience & Record Book (Not less than 5%)
   7. FFA (Not less than 5%)
### 23. Course Pacing Guide and Objectives:

<table>
<thead>
<tr>
<th>Day</th>
<th>Objective</th>
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<tbody>
<tr>
<td>1.</td>
<td>Intelligently discuss theories on the origins of life.</td>
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<tr>
<td>2.</td>
<td>Describe the characteristics of living organisms.</td>
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<tr>
<td>3.</td>
<td>Describe the characteristics of plant and animal cells with respect to their structure and chemistry.</td>
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<tr>
<td>4.</td>
<td>Compare and contrast the roles of meiosis and mitosis in cellular and organism reproduction.</td>
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<td>5.</td>
<td>Define the chromosome theory of heredity, Mendelian genetics, gene-enzyme relationships, and apply this knowledge to animal inheritance.</td>
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<tr>
<td>6.</td>
<td>Distinguish between historical and modern taxonomy systems and scientific nomenclature that demonstrate evolutionary relationships among plants and animals.</td>
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<tr>
<td>7.</td>
<td>Identify the structural and functional similarities and differences among the major animal, plant, and protist phyla.</td>
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<tr>
<td>8.</td>
<td>Analyze the major organ systems of animals and understand their function.</td>
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<tr>
<td>9.</td>
<td>Recognize the structure and function of ecosystems, populations, and communities, and the impact of human society on the natural and agricultural environment.</td>
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<tr>
<td>10.</td>
<td>Describe the three cycles that involve biotic and abiotic factors: nitrogen, carbon-oxygen, and water; and explain the importance of their interrelationships to the biosphere.</td>
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<tr>
<td>11.</td>
<td>Identify the environmental and genetic factors that influence variation among organisms.</td>
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<tr>
<td>12.</td>
<td>Demonstrate basic laboratory techniques including the use of microscopes, microscope slide preparation, maintenance and examination of micro-organism cultures, tests demonstrating fundamental biochemical reactions, dissection of representatives of plant and animal phyla, and the sharpening of interpretative skills.</td>
</tr>
</tbody>
</table>

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### C. HONORS COURSES ONLY

24. *Indicate how this honors course is different from the standard course.*

---

### D. BACKGROUND INFORMATION

25. *Context for Course (optional)*

26. *History of Course Development (optional)*
A. COURSE INFORMATION

1. Course Title:
   Agriculture Math

2. Transcript Title / Abbreviation:
   Mathematical Applications in Agriculture

3. Transcript Course Code / Number:
   390

4. Required for Graduation?
   ☐ Yes  ☑ No

5. Meets UC/CSU Requirements?
   ☐ Yes  ☑ No

   Was this course previously approved by UC?
   ☐ Yes  ☑ No

6. Meets "AP" Requirements?
   ☐ Yes  ☑ No

7. Course Author/Contact:
   First Name: __________________________
   Last Name: __________________________
   Position/Title: ________________________
   Phone #: (_____)_____________ ext.:____
   Email: _______________________________
   Date Submitted: _______________________

8a. Subject Area
   ☑ Mathematics
   ☐ History/Social Science
   ☐ English
   ☐ Laboratory Science
   ☐ Language other than English
   ☐ Visual & Performing Arts
   ☐ College Prep Elective
   ☐ Other: ____________________________

   Is this course classified as a Career Technical Education: ☑ Yes  ☐ No

   If CTE:
   Name of Industry Sector: Agriculture & Natural Resources
   Name of Career Pathway: Agricultural Business

8b. Credential required to teach this course:
   Agriculture

   (To be completed by H.R. only)
   Signature: __________________________
   Date: ____________

9. Grade Level(s)
   7  8  9  10  11  12

10. Meets "Honors" Requirements?
    ☐ Yes  ☑ No

11. Unit Value / Length of Course
    ☐ 0.5 (half year or semester equivalent)
    ☐ 1.0 (one year equivalent)
    ☐ 2.0 (two year equivalent)
    ☐ Other: ____________________________

12. APPROVALS:

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Subject Area Council:</td>
<td>11/17/11</td>
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<tr>
<td>Educational Planning Council:</td>
<td>1/12/12</td>
</tr>
<tr>
<td>Board Approval:</td>
<td>2/16/12</td>
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</tbody>
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   Page 1 of 13
13. Pre-Requisites

Participation in the agriculture program prior to the 12th grade year

14. Co-Requisites

None

15. Brief Course Description

This course is designed for students seeking education in math as it relates to agriculture. Understanding and applying math skills provides the basis for learning and mastering occupational and technical subjects. The application problems in this course will use current and realistic agricultural situations similar to those encountered by professionals engaged in production agriculture, the raising of crops and livestock, and by those employed in agriculturally related occupations and industries.

B. COURSE CONTENT

16. Course Purpose:

What is the purpose of this course? Please provide a brief description of the goals and expected outcomes. Note: More specificity than a simple recitation of the State Standards is needed.

- To provide the student with the opportunity to develop understanding and skills in the area of mathematics.
- To provide the student with a review of basic arithmetic.
- To develop an understanding of data and its use in statistical interpretation.
- To provide the student with algebraic and geometric concepts relative to production agriculture.
- To develop the math skills needed to solve word problems.
17. Course Outline
Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

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<tr>
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<th>Standards (Math)</th>
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<td>Students will be able to apply addition, subtraction, multiplication, and division procedures in dealing with agriculturally relevant situation problems.</td>
<td>A1.4 Analyze appropriate decision-making tools and financial records to make key management decisions.</td>
<td>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Build new mathematical knowledge through problem solving</td>
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<td>A1.5 Analyze physical production relationships to determine optimum use levels.</td>
<td>Solve problems that arise in mathematics and in other contexts</td>
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<tr>
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<td>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.</td>
<td>Apply and adapt a variety of appropriate strategies to solve problems</td>
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<td>F11.4 Understand marketing and merchandising principles used in the floral industry.</td>
<td>Monitor and reflect on the process of mathematical problem solving</td>
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<td>Students will be able to apply algebraic process to agriculture situations.</td>
<td>D5.2 Understand how to use animal performance data in the selection and management of production animals.</td>
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<td>D5.3 Research and discuss current technology used to measure desirable traits.</td>
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<td>D5.4 Understand how to predict phenotypic and genotypic results of a dominant and recessive gene pair.</td>
<td>Solve problems that arise in mathematics and in other contexts</td>
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<td>Students will perform and learn percentage skills used in determining such things as taxes, commission, cash discounts and interest.</td>
<td>A4.1 Understand the differences between cash and accrual accounting systems.</td>
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<td>A4.2 Understand the use and importance of budgets, income statements, balance sheets, and financial statements.</td>
<td>Build new mathematical knowledge through problem solving</td>
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<td>A4.3 Understand the basis of taxation within the tax system and its impact on the economy, including the role of taxes in agribusiness.</td>
<td>Solve problems that arise in mathematics and in other contexts</td>
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<td>A4.4 Analyze the role of depreciation and purchasing in tax planning and liability.</td>
<td>Apply and adapt a variety of appropriate strategies to solve problems</td>
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<td>A4.5 Understand how to determine property values and how to complete a depreciation schedule.</td>
<td>Monitor and reflect on the process of mathematical problem solving</td>
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<td>A4.6 Understand how to determine the tax obligations for an agribusiness.</td>
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<td>Students will learn formulas and perform mathematical operations in determining area, volume and perimeter using agricultural examples.</td>
<td>B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project. 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).</td>
<td>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Build new mathematical knowledge through problem solving Solve problems that arise in mathematics and in other contexts Apply and adapt a variety of appropriate strategies to solve problems Monitor and reflect on the process of mathematical problem solving NCTM: Communication Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Organize and consolidate their mathematical thinking through communication Communicate their mathematical thinking coherently and clearly to peers, teachers, and others Analyze and evaluate the mathematical thinking and strategies of others; Use the language of mathematics to express mathematical ideas precisely. NCTM: Connections Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Recognize and use connections among mathematical ideas Understand how mathematical ideas interconnect and build on one another to produce a coherent whole Recognize and apply mathematics in contexts outside of mathematics NCTM: Representation Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Create and use representations to organize, record, and communicate mathematical ideas Select, apply, and translate among mathematical representations to solve problems Use representations to model and interpret physical, social, and mathematical phenomena</td>
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<td>Students will be able to perform mathematical operations using agricultural scenarios such as board feet, concrete measurement, feed rations, soil moisture, etc.</td>
<td>B2.2 Know how to calculate board feet, lumber volume, and square feet. 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). D10.2 Understand how to develop, maintain, and use growth and management records for large or small animals.</td>
<td><strong>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to:</strong> Build new mathematical knowledge through problem solving Solve problems that arise in mathematics and in other contexts Apply and adapt a variety of appropriate strategies to solve problems Monitor and reflect on the process of mathematical problem solving <strong>NCTM: Communication Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to:</strong> Organize and consolidate their mathematical thinking through communication Communicate their mathematical thinking coherently and clearly to peers, teachers, and others Analyze and evaluate the mathematical thinking and strategies of others Use the language of mathematics to express mathematical ideas precisely <strong>NCTM: Connections Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to:</strong> Recognize and use connections among mathematical ideas Understand how mathematical ideas interconnect and build on one another to produce a coherent whole Recognize and apply mathematics in contexts outside of mathematics <strong>NCTM: Representation Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to:</strong> Create and use representations to organize, record, and communicate mathematical ideas Select, apply, and translate among mathematical representations to solve problems Use representations to model and interpret physical, social, and mathematical phenomena</td>
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<td>Students will learn ratios and proportion skills using agricultural scenarios.</td>
<td>C8.1 Know types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water).</td>
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<tr>
<td></td>
<td>C8.2 Analyze suitable common feed ingredients, including forages, roughages, concentrates, and supplements, for ruminant, monogastric, equine, and avian digestive systems.</td>
<td>Solve problems that arise in mathematics and in other contexts.</td>
</tr>
<tr>
<td></td>
<td>C8.3 Understand basic animal feeding guidelines and evaluate sample feeding programs for various species, including space requirements and economic considerations. (Pierson Square)</td>
<td>Apply and adapt a variety of appropriate strategies to solve problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitor and reflect on the process of mathematical problem solving.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NCTM: Communication Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Organize and consolidate their mathematical thinking through communication.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.</td>
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<td></td>
<td></td>
<td>Analyze and evaluate the mathematical thinking and strategies of others.</td>
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<td></td>
<td>Use the language of mathematics to express mathematical ideas precisely.</td>
</tr>
<tr>
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<td>NCTM: Connections Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Recognize and use connections among mathematical ideas.</td>
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<td></td>
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<td>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.</td>
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<td>Recognize and apply mathematics in contexts outside of mathematics.</td>
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<tr>
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<td>NCTM: Representation Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Create and use representations to organize, record, and communicate mathematical ideas.</td>
</tr>
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<td>Select, apply, and translate among mathematical representations to solve problems.</td>
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<td>Use representations to model and interpret physical, social, and mathematical phenomena.</td>
</tr>
<tr>
<td>Objective</td>
<td>Standards (Ag)</td>
<td>Standards (Math)</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>Students will understand and perform problems in basic concepts of dimensional analysis and word problems.</td>
<td>E11.1 Understand the Public Land Survey System.</td>
<td>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to—</td>
</tr>
<tr>
<td></td>
<td>E11.2 Use surveying equipment, including global positioning satellites, maps, and a compass to determine area, boundaries, and elevation differences.</td>
<td>Build new mathematical knowledge through problem solving</td>
</tr>
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<td></td>
<td></td>
<td>Solve problems that arise in mathematics and in other contexts</td>
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<tr>
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<tr>
<td>Students will understand and perform agricultural problems in geometric and dimensional analysis.</td>
<td>D1.1 Understand appropriate space and location requirements for habitat, housing, feed, and water. D1.2 Understand how to select habitat and housing conditions and materials (such as indoor and outdoor housing, fencing materials, air flow/ventilation, and shelters) to meet the needs of various animal species.</td>
<td>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Build new mathematical knowledge through problem solving Solve problems that arise in mathematics and in other contexts Apply and adapt a variety of appropriate strategies to solve problems Monitor and reflect on the process of mathematical problem solving NCTM: Communication Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Organize and consolidate their mathematical thinking through communication Communicate their mathematical thinking coherently and clearly to peers, teachers, and others Analyze and evaluate the mathematical thinking and strategies of others; Use the language of mathematics to express mathematical ideas precisely. NCTM: Connections Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Recognize and use connections among mathematical ideas Understand how mathematical ideas interconnect and build on one another to produce a coherent whole Recognize and apply mathematics in contexts outside of mathematics NCTM: Representation Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Create and use representations to organize, record, and communicate mathematical ideas Select, apply, and translate among mathematical representations to solve problems Use representations to model and interpret physical, social, and mathematical phenomena</td>
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<td><strong>Objective</strong></td>
<td><strong>Standards (Ag)</strong></td>
<td><strong>Standards (Math)</strong></td>
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<tr>
<td>Students will be able to understand and perform mathematical problems involving averages using agricultural scenarios.</td>
<td>D2.2 Understand the principles for providing proper balanced rations for a variety of production stages in ruminants and monogastrics. F6.3 Analyze organic and inorganic fertilizers to understand their appropriate uses. F6.4 Understand how to read and interpret labels to properly apply fertilizers.</td>
<td>NCTM: Problem Solving Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Build new mathematical knowledge through problem solving Solve problems that arise in mathematics and in other contexts Apply and adapt a variety of appropriate strategies to solve problems Monitor and reflect on the process of mathematical problem solving NCTM: Communication Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Organize and consolidate their mathematical thinking through communication Communicate their mathematical thinking coherently and clearly to peers, teachers, and others Analyze and evaluate the mathematical thinking and strategies of others; Use the language of mathematics to express mathematical ideas precisely. NCTM: Connections Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Recognize and use connections among mathematical ideas Understand how mathematical ideas interconnect and build on one another to produce a coherent whole Recognize and apply mathematics in contexts outside of mathematics NCTM: Representation Standards for grades 9-12 Instructional programs from prekindergarten through grade 12 should enable all students to— Create and use representations to organize, record, and communicate mathematical ideas Select, apply, and translate among mathematical representations to solve problems Use representations to model and interpret physical, social, and mathematical phenomena</td>
</tr>
</tbody>
</table>
18. Writing Assignments

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

19 (A) Textbook #1

Title:  MATHEMATICS FOR AGRICULTURE
Edition:  2000
Publisher:  Danville, Illinois: Interstate Publishers
Author(s):  Rogers, Betty C
Usage:  X Primary Text  ☐ Read in entirety or near entirety

19 (B) Supplemental Instructional Materials (please describe)

As Identified by Ag Department.

20. Key Assignments

Detailed descriptions of the Key Assignments including tests, and quizzes, which should incorporate not only short answers but essay questions also. How do assignments incorporate topics? Include all major assignments that students will be required to complete.

1. Tests and Quizzes
2. Class work/participation
3. Notebook
4. FFA Participation
5. Checkbook Assignment

21. Instructional Methods and/or Strategies

List specific instructional methods that will be used.
- Provide direct instruction through small and whole class groups.
- Use a variety of strategies and media.
- Provide opportunity for small and whole class discussion.
- Offer opportunities for use of manipulatives and other concrete objects.
- Offer opportunities for student research projects.
- Homework should reinforce and extend already instructed skills.

Direct Interactive Instruction will be used in all Classes.

22. Assessment Methods and/or Tools

List different methods of assessments that will be used.
- Chapter assessments tests and quizzes
- Semester Final assessment
- Daily homework
- Daily class work
- Other alternative assessments
23. Course Pacing Guide and Objectives:

COURSE OUTLINE

I. Orientation
II. Whole Numbers
   1. Addition, Subtraction, Multiplication, Division
   2. Combined Operations
III. Common Fractions
   1. Addition, Subtraction, Multiplication, Division
   2. Combined Operations
IV. Decimals
   1. Addition, Subtraction, Multiplication, Division
   2. Combined Operations
V. Percent and Percentages
   1. Addition, Subtraction, Multiplication, Division
   2. Interest, Commission, Taxes
VI. Interpretation and Analysis of Data
   1. Averages
   2. Tables
   3. Interpretation of Graphed Data
VII. Introduction to Algebra
    1. Operations with Integers
    2. Operations with Algebraic Expressions, Powers, Symbols of Grouping
    3. Square Root, Scientific Notation
VIII. Linear Equations
    1. Solving Equations
IX. Measurement
    1. Linear Measurements and Formulas
    2. Volume Measurements and Formulas
    3. Weight Measurements and Formulas
    4. Area Measurements and Formulas
    5. Time and Temperature
X. Special Formulas
    1. Board Feet
    2. Cement

C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.

NA

D. BACKGROUND INFORMATION

25. Context for Course (optional)

NA

26. History of Course Development (optional)

NA
### Perris Union High School District
#### Course of Study

#### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>9. Subject Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Communication, Leadership, and Technology</td>
<td>□ History/Social Science</td>
</tr>
<tr>
<td></td>
<td>□ English</td>
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<tr>
<td></td>
<td>□ Mathematics</td>
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<td></td>
<td>□ Science</td>
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<td></td>
<td>□ Language other than English</td>
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<td></td>
<td>□ Visual &amp; Performing Arts</td>
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<td>□ College Prep Elective</td>
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<td>☑ Other</td>
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<tr>
<th>2. Transcript Title / Abbreviation</th>
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<tr>
<th>3. Transcript Course Code / Number</th>
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<tr>
<th>4. Required for Graduation?</th>
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<tbody>
<tr>
<td>☐ Yes</td>
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<thead>
<tr>
<th>5. Meets UC/CSU Requirements?</th>
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<tbody>
<tr>
<td>☐ Yes</td>
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<tr>
<th>6. Meets “AP” Requirements?</th>
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<tbody>
<tr>
<td>☐ Yes</td>
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<table>
<thead>
<tr>
<th>7. Course Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: <strong><strong><strong>Charlynn McNaul</strong></strong></strong>____</td>
</tr>
<tr>
<td>Date Submitted: 10/5/06</td>
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<tr>
<th>8. Course Author</th>
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<table>
<thead>
<tr>
<th>9. Subject Area</th>
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<tr>
<th>10. Grade Level(s)</th>
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</thead>
<tbody>
<tr>
<td>7 8 9 ☑ 10 ☑ 11 ☑ 12</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Meets “Honors” Requirements?</th>
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<tbody>
<tr>
<td>☐ Yes</td>
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<table>
<thead>
<tr>
<th>12. Unit Value / Length of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ 0.5 (half year or semester equivalent)</td>
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<tr>
<td>☑ 1.0 (one year equivalent)</td>
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<tr>
<td>☐ 2.0 (two year equivalent)</td>
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<td>☐ Other:</td>
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<tr>
<th>13. APPROVALS:</th>
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<tr>
<th>Name/Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Subject Area Council:</td>
<td><strong>NONE</strong></td>
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<tr>
<td>Educational Planning Council:</td>
<td></td>
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<tr>
<td>Board Approval:</td>
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</tbody>
</table>
14. Pre-Requisites
Successful completion of any agriculture education course

15. Co-Requisites
None

16. Brief Course Description
This course is designed to give students the opportunity to learn how to improve their communication skills. It will also show them how to be a more effective leader. The use of technology will be an integral part of this project-based class. Students will receive training in the areas of communication skills, group processes, managerial skills, self-awareness, human relations, and the use of technology. Students will be expected to participate in one of the team Career Development Events and to participate in one of the individual Career Development Events sponsored by the FFA Organization. Students will also be expected to maintain a supervised agricultural experience program and to complete the vocational agricultural record book.

B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes
1. Students will understand the importance of effective communication.
2. Students will become proficient at writing and delivering a prepared speech.
3. Students will become proficient at job interviews.
4. Students will become proficient in the use of Parliamentary Procedure.
5. Students will demonstrate effective group/committee skills.
6. Students will learn the benefit of a portfolio.
7. Students will recognize the value of a supervised agriculture experience project.
8. Students will learn the benefit of the career development events offered through the FFA.
9. Students will learn the importance of positive work ethics and habits.
10. Students will learn basic business structures and employability skills.
### 18. Course Objectives

<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Students will know the difference communication and leadership.</td>
<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
</tr>
<tr>
<td></td>
<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
</tr>
<tr>
<td>1.2 Students will know the parts of the communication process.</td>
<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
</tr>
<tr>
<td></td>
<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
</tr>
<tr>
<td></td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
</tr>
<tr>
<td></td>
<td>ESLR 3b) Effective Communicators who are able to convey and interpret messages using a variety of media.</td>
</tr>
<tr>
<td>1.3 Students will understand that there are identifiable barriers to communication.</td>
<td>ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.</td>
</tr>
<tr>
<td></td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
</tr>
<tr>
<td>1.4 Students will be able to identify various communication styles.</td>
<td>ESLR 3b) Effective Communicators who are able to convey and interpret messages using a variety of media.</td>
</tr>
<tr>
<td>1.5 Students will be able to write a plan to improve communication skills.</td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
</tr>
<tr>
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<td>ESLR 3b) Effective Communicators who are able to convey and interpret messages using a variety of media.</td>
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<tr>
<td>1.6 Students will realize that non-verbal communication impacts group work.</td>
<td>ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.</td>
</tr>
<tr>
<td>2.1 Students will write a persuasive speech.</td>
<td>ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.</td>
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<tr>
<td></td>
<td>ESLR 2 c) Use resources effectively in pursuit of a given goal.</td>
</tr>
<tr>
<td></td>
<td>ESLR 2 d) Apply the appropriate technology to solve problems.</td>
</tr>
<tr>
<td></td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
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<tr>
<td></td>
<td>ESLR 4b) Life-long Learners who Identify and acquire the skills necessary for the attainment of their goals.</td>
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<td>ESLR 4d) Life-long Learners who learn about and use</td>
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<tr>
<td>2.2 Students will perform a six to eight minute oral speech.</td>
<td>new technology.</td>
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<tr>
<td>3.1 Students will participate in a live job interview.</td>
<td>ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals.</td>
</tr>
<tr>
<td><strong>CCTE Foundation Standards</strong></td>
<td><strong>CCTE Foundation Standards</strong></td>
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<tr>
<td><strong>2.4 Listening and Speaking</strong></td>
<td><strong>2.4 Listening and Speaking</strong></td>
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<tr>
<td>(2.3) Apply appropriate interviewing techniques:</td>
<td>(2.3) Apply appropriate interviewing techniques:</td>
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<tr>
<td>a. Prepare and ask relevant questions.</td>
<td>a. Prepare and ask relevant questions.</td>
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<tr>
<td>c. Use language that conveys maturity, sensitivity, and respect.</td>
<td>c. Use language that conveys maturity, sensitivity, and respect.</td>
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<tr>
<td>d. Respond correctly and effectively to questions.</td>
<td>d. Respond correctly and effectively to questions.</td>
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<tr>
<td>e. Demonstrate knowledge of the subject or organization.</td>
<td>e. Demonstrate knowledge of the subject or organization.</td>
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<tr>
<td>g. Evaluate the effectiveness of the interview</td>
<td>g. Evaluate the effectiveness of the interview</td>
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<td><strong>7.0 Responsibility and Flexibility</strong></td>
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<tr>
<td>Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:</td>
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<tr>
<td>7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.</td>
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<tr>
<td>7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.</td>
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<tr>
<td>7.3 Understand the need to adapt to varied roles and responsibilities.</td>
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<tr>
<td>7.4 Understand that individual actions can affect the larger community.</td>
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<tr>
<td><strong>4.1 Students will participate on a parliamentary procedure team.</strong></td>
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<tr>
<td><strong>5.1 Students will participate in at least one committee each semester.</strong></td>
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<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
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<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
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<td>ESLR 1c) Good citizens who demonstrate honesty and integrity in their work.</td>
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<td><strong>CCTE Foundation Standards</strong></td>
<td><strong>CCTE Foundation Standards</strong></td>
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<td><strong>5.0 Problem Solving and Critical Thinking</strong></td>
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<tr>
<td>Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:</td>
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<tr>
<td>5.1 Apply appropriate problem-solving strategies</td>
<td>5.1 Apply appropriate problem-solving strategies</td>
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<tr>
<td>Section</td>
<td>Description</td>
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<tr>
<td>6.1</td>
<td>Students will establish and update a portfolio.</td>
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<tr>
<td>7.1</td>
<td>Students will establish and maintain an agricultural occupational experience program.</td>
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<tr>
<td>8.1</td>
<td>Students will learn the rules, scoring, and rational for at least one FFA career development event.</td>
</tr>
</tbody>
</table>

| ESLR 2 | Critical Thinkers who apply problem-solving processes to real-life situations. |
| ESLR 4 | Life-long Learners who establish informed, responsible personal and professional goals. |
| ESLR 4 | Life-long Learners who identify and acquire the skills necessary for the attainment of their goals. |
| ESLR 4d| Life-long Learners who learn about and use new technology. |

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.  
5.4 Understand how financial systems and tools are used to solve business problems.  
**8.0 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 DECA (An Association of Marketing Students) and Future Business Leaders of America, 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 the attitudes and feelings of others.
9.1 Students will learn to attend class on a regular and punctual basis.

ESLR 1c) Good citizens who demonstrate honesty and integrity in their work.

ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.

ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals.

ESLR 4 b) Life-long Learners who identify and acquire the skills necessary for the attainment of their goals.

ESLR 4 d) Life-long Learners who learn about and use new technology.

CCTE Foundation Standards
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.

9.2 Students will learn the meaning of the school district accepted work ethic terms.

ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.

ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.

ESLR 1c) Good citizens who demonstrate honesty and integrity in their work.

ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.

ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals.

ESLR 4 b) Life-long Learners who identify and acquire the skills necessary for the attainment of their goals.

CCTE Foundation 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,
| 10.1 Students will learn basic principals of the private enterprise system. | ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations. |
| | ESLR 2 b) Analyze, interpret and evaluate concepts in a variety of contexts. |
| | ESLR 2 c) Use resources effectively in pursuit of a given goal. |
| | ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds. |
| | ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals. |
| | ESLR 4 b) Life-long Learners who Identify and acquire the skills necessary for the attainment of their goals. |

### 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, knowledge, 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.
| 10.2 Students will learn the extent of cooperative marketing in agribusiness. | ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations. |
| 10.3 Students will learn the various classifications of cooperatives. | ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.  
ESLR 2 b) Analyze, interpret and evaluate concepts in a variety of contexts. |
| 10.4 Students will know how to organize and operate a cooperative. | ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.  
ESLR 2 b) Analyze, interpret and evaluate concepts in a variety of contexts. |
| 10.5 Students will learn about the laws that affect agriculture cooperatives. | ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.  
ESLR 2 b) Analyze, interpret and evaluate concepts in a variety of contexts. |
19. Course Outline

<table>
<thead>
<tr>
<th>Outline</th>
<th>Standards (List Entire Standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Students will understand the importance of effective communication.</td>
<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
</tr>
<tr>
<td>1.1 Students will know the difference between the difference between communication and leadership.</td>
<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
</tr>
<tr>
<td>1.1.1 Students will define leadership.</td>
<td>ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.</td>
</tr>
<tr>
<td>1.1.2 Students will define communication.</td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
</tr>
<tr>
<td>1.2 Students will know the parts of the communication process.</td>
<td>ESLR 3b) Effective Communicators who are able to convey and interpret messages using a variety of media.</td>
</tr>
<tr>
<td>1.2.1 Students will be able to list the parts of the communication process.</td>
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<tr>
<td>1.2.2 Students will be able to define, channel, receiver, feedback and interference.</td>
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<tr>
<td>1.2.3 Students will model the communication process and be able to distinguish the parts.</td>
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<tr>
<td>1.3 Students will understand that there are identifiable barriers to communication.</td>
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<tr>
<td>1.3.1 Students will model language barriers.</td>
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<tr>
<td>1.3.2 Students will model interpersonal barriers.</td>
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<tr>
<td>1.3.3 Students will model procedural barriers.</td>
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<tr>
<td>1.4 Students will be able to identify various communication styles.</td>
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<tr>
<td>1.4.1 Students will observe meetings/group work and identify the style of communication as: socializers, directors, thinkers, or relaters.</td>
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<tr>
<td>1.5 Students will be able to write a plan to improve communication skills.</td>
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<tr>
<td>1.5.1 Students will list effective listening skills.</td>
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<tr>
<td>1.5.2</td>
<td>Students will list effective reading skills.</td>
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<tr>
<td>1.5.3</td>
<td>Students will list effective speaking skills.</td>
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<tr>
<td>1.6</td>
<td>Students will realize that non-verbal communication impacts groups work.</td>
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<tr>
<td>1.6.1</td>
<td>Students will be able to list positive and negative body language.</td>
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<thead>
<tr>
<th>2.0</th>
<th>Students will become proficient at writing delivering a prepared speech.</th>
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<tbody>
<tr>
<td>2.1</td>
<td>Students will write a persuasive speech.</td>
</tr>
<tr>
<td>2.1.1</td>
<td>Students will use correct format for a written speech.</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Students will have at least four sources, two must be from the Internet.</td>
</tr>
<tr>
<td>2.1.3</td>
<td>Students will type the speech using a word processor or computer.</td>
</tr>
<tr>
<td>2.1.4</td>
<td>Students will critique peer speeches.</td>
</tr>
<tr>
<td>2.2</td>
<td>Students will perform a six to eight oral minute speech.</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Students will memorize and recite their speech.</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Students will critique their speech after viewing it on video.</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Students will critique peers speeches.</td>
</tr>
<tr>
<td>2.2.4</td>
<td>Students will use at least form of current technology in the presentation of the speech.</td>
</tr>
</tbody>
</table>

ESLR 2 a) Critical Thinkers who apply problem-solving processes to real-life situations.
ESLR 2 c) Use resources effectively in pursuit of a given goal.
ESLR 2 d) Apply the appropriate technology to solve problems.
ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.
ESLR 4 b) Life-long Learners who identify and acquire the skills necessary for the attainment of their goals.
ESLR 4d) Life-long Learners who learn about and use new technology.
<table>
<thead>
<tr>
<th>3.0 Students will become proficient at job interviews.</th>
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</thead>
<tbody>
<tr>
<td>3.1 Students will participate in a live job interview.</td>
<td>ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals.</td>
<td>ESLR 4 b) Life-long Learners who identify and acquire the skills necessary for the attainment of their goals.</td>
<td></td>
</tr>
<tr>
<td>3.1.1 Students will learn to and demonstrate appropriate dress.</td>
<td></td>
<td>CCTE Foundation Standards 7.0 Responsibility and Flexibility</td>
<td></td>
</tr>
<tr>
<td>3.1.2 Students will have typed resume.</td>
<td></td>
<td>Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:</td>
<td></td>
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<tr>
<td>3.1.3 Students will have two letters of recommendations.</td>
<td></td>
<td>7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.</td>
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<tr>
<td>3.1.4 Students will have a typed letter of introduction.</td>
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<td>7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.</td>
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</tr>
<tr>
<td>3.1.5 Students will critique their interview after viewing it on video.</td>
<td></td>
<td>7.3 Understand the need to adapt to varied roles and responsibilities.</td>
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<tr>
<td>3.1.6 Students will critique their peers.</td>
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<td>7.4 Understand that individual actions can affect the larger community.</td>
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</tr>
<tr>
<td>4.0 Students will become proficient in the use of parliamentary procedure.</td>
<td>ESLR 3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.</td>
<td>ESLR 3b) Effective Communicators who are able to convey and interpret messages using a variety of media.</td>
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<tr>
<td>4.1 Students will participate on a parliamentary procedure team.</td>
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<tr>
<td>4.1.1 Students will demonstrate the use of at least ten common parliamentary procedures.</td>
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<tr>
<td>4.1.2 Students will critique their peers.</td>
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<tr>
<td>5.0 Students will demonstrate effective group/committee skills.</td>
<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
<td></td>
</tr>
<tr>
<td>5.1 Students will participate in at least one committee each semester.</td>
<td>ESLR 1c) Good citizens who demonstrate honesty and integrity in their work.</td>
<td>CCTE Foundation Standards 5.0 Problem Solving and Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>5.1.1 Students will complete assigned duties within deadlines.</td>
<td>Students understand how to create alternative</td>
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<tr>
<td>5.1.2 Students will serve as chair for portion of the</td>
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<tr>
<td>5.1.3 Students will critique their own work.</td>
<td>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. 5.4 Understand how financial systems and tools are used to solve business problems. <strong>9.0 Leadership and Teamwork</strong> 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 DECA (An Association of Marketing Students) and Future Business Leaders of America, 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 the attitudes and feelings of others.</td>
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<td>5.1.4 Students will critique their peers.</td>
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<td>5.1.5 Students will review the chapter FFA constitution and budget and make recommendations.</td>
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<tr>
<td>5.1.6 Students will solve problems/challenges using accepted problem solving methods.</td>
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</tbody>
</table>

| 6.0 Students will learn the benefits of a portfolio. | ESLR 2 a) Critical Thinkers who apply problemsolving processes to real-life situations. |
| 6.1 Students will establish and update a portfolio. | ESLR 4 a) Life-long Learners who establish informed, responsible personal and professional goals. |
| 6.1.1 Students will maintain the California Vocation Computerized Record Book. | ESLR 4 b) Life-long Learners who Identify and acquire the skills necessary for the attainment of their goals. |
| 6.1.2 Students will have a clip of their speech presentation in the portfolio. | ESLR 4d) Life-long Learners who learn about and use new technology. |
| 6.1.3 Students will have a | |
| 6.1.4 | Students will include a resume, letter of introduction, letters of recommendation, and a completed college or job application. |
| 6.1.5 | Students will include a completed FFA Degree application. |

| 7.0 | Students will recognize the value of a supervised occupational experience program. |
| 7.1 | Students will establish and maintain and agricultural occupational experience program. |
| 7.1.1 | Students will advance toward the next FFA degree level. |
| 7.1.2 | Students will maintain a California Vocational Record Book. |
| 7.1.3 | Students will contact a business within their career choice and either job shadow or complete a career survey. |

| 8.0 | Students will learn the benefits of the career development events offered through the FFA. |
| 8.1 | Students will learn the rules, scoring, and rational for at least one FFA career development event. |
| 8.1.1 | Students will learn the rules of a career development of their choice. |
| 8.1.2 | Students will compete in a career development event of their choice. |
| 8.1.3 | Students will train a peer on how to compete in a career development event of their choice. |

ESLR 2 c) Use resources effectively in pursuit of a given goal.

ESLR 4 b) Life-long Learners who Identify and acquire the skills necessary for the attainment of their goals.

ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.
<table>
<thead>
<tr>
<th>9.0 Students will learn the importance of positive work ethics and habits.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Students will learn to attend class on a regular and punctual basis.</td>
</tr>
<tr>
<td>9.1.1 Students will set up a review committee to grade their peers based upon attendance and punctuality.</td>
</tr>
<tr>
<td>9.1.2 Students will call and leave a voice mail message describing why they will be absent.</td>
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<tr>
<td>9.2 Students will learn the meaning of the school district accepted work ethic terms.</td>
</tr>
<tr>
<td>9.2.1 Students will be able to define and demonstrate trustworthy actions.</td>
</tr>
<tr>
<td>9.2.2 Students will be able to define and demonstrate respectful actions.</td>
</tr>
<tr>
<td>9.2.3 Students will be able to define and demonstrate fair actions.</td>
</tr>
<tr>
<td>9.2.4 Students will be able to define and demonstrate responsible actions.</td>
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<td>ESLR 1a) Good citizens who demonstrate a respect for and an acceptance of differences between people.</td>
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<td>ESLR 1b) Good citizens who contribute their talents to improve the quality of life in their school, local, and global communities.</td>
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<td>ESLR 4d) Life-long Learners who learn about and use new technology.</td>
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</tbody>
</table>

**CCTE Foundation 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, knowledge, 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.

3.7 Explore career opportunities in business through such programs as virtual enterprise,
<table>
<thead>
<tr>
<th>10.0</th>
<th>Students will learn basic business structures and employability skills.</th>
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</thead>
<tbody>
<tr>
<td>10.1</td>
<td>Students will learn the basic principals of the private enterprise system.</td>
</tr>
<tr>
<td>10.1.1</td>
<td>Students will describe the types of businesses according to ownership.</td>
</tr>
<tr>
<td>10.1.2</td>
<td>Students will be able to give examples of the scope and importance of agriculture and agribusiness in the US.</td>
</tr>
<tr>
<td>10.2</td>
<td>Students will learn the extent of cooperative marketing in agribusiness.</td>
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<tr>
<td>10.2.1</td>
<td>Students will list four advantages of cooperative marketing.</td>
</tr>
<tr>
<td>10.2.2</td>
<td>Students will describe a cooperative and how it works.</td>
</tr>
<tr>
<td>10.2.3</td>
<td>Students will describe the basic beginning of cooperative marketing in agriculture in the US.</td>
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<tr>
<td>10.3</td>
<td>Students will learn the various classifications of cooperatives.</td>
</tr>
<tr>
<td>10.3.1</td>
<td>Students will classify cooperatives based upon their characteristics.</td>
</tr>
<tr>
<td>10.3.2</td>
<td>Students will discuss the relation of membership with work experience, and internships.</td>
</tr>
</tbody>
</table>

### 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.

### ESLR 2

2 a) Critical Thinkers who apply problem-solving processes to real-life situations.

2 b) Critical Thinkers who analyze, interpret and evaluate concepts in a variety of contexts.

2 c) Critical Thinkers who use resources effectively in pursuit of a given goal.

3a) Effective communicators who work collaboratively with others diverse experiences and backgrounds.

4 a) Life-long Learners who establish informed, responsible personal and professional goals.

4 b) Life-long Learners who identify and acquire the skills necessary for the attainment of their goals.

### CCTE Foundation 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, knowledge, 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...
structures to the business structure of cooperatives.

10.3.3 Students will distinguish centralized from federated cooperatives.

10.3.4 Students will list and describe the four categories of cooperatives.

10.4 Students will know how to organize and operate a cooperative.

10.4.1 Students will explain the ownership and control principals of cooperatives.

10.4.2 Students will explain revolving capital funds and show how they work.

10.4.3 Students will explain pooling and show how it works.

10.4.4 Students will explain patronage refunds and progress payments.

10.5 Students will learn about laws that affect agriculture cooperatives.

10.5.1 Students will detail the significance of the Capper-Volstead Act.

10.5.2 Students will prepare a work ethic survey to be completed by a potential employer.

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.

3.7 Explore career opportunities in business through such programs as virtual enterprise, work experience, and internships.

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 effective technologies used in Web site development and the Internet.

4.5 Know procedures for maintaining secure information, preventing loss, and reducing risk.

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

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

6.3 Understand the environmental and ergonomic risks associated with the use of business equipment and the financial impact of an unsafe work environment.

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.

**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 major local, state, and federal laws and regulations that affect business as well as the procedural requirements necessary for compliance.

8.5 Know how to design systems and applications to allow access to all users.
19. Course Outline (continued)

<table>
<thead>
<tr>
<th>Outline</th>
<th>Standards (List Standard #)</th>
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20. Texts & Supplemental Instructional Materials


Supplemental Material: *State of California Core Curriculum*

  *Official FFA Manual*

  *Roberts Rule of Order*
21. **Key Assignments**
1. Students will keep a journal of the daily opportunities they have to influence the lives of others.
2. Students will arrange a career visit and interview a person about the impact that influence between employer and employee can have in the work place.
3. Students will plan and carry out a Supervised Agriculture Experience Project.
4. Students will lead a group discussion.
5. Students will compete in the FFA Prepared Public Speaking Contest.
6. Students will compete in the FFA Extemporaneous Public Speaking Contest.
7. Students will plan, prepare, and conduct an effective meeting.
8. Students will compete in the FFA Parliamentary Procedure Contest.
9. Students will present numerous speeches in and outside of the classroom.
10. Students will participate in at least one job interview.

22. **Instructional Methods and/or Strategies**
Students will have a hands-on approach to learning, where they will actually learn by doing.

23. **Assessment Methods and/or Tools**
Demonstrating the class learning objectives will assess student learning. Written as well as oral examinations will also assess student learning.
### A. COURSE INFORMATION

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>1. Course Title</strong></td>
<td>Agricultural Earth &amp; Physical Science</td>
</tr>
<tr>
<td><strong>2. Transcript Title / Abbreviation</strong></td>
<td>Ag Earth &amp; PhySci</td>
</tr>
<tr>
<td><strong>3. Transcript Course Code / Number</strong></td>
<td>429</td>
</tr>
<tr>
<td><strong>5. Required for Graduation?</strong></td>
<td>Yes ☑ No</td>
</tr>
<tr>
<td><strong>6. Meets UC/CSU Requirements?</strong></td>
<td>Yes ☐ No ☑</td>
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<tr>
<td><strong>7. Meets “AP” Requirements?</strong></td>
<td>Yes ☐ No ☑</td>
</tr>
<tr>
<td><strong>8. Course Author</strong></td>
<td>Name: Chris Maddalena</td>
</tr>
<tr>
<td></td>
<td>Date Submitted: November 4, 2003</td>
</tr>
<tr>
<td><strong>9. Subject Area</strong></td>
<td>☑ Science</td>
</tr>
<tr>
<td></td>
<td>☐ History/Social Science</td>
</tr>
<tr>
<td></td>
<td>☐ English</td>
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<td>☐ Mathematics</td>
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<td></td>
<td>☐ Language other than English</td>
</tr>
<tr>
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<td>☐ Visual &amp; Performing Arts</td>
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<td></td>
<td>☐ College Prep Elective</td>
</tr>
<tr>
<td></td>
<td>☐ Other</td>
</tr>
<tr>
<td><strong>10. Grade Level(s)</strong></td>
<td>7 8 9 10 ☒ 11X 12X</td>
</tr>
<tr>
<td><strong>11. Meets “Honors” Requirements?</strong></td>
<td>Yes ☐ No ☑</td>
</tr>
<tr>
<td><strong>12. Unit Value / Length of Course</strong></td>
<td>☐ 0.5 (half year or semester equivalent)</td>
</tr>
<tr>
<td></td>
<td>☑ 1.0 (one year equivalent)</td>
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<tr>
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<td>☐ 2.0 (two year equivalent)</td>
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<td>☐ Other:</td>
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### 13. APPROVALS:

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<tr>
<th>Subject Area Council:</th>
<th>Signature</th>
<th>Date</th>
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<th>Signature</th>
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<th>Board Approval:</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>3/18/04</td>
</tr>
</tbody>
</table>
14. **Pre-Requisites**
Successful completion (C or better) of Plant and Animal Physiology
and
Completion of Algebra 1

15. **Co-Requisites**
Algebra 1

16. **Brief Course Description**
Agriculture Earth and Physical Science is a course designed to develop a scientific viewpoint in students and provide each student with a background in earth and physical science as it relates to agriculture. During the year, students will study the earth and physical sciences including chemistry, forces, work, energy, alternative energy sources, weather, climate, geology, astronomy, and oceanography. Students will be participating regularly in both lab and lecture situations. Homework will include reading, writing, lab reports and field studies. In addition students will be involved in many interdisciplinary connections including Algebra 1 with equations, geography with earth sciences, and English with presenting, speaking, and technical reading and writing.
19. Course Goals and/or Major Student Outcomes

1. Investigate scientific phenomena at various levels of complexity and magnitude. Key concepts will include: Scientific method, laws, theories, lab and safety equipment, structure of the atom, and scale and structure.

2. Develop an awareness of the interrelationship of California's agriculture, natural resources, technology and society on the local, state, national, and international levels and students will be able to discuss the economic impact of these associations.

3. Recognize the traits of effective leaders and participate in leadership activities associated with the FFA including public speaking, leading group discussions, working within a committee, conducting business meetings and problem solving.

4. Complete the California Agriculture Record Book that pertains to students' Supervised Practical Experience program and explain the consequences of inaccurate records while they manage a SPE thus enabling them to develop occupational skills.

5. Relate the importance of technology, computer literacy and technical reading and writing as it pertains to instruction, agriculture science and record keeping and be able to discuss the advantages and disadvantages of using technology as a tool.

6. Investigate the earth's atmosphere and various phenomena of patterns of ongoing change.

7. Define a system, identify its parts and explain its interactions with other systems. Key concepts include: matter and energy, changes in cycles of the atmosphere, rocks, water, and oceans.

8. Create physical, conceptual, and mathematical models to show how things work. Key concepts will include: Scientific method, atomic structure, and changes in matter and energy.

9. Predict and analyze patterns of change in a variety of scientific events. Key concepts include: atomic structure, energy forms, matter and energy changes and scale and structure.
20. Course Objectives

A. Students will apply the scientific method to solve a problem.
B. Students will design an experiment and articulate a conclusion.
C. Students will demonstrate safe lab practices and care of equipment.
D. Students will write lab reports and present them to class.
E. Students will diagram an atom using the Bohr model.
F. Students will identify elements utilizing their properties and characteristics.
G. Students will depict the relationship between the state of matter and matter.
H. Students will balance chemical equations.
I. Students will utilize pH paper to test solutions and identify acids and bases.
J. Students will solve equations using \( v = \frac{d}{t} \) to arrive at velocity, distance, or time.
K. Students will solve equations using \( F = ma \) to calculate force, mass, or acceleration.
L. Students will diagram the transfer of heat energy to mechanical energy.
M. Students will simulate the direction of an object’s motion with respect to momentum.
N. Students will develop models showing the relationship between force, work and power.
O. Students will represent graphically how plate tectonics drives the earth’s process.
P. Students will draw, label, and interpret the “Ring of Fire”.
Q. Students will collect samples and interpret the rock cycle and various rock types.
R. Students will identify minerals.
S. Students will classify soils.
T. Students will trace the path of energy as solar radiation.
U. Students will chart weather tidal influences and predict climactic changes.
V. Students will label and describe parts of the sun, planets and solar system.
W. Students will lead a meeting, class discussion and group activity.
X. Students will sketch California’s natural resource base and relate its productive capabilities.
Y. Students will keep accurate records of field visits labs, and SAE’s.
Z. Students will complete science research including agriculture and career investigations.
21. Course Outline

1. Physical/Earth Science basics.
   a. Science and the scientific method.
   b. Lab safety.
   c. Measurement.
   d. Graphing.

2. Agriculture, Society and Technology.
   a. Local, State, National, International Agriculture.
   b. Technology in Agriculture science.

3. Leadership and record keeping.
   a. FFA.
   b. SAE.
   c. California Agriculture Record Book.

4. Energy and Motion.
   a. Moving objects.
   b. Acceleration and motion.
   c. Energy.
   d. Forces.
   e. Energy conservation.
   f. Agriculture contributions.

5. The Nature of Matter.
   b. Classification of matter.
   c. Atomic structure.
   d. Chemical bonds.
   e. Agricultural Biochemistry.

   a. Solutions.
   b. Chemical reactions.
   c. Radioactivity/Nuclear Reactions.
   d. Agriculture/Commercial chemistry applications.

7. Earth’s History
   a. Fossils.
   b. Extinction of Dinosaurs.
   c. Relative and absolute ages of rocks.
   d. Evolution and geological time.
   e. Present day rapid extinctions.
   f. Early earth history.
   g. Middle and recent earth history.
   h. Environmental problems/solutions.
   i. Agriculture practices worldwide.
8. Earth Materials.
   a. What is a mineral?
   c. Uses of minerals.
   d. Rock cycle.
   e. Types of rocks.
   f. Weathering.
   g. Soil types.
   h. Soil loss (erosion).
   i. Soil management/conservation.

9. Weather and Climate.
   a. Earth's atmosphere.
   b. Ozone.
   c. Energy from the sun.
   d. Air movement.
   e. Differentiating climate and weather.
   f. Weather patterns.
   g. Forecasting.
   h. Global warming.
   i. Origin and composition.
   j. Ocean currents.
   k. Ocean waves and tides.
   l. Tapping tidal energy.
   m. Shorelines.
   n. Sea floor.
   o. Season's growing degree days.
   q. Zones, temperate, tropical, polar.
   r. Natural vegetation vs. agricultural use.
   s. Factors affecting climate.
   t. Surface features and their relationship to climate.

10. Earth Processes.
    a. Structure of the earth.
    b. Science and new ideas.
    c. Continental drift.
    d. Plate tectonics.
    e. Earthquake information.
    f. Destruction by earthquakes.
    g. Living on a fault.
    h. Volcanoes and plate tectonics.
j. Geothermal Energy from volcanoes.
k. Eruptions and forms of volcanoes.
l. Volcanic features.

11. Astronomy.

a. Stars and galaxies.
b. Spaceship earth concept.
c. Ecology.
d. Ag Policy.
e. Chemicals.
22. Texts & Supplemental Instructional Materials

California Agriculture Record Book
Videos
Teacher selected worksheets and study guides.
23. Key Assignments

Laboratory Experiences:

a. Scientific Method.
b. Home Metrics.
c. Measuring Density.
d. Measuring Tools.
e. Displacement Lab.
f. Metric Mass lab.
g. Water laboratory.
h. Measuring Electrical Energy.
i. Velocity and Momentum.
j. Electric Currents.
k. Vibration Lab.
l. Energy to Melt Ice.
m. Candle Changing States.
o. Atom Model Lab.
q. Fertilizer Tag Lab.
r. Acid/base Lab.
s. Earth Movements- Dating rocks.
t. Differences in Species Lab.
v. Effects of Erosion.
w. Soil Infiltration, Water Holding Capacity.
x. Soil Testing, pH
y. Growing Seasons Lab.
z. Weather and Climate Charting.
aa. Earth Layers Lab.
bb. Plate Tectonics Lab.
cc. Mapping Lab.
dd. Orbits and Gravitational Pull.

24. Instructional Methods and/or Strategies

1. Lecture and class discussion.
2. Cooperative work at lab stations.
3. Field studies with accompanying journals.
4. Guest Speakers.
5. Written and oral reporting skills.
6. Technical reading and writing assignments.
7. Use of Technology and equipment.
25. Assessment Methods and/or Tools

1. Written Exams.
2. Quizzes.
3. Laboratory Investigations.
5. Class Work.
6. Homework.

C. HONORS COURSES ONLY
Please refer to instructions

26. Indicate how this honors course is different from the standard course.

D. OPTIONAL BACKGROUND INFORMATION
Please refer to instructions

27. Context for Course (optional)
28. History of Course Development (optional)
Perris Union High School District  
Course of Study

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title:</th>
<th>Agriculture Chemistry</th>
</tr>
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<tbody>
<tr>
<td>2. Transcript Title / Abbreviation:</td>
<td>Ag Chemistry</td>
</tr>
<tr>
<td>3. Transcript Course Code / Number:</td>
<td>428</td>
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<td>4. Required for Graduation?</td>
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<td>5. Meets UC/CSU Requirements?</td>
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<td>Was this course previously approved by UC?</td>
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</tr>
<tr>
<td>6. Meets &quot;AP&quot; Requirements?</td>
<td>Yes [X] No</td>
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<tr>
<td>7. Course Author/Contact:</td>
<td></td>
</tr>
</tbody>
</table>
  First Name: Aaron  
  Last Name: Nering  
  Position/Title: Teacher – Perris High School  
  Phone #: (951) 657-2171 ext.:5509  
  Email: aaron.nering@puhsd.org  
  Date Submitted: 2/13/2010 |
| 8a. Subject Area | 
  History/Social Science  
  English  
  Mathematics  
  Laboratory Science  
  Language other than English  
  Visual & Performing Arts  
  College Prep Elective  
  Other |
| Is this course classified as a Career Technical Education? | Yes [X] No |
| If CTE: | 
  Name of Industry Sector: Agriculture & Natural Resources  
  Name of Career Pathway: Agriscience |
| 8b. Credential required to teach this course: | AGRICULTURE (To be completed by H.R. only) |
| Carmen Meyer | 3/21/11 |
| Signature | date |
| 9. Grade Level(s) | 7 8 9 10 11 12 |
| 10. Meets "Honors" Requirements? | Yes [X] No |
| 11. Unit Value / Length of Course | 
  0.5 (half year or semester equivalent)  
  1.0 (one year equivalent)  
  2.0 (two year equivalent)  
  Other: |
| 12. APPROVALS: | Name/Signature | Date |
| Subject Area Council: | [Signature] | 3/21/11 |
| Educational Planning Council: | [Signature] | 4/7/11 |
| Board Approval: | [Signature] | 5-2-11 |
13. Pre-Requisites

Completion of Algebra 1 with a “C” or better

Completion of Plant & Animal Science & Agricultural Biology with a “B” or better

Completion of Agriculture Earth Science with a “B” or better in order to take Ag Chemistry as a senior

14. Co-Requisites

15. Brief Course Description

Agriculture Chemistry is a laboratory science course designed for the college bound student with career interest in agriculture. Students will be involved in hands on laboratory study an receive in-depth look at various concepts in chemistry including: chemistry and its relationship to agriculture, matter and energy, the periodic table, bonding, chemical reactions, moles, gases and gas levels.
B. COURSE CONTENT

16. Course Purpose:
What is the purpose of this course? Please provide a brief description of the goals and expected outcomes.
Note: More specificity than a simple recitation of the State Standards is needed.

Chemistry is one of the building blocks upon which our technological society is based. An adequate understanding of the chemical nature of matter is necessary for students to continue to develop into contributing members of our society. Chemistry is intended to provide an introductory foundation for those who intend to continue their study of chemistry and/or for those students who intend to study in related scientific, medical, and agriculture fields. It is also intended to meet the needs of those students whose interest lies in other fields of study but require knowledge of chemistry to function in that capacity. All students will be members of the FFA (Future Farmers of America) and maintain an active SAE (supervised agricultural experience) project.

17. Course Outline
Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

- Students will know how to relate the position of an element in the periodic table to its atomic number and atomic mass.
- Students will know how to use the periodic table to identify alkali metals, alkaline earth metals and transition metals, trend in ionizing energy, electro-negativity, and the relative size of ions and atoms.
- Students will know how to use the periodic table to determine the number of electrons available for bonding.
- Students will know the nucleus of the atom is much smaller than the atom yet contains most of its mass.
- Students will know how to relate the position of an element in the periodic table to its quantum electron configuration and to its reactivity with other elements in the table.
- Students will know atoms combine to form molecules by sharing electrons to form covalent or metallic bonds or by exchanging electrons to form ionic bonds.
- Students will know chemical bonds between atoms in molecules such as H2, CH4, NH3, H2CCH2, N2, Cl2 and many large biological molecules are covalent.
- Students will know salt crystals, such as NaCl, are repeating patterns of positive and negative ions held together ions held together by electrostatic attraction.
- Students will know the atoms and molecules in liquids move in a random pattern relative to one another because the intermolecular forces are too weak to hold the atoms or molecules in a solid form.
- Students will know how electro-negativity and ionization energy relate to bond formation.
- Students will know how to identify solids and liquids held together by Van der Waals forces or hydrogen bonding and relate these forces to volatility and boiling/melting point temperatures.
- Students will know how to determine the molar mass of a molecule from its chemical formula and a table of atomic masses and how to covert the mass of a molecular substance to moles, number of particles, or volume of gas at standard temperature and pressure.
- Students will know how to calculate the masses of reactants and products in a chemical reaction from the mass of one of the reactants or products and the relevant atomic masses.
- Students will know how to calculate percent yield in a chemical reaction.
- Students will know how to identify reactions that involve oxidation and reduction and how to balance oxidation-reduction reactions.
- Students will know the random motion of molecules and their collision with a surface create the
observable pressure on that surface.

- Students will know the random motion of molecules explains the diffusion of gases.
- Students will know how to apply the gas laws to relations between the pressure, temperature, and volume of any amount of an ideal gas or any mixture of ideal gases.
- Students will know the values and meanings of standard temperatures and pressure (STP).
- Students will know how to convert between the Celsius and Kelvin temperature scales.
- Students will know the kinetic theory of gases relates the absolute temperature of a gas to the average kinetic energy of its molecules or atoms.
- Students will know how to solve problems by using the ideal gas law in the form PV = nRT.
- Students will know how to apply Dalton’s law of partial pressures to describe the composition of gases and Graham’s law to predict diffusion of gases.
- Students will know the observable properties of acids, bases, and salt solutions.
- Students will know acids are hydrogen-ion-donating and bases are hydrogen-ion-accepting substances.
- Students will know strong acids and bases fully dissociate and weak acids and bases partially dissociate.
- Students will know how to use the pH scale to characterize acid and base solutions.
- Students will know how to calculate pH from the hydrogen-ion concentration.
- Students will know buffers stabilize pH in acid-base reactions.
- Students will know definitions of solute and solvent.
- Students will know how to describe the dissolving process at the molecular level by using the concept of random molecular motion.
- Students will know temperature, pressure, and surface area affect the dissolving process.
- Students will know how to calculate the concentration of a solute in terms of grams per liter, molarity, parts per million, and percent composition.
- Students will know the relationship between the molality of a solute in a solution and the solution’s depressed freezing point or elevated boiling point.
- Students will know how molecules in solution are separated or purified by the methods of chromatography and distillations.
- Students will know how to describe temperature and heat flow in terms of the motion of molecules (or atoms).
- Students will know chemical processes can either release (exothermic) or absorb (endothermic) thermal energy.
- Students will know energy is released when a material condenses or freezes and absorbed when a material evaporates or melts.
- Students will know how to solve problems involving heat flow and temperatures changes, using known values of specific heat and latent heat of phase change.
- Students will know the rate of reaction is the decrease in concentration of reactants or the increase in concentration of products with time.
- Students will know how reaction rates depend on such factors as concentration, temperatures, and pressure.
- Students will know the role a catalyst plays in increasing the reaction rate.
- Students will know the definition and role of activation energy in a chemical reaction.
- Students will know how to use LeChâtelier’s principle to predict the effect of changes in concentration, temperature, and pressure.
- Students will know equilibrium when forward and reverse reaction rates are equal.
- Students will know how to write and calculate an equilibrium constant expression for a reaction.
- Students will know large molecules (polymers), such as proteins, nucleic acid, and starch are formed by repetitive combinations of simple subunits.
- Students will know the bonding characteristics of carbon that result in the formation of a large variety of structures ranging from simple hydrocarbons to complex polymers and biological molecules.
- Students will know amino acids are the building blocks of protein.
- Students will know the system for naming the ten simplest linear hydrocarbons and isomers that contain single bonds, simple hydrocarbons with double and triple bonds, and simple molecules that contain a benzene ring.
- Students will know how to identify the functional groups that form the basis of alcohols, keytones,
ethers, amines, esters, aldehydes, and organic acids.

- Students will know the R-group structure of amino acids and know how they combine to form the polypeptide backbone structure of proteins.
- Students will know protons and neutrons in the nucleus are held together by nuclear forces that overcome the electromagnetic repulsion between the protons.
- Students will know the energy release per gram of material is much larger in nuclear fusion or fission reactions than in chemical reactions. The change in mass (calculated by E=mc²) is smaller but significant in nuclear reactions.
- Students will know some naturally occurring isotopes of elements are radioactive, as are isotopes formed in nuclear reactions.
- Students will know the three most common forms of radioactive decay (alpha, beta, and gamma) and know how the nucleus changes in each type of decay.
- Students will know alpha, beta, and gamma radiation produce different amounts and kinds of damage in matter and have different penetrations.
- Students will know how to calculate the amount of a radioactive substance remaining after an integral number of half-lives have passed.
- Students will know protons and neutrons have substructures and consist of particles called quarks.

18. Writing Assignments

Throughout the course, students will be prompted to reflect on labs done in class. Writing hypothesis and conclusions through the use of properly written lab reports.

Students may be required to write essays to answer standard related questions on tests.

19 (A) Textbook #1

Title: World of Chemistry
Publisher: McDougal Littell
Author(s): Zumdahl, Steven S.; Zumdahl, Susan L.; Decoste, Donald J.
Usage: [X] Primary Text [ ] Read in entirety or near entirety

Textbook #2 (If applicable)

Title: 
Edition: Publication Date: 
Publisher: 
Author(s): 
Usage: [ ] Primary Text [ ] Read in entirety or near entirety

19 (B) Supplemental Instructional Materials (please describe)

Lab equipment for experiments and lab assignments. Periodic table charts for display in classroom. Calculators, Beakers, tubes, Bunsen burners, test tube holders, safety stations for emergencies, eye washing station.
### 20. Key Assignments for Agriculture Chemistry

<table>
<thead>
<tr>
<th>Topic/Standard/Theme</th>
<th>Key Activities/Assignments</th>
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<tbody>
<tr>
<td><strong>Investigation &amp; Experimentation</strong></td>
<td>How Much Did I Spill?</td>
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<tr>
<td>Use appropriate tools &amp; technology</td>
<td>Burning Questions/Qualitative</td>
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<tr>
<td>Identify sources of experimental error</td>
<td>Quantitative observations</td>
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<tr>
<td>Formulate explanations by using evidence</td>
<td>Setting up a hot water bath</td>
</tr>
<tr>
<td>Exponential and logarithmic functions</td>
<td>Separating sugar and sand-write up</td>
</tr>
<tr>
<td>Distinguish between hypothesis and theory</td>
<td>Research paper on irradiated food</td>
</tr>
<tr>
<td>Need for controlled tests</td>
<td>Conduct water quality tests to test effects of high levels of chemicals on aquatic life</td>
</tr>
<tr>
<td>Solve problems using different areas of science</td>
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</tr>
<tr>
<td>Investigate a science-based societal issue</td>
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| **Atomic and Molecular Structure**                                                  | Determine characteristics of metals and non-metals                                        |
| Understand and use Periodic Table                                                   | Identify unknown halogens                                                                  |
| Atomic Structure                                                                     | Observe light spectra using spectroscope                                                   |
| Energy levels/spectral lines                                                        | Locate wave-lengths of different elements using spectrum chart                            |
|                                                                                     | Complete tables predicting formulas for some compounds and balancing electron charges     |
|                                                                                     | Lab investigating properties of ionic and covalent compounds                               |
|                                                                                     | Eco-Nuts/determine what packing materials are degradable                                  |

| **Chemical Bonds**                                                                  | Prepare Lewis Dot structures                                                               |
| Covalent and Ionic bonds                                                            | Draw pictures and dot structures for named compounds                                      |
| Large biological, covalent molecules                                               | Report on polarity of stain removers                                                      |
| Salt crystals and electrostatic attraction                                          | Predict shape and polarity from Lewis dot structures                                     |
|                                                                                     | Observe and compare conductivities of various substances                                 |
|                                                                                     | Compare the melting point of six solids                                                   |

**Conservation of Matter and Stoichiometry**
Conservation of Matter and Stoichiometry
Mole Concept

Balancing equations
Convert Mass to Moles

Oxidation-Reduction Reactions

Avogadro's number

Gases and Their Properties
Random motion of molecules between
Diffusion of gases

Gas Laws

Convert between Kelvin/Celsius

Acids and Bases
Observable properties of acids
Bases and salts
Dissociation

Use pH scale

Determine number of gas molecules and volume of given gases
Use unit analysis to calculate mass
Determine number of molecules in different materials
Develop experiment to show number of atoms in an old and new penny
Solve math problems using mole Concept

"Gases Galore"-relationship
Volume, temperature and pressure
"Slow, slow, gone" –
At what temperature of gas is volume zero?
Standard temperature & pressure
Report why a basketball seems to lose air in winter,
Using Charles Law
Drawings showing how volume of a cylinder affects the pressure.
Generating and collecting O₂

Measure pH of household products
Carry out titrations using indicators
Measure electrical conductivity of solutions
Charge It!" – acid strength and pH, conductivity and Kₐ
"Drip, drip, drip" – Concentration of Acids in vinegar
"Mr. Clean" – Concentration of ammonia in a household cleaner
Solutions

Solvents and solution

“Crystals in and Out” – Temp and Solubility random molecular motion

“Salty Dilemma” – Solubility of Sodium Chloride

Affects of temperature, pressure
And surface area on the dissolving process

“Yellow Trouble” – Precipitates and Concentrations of reactants

Calculate concentration of solutes

Propose reason for using rock salt on icy Chromatography and Distillation streets

“Soda Solution” – Concentration of CO₂ gas in soda

Paper Chromatography – “Which pen was used in a forgery?”

Observe Brownian movement of molecules
by observing India ink/whole milk through microscope

Chemical Thermodynamics

Heat Flow/Motion of molecules

Chemical processes/Thermal Energy
Explain entropy of melting ice

Energy in freezing and evaporation Materials

“Fusing Ice” – Investigate and report on
heat absorbed in melting ice
Specific heat/latent heat of phase change

“Hot Beads” – Measure specific heat and explain heat transfer in calorimetric measurements

Predict and report on heat capacity of sand
and water. Use Handbook of Chemistry and Physics to look up heat capacity silicon dioxide and water.

Do calculations involving specific heat, molar heat capacities and heat transfers.
**Reaction Rates**
Decrease in reactant concentration  
Increase in product concentration  
Concentration, temperature, pressure

"In the Blink of an Eye" - relationship between concentration and reaction rate
"Hot Time" - reaction rate and temperature
"Speed Demon" - effect of catalyst

Investigate and write report on catalytic converters

Home Connection: locate items with Word "enzyme" and describe the chemical reaction the enzyme speeds up.

Use funnels of different diameters to Model the rate-determining step in a chemical reaction.

**Chemical Equilibrium**

Le Chatelier’s Principle
Forward and reverse reaction rates

"Shifty Changes" - Shifting equilibrium  
Back and forth in a solution
"Quick-Change Artist" - altering the equilibrium between chromate and dichromate ions.

Problem Solving: Equilibrium of Salts,  
Complete data table calculating $K_{eq}$ values for reaction and average $K_{eq}$ for all data.

**Organic and Biochemistry**

Polymers
Carbon bonding

"Pop Goes the Bottle" - demonstrate Stretchability of polymers
"Bounce for the Ounce" — crosslinking in Amino acids polymer.

Home connection: Find garden products containing organic compounds and prepare data table.

Use internet to find food sources of selected elements

"Oh So Sweet!" — detecting presence of monosaccharides.

Testing for Amino Acids
Carbon: Construct models of diamond and graphite. Compare observed physical amorphous carbon with its molecular structure. Infer why activated carbon is a good adsorbing agent.
Nuclear Processes

Energy in fusion/fission

“Clocking Half-Reactions” -- 
Compare radioactive isotopes decay curve of short-lived and large radioactive decay half-life isotopes.

Alpha, beta, gamma radiation

Home Connection: Research report on irradiated food

Penny Half-Life – Model of radioactive decay and write-up

Agriculture & Chemistry

Chemistry of Fertilizers Unit

Chemically Speaking -- What’s in a plant?

A Chemical View of the World – Poster on:

Element necessary for plant growth

How to Determine the Percent of an Element in a Compound.

Making a Fertilizer and Testing for Phosphates.

Letter to Your Grandfather. – Role of Chemistry in Agriculture.

'21. Instructional Methods and/or Strategies

List specific instructional methods that will be used.

- Direct Instruction: lecture, reading, in class research, problem sets, presentations, and guest speakers.
- Instructional Materials: textbooks, primary and secondary materials, experts from the fields, web-base and electronic media.
- Team teaching which will include business, university, and community based partners.
- Community based applied concept projects.
- Self-directed, cooperative, and collaborative learning and laboratory projects.
- Instruction adaptable to levels of learning,
- Students use various technologies.
- Student research projects, project-based, and oral presentations.
- Hands-on laboratory and field experiments
22. Assessment Methods and/or Tools

List different methods of assessments that will be used.

Class work/Homework 30%
- Chapter Quizzes - 10%
  Chemistry concepts, problem solving
- Quality of Written Work - 10%
  Chemistry concepts, problem solving, writing skills
- Quality of Activities - 10%
  Chemistry concepts, problem solving, writing skills
- Use of Class Time - 10%
  Responsibility

Exams and State Chemistry Standards Assessments 25%
- Teacher-generated tests
- Text-generated Exams on State Chemistry Standards
- District Criterion Referenced Tests
- Careers relating to Agriculture & chemistry

Laboratory Activities and Written Reports 25%
- Thickness of Aluminum Foil
- Separating a Mixture
- Observation: Specific Heat
- Spectroscopy and Flame Tests-Identifying Materials
- Mendelev Lab of 1869
- Conductivity as an Indicator of Bond Type
- Inquiry Lab- Hydrates-Gypsum and Plaster of Paris
- Balancing Equations by Using Models
- Inquiry Lab – Gravimetric Analysis-Hard-Water Testing
- Calorimetry and Hess’s Law
- Wetting a Surface
- Observation: Viscosity of Liquids
- Consumer: A Close Look at Soaps and Detergents
- Solubility Product Constant-Algal Blooms (written report)
- How Effective are Antacids?
- Concentration Affects Reaction Rate.
- Electroplating for Corrosion Protection
- Detecting Radioactivity
- Isolation of Onion DNA
- FFA Record Book for SAE projects

Agriculture Extensions and or related Projects 10%
- Supervised agricultural experience project
- Science Project- Agriculture Chemistry focus to be entered in a local Agri-Science Fair (if applicable)

FFA Participation/Activities 10%
- Participation in the FFA program activities
23. Course Pacing Guide and Objective. Objectives are listed after this chart.

<table>
<thead>
<tr>
<th>Days</th>
<th>Key Topics</th>
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<tbody>
<tr>
<td><strong>10 Days</strong></td>
<td>Introduction to Chemistry</td>
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<tr>
<td></td>
<td>- States of Matter</td>
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<td>- Physical &amp; Chemical Properties/Changes</td>
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<td>- Elements, Compounds, &amp; Mixture</td>
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<td>- Scientific Method</td>
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<td>- Lab Safety</td>
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<td></td>
<td><strong>Standards</strong> I&amp;B All, 6F <strong>Chapters</strong> 1-2 <strong>Key Activities</strong> - Chemical/PhysProperties/ChangesLab - Separation Lab - Lab Safety Test</td>
</tr>
<tr>
<td><strong>2 days</strong></td>
<td>Careers in Agriculture &amp; Chemistry</td>
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<tr>
<td></td>
<td>- FFA Record Book</td>
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<td></td>
<td><strong>Standards</strong> N/A <strong>Key Activities</strong> - Research/Discussion - Facts &amp; statistics relating to topic</td>
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<tr>
<td><strong>8 Days</strong></td>
<td>Chemical Foundations: Elements, Atoms, &amp; Ions</td>
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<tr>
<td></td>
<td>- Elements</td>
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<td>- Representative Elements</td>
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<td>- Atoms</td>
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<td>- Ions</td>
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<td>- Dalton, Thomson, Rutherford</td>
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<td>- Isotopes</td>
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<td>- Periodic Table</td>
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<td>- Families/Groups</td>
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<td>- Atomic Structure</td>
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<td>- Octet Rule/Electron Configurations</td>
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<td>- Valence Electrons (Be sure to mention)</td>
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<td></td>
<td><strong>Standards</strong> 1A-1I, 11G <strong>Chapters</strong> 3 <strong>Key Activities</strong> - Isotopes Lab - Examples of Chemical Reactions Lab - Relative Mass Lab</td>
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<tr>
<td><strong>4 Days</strong></td>
<td>Atomic Theory, Radioactivity &amp; Nuclear Energy Benchmark 1</td>
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<tr>
<td></td>
<td>- Periodic Trends (3 Days)</td>
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<td></td>
<td>- Alpha, Beta, &amp; Gamma Particles/Radiation (1 Day)</td>
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<tr>
<td></td>
<td><strong>Standards</strong> 1C, 1D, 1G - 1I, 11B-11C <strong>Chapters</strong> 11.4, 19.1, 19.3 <strong>Key Activities</strong> - Flame Tests</td>
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<tr>
<td><strong>10 Days</strong></td>
<td>Nomenclature</td>
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<td>- Cover difference between ionic and covalent/molecular compounds</td>
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<td>- Naming Conventions</td>
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<td>- Binary Compounds</td>
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<td>- Naming Polyatomic Ions, Acids</td>
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<td><strong>Standards</strong> 1D, 2A <strong>Chapters</strong> 4 <strong>Key Activities</strong> - Naming Card Game - Lots of practice!</td>
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<tr>
<td><strong>7 Days</strong></td>
<td>Measurements &amp; Calculations</td>
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<td>- Metric System</td>
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<td>- Scientific Notation</td>
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<td>- Significant Figures</td>
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<td>- Temperature Conversions</td>
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<td>- Density</td>
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<td>- Graphing</td>
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<td><strong>Standards</strong> 4E &amp; 4F <strong>Chapters</strong> 5 <strong>Key Activities</strong> - Measurement Lab - Graphing Lab</td>
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<tr>
<td><strong>10 Days</strong></td>
<td>Chemical Composition Benchmark 2</td>
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<td>- Atoms</td>
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<td>- Molar Mass</td>
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<td>- Percent Composition</td>
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<td>- Percent Yield</td>
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<td>- Empirical &amp; Molecular Formulas</td>
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<td>- Factor Label Method</td>
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<td><strong>Standards</strong> 3B - 3D <strong>Chapters</strong> 6 <strong>Key Activities</strong> - Percent Yield Lab - Halloween Demonstrations</td>
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<tr>
<td><strong>10 Days</strong></td>
<td>Chemical Reactions: An Introduction</td>
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<td>- Single &amp; Double Replacement Reactions</td>
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<td></td>
<td>- Writing Equations</td>
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<td>- Balancing Equations</td>
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<td><strong>Standards</strong> 3A <strong>Chapters</strong> 7 <strong>Key Activities</strong> - Double Replacement Reactions Lab - Ion Lab</td>
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<tr>
<td><strong>10 Days</strong></td>
<td>Reactions in Aqueous Solutions</td>
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<td>- Reaction Classification</td>
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<td>- Predicting Reactions</td>
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<td>- Precipitation</td>
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<td>- Electrolytes</td>
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<td>- Activity Series</td>
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<td><strong>Standards</strong> 1D, 2A, 2C, 3A, 3G, 5A - 5C, 5E, 7B <strong>Chapters</strong> 8 <strong>Key Activities</strong> - Activity Series Lab - Water in a Hydr Lab</td>
</tr>
<tr>
<td>Timeframe</td>
<td>Sections</td>
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<tr>
<td>10 Days</td>
<td>Spectator Ions</td>
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<td>Hydrates</td>
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<tr>
<td>10 Days</td>
<td>Chemical Quantities (Stoichiometry)</td>
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<tr>
<td>~80 Days</td>
<td>Heat &amp; Energy</td>
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<tr>
<td>5 Days</td>
<td>Chemical Bonding: Lewis Structures, Ionic &amp; Covalent Bonds/Compounds, Intro. Polarity (Bulk discussed in Ch. 14), Bond Energy, Molecular Models</td>
</tr>
<tr>
<td>10 Days</td>
<td>Liquids &amp; Solids: Intermolecular Forces, Vapor Pressure, Melting/Boiling, Phase Changes (Phase Diagrams), Freezing Point Depression, Boiling Point Elevation, Melting, Boiling, Freezing, Sublimation, Deposition, &amp; Condensation</td>
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<tr>
<td>10 Days</td>
<td>Solutions: Properties of Solutions, Molarity, Molality, Mole Fraction, Solute &amp; Solvent, Saturated, Unsaturated, Supersaturated, Neutralization, Colligative Properties, Equivalent Acids &amp; Bases, Forming Solutions, Composition of Solutions, Solubility Rules</td>
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<tr>
<td>10 Days</td>
<td>Acids &amp; Bases: pH, pOH, pKa, Titrations, Buffers, Indicators, Conjugate acids and bases</td>
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<tr>
<td>~60 Days</td>
<td>STAR Testing</td>
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<thead>
<tr>
<th>10 Days</th>
<th>Oxidation/Reduction &amp; Electrochemistry</th>
<th>1C, 2A, 3A, 3G</th>
<th>18</th>
<th>- Redox L: - Galvanic Cells</th>
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<tbody>
<tr>
<td></td>
<td>Organic Naming</td>
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<td>Biochemistry</td>
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<td>Nanotechnology</td>
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<td>Environmental Chemistry</td>
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<td>Solar Ovens (Heat &amp; Thermodynamics)</td>
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<td>Quantitative &amp; Qualitative Analysis</td>
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**End of Semester 2**

*This topic is not adequately covered by the text. You can teach it in either place and may need to supplement.*

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*Standards that all students are expected to achieve in the course of their studies are unmarked. Standards that all students should have the opportunity to learn are marked with an asterisk (*).*

**Goal:** Students will develop a knowledge of the basic concepts of the structure of the atom and the Atomic Theory of Matter.

**Obj:** Students will develop a knowledge of the evidence for the Atomic Theory of Matter.

1.1.1: Students will state the Law of Conservation of Mass, Constant Proportions, and Multiple Proportions and indicate how they relate to the atomic theory.

1.1.2: Given the results of Aristotle, Democritus, Dalton, Thomson, Millikan, Rutherford, and Chadwick, students will relate each scientists contribution to the atomic theory of matter.

**Obj:** Students will develop a knowledge of the basic atomic structure of the atom.

1.2.1: Given the Periodic Table of the Elements, students will identify each element by symbol and name and identify each element’s atomic mass and atomic number.

1.2.2: Given the Periodic Table students will relate the position of an element to its atomic number and atomic mass.

1.2.3: Given the Periodic Table students will identify metals, semimetals, nonmetals, and halogens.
1.2.4: Given the Periodic Table students will identify alkali metals, alkaline earth metals, and transition metals, trends in ionization energy, electronegativity, and the relative size of ions and atoms.

1.2.5: Given the Periodic Table students will determine the number of electrons available for bonding.

1.2.6: Given the Periodic Table students will relate the position of an element in the periodic table to its quantum electron configuration and to its reactivity with other elements in the table.

1.2.7: Given the Atomic notion of any element and/or the Periodic Table of the Elements, students will calculate the number of subatomic particles (protons, neutrons, and electrons) present in any element.

1.2.8: Given the percentage abundance and isotopic masses of an element, students will calculate the average atomic mass of any element.

1.3: Obj: Students will develop a knowledge of the nature of the electromagnetic spectrum and its relationship to the distribution of electron in the atom.

1.3.1: Given the complete electromagnetic spectrum, students will relate the visible spectrum to the other major divisions of the electromagnetic spectrum.

1.3.2: Given the wavelength, students will calculate the frequency and its corresponding energy \( E = hf \) and \( c = f \lambda \) and visa versa.

1.3.3: Given Planck’s equation relating light and energy \( E = hf \), students will recognize the dual nature of light and apply the results to the distribution of energy level in the electron cloud of a hydrogen-like atom.

1.3.4: Using the Bohr’s Equations \( EN = -1312kj/n^2 \) and the Bohr theory of the distribution of principle energy levels in the atom, students will calculate energy of the principal energy levels of hydrogen and/or hydrogen-like atoms.

1.3.5: Given the results of Quantum Mechanics developed by Schrodinger and applying Hund’s rule and the Pali exclusion principle, students will translate these results, rules, and principles into the principal energy levels in an atom’s electron cloud, their sublevels, and related atomic orbital (s,p,d,f) and the distribution of electrons in the electron cloud in the atomic orbital.

1.3.6: Given the electron configuration of an element, students will identify that element.

1.4: Obj: Students will develop a knowledge of the periodic relationship inherent in the organization of the Periodic Table of the Elements.

1.4.1: Given the Periodic Table of the Elements, students will
identify the main periods, subperiods, and families of the table.

1.4.2: Given the periodic Table of the Elements. Students will relate the periods, subperiods, and families of the periodic table to the quantum mechanical atom.

1.4.3: Given the Periodic Table of the elements, students will identify the valence electron of each family and the elements in that family and express that distribution by writing correct electron configurations for each element.

1.4.4: Given a Periodic Table of the elements and the Periodic Law, students will predict periodic trends of a family of elements and of a period of elements with respect to atomic mass, atomic numbers, electron number, atomic radii, ionization energy, electron affinity, melting point, chemical reactivity, and electronegativity.

Obj: Students will develop a knowledge of the nature of nuclear chemistry.

1.5.1: Given the identities of all but one of the reactants and products, students will balance equations for nuclear decay.

1.5.2: Given the identities of all but one of the reactants and products, students will identify the type of radioactive decay occurring: alpha, beta, positron, fission, fusion.

Goal: Students will gain an understanding of the conservation of atoms in chemical reactions leads to the principal of conservation of matter and the ability to calculate the mass of products and reactants.

Obj: Students will develop a knowledge of the mole as a number and as a mass.

2.1.1: Given the term mole, students will recognize that it as equal to Avogadro's number of particles (6.023 x 10).

2.1.2: Given the atomic mass of an element, students will recognize it as the mass in grams equal to Avogadro's number of particles (1 mole).

2.1.3: Given the term molar mass, students will recognize it as the mass in grams equal to ne mole of a substance (atomic, formula, or molecular).

2.1.4: Given the Periodic Table of the Elements, students will identify each element and its molar mass.

2.1.5: Given the chemical formula for a compound and the Periodic Table of the Elements, students will determine its molar mass.

2.1.6: Given the chemical formulas for several compounds, students will identify those which are empirical formulas and those which are molecular formulas.

2.1.7: Given appropriate data, students will calculate the molecular formula of a substance.
2.1.8: Students will understand the quantity one mole is set by defining, one mole of carbon 12 atoms to have a mass of exactly 12 grams.

2.2: Obj: Students will develop a knowledge of the importance of balanced equations in chemistry.

2.2.1: Given a balanced equation, students will identify the reactants and products.

2.2.2: Given an unbalanced equation. Students will balance the equation by inspection.

2.2.3: Given the reactants, products, and chemical formulas for a reaction, students will write and balance an equation for the described reaction.

2.2.4: Given a balanced chemical equation, students will verify that it obeys the Law of Conservation of Mass.

2.2.5: Given a balanced equation, students will identify the equations as acid-base neutralization, precipitation, synthesis, decomposition, etc.

2.2.6: Given a chemical reaction students will calculate percent yield.

2.2.7: Given a chemical reaction students will identify reactions that involve oxidation and reductions and how to balance oxidation-reduction reactions.

2.2.8: Given a balanced equation and appropriate data, students will calculate using the mole method the stoichiometric relationships of reactants to reactants, reactants to products, or products to products, (weight/weight, weight/volume, and volume/volume problems)

Goal: Students will gain an understanding of 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, and the nomenclature of inorganic compounds.

3.1: Obj: Students will develop a knowledge of the types of chemical bonds.

3.1.1: Given the terms ionic, covalent, metallic, hydrogen bonding, and Van der Waals dispersion forces, students will describe how each type of bond is formed.

3.1.2: Given the Periodic Table of the Elements and/or the electronegativities of the elements, students will determine which elements are likely to combine to for ionic bonds and which elements are likely to combine to form covalent bonds.

3.1.3: Given the Periodic Table of the Elements and using the octet rule, students will write the Lewis electron dot structure of the representative elements.

3.1.4: Given the Periodic Table of the elements, students will write
Lewis electron dot structure for simple molecules and polyatomic ions.

3.1.5: Given the Periodic Table of Elements, students will write the repeating patterns of negative and positive ions held together by electrostatic attraction.

3.1.6: Using only the Periodic Table, students will describe electronegativity and ionization energy trends and compare the relative polarity of different bonds.

Obj: Students will develop a knowledge of the structure and geometry of molecules, ions, and complex ions.

3.2.1: Given or having derived the Lewis structure of a simple molecule or polyatomic ion, students will use valence shell electron pair repulsion (VSEPR) and/or valence bond theory (Atomic orbital and orbital hybridization) to predict the geometric arrangement of the elements of a molecule, polyatomic ion, or complex ion, and describe its shape using a descriptive term (linear, bent pyramidal, trigonal planer, tetrahedral).

3.2.2: Given or having derived the molecular structure of a molecule using VSEPR or the valence bond theory, students will identify the type of bonding orbitals or hybridization of bonding orbitals used by the combined atoms which result in the determination of the shape of the molecule.

Obj: Students will develop a knowledge of the nomenclature of inorganic compounds.

3.3.1: Given the definition of an acid, base, and salt, students will identify each form—its formula or their name.

3.3.2: Given the rules (traditional and/or IUPAC) for naming binary inorganic compounds, students will name and/or write the formula for binary inorganic acids, bases, salts, complex ions, and nonmetal compounds.

3.3.3: Given the rules (traditional and/or IUPAC) for naming ternary inorganic compounds, students will name and/or write the formula for ternary inorganic acids, salts, coordination compounds, complex ions and polyatomic ions.

Obj: Students will develop a knowledge of the nomenclature and structure of simple organic compounds. (optional)

3.4.1: Given the structural formula of a simple organic compound, students will classify it as a hydrocarbon, aromatic, alkylhalide, aldehyde, ketone, acid, amine, etc.

3.4.2: Given the molecular formula of a simple organic compound students will write its structural formula.

3.4.3: Given the IUPAC name of a simple organic compound, students will write its structural formula.

3.4.4: Given the structural formula of a simple organic compound, students will give its IUPAC name.
Goal: Students will gain an understanding of the kinetic molecular theory describes the motion of atom and molecules and explain the properties of gases.

Obj: Students will develop a knowledge of the nature of the gaseous state.

4.1.1: Given the physical characteristics of the gaseous state, students will classify a substance as a gas.

4.1.2: Given the kinetic theory of matter, students will explain the observed physical characteristics of the gaseous state.

4.1.3: Given appropriate data and the kinetic theory of matter, students will recognize the significance of absolute zero.

4.1.4: Given appropriate data, students will use Graham’s Law to calculate the relative velocities of gaseous species and relate these to the kinetic theory of matter.

4.1.5: Given the Kelvin temperature scale, students will interconvert Celsius and Kelvin temperatures.

4.1.6: Given observable pressure on the surface, students will identify that random motion of molecules and their collisions with a surface create that observable pressure on that surface.

4.1.7: Given appropriate data students will explain the random motion of molecules in correlation with the diffusion of gases.

4.1.8: Given the appropriate data, students will recognize the mathematical relationship between moles, pressure, volume, and temperature for a gas (Boyle’s and Charles Laws, Avogadro’s Hypothesis, etc).

4.1.9: Given the standard temperature and pressure (STP) students will define the values and meaning.

4.1.10: Given the ideal gas law in the form PV=nRT students will solve problems.

4.1.11: Given Dalton’s Laws of Partial Pressure, students will calculate the partial pressure of each gas in the mixture and/or total pressure of a mixture of gases.

Obj: Students will develop a knowledge of the condensed phases of matter-liquids and solids.

4.2.1: Given the physical properties of the liquid and solid states, students will identify a substance as a liquid or a solid.

4.2.2: Given the heat capacity of each state of matter and heats of fusion and vaporization for a pure substance, students will calculate the quantity of heat required for the conversion of a substance from one state to another.

4.2.3: Given appropriate data, students will construct graphically a cooling curve and/or heating curve and identify the significant region of the graph: solid state, liquid state,
gaseous state, fusion curve, vaporization curve.

Obj: Students will develop a knowledge of the effect of chemical bonds on the type of solid formed.

4.3.1: Given appropriate data, students will determine the type of solid (ionic, molecular, metallic, covalent network) formed by a substance and relate its formation to the type of intermolecular, interatomic, and interionic bonding (ionic, covalent, metallic, hydrogen, Van Der Waal’s).

4.3.2: Given the physical properties of various solids, students will distinguish among ionic, molecular, covalent network, and metallic solids with regard to particle structure (molecular, ion, or atomic).

4.3.3: Given the physical properties of various solids, students will compare different molecular substances with respect to the types of intermolecular forces (dipole forces, hydrogen bonding, dispersion (Van Der Waal’s).

Goal: Students will gain an understanding that acids, bases, and salts are three classes of compounds that form ions in water solutions.

Obj: Students will develop a qualitative understanding of the concept of chemical equilibrium.

5.1.1: Given the definition of equilibrium, students will relate the definition to the reversibility of chemical reactions and reaction rates.

5.1.2: Given the definition of equilibrium, students will recognize that the process is dynamic.

5.1.3: Given La Chatelier’s principal, students will predict the effect of changes in temperature, concentration and pressure will have of the chemical state of equilibrium in homogeneous and in heterogeneous systems.

Obj: Students will develop a quantitative understanding of equilibrium in the gaseous state.

5.2.1: Given a balanced chemical equation, students will recognize the relationship between equilibrium, the Law of Mass Action, and La Chatelier’s principle.

5.2.2: Given balanced chemical equations, students will write a equilibrium law expression for each equilibrium system.

5.2.3: Given appropriate data, students will calculate the value of the equilibrium constant either as Kp or Kc of the concentrations of the species in equilibrium using the equilibrium law expression.

5.2.4: Given several sets of appropriate data of the same equilibrium system, students will recognize the relationship between shifting equilibria (La Chatelier’s Principal), the equilibrium law expression, and the value of the equilibrium constant.
Obj: Students will develop a quantitative understanding of solubility equilibrium.

5.3.1: Given or having developed graphic data, students will recognize the relationship of the solubility of a substance to the Celsius temperature.

5.3.2: Given a solubility table, students will predict the solubility of a variety of compounds.

5.3.3: Given a solubility table, students will predict whether a precipitate will form when two electrolytes are mixed and will write a balanced net ionic equation expressing what they believed to have occurred.

5.3.4: Given the formula for a slightly soluble ionic compound, students will write an equation for its dissociation in water to form ions.

5.3.5: Given the formula for a slightly soluble ionic compound and the balance equation for its dissociation in water, students will write the solubility law expression, Ksp.

5.3.6: Given appropriate data, students will calculate the value of the Ksp or the concentrations (molarity or solubility) of the ionic or formula species in solution using the solubility law expression.

Obj: Students will develop a quantitative understanding of acid-base chemistry and acid-base equilibrium.

5.4.1: Given the definition of an Arrhenius acid and base and/or a Bronsted-Lowry acid and base, students will identify each acid and base from a variety of inorganic compounds.

5.4.2: Given the equation of an acid-base reaction, students will identify the Arrhenius acid and base and/or the Bronsted-Lowry acid-base conjugate pairs.

5.4.3: Given the chemical properties of Arrhenius acids and bases, students will predict the chemical behavior of several Arrhenius acids and bases.

5.4.4: Given an Arrhenius acid and base, students will write a balanced chemical reaction for their neutralization forming a salt water.

5.4.5: Given the definition of an acid-base titration, students will recognize the relationship between reactants and products.

5.4.6: Given the definition and chemical characteristics of an acid-base indicator, students will recognize their use in acid-base titrations.

5.4.7: Given appropriate data for an acid-base titration, students will calculate stoichiometrically using the mole method, the molarity of a solution.

5.4.8: Given acids and bases students will know that acids are hydrogen-ion-donating and bases are hydrogen-ion-accepting substances.
5.4.9: Given the formula for an acid or a base, students will write the equation for their dissociation in water.

5.4.10: Given the pH scale students will characterize acid and base solutions.

5.4.11: Given the relationship between pH and the hydrogen ion concentration of a solution (pH equation), students will calculate the pH or the hydrogen ion concentration of a solution.

5.4.12: Given the equation for the dissociation of water, students will write the ion product expression for water, Kw.

5.4.13: Given the Kw for water, students will calculate the hydroxide concentration of an acidic solution or the hydrogen ion concentration of a basic solution.

5.4.14: Given the equation pH + pOH = 14 and appropriate data, students will calculate the pH, the pOH, the hydrogen ion concentration, and/or the hydroxide ion concentration of a solution.

5.4.15: Given buffers students will stabilize pH in acid base reactions.

5.4.16: Given an equation for the dissociation of a weak acid or base in water, students will write the ion product expression of an acid (Ka) or a base (Kb).

Goal: Students will gain an understanding that solutions are homogenous mixture of two or more substances and the nature of chemical solutions.

Obj: Students will develop a knowledge of the chemical methods of expressing the concentration of a solution.

6.1.1: Given the definition of a mixture, students will identify solutions as mixtures.

6.1.2: Given the definition of the components of a mixture, students will identify the solute and the solvent of several solutions.

6.1.3: Given the appropriate data, students will describe how to prepare a solution to a desired molarity, molality, mole fraction, and/or mass percentage concentration.

6.1.4: Given the equation for the mole fraction of a solution and appropriate data, students will calculate the fraction of a solution that is solute and the fraction of a solution that is solvent.

6.1.5: Given the equation for the molarity of a solution, and appropriate data, students will calculate the molarity of the solution, mass of solute, moles of solute, or volume of solution/solvent required to prepare the solution.

6.1.6: Given the concept of random molecular motion students
will describe the dissolving process at the molecular level.

6.1.7: Given the equation of the molality of a solution and appropriate data, students will calculate the molality of the solution, mass of solute, moles of solute, or mass of solvent required to prepare the solution.

6.1.8: Given the equation for the percentage by mass concentration of a solution and appropriate data, students will calculate the percentage concentration of the solution, mass of solute, or mass of solvent required to prepare the solution.

6.1.9: Given the appropriate data students will describe how temperature, pressure, and surface area affect the dissolving process.

6.1.10: Given the appropriate data students will describe how to calculate the concentration of a solute in terms of grams per liter, molarity, parts per million, and percent composition.

6.1.11: Given the chemical formula of a solute, students will write a balanced equation illustrating the formation of ions (dissociation of the solute) in water.

6.1.12: Given a balanced equation of the dissolving of an ionic compound in water, students will identify the steps on the solution process: ionization and/or dissociation and hydration.

6.1.13: Given the appropriate data students will describe how molecules in a solution are separated or purified by the methods of chromatography and distillation.

Obj: Students will develop a knowledge of the colligative properties of solutions.

6.2.1: Given the definition of a colligative property of a solution, students will recognize the following as colligative behavior: freezing point depressions, boiling point elevations, and vapor pressure depressions.

6.2.2: Given the definition and chemical properties of electrolytes, students will identify several compounds as either electrolytes or nonelectrolyte.

6.2.3: Given several solutes, students will compare the colligative properties of electrolytes to those of nonelectrolyte.

6.2.4: Given appropriate data and freezing point depression equation, students will calculate the freezing point of a solution, the molar mass of the solute, or the molality of the solution.

6.2.5: Given appropriate and the boiling point elevation equation, students will calculate the boiling point of a solution, the molar mass of the solute, or the molality of the solution.
Goal: Students will gain an understanding that energy is exchanged or transformed in all chemical reactions and physical changes of matter.

Obj: Students will develop an understanding of chemical thermodynamics.

7.1.1: Given the appropriate data, students will describe temperature and heat flow in terms of the motion of molecules or atoms.

7.1.2: Given the appropriate data, students will describe that chemical processes can either release (exothermic) or absorb (endothermic) thermal energy.

7.1.3: Given the appropriate data, students will describe energy is released when a material condenses or freezes and is absorbed when a material evaporates or melts.

7.1.4: Given the appropriate values for specific heat and heat of phase change students will solve problems involving heat flow and temperature changes.

7.1.5: Given Hess’s law students will calculate enthalpy change in a reaction.

7.1.6: Given Gibbs free energy equation students will determine whether a reaction would be spontaneous.

Goal: Students will gain an understanding of the concept of thermochemistry and chemical thermodynamics.

Obj: Students will develop a knowledge of the relationship between heat and chemical reaction.

8.1.1: Given the definition of heat, energy, and temperature students will relate each to a chemical system.

8.1.2: Given the definition of kinetic and potential energy, students will relate these definitions to chemical compounds and chemical processes and differentiate between specific examples of each.

8.1.3: Given the Law of Conservation of Energy, students will apply the concept to chemical processes and verify its conclusion.

8.1.4: Given the appropriate data and chemical formulas, students will write a balanced thermochemical equation including the enthalpy of reaction.

8.1.5: Given the terms of endothermic and exothermic, students will relate the direction of heat flow to the chemical reaction to the sign of \( ^\Delta H \).

8.1.6: Given a thermochemical equation, students will express the heat in \( ^\Delta H \) notation.

8.1.7: Given specific thermochemical equations and their \( ^\Delta H \), students will identify them as enthalpies of formation and/or combustion.
8.1.8: Given a thermochemical equation, students will calculate stoichiometrically using the mole method, the quantitative relationship between mass, mole, and heat.

Goal: Students will gain an understanding that chemical reaction rates depend on factors that influence the frequency of collision of reactant molecules.

Obj: Students will develop knowledge of chemical reaction.

9.1.1: Given the appropriate data students will describe the rate of reaction is the decrease in concentration of reactants or the increase in concentration of products with time.

9.1.2: Given the appropriate data students will describe how reaction rates depend on such factors as concentration, temperature, and pressure.

9.1.3: Given the appropriate data students will describe the role a catalyst plays in increasing the reaction rate.

9.1.4: Given the appropriate data students will know the definition and role of activation energy in a chemical reaction.

10.0 Goal: Students will gain an understanding of the concept of chemical kinetics.

Obj: Students will develop a knowledge of the Collision Theory and its relationship to chemical kinetics.

10.1.1: Given the Collision Theory, students will relate each factor in the theory to its effect on the rate of a chemical reaction.

10.1.2: Given the Collision Theory, students will predict the effect of temperature, pressure, and concentration changes and catalysts.

10.1.3: Given appropriate data, students will construct a reaction coordinate diagram and label the significant region of the diagram: reactants products, activation energy forward and reverse, activated complex, and enthalpy of reaction.

10.1.4: Given the chemical and physical characteristics of a catalyst, students will relate a catalysts chemical activity to the Collision Theory and reaction kinetics.

10.1.5: Given a reaction coordinate diagram, students will note changes in the diagrams form with the addition of a catalyst to the reaction.

Goal: Students will gain an understanding of chemical equilibrium is a dynamic process at the molecular level.

Obj: Students will develop a knowledge of chemical equilibrium.

11.1.1: Given LeChatelier’s principle students will be able to predict the effect of changes in concentration, temperature, and pressure.
11.1.2: Given the appropriate data, students will describe forward
and reverse reaction rates are equal when equilibrium
established.

11.1.3: Given the appropriate data, students will write and
calculate an equilibrium constant expression for a reaction.

Goal: Students will gain an understanding of oxidation, reduction, and
electrochemical processes.

Obj: Students will develop a knowledge of oxidation numbers,
oxidation, and reduction and the process by which redox
reactions are balanced.

12.1.1: Given the rules for assigning oxidation numbers, students
will assign oxidation numbers to each elements of a
compound, ion, or polyatomic ion.

12.1.2: Given the definition of oxidation, students will identify the
reducing agent in a chemical reaction.

12.1.3: Given the definition of reduction, students will identify the
oxidizing agent in a chemical reaction.

12.1.4: Given the rules for balancing redox reactions, students will
balance redox reactions by inspection or by the half-
reaction method in acid, basic, and neutral solutions.

12.1.5: Given a balanced redox reaction and appropriate data from
a redox titration, students will calculate stoichiometrically
using the mole method, the molarity of a solution.

Obj: Students will develop knowledge of electrolytic cells.

12.2.1: Given a diagram of an electrolytic cell, students will label
the important compounds.

12.2.2: Given a diagram of an electrolytic cell, students will
compare and contrast it with a diagram of an electrochemical
cells.

12.2.3: Given Faraday’s Law of Electrolysis, students will
recognize the relationship between a faraday of electrons
and a mole of electrons.

12.2.4: Given Faraday’s Laws of Electrolysis and appropriate
data, students will calculate the quantity of current
required, the time required, the number of faradays of
electrons, the number of moles of electrons, or the mass
(Volume) of substance oxidized or reduced during an
electrolytic process.

Obj: Students will develop a knowledge of standard electrode
potentials.

12.3.1: Given a table of standard electrode potentials, students will
compare the relative strengths of substances as oxidizing
and reducing agents.

12.3.2: Given a table of standard electrode potentials, students will
predict the spontaneity of a redox reaction form the total voltage of the reaction.

Obj: Students will develop a knowledge of electrochemical cells.

12.4.1: Given a diagram of an electrochemical cell, students will label the importance components.

12.4.2: Given a diagram of an electrochemical cell, students will compare and contrast it with an electrolytic cell.

12.4.3: Given a table of standard electrode potentials, students will determine the anode and cathode and calculate the cell voltage at standard conditions.

Goal: Students will gain understanding of bonding characteristics of carbon allow the formation of many different organic molecules of varied sizes, shapes, and chemical properties and provide the biochemical basis of life.

Obj: Students will develop an understanding of the bonding characteristics.

13.1.1: Given the structural formula of a large molecules (Polymers) such as proteins, nucleic acids, and starch students will write the repetitive combination of simple subunits.

13.1.2: Given the appropriate data students will write the bonding characteristics of carbon that results in the formation of a large variety of structures ranging from simple hydrocarbons to complex polymers and biological molecules.

13.1.3: Given the appropriate data students will describe amino acids are the building blocks of proteins.

13.1.4: Given the appropriate data students will describe the system for naming the ten simplest linear hydrocarbons and isomers that contain single bonds, simple hydrocarbons with double and triple bounds, and simple molecules that contain a benzene ring.

13.1.5: Given the functional groups students will identify that which forms the basis of alcohols, ketones, ethers, amines, esters, aldehydes, and organic acids.

13.1.6: Given the R-group structure of amino acids students will combine them to form the polypeptide backbone structure of proteins.

14.0 Goal: Students will develop an understanding of Nuclear processes those in which an atomic nucleus changes, including radioactive decay of naturally occurring and human-made isotopes, nuclear fission, and nuclear fusion.

Obj: Students will develop an understanding of nuclear processes.

14.1.1: Given the appropriate data students will explain how protons and neutrons in the nucleus are held together by
nuclear forces that overcome the electromagnetic repulsion between the protons.

14.1.2: Given the appropriate data students will calculated by using \( BU = mc^2 \) the energy released per gram of materials is much larger in nuclear fusion or fission reactions than in chemical reactions. The change in mass is small but significant in nuclear reaction.

14.1.3: Given the appropriate data students will describe naturally occurring isotopes of elements are radioactive, as are isotopes formed in nuclear reactions.

14.1.4: Given the appropriate data students will describe the three most common forms of radioactive decay (alpha, beta, and gamma) and know how the nucleus change in each type of decay.

14.1.5: Given the appropriate data students will describe alpha, beta, and gamma radiation produce different amounts and kinds of damage in matter and have different penetrations.

14.1.6: Given the appropriate data students will know how to calculate the amount of a radioactive substance remaining after an integral number of half lives have passed.

14.1.7: Given the appropriate data students will describe how protons and neutrons have substructures and consist of particles called quarks.

Goal: Students will gain an understanding of the basic concepts of measurement and mass.

Obj: Students will develop an understanding of the system of measurement.

15.1.1: Given the conversion (equivalent factors) between the metric system of measurement and the English system of measurement conversions in length, volume, and mass between the two systems.

15.1.2: Given the formula expressing the relationship of Fahrenheit and Celsius temperatures, students will make mathematical conversions between the two temperature scales.

15.1.3: Given appropriate laboratory glassware and apparatus, students will identify the items by name.

15.1.4: Given appropriate directions and rules for the use of laboratory glassware and apparatus and for expected laboratory behavior, students will conduct laboratory experimentation in a safe and prudent manner.

Obj: Students will develop a knowledge of the basic nature of matter.

15.2.1: Given the definition of homogeneous and heterogeneous, students will differentiate between pure substances and mixture.
15.2.2: Given specific properties of elements or compounds, students will identify the properties as physical or chemical.

15.2.3: Given the equation for density \((D = \frac{M}{V})\), students will recognize the relationship between mass and volume.

Goal: Students will gain an understanding of the basic concepts of Agriculture Chemistry.

Obj: Students will develop an understanding of what agriculture chemistry is and why it is important.

16.1.1: Given the appropriate data students will describe the importance of agriculture chemistry in our society.

16.1.2: Given the appropriate data students will describe how agriculture chemistry impacts their lives.

16.1.3: Given the appropriate data students will describe how agriculture chemistry has career opportunities.

Obj: Students will incorporate scientific principals with modern agriculture practices.

16.2.1: Given the appropriate data students will describe how agriculture chemistry research is important.

16.2.2: Given the appropriate data students will conduct an agriculture chemistry research project.

C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.

D. BACKGROUND INFORMATION

25. Context for Course (optional)

26. History of Course Development (optional)
### Perris Union High School District
Course of Study

#### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>9. Subject Area</th>
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<tbody>
<tr>
<td>The Art &amp; History of Floral Design</td>
<td>□ History/Social Science</td>
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<tr>
<td></td>
<td>□ English</td>
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<td>□ Mathematics</td>
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<td></td>
<td>□ Science</td>
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<td>□ Language other than English</td>
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<td>X Visual &amp; Performing Arts</td>
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<td>X College Prep Elective</td>
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<td>7 8 9 10X 11X</td>
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<tr>
<th>3. Transcript Course Code / Number</th>
<th>11. Meets “Honors” Requirements?</th>
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<tr>
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<th>5. Required for Graduation?</th>
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<td>□ Yes X No</td>
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<tr>
<th>6. Meets UC/CSU Requirements?</th>
<th>12. Unit Value / Length of Course</th>
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<tr>
<td>□ Yes X No</td>
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<td>□ 0.5 (half year or semester equivalent)</td>
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<td>X 1.0 (one year equivalent)</td>
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<td>□ 2.0 (two year equivalent)</td>
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<td>□ Other: ___________________</td>
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<th>7. Meets “AP” Requirements?</th>
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<td>□ Yes X No</td>
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<th>8. Course Author</th>
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<tbody>
<tr>
<td>Name: Chris Maddalena/Amanda Sanchez</td>
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<td>January 2008</td>
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<th>13. APPROVALS:</th>
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<tr>
<td>Name/Signature</td>
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<tr>
<td>Subject Area Council:</td>
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<tr>
<td>Educational Planning Council:</td>
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<td>Board Approval:</td>
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14. Pre-Requisites

1 Year of Agriculture Course work with a C or better

15. Co-Requisites

None

16. Brief Course Description

The Art and History of Floral Design provides an introduction to artistic and creative perception including aesthetic valuing through a series of projects in various media including tempera, pencil, flowers, tile, and a variety of papers. Students are also introduced to the elements and principles of visual art design such as line, shape/form, color, balance, and emphasis using a series of floral-based projects to explore the connections, relations, and application to visual arts design. Students will research and study floral trends to understand and develop an appreciation for floral design within historical and cultural, formal and casual, ceremonial and traditional, including an understanding that floral designs are affected by society, culture, history, politics, and economic influence. Various assignments based on abstract two and three dimensional designs, historical culture and theory, color theory, and analytical critiques of various floral art works using design vocabulary in conjunction with development of technical skills in floral art will serve as a foundation for more complex works such as multi-part floral designs and creative expression through wedding consultations.
B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes (California State Standards)

* Not covered on CST.

- 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
# 18. Course Objectives

<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
<th>Text Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.0 ARTISTIC PERCEPTION</strong></td>
<td>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.</td>
<td>2,3,4,5,6,11,12,17</td>
</tr>
<tr>
<td>- Develop Perceptual Skills and Visual Arts Vocabulary</td>
<td>1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.</td>
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<tr>
<td>- Analyze Art Elements and Principles of Design</td>
<td>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.</td>
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<tr>
<td>- Impact of Media Choice</td>
<td>1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.</td>
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<td>-</td>
<td>1.5 Analyze the material used by a given artist and describe how its use influences the meaning of the work.</td>
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<tr>
<td>-</td>
<td>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.</td>
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<tr>
<td><strong>2.0 CREATIVE EXPRESSION</strong></td>
<td>2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.</td>
<td>8,14,15</td>
</tr>
<tr>
<td>- Skills, Processes, Materials, and Tools</td>
<td>2.2 Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.</td>
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<tr>
<td>- Communication and Expression Through Original Works of Art</td>
<td>2.3 Develop and refine skill in the manipulation of digital imagery (either still or video).</td>
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<td>-</td>
<td>2.4 Review and refine observational drawing skills.</td>
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<td>-</td>
<td>2.5 Create an expressive composition, focusing on dominance and subordination.</td>
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<td>-</td>
<td>2.6 Create two or three-dimensional work of art that addresses a social issue.</td>
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<tr>
<td><strong>3.0 HISTORICAL AND CULTURAL CONTEXT</strong></td>
<td>3.1 Identify similarities and differences in the purposes of art created in selected cultures.</td>
<td>1,13,16,18,19</td>
</tr>
<tr>
<td>- Role and Development of the Visual Arts</td>
<td>3.2 Identify and describe the role and influence of new technologies on contemporary works of art.</td>
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<tr>
<td>- Diversity of the Visual Arts</td>
<td>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.</td>
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<tr>
<td>-</td>
<td>3.4 Discuss the purposes of art in selected contemporary cultures.</td>
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</tbody>
</table>
| 4.0 AESTHETIC VALUING | 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.  
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. | 2,4,5,6,8,14 |
5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS
- Connections and Applications
- Visual Literacy
- Careers and Career-Related Skills

A. Student will understand the importance of Leadership/FFA
- Floral Contest
- Program of Work
- Community Service

5.2 Create a work of art that communicates a cross-cultural or universal theme taken from literature or history.

5.3 Compare and contrast the ways in which different media (television, newspapers, magazines) cover the same art exhibition.

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 (aestheticians).

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.

11. Students will have a Supervised Occupational Experience (SOE)
- Practice record book problems
- Types of Projects
- Student Data Sheet/Project Research or Plan
- Fair project ideas
- Business Agreement
- List of floral supplies and flowers
19. Texts & Supplemental Instructional Materials

The Art of Floral Design, by Norah T. Hunter; pub Delmar
Art Fundamentals, by Otto Ocvirk; pub McGraw Hill
Art Talk, by Rosalind Ragans; pub Glencoe & McGraw-Hill
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
20. Key Assignments

- 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 notes from lectures, drawings, and class exercises. Students will build upon this notebook through each unit of instruction utilizing both sides of the brain.
- 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
- 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
- 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.
• 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
• Add information, notes, and drawing to Interactive Notebook on color harmony, value, and schemes
• 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.

21. Instructional Methods and/or Strategies

• Direct instruction
• Demonstrations
• Project-based learning
• Lecture
• Cooperative learning
• Reading assignments
• Video and CD-ROM lessons
• Exhibitions of student art work
• Peer and teacher evaluation
• Interactive Notebook
• Art/Floral work portfolio
• Class discussions
• Additions to student art and floral Portfolio Projects: applying focal point to student works
• 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.
• 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 exhibition.
• Create a two- dimensional or three-dimensional design incorporating elements and principles as applied to a specific theme and culture.

22. Assessment Methods and/or Tools
• Teacher observation
• Homework assignments
• Quizzes and tests
• Projects
• Interactive notebook
• Essays and reports
• Student demonstrations
• Art/Floral work portfolio
• Rubrics
• Participation
D. BACKGROUND INFORMATION

24. Context for Course (optional)

25. History of Course Development (optional)
Perris Union High School District  
Course of Study

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>9. Subject Area</th>
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<tbody>
<tr>
<td>Agriculture Government</td>
<td>☑ History/Social Science</td>
</tr>
<tr>
<td>2. Transcript Title / Abbreviation</td>
<td>☐ English</td>
</tr>
<tr>
<td>Ag Government</td>
<td>☐ Mathematics</td>
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<td>3. Transcript Course Code / Number</td>
<td>☐ Science</td>
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<td>5. Required for Graduation?</td>
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<td>7 8 9 10 11 12X</td>
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<table>
<thead>
<tr>
<th>8. Course Author</th>
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<tr>
<td>Name: Chris Maddalena</td>
<td>☑ 0.5 (half year or semester equivalent)</td>
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<td>Date Submitted: September 13, 2004</td>
<td>☐ 1.0 (one year equivalent)</td>
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<td>☐ 2.0 (two year equivalent)</td>
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<tr>
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<tr>
<td>9/21/04 SAC - 1st Reading</td>
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<td>10/19/04 SAC - 2nd Reading/Vote</td>
<td>CONDITIONAL APPROVAL – SEE BELOW</td>
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<td>Steve Spraker</td>
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<td>Jacqueline Cooper</td>
<td>12-02-04</td>
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<tr>
<td>Board Approval:</td>
<td>Dennis D. Murray</td>
<td>01-19-05</td>
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CONDITIONAL APPROVAL:
Approved by SAC as pilot for 2005-06 school year.
End-of-Level assessment used for all Government classes will be given to Ag Government students.
Permanent status will be recommended if students perform at average and above in comparison to regular Government classes.
14. Pre-Requisites

One year of Agriculture with a C or better.

15. Co-Requisites

None

16. Brief Course Description

America’s agricultural industry is the mainstay of the United States. An understanding of the American political process, its influence on agriculture and the individual will be the main focus. Students will study the constitution, governments, federalism and the U.S. Farm Bill and policies. To gain a working knowledge of which agencies of government affect particular problems in the lives of citizens, students will be prepared to vote, to reflect on their responsibilities, and to participate in community activities. Supervised agricultural experiences and FFA participation are required.
B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes

The student:

1. Analyze the basic principles of the United States Constitution.

2. Assess the impact of the Bill of Rights and the civil rights amendments on the social and political development of the United States.

3. Define the relationships between the powers of federal state and local governments as well as its affect on the agriculture industry.

4. Examine the relationship between the three branches of the federal government and its influence on the agricultural industry.

5. Discuss how political opinions and orientations are formed.

6. Summarize the essential steps in all elections.

7. Describe citizen and group interaction with governmental entities including the involvement of the Farm Bureau and the Grange.

8. Compare and contrast the basic political structures in the world today.

9. Analyze various means of individual participation in politics at all levels.

10. Investigate the impact of governmental actions on daily life.


12. Explain the affects of government organizations (USDA, FDA, etc.) on agriculture and agribusiness.

13. Identify major points of law as applied to agriculture enterprises.

14. Analyze the relationship between public opinion the electoral process especially in states where the agricultural industry is a major player.

15. Describe the impact of widespread citizen participation on the democratic process.

16. Analyze how the media influences domestic and world issues.

17. Exhibit an understanding of geographic literacy and its relationship to government.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Introduction - Overview of Course</td>
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<tr>
<td>II. Brief History of U.S. Agriculture</td>
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<tr>
<td>III. The Government</td>
<td>12.1 (1)</td>
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<tr>
<td>A. What is Politics?</td>
<td>12.1 (2,3)</td>
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<tr>
<td>B. Why have Government?</td>
<td>12.8 (1,2,3)</td>
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<tr>
<td>C. What is Democracy?</td>
<td>12.7 (6,7)</td>
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<tr>
<td>*D. General Impact of American Governmental on Daily Life. Separation of powers; checks and balances.</td>
<td>12.6 (2,3,4,6)</td>
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<tr>
<td>E. Structure and Operation of the Government</td>
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<tr>
<td>*F. Interaction of the Major Institutions; Federal, Executive and Judicial Branches</td>
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<tr>
<td>G. Leadership Development Activities</td>
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<tr>
<td>IV. The Constitution</td>
<td>12.4 (1,3,4,5,6)</td>
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<tr>
<td>*A. Development of the Constitution, formal &amp; informal changes</td>
<td>12.4 (2)</td>
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<td>B. Principles considered essential to the Constitution</td>
<td>12.1 (6), 12.2 (1), 12.5 (1)</td>
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<td>C. Evolution of the Constitution; Formal and informal changes</td>
<td>12.2 (4,5), 12.5 (3,4)</td>
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<td>V.</td>
<td>Civil Liberties</td>
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<tr>
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<td>A. The Bill of Rights</td>
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<td>B. Minority Groups and Women's Rights</td>
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<td>C. Development and History of Civil Rights and Civil Liberties through Judicial Interpretation.</td>
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<td>D. The Concept of Citizenship</td>
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<tr>
<td>VI.</td>
<td>Federalism</td>
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<tr>
<td></td>
<td>A. Structure of Federal, State and Local Governments</td>
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<td>B. Role of the Local Government</td>
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<td></td>
<td>C. Relationship between Federal and State Governments</td>
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<td>D. Taxation and the Tax System in relation to Agribusiness</td>
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<td>E. Major Points of Law as applied to Agricultural Enterprise</td>
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<td>VII.</td>
<td>Comparative Governments</td>
</tr>
<tr>
<td></td>
<td>A. Major Forms of Government around the World</td>
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<tr>
<td></td>
<td>B. Changes in National Policy and World Leadership in relation to War, Treaties and Trade</td>
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<tr>
<td>VIII.</td>
<td>Agricultural Policy</td>
</tr>
<tr>
<td></td>
<td>A. Current Domestic and International Issues in the Context of U.S. Agricultural Policy</td>
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<tr>
<td>B. Post-war Preoccupation with Security</td>
<td>12.3 (2,3,4)</td>
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<tr>
<td>C. Affects of Government Organizations on Agriculture and Agribusiness</td>
<td>12.3 (1)</td>
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<tr>
<td>D. Supervised Agricultural Experiences</td>
<td>12.6 (1)</td>
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</table>

**IX. Citizen Participation in Politics**
- A. Formation of Opinions
- B. Interest Groups
- C. Political Parties and election process
- D. Other Mechanisms for Citizens to Organize and Communicate with the Government

| C. Political Parties and election process | 12.6 (1,2) |
|                                          | 12.2 (3) |

| X. Domestic/Foreign Policy                 | 12.7 (2) |
| A. Budget                                 | 12.9 (1) |
| B. Social welfare                         | 12.9 (1) |
| 1. Social Security                        | 12.9 (1) |
| 2. Medicare                               | 12.9 (1) |
| 3. Environment                            | 12.9 (1) |
| 4. Energy                                 | 12.9 (1) |
| C. Foreign Policy                         | 12.9 (1-8) |
| 1. Defense                                | 12.9 (1-8) |
| 2. History of foreign action              | 12.9 (1-8) |
| 3. Cold War                               | 12.9 (1-8) |
| 4. Post-Cold War                          | 12.9 (1-8) |
19. Course Outline

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<th>Outline</th>
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</tbody>
</table>
20. Texts & Supplemental Instructional Materials:

   America Government, West


   Marketing and Regulatory Programs, USDA.
   www.aphis.usda.gov/mrp

   State of California Core Curriculum

21. Key Assignments

   Local Government participation
   Community Service Hours

22. Instructional Methods and/or Strategies

   1. In depth readings of the textbook and periodicals.
   2. Field study, independent readings, and academic homework.
   3. Lecture/discussion/demonstration lead by instructor and students.
   4. Group and individual research projects using the Internet.
   5. Content based tests.

23. Assessment Methods and/or Tools

   1. Written midterm and final exam
   2. One major research project
   3. Weekly homework assignments
   4. Quizzes
   5. Oral exams
   6. Laboratory practicals
   7. Teacher observation
   8. Class participation
   9. Attendance
   10. FFA Participation
C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.

D. BACKGROUND INFORMATION

25. Context for Course (optional)

Agriculture Government Policy fits both into the social sciences department and the agriculture department by offering an additional course that meets the requirements of the state social science standards, as well as the agricultural career pathway, which will prepare students for higher education in the agricultural industry.

26. History of Course Development (optional)

This course was developed through cooperation between the social sciences department and the agriculture department with assistance from site and district administration. A consultant from the State Department of Education also assisted in the development of this course, which was modeled after the current, UC approved course titled "Agriculture Government" at Norco High School. The Perris High School Agricultural Department prides itself on developing courses that meet the needs of two strands of students - college-bound and work force bound.
## Perris Union High School District
### Course of Study

### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>Agriculture Economics</th>
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<tr>
<td>2. Transcript Title / Abbreviation</td>
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<td>5. Required for Graduation?</td>
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<tr>
<td>6. Meets UC/CSU Requirements?</td>
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<tr>
<td>7. Meets “AP” Requirements?</td>
<td>Yes [ ] No [x]</td>
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</table>
| 8. Course Author | Name: Chris Maddalena  
Date Submitted: September 13, 2004 |
| 9. Subject Area | History/Social Science [x]  
English [ ] Mathematics [ ]  
Science [ ] Language other than English [ ]  
Visual & Performing Arts [ ] College Prep Elective [ ]  
Other [ ] |
| 10. Grade Level(s) | 7 8 9 10 11 12X |
| 11. Meets “Honors” Requirements? | Yes [ ] No [x] |
| 12. Unit Value / Length of Course | 0.5 (half year or semester equivalent) [x]  
1.0 (one year equivalent) [ ]  
2.0 (two year equivalent) [ ]  
Other: __________________________ |

### 13. APPROVALS:

<table>
<thead>
<tr>
<th>Approval Type</th>
<th>Name/Signature</th>
<th>Date</th>
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<tr>
<td>Subject Area Council:</td>
<td>Steve Spraker</td>
<td>10/19/04</td>
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<td>Educational Planning Council:</td>
<td>Jacqueline Cooper</td>
<td>12/2/04</td>
</tr>
<tr>
<td>Board Approval:</td>
<td>Dennis D. Murray</td>
<td>1/19/05</td>
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</tbody>
</table>
14. Pre-Requisites

One year of Agriculture with a C or better.

15. Co-Requisites

None

16. Brief Course Description

This course is designed for the student interested in understanding the operations and institutions of economic systems as applied to our nation’s largest industry—agriculture. Units of instruction include basic economic concepts, comparative economic systems, individual and aggregate, economic behavior and international trade and policy. Instruction is also given in leadership and career education.
B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes

A. The student will demonstrate the ability to understand the scope of American agriculture by explaining the role of economics as it relates to the agricultural industry as a whole.

B. The student will demonstrate the ability to understand career opportunities in agribusiness and industry by comparing them:

C. The student will demonstrate the ability to understand the difference between the final goods and services that an economy produces and the productive resources that are used to produce the goods and services by comparing and contrasting the relationships of labor, capital, and technology.

D. The student will demonstrate the ability to understand how resources affect an economic system by explaining the role through oral, written, or visual expression.

E. The student will demonstrate the ability to understand the difference between industrial production and agricultural production by comparing and contrasting them.

F. The student will demonstrate the ability to understand the economic systems by comparing the advantages and disadvantages of each system.

G. The student will demonstrate the ability to analyze the concepts of microeconomics by comparing and contrasting them.

H. The student will demonstrate the ability to analyze macroeconomic concepts by using indicators and policies to understand how they relate to economic goals.

I. The student will demonstrate the ability to analyze international economics by comparing and contrasting past, present, and future policy on international trade.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
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<tbody>
<tr>
<td>Role of Economics</td>
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<tr>
<td>Historical development of the role of agricultural economic policy in the U.S.</td>
<td>12.2 (10)</td>
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<tr>
<td>Relationships of the agricultural economy to the general U.S. economy.</td>
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<tr>
<td>Career Opportunities in Agribusiness and Industry</td>
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<td>Personal requirements</td>
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<td>Differences in the career ladder</td>
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<td>Specific job titles, responsibilities and duties</td>
<td>12.4 (1,2,3)</td>
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<td>Post-high school educational institutions offering agribusiness classes</td>
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<td>Introduction for Economics, Agricultural Economics, and Economic Growth</td>
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<td>Role of capital</td>
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<td>Role of technology</td>
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<td>Role of Natural Resources in Economic Growth</td>
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<td>Production Principles</td>
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<td>Influences on the system</td>
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<td>a. Technology</td>
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<td>Microeconomics</td>
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<td>Demand</td>
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<tr>
<td>a. Utility</td>
<td>Types of input costs</td>
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<td>b. Consumer behavior</td>
<td>Effect of technology on costs</td>
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<td>c. Food Products</td>
<td>Revenue considerations</td>
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<td>Markets and their structure</td>
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<td>Market structures</td>
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<td>d. Monopolistic competition</td>
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<td>e. Perfect competition</td>
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<td>f. Role of government</td>
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<td>g. Planning and zoning</td>
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<td>Macroeconomics</td>
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<tr>
<td>a. Consumer price index</td>
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<td>b. Gross national product deflator</td>
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<td>c. Employment</td>
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<td>d. Cost of living</td>
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<td>e. Inflation f.</td>
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<td>g. Cycles of production</td>
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<td>Government programs and, policies</td>
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<td>a. Budget process</td>
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<td>b. Spending/taxing</td>
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<tr>
<td>c. Monetary policy</td>
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<tr>
<td>(1) Money</td>
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<td>(2) Federal reserve</td>
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<td>(3) Financial intermediaries</td>
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<td>d. Ag programs</td>
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<td>(1) Loans</td>
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<td>(2) Subsidies</td>
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<td>(3) Alternatives</td>
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International Economics
<table>
<thead>
<tr>
<th>Topic</th>
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<tr>
<td>Agricultural trade and economic development</td>
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<td>Foreign trade policy</td>
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<td>Quotas</td>
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<tr>
<td>Food as a weapon</td>
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<tr>
<td>Importance of exports</td>
<td></td>
</tr>
<tr>
<td>The problem solving approach and policy formulation</td>
<td>12.3 (1,4)</td>
</tr>
<tr>
<td>Goals of policy</td>
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<tr>
<td>Criteria of policy formulation</td>
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<td>Problem solving environment</td>
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<td>Problems in resource development</td>
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<td>United States</td>
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<td>(1) Rural</td>
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<td>(2) Urban</td>
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<td>Developing countries</td>
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<td>12.6 (1,2,3,4)</td>
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</table>
20. Texts & Supplemental Instructional Materials:

PUHSD Economics Text
Farm Cooperatives
Agriculture Content Standards

22. Instructional Methods and/or Strategies

A. Lecture
B. Demonstration
C. Study guides
D. Computers
E. Guest speakers
F. Debates
G. Field trips
H. Audio-visual
I. FFA Participation

23. Assessment Methods and/or Tools

A. Written tests
B. Study guides
C. Term paper
D. Homework
E. Group projects
F. FFA Participation

C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.
25. Context for Course (optional)

Agriculture Economics Policy fits both into the social sciences department and the agriculture department by offering an additional course that meets the requirements of the state social science standards, as well as the agricultural career pathway, which will prepare students for higher education in the agricultural industry.

26. History of Course Development (optional)

This course was developed through cooperation between the social sciences department and the agriculture department with assistance from site and district administration. A consultant from the State Department of Education also assisted in the development of this course, which was modeled after the current, UC approved course titled “Agriculture Economics” at Paso Robles High School. The Perris High School Agricultural Department prides itself on developing courses that meet the needs of two strands of students – college-bound and work force bound.
**Perris Union High School District**
**Course of Study**

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>9. Subject Area</th>
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<tbody>
<tr>
<td>Agriculture Mechanics and Power tools</td>
<td>□ History/Social Science</td>
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<td>□ Visual &amp; Performing Arts</td>
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<td>□ Yes</td>
<td>□ Yes</td>
<td>□ Yes</td>
<td>7 8 9 x 10 x 11 12</td>
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<tr>
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<table>
<thead>
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<th>12. Unit Value / Length of Course</th>
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<tr>
<td>Name: Charlynn Mc Naul</td>
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<td>□ 0.5 (half year or semester equivalent)</td>
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<td>Date Submitted: January 31, 2008</td>
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<td>□ 1.0 (one year equivalent)</td>
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<td>□ No</td>
<td>□ 2.0 (two year equivalent)</td>
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<th>13. APPROVALS:</th>
<th>12. Unit Value / Length of Course</th>
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<tr>
<td>Name/Signature</td>
<td>Date</td>
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<td>4-3-08</td>
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</table>

**Name/Signature**: [Signature 1] [Signature 2]

**Date**: 2-27-08 4-3-08
14. Pre-Requisite
Enrolled or have taken an agriculture course

15. Co-Requisites
Any Agriculture Course.

16. Brief Course Description
Ag Mechanics prepares students for careers related to the construction, operation, and maintenance of equipment and machines used by the agriculture industry. Basic mechanics skills and safety (standards 1.0 through 8.0) cover electrical systems, plumbing/irrigation, metal work, concrete/masonry, and beginning welding. In addition, FFA/leadership development, career awareness, record keeping and supervised agricultural experience projects (SAE’s) will be an important part of the course.

B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes (California State Standards)
The primary goal of the Perris Union High School’s District Agriculture Departments is to provide each student with an opportunity for the best possible education in keeping with the student’s interest and abilities. This opportunity is available as long as the student benefits and does not interfere with other students’ rights to receive an education. The Agriculture Department recognizes that individual differences exist among students. The Agriculture Program is planned to develop vocational talents, worthy attitudes and interests of all students enrolled.

1. To teach safety in a way that makes it an integral part of the students’ work habits.
2. To train students in fundamental skills and knowledge used in both rural and urban agricultural enterprises.
3. To apply skill learned in class to their own project construction situations.

California Career Technical Education Model Curriculum Standards-Addressed:

Agriculture Mechanics Standards: B.1.0, 1.1, 1.2, 1.3, B2.0, 2.1, 2.2, 2.3, 2.4, B3.0, 3.1, 3.2, 3.3, 3.4, 3.5, B4.0, 4.1, 4.2, 4.3, 4.4, B6.0, 6.1, 6.2, 6.3, B7.0, 7.1, 7.2, 7.3, 7.4, 7.5, B8.0, 8.1, 8.2, 8.3, 8.4

Agriculture Foundation Standards: 1-10

* Not covered on CST.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
<th>Text Chapter</th>
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<tbody>
<tr>
<td>A. Students will know and understand Health and Safety Policies, Procedures,</td>
<td>Agriculture Foundation Standards</td>
<td>3-6</td>
</tr>
<tr>
<td>and Regulations and Practices, Including Equipment and Hazardous</td>
<td>6.0 Health and Safety Students understand health and safety policies, procedures, regulations,</td>
<td></td>
</tr>
<tr>
<td>Material Handling</td>
<td>and practices, including the use of equipment and handling of hazardous materials:</td>
<td></td>
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<tr>
<td>- Power Tools used include mowers, string trimmers, chipper/shredders,</td>
<td>6.1 Know policies, procedures, and regulations regarding health and safety in the workplace,</td>
<td></td>
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<tr>
<td>tiller, saws, utility cart, tractor, loader, and others</td>
<td>including employers' and employees' responsibilities.</td>
<td></td>
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<tr>
<td>- Successful completion of safety instruction and exams for each</td>
<td>6.2 Understand critical elements of health and safety practices related to storing, cleaning,</td>
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<tr>
<td>power tool is required before using the machine</td>
<td>and maintaining tools, equipment, and supplies.</td>
<td></td>
</tr>
<tr>
<td>- Practice Rules for Personal and Group Safety</td>
<td>6.3 Understand how to locate important information on a material safety data sheet.</td>
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<td>- Operate and maintain tools and equipment safely and efficiently</td>
<td>6.4 Maintain safe and healthful working conditions.</td>
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<td></td>
<td>6.5 Use tools and machines safely and appropriately.</td>
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<td></td>
<td>6.6 Know how to both prevent and respond to accidents in the agricultural industry.</td>
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<tr>
<td>B1.0 Students understand personal and group safety:</td>
<td>B1.1 Practice the rules for personal and group safety while working in an agricultural</td>
<td></td>
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<tr>
<td></td>
<td>mechanics environment.</td>
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<tr>
<td></td>
<td>B1.2 Know the relationship between accepted shop management procedures and a safe working</td>
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</tr>
<tr>
<td></td>
<td>environment.</td>
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<td>B1.3 Know how to safely secure loads on a variety of vehicles.</td>
<td></td>
</tr>
</tbody>
</table>
| B. Student will understand the importance of Leadership/FFA:  
- Community Service  
- Power Tool Contest  
- Small Engine Contest  
- Program of Work/Standing Committees | Agriculture Foundation Standards 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. |
| C. The students will understand and be able to read and use a ruler or tape measure.  
  a. Compare and contrast two basic systems of measurement utilized in the United States.  
  b. Compare and contrast the International Metric system versus the U.S. Customary System.  
  c. Review the English system of measurements.  
  d. Understand fractions of measurements.  
  e. List three ways in which fractions may be expressed.  
| Agriculture Foundation Standards  
| Algebra 1 (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  
 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.  
| (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):  
| C. Students will understand woodworking and carpentry practices used in agricultural settings  
  a. Tool identification and safe use  
  b. Measuring activities  
  c. Assembly line construction project  
| 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.  
| ** Any major cutting of wood materials for this course will be made by the Perris High School Woodshop instructor.  
| 7-11  
|
### D. Students will understand Basic Electricity Principals and Wiring Practices

| Students understand the basic electricity principles and wiring practices commonly used in agriculture: |
|---|---|
| a. Understand voltage, amperage, resistance, and power in alternating current (AC) circuits. |
| b. Work with solar system kits to understand AC and direct current (DC) applications |
| c. Wiring techniques and basic circuit problems |
| d. Interpret basic agricultural and/or landscape architect wiring plans |

### E. Students will have a Supervised Agriculture Experience (SAE)

<p>| Agriculture Foundation Standards |
|---|---|
| 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. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Students will understand Basic Plumbing and Irrigation Practices Commonly Used in Agriculture</th>
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</thead>
<tbody>
<tr>
<td>f.</td>
<td>a. Apply plumbing fitting skills using a variety of materials</td>
</tr>
<tr>
<td></td>
<td>b. Understand the environmental influences on plumbing systems</td>
</tr>
<tr>
<td></td>
<td>c. Work on plumbing and irrigation systems in agriculture</td>
</tr>
<tr>
<td></td>
<td>d. Complete a plumbing project, including plans, bill of materials, and installation</td>
</tr>
<tr>
<td></td>
<td>e. Irrigation techniques, tools, and supplies</td>
</tr>
<tr>
<td></td>
<td>B4.0 Students understand plumbing system practices commonly used in agriculture:</td>
</tr>
<tr>
<td></td>
<td>B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC</td>
</tr>
<tr>
<td></td>
<td>(polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).</td>
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<tr>
<td></td>
<td>B4.2 Understand the environmental influences on plumbing system choices (e.g., filter</td>
</tr>
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<td></td>
<td>systems, water disposal).</td>
</tr>
<tr>
<td></td>
<td>B4.3 Know how various plumbing and irrigation systems are used in agriculture.</td>
</tr>
<tr>
<td></td>
<td>B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of</td>
</tr>
<tr>
<td></td>
<td>materials and cutting list, selecting materials, joining, and testing.</td>
</tr>
</tbody>
</table>
g. Students will understand Concrete and Masonry Practices
   a. Calculate volume, materials needed, and project costs
   b. Preparation and concrete form layout and construction
   c. Complete a concrete or masonry project, including assembling, mixing, placing, 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.

Agriculture Foundation Standards

Algebra I Standards
(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

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.
(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):
<table>
<thead>
<tr>
<th>h. Students will understand Safety in Welding</th>
<th>B7.0 Students understand oxy-fuel cutting and welding:</th>
<th>22-26</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Beginning oxy-fuel cutting and Welding</td>
<td>B7.1 Understand the role of heat and oxidation in the cutting process.</td>
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</tr>
<tr>
<td>b. Beginning electric arc welding</td>
<td>B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.</td>
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<tr>
<td>c. Understand the use of braze welding</td>
<td>B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.</td>
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** The hands-on welding portion of this course will be at the instructor's discretion. **

<table>
<thead>
<tr>
<th></th>
<th>B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.</th>
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<tbody>
<tr>
<td></td>
<td>B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.</td>
</tr>
</tbody>
</table>
Students will understand the Agriculture Mechanic Careers and Opportunities

a. Research Project and Portfolio

Agriculture Foundation 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.

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.
Perris Union High School District  
Course of Study

### A. Course Information

<table>
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<tr>
<th>1. Course Title</th>
<th>2. Transcript Title / Abbreviation</th>
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<td>Computer Applications in Agriculture</td>
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<tr>
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<th>7. Meets &quot;AP&quot; Requirements?</th>
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<th>8. Course Author</th>
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<tbody>
<tr>
<td>Name: Amanda Sanchez</td>
</tr>
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<td>Date Submitted: 11/10/04</td>
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<td>☐ History/Social Science</td>
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<th>10. Grade Level(s)</th>
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<tr>
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<th>11. Meets &quot;Honors&quot; Requirements?</th>
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<tr>
<td>☐ 2.0 (two year equivalent)</td>
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<td>☐ Other:</td>
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This course is NOT a pre requisite for any other Agriculture course. A student MUST enroll in Plant and Animal Physiology as a 9th or 10th grader in order to continue through the Ag Program.

### 13. Approvals:

<table>
<thead>
<tr>
<th>Subject Area Council:</th>
<th>Name/Signature</th>
<th>Date</th>
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<td>2-22-05</td>
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</tbody>
</table>
B. COURSE CONTENT

17. Course Goals and/or Major Student Outcomes

1. Career Development
   Be able to describe career opportunities in agriculture, develop goal-setting skills, proper work values, describe career paths in the field of agriculture and develop professional organization skills.

2. Employability
   Be able to perform basic job search skills, to find and describe employment resources, describe employment benefits, complete a job portfolio (which includes a resume, completed job application, cover letter, letters of recommendation, writing samples, and work sample), develop interview skills which include answering common interview questions, interpersonal communication, non-verbal communication.

3. Technology
   Develop basic computer application skills. Be able to describe technology based equipment used in agriculture. Describe future needs in the field of technology.

4. Software
   Be able to describe software background. Be able to describe industry utilization of software.
   Be able to use basic computer software. Be able to use FFA record book software. Be able to use FFA applications software.

5. Historical Development
   Describe the history of computer science and describe current uses of computers in agriculture.

6. Word Processing
   List specific programs, perform commands and functions, design and edit documents, compose agribusiness correspondence, use desktop publishing and write a paper as an example of student work for portfolio.

7. Spreadsheets
   List different types of applications, perform commands and functions, use in applications to business records including budgets, accounts, depreciation, and other farm records.

8. Farm Accounting Software
   Be able to explain importance of farm-accounting software, describe accounting principles, keep financial records and describe and complete loan applications.

9. Data Base
   Be able to manage data in a data base, use commands and functions that relate to data base program, use data base program for the following applications: production records, business records, inventories, and budgets.

10. Electronic Communication
    Be able to describe and use a modem. Be able to the function of computer networking. Be able to use the internet. Be able to effectively connect with Web Sites. Be able to use an email account.
# 18: Course Objectives
Basic Core Career Path Cluster Content Standards

<table>
<thead>
<tr>
<th>Objective</th>
<th>Standards (List Entire Standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>1.6 Interpersonal Leadership Development</td>
</tr>
<tr>
<td>a. Overview of course</td>
<td>1.7 Projects</td>
</tr>
<tr>
<td>b. Leadership developments activities</td>
<td></td>
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<tr>
<td>c. Supervised Agricultural experiences</td>
<td></td>
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<tr>
<td>d. Computer Science History</td>
<td></td>
</tr>
<tr>
<td>e. Legal issues related to computers</td>
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</tr>
<tr>
<td>2. Computer Systems</td>
<td>1.5 Computer Literacy</td>
</tr>
<tr>
<td>a. Processing and memory</td>
<td></td>
</tr>
<tr>
<td>b. Keyboard, mouse and monitor</td>
<td></td>
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<tr>
<td>c. Storage devices</td>
<td></td>
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<tr>
<td>d. Printers</td>
<td></td>
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<tr>
<td>e. Hardware options and set-up</td>
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<tr>
<td>f. CD-ROM</td>
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<tr>
<td>g. Computer terminology</td>
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<tr>
<td>h. Cost versus function</td>
<td></td>
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<tr>
<td>i. Emerging equipment and software trends</td>
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<tr>
<td>3. File managements</td>
<td></td>
</tr>
<tr>
<td>a. Understanding files and folders</td>
<td></td>
</tr>
<tr>
<td>b. Organizing your work</td>
<td></td>
</tr>
<tr>
<td>4. Introduction to applications software</td>
<td>1.4 Record Keeping</td>
</tr>
<tr>
<td>a. Overview of applications software</td>
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</tr>
<tr>
<td>b. Interfacing application software</td>
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<td>5. Word processing</td>
<td>1.5 Computer Literacy</td>
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<tr>
<td>a. Getting started with the word processor</td>
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<tr>
<td>b. Creating a document</td>
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<tr>
<td>c. Editing and printing a document</td>
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<tr>
<td>d. Formatting text</td>
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<tr>
<td>10. Agricultural applications of spreadsheets</td>
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<tr>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>a. Payroll</td>
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<tr>
<td>b. Record keeping</td>
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<tr>
<td>c. Tax management</td>
<td></td>
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<tr>
<td>d. Balancing rations</td>
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<tr>
<td>e. Selection replacement</td>
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<tr>
<td>f. Culling managements</td>
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<td>11. Integrating data</td>
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<tr>
<td>a. Integrating database, word</td>
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<tr>
<td>processing and spreadsheets</td>
<td></td>
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<tr>
<td>b. Using the draw tool to integrate data</td>
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</tr>
<tr>
<td>12. Agricultural applications for integrating data</td>
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</tr>
<tr>
<td>a. Marketing decisions</td>
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<tr>
<td>b. Publications and presentations</td>
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<tr>
<td>c. Production management</td>
<td></td>
</tr>
<tr>
<td>d. Farm and ranch management</td>
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<tr>
<td>13. Electronic Communication</td>
<td></td>
</tr>
<tr>
<td>a. Email</td>
<td></td>
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<tr>
<td>b. World wide web</td>
<td></td>
</tr>
<tr>
<td>c. Search engines</td>
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</tr>
<tr>
<td>14. Career Exploration</td>
<td></td>
</tr>
<tr>
<td>a. Resume</td>
<td></td>
</tr>
<tr>
<td>b. Job search</td>
<td></td>
</tr>
<tr>
<td>c. Letter of Inquiry</td>
<td></td>
</tr>
</tbody>
</table>

1.5 Computer Literacy

1.8 Careers and Employability
21. Key Assignments

1. Portfolio to include: resume, completed job application, cover letter, letters of recommendation, writing samples, and work sample
2. Power Point Presentation
3. Promotional Flyer
4. Typing Test
5. Research Paper
6. FFA Participation
24. Indicate how this honors course is different from the standard course.
Perris Union High School District
Course of Study

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title</th>
<th>Advanced Floral Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Transcript Title / Abbreviation</td>
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</tr>
<tr>
<td>3. Transcript Course Code / Number</td>
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</tr>
<tr>
<td>4. Required for Graduation?</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Meets UC/CSU Requirements?</td>
<td>Yes</td>
</tr>
<tr>
<td>6. Meets &quot;AP&quot; Requirements?</td>
<td>Yes</td>
</tr>
<tr>
<td>7. Course Author</td>
<td>Amanda Sanchez</td>
</tr>
<tr>
<td>8. Date Submitted</td>
<td>January 2008</td>
</tr>
<tr>
<td>9. Subject Area</td>
<td>History/Social Science</td>
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<tr>
<td>10. Grade Level(s)</td>
<td>7 8 9 10 11-X 12-X</td>
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<tr>
<td>11. Meets &quot;Honors&quot; Requirements?</td>
<td>Yes</td>
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<tr>
<td>12. Unit Value / Length of Course</td>
<td>0.5 (half year or semester equivalent)</td>
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<td>13. APPROVALS:</td>
<td></td>
</tr>
<tr>
<td>Subject Area Council:</td>
<td>Name/Signature</td>
</tr>
<tr>
<td>Educational Planning Council:</td>
<td>Jacqueline Adelle Supp Cooper</td>
</tr>
<tr>
<td>Board Approval:</td>
<td></td>
</tr>
</tbody>
</table>
14. Pre-Requisites
   Floriculture

15. Co-Requisites

16. Brief Course Description
   The advanced floral design class is designed to give the student advanced design techniques including wedding, sympathy, and high-style floral design. This includes everlasting flowers, contemporary design and techniques, and harvest and distribution. This class also goes into greater detail of operating a retail flower shop and covers careers and continuing education. In addition the class will also cover the employment application elements and process, interview skills and create a portfolio of work.

17. Course Goals and/or Major Student Outcomes (California State Standards)
   * Not covered on CST.
   - Identifying Careers in the Floral Industry
   - Recognizing Professional Florists’ Associations
   - Developing a Professional Portfolio
   - Applying Safe Work Practices In Floral Design
   - Conducting Sales and Services in the Floral Business
   - Managing a Retail Floral Business
   - Identifying and Classifying Specialty Cut Flowers and Foliage Used in Floral Designs
   - Recognizing the Roles of Florists in Wedding Planning and Consultation
   - Designing and Preparing Wedding Arrangements
   - Recognizing the Roles of Florists in Preparing Sympathy Arrangements
   - Designing and Preparing Sympathy Arrangements
   - Designing and Preparing Floral Arrangements for Formal and Informal Occasions
   - Preparing Floral Designs to Coordinate with the Themes and Colors of Special Occasions
   - Demonstrating Design Techniques Used in Creating Contemporary and Artistic Interpretation Arrangements
   - Creating a Formal Linear Design
   - Creating an Abstract and Interpretive Design
   - Creating a Parallel Design
   - Creating a Waterfall Design
   - Creating a Pave Design
   - Creating a Vegetative Design
18. Course Objectives

<table>
<thead>
<tr>
<th>1. Harvest and Distribution</th>
<th>California Career Technical Education Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The world flower market</td>
<td>Agriculture and Natural Resources Foundations Standards</td>
</tr>
<tr>
<td>2. Harvest</td>
<td></td>
</tr>
<tr>
<td>3. Packing</td>
<td></td>
</tr>
<tr>
<td>4. Shipping</td>
<td></td>
</tr>
<tr>
<td>5. Distribution</td>
<td>1.3 History–Social Science Specific applications of Principles of Economics standards (grade twelve):</td>
</tr>
<tr>
<td>6. Marketing flowers</td>
<td>(12.2.2) Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.</td>
</tr>
</tbody>
</table>

**Goal: The students will demonstrate knowledge and understanding of Harvest and Distribution.**

A. Describe the world flower market and the position the United States maintains in this market.
B. Discuss the important processes of harvesting, grading, bunching, and conditioning flowers to ensure optimum quality and longevity for the final consumer.
C. Explain the various methods of packing and shipping flowers.
D. Outline the tradition distribution channel for flowers and describe changes that are taking place in the movement of product from growers to final consumers.
E. Summarize the floral industry's advertising and promotion programs.

<table>
<thead>
<tr>
<th>2. Wedding Flowers</th>
<th>California Career Technical Education Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Floral romance</td>
<td>Agriculture and Natural Resources Foundations Standards</td>
</tr>
<tr>
<td>2. Promotion and advertising by retail florist</td>
<td>F. Ornamental Horticulture Pathway</td>
</tr>
<tr>
<td>3. Wedding consultation</td>
<td>F1.0 Students understand plant classification and use principles:</td>
</tr>
<tr>
<td>4. Styles of bouquets</td>
<td>F1.1 Understand how to classify and identify plants by order, family, genus, and species.</td>
</tr>
<tr>
<td>5. Servicing the wedding.</td>
<td>F1.2 Understand how to identify plants by using a dichotomous key.</td>
</tr>
</tbody>
</table>

**Goal: The students will demonstrate knowledge and understanding of Wedding Flowers.**

A. Describe the importance of promotion and advertising to attract prospective brides-to-be.
B. Specify the importance of the wedding consultation appointment and the

(12.2.5) Understand the process by which competition among buyers and sellers determines a market price.

(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.
necessity for a floral consultant to be knowledgeable about wedding flowers and professional in helping a bride-to-be select appropriate flowers for her wedding.

C. Describe how to conduct a bridal consultation and explain the various floral pieces that are listed on a wedding order form.

D. Describe the most popular bouquet styles.

E. Describe general approaches to planning and presenting flowers for the ceremony and reception decorations.

F. List the fundamental design techniques that are important in creating wedding flowers.

G. Construct a simple colonial bouquet and a simple cascade bouquet using foam bouquet holders.

H. Construct a cake top in a cake-top holder.

I. Describe the importance of servicing weddings that require professional attention at the ceremony and the reception.

3. Sympathy Flowers

1. Importance of sympathy flowers
2. Trends and regional differences
3. Selling sympathy flowers
4. Overview of sympathy flower designs
5. Maintaining ideal working relations with funeral directors
6. Servicing the funeral

**Goal:** The students will demonstrate knowledge and understanding of sympathy flowers.

| A. Identify various sympathy floral designs, tributes, and funeral-related terminology. |
| B. Describe the significant construction techniques in creating sympathy designs. |
| C. List ways a professional retail flower shop can develop a positive working relationship with funeral directors. |
| D. Identify concerns that limit the growth of the sympathy flower business. |
| E. Characterize how to conduct a consultation with a family ordering flowers for their deceased loved one. |
| F. Construct a variety of floral designs including a tied flat spray, a pedestal arrangement, an easel spray and a simple casket spray. |

California Career Technical Education Standards
Agriculture and Natural Resources
F. Ornamental Horticulture Pathway

**F1.0 Students understand plant classification and use principles:**

F1.1 Understand how to classify and identify plants by order, family, genus, and species.
F1.2 Understand how to identify plants by using a dichotomous key.
F1.3 Understand how common plant parts are used to classify the plants.
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.

**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.
### 4. Contemporary Design Styles and Techniques

1. Classic design styles
2. Naturalistic design styles
3. Linear design styles
4. Modernistic design styles
5. Advanced design techniques

**Goal:** The students will demonstrate knowledge and understanding of the different styles of contemporary design styles and techniques.

A. Specify what constitutes a contemporary floral design.
B. Demonstrate proficiency in advanced arrangement techniques.
C. Define, sketch, or construct the various contemporary, advanced, classic, naturalistic, linear, and modernistic design styles discussed.

- California Career Technical Education Standards
- Agriculture and Natural Resources
- F. Ornamental Horticulture Pathway
- F1.0 Students understand plant classification and use principles:
  - F1.1 Understand how to classify and identify plants by order, family, genus, and species.
  - F1.2 Understand how to identify plants by using a dichotomous key.
  - F1.3 Understand how common plant parts are used to classify the plants.
  - F1.4 Understand how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.
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- 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.

### 5. Retail Flower Shop

1. Types of flower shops
2. Location
3. Production presentation and shop layout
4. Employees and responsibilities
5. Marketing
6. Salesmanship and customer relations
7. Wire service
8. Buying and pricing
9. Designing
10. Delivery

**Goal:** The students will demonstrate knowledge and understanding of the retail flower shop.

A. Identify the primary functions of a retail flower shop.

- California Career Technical Education Standards
- Agriculture and Natural Resources
- Foundations Standards

1.1 Mathematics
1.0 Academics
10.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

- 6.0 Health and Safety
  - Students understand health and safety policies, procedures, regulations, and
B. Differentiate the major classifications of retail flower operations.
C. Explain the characteristics of store location options.
D. Characterize the principle responsibilities of employees.
E. Summarize the key management responsibilities required for a successful and profitable flower shop.
F. Describe product presentation and the importance of window and store display.
G. Identify the primary goals of display.
H. Describe the sequence of taking information for a telephone order.

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.

6. Career Portfolio
Goal: The students will create portfolio with work examples associated with employment skills and expectations.

1. Resume
2. Cover letter
3. Job application
4. Work Samples
5. Work Critiques
6. Design Styles

California Career Technical Education Standards
Agriculture and Natural Resources Foundations Standards
2.0 Communications
2.2 Writing

(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.

2.4 Listening and Speaking
(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
7. Introduction to Careers and Continuing Education

1. Career opportunities for qualified professional floral designers
2. Other career opportunities in the floral industry

Continuing Education

**Goal:** The students will demonstrate knowledge and understanding of careers and continuing education.

| A. | Describe various employment opportunities in a retail flower shop. |
| B. | Outline the skills and experience required to work in specialized areas of floral design. |
| C. | Identify other career opportunities within the wholesale and production areas of the floral industry. |
| D. | Describe the importance of continuing education in floral design. |
| E. | Identify numerous career options within the floral industry. |
| F. | Describe and distinguish between the different trade organizations and the opportunities each provides. |
| G. | List some of the many trade publications, design workshops, and educational programs available to increase the knowledge and skills of a floral designer. |

8. Introduction to FFA

**Goal:** The students will demonstrate knowledge and understanding of National FFA Associations as they pertain to premier leadership, personal growth, and career success for life.

1. Demonstrate knowledge about the FFA.
2. Participate in leadership activities and FFA events.

| California Career Technical Education Standards |
| Agriculture and Natural Resources Foundations Standards |

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. 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.
19. Texts & Supplemental Instructional Materials

Textbooks:

Western Garden Book Sunset

Supplemental:
National FFA Manual
Floriculture Curricular Code

Publications:

Florists' Review, Monthly
Flowers &, Monthly
20. Key Assignments

- Research and present a Career in the Floral Industry
- Applying Safe Work Practices in Floral Design
- Conduct Sales and Services in the Floral Business
- Participate in the Management of a Retail Floral Business
- Conduct a sales order
- Create a Wedding Planning and Consultation project that requires Designing and Preparing Wedding Arrangements and a presentation
- Create a Sympathy Arrangements display board that incorporates Designing and Preparing Sympathy Arrangements and marketing of sympathy arrangements
- Floral projects: Designing and Preparing Floral Arrangements for Formal and Informal Occasions, Preparing Floral Designs to Coordinate with the Themes and Colors of Special Occasions
- Demonstrate Design Techniques Used in Creating Contemporary and Artistic Interpretation Arrangements
- Developing a Professional Portfolio with work examples associated with employment skills and expectations. To include: Cover letter, Job application, Resume, Work Samples, Work Critiques, Design Styles
- Maintain a current folder

21. Instructional Methods and/or Strategies

- Direct instruction
- Demonstrations
- Project-based learning
- Lecture
- Cooperative learning
- Reading assignments
- Video and CD-ROM lessons
- Exhibitions of student art work
- Peer and teacher evaluation
- Individual and group assignments
- Notebooks and portfolio
- Presentations and speeches
- Projects, experiments and reports
- Supervised Agriculture Experience Project (SAEP)
- Record Book
- FFA Participation
- Art/Floral work portfolio
- Class discussions
22. Assessment Methods and/or Tools

- Teacher observation
- Homework assignments
- Quizzes and tests
- Projects
- Interactive notebook
- Essays and reports
- Student demonstrations
- Rubrics
- Participation

C. HONORS COURSES ONLY

23. Indicate how this honors course is different from the standard course.

D. BACKGROUND INFORMATION

24. Context for Course (optional)

25. History of Course Development (optional)
Perris Union High School District  
Course of Study

### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title:</th>
<th>Arboriculture</th>
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<tbody>
<tr>
<td>2. Transcript Title / Abbreviation:</td>
<td>Arboriculture</td>
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<tr>
<td>3. Transcript Course Code / Number:</td>
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<tr>
<td>5. Required for Graduation?</td>
<td>□ Yes  ✔ No</td>
</tr>
<tr>
<td>6. Meets UC/CSU Requirements?</td>
<td>□ Yes  ✔ No</td>
</tr>
<tr>
<td>7. Meets “AP” Requirements?</td>
<td>□ Yes  ✔ No</td>
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</tbody>
</table>
| 8. Course Author/Contact: | First Name: Charlynn  
Last Name: McNaul  
Position/Title: Agriculture Teacher  
Phone #: (951) 657-2171 ext.: 4701  
Email: charlynn.mcnaul@puhsd.org |
| 9. Subject Area | □ History/Social Science  
□ English  
□ Mathematics  
□ Laboratory Science  
□ Language other than English  
□ Visual & Performing Arts  
✘ College Prep Elective  
□ Other  
Elective |
| Is this course classified as a Career Technical Education? | □ Yes  ✔ No |
| If CTE: | Name of Industry Sector: Agriculture and Natural Resources  
Name of Career Pathway: Ornamental Horticulture |
| 10. Grade Level(s) | 7 8 9 x10 x11 x12 |
| 11. Meets “Honors” Requirements? | □ Yes  ✔ No |
| 12. Unit Value / Length of Course | □ 0.5 (half year or semester equivalent)  
✘ 1.0 (one year equivalent)  
□ 2.0 (two year equivalent)  
□ Other: |
| 13. APPROVALS: | Name/Signature  
| Subject Area Council: | □ Dan Martin  9-30-09 |
| Educational Planning Council: | □ Jacqueline Adele Sapp  5-1-09 |
| Board Approval: | □ |

Page 1 of 5
14. Pre-Requisites
   Plant/Animal Science

15. Co-Requisites
   Agriculture Biology/ and or The Art and History of Floral Design

16. Brief Course Description
This course includes care and management of ornamental trees, pruning techniques, fruit tree care, bracing, cabling, and pest control. Also included are safe practices in the use of equipment, including the use of ropes, chippers, boom trucks, chain saws, and identification and evaluation of common trees. Prepares students for the tree worker and arborist certification exams.

B. COURSE CONTENT

17. Course Purpose:
What is the purpose of this course? Please provide a brief description of the goals and expected outcomes. Note: More specificity than a simple recitation of the State Standards is needed.

This course is intended to begin to prepare students for the horticulture/arboriculture industry. This will be an introductory course in Horticulture. Students will have the opportunity to take several other courses in this particular pathway. This course will be articulated with MSJC and students will be able to have units already in place when they enter MSJC.

18 (A) Course Outline
Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

Lecture Topics:
  a. Tree Biology
  b. Tree Identification
  c. Liability
  d. Tree/Soil Relationships
  e. Water Management
  f. Tree Nutrition and Fertilization
  g. Tree Selection
  h. Tree Installation and Establishment
  i. Pruning Concepts and Techniques
  j. Cabling, Bracing
  k. Problem Diagnosis and Management
  l. Construction Management

Laboratory Topics:
  a. Equipment Introduction, safety, ropes, knots
  b. Field/Practical pruning
  c. Climbing methods/practices
  d. Pruning techniques
  e. Tree surgery
  f. Tree removal
  g. Aerial basket, chipper and chain saw operations
  h. Tree identification
18 (B) Writing Assignments

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

1) Visit a local nursery or tree grower and select and identify based on key characteristics, 10 trees appropriate for golf courses. Summarize supporting documentation.

2) Write a tree care program and schedule for tree management.

19 (A) Textbook #1

Title: International Society of Arboriculture Arborists' Certification Study Guide
Edition: ___________________________ Publication Date: most current
Publisher: ISA, PO Box 255155, Sacramento CA 95865

Author(s):

Usage: [x] Primary Text [ ] Read in entirety or near entirety

Textbook #2 (if applicable)

Title: ___________________________
Edition: ___________________________ Publication Date: ___________________________
Publisher: ___________________________
Author(s):

Usage: [ ] Primary Text [ ] Read in entirety or near entirety

19 (B) Supplemental Instructional Materials (please describe)
20. Key Assignments

Detailed descriptions of the Key Assignments including tests, and quizzes, which should incorporate not only short answers but essay questions also. How do assignments incorporate topics? Include all major assignments that students will be required to complete.

1) Visit a local nursery or tree grower and select and identify based on key characteristics, 10 trees appropriate for golf courses. Summarize supporting documentation.

2) Write a tree care program and schedule for tree management.

3) Survey the current literature on tree safety and recent court decisions related to arboriculture and present one significant case study orally to the class.

4) Laboratory project requiring student to demonstrate proper pruning methods and including all safety procedures.

21. Instructional Methods and/or Strategies

List specific instructional methods that will be used.

1. Lecture presentation with supporting multimedia material introducing key concepts including tree biology, liability, nutrition, selection, pruning, cabling and management.

2. Laboratory projects requiring the student to show mastery of ropes, knots, pruning, climbing and safety.

3. Field trips analyzing various tree problems with written and oral presentation formulating and proposing solutions.

22. Assessment Methods and/or Tools

List different methods of assessments that will be used.

1. Objective tests including mid term and final exam. A collection of objective questions of important concepts including pruning, cabling, climbing and safety.

2. Oral presentations of solutions to problems observed during field trips to local Golf Courses examining tree problems.

3. Laboratory projects requiring an individual student to demonstrate mastery of tree climbing, pruning, and safety procedures.
### 23. Course Pacing Guide and Objectives:

<table>
<thead>
<tr>
<th>Day</th>
<th>Objective</th>
<th>Standards</th>
<th>Chapters</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>Tree Biology, Tree Identification</td>
<td>F. Ornamental Horticulture Pathway F1.1-F1.5</td>
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<td></td>
<td></td>
<td>F. Ornamental Horticulture Pathway F2.0-3.3</td>
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<td>11-14</td>
<td>Liability</td>
<td>F. Ornamental Horticulture Pathway 10.5</td>
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<td>15-24</td>
<td>Tree/Soil Relationships, Water Management</td>
<td>F. Ornamental Horticulture Pathway F5.2-5.5</td>
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<tr>
<td>25-33</td>
<td>Tree Nutrition and Fertilization</td>
<td>F. Ornamental Horticulture Pathway F6.0-6.4</td>
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<td>34-38</td>
<td>Tree Selection</td>
<td>F. Ornamental Horticulture Pathway F8.0-8.4</td>
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<td>39-44</td>
<td>Tree Installation and Establishment</td>
<td>F. Ornamental Horticulture Pathway F9.0-9.1</td>
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<td>45-50</td>
<td>Pruning Concepts and Techniques</td>
<td>F. Ornamental Horticulture Pathway F10.4</td>
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<td>51-60</td>
<td>Cabling and Bracing</td>
<td>F. Ornamental Horticulture Pathway F10.4</td>
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<td>61-67</td>
<td>Problem Diagnosis and Management</td>
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<td>68-74</td>
<td>Construction Management</td>
<td>F. Ornamental Horticulture Pathway F10.4</td>
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<td>75-78</td>
<td>Review and Final</td>
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</table>

### C. HONORS COURSES ONLY

24. Indicate how this honors course is different from the standard course.

### D. BACKGROUND INFORMATION

25. Context for Course (optional)

26. History of Course Development (optional)
# Perris Union High School District
## Course of Study

### A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>1. Course Title:</th>
<th>Horticulture Science</th>
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<table>
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<th>2. Transcript Title / Abbreviation:</th>
<th>Horticulture</th>
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<tr>
<th>3. Transcript Course Code / Number:</th>
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<table>
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<tr>
<th>5. Required for Graduation?</th>
<th>Yes</th>
<th>No</th>
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Is this course classified as a Career Technical Education: Yes | No |

If CTE:
Name of Industry Sector: Agriculture and Natural Resources
Name of Career Pathway: Ornamental Horticulture

<table>
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<tr>
<th>6. Meets UC/CSU Requirements?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Was this course previously approved by UC? Yes | No |

<table>
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<tr>
<th>7. Meets “AP” Requirements?</th>
<th>Yes</th>
<th>No</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>8. Course Author/Contact:</th>
<th>Charlynn McNaul</th>
</tr>
</thead>
</table>

Position/Title: Agriculture Teacher
Phone #: (951) 657-2171 ext: 4701
Email: charlynn.mcnaul@puhsd.org
Date Submitted: |

<table>
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<tr>
<th>10. Grade Level(s)</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10x</th>
<th>11x</th>
<th>12x</th>
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<table>
<thead>
<tr>
<th>11. Meets “Honors” Requirements?</th>
<th>Yes</th>
<th>No</th>
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<table>
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<tr>
<th>12. Unit Value / Length of Course</th>
<th>0.5 (half year or semester equivalent)</th>
<th>1.0 (one year equivalent)</th>
<th>2.0 (two year equivalent)</th>
<th>Other:</th>
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<th>13. APPROVALS:</th>
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<table>
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<tr>
<th>Subject Area Council:</th>
<th>Dan Martin</th>
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<tr>
<th>Educational Planning Council:</th>
<th>Jacqueline Sopp</th>
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<th>Board Approval:</th>
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<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

9-22-09 | 5 NOV 09 |

12-10-09 | |
14. Pre-Requisites

Plant/Animal Science

15. Co-Requisites

Agriculture Biology and or The Art and History of Floral Design

16. Brief Course Description

This course provides an introduction to the horticulture industry, using videos, text, field trips, and guest lecture. Topics include fundamental skills used in the horticulture industry. Cultivation of plant varieties, methods, knowledge, and techniques used in commercial and residential landscaping, golf course management, plant nurseries, and maintenance for urban gardeners.

B. COURSE CONTENT

17. Course Purpose:

What is the purpose of this course? Please provide a brief description of the goals and expected outcomes. Note: More specificity than a simple recitation of the State Standards is needed.

This course is intended to begin to prepare students for the horticulture industry. This will be an introductory course in Horticulture. Students will have the opportunity to take several other courses in this particular pathway. This course will be articulated with MSJC and students will be able to have units already in place when they enter MSJC.

18 (A) Course Outline

A. Horticulture and the horticulture industry
   Economic Impact
   Career Opportunities

B. Plant growth and development
   Seeds
   Roots
   Stems
   Leaves
   Flowers
   Fruits

C. Soils, soil water, watering practices
   Clay
   Sand
   Loam
   Infiltration
   Absorption
   Frequency
   Timing
   Methods
D. Plant nutrition
   Fertilizers
   Amendments

E. Plant propagation, greenhouses
   Flats
   Containers
   Division
   Cuttings
   Layering
   Budding
   Grafting

F. Compost and soil amendments
   Nitrogen
   Phosphorus
   Potassium
   Other nutrients
   Composting methods

G. Plant nomenclature, plant identification
   Scientific Names
   Common Names
   Plant Identification Resources

H. Pests and diseases and introduction to pest management concepts
   Insects
   Disease Pathogens
   Identification Methods
   Weeds
   Solutions and Controls

I. Growing vegetables, annuals, perennials
   Warm or Cool Season
   Annual Varieties
   Perennial Varieties
   Sun or Shade

J. Interior plants
   Soils For Indoor Plants
   Plant Varieties
   Plant Care

K. Lawns and ground covers
   Cool Season Grasses
   Warm Season Grasses
   Soil Preparation
   Installation
   Maintenance

L. Landscape and landscape maintenance
   Design
   Construction
   Maintenance
18 (B) Writing Assignments

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

1. The student will write a critical analysis comparing and contrasting the results of various pesticides on plant material from a case study based on an actual field trip.

19 (A) Textbook #1

Title: Introductory Horticulture
Edition: 7th or Current Publication Date: 2007
Publisher: Delmar/Cengage
Author(s): H. Edward Beiley, Carroll L. Shry, Jr.
Usage: √ Primary Text □ Read in entirety or near entirety

19 (B) Supplemental Instructional Materials (please describe)

None

20. Key Assignments

Detailed descriptions of the Key Assignments including tests, and quizzes, which should incorporate not only short answers but essay questions also. How do assignments incorporate topics? Include all major assignments that students will be required to complete.

- Given samples of plant varieties, using slides or pictures, the student will be asked to identify the species.
- The student will write a critical analysis comparing and contrasting the results of various pesticides on plant material from a case study based on an actual field trip.
- Based on plant specifications the student will select the proper plant material for a hypothetical local golf course and propose in writing a schedule of installation.
- The student will read technical horticultural material on plants designed for use in golf courses, and using specific plant characteristics, make a selection of typical materials appropriate to the region.

21. Instructional Methods and/or Strategies

- Slide analysis such as: Plant Diseases, Pest Problems in Turf, Plant Varieties.
- Field trips to Nurseries, Fertilizer Plants, Turf Plots, Irrigation Supply Houses, Green Houses.
- Guest lectures on Plant Propagation from green house managers, Tree Pruning from certified arborist, Varied Horticulture of golf courses from a golf course superintendent.
22. Assessment Methods and/or Tools
- At least 2 objective tests including midterm and final exam covering key concepts such as:
  - Plant identification, Disease Identification and control, Water Usage, Plant Propagation, and Turf Grasses.
- Written case study analysis with oral presentations
- Written presentations of case studies
- Written presentation of slide analysis identifying species

23. Course Pacing Guide and Objectives:

<table>
<thead>
<tr>
<th>Day</th>
<th>Objective</th>
<th>Standards</th>
<th>Chapters</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>Introduction to Horticulture/Careers</td>
<td>10.0 Technical Knowledge and Skills 10.1-10.3., 3.0 Career Planning and Management 3.1-3.6</td>
<td>Unit 1 and 2</td>
<td></td>
</tr>
<tr>
<td>11-33</td>
<td>Plant Sciences, Horticulture, soil Sciences</td>
<td>F. Ornamental Horticulture Pathway F1.1-F1.5 F2.0 F2.1-F2.6 F3.0 F3.1-F3.3</td>
<td>Unit 3-15</td>
<td></td>
</tr>
<tr>
<td>34-67</td>
<td>Fertilizers and Pesticides</td>
<td>F. Ornamental Horticulture F4.0 F4.1-F4.4, F5.0 F5.1-F5.5, F6.0 F6.1-6.4</td>
<td>Unit 16-20</td>
<td></td>
</tr>
<tr>
<td>68-78</td>
<td>Review and Final</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**C. HONORS COURSES ONLY**

24. Indicate how this honors course is different from the standard course.

**D. BACKGROUND INFORMATION**

25. Context for Course (optional)

26. History of Course Development (optional)
E. Program and/or Course Subject Matter Content Outline
Evidence is provided in section D.
F.
Program Completion Standards
Agriculture Science

_________________________ has complete coursework in the study and practice in Agriculture Science and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

**Competency Level**

- Basic Animal Science
- Anatomy and Physiology of domestic livestock Animals
- Livestock Breeding and Genetics
- Handling Livestock
- Livestock Nutrition and Feeds
- Animal Health
- Beef Cattle
- Swine
- Sheep
- Beef, Swine, and Sheep veterinary practices
- Dairy Cattle and Dairy Cattle veterinary practices
- Livestock Evaluation and Selection
- Livestock Products
- Poultry veterinary practices
- Basic Plant Science
- Plant Classification Systems
- Areas of Crop Production
- Vegetable Crops
- Tree Crops
- Forage Crop Production
- Vine and Small Fruit Crops
- Land Preparation and Planting
- Soils
- Fertilizers
- Irrigation and Drainage
- Harvesting
- Identification of Crops, Products, and By-Products
- Agricultural Production Services
- Agricultural Production Records
- Marketing Agricultural Products
- Financing Agricultural Production

- Intelligently discuss theories on the origins of life.
- Describe the characteristics of living organisms.
Describe the characteristics of plant and animal cells with respect to their structure.

Compare and contrast the roles of meiosis and mitosis in cellular reproduction.

Understand heredity, Mendelian Genetics, terminology and apply this to animal inheritance.

Distinguish between historical and modern taxonomy systems and understand the evolutionary relationships among domestic plants and animals.

Understand the structural and functional similarities and differences among major animal, plant and protist phyla.

Identify and understand the major organ systems of animals.

Recognize the structure and function of ecosystems, populations, and communities and the impact of human society on the natural and agricultural environment.

Describe the three cycles that involve abiotic and biotic factors. And explain their interrelationships and importance to the biosphere.

Identify the environmental and genetic factors that influence variation among organisms.

Demonstrate basic laboratory techniques including the use of microscopes, slides, microorganism examination, and the dissection of representative plants and animals of various species.

Certifying Instructor

Course Grade

Date
Proficiency Standards

Students are to be graded on their ability to accomplish or perform different tasks.

Rating Scale:
4 – Skilled or can work independently
3 – Moderately skilled or can perform with limited help
2 – Limited skill, requires instruction and close supervision
1 – No exposure, no experience or knowledge in this area

Rating

A. To identify the importance of production agriculture.

B. Identify the seven basic agricultural career areas.

C. Identify and understand the function of the Future Farmers of America as it relates to modern agriculture, the structure, history and purpose of the Future Farmers of America and how it develops leadership skills.

D. Demonstrate an understanding of the Supervised Occupational Experience Projects and their relationship with agriculture and agriculture careers.

E. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.

F. Identify the common breeds of beef, sheep, swine, horse, dairy cattle and small animals.

G. Demonstrate an understanding of basic livestock management principles, including feeds and nutrition, care and maintenance, diseases and reproduction.

H. Demonstrate an understanding of the terminology associated with each species of livestock.

I. Identify the common crops grown and understand their importance to California Agriculture.

J. Identify plant parts and explain their functions for a variety of common agriculture plants.

K. Explain the factors involved in plant growth and general production practices.

L. Students will understand and perform basic tractor operations and maintenance. Identify basic parts of common agriculture equipment.

M. Identify basic parts of common agriculture equipment.

N. Demonstrate proper safety techniques used in the agricultural industries and in the classroom setting.
Floral Design

has completed

Courses of study and practice in Floral Design and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

Competency Level

_____ 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.

_____ Describe the principles of design as used in works of art, focusing on dominance and subordination.

_____ 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.

_____ Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

_____ Analyze the material used by a given artist and describe how its use influences the meaning of the work.

_____ Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

_____ Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.

_____ Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.

_____ Develop and refine skill in the manipulation of digital imagery (either still or video).

_____ Review and refine observational drawing skills.

_____ Create an expressive composition, focusing on dominance and subordination.

_____ Create two or three-dimensional work of art that addresses a social issue.
Identify similarities and differences in the purposes of art created in selected cultures.

Identify and describe the role and influence of new technologies on contemporary works of art.

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.

Discuss the purposes of art in selected contemporary cultures.

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.

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.

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.

Articulate the process and rationale for refining and reworking one of their own works of art.

Employ the conventions of art criticism in writing and speaking about works of art.

Certifying Instructor

Course Grade

Date
Floral Design

Students are to be graded on their ability to accomplish or perform different tasks. 

**Rating Scale:**

4 – Skilled or can work independently 

3 – Moderately skilled or can perform with limited help 

2 – Limited skill, requires instruction and close supervision 

1 – No exposure, no experience or knowledge in this area

<table>
<thead>
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<th>Rating</th>
<th>Agriculture I</th>
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<tbody>
<tr>
<td>_____</td>
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<tr>
<td>1.</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>_____</td>
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<tr>
<td>2.</td>
<td>Students will research and write a description of the historical symbolism of specific flowers and foliage.</td>
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<td>_____</td>
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<tr>
<td>3.</td>
<td>Students will choose a flower or foliage, find the symbolism and from it create a floral design.</td>
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<td>_____</td>
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<tr>
<td>4.</td>
<td>Evaluation of art examples from various time periods</td>
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<td>5.</td>
<td>Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.</td>
</tr>
<tr>
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<td>6.</td>
<td>Create a visual presentation on history of Floral Design</td>
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<tr>
<td>_____</td>
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<tr>
<td>7.</td>
<td>Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles</td>
</tr>
<tr>
<td>_____</td>
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<tr>
<td>8.</td>
<td>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</td>
</tr>
<tr>
<td>_____</td>
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<tr>
<td>9.</td>
<td>Practicum using a given theme: two dimensional layouts, three-dimensional arrangements, fresh and dry cut flower designs, and container arrangements</td>
</tr>
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<td>10.</td>
<td>Identify plant parts and explain their functions for a variety of common agriculture plants.</td>
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<tr>
<td>11.</td>
<td>Complete a floral art three-dimensional Critique Sheet for historical periods</td>
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G. 

Description of Facilities and Major Equipment
Description of Facilities and Major Equipment
Heritage High School Agriculture Department

Agriculture Facilities
2.5 acre land laboratory
1,500 sq ft floral shop/classroom
8'x12' floral display walk in
2, 144 sq ft office/storage rooms
1 standard classroom
3 laboratory classrooms
1 Shadehouse
1 Greenhouse

Major Equipment

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>F-450 Ford Dually Truck</td>
</tr>
<tr>
<td>1</td>
<td>Ford 9 passenger Van</td>
</tr>
<tr>
<td>1</td>
<td>Golf Cart</td>
</tr>
<tr>
<td>1</td>
<td>Kubota Tractor</td>
</tr>
<tr>
<td>1</td>
<td>RTV900xt</td>
</tr>
<tr>
<td>1</td>
<td>16 foot flatbed trailer</td>
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<td>2</td>
<td>Livestock Trailers</td>
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<tr>
<td>1</td>
<td>Tractor Disc</td>
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<td>1</td>
<td>Tractor Scraper</td>
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<tr>
<td>8</td>
<td>Farrowing Crates</td>
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<td>Tractor Rototiller Implement</td>
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<td>2</td>
<td>Blocking Chutes</td>
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<td>8</td>
<td>portable livestock shelter</td>
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<td>5</td>
<td>Goat/Lamb tables</td>
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<td>3</td>
<td>Blowers</td>
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<td>6</td>
<td>Clippers</td>
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<tr>
<td>18</td>
<td>Storage racks</td>
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<td>Floral Design Tables</td>
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<td>Landscape Carts</td>
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H.
Five Year Facility
And Equipment
Acquisition
Schedule
Five Year Facility and Equipment Plan

2015-2016

1. Purchase 2 more farrowing crates
2. Continue to landscape Ag area and campus with shrubs/trees.
3. Install raised garden beds.

2016-2017

1. Purchase lab additional equipment
2. Install chicken brooder house
3. Purchase new van

2017-2018

1. Continue to purchase lab equipment
2. Purchase rabbit breeding supplies
3. Purchase new landscape supplies and equipment
4. Build farrowing barn.

2018-2019

1. Purchase additional Port-a-Huts
2. Replace original incubator.
3. New Aquaculture tanks, pumps and equipment.

2019-2020

1. Replace worn rabbit cages & supplies
2. Replace battery brooders as needed.
I. Staff Assignments
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Program of Activities
Menifee Heritage FFA

Program of Activities
2015-2016

Edited by 2015-2016 Vice President
Ashley Reilly & Amber Thompsem
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2015
August

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Pig Practice @6:30pm |     | Lamb/Goat Practice @7pm | Ag, Freshman Orientation @8pm |
9  | 10  | 11  | 12  | 13  | 14  | 15
Pig Practice @6:30pm |     | Lamb/Goat Practice @7pm | Spirit Day* |     |     |     
16 | 17  | 18  | 19  | 20  | 21  | 22
Pig Practice @6:30pm |     | Lamb/Goat Practice @7pm | Spirit Day* |     | Chapter Meeting @8pm |
23 | 24  | 25  | 26  | 27  | 28  | 29
Pig Practice @6:30pm |     | Lamb/Goat Practice @7pm | Spirit Day* |     |     |     
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<td>Pig Practice @6:30pm</td>
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<td>*Riverside Section CATA &amp; FFA Mtg. (Heritage) 4:30 PM Pig Practice @6:30pm</td>
<td>Lamb/Goat Practice @7pm Riverside Section FFA Softball @4pm</td>
<td>Greenhand Reception @5pm Spirit Day*</td>
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<td>El Capitan Field Day (El Capitan HS) @8am</td>
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<td>*SOCAL Fair Move-Out</td>
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<td>*SOCAL FFA Leadership Conference (Indio) 8:30 AM</td>
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<td>Spirit Day*</td>
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<td>* Heritage Cup Field Day (Heritage HS) 8:00 AM</td>
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<td><em>Riverside Section Job Interview &amp; Impromptu Contest (Norco) 4:00 PM Spirit Day</em> Finals 3 &amp; 6 Chapter Meeting @1pm</td>
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<td><em>Martin Luther King Day No School</em></td>
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<td>*FFA Award Apps due</td>
<td>*Mentor Teacher Conf. @ Fresno</td>
<td>Spirit Day*</td>
<td>*Section STAR Apps Due in Southern Region Office</td>
<td>*Southern Region FFA Officer Screening (CSU-Pomona) 9:00 AM</td>
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<td>*Mentor Teacher Conf. @ Fresno</td>
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<td>*All Section Proficiency APPS due in Region Office 9:00 AM</td>
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<td>*Indio Fair (thru 2/21)</td>
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<td>*Southern Region Scholarship App Due</td>
<td>*CATA Award Apps Due</td>
<td>*State Nominating Committee apps due</td>
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<td>Presidents Week Break Ends</td>
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<td>Lunch Activity **Mira Costa Field Day</td>
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<td>Region Banquet Reservations due</td>
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<td>*Sacramento Leadership Experience (SLE)</td>
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<td>*Escondido Field Day (Escondido HS) 8:00 AM</td>
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<td>*Riverside Section CATA &amp; FFA Mtg. &amp; COOP Quiz &amp; BIG (Indio HS) 4:30 PM</td>
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<td>*Southern Region FFA State Degree &amp; Proficiency Banquet (La Habra- Sonora) 1:00 PM</td>
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<td>*Southern Region Speech Contest Finals (CSU-Pomona) 10:00 AM</td>
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<td>* Cesar Chavez Day</td>
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**2016**
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<td>*Southern Region Chapter Website Entries due (Region Office)</td>
<td>*Southern Region Parli Pro Finals (CSU-Pomona) 10:00 AM</td>
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<td>Chapter Interviews @3pm Animal Meeting @6pm</td>
<td>Spirit Day*</td>
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<td>*Pomona/Mt Sac Field Day (CSU-Pomona) 7:30 AM</td>
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<td><em>State FFA Leadership Finals (Fresno) Spirit Day</em></td>
<td>*State FFA Parli Pro Semi-Finals (Fresno)</td>
<td>*State FFA Leadership Conference</td>
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<td>Spirit Day*</td>
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<td>1st Livestock Payment due</td>
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<td>Spirit Day*</td>
<td>*State FFA Finals @ CP SLO</td>
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<td>*State FFA Finals @ CP SLO</td>
<td>*Riverside Section Officer Elections (Perris HS) 4:30 PM</td>
<td><em>Riverside Section FFA Volleyball (Jurupa Valley HS) 4:00 PM Spirit Day</em></td>
<td>*American Degree apps due in Region Office</td>
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<td>*Riverside Section CATA Planning Mtg. &amp; In-service (San Jacinto HS) 9:00 AM</td>
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<td>Spirit Day*</td>
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<td>*Memorial Day</td>
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<td>Spirit Day*</td>
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<td>*National Delegate, Chorus &amp; Band Apps due in State Office</td>
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<td>Last Day of School*</td>
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<td>Spirit Day*</td>
<td>Graduation</td>
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<td>*State CATA Summer Conference (CP-SLO)</td>
<td>*State CATA Summer Conference (CP-SLO)</td>
<td>*State CATA Summer Conference (CP-SLO)</td>
<td>*State CATA Summer Conference (CP-SLO)</td>
<td>*State CATA Summer Conference (CP-SLO)</td>
<td>*Agri-Skills Sessions (CP-SLO) 1:00 PM</td>
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K.
School and/or Department Policies Pertaining to:

*Student Eligibility to Participate in out-of-class Activities
*Leadership Development Integrations into Program
*SOE Integration into Program and other Policies
Heritage High School Grading Policies for FFA

All students enrolled in the Agriculture Program at Heritage High School are members of the FFA program. The Ag Ed instructor allows a maximum of 10% of the student’s grade for his or her FFA activities. These grades are considered four times per year. Activities may include chapter meetings, judging teams, market animals or projects to be shown at the county fair, assisting in the completion of the chapter program of activities, and participation in chapter fundraisers.

Heritage High School Eligibility for FFA Activities away from school

It is a policy at Heritage High School that all students participating in out-of-class activities including FFA maintain at least 2.0 grade point average. The Agriculture Education Department supports this policy and applies it to all FFA activities outside of class time that is away from school. There may be an exception to this policy if the FFA activity does not interfere with school time. The decision in this case shall be made by the Agriculture Education Department Chairman, with advisement from the Principal at Heritage High School.
Agriculture Government Policy & Agriculture Economics Syllabus

Course Descriptions: Agriculture Government Policy is a one-semester course aligned to the principles of American Democracy content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts, and interrelationships of government. Agriculture Economics is designed for the student interested in understanding the operations and institutions of economic systems as applied to our nation's largest industry agriculture. Units of instruction include basic economic concepts, comparative economic systems, individual and aggregate, economic behavior, and international trade and policy. Instruction is also given in leadership and career education.

Major Course Requirements:

a. Text, homework and projects - successfully complete the work assigned.
b. Take careful notes and maintain a well-organized collection of the year’s work.
c. Keep all assignments until end of semester.
d. Maintain a running record of your daily work and attendance on your Daily Activity Worksheet. These MUST be complete whether you are absent, have a school holiday, etc.
e. Hand in all work the day it is due. **NO LATE WORK IS ACCEPTED.**
f. Observe the school, Agriculture Department, and classroom rules.
g. Must have possession of textbook and chromebook **FULLY CHARGED every day.**
h. Students are not to be watching videos, viewing websites other than directed by teacher or listening to music.
i. Use of Chromebook without direction of teacher may result in referral and/or suspension from class taking failing grades on any missed assignments.

Necessary Equipment

a. Three ring binder, either for Ag or a portion of a larger one for Ag.
b. Black or blue ball point pens.
c. #2 pencils and eraser.
d. Lots of notebook paper

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Class work and homework assignments.
4. Quizzes and Test scores
5. Projects.
6. FFA Activities
Grading Criteria:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Percentages</th>
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<tbody>
<tr>
<td>Assessment</td>
<td>40%</td>
</tr>
<tr>
<td>Home work, Class work</td>
<td>40%</td>
</tr>
<tr>
<td>Project(s)</td>
<td>10%</td>
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<tr>
<td><strong>FFA Activities</strong></td>
<td><strong>10% (500 points per semester)</strong></td>
</tr>
</tbody>
</table>

100% - 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 60 % = D

Below 60% = Failing Grade

Make – Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence. See another student to copy their Daily Activity. Once this is done, You must tell your instructor the exact assignment you need to make up. Your instructor will not chase you.

Attendance- Board Policy AND Heritage attendance policy will be followed.

NO MAKE UP WORK WILL BE PROVIDED TO STUDENTS SENT TO THE DISCIPLINE OFFICE, IN OCD OR SUSPENDED/PFDA.

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal. Students will take Failing grades on assignments if they are referred to the Discipline Office, have truancies/unexcused absences, or are suspended.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Ag Government & Economics contained above.

STUDENT NAME (please print)__________________________________________
STUDENT SIGNATURE ________________________________________________
PARENT/GUARDIAN NAME (please print)________________________________
PARENT/GUARDIAN SIGNATURE ________________________________________

Parent/Guardian e mail & cell phone number.
THIS SYLLABUS WILL NOT BE ACCEPTED UNLESS BOTH ARE PROVIDED and CONFIRMED.

Please print E mail__________________________________________________

Please print Cell# _________________________________________________
The Art & History of Floral Design Syllabus

Text: The Art of Floral Design; Delmar Publishing

Course Description: This course gives the student a practical look at the floriculture industry in California. The major emphasis will be on floral design principles and corsage construction as well as culture, care, and processing. The course is designed to lay the foundation for an entry level position in the floriculture industry or as the prerequisite for an advanced class. Participation in the FFA will be required and graded.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and keep all assignments until end of semester.
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Observe the school, agriculture department, and classroom rules.
f. Chromebooks are REQUIRED fully charged every day however they are NOT to be taken out unless directed by teacher.
g. Videos, e mailings, etc. is never permitted in class on chromebooks unless directed by teacher.
h. Use of Chromebook without direction of teacher may result in referral and/or suspension from class taking failing grades on any assignments missed.

Necessary Equipment

a. Three Ring binder either for floral or a portion of a larger one.
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Lots of notebook paper.

GRADING CRITERIA:

Tests/ quizzes 20%
Floral Projects 50%
Classwork/Homework 20%
FFA Participation 10% (300 points per semester)
Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Class work and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write- ups.
6. FFA Activities.
7. S.O.E.P. (Project)

100% - 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 60 % = D
Below 60% = Failing Grade

Make – Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within one week of your absence. If it is a text book assignment, you will check out a text with the library. Please get the Daily Activity you missed from another student, once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Because we use fresh flowers, an alternate assignment, as per School Board Guidelines, may be given by the instructor if you are absent for even one day of the arrangement construction.

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Floriculture contained above.

STUDENT NAME (please print) ________________________________
STUDENT SIGNATURE ________________________________
PARENT/GUARDIAN NAME (please print) ________________________________
PARENT/GUARDIAN SIGNATURE ________________________________

Parent/Guardian e mail & cell phone number.
THIS SYLLABUS WILL NOT BE ACCEPTED UNLESS BOTH ARE PROVIDED AND CONFIRMED.

Print please E mail ____________________________________________
Print Please Cell# ____________________________________________
Agriculture Biology - Syllabus

Text Books: Biology, McDougal Littell

Course Description: Agriculture Biology is a one year, laboratory science course, aligned to the biology science content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. The molecular and cellular aspects of life.
2. Energetics of life, growth, and reproduction in plants and animals.
3. Evolution of modern plants and domestic livestock species.
4. Plant and animal genetics.
5. Taxonomy of modern agricultural plants and animals.
6. Animal behavior.
7. Ecological relationships among plants, animals, humans, ands the environment.
8. Nutrition in animals.
9. Health and diseases in animals, and similarities between animals and humans.

Major Course Requirements:

a. Laboratory work - successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work, as described in the “How To Organize Your Notebook” sheet.
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Black or blue ball point pens, not one but many.
b. #2 pencils and eraser not one but many.
c. Chromebook
d. Notebook

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S.O.E.P. (Project)
Grading Criteria:

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<thead>
<tr>
<th>Activities</th>
<th>Percentages</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Labs, Class work</td>
<td>40%</td>
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<tr>
<td>Agri-Science Project</td>
<td>10%</td>
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<tr>
<td>FFA Activities</td>
<td>10%</td>
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</table>

100% - 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 55% = D
Below 55% = Failing Grade

Make-Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within one week of your absence. See another student to copy their Daily Activity. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Refer to the handout on Make up assignments if you have any questions. Late work is NOT accepted.

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Ag Biology contained above.

STUDENT NAME (please print)

STUDENT SIGNATURE

PARENT/GUARDIAN NAME (please print)
PARENT/GUARDIAN SIGNATURE

Parent/Guardian e mail & cell phone number.
THIS SYLLABUS WILL NOT BE ACCEPTED UNLESS BOTH ARE PROVIDED and CONFIRMED.

Please print E mail

Please print Cell#
Plant and Animal Science - Syllabus

Text Book: Life Science, Glencoe, 2008

Course Description: Plant and Animal Science is a one year course aligned to meet the graduation requirements in Life Science. This course is also the required first course in the agriculture pathway at Heritage High School. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Using the Scientific Method.
2. Understanding the Math process.
3. Demonstrating writing skills.
4. Comparative relationships of plant and animal nutrition, diseases and health.
5. Evolution of plants and animals.
7. Comparative analysis of major body organs.
9. Appreciates the role of the FFA and its opportunities.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Three Ring binder- Either for Ag (highly recommended) or a portion of a larger one for Ag.
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Lots of notebook paper.

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write- ups.
6. FFA Activities.
7. S.O.E.P. (Project)
**Grading Criteria:**

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<tr>
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<tr>
<td>Agri-Science Project</td>
<td>10%</td>
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<tr>
<td>FFA Activities</td>
<td>10% (300 points per semester)</td>
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100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60% = D
59.9% and Below = Failing Grade

**Make – Up Work**

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. **Late work is NOT accepted.**

**Work is due at the end of each week, and all expected work is outlined on a sheet handed out at the beginning of each week.**

**Consequences:**

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:

1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal

*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

**We have read the above policies for this class contained above.**

**STUDENT NAME (please print) ________________________________**

**STUDENT SIGNATURE _______________________________________**

**PARENT/GUARDIAN NAME (please print) _______________________**

**PARENT/GUARDIAN SIGNATURE ________________________________**
Agriculture Earth and Physical Science- Syllabus

Course Description: Agriculture Earth and Physical Science is a one year, science course, aligned to the Earth science content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Investigate Scientific phenomenon's.
2. Identify elements using properties and characteristics.
3. Understand plate tectonics.
4. Analyze soils for macro and micro elements and nutrients.
5. Understand tidal influences and climatic changes.
6. Identify the sun, stars and planets of our solar system.
7. Solve equations to understand velocity, distance and time.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Three Ring binder- Either for Ag (recommended) or a portion of a larger one for Ag.
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Lots of notebook paper.

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write- ups.
6. FFA Activities.
7. S.O.E.P. (Project)
Grading Criteria:

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<tr>
<th>Activities</th>
<th>Percentages</th>
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<tbody>
<tr>
<td>Assessments</td>
<td>40%</td>
</tr>
<tr>
<td>Classwork, Labs, Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Agri-Science Project</td>
<td>10%</td>
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<tr>
<td>FFA Activities</td>
<td>10% (300 points per semester)</td>
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</tbody>
</table>

100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60 % = D
59.9% and Below = Failing Grade

Make – Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Late work is NOT accepted.

**Work is due at the end of each week, and all expected work is outlined on a sheet handed out at the beginning of each week.**

Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:

1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for this class contained above.

STUDENT NAME (please print) __________________________
STUDENT SIGNATURE __________________________

PARENT/GUARDIAN NAME (please print) __________________________
PARENT/GUARDIAN SIGNATURE __________________________
Heritage Agricultural Education Department

Ag Leadership

Length – 1 year

Grade Level 10-12

References: Program of Activities, FFA handbook, National FFA, California State FFA

Course Description:
The purpose of this course is to assist students in developing their knowledge, attitudes, skills and aspirations regarding leadership development in an agricultural setting or provide them with the beginning foundation for any setting. The goal of this course is to encourage students to be knowledgeable, caring, decision makers. Students in our program desiring to develop and expand their leadership skills are encouraged to take this course. Students will find opportunities to further develop their organizational skills by interacting not only with other class members, but with other organizations, groups, and activities. Students are in charge of club and school activities, and are responsible for successfully organizing, conducting, and evaluating the activities. In addition high priority will be on studying for contests and making sure the Heritage FFA chapter is ready for each contest.

1. Leadership in Agriculture
   • Analyze various definitions of leadership
   • Discuss the contributions of agriculture education and the FFA to leadership development
   • Evaluate myths about leaders and leadership
   • Identify various agriculture leaders in the community
   • Identify opportunities for leadership in agriculture careers and the workplace

2. Supervised Agriculture Experience (SAE) & Record Keeping
   • Identify and maintain the SAE
   • Construct a personal budget
   • Utilize the California FFA SAE Record book to monitor the SAE
   • Complete a local and district proficiency award application
   • Complete chapter and/or State FFA Degree Applications
   • Track SAE skills developed, hours worked as well as FFA, school, and community activities
   • Set appropriate SAE long and short term goals
   • Prepare income and expense records in record book
   • Prepare monthly cash flow statements in record book
   • Record personal and business inventories, assets, and liabilities in record book
3. The National FFA Organization and Leadership
   - Participate and prepare Student, Chapter, and Community Development Activities as established by the POA
   - Demonstrate the use of 15 motions in Parliamentary Procedure

4. Prepared Public Speaking
   - Identify characteristics of a good speech
   - Research and prepare a rough draft for a 8-10 minute speech on an agricultural topic
   - Write a final manuscript for a 8-10 minute speech over an agriculture topic using MLA style with title page and works cited
   - Present a memorized 8-10 minute agriculture speech to the class

5. Extemporaneous Public Speaking
   - Discuss the advantages and disadvantages of extemporaneous speaking
   - Develop strategies for research an extemporaneous speech
   - Prepare an outline for an extemporaneous speech
   - Discuss strategies for time management in preparing an extemporaneous speech
   - Discuss the use of note cards in an extemporaneous speech
   - Deliver an extemporaneous speech to the class

6. Program of Activities (POA)
   - Explain the 3 areas of the program of activities
   - List the items that should be included in the POA
   - Work with POA committees to conduct activities
   - Assist in goal setting for POA activities
   - Finalize the POA for the FFA Chapter
   - Submit the chapter POA to Advisor(s)

7. Fundraising
   - Set goals for chapter fundraising
   - Prepare handouts with dates and details for all members
   - Keep list of all members and their quantities involved in fundraising
   - Prepare ASB Financial documents for club

8. Activity Planning and Evaluation
   - Submit the FFA Roster (R2's) to the State FFA office by deadline
   - Prepare the agenda for chapter meetings
   - Evaluate strengths & weaknesses of activities
   - Make recommendations for conducting the activity again
   - Manage, organize, and inventory FFA chapter resources
9. National Chapter Award
   • Divide up responsibilities for the National Chapter Award among class members
   • Select activities for the National Chapter Award
   • Write the Heritage FFA National Chapter Award
   • Select photographs to use in the National Chapter Award
   • Finalize and proof read the National Chapter Award for the FFA Chapter
   • Submit Form I of the National Chapter Award to District Selection Day
   • Submit Form I and II the National Chapter Award to the State FFA Office by the March 30th deadline

10. Banquet Planning
    • Evaluate last year's chapter banquet
    • Set goals for banquet
    • Develop a banquet program with deadlines
    • Order banquet plaques and supplies
    • Plan, prepare, and conduct banquet

11. FFA Week Planning
    • Work with POA Committees to plan FFA week activities
    • Develop a plan to promote FFA week in the FFA chapter, school, and community
    • Conduct FFA week activities

12. Correspondence/Written Communication
    • Write business letters on behalf of the FFA chapter
    • Write emails on behalf of the chapter
    • Write thank you letters/notes on behalf of the chapter

13. News Writing/Public Relations
    • Write news articles for the FFA chapter
    • Complete press releases for the FFA chapter
    • Update the FFA chapter website/social media
    • Take photographs of chapter activities

14. Conference’s
    • Identify and promote to chapter members
    • Create handouts for all members detailing trip and purpose
    • Disperse and collect all official documents that must be turned into conference registration

15. Personal Skills Related to Effective Leadership
    • Describe the importance of positive self-concept, social skills, and maintaining a professional image with respect to cultural diversity
    • Identify acceptable leadership styles
    • Prepare personal resumes and employment applications
16. Employer/Employee Responsibilities
- Know work-related and business-related ethics
- List methods for working effectively with co-workers
- Practice job interview and evaluation skills
- Participate in the job interview contest with a cover letter, resume, interview

17. Group and Individual Efficiency
- Define the significance of personal and group goals
- Discuss the importance of time management and teamwork
- List the steps in the decision-making and problem-solving processes
- Demonstrate a working knowledge of parliamentary law

18. Communications and Career Development Skills
- Follow oral instructions
- Participate in group communication activities
- Give oral directions
- Use language and format appropriate to the subject matter, purpose, and audience
- Set priorities in which several tasks will be accomplished
- Utilize time management to reduce conflicts
- Apply rules including punctuality, attendance, and work ethic
- Access and use information to develop educational and career options
- Demonstrate stress management skills

19. Computer Literacy
- Define, understand, and use common computer technology terms
- Compose, organize, and edit information using a computer
- Use presentation software to design and create a presentation
- Use ag related software/websites
- Access, navigate, & use on-line services
- Send and receive email messages with enclosures
- Use FFA online record book
- Use Microsoft Office (Word, Excel, Powerpoint, and Internet Explorer) to complete projects
- Grading Criteria

<table>
<thead>
<tr>
<th>Grading Criteria</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Assessments</td>
<td>40%</td>
</tr>
<tr>
<td>Classwork, Labs, Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Agri-Science Project</td>
<td>10%</td>
</tr>
<tr>
<td>FFA Activities</td>
<td>10% (400 points per semester)</td>
</tr>
</tbody>
</table>

100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60% = D
59.9% and Below = Failing Grade
Consequences:

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:

1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for this class contained above.

STUDENT NAME (please print) ________________________________
STUDENT SIGNATURE ________________________________________

PARENT/GUARDIAN NAME (please print) ______________________
PARENT/GUARDIAN SIGNATURE ________________________________
Anatomy & Physiology Vet Science- Syllabus

Course Description:
Veterinary Science is a one year laboratory science course that examines anatomy, physiology, biochemistry, & medical terminology while applying scientific knowledge & research to the study of various agriculture and pet animals. Students will focus on the physiological, biological, & structural details of the body, including a rigorous study of the body systems. Students will apply scientific methodologies (inquiry, developing hypotheses, gathering factual information, evaluating data, & drawing conclusions) to the practices employed by veterinary medicine professionals. Medical terminology and animal disease and diagnosis will be integrated as students understand each of the nine body systems. Students will exceed core academic knowledge & demonstrate critical thinking skills as they apply knowledge to laboratory experimentation, real-life scenarios, medical case studies, and physiological response & treatment of infection. Students will perform advanced research of various physiological & pathological disorders. A variety of resources will be accessed (Internet, veterinary journals & books, & veterinary professionals) for the purpose of creating written & oral presentations that demonstrate students’ knowledge & application of scientific principles. Students will participate in leadership activities through the Future Farmers of America (FFA) and will be involved in an agriculture project as a “hands-on” application of classroom knowledge.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work.
c. NEVER THROW ANYTHING AWAY UNTIL END OF YEAR.
d. Maintain a running record of your daily work and attendance.
e. Hand in all work the day it is due.
f. Chromebooks are REQUIRED fully charged every day however they are NOT to be taken out unless directed by teacher.
g. Videos, e mailings, etc. is never permitted in class on chromebooks unless directed by teacher
h. Use of Chromebook without direction of teacher may result in referral and/or suspension from class taking failing grades on any assignments missed.
i. Display the proper attitude in class at all times.
j. Observe the school, agriculture department, and classroom rules.

Agriscience Project
In the Fall Semester each student will design, implement, and carry through an agriscience project to be presented at the class science fair.

Necessary Equipment
b. Interactive Notebook. Provided, but may be purchased separately. (8 ½ x 11 Recommended)
c. Black or blue ball point pen.
d. #2 pencil and eraser.
e. Highlighter
f. Extra Notebook Paper
Grading Criteria:  Activities  Percentages

Assessments  40%
Interactive Notebook  40%
Agriscience Project (S.A.E.)  10%
FFA Activities  10% (300 points per semester)

100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60% = D
59.9% and Below = Failing Grade

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S.A.E. (Agriscience Project)

Make-Up Work
You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the time frame allowed in the student handbook. Please see another student for their entries in the interactive notebook. Also, all assignments will be posted on the class Haiku page. Once this is done, you must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Late work is NOT accepted.

Behavior:
Mrs. Rushing follows all school rules in her classroom. Please follow all school rules on a daily basis as outlined in the student handbook received at the beginning of the year. Consequences are provided as per the student and teacher handbooks.

Contact Mrs. Rushing at: shaina.rushing@puhsd.org

We have read the above policies for Ag Biology contained above.
STUDENT NAME (please print) ____________________________________________________
STUDENT SIGNATURE __________________________________________________________
PARENT/GUARDIAN NAME (please print) __________________________________________
PARENT/GUARDIAN SIGNATURE ________________________________________________
Parent/Guardian e mail: THIS SYLLABUS WILL NOT BE ACCEPTED UNLESS PROVIDED and CONFIRMED.

Please print E mail(s) __________________________________________________________
Agriculture Biology- Syllabus

Textbook: Biology, McDougal Littell

Course Description: Agriculture Biology is a one year, laboratory science course, aligned to the biology science content standards, designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. The molecular and cellular aspects of life.
2. Energetics of life, growth, and reproduction in plants and animals.
3. Evolution of modern plants and domestic livestock species.
4. Plant and animal genetics.
5. Taxonomy of modern agricultural plants and animals.
6. Animal behavior.
7. Ecological relationships among plants, animals, humans, and the environment.
8. Nutrition in animals.
9. Health and diseases in animals, and similarities between animals and humans.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year's work.
c. NEVER THROW ANYTHING AWAY UNTIL END OF YEAR.
d. Maintain a running record of your daily work and attendance.
e. Hand in all work the day it is due.
f. Chromebooks are REQUIRED fully charged every day however they are NOT to be taken out unless directed by teacher.
g. Videos, e-mailings, etc. is never permitted in class on chromebooks unless directed by teacher.
h. Use of Chromebook without direction of teacher may result in referral and/or suspension from class taking failing grades on any assignments missed.
i. Display the proper attitude in class at all times.
j. Observe the school, agriculture department, and classroom rules.

Agriscience Project
In the Fall Semester each student will design, implement, and carry through an agriscience project to be presented at the class science fair.

Necessary Equipment

b. Interactive Notebook. Provided, but may be purchased separately. (8 ½ x 11 Recommended)
c. Black or blue ball point pen.
d. #2 pencil and eraser.
e. Highlighter
f. Extra Notebook Paper
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<td>10% (500 points per semester)</td>
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100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60 % = D
59.9% and Below = Failing Grade

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores.
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S.A.E. (Agriscience Project)

**Make - Up Work**
You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the time frame allowed in the student handbook. Please see another student for their entries in the interactive notebook. Also, all assignments will be posted on the class Haiku page. Once this is done, you must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Late work is NOT accepted.

**Behavior:**
Mrs. Rushing follows all school rules in her classroom. Please follow all school rules on a daily basis as outlined in the student handbook received at the beginning of the year.
Consequences are provided as per the student and teacher handbooks.

Contact Mrs. Rushing at: shaina.rushing@puhsd.org

We have read the above policies for Ag Biology contained above.

STUDENT NAME (please print) ____________________________________________
STUDENT SIGNATURE ________________________________________________
PARENT/GUARDIAN NAME (please print) ________________________________
PARENT/GUARDIAN SIGNATURE ________________________________________
Parent/Guardian e mail: _____________________________________________

THIS SYLLABUS WILL NOT BE ACCEPTED UNLESS PROVIDED and CONFIRMED.

Please print E mail(s) ________________________________________________
Agriculture Chemistry Course Syllabus

Text Book: The World of Chemistry, Zumdahl

Course Description: Agriculture Chemistry is a one-year, laboratory science course, aligned to the chemistry science content standards, and designed for the college-bound student with career interests in agriculture. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Atomic and molecular structure
2. Chemical bonds
3. Conservation of matter and stoichiometry
4. Gases and their properties
5. Acids and bases
6. Solutions
7. Chemical thermodynamics
8. Reaction rates
9. Chemical equilibrium
10. Organic and biochemistry
11. Investigation and experimentation

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work.
c. NEVER THROW ANYTHING AWAY UNTIL THE END OF THE YEAR.
d. Maintain a running record of your daily work and attendance.
e. Hand in all work the day it is due.
f. Chromebooks are REQUIRED to be fully charged every day; however, they are NOT to be taken out unless directed by the teacher.
g. Videos, email, games, etc. are never permitted in class on Chromebooks unless directed by the teacher.
h. Use of Chromebook without direction of the teacher may result in a referral and/or suspension from the class, taking failing grades on any assignments missed.
i. Display the proper attitude in class at all times.
j. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. Spiral notebook- Either specifically for Ag. (highly recommended) or a portion of a larger one for Ag.
b. Black or blue ballpoint pen.
c. #2 pencil and eraser.
d. Lots of EXTRA notebook paper (A.K.A. loose paper that is NOT from your class notebook.)

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S. A. E. (Project)

Grading Criteria:                  Activities                  Percentages

Assessments                      40%
Classwork, Labs, Homework        40%
Agri-Science Project             10%
FFA Activities                   10% (300 points per semester)

100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60 % = D
59.9% and below = Failing Grade

Make-Up Work

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you. Late work is NOT accepted. Work is due at the end of each week (or a different day designated by Ms. Maratsos) in the form of a notebook check.

Consequences:

If one or more of the classroom or school rules is broken, the following consequences will be immediately administered:
1. Reminder.
2. Parent Contact.
3. Referral to Assistant Principal.

** Severe Case – Immediate referral to the Assistant Principal
*** All school rules, including absence/tardy policy and dress code, will be strictly enforced.

We have read the above policies for Ag. Chemistry contained above.

STUDENT NAME (please print) ____________________________________________
STUDENT SIGNATURE ____________________________________________

PARENT/GUARDIAN NAME (please print) ________________________________
PARENT/GUARDIAN SIGNATURE ________________________________________
PARENT/GUARDIAN EMAIL ____________________________________________
Plant and Animal Science - Syllabus

Text Book: Life Science, Glencoe, 2008

Course Description: Plant and Animal Science is a one year course aligned to meet the graduation requirements in Life Science. This course is also the required first course in the agriculture pathway at Heritage High School. Using agriculture as the learning vehicle, the course emphasizes the principles, central concepts and interrelationships among the following topics:

1. Using the Scientific Method.
2. Understanding the Math process.
3. Demonstrating writing skills.
4. Comparative relationships of plant and animal nutrition, diseases and health.
5. Evolution of plants and animals.
7. Comparative analysis of major body organs.
9. Appreciates the role of the FFA and its opportunities.

Major Course Requirements:

a. Laboratory work- successfully complete the labs assigned during the year.
b. Take careful notes and maintain a well-organized collection of the year’s work
c. Maintain a running record of your daily work and attendance.
d. Hand in all work the day it is due.
e. Display the proper attitude in class at all times.
f. Observe the school, agriculture department, and classroom rules.

Necessary Equipment

a. College ruled notebook- for this class only. It will be turned in at times
b. Black or blue ball point pen.
c. #2 pencil and eraser.
d. Color: Markers, Crayons, or color pencils
e. School Planner

Your classroom grade will be an accumulation of points from the following components:

1. Notebook organization and completion.
2. Classroom participation in discussions and group work.
3. Classwork and homework assignments.
4. Quizzes and Test scores
5. Laboratory experiences and write-ups.
6. FFA Activities.
7. S.O.E.P. (Project)
**Grading Criteria:**

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<tr>
<td>FFA Activities</td>
<td>10% (300 points per semester)</td>
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</tbody>
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100% - 90% = A; 89.9% - 80% = B; 79.9% - 70% = C; 69.9% - 60 % = D  
59.9% and Below = Failing Grade

**Make – Up Work**

You are responsible for seeing to it that you get all lecture notes missed during an absence, and that any assignments are made up within the timeframe allowed in the student handbook. Please see another student for their entries on the daily sheets. Once this is done, YOU must tell your instructor the exact assignment you need to make up. Your instructor will not chase you.  
*Work is due at the end of each week.*

**Consequences:**

If one or more of the Classroom or School rules is broken, the following consequences will be immediately administered:

1. Reminder.  
2. Parent Contact.  
3. Referral to Assistant Principal.

**Severe Case – Immediate referral to the Assistant Principal**  
***All school rules, including absence/tardy policy and dress code, will be strictly enforced.**

We have read the above policies for the Ag Course contained above.

**STUDENT NAME (please print)**

**STUDENT SIGNATURE**

**PARENT/GUARDIAN NAME (please print)**

**PARENT/GUARDIAN SIGNATURE**
L.
Proficiency Standards for Program Completers
Agriculture Biology

has complete coursework in the study and practice in Agriculture Science and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

Competency Level

Basic Animal Science
Anatomy and Physiology of domestic livestock
Livestock Breeding and Genetics
Handling Livestock
Livestock Nutrition and Feeds
Animal Health
Beef Cattle
Swine
Sheep
Beef, Swine, and Sheep veterinary practices
Dairy Cattle and Dairy Cattle veterinary practices
Livestock Evaluation and Selection
Livestock Products
Poultry veterinary practices
Basic Plant Science
Plant Classification Systems
Areas of Crop Production
Vegetable Crops
Tree Crops
Forage Crop Production
Vine and Small Fruit Crops
Land Preparation and Planting
Soils
Fertilizers
Irrigation and Drainage
Harvesting
Identification of Crops, Products, and By-Products
Agricultural Production Services
Agricultural Production Records
Marketing Agricultural Products
Financing Agricultural Production
Understands the nature of scientific inquiry and incorporate the use of the scientific method in laboratory investigations that pertain to biological and agricultural principles.
is familiar with the theory of cell biology and its application to the organization of all living organisms.

Can identify and understand the process of cellular and organism growth and reproduction.

Can recognize the diversity of life and the interrelationships among all organisms.

Understands the role of genetics in organism variation and adaptation.

Understands the role of genetics as it pertains to the development of multi cellular organisms and appreciate how encoded genes specify the characteristics of living organisms.

Has acquired biological and agricultural research vocabulary and the reading, writing, and critical thinking skills pertaining to scientific inquiry.

Understands the stability in an ecosystem is a balance between competing effects.

Understands fundamental cellular and systemic functions and processes.

Recognizes the interrelationships between biotic and physical factors to energy flow in the biosphere.

Can intelligently discuss theories on the origins of life.

Can describe the characteristics of living organisms.

Can describe the characteristics of plant and animal cells with respect to their structure and chemistry.

Can compare and contrast the roles of meiosis and mitosis in cellular and organism reproduction.

Can define the chromosome theory of heredity, Mendelian genetics, gene-enzyme relationships, and apply this knowledge to animal inheritance.

Can distinguish between historical and modern taxonomy systems and scientific nomenclature that demonstrate evolutionary relationships among plants and animals.

Can identify the structural and functional similarities and differences among the major animal, plant, and protist phyla.

Can analyze the major organ systems of animals and understand their function.
____ Can r recognize the structure and function of ecosystems, populations and communities and the impact of human society on the natural and agricultural environment.

____ Can describe the three cycles that involve biotic and abiotic factors: nitrogen, carbon-oxygen, and water and explain the importance of their interrelationships to the biosphere.

____ Can I identify the environmental and genetic factors that influence variation among organisms.

____ Can demonstrate basic laboratory techniques including the use of microscopes, microscope slide preparation, maintenance and examination of micro-organism cultures, tests, demonstrating fundamental biochemical reactions, dissection of representatives of plant and animal phyla, and the sharpening of interpretive skills.
**Proficiency Standards**

Students are to be graded on their ability to accomplish or perform different tasks.

**Rating Scale:**
- 4 – Skilled or can work independently
- 3 – Moderately skilled or can perform with limited help
- 2 – Limited skill, requires instruction and close supervision
- 1 – No exposure, no experience or knowledge in this area

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<thead>
<tr>
<th>Rating</th>
<th>Agriculture I</th>
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<tbody>
<tr>
<td></td>
<td>A. To identify the importance of production agriculture.</td>
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<td></td>
<td>B. Identify the seven basic agricultural career areas.</td>
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<tr>
<td></td>
<td>C. Identify and understand the function of the Future Farmers of America as it relates to modern agriculture, the structure, history and purpose of the Future Farmers of America and how it develops leadership skills.</td>
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<tr>
<td></td>
<td>D. Demonstrate an understanding of the Supervised Occupational Experience Projects and their relationship with agriculture and agriculture careers.</td>
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<td></td>
<td>E. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.</td>
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<td>F. Identify the common breeds of beef, sheep, swine, horse, dairy cattle and small animals.</td>
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<td>G. Demonstrate an understanding of basic livestock management principles, including feeds and nutrition, care and maintenance, diseases and reproduction.</td>
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<td>H. Demonstrate an understanding of the terminology associated with each species of livestock.</td>
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<td>I. Identify the common crops grown and understand their importance to California Agriculture.</td>
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<td></td>
<td>J. Identify plant parts and explain their functions for a variety of common agriculture plants.</td>
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<td>K. Explain the factors involved in plant growth and general production practices.</td>
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<td>L. Students will understand and perform basic tractor operations and maintenance. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
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<td>M. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
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<td>N. Demonstrate proper safety techniques used in the agricultural industries and in the classroom setting.</td>
</tr>
</tbody>
</table>
Certificate of Skills

Agriculture Biology

This is to certify that ________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

_________________________  __________________________
Instructor Signature  Date
Agriculture Earth & Physical Science

_________________________ has complete coursework in the study and practice in Agriculture Science and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

**Competency Level**

_____ Basic Animal Science
_____ Areas of Crop Production
_____ Vegetable Crops
_____ Tree Crops
_____ Forage Crop Production
_____ Vine and Small Fruit Crops
_____ Land Preparation and Planting
_____ Soils
_____ Fertilizers
_____ Irrigation and Drainage
_____ Harvesting
_____ Identification of Crops, Products, and By-Products
_____ Agricultural Production Services
_____ Agricultural Production Records
_____ Marketing Agricultural Products
_____ Financing Agricultural Production

_____ Students will apply the scientific method to solve a problem.
_____ Students will design an experiment and articulate a conclusion.
_____ Students will demonstrate safe lab practices and care of equipment.
_____ Students will write lab reports and present them to class.
_____ Students will diagram an atom using the Bohr model.
_____ Students will identify elements utilizing their properties and characteristics.
_____ Students will depict the relationship between the state of matter and matter.
_____ Students will balance chemical equations.
_____ Students will utilize pH paper to test solutions and identify acids and bases.
____ Students will solve equations using $v = \frac{d}{t}$ to arrive at velocity, distance, or time.
____ Students will solve equations using $F = ma$ to calculate force, mass, or acceleration.
____ Students will diagram the transfer of heat energy to mechanical energy.
____ Students will simulate the direction of an object’s motion with respect to momentum.
____ Students will develop models showing the relationship between force, work and power.
____ Students will represent graphically how plate tectonics drives the earth’s process.
____ Students will draw, label, and interpret the “Ring of Fire”.
____ Students will collect samples and interpret the rock cycle and various rock types.
____ Students will identify minerals.
____ Students will classify soils.
____ Students will trace the path of energy as solar radiation.
____ Students will chart weather tidal influences and predict climactic changes.
____ Students will label and describe parts of the sun, planets and solar system.
____ Students will lead a meeting, class discussion and group activity.
____ Students will sketch California’s natural resource base and relate its productive capabilities.
____ Students will keep accurate records of field visits, labs, and SAE’s.
____ Students will complete science research including agriculture and career investigations.
Certificate of Skills
Agriculture Earth & Physical

This is to certify that ___________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

__________________________  ________________________
Instructor Signature                  Date
Plant & Animal Science

has complete coursework in the
study and practice in Agriculture Science and has attained a competency level of:
(n/a) not applicable; (0) does not meet basic standards;
(1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

Competency Level

_____ Basic Animal Science
_____ Anatomy and Physiology of domestic livestock Animals
_____ Livestock Breeding and Genetics
_____ Handling Livestock
_____ Livestock Nutrition and Feeds
_____ Animal Health
_____ Beef Cattle
_____ Swine
_____ Sheep
_____ Beef, Swine, and Sheep veterinary practices
_____ Dairy Cattle and Dairy Cattle veterinary practices
_____ Livestock Evaluation and Selection
_____ Livestock Products
_____ Poultry veterinary practices
_____ Basic Plant Science
_____ Plant Classification Systems
_____ Areas of Crop Production
_____ Vegetable Crops
_____ Tree Crops
_____ Forage Crop Production
_____ Vine and Small Fruit Crops
_____ Land Preparation and Planting
_____ Soils
_____ Fertilizers
_____ Irrigation and Drainage
_____ Harvesting
_____ Identification of Crops, Products, and By-Products
_____ Agricultural Production Services
_____ Agricultural Production Records
_____ Marketing Agricultural Products
_____ Financing Agricultural Production

_____ Intelligently discuss theories on the origins of life.
_____ Describe the characteristics of living organisms.
___ Describe the characteristics of plant and animal cells with respect to their structure.
___ Compare and contrast the roles of meiosis and mitosis in cellular reproduction.
___ Understand heredity, Mendelian Genetics, terminology and apply this to animal inheritance.
___ Distinguish between historical and modern taxonomy systems and understand the evolutionary relationships among domestic plants and animals.
___ Understand the structural and functional similarities and differences among major animal, plant and protest phyla.
___ Identify and understand the major organ systems of animals.
___ Recognize the structure and function of ecosystems, populations, and communities and the impact of human society on the natural and agricultural environment.
___ Describe the three cycles that involve abiotic and biotic factors. And explain their interrelationships and importance to the biosphere.
___ Identify the environmental and genetic factors that influence variation among organisms.
___ Demonstrate basic laboratory techniques including the use of microscopes, slides, microorganism examination, and the dissection of representative plants and animals of various species.

Certifying Instructor ___________________ Course Grade _______ Date _______
**Proficiency Standards**

Students are to be graded on their ability to accomplish or perform different tasks.

**Rating Scale:**
- 4 – Skilled or can work independently
- 3 – Moderately skilled or can perform with limited help
- 2 – Limited skill, requires instruction and close supervision
- 1 – No exposure, no experience or knowledge in this area

<table>
<thead>
<tr>
<th>Rating</th>
<th>Agriculture I</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td></td>
</tr>
<tr>
<td>______</td>
<td>A. To identify the importance of production agriculture.</td>
</tr>
<tr>
<td>______</td>
<td>B. Identify the seven basic agricultural career areas.</td>
</tr>
<tr>
<td>______</td>
<td>C. Identify and understand the function of the Future Farmers of America as it relates to modern agriculture, the structure, history and purpose of the Future Farmers of America and how it develops leadership skills.</td>
</tr>
<tr>
<td>______</td>
<td>D. Demonstrate an understanding of the Supervised Occupational Experience Projects and their relationship with agriculture and agriculture careers.</td>
</tr>
<tr>
<td>______</td>
<td>E. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.</td>
</tr>
<tr>
<td>______</td>
<td>F. Identify the common breeds of beef, sheep, swine, horse, dairy cattle and small animals.</td>
</tr>
<tr>
<td>______</td>
<td>G. Demonstrate an understanding of basic livestock management principles, including feeds and nutrition, care and maintenance, diseases and reproduction.</td>
</tr>
<tr>
<td>______</td>
<td>H. Demonstrate an understanding of the terminology associated with each species of livestock.</td>
</tr>
<tr>
<td>______</td>
<td>I. Identify the common crops grown and understand their importance to California Agriculture.</td>
</tr>
<tr>
<td>______</td>
<td>J. Identify plant parts and explain their functions for a variety of common agriculture plants.</td>
</tr>
<tr>
<td>______</td>
<td>K. Explain the factors involved in plant growth and general production practices.</td>
</tr>
<tr>
<td>______</td>
<td>L. Students will understand and perform basic tractor operations and maintenance. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
<td>______</td>
<td>M. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
<td>______</td>
<td>N. Demonstrate proper safety techniques used in the agricultural industries and in the classroom setting.</td>
</tr>
</tbody>
</table>
Certificate of Skills

Plant & Animal Science

This is to certify that ____________________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

Instructor Signature ________________________________ Date ________________
Floral Design

has completed

Courses of study and practice in Floral Design and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

**Competency Level**

______ 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.

______ Describe the principles of design as used in works of art, focusing on dominance and subordination.

______ 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.

______ Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design

______ Analyze the material used by a given artist and describe how its use influences the meaning of the work.

______ Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

______ Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.

______ Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.

______ Develop and refine skill in the manipulation of digital imagery.

______ Review and refine observational drawing skills.

______ Create an expressive composition, focusing on dominance and subordination.

______ Create two or three-dimensional work of art that addresses a social issue.
Identify similarities and differences in the purposes of art created in selected cultures.

Identify and describe the role and influence of new technologies on contemporary works of art.

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.

Discuss the purposes of art in selected contemporary cultures.

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.

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.

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.

Articulate the process and rationale for refining and reworking one of their own works of art.

Employ the conventions of art criticism in writing and speaking about works of art.

Certifying Instructor ___________ Course Grade ___________ Date ___________
Floral Design

Students are to be graded on their ability to accomplish or perform different tasks.

Rating Scale:
4 – Skilled or can work independently
3 – Moderately skilled or can perform with limited help
2 – Limited skill, requires instruction and close supervision
1 – No exposure, no experience or knowledge in this area

Rating:________

1. 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

2. Students will research and write a description of the historical symbolism of specific flowers and foliage.

3. Students will choose a flower or foliage, find the symbolism and from it create a floral design.

4. Evaluation of art examples from various time periods.

5. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.

6. Create a visual presentation on history of Floral Design.

7. Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles.

8. 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.

9. Practicum using a given theme: two dimensional layouts, three-dimensional arrangements, fresh and dry cut flower designs, and container arrangements.

10. Identify plant parts and explain their functions for a variety of common agriculture plants.

11. Complete a floral art three-dimensional Critique Sheet for historical periods.
Certificate of Skills

The Art & History of Floral Design

This is to certify that [Student Name] was Enrolled in the Agricultural Science Courses at Heritage High School and is a Program Completer.

To be a program completer the student has demonstrated the skills and knowledge listed on the reverse side of this certificate.

Instructor Signature

Date
1. Harvest and Distribution

A. Describe the world flower market and the position the United States maintains in this market.

B. Discuss the important processes of harvesting, grading, bunching, and conditioning flowers to ensure optimum quality and longevity for the final consumer.

C. Explain the various methods of packing and shipping flowers.

D. Outline the tradition distribution channel for flowers and describe changes that are taking place in the movement of product from growers to final consumers.

E. Summarize the floral industry's advertising and promotion programs.

2. Wedding Flowers
A. Describe the importance of promotion and advertising to attract prospective brides-to-be.

B. Specify the importance of the wedding consultation appointment and the
necessity for a floral consultant to be knowledgeable about wedding flowers and professional in helping a bride-to-be select appropriate flowers for her wedding.

Describe how to conduct a bridal consultation and explain the various floral pieces that are listed on a wedding order form.

Describe the most popular bouquet styles.

Describe general approaches to planning and presenting flowers for the ceremony and reception decorations.

List the fundamental design techniques that are important in creating wedding flowers.

Construct a simple colonial bouquet and a simple cascade bouquet using foam bouquet holders.

Construct a cake top in a cake-top holder.

Describe the importance of servicing weddings that require professional attention at the ceremony and the reception.
3. **Sympathy Flowers**

Identify various sympathy floral designs, tributes, and funeral-related terminology.
Describe the significant construction techniques in creating sympathy designs.
List ways a professional retail flower shop can develop a positive working relationship with funeral directors.
Identify concerns that limit the growth of the sympathy flower business.
Characterize how to conduct a consultation with a family ordering flowers for their deceased loved one.
Construct a variety of floral designs including a tied flat spray, a pedestal arrangement, an easel spray and a simple casket spray.

4. **Contemporary Design Styles and Techniques**
A. Specify what constitutes a contemporary floral design.
B. Demonstrate proficiency in advanced arrangement techniques.
C. Define, sketch, or construct the various contemporary, advanced, classic, naturalistic, linear, and modernistic design styles discussed.

5. Retail Flower Shop

A. Identify the primary functions of a retail flower shop.
Differentiate the major classifications of retail flower operations. Explain the characteristics of store location options.

- Characterize the principle responsibilities of employees. 
- Summarize the key management responsibilities required for a successful and profitable flower shop.
- Describe product presentation and the importance of window and store display.
- Identify the primary goals of display.
- Describe the sequence of taking information for a telephone order.

6. Career Portfolio
   Goal: The students will create portfolio with work examples associated with employment skills and expectations.
1. Resume
2. Cover letter
3. Job application
4. Work Samples
5. Work Critiques
6. Design Styles

7. *Introduction to Careers and Continuing Education*
1. Describe various employment opportunities in a retail flower shop.

2. Outline the skills and experience required to work in specialized areas of floral design.

3. Identify other career opportunities within the wholesale and production areas of the floral industry.

4. Describe the importance of continuing education in floral design.

5. Identify numerous career options within the floral industry.

6. Describe and distinguish between the different trade organizations and the opportunities each provides.

7. List some of the many trade publications, design workshops, and educational programs available to increase the knowledge and skills of a floral designer.
8. **Introduction to FFA**

**Goal:** The students will demonstrate knowledge and understanding of *National FFA Associations as they pertain to premier leadership, personal growth, and career success for life.*

1. Demonstrate knowledge about the FFA.
2. Participate in leadership activities and FFA events.
Certificate of Skills
Advanced Floral Design

This is to certify that ________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

________________________________________________________________________
Instructor Signature ____________________________ Date
M. Teacher Data Sheet for each Teacher
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

STEPHEN DALY

is hereby awarded a

Preliminary Single Subject Teaching Credential: New Credential Type

AUTHORIZED SUBJECT(S):
Agriculture,

SUBJECT MATTER AUTHORIZATION(S):
Agriculture,

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 06/18/2015 to 07/01/2020

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

STEPHEN DALY

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture): New Credential Type

AUTHORIZED SUBJECT(S):
Agriculture

SUBJECT MATTER AUTHORIZATION(S):
Agriculture

SUPPLEMENTARY AUTHORIZATION(S):
Valid from 06/18/2015 to 07/01/2020

This is not an official document. The official record of credentials, permits, and certificates is the Commission's website at www.ctc.ca.gov
COMMISSION ON
TEACHER CREDENTIALING

Ensuring Educator Excellence

By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

CHRISTOPHER JOHN MADDALENA

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

CHRISTOPHER JOHN MADDALENA

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

SHAINA R LEACH

is hereby awarded a

Clear Single Subject Teaching Credential

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

SHAINA R LEACH

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
Commission on Teacher Credentialing
Ensuring Educator Excellence

By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

JEREMIAH MATHEW PEROTTI

is hereby awarded a

Preliminary Single Subject Teaching Credential

AUTHORIZED SUBJECT(S):
Agriculture
COMMISSION ON
TEACHER CREDENTIALING

Ensuring Educator Excellence

By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

JEREMIAH MATHEW PEROTTI

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
N.
Roster of Agriculture Advisory Committee
Heritage Ag Program Ag Advisory Members 2014-2-15

Marion Hammerlund DVM
1845 University Ave
Riverside, Ca 92507
951 682 3803

Brookhurst Feed Mil
Vic Solarzano
3315 Van Buren Ave.
Riverside 92503
951 688 3511

Star Milling
Bill Cramer
24067 Water Ave.
Perris Ca. 92570

Dian Martin
CTE Coordinator
155 E 4th St
Perris Ca 92571
951 943 6369

R & L Stock Farm
Robert & Linda Kirshner
24240 Juniper Flats Rd
Homeland Ca 92548
951 926 1010
O. Advisory Committee Minutes
I waited until 6:30 pm, No Ag teachers or advisory Members attended.

Chris Maddalena

Ag Teacher
P.
Current Year Budget
# Heritage Ag Budget 2015-2016

<table>
<thead>
<tr>
<th>Description</th>
<th>Income</th>
<th>Expenses</th>
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</thead>
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<td>AIG</td>
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<tr>
<td>Matching</td>
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<td>Mayesh Flowers &amp; Supplies</td>
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<td>Fuel</td>
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<td>Dan’s Feed</td>
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<td>Dr. Moss Veterinarian</td>
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<td>Star Milling</td>
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<td>Temecula Pipe</td>
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<td>Valley Vet</td>
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<td>Reimbursement Maddalena</td>
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<td>Paper mart Floral</td>
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<td>Sequoia Floral</td>
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<td>Prestige Golf carts maintenance</td>
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<td><strong>FFA Leadership packets approx. 800@8.50</strong></td>
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<td>6,800</td>
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<td><strong>Total</strong></td>
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*Balance of 5,400 AIG TBD semester 2*
Q.
Signed Articulation Agreement and/or Evidence of Articulation
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<tr>
<th>HS District Name</th>
<th>School</th>
<th>District Course Title</th>
<th>MSJC Course Title</th>
<th>Units</th>
<th>Transfers To</th>
<th>Approved</th>
<th>Update By</th>
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<td>DMS 095 Medical Terminology</td>
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<td>CSIS’1115: Fundamentals of Computers Programming</td>
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</table>
MT. SAN JACINTO COLLEGE
HIGH SCHOOL/ROP AND COMMUNITY COLLEGE
COURSE ARTICULATION AGREEMENT COVER SHEET

**STATEMENT OF INTENT**
This agreement enables students to receive college credit and/or a waiver of a prerequisite for coursework at the secondary level comparable to courses offered by Mt. San Jacinto College District. The granting of college "credit-by-examination" is based upon achievement of competencies through a course or courses as defined in Attachment C, which specifies the conditions of the articulation agreement.

**TERMS OF AGREEMENT**
This agreement between Mt. San Jacinto College District and high schools or ROP shall remain valid for three years for all disciplines except child development education which are valid for two years. After this time period the agreement will be reviewed and updated as needed for renewal. This review will include an examination of up-to-date course outlines and a discussion of current teaching methods, stated competencies and measurement methods. Either party to the agreement may terminate this agreement at the close of any school year by proper written notice delivered to the Superintendent/President of Mt. San Jacinto College or to the Superintendent of the secondary or R.O.P. educational institution. This agreement will be reviewed periodically. This agreement was created using a Statewide Career Pathways Project articulation agreement template.

<table>
<thead>
<tr>
<th>MT. SAN JACINTO COLLEGE DISTRICT</th>
<th>HIGH SCHOOL/ROP/DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME AND NUMBER OF COURSE:</strong></td>
<td><strong>NAME &amp; NUMBER OF COURSE:</strong></td>
</tr>
<tr>
<td>HORT 107 Arboriculture</td>
<td>Perris Union School District Arboriculture 441</td>
</tr>
<tr>
<td><strong>COLLEGE SIGNATURES</strong></td>
<td><strong>HIGH SCHOOL/ROP/DISTRICT SIGNATURES</strong></td>
</tr>
<tr>
<td>[Signature] 4/12/13</td>
<td>[Signature] 4/12/13</td>
</tr>
<tr>
<td><strong>DEPARTMENT CHAIR/PROGRAM COORDINATOR DATE:</strong></td>
<td><strong>INSTRUCTOR DATE:</strong></td>
</tr>
<tr>
<td>[Signature] 4/12/13</td>
<td>[Signature] 4/12/13</td>
</tr>
<tr>
<td><strong>DEAN, CAREER EDUCATION/INSTRUCTION DATE:</strong></td>
<td><strong>PRINCIPAL/PROGRAM ADMINISTRATOR DATE:</strong></td>
</tr>
<tr>
<td>[Signature] 5/20/13</td>
<td>Mary Savage 9/13</td>
</tr>
<tr>
<td><strong>CURRICULUM COMMITTEE (INFORMATION ITEM) DATE:</strong></td>
<td><strong>SUPERINTENDENT DATE:</strong></td>
</tr>
<tr>
<td>[Signature] 5/20/13</td>
<td>[Signature] 5/20/13</td>
</tr>
<tr>
<td><strong>VICE PRESIDENT DATE:</strong></td>
<td></td>
</tr>
<tr>
<td>[Signature] 5/20/13</td>
<td>[Signature] 5/20/13</td>
</tr>
<tr>
<td><strong>PRESIDENT/SUPERINTENDENT DATE:</strong></td>
<td></td>
</tr>
</tbody>
</table>
Mt. San Jacinto Community College District  
Secondary and Community College  
Course Articulation Agreement  

**Statement of Intent**

This agreement enables students to receive college credit and/or a waiver of a prerequisite for coursework at the secondary level comparable to courses offered by Mt. San Jacinto Community College District. The granting of college "credit-by-examination" is based upon achievement of competencies through a course, or courses, as defined in Attachment B, which specifies the conditions of the articulation agreement.

**Terms of Agreement**

This agreement between Mt. San Jacinto Community College District and high schools or ROP shall remain in force for an indefinite period of time but shall be reviewed for consideration of continuation every three years. This review will include an examination of up-to-date course outlines and a discussion of current teaching methodologies and stated competencies. Either party to the agreement may terminate this agreement at the close of any school year by proper written notice delivered to the Superintendent/President of Mt. San Jacinto College or to the Superintendent of the secondary or R.O.P. educational institution.

---

**Horticulture Science**  
Name and Number of Course/MSJCCD

**Horticulture Science 442**  
Name & Number of Course/High School/ROP

---

**Mt. San Jacinto Community College District**  
Department Chair  
Score  
Date

---

**Secondary/ROP Educational Institution**  
Principal/Program Administrator Date

---

**Vice President**  
Date

---

**President/Superintendent**  
Date
R.
Graduate Follow-up
System
S.
List of Active Placement Sites
Active Placement Sites

At this time we have no students working in an Ag-related field. Jobs in our area require employees to be 18 years old or require them to work during the school day.
T.
Recruitment Activities
And Materials
CAREER DEVELOPMENT EVENTS

Members have the opportunity to compete in events throughout the state of California designed to further their education and experience in the agriculture education program.

- Best Informed Greenhand
- Ornamental Horticulture
- Specialty Animals
- Vegetable Crop ID
- Public Speaking
- And so much more.

FFA conferences allow members to participate in general sessions, competitive events, educational tours, leadership workshops, career shows and expos, volunteer activities and much more.

Student Projects Include
- Market Beef*
- Dairy Heifers*
- Poultry*
- Market Goats
- Market Lambs
- Market Rabbits*
- Market Swine
- Market Turkeys
- Breeding Projects*

*Projects to come in the future.
Other Courses
- Agriculture Chemistry
- Agriculture Government and Economics
- Agricultural Earth and Physical Science
- Plant & Animal Science (9th)
- Agriculture Biology (10th)

Pathway
College Prep Course
Agriculture

Veterinary Science
Agriculture Leadership
Advanced Floral Design
The Art and History of Floral Design

FFA Mission:
The mission of FFA is to promote premier success through agricultural education, leadership, personal growth, and career exploration and experience what they learn in the classroom and apply it to real-world settings. FFA students develop a SAE project to further guidance from their agricultural teachers. FFA project: Supervised Agricultural Experience.

Classroom: Agricultural Education prepares students for successful careers in agriculture.

Agricultural Education is founded in southern California with over 600 members. The FFA is a national youth organization with over 7,000 chapters in all 50 United States. Heritag is the largest FFA Chapter in America with over 53,000 members.

- Animal Pens
- Greenhouse
- Shade House
- Farming Barn
- Science Labs
- Laying Hen Barn
- Poultry Barn
- Steer Barn
- Facilities

Educational experience projects make up agriculture classroom, FFA and Supervised Agricultural experience. Together the three different aspects of FFA form the core of the educational experience.
U.

Staff In-Service Record
INCENTIVE GRANT IN-SERVICE ACTIVITIES DOCUMENTATION

CRITERIA 4.B  School Year  14/15  School  

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>Maddalena</th>
<th>Marotsos</th>
<th>Perotti</th>
<th>Rushing</th>
<th>Macy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Region Meeting</td>
<td></td>
<td>X</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Region In-service Day</td>
<td></td>
<td>X</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Spring Region Meeting</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Conference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University AgEd Skills Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Development **</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</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. Maddalena,...Riverside Section Planning Meeting, PCBC Winter Poultry Show, PPBA Winter Poultry Show
2. 
3. 
4. 
5. 
V.
Staff Minutes
RE: dept minutes

1 message

Jack E Havens <jhavens@cpp.edu>
To: Chris Maddalena <chris.maddalena@puhsd.org>

Mon, Nov 2, 2015 at 1:11 PM

Current ones have been sent to me – so no need to duplicate.

From: Chris Maddalena [mailto:chris.maddalena@puhsd.org]
Sent: Monday, November 02, 2015 12:54 PM
To: Jack E Havens
Subject: dept minutes

we do not have previous departmental meeting minutes because of not being allowed to meet past 2 years. Do you want our current ones?
W.
Department Inventory
<table>
<thead>
<tr>
<th>Quantity</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12-door hog feeders</td>
</tr>
<tr>
<td>6</td>
<td>4-door hog feeders</td>
</tr>
<tr>
<td>2</td>
<td>8’ sheep hay/grain feeders</td>
</tr>
<tr>
<td>6</td>
<td>4’ sheep hay/grain feeders</td>
</tr>
<tr>
<td>2</td>
<td>2’ sheep hay/grain feeders</td>
</tr>
<tr>
<td>100</td>
<td>hog panels</td>
</tr>
<tr>
<td>100</td>
<td>t-posts</td>
</tr>
<tr>
<td>200</td>
<td>chicken show coops</td>
</tr>
<tr>
<td>10</td>
<td>turkey show coops</td>
</tr>
<tr>
<td>10</td>
<td>garden carts</td>
</tr>
<tr>
<td>9</td>
<td>wheelbarrows</td>
</tr>
<tr>
<td>4</td>
<td>poultry coop racks</td>
</tr>
<tr>
<td>2</td>
<td>livestock truck racks</td>
</tr>
<tr>
<td>12</td>
<td>5’ x 7’ framed gate panels</td>
</tr>
<tr>
<td>3</td>
<td>7’ x 8’ welded double gate panels</td>
</tr>
<tr>
<td>11</td>
<td>42” x 8’ framed hog panels</td>
</tr>
<tr>
<td>12</td>
<td>42” x 12’ framed hog panels</td>
</tr>
<tr>
<td>12</td>
<td>24’ pipe corrals</td>
</tr>
<tr>
<td>2</td>
<td>24’ double gate pipe corrals</td>
</tr>
<tr>
<td>3</td>
<td>8’ x 24’ pipe corral covers</td>
</tr>
<tr>
<td>60</td>
<td>26” x 10’ corrugated roofing</td>
</tr>
<tr>
<td>1</td>
<td>16’ flatbed trailer</td>
</tr>
<tr>
<td>1</td>
<td>tractor disc implement</td>
</tr>
<tr>
<td>1</td>
<td>tractor scraper implement</td>
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<td>4</td>
<td>sheep fitting tables</td>
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<tr>
<td>5</td>
<td>cattle blocking chutes</td>
</tr>
<tr>
<td>2</td>
<td>beef head clippers</td>
</tr>
<tr>
<td>3</td>
<td>sheep head clippers</td>
</tr>
<tr>
<td>2</td>
<td>small hand clippers</td>
</tr>
<tr>
<td>1</td>
<td>large tack box</td>
</tr>
<tr>
<td>3</td>
<td>circuiteer 300 livestock blowers</td>
</tr>
<tr>
<td>1</td>
<td>6’ chest freezer</td>
</tr>
<tr>
<td>1</td>
<td>4’ floral display coolers</td>
</tr>
<tr>
<td>1</td>
<td>8’ x 12’ floral display walk-in refrigerator</td>
</tr>
<tr>
<td>3</td>
<td>GQF 1250 incubators</td>
</tr>
<tr>
<td>1</td>
<td>microscope camera</td>
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<tr>
<td>1</td>
<td>8 color ink marker set</td>
</tr>
<tr>
<td>1</td>
<td>set 8 ink colors</td>
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<tr>
<td>1</td>
<td>12’ ladder</td>
</tr>
<tr>
<td>5</td>
<td>large rolling toolboxes</td>
</tr>
<tr>
<td>1</td>
<td>small air compressor</td>
</tr>
<tr>
<td>11</td>
<td>storage rack (tool and floral rooms)</td>
</tr>
<tr>
<td>5</td>
<td>floral racks (inside walk-in)</td>
</tr>
<tr>
<td>1</td>
<td>battery-powered hand drill</td>
</tr>
<tr>
<td>1</td>
<td>hardware rack</td>
</tr>
<tr>
<td>1</td>
<td>large shop vacuum</td>
</tr>
<tr>
<td>3</td>
<td>4’ bookcases</td>
</tr>
<tr>
<td>Quantity</td>
<td>Item Description</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>rolls of colored butcher paper</td>
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<tr>
<td>5</td>
<td>paper cutters</td>
</tr>
<tr>
<td>1</td>
<td>set of portable speakers</td>
</tr>
<tr>
<td>1</td>
<td>Ford F450 crew cab dually truck</td>
</tr>
<tr>
<td>20</td>
<td>rakes, shovels, brooms, scrapers</td>
</tr>
<tr>
<td>5</td>
<td>farrowing crates</td>
</tr>
<tr>
<td>4</td>
<td>individual hay/grain feeders for cattle</td>
</tr>
<tr>
<td>1</td>
<td>6' propane BBQ</td>
</tr>
<tr>
<td>3</td>
<td>5 gallon propane tanks</td>
</tr>
<tr>
<td>400</td>
<td>porcelain floral containers for various projects</td>
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<tr>
<td>60</td>
<td>rolls of satin ribbon, various colors</td>
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<tr>
<td>3</td>
<td>cs of floral foam</td>
</tr>
<tr>
<td>6</td>
<td>100' garden hoses</td>
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<tr>
<td>6</td>
<td>50' extension cords</td>
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<tr>
<td>1</td>
<td>small fountain</td>
</tr>
<tr>
<td>4</td>
<td>styrofoam incubators</td>
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<tr>
<td>6</td>
<td>loppers</td>
</tr>
<tr>
<td>18</td>
<td>hand pruners</td>
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<tr>
<td>18</td>
<td>floral shears</td>
</tr>
<tr>
<td>1</td>
<td>bolt cutter</td>
</tr>
<tr>
<td>4</td>
<td>hedge trimmers</td>
</tr>
<tr>
<td>1</td>
<td>skill saw</td>
</tr>
<tr>
<td>1</td>
<td>small plastic tool box</td>
</tr>
<tr>
<td>20</td>
<td>3-hole rabbit carriers</td>
</tr>
<tr>
<td>1</td>
<td>6' sheep water tank</td>
</tr>
<tr>
<td>3</td>
<td>small metal sheep water buckets</td>
</tr>
<tr>
<td>4</td>
<td>single-hole rabbit carriers</td>
</tr>
<tr>
<td>2</td>
<td>rolling metal tables</td>
</tr>
<tr>
<td>1</td>
<td>lockable cage rack</td>
</tr>
<tr>
<td>2</td>
<td>16' aluminum livestock trailer</td>
</tr>
<tr>
<td>4</td>
<td>small porta-huts</td>
</tr>
<tr>
<td>4</td>
<td>large porta-huts</td>
</tr>
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</table>
15. Advisory Committee Agendas
Ag. Advisory Committee Agenda

Currently, our department is working on revamping the way we organize and utilize our advisory committee; as such, we do not have an agenda from any of the previous meetings to showcase. However, this is an area that we are striving to improve upon, and come January, and our first advisory committee meeting with said changes, an agenda will be printed for each member of the committee.
Heritage Ag Program Ag Advisory Members 2014-2-15

Marion Hammerlund DVM
1845 University Ave
Riverside, Ca 92507
951 682 3803

Brookhurst Feed Mil
Vic Solarzano
3315 Van Buren Ave.
Riverside 92503
951 688 3511

Star Milling
Bill Cramer
24067 Water Ave.
Perris Ca. 92570

Dian Martin
CTE Coordinator
155 E 4th St
Perris Ca 92571
951 943 6369

R & L Stock Farm
Robert & Linda Kirshner
24240 Juniper Flats Rd
Homeland Ca 92548
951 926 1010
16. Advisory Committee Minutes
Heritage High School Agriculture Department

Advisory Committee Meeting Agenda March 19, 2015

Meeting Minutes

I waited until 6:30 pm, No Ag teachers or advisory Members attended.

Chris Maddalena
Ag Teacher
17. Advisory Committee Constitution and By-Laws
Ag. Advisory Committee By-Laws

As our program is working currently to improve the structure of our Ag. Advisory Committee to make it more effectual, we do not have any by-laws. However, our department chair has sat in on several advisory committee meetings for other chapters to get a better idea on how to run and utilize our own committee, and we will be writing our own by-laws as a department before our first meeting with our advisory committee in January.
18. Proficiency Standards
Plant & Animal Science

has complete coursework in the
study and practice in Agriculture Science and has attained a competency level of:
(n/a) not applicable; (0) does not meet basic standards;
(1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

**Competency Level**

- Basic Animal Science
- Anatomy and Physiology of domestic livestock Animals
- Livestock Breeding and Genetics
- Handling Livestock
- Livestock Nutrition and Feeds
- Animal Health
- Beef Cattle
- Swine
- Sheep
- Beef, Swine, and Sheep veterinary practices
- Dairy Cattle and Dairy Cattle veterinary practices
- Livestock Evaluation and Selection
- Livestock Products
- Poultry veterinary practices
- Basic Plant Science
- Plant Classification Systems
- Areas of Crop Production
- Vegetable Crops
- Tree Crops
- Forage Crop Production
- Vine and Small Fruit Crops
- Land Preparation and Planting
- Soils
- Fertilizers
- Irrigation and Drainage
- Harvesting
- Identification of Crops, Products, and By-Products
- Agricultural Production Services
- Agricultural Production Records
- Marketing Agricultural Products
- Financing Agricultural Production

- Intelligently discuss theories on the origins of life.
- Describe the characteristics of living organisms.
_____ Describe the characteristics of plant and animal cells with respect to their structure.
_____ Compare and contrast the roles of meiosis and mitosis in cellular reproduction.
_____ Understand heredity, Mendelian Genetics, terminology and apply this to animal inheritance.
_____ Distinguish between historical and modern taxonomy systems and understand the evolutionary relationships among domestic plants and animals.
_____ Understand the structural and functional similarities and differences among major animal, plant and protest phyla.
_____ Identify and understand the major organ systems of animals.
_____ Recognize the structure and function of ecosystems, populations, and communities and the impact of human society on the natural and agricultural environment.
_____ Describe the three cycles that involve abiotic and biotic factors. And explain their interrelationships and importance to the biosphere.
_____ Identify the environmental and genetic factors that influence variation among organisms.
_____ Demonstrate basic laboratory techniques including the use of microscopes, slides, microorganism examination, and the dissection of representative plants and animals of various species.
**Proficiency Standards**

Students are to be graded on their ability to accomplish or perform different tasks.

**Rating Scale:**
- 4 – Skilled or can work independently
- 3 – Moderately skilled or can perform with limited help
- 2 – Limited skill, requires instruction and close supervision
- 1 – No exposure, no experience or knowledge in this area

<table>
<thead>
<tr>
<th>Rating</th>
<th>Agriculture 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td>A. To identify the importance of production agriculture.</td>
</tr>
<tr>
<td>______</td>
<td>B. Identify the seven basic agricultural career areas.</td>
</tr>
<tr>
<td>______</td>
<td>C. Identify and understand the function of the Future Farmers of America as it relates to modern agriculture, the structure, history and purpose of the Future Farmers of America and how it develops leadership skills.</td>
</tr>
<tr>
<td>______</td>
<td>D. Demonstrate an understanding of the Supervised Occupational Experience Projects and their relationship with agriculture and agriculture careers.</td>
</tr>
<tr>
<td>______</td>
<td>E. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.</td>
</tr>
<tr>
<td>______</td>
<td>F. Identify the common breeds of beef, sheep, swine, horse, dairy cattle and small animals.</td>
</tr>
<tr>
<td>______</td>
<td>G. Demonstrate an understanding of basic livestock management principles, including feeds and nutrition, care and maintenance, diseases and reproduction.</td>
</tr>
<tr>
<td>______</td>
<td>H. Demonstrate an understanding of the terminology associated with each species of livestock.</td>
</tr>
<tr>
<td>______</td>
<td>I. Identify the common crops grown and understand their importance to California Agriculture.</td>
</tr>
<tr>
<td>______</td>
<td>J. Identify plant parts and explain their functions for a variety of common agriculture plants.</td>
</tr>
<tr>
<td>______</td>
<td>K. Explain the factors involved in plant growth and general production practices.</td>
</tr>
<tr>
<td>______</td>
<td>L. Students will understand and perform basic tractor operations and maintenance. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
<td>______</td>
<td>M. Identify basic parts of common agriculture equipment.</td>
</tr>
<tr>
<td>______</td>
<td>N. Demonstrate proper safety techniques used in the agricultural industries and in the classroom setting.</td>
</tr>
</tbody>
</table>
Certificate of Skills

Plant & Animal Science

This is to certify that ________________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

Instructor Signature ___________________________ Date
Floral Design

______________________ has completed

Courses of study and practice in Floral Design and has attained a competency level of: (n/a) not applicable; (0) does not meet basic standards; (1) basic; (2) good; or (3) excellent as certified by instructor in the following skill areas:

**Competency Level**

_____ 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.

_____ Describe the principles of design as used in works of art, focusing on dominance and subordination.

_____ 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.

_____ Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

_____ Analyze the material used by a given artist and describe how its use influences the meaning of the work.

_____ Compare and contrast similar styles of works of art done in electronic media with those done with materials traditionally used in the visual arts.

_____ Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.

_____ Prepare a portfolio of original two-and three-dimensional works of art that reflects refined craftsmanship and technical skills.

_____ Develop and refine skill in the manipulation of digital imagery.

_____ Review and refine observational drawing skills.

_____ Create an expressive composition, focusing on dominance and subordination.

_____ Create two or three-dimensional work of art that addresses a social issue.
Identify similarities and differences in the purposes of art created in selected cultures.

Identify and describe the role and influence of new technologies on contemporary works of art.

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.

Discuss the purposes of art in selected contemporary cultures.

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.

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.

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.

Articulate the process and rationale for refining and reworking one of their own works of art.

Employ the conventions of art criticism in writing and speaking about works of art.

Certifying Instructor __________________________ Course Grade __________________ Date __________________
Floral Design

Students are to be graded on their ability to accomplish or perform different tasks.

Rating Scale:

4 – Skilled or can work independently
3 – Moderately skilled or can perform with limited help
2 – Limited skill, requires instruction and close supervision
1 – No exposure, no experience or knowledge in this area

Rating

Agriculture I

1. Students will write an art evaluation on one of the below:
   Ikebana Design, Vincent Van Gogh, Pablo Picasso, Edouard Monet, Klaus Wagner, Gregor Lersch, Elis and George Hazenberg, Georgia O’Keeffe, Pierre Renoir

2. Students will research and write a description of the historical symbolism of specific flowers and foliage.

3. Students will choose a flower or foliage, find the symbolism and from it create a floral design.

4. Evaluation of art examples from various time periods.

5. Demonstrate an understanding of the California Vocational Agriculture Record Book by following actual or sample student projects.

6. Create a visual presentation on history of Floral Design

7. Project on floral art history and specific art periods including: European Period, Impressionistic Era, Oriental Influence, and American Styles

8. 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

9. Practicum using a given theme: two dimensional layouts, three-dimensional arrangements, fresh and dry cut flower designs, and container arrangements

10. Identify plant parts and explain their functions for a variety of common agriculture plants.

11. Complete a floral art three-dimensional Critique Sheet for historical periods
Certificate of Skills

The Art & History of Floral Design

This is to certify that _________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

______________________________          ______________________
Instructor Signature            Date
1. *Harvest and Distribution*

A. Describe the world flower market and the position the United States maintains in this market.

B. Discuss the important processes of harvesting, grading, bunching, and conditioning flowers to ensure optimum quality and longevity for the final consumer.

C. Explain the various methods of packing and shipping flowers.

D. Outline the tradition distribution channel for flowers and describe changes that are taking place in the movement of product from growers to final consumers.

E. Summarize the floral industry’s advertising and promotion programs.

2. *Wedding Flowers*
A. Describe the importance of promotion and advertising to attract prospective brides-to-be.

B. Specify the importance of the wedding consultation appointment and the
necessity for a floral consultant to be knowledgeable about wedding flowers and professional in helping a bride-to-be select appropriate flowers for her wedding.
Describe how to conduct a bridal consultation and explain the various floral pieces that are listed on a wedding order form.
Describe the most popular bouquet styles.
Describe general approaches to planning and presenting flowers for the ceremony and reception decorations.
List the fundamental design techniques that are important in creating wedding flowers.
Construct a simple colonial bouquet and a simple cascade bouquet using foam bouquet holders.
Construct a cake top in a cake-top holder.
Describe the importance of servicing weddings that require professional attention at the ceremony and the reception.
3. Sympathy Flowers

Identify various sympathy floral designs, tributes, and funeral-related terminology.
Describe the significant construction techniques in creating sympathy designs.
List ways a professional retail flower shop can develop a positive working relationship with funeral directors.
Identify concerns that limit the growth of the sympathy flower business.
Characterize how to conduct a consultation with a family ordering flowers for their deceased loved one.
Construct a variety of floral designs including a tied flat spray, a pedestal arrangement, an easel spray and a simple casket spray.

4. Contemporary Design Styles and Techniques
A. Specify what constitutes a contemporary floral design.

B. Demonstrate proficiency in advanced arrangement techniques.

C. Define, sketch, or construct the various contemporary, advanced, classic, naturalistic, linear, and modernistic design styles discussed.

5. Retail Flower Shop

A. Identify the primary functions of a retail flower shop.
Differentiate the major classifications of retail flower operations.
Explain the characteristics of store location options.
Characterize the principle responsibilities of employees.
Summarize the key management responsibilities required for a successful and profitable flower shop.
Describe product presentation and the importance of window and store display.
Identify the primary goals of display.
Describe the sequence of taking information for a telephone order.

6. Career Portfolio
Goal: The students will create portfolio with work examples associated with employment skills and expectations.
1. Resume
2. Cover letter
3. Job application
4. Work Samples
5. Work Critiques
6. Design Styles

7. Introduction to Careers and Continuing Education
1. Describe various employment opportunities in a retail flower shop.
2. Outline the skills and experience required to work in specialized areas of floral design.
3. Identify other career opportunities within the wholesale and production areas of the floral industry.
4. Describe the importance of continuing education in floral design.
5. Identify numerous career options within the floral industry.
6. Describe and distinguish between the different trade organizations and the opportunities each provides.
7. List some of the many trade publications, design workshops, and educational programs available to increase the knowledge and skills of a floral designer.
8. Introduction to FFA

Goal: The students will demonstrate knowledge and understanding of National FFA Associations as they pertain to premier leadership, personal growth, and career success for life.

1. Demonstrate knowledge about the FFA.
2. Participate in leadership activities and FFA events.
Certificate of Skills

Advanced Floral Design

This is to certify that ________________________ was
Enrolled in the Agricultural Science Courses at
Heritage High School and is a Program Completer.

To be a program completer the student has
demonstrated the skills and knowledge listed on the
reverse side of this certificate.

__________________________  __________________________
Instructor Signature                  Date
19. Teacher Credentials
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

JEREMIAH MATHEW PEROTTI

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

JEREMIAH MATHEW PEROTTI

is hereby awarded a

Preliminary Single Subject Teaching Credential

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

SHAINA R LEACH

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

SHAINA R LEACH

is hereby awarded a

Clear Single Subject Teaching Credential

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

CHRISTOPHER JOHN MADDALENA

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
COMMISSION ON TEACHER CREDENTIALING
Ensuring Educator Excellence

By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

CHRISTOPHER JOHN MADDALENA
is hereby awarded a

Clear Specialist Instruction Credential (Agriculture)

AUTHORIZED SUBJECT(S):
Agriculture
By virtue of the authority vested in the Commission on Teacher Credentialing in recognition of preparation to serve in California public schools

STEPHEN DALY

is hereby awarded a

Preliminary Single Subject Teaching Credential: New Credential Type

AUTHORIZED SUBJECT(S):
Agriculture,

SUBJECT MATTER AUTHORIZATION(S):
Agriculture,

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 06/18/2015 to 07/01/2020

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

STEPHEN DALY

is hereby awarded a

Clear Specialist Instruction Credential (Agriculture): New Credential Type

AUTHORIZED SUBJECT(S):
Agriculture

SUBJECT MATTER AUTHORIZATION(S):
Agriculture

SUPPLEMENTARY AUTHORIZATION(S):

Valid from 06/18/2015 to 07/01/2020

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Year: 2015

Heritage HS, Menlo

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|     |     |     |     | Spirit Day* | *SOCAL Fair (thru 10/11)  
SOCAL Fair Move-In |     |
| 4   | 5   | 6   | 7   | 8   | 9   | 10  |
|     |     |     |     | Spirit Day* | *SOCAL Conference  
Registration due | El Capitan Field Day  
(El Capitan HS) @8am |
| 11  | 12  | 13  | 14  | 15  | 16  | 17  |
|     | *Columbus Day  
SOCAL Fair Move-Out |     |     | *R2, FFA Roster &  
Grad Follow Up due  
* Greenhand Conf  
Registration due  
Spirit Day* |     | *SOCAL FFA Leadership  
Conference (Indio)  
8:30 AM |
| 18  | 19  | 20  | 21  | 22  | 23  | 24  |
|     |     | *Perris FFA O/C Invitational (Perris)  
4:30 PM |     | Spirit Day* |     |     |
| 25  | 26  | 27  | 28  | 29  | 30  | 31  |
|     | *National FFA Convention Delegate Trip –  
Louisville | *National FFA Convention Delegate Meetings  
Louisville | *FFA National Convention – Louisville  
Lunch Meeting (both lunches)  
Chapter Meeting @6pm | *FFA National Convention – Louisville  
Spirit Day* | *FFA National Convention – Louisville  
*Washington DC Trip |     |

**2015**
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<td>*Indio Fair (thru 2/21)</td>
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<td>*Escondido Field Day (Escondido HS) 8:00 AM</td>
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2016
21. Professional Development
INCENTIVE GRANT IN-SERVICE ACTIVITIES DOCUMENTATION

CRITERIA 4.B

School Year 14/15 School

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

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<th>Maddalena</th>
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<td>X</td>
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</tr>
<tr>
<td>Region In-service Day</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spring Region Meeting</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section In-service*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Conference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>University AgEd Skills Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Professional Development **</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</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. Maddalena…….Riverside Section Planning Meeting , PCBC Winter Poultry Show, PPBA Winter Poultry Show
2.
3.
4.
5.
22. Current R-2 Report
<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Plan/Soil Scil</th>
<th>An. Science</th>
<th>AgriScience</th>
<th>Program</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>141</td>
<td>19</td>
<td>128</td>
<td>33</td>
<td>3</td>
<td>169</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race*</th>
<th>Plan/Soil Scil</th>
<th>An. Science</th>
<th>AgriScience</th>
<th>Program</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2</td>
<td>6</td>
<td>44</td>
<td>285</td>
<td>373</td>
</tr>
<tr>
<td>Black</td>
<td>1</td>
<td>3</td>
<td>13</td>
<td>475</td>
<td>513</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>7</td>
<td>403</td>
<td>475</td>
<td>517</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>7</td>
<td>13</td>
<td>359</td>
<td>475</td>
<td>517</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>475</td>
<td>475</td>
</tr>
<tr>
<td>Science</td>
<td>475</td>
<td>475</td>
</tr>
<tr>
<td>AgriScience</td>
<td>403</td>
<td>359</td>
</tr>
<tr>
<td>Male</td>
<td>517</td>
<td>513</td>
</tr>
<tr>
<td>Female</td>
<td>517</td>
<td>513</td>
</tr>
</tbody>
</table>

Year: 2015
R2 Student Report
Heritage HS
<table>
<thead>
<tr>
<th>Average Years Completed</th>
<th>2.0</th>
<th>22%</th>
<th>60</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Cohort Students</td>
<td>271</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% 13%</td>
<td>34</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% 9%</td>
<td>24</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% 56%</td>
<td>153</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years in AG Completed</td>
<td>Count</td>
<td>Percent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total 9-12</th>
<th>774</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 790</td>
<td>0</td>
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<tr>
<td>4</td>
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<td>6</td>
<td>0</td>
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<tr>
<td>4</td>
<td>0</td>
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<tr>
<td>62</td>
<td>0</td>
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<tr>
<td>117</td>
<td>0</td>
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<tr>
<td>190</td>
<td>0</td>
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<tr>
<td>7</td>
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<td>6</td>
<td>0</td>
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<td>5</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>94</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>0</td>
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<tr>
<td>96</td>
<td>0</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Program Completer Status</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td></td>
</tr>
<tr>
<td>3 or more years of AE instruction: 63</td>
<td></td>
</tr>
<tr>
<td>Total Seniors having completed: 73</td>
<td></td>
</tr>
</tbody>
</table>

Printed: 12/6/2015 10:57:33 AM

Menifee, CA 92585
26000 Briggs Rd
Heritage HS
# CA036 Menifee - Heritage

Printing Year=2015
Graduate Follow-up Report
# ANNUAL FFA CHAPTER ACTIVITIES CHECK SHEET

**Year**: 2014-2015  
**School**: Heritage  

**Must meet at least 12 areas**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>NUMBER OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attended the following:</strong></td>
<td></td>
</tr>
<tr>
<td>Greenhand Conference</td>
<td>40</td>
</tr>
<tr>
<td>Made For Excellence Conference</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Leadership Academy</td>
<td>6</td>
</tr>
<tr>
<td>Chapter Officer Leadership Conference</td>
<td>8</td>
</tr>
<tr>
<td>Spring Region Meeting</td>
<td>18</td>
</tr>
<tr>
<td>State Leadership Conference</td>
<td>27</td>
</tr>
<tr>
<td>National Convention</td>
<td>1</td>
</tr>
<tr>
<td><strong>Submitted the following:</strong></td>
<td></td>
</tr>
<tr>
<td>State Degree Application</td>
<td>10</td>
</tr>
<tr>
<td>American Degree Application</td>
<td>0</td>
</tr>
<tr>
<td>Proficiency Award Application - Section</td>
<td>6</td>
</tr>
<tr>
<td>Chapter Award Application - State</td>
<td>1</td>
</tr>
<tr>
<td>Scholarship Application - State</td>
<td>0</td>
</tr>
<tr>
<td><strong>Participated in the following:</strong></td>
<td></td>
</tr>
<tr>
<td>Opening and Closing Contest - Section</td>
<td>18</td>
</tr>
<tr>
<td>Best Informed Greenhand Contest - Section</td>
<td>6</td>
</tr>
<tr>
<td>Co-Op Marketing Quiz - Section</td>
<td>0</td>
</tr>
<tr>
<td>Creed Recitation - Section</td>
<td>3</td>
</tr>
<tr>
<td>Extemporaneous Speaking - Section</td>
<td>4</td>
</tr>
<tr>
<td>Job Interview - Section</td>
<td>0</td>
</tr>
<tr>
<td>Impromptu Speaking - Section</td>
<td>1</td>
</tr>
<tr>
<td>Prepared Speaking - Section</td>
<td>3</td>
</tr>
<tr>
<td>Parliamentary Procedure - Section</td>
<td>0</td>
</tr>
<tr>
<td>County/District Fair/Show</td>
<td>40</td>
</tr>
<tr>
<td>Career Development Teams (other than those identified above)</td>
<td></td>
</tr>
<tr>
<td>1 Vegetable Crops</td>
<td>6</td>
</tr>
<tr>
<td>2 Nursery/Landscape</td>
<td>4</td>
</tr>
<tr>
<td>3 Vet. Science</td>
<td>8</td>
</tr>
<tr>
<td>Other Activity Above the Chapter Level (Leadership Events/Additonal CDE Teams)</td>
<td></td>
</tr>
<tr>
<td>1 Livestock Judging</td>
<td>4</td>
</tr>
<tr>
<td>2 Project Competition</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL AREAS MET**

22 (230)
23. Travel Request
# PERRIS UNION HIGH SCHOOL DISTRICT

## CONFERENCE/WORKSHOP REQUEST & APPROVAL

### CONFERENCE INFORMATION

<table>
<thead>
<tr>
<th>Name of Conference</th>
<th>Sponsor of Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Professionals Franchise</td>
<td>California Ag. Teachers Association</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date(s) of Conference - List all applicable</th>
<th>Location of Conference</th>
<th>Registration Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/14 - 11/20/15</td>
<td>Fresno, CA</td>
<td>11/1/15</td>
</tr>
</tbody>
</table>

**Purpose/Objective of Attending the Conference:** Professional development

### CONFERENCE PARTICIPANT INFORMATION

<table>
<thead>
<tr>
<th>Names: Last, First (Please Print)</th>
<th>Site/Department</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malpass, Maggie</td>
<td>HHS</td>
<td></td>
<td>10/15/15</td>
</tr>
</tbody>
</table>

### PAYMENT INFORMATION - REGISTRATION ONLY

<table>
<thead>
<tr>
<th>Vendor Name (check payable to)</th>
<th>Vendor Number</th>
<th>Instructions (mark all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cal Poly</td>
<td></td>
<td>Payment required in advance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return check to Requestor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Registration cost paid by Requestor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vendor Address</th>
<th>Payment Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 Grand Avenue, Sunnyvale, CA 93407</td>
<td>$175</td>
</tr>
</tbody>
</table>

**Funding Lines to be Charged**

<table>
<thead>
<tr>
<th>Amount</th>
<th>Fund</th>
<th>School</th>
<th>Resource</th>
<th>PY</th>
<th>Goal</th>
<th>Function</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>5200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** To request hotel costs be paid by the district in advance, please attach a separate "Direct Payment" form.

### ESTIMATED COST INFORMATION

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>125</td>
</tr>
<tr>
<td>Lodging</td>
<td>50</td>
</tr>
<tr>
<td>Air Travel</td>
<td>2</td>
</tr>
<tr>
<td>Car Rental</td>
<td></td>
</tr>
<tr>
<td>Mileage @ 0.555 per mile</td>
<td></td>
</tr>
<tr>
<td>Meals - cost breakdown (itemized receipts will be required)</td>
<td></td>
</tr>
<tr>
<td>Breakfast @ $10 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Lunch @ $15 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Dinner @ $25 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Miscellaneous - (Parking, Transportation, etc.)</td>
<td></td>
</tr>
<tr>
<td>TOTAL ESTIMATED COST</td>
<td>$175.00</td>
</tr>
</tbody>
</table>

### APPROVALS

<table>
<thead>
<tr>
<th>Position</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal/Division Head</td>
<td></td>
</tr>
<tr>
<td>Categorical (if required)</td>
<td></td>
</tr>
<tr>
<td>Assistant Superintendent</td>
<td></td>
</tr>
</tbody>
</table>

### BUSINESS OFFICE USE ONLY

<table>
<thead>
<tr>
<th>Approved for Payment</th>
<th>Vendor #</th>
<th>Claim #</th>
<th>Date</th>
<th>Date Paid:</th>
</tr>
</thead>
</table>

**INSTRUCTIONS TO CONFERENCE PARTICIPANTS**

1. Complete this request form and the conference registration form.
2. Obtain approval from your Principal/Division Head.
3. Submit to the applicable department for Essential Program Component (EPC) approval as follows:
   - SACS Function codes 1000-3999 - Ed Services, Functions 4000 - 7399 and 7500-8999 - Business Services, Functions 7400-7499 - Human Resources
4. Request must be received in Accounts Payable at least 15 working days in advance. If this cannot be met due to late notice of a conference date, the requestor may pay for the registration and submit a Conference/Workshop Expense Claim. Requests received with insufficient processing time will be returned. Please note the request form is still required even if the registration is paid by the requestor.
5. Retain the goldenrod copy for your records. After approval and processing, the pink and yellow copies will be returned. The yellow copy is required for processing a Conference/Workshop Expense Claim.

**Updated 2/07/07**

White: Accountant (Registration)  Yellow: Required for Reimbursement  Pink: Site/Dent  Goldenrod: Request
ANNUAL EVENTS FIELD TRIP/EXCURSION CONSENT
PERRIS UNION HIGH SCHOOL DISTRICT

Dear Parent/Guardian: Your student, as a member of the Class/Club/Organization listed below, will have the opportunity to participate in multiple field trip/excursions. Your consent is required for your child to participate in each of these activities. Rather than submit a single consent form for each field trip/exursion, this consent form is used for the various activities as listed on the following page(s) of this form. Should additional activities be planned that are not listed, another form will be required.

Please complete and return this form to:

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>School:</th>
</tr>
</thead>
</table>

ANNUAL EVENTS FIELD TRIP/EXCURSION INFORMATION (additional activities listed on reverse)

<table>
<thead>
<tr>
<th>Sponsoring Class/Club/Organization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season/Duration of Events:</td>
</tr>
<tr>
<td>Name of Person in Charge:</td>
</tr>
<tr>
<td>Contact Telephone#:</td>
</tr>
</tbody>
</table>

HEALTH INFORMATION

In the event of illness or injury, I do hereby consent to whatever x-ray, examination, anesthetic, medical, surgical or dental diagnosis or treatment and hospital care are considered necessary in the best judgment of the attending physician, surgeon, or dentist and performed by or under the supervision of a member of the medical staff of the hospital or facility furnishing medical or dental services.

Health Needs

☐ My child has a special medical/health need, including allergies and/or medication (Please provide details or special instructions below.)

______________________________________________________________________________________________________________________________________________________

Emergency Contact Information:
(In the event of an emergency, please list the names and telephone numbers below in the order you wish them to be called.)

1. __________________________________________________________________________________________________________

2. __________________________________________________________________________________________________________

PARENTAL / GUARDIAN CONSENT

I fully understand that participants are to abide by all rules and regulations governing conduct during these trips. Any violation of these rules and regulations may result in that individual being sent home at the expense of his/her parent/guardian.

As stated in California Education Code Section 35330, I understand that I hold the Perris Union High School District, its officers, agents and employees, harmless from any and all liability or claims, which may arise out of or in connection with my child's participation in these activities.

See reverse side for annual events/field trips/excursions

<table>
<thead>
<tr>
<th>Signature of Parent/Guardian</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature of Student</th>
<th>Date</th>
</tr>
</thead>
</table>

Revised 1-12-12
Dear Parent/Guardian: Please sign the specific activities you wish your child to participate in.

<table>
<thead>
<tr>
<th>Name of Event/Activity:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Departure Time:</td>
<td>a.m./p.m.</td>
<td>Return Time: a.m./p.m.</td>
</tr>
<tr>
<td>Departure Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Transportation:</td>
<td>District Bus</td>
<td>District Vehicle</td>
</tr>
<tr>
<td></td>
<td>Charter Bus</td>
<td>Rental Vehicle</td>
</tr>
<tr>
<td></td>
<td>Private Vehicle (Requires the completion of Private Vehicle Consent Form.)</td>
<td></td>
</tr>
<tr>
<td>Special Instructions/ Additional Information:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of Parent/Guardian

<table>
<thead>
<tr>
<th>Name of Event/Activity:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Name:</td>
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<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Departure Time:</td>
<td>a.m./p.m.</td>
<td>Return Time: a.m./p.m.</td>
</tr>
<tr>
<td>Departure Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Location:</td>
<td></td>
<td></td>
</tr>
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<td>Method of Transportation:</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of Parent/Guardian

<table>
<thead>
<tr>
<th>Name of Event/Activity:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Departure Time:</td>
<td>a.m./p.m.</td>
<td>Return Time: a.m./p.m.</td>
</tr>
<tr>
<td>Departure Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Transportation:</td>
<td>District Bus</td>
<td>District Vehicle</td>
</tr>
<tr>
<td></td>
<td>Charter Bus</td>
<td>Rental Vehicle</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of Parent/Guardian

<table>
<thead>
<tr>
<th>Name of Event/Activity:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Departure Time:</td>
<td>a.m./p.m.</td>
<td>Return Time: a.m./p.m.</td>
</tr>
<tr>
<td>Departure Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Transportation:</td>
<td>District Bus</td>
<td>District Vehicle</td>
</tr>
<tr>
<td></td>
<td>Charter Bus</td>
<td>Rental Vehicle</td>
</tr>
<tr>
<td></td>
<td>Private Vehicle (Requires the completion of Private Vehicle Consent Form.)</td>
<td></td>
</tr>
<tr>
<td>Special Instructions/ Additional Information:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of Parent/Guardian
Purpose of Trip: ________________________________

☐ During Instructional Time  ☐ After School  ☐ Saturday/Sunday/Holiday

Justify Trip in Relationship to Course of Study: ________________________________

______________________________  ________________________________________

Trips during school hours must have a direct instructional relationship to classroom instruction.

Destination Name: ________________________________

Destination Address: ________________________________

Date(s) of Trip: __________________ Departure Time: __________________

Return Time: __________________ Person in Charge: __________________

Other Adults on Trip: ____________________________________________

No. of Students: _______  Cost Per Person: $ _______  No. of Adults: _______  Total Cost: $ _______

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>Fund</th>
<th>School</th>
<th>Resource</th>
<th>PY</th>
<th>Goal</th>
<th>Function</th>
<th>Object</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Source:</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

Vehicle-Driver Registration for Transporting Students, Request for Student Transportation (District or Rental) forms, or Charter Contract Must be Attached Along with Appropriate Back-up.

☐ Walking  ☐ District Vehicle  ☐ Rental Vehicle

☐ Charter Carrier  ☐ Private Vehicle

Requires Board approval (allow enough time for approval prior to the trip – about eight (8) weeks). Check Appropriate Box:

☐ Overnight Trip of ______ Night(s)  ☐ Out-of-State Trip  ☐ Foreign Country Trip

Person in Charge (Printed)  ________________________________  School Site (Printed)  ________________________________

Person in Charge Signature  ________________________________  Date  ________________________________

I have read and will abide by the Board Policy and Administrative Regulation 8153 pertaining to field trips.

Principal or Designee  ________________________________  Date  ________________________________

Educational Services Authorized Signature  ________________________________  Date  ________________________________

Business Services Authorized Signature  ________________________________  Date  ________________________________

Date of Board Approval (if applicable)  ________________________________

7/01/11
# Request for Student Transportation

**Athletic Activity**  
*Instruction:* Please fill out form completely and forward form to the Business Services Department. Retain school copy (gold). Please allow three (3) weeks for scheduling.

**Field Trip Activity**  
*Instruction:* Please fill out form completely and forward form to the Business Services Department – Department – retain school copy (gold). Please allow four (4) weeks for scheduling.

<table>
<thead>
<tr>
<th>Site Requesting Trip:</th>
<th>Department:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Instructional Purpose of Trip:</th>
<th>Date of Trip:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Destination Name:</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Destination Address:</th>
<th>(Please provide complete address)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Destination Telephone Number:</th>
<th>Pick Up Location (be specific):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Departure Time:</th>
<th>(Please allow plenty of time for travel time, as well as time for rest and eating stops.)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date/Time Arriving Destination:</th>
<th>Total Students to be Transported:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date/Time Departing Destination:</th>
<th>Total Faculty to be Transported:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date/Time Expected Back to School:</th>
<th>Additional Storage Space Required for Equipment Needs?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Send Invoice To (Name, Address, Phone #):</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Estimated Cost of Trip?</th>
<th>$</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Person in Charge of Trip:</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Budget Program/Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund</td>
</tr>
<tr>
<td>-------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested By:</th>
<th>Phone Number:</th>
<th>Number of Buses Required:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Principal or Designee Signature:</th>
<th>Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Business Services Authorized Signature:</th>
<th>Date:</th>
</tr>
</thead>
</table>

*The Principal is ultimately responsible and a site program will be charged if Business Services is unable to collect from the invoiced agency.*

## Special Information Regarding This Trip:
*Please indicate any unusual requirements which will necessitate side trips at destination, all equipment to be transported, or other information pertinent to serving your needs.*

<table>
<thead>
<tr>
<th>Mileage Finish:</th>
<th>For Office Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mileage Start:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Mileage:</th>
<th>Total Charge:</th>
</tr>
</thead>
</table>

---

**REVISED 7/01/11**

**WHITE – Transportation**  **YELLOW-Confirmation**  **PINK-Business**  **GOLD-School**
24. CATA Membership Card
CALIFORNIA AGRICULTURAL
TEACHERS' ASSOCIATION

SERVING AGRICULTURE BY TEACHING
2015/2016 ACTIVE MEMBER
25. Professional Development Report
PERRIS UNION HIGH SCHOOL DISTRICT
CONFERENCE/WORKSHOP REQUEST & APPROVAL

CONFERENCE INFORMATION

<table>
<thead>
<tr>
<th>Name of Conference</th>
<th>Sponsor of Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Professionals Institute</td>
<td>California Ag. Teachers Association</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date(s) of Conference - List all applicable</th>
<th>Location of Conference</th>
<th>Registration Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/19 - 11/20/15</td>
<td>Fresno, CA</td>
<td>11/1/15</td>
</tr>
</tbody>
</table>

Purpose/Objective of Attending the Conference: Professional development.

CONFERENCE PARTICIPANT INFORMATION

<table>
<thead>
<tr>
<th>Names: Last, First (Please Print)</th>
<th>Site/Department</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maldonado, Maggie</td>
<td>HHS</td>
<td></td>
<td>10/15/15</td>
</tr>
</tbody>
</table>

PLEASE ATTACH FLYER OR COMPLETED REGISTRATION FORM FOR EACH PARTICIPANT

PAYMENT INFORMATION - REGISTRATION ONLY

<table>
<thead>
<tr>
<th>Vendor Name (check payable to)</th>
<th>Vendor Number</th>
<th>Instructions (mark all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cal Poly</td>
<td></td>
<td>Payment required in advance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vendor Address</th>
<th>Payment Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 Grand Avenue, San Juan, CA 93407</td>
<td>$175</td>
</tr>
</tbody>
</table>

Amount | Fund | School | Resource | PY | Goal | Function | Object |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: To request hotel costs be paid by the district in advance, please attach a separate "Direct Payment" form.

ESTIMATED COST INFORMATION

<table>
<thead>
<tr>
<th>Registration</th>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging</td>
<td>50</td>
</tr>
<tr>
<td>Air Travel</td>
<td></td>
</tr>
<tr>
<td>Car Rental</td>
<td></td>
</tr>
<tr>
<td>Mileage miles @ 0.555 per mile</td>
<td></td>
</tr>
<tr>
<td>Meals - cost breakdown (itemized receipts will be required)</td>
<td></td>
</tr>
<tr>
<td>Breakfast meal(s) @ $10 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Lunch meal(s) @ $15 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Dinner meal(s) @ $25 max</td>
<td>$ -</td>
</tr>
<tr>
<td>Miscellaneous - (Parking, Transportation, etc.)</td>
<td></td>
</tr>
<tr>
<td>TOTAL ESTIMATED COST</td>
<td>$175.00</td>
</tr>
</tbody>
</table>

APPROVALS

Principal/Division Head

Categorical (if required)

Assistant Superintendent

Business Office Use Only

Vendor #

Approved for Payment

Claim #

Date Paid:

INSTRUCTIONS TO CONFERENCE PARTICIPANTS

1. Complete this request form and the conference registration form.
2. Obtain approval from your Principal/Division Head.
3. Submit to the applicable department for Essential Program Component (EPC) approval as follows:
   SACS Function codes 1000-3999 - Ed Services, Functions 4000 - 7399 and 7500-8999 - Business Services, Functions 7400-7499 - Human Resources
4. Request must be received in Accounts Payable at least 15 working days in advance. If this cannot be met due to late notice of a conference date, the requestor may pay for the registration and submit a Conference/Workshop Expense Claim. Requests received with insufficient processing time will be returned. Please note the request form is still required even if the registration is paid by the requestor.
5. Retain the goldenrod copy for your records. After approval and processing, the pink and yellow copies will be returned. The yellow copy is required for processing a Conference/Workshop Expense Claim.

Updated 2/07/07

White: Accountant/Registration  Yellow: Required for Reimbursement  Pink: Site/Plant  Goldenrod: Requested
PERRIS UNION HIGH SCHOOL DISTRICT
Field Trip/Off-Campus Activity Request Form (please allow two (2) weeks)
District-Sponsored Event – Attendance Voluntary
(please complete all areas of this form.)

(OVERNIGHT/Out-of-State field trips, please allow eight (8) weeks.)

Purpose of Trip: CA State FFA Finals

☐ During Instructional Time ☐ After School ☑ Saturday/Sunday/Holiday

Justify Trip in Relationship to Course of Study:
Career Tech. Ed / Leadership

Trips during school hours must have a direct instructional relationship to classroom instruction.

Destination Name: Cal Poly, San Luis Obispo

Destination Address: 1 Grand Avenue, San Luis Obispo, CA 93407

Date(s) of Trip: 5/6 - 5/8/16
Departure Time: 7:45 am

Return Time: 
Person in Charge: Maratosos

Other Adults on Trip: Jeremiah Brought, Shaina Rushing

No. of Students: 18
No. of Adults: 3
Total Cost: $420

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>Goal</th>
<th>Function</th>
<th>Object</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASP - FFA</td>
<td>$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vehicle-Driver Registration for Transporting Students, Request for Student Transportation (District or Rental) forms, or Charter Contract Must be Attached Along with Appropriate Back-up.

☐ Walking ☐ Rental Vehicle ☑ District Vehicle ☐ Site Vehicle ☐ Other ☐ Charter Carrier ☐ Private Vehicle

Requires Board approval (allow enough time for approval prior to the trip – about eight (8) weeks).
Check Appropriate Box

☑ Overnight Trip of 2 Night(s) ☐ Out-of-State Trip ☐ Foreign Country Trip

Person in Charge (Printed) Maggie Maratosos

School Site (Printed) HHS

I have read and will abide by the Board Policy and Administrative Regulation 6153 pertaining to field trips.

Person in Charge Signature and Date 5/29/15

Principal or Designee Signature and Date 6/8/15

Educational Services Authorized Signature and Date 10/22/15

Business Services Authorized Signature and Date

OVERNIGHT/Out-of-State use only:

Date of Board Approval (If applicable)

11/01/2013
26. Five-Year Acquisition List
Five Year Facility and Equipment Plan

2015-2016

1. Purchase 2 more farrowing crates
2. Continue to landscape Ag area and campus with shrubs/trees.
3. Install raised garden beds.

2016-2017

1. Purchase lab additional equipment
2. Install chicken brooder house
3. Purchase new van

2017-2018

1. Continue to purchase lab equipment
2. Purchase rabbit breeding supplies
3. Purchase new landscape supplies and equipment
4. Build farrowing barn.

2018-2019

1. Purchase additional Port-a-Huts
2. Replace original incubator.
3. New Aquaculture tanks, pumps and equipment.

2019-2020

1. Replace worn rabbit cages & supplies
2. Replace battery brooders as needed.
Agricultural Research Center
Heritage High School

NORTH
- Metal Roof Panel System
- Galvanized Finish or Similar
- Clerestory Operable Window
- Metal Clad Wall System
- Split Face Masonry Block
- Precision Masonry Block

SOUTH
- Metal Roof Panel System
- Galvanized Finish or Similar
- Clerestory Operable Window
- Metal Clad Wall System
- Split Face Masonry Block
- Precision Masonry Block

EAST
- Exposed Steel Scissor Truss
- Clerestory Window
- Metal Clad Wall System
- Dual Height Drinking Fountain
- Precision and Split Face Block
- Internal to Match Existing Campus

WEST
- Exposed Steel Scissor Truss
- Clerestory Window
- Metal Clad Wall System
- 12" High Bi-Fold Mechanical Door w/ Metal Clad Wall System
- Precision and Split Face Block
- Internal to Match Existing Campus
Agricultural Research Center
Heritage High School

A-A
ANIMAL SCIENCE LAB

RESEARCH LAB

GIRLS RESTROOM

H.V.A.C. LOFT

PJHM

B-B
PARTITION STORAGE

ANIMAL SCIENCE LAB

C-C
ANIMAL SCIENCE LAB

SECURE STORAGE
27. Current Budget
## Heritage Ag Budget 2015-2016

<table>
<thead>
<tr>
<th>Description</th>
<th>Income</th>
<th>Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIG</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>Matching</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>Office Depot</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Mayesh Flowers &amp; Supplies</td>
<td></td>
<td>5,000</td>
</tr>
<tr>
<td>Stater Bros</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>Costco</td>
<td></td>
<td>1,500</td>
</tr>
<tr>
<td>Home Depot</td>
<td></td>
<td>2,000</td>
</tr>
<tr>
<td>Jeffers</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Fuel</td>
<td></td>
<td>6,000</td>
</tr>
<tr>
<td>Dan's Feed</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Dr. Moss Veterinarian</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Star Milling</td>
<td></td>
<td>2,000</td>
</tr>
<tr>
<td>Temecula Pipe</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Valley Vet</td>
<td></td>
<td>1,500</td>
</tr>
<tr>
<td>Reimbursement Maddalena</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>Paper Mart Floral</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Sequoia Floral</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>Prestige Golf carts maintenance</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>FFA Leadership packs approx. 800@8.50</td>
<td></td>
<td>6,800</td>
</tr>
</tbody>
</table>

|                                | 36,000 | 30,600 |

Balance of 5,400 AIG TBD semester 2
California Department of Education
AGRICULTURAL CAREER TECHNICAL EDUCATION INCENTIVE GRANT
2015–16 APPLICATION FOR FUNDING
(Due Date: To be received in Regional Supervisor's Office by June 30, 2015)

DATES OF PROJECT DURATION - JULY 1, 2015, TO JUNE 30, 2016

Heritage
(School Site)

Perris Union High School
(District)

Certification: I hereby certify that all applicable state and federal rules and regulations will be observed; that to the best of my knowledge, the information contained in this application is correct and complete; and that the attached assurances are accepted as the basic conditions of the operations in this project/program for local participation and assistance.

__________________________  _____________________________
Signature of Authorized Agent  Title

__________________________  _____________________________
Signature of Agriculture Teacher  Signature of Principal
Responsible for the Program

Contact Phone Number: _____________________________

Date of Approval of Local Agency Board:

<table>
<thead>
<tr>
<th>Funds Requested - Part</th>
<th>$5,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I</td>
<td></td>
</tr>
<tr>
<td>Part II</td>
<td>$5,416.00</td>
</tr>
<tr>
<td>Part III</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Part IV</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total</td>
<td>$20,416.00</td>
</tr>
</tbody>
</table>

Number of Different Agriculture Teachers at Site: 5

PART I - QUALITY CRITERIA 1-9 (REQUIRED) ALLOCATION

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Will Meet Criteria</th>
<th>Variance Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Curriculum and Instruction</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2. Leadership and Citizenship Development</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3. Practical Application of Occupational Skills</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
4. Qualified and Competent Personnel
5. Facilities, Equipment, and Materials
6. Community, Business, and Industry Involvement
7. Career Guidance
8. Program Promotion
9. Program Accountability and Planning

Formal Variance Request must be included if requesting a variance. A variance is a proposed plan for bringing the program into compliance with required quality criteria. Variances should result in compliance prior to the following year's application. All variances must be approved with the application. Non-compliance with the terms of the approved variance will result in a loss of funds.

PART I - CONTINUED

Departmental Allocation: Meeting the criteria in PART I makes the program eligible for the following amounts based on the number of teachers in the program.

<table>
<thead>
<tr>
<th>Total Number of Teachers</th>
<th>Amount Eligible</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Teacher or Less</td>
<td>$4,000</td>
<td></td>
</tr>
<tr>
<td>Two Teachers</td>
<td>$4,500</td>
<td></td>
</tr>
<tr>
<td>Three Teachers or More</td>
<td>$5,000</td>
<td>$5,000.00</td>
</tr>
</tbody>
</table>

PART II - PROGRAM ENROLLMENT ALLOCATION

<table>
<thead>
<tr>
<th>Total Number of Students</th>
<th>2014–15 R2 Numbe</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>List Number from R2 Report ($8/Member</td>
<td>677</td>
<td>$5,416.00</td>
</tr>
</tbody>
</table>

PART III - QUALITY CRITERIA 10–11 (OPTIONAL) ALLOCATION

Schools which qualify for a Departmental Allocation may apply for additional amounts for each specific Quality Criteria (10 and 11) met.

* Amounts requested in Quality Criterion 10 will be the indicated amount for that criterion, multiplied by the full-time equivalent (FTE). To count a preparation period, the teacher must be teaching Career Technical Education courses in Agriculture for 50 percent or more of their teaching periods.
* Amounts requested in Quality Criterion 11A will be the indicated amount for each teacher who was compensased a minimum of $2,000 for year-round employment.

* Amounts requested in Quality Criterion 11B will be the indicated amount for each teacher who is provided a project supervision period. Project periods will be counted if the teacher has a preparation period as part of the regular teaching day.

Number of FTE Agriculture Teachers at Site: 5

List the Names of the Agriculture Teachers:

Chris Maddalena                         Maggie Maratsos
Jeremiah Perotti                        Stephen Daly
Shaina Rushing

<table>
<thead>
<tr>
<th>Number Meeting Criteria</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 10 - Student/Teacher Ratio</td>
<td>$0.00</td>
</tr>
<tr>
<td>Criterion 11A - Year-Round Employment</td>
<td>5</td>
</tr>
<tr>
<td>Criterion 11B - Project Supervision Period</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL FUNDS REQUESTED PART IV

$10,000.00

PART IV - QUALITY CRITERION 12 (OPTIONAL) ALLOCATION

Quality Criterion 12 Form is attached and all criteria has been met. If the answer is yes, list $7,500 (funds requesting) in space to the right.

PART V - FINANCIAL SCHEDULE

Part A

<table>
<thead>
<tr>
<th>Line</th>
<th>Acct. No.</th>
<th>Classification</th>
<th>Description of Item for Which Funds Will be Expended</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4000</td>
<td>Books &amp; Supplies</td>
<td></td>
<td></td>
<td>15,416.00</td>
<td>15,416.00</td>
</tr>
<tr>
<td>Line</td>
<td>Acct No.</td>
<td>Classification</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>----------------</td>
<td>------------------------</td>
<td>------------------------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Description of Item for Which Funds Were Expended</td>
<td>Incentive Grant Funds</td>
<td>Amount of Salary and Benefits</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1000</td>
<td>Salaries</td>
<td>Teachers’ Summer Service Salaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1000</td>
<td>Salaries</td>
<td>Teachers’ Salaries for Project Supervision Period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>3000</td>
<td>Benefits</td>
<td>Benefits for the Above Items (1000)</td>
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<tr>
<td>18</td>
<td>TOTAL</td>
<td>$0.00</td>
<td></td>
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</tbody>
</table>

TOTAL Amount of Waiver Requested: ____________________________
California Department of Education
AGRICULTURAL CAREER TECHNICAL EDUCATION INCENTIVE GRANT
2015–16 APPLICATION FOR FUNDING
(Due Date: To be received in Regional Supervisor’s Office by June 30, 2015)

DATES OF PROJECT DURATION - JULY 1, 2015, TO JUNE 30, 2016

Heritage
(School Site)  
Perris Union High School
(District)

Certification: I hereby certify that all applicable state and federal rules and regulations will be observed; that to the best of my knowledge, the information contained in this application is correct and complete; and that the attached assurances are accepted as the basic conditions of the operations in this project/program for local participation and assistance.

Signature of Authorized Agent

Signature of Agriculture Teacher
Responsible for the Program

Title

Signature of Principal

Contact Phone Number: 951.940.5447

Date of Approval of Local Agency Board:

Funds Requested - Part I $5,000.00
Part II $5,416.00
Part III $8,000.00
Part IV $0.00
Total $18,416.00

Number of Different Agriculture Teachers at Site: 5

PART I - QUALITY CRITERIA 1-9 (REQUIRED) ALLOCATION

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>Will Meet</th>
<th>Variance Requested</th>
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</thead>
<tbody>
<tr>
<td>1. Curriculum and Instruction</td>
<td>x</td>
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<tr>
<td>2. Leadership and Citizenship Development</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3. Practical Application of Occupational Skills</td>
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<td></td>
</tr>
<tr>
<td>4. Qualified and Competent Personnel</td>
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<td></td>
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<tr>
<td>5. Facilities, Equipment, and Materials</td>
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<tr>
<td>6. Community, Business, and Industry Involvement</td>
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<tr>
<td>7. Career Guidance</td>
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<td></td>
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<tr>
<td>8. Program Promotion</td>
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</tr>
<tr>
<td>9. Program Accountability and Planning</td>
<td>x</td>
<td>5,000</td>
</tr>
</tbody>
</table>

**Formal Variance Request must be included if requesting a variance.** A variance is a proposed plan for bringing the program into compliance with required quality criteria. Variances should result in compliance prior to the following year's application. All variances must be approved with the application. Non-compliance with the terms of the approved variance will result in a loss of funds.
PART I - CONTINUED

Departmental Allocation: Meeting the criteria in PART I makes the program eligible for the following amounts based on the number of teachers in the program.

<table>
<thead>
<tr>
<th>Total Number of Teachers</th>
<th>Amount Eligible</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Teacher or Less</td>
<td>$4,000</td>
<td></td>
</tr>
<tr>
<td>Two Teachers</td>
<td>$4,500</td>
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<tr>
<td>Three Teachers or More</td>
<td>$5,000</td>
<td>$5,000.00</td>
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PART II - PROGRAM ENROLLMENT ALLOCATION

<table>
<thead>
<tr>
<th>Total Number of Students</th>
<th>2014–15 R2 Number</th>
<th>Amount Requested</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$5,416.00</td>
</tr>
</tbody>
</table>

List Number from R2 Report ($8/Member) 677

PART III - QUALITY CRITERIA 10–11 (OPTIONAL) ALLOCATION

Schools which qualify for a Departmental Allocation may apply for additional amounts for each specific Quality Criteria (10 and 11) met.

* Amounts requested in Quality Criterion 10 will be the indicated amount for that criterion, multiplied by the full-time equivalent (FTE). To count a preparation period, the teacher must be teaching Career Technical Education courses in Agriculture for 50 percent or more of their teaching periods.

* Amounts requested in Quality Criterion 11A will be the indicated amount for each teacher who was compensated a minimum of $2,000 for year-round employment.

* Amounts requested in Quality Criterion 11B will be the indicated amount for each teacher who is provided a project supervision period. Project periods will be counted if the teacher has a preparation period as part of the regular teaching day.

Number of FTE Agriculture Teachers at Site: 4

List the Names of the Agriculture Teachers:

Chris Maddalena
Jeremiah Perotti
Shaina Rushing

Maggie Maratsos
Ross Macy 40%

<table>
<thead>
<tr>
<th>Number Meeting Criteria</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0.00</td>
</tr>
<tr>
<td>Criterion 10 - Student/Teacher Ratio</td>
<td></td>
</tr>
<tr>
<td>Criterion 11A - Year-Round Employment</td>
<td>4</td>
</tr>
<tr>
<td>Criterion 11B - Project Supervision Period</td>
<td></td>
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</table>

TOTAL FUNDS REQUESTED PART IV

$8,000.00

PART IV - QUALITY CRITERION 12 (OPTIONAL) ALLOCATION

Quality Criterion 12 Form is attached and all criteria has been met. If the answer is yes, list $7,500 (funds requesting) in space to the right.
## PART V - FINANCIAL SCHEDULE

### Part A

<table>
<thead>
<tr>
<th>Line</th>
<th>Acct. No.</th>
<th>Classification</th>
<th>A: Description of Item for Which Funds Will be Expended</th>
<th>B: Incentive Grant Funds</th>
<th>C: Matching Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4000</td>
<td>Books &amp; Supplies</td>
<td></td>
<td>15,416.00</td>
<td>15,416.00</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Subtotal for 4000</td>
<td>$15,416.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5000</td>
<td>Services and Other Operating Expenses such as: Services of Consultants, Staff Travel, and Conference; Rentals, Leases, and Repairs; Bus Transportation</td>
<td>1. 4,000</td>
<td>2,000.00</td>
<td>2,000.00</td>
</tr>
<tr>
<td>4</td>
<td></td>
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<td>2.</td>
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<td>5</td>
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<td>3.</td>
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<td>7</td>
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<td>5.</td>
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<td>8</td>
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<td>Subtotal for 5000</td>
<td>$2,000.00</td>
<td>$2,000.00</td>
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<tr>
<td>9</td>
<td>6000</td>
<td>Capital Outlay: Includes Sites and Improvements of Sites; Buildings and Improvement of Buildings; Equipment</td>
<td>1. 2000</td>
<td>1,000.00</td>
<td>1,000.00</td>
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<tr>
<td>10</td>
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<td>2.</td>
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<tr>
<td>11</td>
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<td>12</td>
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<td>13</td>
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<td>5.</td>
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<tr>
<td>14</td>
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<td>Subtotal for 6000</td>
<td>$1,000.00</td>
<td>$1,000.00</td>
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<tr>
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<td></td>
<td></td>
<td>Total for 4000–6000 Lines 2, 8, 13</td>
<td>$18,416.00</td>
<td>$18,416.00</td>
</tr>
</tbody>
</table>

**TOTAL 2015–16 Incentive Grant Allocation:** $18,416.00

### Part B - Complete this portion if a waiver of the matching requirement is requested:

<table>
<thead>
<tr>
<th>Line</th>
<th>Acct No.</th>
<th>Classification</th>
<th>A: Description of Item for Which Funds Were Expended</th>
<th>B: Incentive Grant Funds</th>
<th>C: Amount of Salary and Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>1000</td>
<td>Salaries</td>
<td>Teachers' Summer Service Salaries</td>
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<tr>
<td>16</td>
<td>1000</td>
<td>Salaries</td>
<td>Teachers' Salaries for Project Supervision Period</td>
<td></td>
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<tr>
<td>17</td>
<td>3000</td>
<td>Benefits</td>
<td>Benefits for the Above Items (1000)</td>
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<tr>
<td>18</td>
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<td>TOTAL</td>
<td></td>
<td></td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**TOTAL Amount of Waiver Requested:** 3
Califonia Department of Education
AGRICULTURAL CAREER TECHNICAL EDUCATION INCENTIVE GRANT
VARIANCE REQUEST FORM

Variance Request for Funding Year: 2014-2015

District: Perris Union High School

School Site: Heritage High School

Principal - Print Name: [Signature]

Principal - Signature: [Signature]

Ag Teacher - Print Name: [Signature]

Ag Teacher - Signature: [Signature]

1. Standard and criterion for which variance is requested:
   Standard Number: 4D
   Criterion Number: [Blank]

2. Reasons why the criterion is not being met at this time (use additional pages if needed):
   At meeting time we were not allowed to meet monthly or more during our PLC time at school. We had to go to SCI PLC where we did not to work on dept duties as a team. If the particular Monday was taken up by a PLC event or school training we could not meet. This was hard for both AG to meet and for admin to get all our trainings done. We need to be our own department to correct this problem.

3. Steps to be taken in order to meet this criterion (use additional pages if needed):

   STEPS                          TIMELINE
   A. ____________________________
   B. ____________________________
   C. ____________________________
   D. ____________________________
   E. ____________________________

Regional Supervisor - Print Name: [Signature]

Regional Supervisor - Signature: [Signature]
28. Budget Description
Budget Description

Ag. Incentive Grant
Matched by the district (usually using Perkins funding)
Cannot be used for salaries, books, or substitutes
Cannot cover travel out of state
Examples:
- Travel (hotel, mileage, meals)
- Conference registration
- Class and farm materials and supplies
- FFA expenses (banquet, meetings, activities, supplies)

Perkins
Cannot be single-use or consumable supplies
Cannot be used for travel out of state
Examples:
- Travel (hotel, but not meals)
- Conference registration (for students or staff) and substitute coverage
- Depreciable property or outlay items
- Materials or equipment to be used for extended times

PUHSD Funds
For student project use
Decided on allotment from district or school site
Examples:
- Equipment or consumable materials or supplies
- Conference registration and travel costs

School General Fund
School site decision
Usually small because of other funding sources
Examples:
- Office supplies

FFA / ASB Funds
School account managed by students, monitored by advisors
Fundraising and general FFA costs
Examples:
- Banquet food and awards
- Scrapbook supplies
- Meals during contests
- FFA meeting supplies
29. N/A
(Department Chair)
30. Chart of Responsibilities
<table>
<thead>
<tr>
<th>Ordering Supplies</th>
<th>dept</th>
<th>ffa</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2's</td>
<td></td>
<td>x</td>
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<tr>
<td>Graduate Follow-up</td>
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<tr>
<td>Scholarship Application</td>
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<td>x</td>
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</table>

**II. FFA Activities**

<table>
<thead>
<tr>
<th>Daly</th>
<th>Maddalena</th>
<th>Maratsos</th>
<th>Perotti</th>
<th>Rushing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- Officer Training: x
- Elections: x
- Newsletter: x
- Ordering Supplies: x
- Banquet: x
  - Nursery/Landscape: x
  - Co-Ops: x
  - Parli-Pro: x
  - Vegetable Crop Judging: x
  - Best Informed GH: x
  - Vet Science: x
  - Livestock Judging: x
  - Opening/Closing: Daly
    - Novice: x
    - Advanced: x
    - Officers: x

- Speech Contests: Daly
  - Creed: x
  - Impromptu: x
  - Prepared: x
  - Extemporaneous: x
  - Job Interview: x

- Fund Raisers: Daly
  - Maddalena
  - Maratsos
  - Perotti
  - Rushing
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<thead>
<tr>
<th>Entries to Fair</th>
<th>Daly</th>
<th>Maddalena</th>
<th>Maratsos</th>
<th>Perotti</th>
<th>Rushing</th>
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<tbody>
<tr>
<td>Awards and Degrees</td>
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<tr>
<td>- Greenhand Degrees</td>
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<tr>
<td>- Chapter Degrees</td>
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<td>Maratsos</td>
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<td>- Sectional/State</td>
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<td>Officer Applications</td>
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<td>Maddalena</td>
<td>Maratsos</td>
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<td>- Sectional Office</td>
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<td>FFA Week</td>
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<td>FFA Points Tabulations</td>
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<td>Maratsos</td>
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<td>Rushing</td>
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<td><strong>FFA Conferences</strong></td>
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<td>Horticulture</td>
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<td>MAZZALENA</td>
<td>PEROTTI</td>
<td>RUSHING</td>
<td>MARATOS</td>
<td>DALY</td>
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<td>---------</td>
<td>---------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Rabbit Barn</td>
<td>Hog Barn</td>
<td>Breeding Sheep pens</td>
<td>Greenhouse</td>
<td>ARC Office</td>
<td></td>
</tr>
<tr>
<td>10' area surrounding rabbit barn</td>
<td>10' surrounding Hog Barn</td>
<td>Aisles in front of breeding sheep</td>
<td>Shadehouse</td>
<td>Inside East Side of ARC, including storeroom</td>
<td></td>
</tr>
<tr>
<td>Large &amp; Small Chicken Houses</td>
<td>Hog Breeding area</td>
<td>Lamb Pens and surrounding area</td>
<td>Areas surrounding GH &amp; SH</td>
<td>Goat pens &amp; surrounding area</td>
<td></td>
</tr>
<tr>
<td>Area surrounding chicken houses</td>
<td>Concrete in front of hog breeding area</td>
<td>Clean Hay stack and surrounding area</td>
<td>Landscape area at entrance</td>
<td>Show Ring and surrounding area</td>
<td></td>
</tr>
<tr>
<td>Egg Room</td>
<td>Steer area</td>
<td>Cleaned Trash area</td>
<td>Planter areas surrounding ARC building</td>
<td>Privet shrubs surrounding of show ring area</td>
<td></td>
</tr>
<tr>
<td>Egg Sink area and floors</td>
<td>Farrowing area inside ARC</td>
<td>Cleaned Trash can maintenance</td>
<td>Automatic irrigation system at ARC</td>
<td>Citrus Tree maintenance</td>
<td></td>
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<tr>
<td>Incubator area</td>
<td>Bougainvillea in front of steers</td>
<td>Area surrounding wash rack organization</td>
<td>Organization and cleaning of Soil bins except trash area</td>
<td>Wash rack organization and cleaning</td>
<td></td>
</tr>
<tr>
<td>Work Orders</td>
<td>Landscape Tool Room</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tractor, Golf Cart, ATV, Trailers</td>
<td></td>
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</tr>
</tbody>
</table>
Minutes for 11/30 Ag. Department Meeting

On 11/30/15 the Heritage Agriculture Department held its bi-monthly meeting.
The meeting began on time, with all five of the Agriculture teachers present 7:45 p.m., in
the ARC.

Discussion commenced on the following topics:

a. The department discussed transportation for the Fallbrook Field Day this Saturday.
   i. Chickens need to be put in pens on return from the field day.
   ii. We only have a maximum of eight spots for each team; ask parents if they’d be willing to drive them down to Fallbrook (we’ll pick up registration costs).

b. Jeremiah will talk to the proper people about the geese fundraiser for next year.

c. Advisory Committee meeting date is moved from this Wednesday to January.

d. Science project boards are available for pick up in Chris’s room. Progress should be shown to each Ag. teacher by Monday.

e. Farmhands were selected. Parents will be contacted tonight.

f. Schedule for canned food drive: Jeremiah is Tuesday, Wednesday, and Thursday; Shaina is Friday. Stephen will be next Wednesday, Chris and Stephen will be next Thursday, Maggie and Shaina will be next Friday.

g. Southern Region Roadshow is next Tuesday, so all Ag. teachers will be out.

h. Chris will put a list together of food we need to purchase for the Heritage Cup in two weeks.
   i. Chris has fair premium checks for kids to pick up.

There was no unfinished business to be presented. The meeting was adjourned at
8:39 a.m. The next meeting will be 12/16.

Minutes prepared and approved by Maggie Maratsos.
2:30p HHS Centric 2:35p CDE Team
1:30p Science Co 3:25p CDE Team
2
3
Feb
1
2
3
31
11p Meeting
AG Department
AG Department
AG Department
11p Meeting
3:30p CDE Team
2:25p CDE Team
3:25p CDE Team
22
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29
30
31
Rivervale Regional
3:30p Officer Meet
2:30p CDE Team
1:30p Science Co
2:25p CDE Team
11p Meeting
AG Department
AG Department
AG Department
11p Meeting
3:30p CDE Team
2:25p CDE Team
3:25p CDE Team
22
21
20
19
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31. Substitute Teacher Procedures & Plans
Report Absence

MARATSOS, MARGARET E
Site:    HHS
Position:  AGRICULTURE

Absence Info
Start Date/Time            End Date/Time
12/7/2015  07:30 AM            12/7/2015  02:45 PM
Follow Employee Schedule     Same Time Daily

Job Info
Start Date/Time            End Date/Time
12/7/2015  07:30 AM            12/7/2015  02:45 PM
Follow Employee Schedule     Same Time Daily

Reason:  A01 SICK LEAVE
Job Type:  Substitute Required

Special Instructions
Attach File:  Choose File  No file chosen
Enter Text-based Special Instructions:
Sub Plan for Ms. Maratsos, Room W121, 11/17/15

Thank you for subbing for me today!

The classes you’ll be covering today are Plant and Animal Science, which is comprised entirely of freshmen, as well as Ag. Chemistry, which is for juniors and seniors. Included in this folder is a copy of our bell schedule, as well as a list of important phone numbers. **ALL OF MY CLASSES WILL BE MEETING AT THE SCHOOL FARM (the ARC) TODAY, since the classrooms are being used for a conference. Other classes will be using my room today; the farm is the big red building by the staff parking lot.**

My daily schedule is as follows:

1\textsuperscript{st} Period: Ag. Chemistry  
2\textsuperscript{nd} Period: Plant and Animal Science  
3\textsuperscript{rd} Period: Plant and Animal Science  
4\textsuperscript{th} Period: Ag. Chemistry  
First Lunch  
5\textsuperscript{th} Period: Prep  
6\textsuperscript{th} Period: Ag. Chemistry  
7\textsuperscript{th} Period: Plant and Animal Science

For Plant and Animal Science, they will be working on the Chapter 3 review worksheet on my long demo desk (labeled “Plant and Animal Tuesday”). They will do questions 1-16. The worksheet will go on page 76 in their notebooks (or their next available left-hand page). They may use their notes or the to help them find the answers. Additionally, they will go on their Chromebooks after finishing their worksheet, and will write the **hypothesis and list of materials needed** on their chicken experiment Google Slideshow (which they set up yesterday).

For Ag. Chemistry, they will be working on a worksheet reviewing the types of problems we worked on last week. This worksheet will go on page 68 in their notebooks. If they finish early, they are to be working on researching a topic and developing a hypothesis for their agriscience search project.

If any of my students have completed all their work before the period is over, they may use the rest of the period to catch up on any notes or assignments they are missing from their ISNs. Every assignment we have done for the last eight weeks is on both of my classes’ Haiku pages, so they should be able to find it online if they don’t know what to do on a page. **This is the only instance in which they should have their Chromebooks out, other than working on their science projects.**

Please remind all my classes that the November FFA Chapter Meeting is at 6:00 p.m. this Thursday at the farm, and is worth 25 points. Also, please remind my Plant and Animal Science classes that there are FFA team practices this Thursday at 3:30 p.m. Veggie judging is in W126, Vet Science, B.L.G., and O.H. are in L114, and Livestock judging is in L113.

Most of the students in my classes are friendly and helpful if you need anything. Here are some very helpful and truthful students for each period if you have questions:

- **Period 1:** Faith Baker & Sean Randall (and T.A. Jon Kirkpatrick)  
- **Period 2:** Fatima Ojeda & Bryan Nevarez  
- **Period 3:** Annika Smith & Andrew Daggett  
- **Period 4:** Amber Thompisen & Carlos Rodriguez  
- **Period 6:** CJ Moore & Christian Frahn  
- **Period 7:** Andrea Ruiz & Osmany DelSol

Please feel free to write down the names of any students who were problematic, and I will address those needs when I return. If there is anything that you need from me that I left out of this plan, shoot me a text at (760) 685-1518 and I’ll do my best to be prompt with my response. Thanks again for subbing for me!

Sincerely, Maggie Maratsos
32. Program Completer Description
Students are considered “program completers” when they have completed all four years of high school as a member of our FFA program.

Students would have:
- Earned State FFA Degree
- Or completed two or three years in an approved SAE program
- Participated in FFA
- Planned for a career
- Prepared for career with a professional portfolio
- Completed at least one career-focused pathway

**Program Completer**

Students can complete “agriculture pathways” that include a set of courses:

**Veterinary Science:** Plant and Animal Science, Ag. Biology, Ag. Earth Science/Ag, Chemistry, Veterinary Science

**Floriculture:** Plant and Animal Science, Ag. Biology, Ag. Earth Science/Ag, Chemistry, Floral Design

**Agricultural Sciences:** Plant and Animal Science, Ag. Biology, Ag. Earth Science/Ag, Chemistry, Ag. Economics/Government
PERRIS UNION HIGH SCHOOL DISTRICT
AGRICULTURE PROGRAM PATHWAYS

Plant and Animal Physiology
Graduation credit in Life Science
UC G - College Prep Credit
Prerequisite: Plant and Animal Physiology
Only Available to 9th grade students or Teacher Approval

Agriculture Sciences
Graduation credit in Life Science
UC D - Lab Science Credit
Prerequisite: Plant and Animal Physiology

Agriculture Biology
Graduation credit in Life Science
UC D - Lab Science Credit
Prerequisite: Plant and Animal Physiology

Agriculture Earth Science
Graduation credit in Physical Science
UC G - College Prep Credit
Prerequisite: Agriculture Biology

Agriculture Chemistry
UC D - Lab Science Credit
Prerequisite: Agriculture Biology

Agriculture Chemistry
UC D - Lab Science Credit
Prerequisite: Agriculture Biology

Floriculture
Graduation credit in Visual Arts
UC F - Fine Art Credit
Prerequisite: Plant and Animal Science

Anatomy and Physiology in Veterinary Science
UC D - Lab Science Credit
Prerequisite: Agriculture Earth Science or Agriculture Chemistry

Horticulture/Arboriculture
MSC Credit
Prerequisite: Agriculture Biology

Advanced Floriculture
Elective Credit

Agriculture Economics and Government
UC A - Social Science Credit and
UC G - College Prep Credit
Prerequisite: Any two Agriculture Core Courses
Note: Floriculture may be taken in the 10th grade year and Advanced Floral in the 11th grade year.

Agriculture Mechanics
Elective Credit

Computers in Agriculture
Elective Credit

Agriculture Business
Graduation credit in Life Science
UC D - Lab Science Credit
Prerequisite: Plant and Animal Physiology

Agriculture Earth Science
Graduation credit in Physical Science
UC G - College Prep Credit
Prerequisite: Agriculture Biology

Agriculture Chemistry
UC D - Lab Science Credit
Prerequisite: Agriculture Biology

Agriculture Chemistry
UC D - Lab Science Credit
Prerequisite: Agriculture Biology

Agriculture Wood Design
Elective Credit

Agriculture Leadership
Elective Credit
# TARGETED OCCUPATIONS

We train our students to meet competencies in an occupation in one or more of the “Four 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>Equipment Operator, Parts Person, Shop Foreman,</td>
</tr>
<tr>
<td></td>
<td>Tractor Driver, Harvest Equipment Operator, Fork Lift Driver, Mechanic Helper</td>
</tr>
<tr>
<td>Ornamental Horticulture</td>
<td>Jobs</td>
</tr>
<tr>
<td>------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Greenhouse Management</td>
<td>Greenhouse Worker, Foreman Maintenance, Propagator, Tissue Culture</td>
</tr>
<tr>
<td>Nursery &amp; Turf Operator</td>
<td>Nursery Worker, Salesman, Plant Propagator, Gardener, Golf Course Maintenance</td>
</tr>
<tr>
<td>Landscape</td>
<td>Grounds Worker, Gardening Business, Garden Store Sales</td>
</tr>
<tr>
<td>Floriculture</td>
<td>Floral Design, Floral Sales, Floral Delivery</td>
</tr>
<tr>
<td><strong>Agribusiness/Computers</strong></td>
<td><strong>Jobs</strong></td>
</tr>
<tr>
<td>Agribusiness</td>
<td>Ag Sales, Banking, Keyboard Operator, Farm Accounting, Ag Secretary/Bookkeeper, Inventory Maintenance</td>
</tr>
</tbody>
</table>
33. Reimbursement Process
Teacher Reimbursement

Agriculture teachers are reimbursed for expenses incurred for FFA, SAE, and approved professional development activities.

The process of reimbursement is as follows:

1. Approval of conference or activity
2. Requisition through district office or ASB cashier must be submitted beforehand, and minutes requesting funds must be approved by the voting FFA membership
3. Original or copied receipts must be attached to the requisition
4. Each expenditure on district requisitions need to be itemized by date and cost
5. Payment through the district takes approximately 30 to 90 days, and payment from the ASB account funds typically takes about 30 days
**HERITAGE HIGH SCHOOL**
**PURCHASE ORDER REQUISITION**

**Vendor:** Sears (online)  
**Ordering Address:** 22550 Town Circle Moreno Valley, California 92553

**Date requested:** 12/1/2014  
**Date Needed:** 01/1/2015

**Phone #** 1-800-697-3277  
**Fax #**  
**Web id** http://www.sears.com/

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
<th>Unit Price</th>
<th>Total</th>
</tr>
</thead>
</table>
| 1        | Frigidaire 16.7 cu. Ft. Freezerless Refrigerator  
   Item # 04670722000P Model # 70722 | 629.99     | 629.99|

Free delivery

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perkins Goal #3801 / #522</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Teacher:** Perotti  
**Department Head:** None  
**Department:** Science  
**Program:** Agriculture

**SUBTOTAL** $629.99  
**TAX (8%)** $50.40  
**SHIPPING** $  
**Free**

**GRAND TOTAL** $680.39

**APPROVED:**  
Principal’s Signature

**Standards Focus:** For all Agriculture Science Department lab/Animal/ FFA supplies.
HERITAGE HIGH SCHOOL
REQUISITION FOR PURCHASE ORDER
ASSOCIATED STUDENT BODY

Purchase Orders must be submitted by the 15th of the month prior to the activity/fundraiser. Requests must be submitted two weeks prior to needing the check.

ACTIVITY
The following section must be filled in completely.

VENDOR ____________________________ (Checks will be made out to this name/co.)

ADDRESS ____________________________

CITY ________ STATE ________ ZIP ________

PHONE ________ FAX ________

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>ARTICLE OR SERVICE WANTED</th>
<th>UNIT PRICE (individual price)</th>
<th>TOTAL (extended price)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

TAX............
SHIPPING...
TOTAL........

This form is not to be used for purchasing. Return to the business office and a purchase order will be issued, after approval.

ORGANIZATION OR CLUB ___________ DATE ________

STUDENT OFFICER ___________ ADVISOR ___________

APPROVED: YES _____ NO _____ DATE ________

STUDENT COUNCIL SECRETARY ___________ STUDENT COUNCIL ADVISOR ___________

PRINCIPAL/DESIGNEE ____________________

***************FOR OFFICE USE ONLY***************

CHECK# AMOUNT CHECK# AMOUNT CHECK# AMOUNT CHECK# AMOUNT CHECK# AMOUNT Date Pd. Acct Clk. ________

______ ________ ________ ________ ________ ________ ________ ________ ________ ________
FUNDRAISING APPROVAL FORM
PERRIS UNION HIGH SCHOOL DISTRICT

SCHOOL SITE: ________________________________

PROPOSED EVENT: ____________________________

REQUESTING CLUB/ORGANIZATION: ______________

CLUB ADVISOR: ______________________________ PHONE EXT: __________

CLUB/EVENT CONTACT PERSON: ______________

DESCRIPTION of the EVENT: _______________________

DATE(s) & TIME(s) OF THE EVENT: __________________________

PRE-SALE DATES: _________________________ ☐ N/A

LOCATION OF THE EVENT: ______________________________

CHAPERONES: ______________________________

Is food being served?** ☐ Yes ☐ No (If yes, allow additional time for event approval)

Is a Purchase Order needed? ☐ Yes ☐ No (Please attach necessary quotes)

Names of any companies where product will be purchased (may not apply to all events) __________________________

Will a Contract with an outside agency be used? ☐ Yes (attach contract for approval by Purchasing) ☐ No

Is Insurance Required? ☐ Yes (attach ins. for approval by Purchasing) ☐ No

Are district facilities or equipment being used? ☐ Yes (attach COPY of the use of facilities form) ☐ No

Is event off campus? ☐ Yes (attach copy of approved field trip request) ☐ No

Is transportation required? ☐ Yes (attach approved transport. request form) ☐ No

Has the Assistant Principal been contacted regarding security? If so... ☐ Yes (how many?_______)

☐ Yes (submit PO to cover cost for Security and/or Custodian) ☐ N/A

☐ No

Custodians required? ☐ Yes ☐ No Date added: ________________

Is this event on the school events calendar? ☐ Yes ☐ No

Has the fundraiser type been board approved? ☐ Yes ☐ No (cannot be approved without board approval)

☐ Fundraising Event Profit Form attached (required for approval)

APPROVAL SIGNATURES:

Club Officer_________________________ Date Signed______________

Club Advisor_______________________ Date Signed______________

ASB Advisor_______________________ Date Signed______________

Principal/Designee________________ Date Signed______________

Nutrition Services**________________ Date Signed______________

Business Office___________________ Date Signed______________

4/08/13
Heritage High School

ACTIVITY COLLECTION REPORT / DEPOSITS

Activity: ____________________________ Date: ____________________________
Name of Trust Account: ____________________________
Activity Receipt Beginning # ____________________________
Ending # ____________________________
Total amount of all activity receipts or Activity group receipt being turned in: ____________________________

PROOF OF COLLECTION:

<table>
<thead>
<tr>
<th>Denominations</th>
<th># Bills or coins</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>$50</td>
<td>50</td>
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<tr>
<td>$0.01</td>
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</tr>
<tr>
<td>Other</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>Sub-total=</td>
<td></td>
</tr>
</tbody>
</table>

Checks

No. of Checks

Amount

Sub-total money turned in: ____________________________
Beginning cash: ____________________________
Total to be deposited: ____________________________

Signature of club advisor turning in report: ____________________________
Signature of 2nd person verifying the cash: ____________________________
Verified by ASB bookkeeper: ____________________________
Master Receipt# ____________________________ Date: ____________________________
Project Proposal  
(to be completed in conjunction with AGED 539)

Quality Criteria Number Addressed (the one about facilities renovations): 5.

Goal or Purpose of the Project:
I will complete the binder, written, and oral presentation components of my Master's Degree requirements. I will also supervise and aid several students in the construction of about 20 raised planter beds for our school farm, in order to further diversify the types of horticulture projects offered at our school. This process will be beneficial to our students, in that, not only will they learn a few basic landscape and irrigation installation techniques, but they will also have the opportunity to take on the oversight and management of a planter box full of vegetables, as well as monitor crop health and harvest.

Specific Objectives to Accomplish (Be as detailed as possible):
I, along with several students, am constructing 20 redwood raised beds for our school farm, to be filled with vegetables and fruit. These planter beds will become projects for students that are interested in crop production and horticulture. Students that are constructing the beds will also learn how to install and maintain irrigation for such a large-scale project. Therefore, I am requesting to get 3 units of credit for AGED 500, to be completed through my work on the raised bed project for our school farm.

Estimated number of hours on this project: 90.
Estimated expenditures ($) on this project (your costs): $5,115

Proposed timeline for completion of the project:
- Beginning of June—purchase supplies
- Middle of July—begin leveling the area where the boxes will go
- Middle of July—lay out and hook up irrigation
- End of July—Construct boxes and fill with vegetable mix soil
- Beginning of August—Sow seeds

Progress Report: How will you inform the Cal Poly faculty of your progress on a regular basis? I can send my faculty advisor updates, with pictures, on an every-other-week basis.

For Office Use Only:
Project Approved By: ________________________________.
Date of Approval: ________________________________.
Quarter student will enroll in AGED 539: __________________________.
Master’s Project Write-Up

Over the past semester, I was able to oversee the purchase and construction of 20 redwood planter beds for our school farm. This project was constructed during class time with the help of students in our Ag. Leadership class, and helped them develop skills in basic wood construction.

Our first step in the process was to purchase the materials. This was done at the end of last school year; we bought all of our redwood lumber from our local Home Depot and every piece cut at Home Depot for ease of construction by our students. We also purchased irrigation supplies necessary for an automatic watering system. After purchasing the materials, this fall semester, we began construction, and the entire project was put together in a matter of weeks. Although we did not complete the project within my original, proposed timeline, it did take us about the same amount of time (about two or three weeks) to level the area where the boxes are located and to construct all of the boxes. Students were responsible for placing pieces together according to a plan the advisors had developed for the boxes, and drilled and screwed all of the pieces together with supervision from me and other advisors helping with the project. We installed irrigation at the end of the semester, filled the boxes with a special vegetable mix of soil that we ordered at the end of last school year, and began sowing seeds inside our greenhouse.

Students learned how to create a PVC pipe irrigation system with polyethylene drip tubes for each individual planter bed. They learned basic plumbing construction skills and a couple individual students played a part in actually designing the system themselves. Several classes took part in sowing seeds in the greenhouse, and student farmhands were responsible for caring for and watering the seedlings after they began to sprout.

Next semester, we will begin transplanting seedlings, which will be liner-sized by January, into the planter beds. This will provide more opportunities for our students to get involved in different horticultural projects, including vegetable crop production. These planter beds will also be used as a plant identification gardens for the Nursery/Landscape and Vegetable Crop teams. We are looking into purchasing a number of one-gallon nursery plants, and the Nursery/Landscape team will work on installing them in several of the boxes. They will use these to practice the plant identification and judging portions of their contest. The Vegetable Crops team will also be able to use the vegetable seedlings for identification practice once they reach maturity. Finally, our agriculture classes, especially the freshmen classes, will be able to use these planter beds as class projects during their units on horticulture.

Overall, this project meets a wide variety of student needs, and involved (and will involve, in the future) many students in our program. There is potential for these planter beds to provide space for both several student S.A.E. project, class projects, and useful tools for judging teams.
Photographic Documentation
Part 1: Purchasing the Supplies

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA LBR FEE</td>
<td>2</td>
<td>$2.60</td>
</tr>
<tr>
<td>CA LUMBER FEE</td>
<td>1</td>
<td>$0.40</td>
</tr>
<tr>
<td>LUMBER CUTTING</td>
<td>3</td>
<td>$2.00</td>
</tr>
<tr>
<td>3/4X3/4 8X8 - 12FT A</td>
<td>1</td>
<td>$27.00</td>
</tr>
<tr>
<td>2X4-10FT CON COMM REDWOOD</td>
<td>2</td>
<td>$55.62</td>
</tr>
</tbody>
</table>

**Subtotal:** $348.35  
**Sales Tax:** $27.62  
**Total:** $375.97

Authorization Code: 017366/3012204

PERRIS UNION HIGH SC  
MARATOS MAGGIE

P.O.#/Job Name: PLANTER BOXES

**<u>** - NON-DISCOUNTABLE ITEM
Part 2: Constructing the Boxes
Part 2: Constructing the Boxes
Part 3: Positioning the Boxes, Leveling the Ground
Part 4: Putting in the Soil