Graduate Internship Report

San Jacinto High School

Lindsey Stiff
San Jacinto High School Agriculture Department
AGED 539, Cal Poly State University
Spring Quarter 2018
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Section I

Reflection on Quality Criteria
Quality Criteria Standard 1: Curriculum and Instruction

Students enrolled in San Jacinto High School (SJHS) agriculture department fall into one of the three pathways: Agriculture Mechanics, Plant/Horticulture, or Agriculture Science. As they follow the pathway, seniors will be enrolled in Agriculture Business and Government until we establish our program and increase our teachers.

Pathways available in the SJHS Agriculture Department

Agriculture Department Pathways

- **Plant/Horticulture**
  - Ag Biology (D)/Sustainable Ag (D)
  - Ag & Soil Chemistry (D)/Ag Systems Mgmt (D)
  - Floral (F)/Plant & Soils (E)
  - Floral (F)/Plant & Soils (E)

- **Ag Science**
  - Ag Biology (D)/Sustainable Ag (D)
  - Ag & Soil Chemistry (D)/Ag Systems Mgmt (D)
  - Animal Science/Vet Science (E)/Floral (F)

- **Ag Mechanics**
  - Intro to Metal Fabrication and Welding (E)
  - Metal Fabrication and Welding II (E)
  - Metal Fabrication and Welding III (E)

*Must pass Intro to Metal Fabrication and Welding with C or better to continue to next course.

* Animal Science and Vet Science - Juniors or seniors ONLY

* Yellow: Freshman year, Green: Sophomore year, Blue: Junior year, Grey: Senior year

Each course in the pathways count towards the SJHS graduation requirements and all are UC/CSU approved to meet A-G credit requirements. We will be articulating with San Jacinto Community College for plant science. Currently, the Agriculture Business course is being developed and in the process of being approved.

Standards in each class in the departments were developed from the California Career Technical Education Model Curricular Stands and the Next Generation Science Standards (NGSS).
All classes at SJHS have a focus on writing and technology, as we are transferring to the Common Core and Next Generation Science Standards. Teachers are becoming more of a facilitator and have project-based learning. Students are analyzing, writing, and using technology. Students and teachers have access to technology as our school is in the process of becoming 1:1. We use technology such as, Google Classroom to assign work, create announcements, and give feedback.

The high school has made strides in providing technology to all teachers. This summer all teachers were given new computers. We also all have an LCD projector and document camera. Last year, freshman and sophomores had Chromebooks and juniors had tablets. In 2017-2018, all students have some type of computer device. For those that do not have access to technology can use a Chromebook from our cart during the class period to work on AET, projects, or other assignments in the class. Teachers use Aeries to update students and families about classes and grades. The FFA keeps students, faculty, families, and community members updated via our website and monthly newsletters. Finally, teachers use the Remind 101 app for our fair students and officer to keep them up to date.
Quality Criteria Standard 2: Leadership and Citizenship Development

San Jacinto FFA received its charter in 1955. Since this time, the community has shifted from a large number of dairy operations and farmers to a smaller number of dairies and Los Angeles and other transfer families in the community. These dynamics have changed the environment in the San Jacinto Unified School District and the agriculture department at the High School.

The agriculture department has fully adopted the agriculture education three-ring model. Each student is automatically enrolled in the FFA and must complete a Supervised Agriculture Experience Project (SAE). This gives students the leadership and responsibility skills and opportunities that other students, not enrolled in the department, do not have access to. Each circle of the model (Classroom, FFA, and SAE) are graded for each individual and it reflects their involvement and completion of each circle. For example, students must complete six FFA activities per semester (twelve per year) to receive 15% of their grade. The SAE portion of their grade, 15%, is received by completing an approved agriculture related project and maintaining an up to date record book. The other 70% of their grade is based on in-class activities such as labs, tests, homework, and projects.

FFA activities throughout the year offer students opportunities to be involved as various leveling within the organization. The students receive a calendar at the beginning of the year via Google Classroom and our FFA website. Each advisor also keeps a calendar in their classroom and verbally announces upcoming opportunities every day. As students attend events, attendance is recorded and tracked. As students complete FFA activities it goes into their record book and is entered into their grade. If a student attends more than the required six activities they are given extra credit, determined points vary by teacher, to encourage continuing attendance at events.
Students are involved in planning of many of the activities for the year. The chapter officer team plans activities at a retreat over the summer break, including FFA meetings, community service events, and fundraisers. Once school is in session, the officers will form committees and will continue working on goals set during the retreat. Students can become involved in planning of events via these committees. Advisors are in charge of overseeing the committee development and every activity the chapter holds.

The SAE component of the course requires every student to acquire and maintain a project, agriculture related, and an up to date record book. The student must complete at least 20 hours of work in order for the project to qualify for a passing grade. Projects vary from lawn businesses, animals, plant projects, or internships within the industry. Every project is approved by the instructor and is entered into AET.
Quality Criteria Standard 3: Practical Application of Agricultural Skills

The San Jacinto Agriculture Department uses practical application of agricultural-based skills within each course. All three agriculture teachers use hands-on lessons and labs throughout their courses. For examples, floral students are required to wrap wire with floral tape, make bows, and create various projects. Students sell flowers every Friday to keep the class running. They also make arrangements for various events and floral club. In the welding course students complete units on oxy-fuel cutting, brazing, arc welding, and other topics they can use in their future. The animal science course allows students to castrate, artificially inseminate, tract heat cycles, etc. All of our courses have various opportunities for our student to use their skills.

Students not only develop these skills, they are able to practice them. The welding shop is slowly being equipped with various tools, welders, and other equipment for students to use. The floral program has one cooler by the class. The Plant & Soils and Agriculture Soils and Chemistry course have access to our garden that has various rows to plant, greenhouse, shade house, and a hydroponics system. The floral class also uses fresh flowers grown in the garden area. Outside of our garden, we have a breeding sow on campus for animal science students to inseminate, process piglets, and track gestation or heat cycles. Students are able to keep their fair animals at our off campus school farm. Finally, the department has a van, truck, and trailer available to use for transporting students, projects, and materials.

As mentioned in quality criteria standard 2, the SAE project is mandatory and must be completed outside of normal class time for each student in the program. At the beginning of the school year, students work on a SAE Plan to track their goals, materials, and contacts for the project. By the end of the semester, students will have completed at least twenty hours towards their project. They also will write a two page paper on their project according to our rubric.
Many students use this opportunity to complete community service hours or hours for FFA degrees. Depending on the project, students can also take their project to the Southern California Fair in Perris or National Date Festival in Indio.
Quality Criteria Standard 4: Qualified and Professional Personnel

Currently there are three teachers within the San Jacinto High School Agriculture Department. Each teacher has their Single Subject Teaching Credential in Agriculture, as well as a Clear Specialist Instruction Credential in Agriculture. See below for the breakdown of teachers within the department and the classes taught by each instructor.

- Danielle Scoggins
  - Agriculture Soils and Chemistry, Floral, Plant Science and Animal Science
- Lindsey Stiff
  - Agriculture Biology and Intro to Metal Fabrication and Welding

Every teacher in the department focuses on professional development as an agriculture teacher. They attend CATA meetings in section and region, CATA Summer Conference, and Agri-Skills.

Outside of the CATA, the department attends weekly faculty meetings. In addition, one teacher is involved in science department planning committee. They also attend, district wide trainings and collaboration on subject like Next Generation Science Standards, Common Core, and other topics. The department meets frequently to collaborate about FFA, fair, and upcoming events within the department. Finally, each teacher attends Career and Technical Educational advisory committee meetings to stay up to day and connect with other industry sectors.
Quality Criteria Standard 5: Facilities, Equipment, and Materials

The San Jacinto High School Agriculture Department has four full classrooms, welding shop, agriculture office, shade house, greenhouse, floral cooler, storage cargo, animal area, and a garden area. Our main headquarters is in portables in front of the garden/animal area.

The classrooms for each teacher include a projector, computer, document camera, and printer. One of the two classrooms has a sink and various moveable cabinets in the other. Students sit at desks in the rooms. The classrooms are easily accessible by vehicle. The third classroom has desks and is our shop.

As of this year we have taken over the shop, which previously was the weight room. We have three small rooms within the shop. One of the rooms is set up for welding and the other two our storage area for material. The department’s FFA jackets and ties/scarves are stored in one of the rooms to be used by students for various FFA events. Currently, there are four MIG welders, three multi-process welders, two oxy-fuel cutting carts, drill press, band saw, pan and break, throat-less shear and welding/cutting tables created by students. The storage room has cabinets that store nuts, bolts, screws, and other material needed for course.
The agriculture office is attached to one of the classrooms. In the office we have a mini fridge, large cabinets, floral fridge, and laptop. This is also where we have permanent files and other materials to use in the courses.

The greenhouse, shade house, and garden areas are all located outside behind the portables. The greenhouse is equipped with three rolling table to grow plants. The greenhouse also has a cooling system and has a sprinkler system. The shade house has a sprinkler system for plants that will be transferred to the garden beds. Each bed is equipped with drip irrigation lines that are hooked up to a timer system. Within this area, the department has a hydroponics system to use for instruction or SAE projects. Attached to this area, is an area for animals. We currently have a pen set up for our breeding sow and will continue to expand the area by bringing in pens for our fair goats and lambs.

The school farm is easily accessed by two different entry points. There is a gate in the animal area next to the baseball field and one by the portable. Within the garden/animal area there is a total of three locked gates. One on the baseball side, portable side, and one in-between the animals and garden area. We also have an off site school farm, which houses all of our fair animals. Our students and the advisors just completed assembling the new pens outside of our barn at our off site location.
Quality Criteria Standard 6: Community, Business, and Industry Involvement

The San Jacinto High School Agriculture Department has an advisory committee. This committee involved community members within the industry. The committee meets three times a year to discuss department events and receive feedback or suggestions to improve the program. As a department, we take the input from the committee to create and update our five year program plan, develop our classes, and expand our program. Our committee also established a sponsorship account that will help us pay for feed and animals until we get reimbursed by our students.

The San Jacinto Unified School District also has a program called the “Saturday Crew” who help with anything our students would not be able do. This has helped us when assembling the pens at the off site facilities.

The community is extremely supportive of the agriculture department. The local feed store works directly with our teachers to provide feed and supplies to the program. The feed store also provides opportunities for our students to work at the local pumpkin patch. In addition, the local dairy industry members has continuously helped us with our needs.
Quality Criteria Standard 7: Career Guidance

Every student at San Jacinto High School is assigned a guidance counselor to assist them with classes and college admittance. We have seven counselors that follow the students their entire way through high school to help students throughout their years in high school.

All of the courses in the agriculture department include a unit on careers and higher education within the agriculture industry. For example, in the Animal Science course students must create a resume, cover letter, and complete job applications. The Sustainable Agriculture course requires students to research careers within the agriculture industry and present to the class. We also prepare students for hands on work in the garden and in our Agriculture Mechanics course. Students also have had the opportunity to take field trips to local agriculture businesses to gain further insight of opportunities available.

This year we are working on articulating classes with San Jacinto Junior College. Within the next year we will have classes that students can take in our department and receive college credit. This will allow them to advance faster than peers and enter the industry quicker.

As part of the Agriculture Incentive Grant, students complete a Career Data Sheet at the beginning of the school year. This sheet tracks their demographics, including a career interest. This gives teachers the opportunity to speak about the pathways in the agriculture department, as well the associated careers within the pathways. Once we see the demographics each student, we are better able to cater to students and use this to direct our career units.
Quality Criteria Standard 8: Program Promotion

Program promotion is integrated throughout the school year on campus, within the district, and the community. Throughout the year, the FFA officers and students promote the program via registration, orientation, club days, and kiss the pig. The officers and students are able to talk to parents, students, and younger siblings at these events. At all of these events we have students there to talk to anyone who attends the events.

Within the district and community, our officers and members attend various events. Our officers attend First Friday where local businesses meet and support our schools. They also have the opportunity to talk to various businesses and tell them about our program during this event. The program is also promoted at our 4th of July parade and homecoming parade where the majority of the town is present.

San Jacinto FFA also has an Instagram, Twitter, Facebook, and chapter website. These are all overseen by the department head within the department, but mainly ran by the officer team. These platforms highlight various events that our members are involved in, as well as the accomplishments of our members. We post pictures from career development experiences to fairs or even community events. We also use the media from these platforms to create newsletters that are sent to the district, parents, etc. or create articles for the newspaper.
Outside of the media used, our students are involved with community service. The biggest event that we participate in is the local pumpkin patch. One of our advisory members hosts a huge pumpkin patch throughout October with music, food, maze, hay rides, etc. Our members help with each of these attractions after school on the weekend. By taking on additional service opportunities, students are involved and interacting with the community while promoting our program.
Quality Criteria Standard 9: Program Accountability and Planning

Through the Comprehensive Program Plan, that is kept up to date and on file, hold the San Jacinto FFA accountable. The Southern Region Supervisor also has a copy of the file that is updated every year as we complete the Agriculture Incentive Grant (AIG). The file includes minutes from department meetings, updated five year expenditure schedule, staff responsibilities, program of work, advisory committee minutes and membership, FFA checklist, and in-service checklists. The advisory committee helps update the job market, occupations, budget, and with our active placement sites. In addition, our roster is updated annually with our FFA membership, graduate follow-up, R-2 report, and report of expenditures for the AIG. Our program is reviewed every year either by the regional supervisor, advisory committee, or department.

Our program has continued to grow over the recent years. With program promotion and success, we have added one additional teacher to the department within the year. Currently we have a demand for more students that are career ready, specifically in welding. Thus brought about various courses added to our pathways such as, Agriculture Communications, Agricultural Soil and Chemistry, and Into to Metal Fabrication and Welding. We hope to continue to grow in our department and offer more opportunities for students.
Quality Criteria Standard 10: Student-Teacher Ratio

The Agriculture Incentive grant requires a ratio of 25:1 for classroom instruction and 20:1 for mechanics and laboratory courses. Currently, our department does not meet these requirements. Overall, the class sizes for each instructor varied. Two of the three instructors had lower class sizes, while the third overall had bigger class sizes. See the guide below for the breakdown in classes.

<table>
<thead>
<tr>
<th>Course</th>
<th>Enrollment</th>
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<tbody>
<tr>
<td>Ag Biology</td>
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<td>Ag Biology</td>
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<td>Ag Biology</td>
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<td>Ag Floral</td>
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<td>Ag Soil and Chemistry</td>
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<td>Ag Soil and Chemistry</td>
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<td>Intro to Metal Fabrication and Welding</td>
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<tr>
<td>Animal Science</td>
<td>38</td>
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<tr>
<td>Plant Science</td>
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</table>

The department also does not meet the suggested enrollment numbers of 75:1. See the information below regarding the total enrollment numbers per teacher.

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Enrollment Numbers</th>
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</thead>
<tbody>
<tr>
<td>Scoggins</td>
<td>222</td>
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</table>
These numbers outlined above does not meet the requirements according to the Agriculture Incentive Grant. We have seen a decrease in our overall enrollment since we lost our part time teacher. Our teachers typically start off with forty students and as the year progresses the numbers decline due to being sent to Mountain View. The only class that starts with twenty five students is our Into to Metal Fabrication and Welding. We continue to increase our enrollment and with the addition of one teacher this has helped with the demand. Our department is in high demand and we hope to continue to add staff to help increase the opportunities for our students.
Quality Criteria Standard 11: Full Year Employment

The two agriculture teachers in the department have a full year employment contract. We do not receive a stipend to cover the summer duties, it is already added into our salary. None of the teachers have a project supervision period, but each have one prep period to prepare for classes, grade, or other duties. Our prep period has been set to 6th period, which allows us to get the van or truck to take students to the farm or competitions.
Section II

Supporting Materials
Supporting Material 1: Student Data Sheets

Below is a copy of ten Student Data Sheets from our department this year. The data sheets are filled out at the beginning of each school year and uploaded to the R2 online as part of the Agriculture Incentive Grant. The students fill out the data sheets online. During this time period, each student is made aware of our pathways available and how to plan for their future in the department.
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name

B. Gender: Male ___ Female ___

C. Ethnicity/Race:

Are you Hispanic or Latino? (Check one): Yes ___ No ___

The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.

American Indian or Alaskan Native ___
Asian Indian ___
Cambodian ___
Chinese ___
Hmong ___
Japanese ___
Korean ___
Laotian ___
Vietnamese ___
Black or African American ___
Filipino ___
Guamanian ___
Samoan ___
Tahitian ___
White ___

D. Year in Agriculture Program: __1s+__
   (1st, 2nd, 3rd, 4th)

E. Grade Level in School: __10__
   (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)

I plan a career in agriculture ___
Not a career, just an interest in agriculture. ___
Not interested, placed in class. ___

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing. Being a vet. I would be interested in handling with animals ___

H. Date: __August 21, 2015__

I. Locator Data
   Street Address:
   City, Zip:
   Phone Number:
   Email:
   Parent/Guardian Name (Print Full Name For Each):

   Mr. ___
   Miss/Mrs./Ms. ___

J. Program of Instruction Being Pursued: (Select Only One)

- Plant & Soil Science (4010)
- Animal Science (4020)
- Agricultural Mechanics (4030)
- Agricultural Business (4040)
- Ornamental Horticulture (4050)
- Forestry & Natural Resources (4060)
- Agriscience (4070)

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

1. Go to Work Full - Time ___

   No Further Education ___
   Some College Later ___

2. Go to College ___

   Community College ___
   Four Year College ___
   Full-Time Student ___
   Part-Time Student ___
   Agriculture Major ___
   Non-Agriculture Major ___

3. Go Into Military Service ___
the future.

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<th>SOPHOMORE YEAR</th>
<th>JUNIOR YEAR</th>
<th>SENIOR YEAR</th>
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<td>Sustainable Ag</td>
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<td>World Hist</td>
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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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<tr>
<th>SOE</th>
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<td>Turkey</td>
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N. Planned Departmental Activities (FFA)

<table>
<thead>
<tr>
<th>Chapter meeting</th>
<th>Football BBQ</th>
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<tr>
<td>Ice cream social</td>
<td>chapter meeting</td>
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<tr>
<td>Club Ranch Lunch</td>
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Parents/Guardians Signature: ____________________________
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name
  Last Name
  First Name, MI

B. Gender: Male  Female
  Are you Hispanic or Latino? (Check one): Yes  No  
  The above part of the question is about ethnicity, not race. No matter
  what you selected above, please answer the following by marking one
  or more boxes to indicate what you believe your race to be.
  American Indian or Alaskan Native
  Asian Indian
  Cambodian
  Chinese
  Hmong
  Japanese
  Korean
  Laotian
  Vietnamese
  Black or African American
  Filipino
  Guamanian
  Samoan
  Tahitian
  White

C. Ethnicity/Race:

D. Year in Agriculture Program:
  (1st, 2nd, 3rd, 4th)

E. Grade Level in School:
  (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   
   I plan a career in agriculture
   Not a career, just an interest in agriculture.
   Not interested, placed in class.

G. When you eventually take your place in this world, what would you
   like to do? If your dream is not related to agriculture, place in
   parenthesis ( ) an occupation in agriculture you would enjoy doing.
   
   Fire Fighter  (risibly recommended)

H. Date:  August 21, 2015

I. Locator Data
  Street Address:
  City, Zip:

J. Program of Instruction Being Pursued: (Select Only One)
   
   Plant & Soil Science (4010)
   Animal Science (4020)
   Agricultural Mechanics (4030)
   Agricultural Business (4040)
   Ornamental Horticulture (4050)
   Forestry & Natural Resources (4060)
   Agriscience (4070)

K. Please indicate below your plans after graduation from high
   school:
   
   1. Go to Work Full - Time
   No Further Education
   Some College Later

   2. Go to College
   Community College
   Four Year College
   Full-Time Student
   Part-Time Student
   Agriculture Major
   Non-Agriculture Major

   3. Go Into Military Service
the future.

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<th>JUNIOR YEAR</th>
<th>SENIOR YEAR</th>
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<td>(2016 - 17)</td>
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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

<table>
<thead>
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<th>Chapter activity</th>
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<tbody>
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<td>project project</td>
<td>project project</td>
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Parents/Guardians Signature: ____________________________
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name
Last Name  [Redacted]  First Name, MI

B. Gender:
Male  [ ]  Female  [X]

C. Ethnicity/Race:
Are you Hispanic or Latino? (Check one): Yes  [ ]  No  [X]

The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.

[ ] American Indian or Alaskan Native
[ ] Asian Indian
[ ] Cambodian
[ ] Chinese
[ ] Hmong
[ ] Japanese
[ ] Korean
[ ] Laotian
[ ] Vietnamese
[ ] Black or African American
[ ] Filipino
[ ] Guamanian
[ ] Samoan
[ ] Tahitian
[ ] White

D. Year in Agriculture Program: 15th
(1st, 2nd, 3rd, 4th)

E. Grade Level in School: 10th
(9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)

[ ] I plan a career in agriculture
[ ] Not a career, just an interest in agriculture.
[ ] Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing.

I want to be a [teacher], and a [math teacher].

H. Date:  

I. Locator Data
Street Address:
City, Zip:
Phone Number:

J. Program of Instruction Being Pursued: (Select Only One)

[ ] Plant & Soil Science (4010)
[ ] Animal Science (4020)
[ ] Agricultural Mechanics (4030)
[ ] Agricultural Business (4040)
[ ] Ornamental Horticulture (4050)
[ ] Forestry & Natural Resources (4060)
[ ] Agriscience (4070)

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

1. Go to Work Full-Time  [X]
   No Further Education  
   Some College Later  

2. Go to College  [X]
   Community College  
   Four Year College  
   Full-Time Student  [X]
   Part-Time Student  
   Agriculture Major  [X]
   Non-Agriculture Major  

3. Go Into Military Service  

[Redacted]
M. Supervised Practical Experience Plan (Project program should be related to career goal).
A. Name ____________________________________________
   Last Name ________________________________________
   First Name, Ml ______________________________________

B. Gender: Male ☑ Female ☐

C. Ethnicity/Race:
   Are you Hispanic or Latino? (Check one): Yes ☐ No ☑
   The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.
   ☐ American Indian or Alaskan Native
   ☐ Asian Indian
   ☐ Cambodian
   ☐ Chinese
   ☐ Hmong
   ☐ Japanese
   ☐ Korean
   ☐ Laotian
   ☐ Vietnamese
   ☐ Black or African American
   ☐ Filipino
   ☐ Guamanian
   ☐ Samoan
   ☐ Tahitian
   ☐ White

D. Year in Agriculture Program: 1st, 2nd, 3rd, 4th
   (1st, 2nd, 3rd, 4th)

E. Grade Level in School: 10
   (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   ☐ I plan a career in agriculture
   ☐ Not a career, just an interest in agriculture.
   ☑ Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing.
   ☐ I would like to be a cop or an NFL player (animals)

H. Date: 3/21/15

I. Locator Data
   Street Address: _______________________________
   City, Zip: ____________________________
   Phone Number: __________________________

J. Program of Instruction Being Pursued: (Select Only One)
   ☐ Plant & Soil Science (4010)
   ☐ Animal Science (4020)
   ☐ Agricultural Mechanics (4030)
   ☐ Agricultural Business (4040)
   ☐ Ornamental Horticulture (4050)
   ☐ Forestry & Natural Resources (4060)
   ✓ Agriscience (4070)

K. Please indicate below your plans after graduation from high school:
   1. Go to Work Full - Time
      ☐ No Further Education
      ☑ Some College Later
   2. Go to College
      ☐ Community College
      ☐ Four Year College
      ☐ Full-Time Student
      ☐ Part-Time Student
      ☐ Agriculture Major
      ☐ Non-Agriculture Major
   3. Go Into Military Service
      ☐
### FRESHMAN YEAR (20__-__)

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### SOPHOMORE YEAR (2013-16)

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<td>Mr. K.</td>
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<td>Mr. R.</td>
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### JUNIOR YEAR (2016-17)

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### SENIOR YEAR (2017-18)

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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

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<th>Chapter Activity</th>
<th>Chapter Activity</th>
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<tr>
<td>Speech</td>
<td>Public Speaker</td>
<td>Pumpkin</td>
</tr>
<tr>
<td>Sell Flowers</td>
<td>Football AFL</td>
<td>Football bowling</td>
</tr>
<tr>
<td>Ice Cream Social</td>
<td>Ice Cream Social</td>
<td>Ice Cream Social</td>
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</tbody>
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Parents/Guardians Signature: __________________________
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name
   Last Name [redacted] First Name [redacted] MI

B. Gender: Male  Female  X

C. Ethnicity/Race:
   Are you Hispanic or Latino? (Check one): Yes  No
   The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.

   ___ American Indian or Alaskan Native
   ___ Asian Indian
   ___ Cambodian
   ___ Chinese
   ___ Hmong
   ___ Japanese
   ___ Korean
   ___ Laotian
   ___ Vietnamese
   ___ Black or African American
   ___ Filipino
   ___ Guamanian
   ___ Samoan
   ___ Tahitian
   ___ White

D. Year in Agriculture Program:  1st  2nd  3rd  4th
   (1st, 2nd, 3rd, 4th)

E. Grade Level in School:  10
   (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   ___ I plan a career in agriculture
   ___ Not a career, just an interest in agriculture.
   ___ Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis () an occupation in agriculture you would enjoy doing.

   ___ Volunteer Player (animal)

H. Date:  8/2/15

I. Locator Data
   Street Address: [redacted]
   City, Zip: [redacted]
   Phone Number: [redacted]
   Email: [redacted]
   Parent/Guardian Name (Print Full Name For Each):
   Mr.
   Miss/Mrs./Ms. [redacted]

J. Program of Instruction Being Pursued: (Select Only One)

   ___ Plant & Soil Science (4010)
   ___ Animal Science (4020)
   ___ Agricultural Mechanics (4030)
   ___ Agricultural Business (4040)
   ___ Ornamental Horticulture (4050)
   ___ Forestry & Natural Resources (4060)
   X Agriscience (4070)

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

   1. Go to Work Full - Time
      ___ No Further Education
      ___ Some College Later

   2. Go to College
      ___ Community College
      ___ Four Year College
      ___ Full-Time Student
      ___ Part-Time Student
      ___ Agriculture Major
      ___ Non-Agriculture Major

   3. Go Into Military Service
      ___
the future.

FRESHMAN YEAR
(2012 - 2013)

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SOPHOMORE YEAR
(2013 - 2014)

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<td>Physical Education</td>
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JUNIOR YEAR
(2014 - 2015)

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SENIOR YEAR
(2015 - 2016)

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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

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<td>Chapter Meetings</td>
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<td>Pumpkin Patch</td>
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Parents/Guardians Signature: ______________________
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name ____________________________
   Last Name ____________________________ First Name, MI ____________________________

B. Gender: Male ✅ Female ______

C. Ethnicity/Race:
   Are you Hispanic or Latino? (Check one): Yes ______ No ✅
   The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.
   ______ American Indian or Alaskan Native
   ______ Asian Indian
   ______ Cambodian
   ______ Chinese
   ______ Hmong
   ______ Japanese
   ______ Korean
   ______ Laotian
   ______ Vietnamese
   ______ Black or African American
   ______ Filipino
   ______ Guamanian
   ______ Samoan
   ______ Tahitian ✅
   ______ White

D. Year in Agriculture Program: ________
   (1st, 2nd, 3rd, 4th)

E. Grade Level in School: _______ th
   (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   ✅ I plan a career in agriculture
   ______ Not a career, just an interest in agriculture.
   ______ Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis () an occupation in agriculture you would enjoy doing.
   I want to be an actor (agriculture is a second option and soaping)

H. Date: 8-21-15

I. Locator Data
   Street Address:
   City, Zip:
   Phone Number:
   Email:
   Parent/Guardian Name (Print Full Name For Each):
   Mr. ______ Miss/Mrs./Ms. ______

J. Program of Instruction Being Pursued: (Select Only One)
   ______ Plant & Soil Science (4010)
   ______ Animal Science (4020)
   ______ Agricultural Mechanics (4030)
   ______ Agricultural Business (4040)
   ______ Ornamental Horticulture (4050)
   ______ Forestry & Natural Resources (4060)
   ✅ Agriscience (4070)

K. Please indicate below your plans after graduation from high school:
   1. Go to Work Full - Time
      No Further Education ______ Some College Later ______
   2. Go to College
      Community College ______ Four Year College ______
      Full-Time Student ______ Part-Time Student ______
      Agriculture Major ✅ Non-Agriculture Major ______
   3. Go Into Military Service ______
M. Supervised Practical Experience Plan (Project program should be related to career goal).

N. Planned Departmental Activities (FFA)
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name [REDACTED] Last Name [REDACTED] First Name, MI

B. Gender: Male ☑ Female ☐

C. Ethnicity/Race:
   Are you Hispanic or Latino? (Check one): Yes ☑ No ☐
   The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.
   ☐ American Indian or Alaskan Native
   ☐ Asian Indian
   ☐ Cambodian
   ☐ Chinese
   ☐ Hmong
   ☐ Japanese
   ☐ Korean
   ☐ Laotian
   ☐ Vietnamese
   ☐ Black or African American
   ☐ Filipino
   ☐ Guamanian
   ☐ Samoan
   ☐ Tahitian
   ☐ White

D. Year in Agriculture Program: 15+ (1st, 2nd, 3rd, 4th)

E. Grade Level in School: 10 (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   ☑ I plan a career in agriculture
   ◐ Not a career, just an interest in agriculture.
   ◐ Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing.
   [REDACTED]

H. Date: 2/12/16

I. Locator Data
   Street Address: [REDACTED]
   City, Zip: [REDACTED]
   Phone Number: [REDACTED]
   Email: [REDACTED]
   Parent/Guardian Name (Print Full Name For Each):
   Mr. [REDACTED]
   Miss/Mrs./Ms. [REDACTED]

J. Program of Instruction Being Pursued: (Select Only One)
   ☐ Plant & Soil Science (4010)
   ☐ Animal Science (4020)
   ☐ Agricultural Mechanics (4030)
   ☐ Agricultural Business (4040)
   ☐ Ornamental Horticulture (4050)
   ☐ Forestry & Natural Resources (4060)
   ☑ Agriscience (4070)

K. Please indicate below your plans after graduation from high school:
   1. Go to Work Full - Time
      No Further Education
      Some College Later

   2. Go to College
      Community College
      Four Year College
      Full-Time Student
      Part-Time Student
      Agriculture Major
      Non-Agriculture Major ☑

   3. Go Into Military Service

Revised 7.16.10
## Freshman Year (2020 - 2021)

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## Sophomore Year (2021 - 2022)

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## Junior Year (2022 - 2023)

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## Senior Year (2023 - 2024)

M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

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<tr>
<th>Activity</th>
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Parents/Guardians Signature:
AGRICULTURAL EDUCATION - STUDENT CAREER DATA SHEET

A. Name [Redacted] Last Name [Redacted] First Name, MI

B. Gender: Male ___ Female ___

C. Ethnicity/Race:
   Are you Hispanic or Latino? (Check one): Yes ___ No ___
   The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.
   [ ] American Indian
   [ ] Asian Indian
   [ ] Cambodian
   [ ] Chinese
   [ ] Hmong
   [ ] Japanese
   [ ] Korean
   [ ] Laotian
   [ ] Vietnamese
   [X] Black or African American
   [ ] Filipino
   [ ] Guamanian
   [ ] Samoan
   [ ] Tahitian
   [ ] White

D. Year in Agriculture Program: ___
   (1st, 2nd, 3rd, 4th)

E. Grade Level in School: ___
   (9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)
   [X] I plan a career in agriculture
   [ ] Not a career, just an interest in agriculture.
   [ ] Not interested, placed in class.

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing.
   [X] Criminal Law, Dance (Plants)

H. Date: ___
   Aug 21, 2015

I. Locator Data
   Street Address:
   City, Zip:
   Phone Number:

J. Program of Instruction Being Pursued: (Select Only One)
   [X] Agriscience (4070)
   [ ] Plant & Soil Science (4010)
   [ ] Animal Science (4020)
   [ ] Agricultural Mechanics (4030)
   [ ] Agricultural Business (4040)
   [ ] Ornamental Horticulture (4050)
   [ ] Forestry & Natural Resources (4060)

K. Please indicate below your plans after graduation from high school:
   1. Go to Work Full - Time
      [ ] No Further Education
      [ ] Some College Later
   2. Go to College
      [X] Community College
      [ ] Four Year College
      [ ] Full-Time Student
      [ ] Part-Time Student
      [X] Agriculture Major
      [ ] Non-Agriculture Major
   3. Go Into Military Service
      [ ]
M. Supervised Practical Experience Plan (Project program should be related to career goal).

N. Planned Departmental Activities (FFA)
A. Name
Last Name
First Name, MI
B. Gender: Male ☐ Female ☒
C. Ethnicity/Race:
American Indian or Alaskan Native ☒
Asian Indian
Cambodian
Chinese
Hmong
Japanese
Korean
Laotian
Vietnamese
Black or African American
Filipino
Guamanian
Samoan
Tahitian
White
D. Year in Agriculture Program: ☐ 1st (1st, 2nd, 3rd, 4th)
E. Grade Level in School: ☐ 11 (9, 10, 11, 12)
F. I Am Taking This Course Because: (Select One)
☐ I plan a career in agriculture
☐ Not a career, just an interest in agriculture.
☐ Not interested, placed in class.
G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis () an occupation in agriculture you would enjoy doing.
Veterinarian [40, MILES]
H. Date: 8-21-10
I. Locator Data
Street Address:
City, Zip:
Phone Number:
Email:
Parent/Guardian Name (Print Full Name For Each): Mr. Miss/Mrs./Ms.
J. Program of Instruction Being Pursued: (Select Only One)
☐ Plant & Soil Science (4010)
☐ Animal Science (4020)
☐ Agricultural Mechanics (4030)
☐ Agricultural Business (4040)
☐ Ornamental Horticulture (4050)
☐ Forestry & Natural Resources (4060)
☐ Agriscience (4070)
K. Please indicate below your plans after graduation from high school:
1. Go to Work Full - Time
☐ No Further Education
☐ Some College Later
2. Go to College
☐ Community College
☐ Four Year College
☐ Full-Time Student
☐ Part-Time Student
☐ Agriculture Major
☐ Non-Agriculture Major
3. Go Into Military Service
the future.

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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

<table>
<thead>
<tr>
<th>Chapter Activity</th>
<th>Chapter Activity</th>
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<tbody>
<tr>
<td>Pumpkin Patch</td>
<td>Dunking Patch</td>
</tr>
<tr>
<td>Garden</td>
<td>Garden</td>
</tr>
<tr>
<td>Ice Cream</td>
<td>Ice Cream</td>
</tr>
<tr>
<td>Raising Animals</td>
<td>Raising Animals</td>
</tr>
</tbody>
</table>

Parents/Guardians Signature: ___________________________
A. Name
Last Name ___________________________ First Name, MI _______________________

B. Gender: Male ___ Female ___

C. Ethnicity/Race:
Are you Hispanic or Latino? (Check one): Yes ___ No ____
The above part of the question is about ethnicity, not race. No matter what you selected above, please answer the following by marking one or more boxes to indicate what you believe your race to be.

- American Indian or Alaskan Native ___
- Asian Indian ___
- Cambodian ___
- Chinese ___
- Hmong ___
- Japanese ___
- Korean ___
- Laotian ___
- Vietnamese ___
- Black or African American ___
- Filipino ___
- Guamanian ___
- Samoan ___
- Tahitian ___
- White ___

D. Year in Agriculture Program: ___
(1st, 2nd, 3rd, 4th)

E. Grade Level in School: ___
(9, 10, 11, 12)

F. I Am Taking This Course Because: (Select One)

- I plan a career in agriculture ___
- Not a career, just an interest in agriculture. ___
- Not interested, placed in class. ___

G. When you eventually take your place in this world, what would you like to do? If your dream is not related to agriculture, place in parenthesis ( ) an occupation in agriculture you would enjoy doing.

- Professional boxer. (Slaughter house) ___

H. Date: 8-21-15

I. Locator Data
Street Address: ___________________________
City, Zip: ___________________________
Phone Number: ________________________
Email: ________________________________
Parent/Guardian Name (Print Full Name For Each):
Mr. ___________________________
Miss/Mrs./Ms. ___________________________

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- Plant & Soil Science (4010) ___
- Animal Science (4020) ___
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- Agricultural Business (4040) ___
- Ornamental Horticulture (4050) ___
- Forestry & Natural Resources (4060) ___
- Agriscience (4070) ___

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   - No Further Education ___
   - Some College Later ___

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   - Community College ___
   - Four Year College ___
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   - Agriculture Major ___
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3. Go Into Military Service ___
the future.

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M. Supervised Practical Experience Plan (Project program should be related to career goal).

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N. Planned Departmental Activities (FFA)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>Ice cream social</td>
<td>Chapter meeting</td>
</tr>
<tr>
<td>Pumpkin patch</td>
<td>Bottle races</td>
</tr>
</tbody>
</table>

Parents/Guardians Signature: __________________________
Supporting Material 2: Permanent Files

The department utilizes a permanent file system for tracking all current students, as well as students that have graduated the year prior. We are moving to digitally tracking our prior students in our program.

All of our tracking of activities and data sheets have now moved to AET, which has made it easier to track the student’s progress. We are working on ensuring we have students' emails to send out our graduate survey before they graduate.

Students that have hard copy record books are kept in the storage area by year, unless they have them in their possession.
Supporting Material 3: Agriculture Course Outlines & Syllabi

The course outlines for the Agriculture Department are board-approved. They also must be approved by the San Jacinto Unified School District Board. The outlines are updated as necessary, and presented to the Advisory Committee for commentary. The outlines are then placed in the Program Plan. See the example course outlines for the Agriculture Department below.

In addition, sample course syllabi are provided. They outline the procedures, rules, and descriptions of each class. The grading system is also broken down for the students, and discusses the three circle model of agricultural education.
Agriculture Biology
San Jacinto High School
Ms. Stiff
lstiff@sanjacinto.k12.ca.us

I. Course Description
Grade Level: 9-12

Agricultural Biology is a one-year laboratory science course 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: The molecular and cellular aspects of life, the chemical and structural basis of life, energetics of life, growth and reproduction in plants/animals, evolution of modern plans and domestic livestock species, plant and animal genetics, taxonomy of plants, animals, humans, and the environment nutrition in animals, health and disease in animals, and the similarities between animals and humans. The course is centered on an extensive laboratory component in order to connect the 36 big ideas of life science with agricultural applications, earth and physical principals and other curricular areas, including written and oral reporting skills.

II. Class Rules
1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. NO cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

III. Housekeeping
1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).
3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

**IV. Expectations**

1. Students will be respectful, arrive to class on time, and be prepared to learn.

2. If a student is absent, it is their responsibility to meet with the teacher to determine what assignment(s) they missed BEFORE or AFTER class. The student will have one day for everyday he/she were absent to complete the absent work.

3. Late work will be accepted ONLY ONE WEEK PAST THE DUE DATE. Students will lose 10% each day it is late.

**V. Materials Needed**

1. Pencil, pen, or other writing utensil

2. Lined paper

3. California Agriculture Education Record Book (provided)

4. Course textbooks (provided)

**VI. Grades**

Grade Breakdown Grade Percentages

A+ 100-97%; A 96-94%; A- 93-90%

B+ 89-87%; B 86-84%; B- 83-80%

C+ 79-77%; C 76-74%; C- 73-70%

D+ 69-67%; D 66-64%; D- 63-60%

F 59% and below
1. **Classroom (Approximately 70%)**

Completion of assignments……………………………………………………………………………….50%

Quizzes/Tests………………………………………………………………………………………………..20%

2. **Supervised Agriculture Experience Program (Approximately 15%)**

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

1. Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

2. Non-Ownership- A project which the student works with, but does not own.

3. Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. **FFA (Approximately 15%)**

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 5 activities a semester.
<table>
<thead>
<tr>
<th>Instructional Days</th>
<th>Standards</th>
<th>Big Ideas – &quot;Our students should know...&quot;</th>
<th>Supporting Labs/Activities</th>
<th>Videos/Flipchart Resources</th>
</tr>
</thead>
</table>
| 8 Days            | HS-LS1-7 Macromolecules | ➢ I can identify the essential atoms present in living organisms.  
➢ I can distinguish the difference functions and components of each macromolecules.  
➢ I can explain the relationship between monomers and polymers.  
➢ I can explain the function of an enzyme. | Building Macromolecules  
DR Review pH Lab Enzyme Lab | Macromolecules Slides  
● Handout |
| Concept Assessment | Big Idea:  
• Have a knowledge of the 4 main biomolecules  
• Know the relationship between monomers and polymers  
• Understand that atoms can be rearranged to make different biomolecules  
• Enzymes speed up chemical by decreasing activation energy and bind only certain substrates  
• Organic compounds | Vocabulary:  
1. Atom  
2. Element  
3. Compound  
4. Molecule  
5. Ions  
6. Carbohydrates  
7. Lipids  
8. Protein  
9. Nucleic Acid  
10. Polymer  
11. Monomer  
12. Monosaccharide  
13. Polysaccharide  
14. Fatty Acid  
15. Amino Acid  
16. Nucleotide  
17. Enzyme  
18. Phospholipid |
- Explain how glucose is broken down to produce ATP

- Evaluate the importance of oxygen in aerobic respiration
- Explain how anaerobic conditions lead to fermentation
- Explain how we gain energy by breaking down ATP
<table>
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<tr>
<th>6 Days</th>
<th>Necessary Background Knowledge</th>
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<tr>
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<td>Cellular Organelle Assessment</td>
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<td>- Cell Analogy Intro</td>
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</tbody>
</table>

|  | ➢ I can explain the structure of the cell. |
|  | ➢ I can compare and contrast a prokaryotic cell with a eukaryotic cell. |
|  |   ○ Prokaryote Structure |
|  | ➢ I can distinguish between a virus and a cell. |
|  | ➢ I can explain a cell’s role within the body. |

|  | Prokaryote and Eukaryote Cell Model |
|  | Bacteria/Virus Presentation |
|  | - (Pecha Kucha Style) |
|  | - Fascinating world of bacteria |

|  | Cell Exploration |
|  | Cell Types Lecture |
|  | - Notes Review |
|  | - Cellular Organelle Lecture |
|  | - Organelle Notes |

<table>
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<tr>
<th>Concept Assessment</th>
<th>Big Idea: structure and function</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Know the structure and function of eukaryotic &amp; prokaryotic cells.</td>
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<table>
<thead>
<tr>
<th>Vocabulary:</th>
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<tbody>
<tr>
<td>1. Vacuole</td>
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<tr>
<td>2. Organelles</td>
</tr>
<tr>
<td>3. Nucleus</td>
</tr>
<tr>
<td>4. Flagella</td>
</tr>
<tr>
<td>5. Eukaryotic cell</td>
</tr>
<tr>
<td>6. Smooth ER</td>
</tr>
<tr>
<td>7. Rough ER</td>
</tr>
<tr>
<td>8. Ribosome</td>
</tr>
<tr>
<td>9. Plasma membrane</td>
</tr>
<tr>
<td>10. Nuclear Pore</td>
</tr>
<tr>
<td>11. Nuclear Envelope</td>
</tr>
<tr>
<td>12. Mitochondrion</td>
</tr>
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<td>13. Lysosome</td>
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<td>14. Golgi apparatus</td>
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<td>15. Endoplasmic reticulum</td>
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<td>16. Cytoskeleton</td>
</tr>
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<td>17. Cytoplasm</td>
</tr>
<tr>
<td>18. Chloroplast</td>
</tr>
<tr>
<td>19. Centrioles</td>
</tr>
<tr>
<td>20. Cell Wall</td>
</tr>
<tr>
<td>Concept Assessment</td>
</tr>
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</tbody>
</table>
| **Big Idea:** Understand the reactants and products necessary for photosynthesis to occur. | 1. Reactants  
2. Products  
3. Photosynthesis  
4. Light Reactions  
5. Photosynthesis  
6. Cellular Respiration  
7. Glycolysis  
8. Fermentation  
9. Electron Transport Chain  
10. Chlorophyll |
| What is photosynthesis and cellular respiration? How does carbon travel through the environment using these processes? | |

<table>
<thead>
<tr>
<th>8 days</th>
<th>HS-LS1-6 Cellular Respiration</th>
</tr>
</thead>
</table>
| ✓ I can identify the reactants and products of the chemical reaction in cellular respiration.  
✓ I can understand how energy is released when chemical bonds are broken in chemical reactions.  
✓ I can identify how the energy released in biochemical reactions is used by living organisms. | Breathing Lab  
Lactic Acid Lab  
Fermentation DR |

| 8 days | HS-LS1-5 Photosynthesis  
HS-LS2-5 (Carbon Cycle and photosynthesis and cellular Respiration) |
|--------|---------------------------------------------------------------|
| • I can model the reactants and products necessary for photosynthesis to occur  
• I can identify the inputs and outputs of:  
  ○ photosynthesis  
  ○ cellular respiration  
• I can identify the biosphere, atmosphere, hydrosphere, and geosphere and how carbon is stored within each.  
• I can explain how carbon cycles through the environment using the processes of photosynthesis and cellular respiration. | Floating Leaf Disk Lab  
-Teacher prep  
-Student wksht |

| Floating Leaf Disk Lab  
-Teacher prep  
-Student wksht | Photosynthesis notes  
DR  
Cell Notes  
NASA: Keeping Up with Carbon Video |
<table>
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<th>Concept</th>
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<th>Vocabulary:</th>
<th>Assessment</th>
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<td>3. Glycolysis</td>
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<td>4. Krebs Cycle</td>
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<td>5. Fermentation</td>
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<td>6. ATP</td>
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<td>7. Electron transport chain</td>
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<td>8. Mitochondria</td>
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<td>9. Pyruvate</td>
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<tr>
<td>8 days</td>
<td>HS-LS1-4 Mitosis</td>
<td>I can explain how the body repairs itself.</td>
<td>Mitosis Stop Motion -Example 1 -Example 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I can explain what a chromosome is and how it relates to cellular division</td>
<td>Mitosis Comic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I can identify and explain the different steps of the cell cycle</td>
<td>Karyotyping Activity Karyotyping Manipulative</td>
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<tr>
<td></td>
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<td>Mitosis and Meiosis</td>
<td>Genetic Notes 5 (Chromosomes, Karyotype, Mutations)</td>
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<td>Genetics Notes 5 (Chromosomes, Karyotype, Mutations)</td>
</tr>
<tr>
<td>4 days</td>
<td>HS-LS3-2 Meiosis</td>
<td>I can explain how new genetic combinations occur during the process of meiosis.</td>
<td>Punnett Square Handouts Reebop Lab</td>
</tr>
<tr>
<td></td>
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<td>I can explain the means for which mutations occur in meiosis.</td>
<td>Meiosis reading</td>
</tr>
<tr>
<td>Concept Assessment</td>
<td>Big Idea:</td>
<td>Vocabulary:</td>
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</table>
| I can effectively use punnett squares to display genetic combinations.  
I can read and interpret a pedigree.  | ➢ I can describe DNA and RNA  
➢ I can explain the function of DNA and RNA  
➢ I can identify sequences of genes that code for protein  
➢ I can describe how proteins are produced  
➢ I can describe the uses of proteins  | 1. Amino Acid  
2. Protein  
3. Amino Acids  
4. RNA  
5. DNA  
6. Double Helix  
7. Peptide Bond  
8. Central Dogma for Molecular Biology |
<table>
<thead>
<tr>
<th>3 days</th>
<th>Big Idea:</th>
<th>Vocabulary:</th>
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</table>
| HS-LS3-1 Inheritance of Traits, HS-LS3-3 Statistics/Probability | ➢ I can explain why expressed traits stay or leave a population based on the environment  
➢ I can explain how traits are expressed through chromosomes  
➢ Probability and Inheritance | Reebop Lab Write-up  
Reebop Background  
Reebop Census |
| Concept Assessment | | |
| 4 Days | Big Idea: What is natural selection?  
How does it lead to changes of a population in both short term and long term? | Vocabulary: |
| HS-LS4-4 (Natural Selection and Adaptation) | ➢ I can identify genetic variation within a species that is passed on to their offspring.  
➢ I can identify which individuals have traits that have a competitive advantage relative to other individuals in the species.  
➢ I can predict how a population will change when some feature of the environment changes.  
➢ I can explain how natural selection increases the gene frequency of a trait which leads to a population adapted to a particular environment. | Coin Flip Lab  
population distribution. |
| 12 Days | HS-LS4-1 Evidence for Evolution | • I can explain how fossil evidence supports biological evolution.  
• I can explain how the fossil record supports common ancestry.  
• I can define and explain how anatomical structures support evolution.  
• I can analyze DNA sequences and determine support for biological evolution.  
• I can identify and explain the types of evolution. | Whale Ancestry  
○ DNA Strips  
• Whale Ankles and DNA Snake Argumentation Activity | Fossils |
|---|---|---|---|
| Concept Assessment | Big Idea:  
What are the types of evolution?  
How does the fossil record and molecular patterns support evolution? | Vocabulary:  
1. vestigial structures  
2. anatomical evidence  
3. DNA  
4. fossil record  
5. geologic time scale  
6. homologous structures  
7. analogous structures  
8. Coevolution  
9. Parallel Evolution  
10. Divergent Evolution  
11. Convergent Evolution  |  
8 Days | HS-LS4-2 Four Factors of Evolution | ★ I can explain the concept of overpopulation as it relates to species survival.  
★ I can explain the purpose and benefit of mutation in sexual reproduction.  
★ I can explain how competition shapes an organism’s population.  
★ I can define and explain the concept of fitness. | ➔ Darwin’s Finches Lab  
◆ Prey Variation  
◆ Predator Variation | Galapagos Movie “Species Defence” |
### Concept Assessment

**Big Idea:**
The Four Factors of Evolution:
1. Overpopulation
2. Mutation & Variation
3. Competition
4. Fitness

**Vocabulary:**
- Genetic Variation
- Genotype
- Phenotype
- Population
- Evolutionary Fitness
- Genetic Drift
- Genetic Equilibrium
- Mutation
- Species
- Allele
- Founder Effect
- Gene Pool
- Gene Flow
- Genetic Bottleneck

<table>
<thead>
<tr>
<th>8 Days</th>
<th>HS-LS4-5, HS-LS2-2</th>
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<tbody>
<tr>
<td>8 Days</td>
<td>HS-LS4-5, HS-LS2-2</td>
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</tbody>
</table>

- Introduction to Ecology (Population Changes)
- Notes need to be moved to the appropriate standard: Ecology Notes 1 Ecology Pictures 1 Ecology Notes 2 Ecology Pictures 2 Ecology Notes 3 Ecology Pictures 3

- I can identify claims that include the idea that changes in environmental conditions may result in population changes
- I can explain how changes in a population can result in increases in the number of individuals of some species
- I can explain how changes in a population can result in the emergence of new species over time
- I can explain how changes in a population can result in the extinction of other species

- Start Duckweed Lab
- Habitat/Niche Worksheet
- Succession Foldable

### Forces of Evolution Presentation

- Ecology
<table>
<thead>
<tr>
<th>Concept Assessment</th>
<th>Big Idea:</th>
<th>Vocabulary:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biome Project</td>
<td></td>
<td>1. Extinction 6. Food Web</td>
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<td>2. Biotic Factors 7. Ecological Niche</td>
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<td></td>
<td></td>
<td>3. Abiotic Factors 8. Ecological Pyramid</td>
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<tr>
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<td>11. Community</td>
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</table>

| 10 days | HS-LS4-6 (Impacts of human activity on biodiversity) | I can create a simulation that models effects of human activity (over population, pollution, invasive species, & changes in climate) on an endangered species. |
|         |          | I can create a simulation that models effects of human activity to the genetic variation within a species. |
|         |          | I can create a simulation that provides quantitative information about the effect of the solutions on endangered species. |
|         |          | • Peppered Moth Lab |
|         |          | • Learner.org Interactive Labs |

<p>| 5 Days | HS-LS2-1 (Carrying Capacity) | I can distinguish among the factors influencing population growth. |
|        |          | I can explain how available resources limit the population growth in ecosystems. |
|        |          | • Duckweed Lab(takes 21 days) |
|        |          | Population growth factors |</p>
<table>
<thead>
<tr>
<th>Concept Assessment</th>
<th>Big Idea:</th>
<th>Vocabulary:</th>
</tr>
</thead>
</table>
| 3 Days            | HS-LS2-6  | ➢ I can identify the claims, evidence, and reasoning that ecosystems can be affected by changing conditions  
➢ I can predict the impact that certain changes may have on an ecosystem  
➢ I can provide reasoning for my predictions based on understanding of factors affecting biodiversity and relationships between species and the physical environment in the ecosystem  
➢ I can compare and contrast the effects of small disturbances with the effects of extreme disturbances  
➢ I can identify the different relationships in an ecosystem |
| 3 Days            |            | 1. Carrying capacity  
2. Density dependent factors  
3. Density independent factors  
4. Immigration  
5. Emigration  
6. Population growth |
| Concept Assessment| Big Idea: | Vocabulary: |
| 3 Days            | Age structure  
Community  
Ecological Succession  
Ecosystem  
Ecosystem Stability  
Species Diversity |
| 2 days | HS-LS2-4 (Energy Flow) | ➢ I can explain energy flow among organisms in an ecosystem.  
➢ I can explain how food chains and food webs model feeding relationships.  
   ○ Additional Food Web Reading  
➢ I can describe trophic levels and ecological pyramids. | Trophic Levels and Pyramids (slides 24-31) |

| Big Idea: | Vocabulary: |  
| 1. Ecosystem  
2. Food Web  
3. Food Chain  
4. Trophic Level  
5. Ecological pyramid  
6. Ecosystem Stability  
7. Ten Percent Rule  
8. Trophic Efficiency |

| 10 Days | HS-LS2-7 (Human Impact on the environment and Biodiversity) | ➢ I can evaluate the impact of human activities on the environment  
➢ I can compare and contrast solutions to reduce the impact of human activities on the environment  
➢ I can design a solution including: Cost, safety, reliability, and social, cultural, and environmental impacts along with benefits of the solution. | Creating your own renewable energy solution  
Human Impact  
Ecological story books |

| Big Idea: | Vocabulary: |  
| 1. Pollution  
2. Global warming  
3. Greenhouse effect  
4. Greenhouse gas  
5. Habitat  
6. Climate Change  
7. Introduced Species  
8. Urbanization |
| 6 Days | HS-LS1-3 Homeostasis | ➢ I can compare and contrast positive and negative feedback mechanisms  
➢ I can describe how the body regulates its internal environment  
➢ I can conduct research to determine what kind of changes result in the body regulating itself (Such as temperature regulation) | Body Control Center  
Gummy Bear Osmosis  
Diffusion Lab  
Active Transport | Homeostasis  
Homeostasis Notes |
| Concept Assessment | Big Idea:  
What is homeostasis?  
How does the body regulate itself on a micro and macro scale? | Vocabulary:  
1. Positive Feedback  
2. Negative Feedback  
3. Feedback Inhibition  
4. Excretion  
5. Homeostasis | | |
| | HS-LS1-2 Hierarchical Organization/Body Systems | ➢ I can describe the function of at least two body systems and how they contribute to the overall organism  
➢ I can model the different parts and processes of body systems in multicellular organisms  
➢ I can describe the interactions between the different body systems | Human body model  
Rcsb.org  
Body Systems Book Project | Discovery Channel Body Story - Episode 7 - Out of Control |
| 4/27-5/1 | Big Idea:  
(What are the human body systems? How do they interact with one another?) | Vocabulary:  
1. Digestive Enzymes  
2. Digestive Tract  
3. Endodermis  
4. Endocrine Signaling  
5. Gas exchange  
6. Heart  
7. Heart Valve  
8. Hormone  
9. Neuron  
10. Respiratory Surface  
11. Sensory Neuron  
12. Sensory receptor  
13. Synapse  
14. Skeletal Muscle | | |
Floral Design
San Jacinto High School
Ms. Stiff
lstiff@sanjacinto.k12.ca.us

Course Description:

Grade Level: 9-12

The Construction of Floral Design is a one-year course that provides an introduction to artistic and creative perception, using flowers and plants as the main media. Students are introduced to the elements and principles of design such as line, shape/form, color, balance, and emphasis using a series of floral-based projects. Students will research and study floral trends, customs, cultures, as well as learn the business practices of a real floral design shop. The class will be primarily a lab-based, hands-on environment where student’s creativity will be encouraged. Students will be required to participate in FFA Activities as well as complete a Supervised Agricultural Experience Project (SAEP) as part of the course.

Class Rules

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

Expectations

1. If a student is absent, it is his/her responsibility to meet with the teacher, before or after class, regarding missed assignments. The student will have one day for every day he/she was absent to complete the work.
2. Late work will be accepted **ONLY ONE WEEK PAST THE DUE DATE**. Students will be lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.

**Housekeeping**

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.
2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).
3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).
4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.
5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

**Materials Needed:**

Pencil, pen or other writing utensil
A three-ring binder and Lined paper for binder
California Agricultural Education Record Book (provided)
Course text books (provided)

**Grades %**

The class is graded according to this scale:

A+ 100-97; A 96-94; A- 93-90;
B+ 89-87; B 86-84; B- 83-80;
C+ 79-77; C 76-74; C- 73-70;
D+ 69-67; D 66-64; D- 63-60;
F  59 and below

1. **Classroom (Approximately 70%)**

Completion of assignments (reports, handouts, homework, projects, classroom/laboratory activities, binder checks, class participation)..............................................................50%
Quizzes/Tests.................................................................................................................................................20%

2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

Non-Ownership- A project which the student works with, but does not own.

Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 5 activities a semester.
## Pacing Calendar: Floral Design

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<thead>
<tr>
<th>Unit</th>
<th>Length in Weeks/Days</th>
<th>Activities &amp; Notes</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intro to Floral Design</strong></td>
<td>2 days</td>
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<tr>
<td>- Syllabus &amp; Outline</td>
<td>1 day on Syllabus &amp;</td>
<td>Syllabus Handout</td>
<td><strong>AG OH – F 11.0</strong></td>
</tr>
<tr>
<td>- Activities &amp; Labs</td>
<td>Outline</td>
<td>Parent Signature Sheet</td>
<td></td>
</tr>
<tr>
<td>- Class Expectations &amp; Grading</td>
<td>1 day on Grading/FFA/SAE</td>
<td>3 Circles Handout</td>
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<tr>
<td>- Intro to the FFA/SAE</td>
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<td>Student Data Sheet</td>
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<td>TCOVE Forms</td>
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<tr>
<td><strong>Safety in Floral Design</strong></td>
<td>3 days</td>
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<tr>
<td>- Safety Rules</td>
<td>1 day on Notes</td>
<td>Safety Notes</td>
<td><strong>AG Foundation</strong> –</td>
</tr>
<tr>
<td>- Examples of Injuries</td>
<td>1 day on Demos</td>
<td>Safety Test</td>
<td>Health &amp; Safety: 6.1, 6.2, 6.4, 6.5, 6.6</td>
</tr>
<tr>
<td>- Demonstration of Tools</td>
<td>1 day on Demos and</td>
<td>Tool Demos: knife, scissors, spray cans, helium tank, balloons, etc.</td>
<td>Tech. Skills: 10.0, 11.0</td>
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<td></td>
<td>Test</td>
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<tr>
<td><strong>Common Tools &amp; Materials</strong></td>
<td>3 days</td>
<td></td>
<td></td>
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<tr>
<td>- Tool ID &amp; Materials Notes</td>
<td>1 days on Tools</td>
<td>Tool ID Notes</td>
<td><strong>AG Foundation</strong> –</td>
</tr>
<tr>
<td>- Demonstration of Use</td>
<td>1 days on Materials</td>
<td>Materials ID Notes</td>
<td>Technology 4.0</td>
</tr>
<tr>
<td>- Draw Picture, Take Notes</td>
<td>1 day on Review and</td>
<td>ID Quiz</td>
<td>Health &amp; Safety: 6.2, 6.4, 6.5</td>
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<tr>
<td></td>
<td>Ch. 8</td>
<td>Ch. 8 – Common Tools, Cont., Mech.</td>
<td>Tech. Skills: 10.0 Demo/Apply 11.0</td>
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<tr>
<td></td>
<td>1 day of Testing and</td>
<td></td>
<td><strong>AG OH – F 11.1</strong></td>
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<tr>
<td></td>
<td>Practice</td>
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<tr>
<td><strong>Plant Physiology</strong></td>
<td>4 days</td>
<td></td>
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<tr>
<td>- Parts of a Plant and Flower</td>
<td>1 day on Ch. 9</td>
<td>Ch. 9 – Worksheet</td>
<td><strong>AG OH –</strong></td>
</tr>
<tr>
<td>- Plant/Floral Identification</td>
<td>1 day on ID Tips &amp;</td>
<td>Tips on Handling article</td>
<td>1.2, 1.3, 1.4, 2.2, 2.4, 2.6, 3.1, 3.2, 3.3, 8.1, 8.2, 8.3, 8.4, 9.3</td>
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<tr>
<td>- Flower Care &amp; Handling</td>
<td>Video</td>
<td>Proper Care – Longevity article</td>
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<tr>
<td>- Refrigeration and Preservatives</td>
<td>1 day on Dissection</td>
<td>Ch. 10 – Care &amp; Handling</td>
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<td></td>
<td>Lab</td>
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<td></td>
<td>1 day on Handouts</td>
<td>Flower Dissection</td>
<td></td>
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<td></td>
<td>and Review</td>
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<tr>
<td><strong>Introduction to Art Terms</strong></td>
<td>3 days</td>
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<tr>
<td>- Purposes of Art (Functions)</td>
<td>1 day on Sources</td>
<td>Purposes Notes</td>
<td><strong>AG OH – F 11.0</strong></td>
</tr>
<tr>
<td>- Sources of Inspiration</td>
<td>1 day on Purposes</td>
<td>(functions)</td>
<td>VA – Art. Perc.: 1.1, 1.2, 1.4</td>
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<tr>
<td>- CA Art Standards and Vocab.</td>
<td>1 day on Analyze</td>
<td>Sources Notes</td>
<td>Creative Exp.: 2.1</td>
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<tr>
<td></td>
<td>Activity</td>
<td>Crossword Review</td>
<td>History/Culture: 3.1, 3.2, 3.3, 3.4</td>
</tr>
<tr>
<td><strong>Elements of Art</strong></td>
<td><strong>8 days</strong></td>
<td><strong>Examples and Quiz</strong></td>
<td><strong>Aesthetic Val.: 4.1</strong>&lt;br&gt;<strong>Connect/Apply: 5.4</strong></td>
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<tr>
<td>- Elements List</td>
<td>1 day on Line Notes and Lab</td>
<td>Elements Notes&lt;br&gt;Line Notes – draw examples&lt;br&gt;Vertical Line Design&lt;br&gt;Shape/Form Notes – 2-D, 3-D act.&lt;br&gt;Space/Depth Notes – draw ex.&lt;br&gt;Color &amp; Color Scheme Notes&lt;br&gt;Color Wheel&lt;br&gt;Painting&lt;br&gt;Ch. 3 – Color&lt;br&gt;Balloon Flower in Color Combos&lt;br&gt;“It’s Hue” AIFD video&lt;br&gt;Texture Notes – Ribbon Flowers&lt;br&gt;Study Guide&lt;br&gt;Unit Test</td>
<td><strong>AG OH – F 11.0</strong>&lt;br&gt;<strong>VA – Artistic</strong>&lt;br&gt;Percept.: 1.1, 1.2, 1.4, 1.5&lt;br&gt;Creative Exp.: 2.1, 2.2, 2.6&lt;br&gt;History/Culture: 3.2, 3.3, 3.4&lt;br&gt;Connect/Apply: 5.4</td>
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<tr>
<td>- Line</td>
<td>1 day on Shape/Form and Lab</td>
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<tr>
<td>- Shape &amp; Form</td>
<td>1 day on Space/Depth and Ex.</td>
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<tr>
<td>- Space &amp; Depth</td>
<td>1 day on Color Notes and Color Wheel Activity&lt;br&gt;1 day on Ch. 3, Color Schemes and Balloon Flowers&lt;br&gt;1 day on Texture and Activity&lt;br&gt;1 day on AIFD Video and Study Guide&lt;br&gt;1 day on Review &amp; Test</td>
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<tr>
<td>- Color</td>
<td>1 day on AIFD Video and Study Guide&lt;br&gt;1 day on Review &amp; Test</td>
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<tr>
<td>- Texture</td>
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<tr>
<th><strong>Personal Flowers</strong></th>
<th><strong>5 days</strong></th>
<th><strong>Examples and Quiz</strong></th>
<th><strong>AG Foundation – History/Soc. 1.3</strong>&lt;br&gt;<strong>AG OH – F 11.0</strong>&lt;br&gt;<strong>VA – Artistic</strong>&lt;br&gt;Perc.: 1.1, 1.2, 1.4, 1.5&lt;br&gt;Creative Exp.: 2.2, 2.6&lt;br&gt;History/Culture: 3.1, 3.4</th>
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<tr>
<td>- Flowers to Wear</td>
<td>1 day on Notes and Ch. 14.</td>
<td>Personal Flowers Notes&lt;br&gt;Ch. 14 – Flowers to Wear&lt;br&gt;Tape / Wire Corsage&lt;br&gt;Glue Corsage (watch JTV)&lt;br&gt;Ron Mulray Video and Questions&lt;br&gt;Collage</td>
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<tr>
<td>- Flowers to Carry</td>
<td>1 day on AIFD video</td>
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<tr>
<td>- Corsage Design</td>
<td>1 day on Collage&lt;br&gt;1 day on Review, Quiz&lt;br&gt;1 day on Corsage Construction</td>
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<tr>
<th><strong>Floral History Time Periods</strong></th>
<th><strong>8 days</strong></th>
<th><strong>Examples and Quiz</strong></th>
<th><strong>AG Foundation – Comm. 2.2, 2.4</strong>&lt;br&gt;<strong>AG OH – F 11.0</strong>&lt;br&gt;<strong>VA – Artistic</strong>&lt;br&gt;Perc.: 1.5&lt;br&gt;Creative Exp.: 2.2, 2.6&lt;br&gt;History/Culture: 3.1, 3.2, 3.3, 3.4</th>
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<tbody>
<tr>
<td>- Introduction and Ancient</td>
<td>1 day on Intro / Ancient notes</td>
<td>Introduction &amp; Ancient notes&lt;br&gt;Activity: Garland or Head Wreath&lt;br&gt;European notes&lt;br&gt;Activity: Victorian Posy&lt;br&gt;American notes</td>
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<tr>
<td>- European</td>
<td>1 day on Head Wreath</td>
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<td>- American</td>
<td>1 day on European notes</td>
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<tr>
<td>- Oriental</td>
<td>1 day on Victorian Posy</td>
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<tr>
<td>- Modern</td>
<td>1 day on Colonial notes &amp; lab</td>
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<tr>
<td>- Timeline</td>
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<tr>
<td>Principles of Art</td>
<td>7 days</td>
<td>Activity: Colonial (w/ wheat, leaves) Oriental Notes &amp; Ch. 16 – Oriental Modern Notes &amp; Ch. 17 – Contemp. Timeline or Time Period Project</td>
<td>Aesthetic Val.: 4.1, 4.5 Connect Apply: 5.2, 5.4</td>
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<tr>
<td>- Introduction</td>
<td>1 day on Balance and Scale/Prop 1 day on Ch. 4, and examples 1 day on Focal Point, Rhythm 1 day on Ch. 5, and examples 1 day on Harmony, Unity and Ch. 2 1 day on AIFD video and Study G. 1 day on Test</td>
<td>Balance Notes and ex. Scale/Proportion Notes and ex. Ch. 4 – Balance, Proportion, Scale Focal Point/Accent and ex. Rhythm Notes and ex. Ch. 5 – Focal Point and Rhythm Harmony/Unity Notes and ex. Ch. 2 – Design, Harmony, Unity “Notations” AIFD video Study Guide Test</td>
<td>AG OH: F 11.0 VA – Artistic Percept.: 1.1, 1.2, 1.4, 1.5 Creative Exp.: 2.1, 2.2, 2.6 Aesthetic Val.: 4.4</td>
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<tr>
<td>- Balance</td>
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<td>- Scale &amp; Proportion</td>
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<td>- Focal Point &amp; Accent</td>
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<td>- Rhythm</td>
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<td>- Harmony</td>
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<td>- Unity</td>
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<table>
<thead>
<tr>
<th>Wedding Project</th>
<th>7 days</th>
<th>Weddings Notes Project Handout Ch. 18 – Wedding Flowers “Secrets of Wedding Design” Video “The Knot” AIFD video Project Work Days – 3 - how to order wholesale - getting paid &amp; consultations</th>
<th>Ag Foundation – Math 1.0 (13.0) History/Soc. 1.3, Writing 2.2 (2.3.d), 2.4 (1.7) VA – Artistic Perc.: 1.4, 1.5 Creative Exp.: 2.1, 2.6 History/ Culture: 3.1, 3.3, 3.4 Aesthetic Val.: 4.4, 4.5</th>
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</thead>
<tbody>
<tr>
<td>- Wedding</td>
<td>1 day on notes and project info 1 day on Secrets video 1 day on AIFD videos 1 day on Ch. 18 3 days on project</td>
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<td>Information</td>
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<tr>
<td>- Personal Flowers</td>
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<tr>
<td>- Ceremony Flowers</td>
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<td>- Reception Flowers</td>
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<tr>
<td>- Pricelists and Wholesale Orders</td>
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<td></td>
<td>6 days</td>
<td>- brainstorming and planning</td>
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<tr>
<td><strong>Seasonal Flowers</strong></td>
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<tr>
<td>- Typical Designs</td>
<td>1 day on Ch. 13</td>
<td>Ch. 13 – Seasonal, Holiday, Sp. Occ.</td>
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<tr>
<td>- Major Floral Holidays</td>
<td>1 day on articles</td>
<td>Poinsettia Article</td>
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<tr>
<td>- History of Holidays</td>
<td>2 days on AIFD video</td>
<td>Evergreen Article</td>
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<tr>
<td>- Special Occasion Flowers</td>
<td>1 day on Project planning</td>
<td>Tulip Time Article</td>
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<tr>
<td></td>
<td>1 day on project design</td>
<td>Seasonal Phenomena</td>
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<td></td>
<td><strong>Advanced/ROP only</strong></td>
<td>AIFD video</td>
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<td>Holiday / Seasonal Project</td>
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<tr>
<td><strong>Designs – Shapes and Styles</strong></td>
<td>4 days</td>
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<tr>
<td>- Shapes and Styles of designs</td>
<td>1 day on Design School and Notes</td>
<td>Design School book</td>
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<tr>
<td></td>
<td>1 day on Ch. 12 and place order</td>
<td>Shapes and Styles Notes</td>
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<td></td>
<td>1 day on Collage</td>
<td>Ch. 12 – Shapes of Arrangements</td>
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<td></td>
<td>1 day on Design</td>
<td>Collage and examples</td>
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<tr>
<td><strong>Permanent Botanicals</strong></td>
<td>4 days</td>
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<tr>
<td>- Silk Flower Designs</td>
<td>1 day on JTV Demo and Ch. 15</td>
<td>Demo on How-To-Design – JTV</td>
<td></td>
</tr>
<tr>
<td>- Silk Flower Production</td>
<td>1 day on articles and finish Ch.15</td>
<td>Ch. 15 – Everlasting Flowers</td>
<td></td>
</tr>
<tr>
<td>- Dried/Preserved Flowers</td>
<td>1 day to practice drying</td>
<td>Silk Flower Production article</td>
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<tr>
<td></td>
<td>1 day on design</td>
<td>Experiment with Dry Flowers</td>
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<td>Design with Dried or Silk</td>
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<tr>
<td><strong>Retail Floristry</strong></td>
<td>4 days</td>
<td></td>
<td></td>
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<tr>
<td>Wire Orders</td>
<td>1 day on Ch. 21</td>
<td>Ch. 21 – Retail Flower Shop</td>
<td></td>
</tr>
<tr>
<td>Running a Business Professional</td>
<td>1 day on Carnation article &amp; video</td>
<td>“Mass Pandemonium” article</td>
<td></td>
</tr>
<tr>
<td>Organizations</td>
<td>1 day on comp. or packet research</td>
<td>Incarnation article</td>
<td></td>
</tr>
<tr>
<td>Summary of Floral Industry</td>
<td>1 day on writing</td>
<td>Incarnation AIFD video</td>
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<td></td>
<td></td>
<td>Write Summary of Industry for Port.</td>
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<tr>
<td><strong>Professional Portfolio</strong></td>
<td>5 days</td>
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</tr>
</tbody>
</table>
### Table of Contents
- Cover Letter
- Resume
- Letters of Recommendation
- Job Application
- Work Samples
- Reflection

### Career Project

<table>
<thead>
<tr>
<th>Advanced/ROP only</th>
<th>4 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Career Research</td>
<td>1 day on project and research, 1 day on Ch. 22, 1 day on Planning &amp; Writing, 1 day Visiting Job</td>
</tr>
<tr>
<td>- Job Shadow</td>
<td>1 day on Project Presentations</td>
</tr>
<tr>
<td>- Professional Interview</td>
<td>1 day on Reflection</td>
</tr>
<tr>
<td></td>
<td>1 day on Project Presentations (Mock Interviews for Advanced/ROP only)</td>
</tr>
</tbody>
</table>

| Introduction to the Project | 1 day on Reflection |
| Research on Careers Ch. 22 – Careers & Cont. Educ. | 1 day on Project Presentations |
| Interview Questions and Planning | 1 day on Project Presentations (Mock Interviews for Advanced/ROP only) |
| Conduct Job Shadow | 1 day on Project Presentations |

### AG Foundation – Communications: 2.0 (2.1, 1.6, 2.5, 2.6) 2.5 (2.5,a,b) VA – Creative Exp.: 2.2

### Art History – Famous Artists

<table>
<thead>
<tr>
<th>9 days</th>
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<tbody>
<tr>
<td>- Introduction</td>
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<tr>
<td>- Ancient</td>
</tr>
<tr>
<td>- Renaissance</td>
</tr>
<tr>
<td>- Baroque &amp; Dutch Flemish</td>
</tr>
<tr>
<td>- Impressionism</td>
</tr>
<tr>
<td>- Modern Art</td>
</tr>
</tbody>
</table>

### AG Foundation – History/Soc. 1.3 VA – Artistic Percept.: 1.3, 1.5 History/Culture: 3.1, 3.2, 3.3, 3.4 Aesthetic Val.: 4.1, 4.2, 4.5
|                      | 1 day on Review and Intro Project | 1 day on Planning Project | 1 day on Design or Presentations | Modern Art Notes & Quiz  
“Mona Lisa Smile” Movie Questions  
Review Packet  
Artist Research Project (report)  
Artist Interpretation Design | Connect/Apply: 5.2, 5.4 |
<table>
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<tbody>
<tr>
<td><strong>Final Exam</strong></td>
<td>2 days</td>
<td></td>
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<tr>
<td></td>
<td>1 day on Study Guide &amp; Review</td>
<td></td>
<td>Elements Principles Holidays Retail Estimates Flower ID Foliage ID Tool &amp; Material ID</td>
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</tr>
</tbody>
</table>

Common to all Units:

Retail Estimate Form: AG F – Mathematics: (13.0), VA – Aesthetic Value 4.4

Self-Evaluation From VA – Artistic Percept.: 1.1, Creative Exp.: 2.2, Aesthetic Val.: 4.4, 4.5, Connect/Apply: 5.4

Content Standards: http://www.cde.ca.gov/be/st/ss/index.asp
Supporting Material 4: Course Gradebooks

Each course’s gradebook is broken down to at least three categories: classwork, FFA, and SAE (includes record book). The grading system used by San Jacinto High School is called Aeries. Teachers, administration, and parents all have access to the system and can check grades and assignments at any point. The school year is broken up into six grading periods including final semester grades.

The Aeries gradbook setup for the year in Agriculture Biology.

Teacher view of Aeries to enter grades for each student/class.
Supporting Material 5: FFA Program of Activities

The San Jacinto FFA Program of Activities is used to update the school, community, and members about everything that has to do with San Jacinto FFA. It includes a calendar for the year, event descriptions, SAE examples, and much more. The Program of Activities are updated annually at the officer retreat and made available online. It is also included in the Comprehensive Program Plan.
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<th>Table of Contents</th>
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<tr>
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<td>Officer Letter</td>
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<tr>
<td>Advisor’s Message</td>
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<tr>
<td>Chapter Officer Vision &amp; Mission</td>
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<tr>
<td>Missions and Strategies</td>
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<tr>
<td>The FFA Emblem, Colors and Motto</td>
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<td>The FFA Creed</td>
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<td>Judging Teams, Public Speaking</td>
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<td>Possible FFA Awards</td>
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<td>Fairs &amp; Shows</td>
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<td>Project Explanation &amp; Budget plan for Market Goats</td>
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<tr>
<td>Project Explanation &amp; Budget plan for Market Poultry</td>
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<td>Project Explanation &amp; Budget plan for Market Rabbits</td>
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<tr>
<td>Project Explanation &amp; Budget plan for Market Steer</td>
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<tr>
<td>Project Explanation &amp; Budget plan for Market Sheep</td>
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<tr>
<td>Project Explanation &amp; Budget plan for Market Swine</td>
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<tr>
<td>FFA Officers</td>
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</tr>
<tr>
<td>State Degrees, American Degrees, Proficiency Award Winners, State Officers,</td>
<td>15</td>
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<tr>
<td>Region Officers, Section Officers,</td>
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<tr>
<td>Region &amp; Section Speaking Contest Results</td>
<td>16</td>
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<tr>
<td>The Official Constitution</td>
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<tr>
<td>Calendar of Events</td>
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</tr>
</tbody>
</table>
Officer Letter

Dear FFA Members,

Greetings, from the 2017-2018 FFA Officer Team.

It is the goal of this year’s FFA officer team to get you, new and returning FFA members, to unite in participating and involving yourself in the FFA organization. We have many fun and exciting activities this year to encourage your involvement in the San Jacinto FFA Chapter. We have a goal of getting the San Jacinto FFA Chapter more actively involved in the community. The members are truly the backbone of our organization. Because of your support and belief in the FFA, we will continue to prosper in the upcoming years.

This year we will have many fun and thrilling activities for you. Because of your many talents, you will help better the San Jacinto FFA chapter. We hope this year will be a great learning experience as well a fun and exciting time for you. Due to your excitement and energy, we know we will have the ultimate FFA experience in the 2017-2018 school year.

Sincerely,

The 2017-2018 San Jacinto FFA Officer Team

Janna Scott, President
Pamela Zavala, Vice President
Sahian Bolanos, Secretary
Adam Pendergraft, Treasurer
Jill Scott, Reporter
Cassandra Ponce, Sentinel
Advisor’s Message

The advisors of the San Jacinto FFA chapter would like to welcome every new and returning member of the San Jacinto FFA for the 2017-2018 school year. Once again, we are certain that the San Jacinto FFA is going to continue its success.

This year, the officers have set a goal for the new and returning FFA members to increase participation and involvement in the FFA. As advisors, we agree with the officers that it is vitally important to have FFA members actively involved in our program. The Program of Work will serve as a guide, outlining opportunities offered to you in this chapter and agriculture program. It would be impossible for the chapter officers to carry out the activities outlined in this program without the cooperation from each and every member of this chapter. The duty of the advisors is only to point the way, while the officers decide how active or successful the chapter will be this year by your participation. We would like this year to be the best year you ever had in school. The FFA program is the greatest youth organization in the world and the San Jacinto FFA is working its way to the top.

The chapter advisors look forward to working with our chapter members to keep San Jacinto FFA the best in the state! We are relying on you to make this year a success!

Sincerely,

The San Jacinto FFA Advisors

_____________________               _____________________

Mrs. Scoggins               Ms. Stiff
Chapter Officer Vision

To have a welcoming, motivated, and hard working team that brings in dedicated and active members. As our chapter grows, we hope that we can continue to bring new members to our chapter while maintaining our active members. Through a motivated and hard working officer team, we hope to inspire our fellow members and encourage new ones to continue in the program.

Chapter Officer Mission Statement

To enthusiastically and open mindedly advocate the agriculture industry through the National FFA Organization; promoting a strong work ethic for members and future members to follow through, and stay on task in becoming productive citizens in society with the voice of Agriculture.
Missions and Strategies

FFA makes a positive difference in the lives by developing their potential for premier leadership, personal growth, and career success through agricultural education. To accomplish the mission, we the FFA:

1. Develop competent and assertive agricultural leadership.

2. Increase awareness of the global and technological importance of agriculture and its contribution to our well-being.

3. Strengthen the confidence of agriculture students in themselves and their work.

4. Promote the intelligent choice and establishment of an agricultural career.

5. Encourage achievement in supervised agricultural experience programs.

6. Encourage wise management of economic, environmental, and human resources of the community.

7. Develop interpersonal skills in teamwork, communication, human relations and interaction.

8. Build Character; Promote Citizenship, Volunteerism, and Patriotism.
The Emblem

The national FFA emblem, consisting of five symbols, is representative of the history, goals and future of the organization. As a whole, the emblem covers the broad spectrum of the FFA and agriculture. Each element within the emblem has unique significance. THE CROSS SECTION OF THE EAR OF CORN provides the foundation of American agriculture. It is also a symbol of unity, as corn is grown in every state of the nation. THE RISING SUN signifies progress and holds a promise that tomorrow will bring a new day glowing with opportunity. THE PLOW signifies labor and tillage of the soil, the backbone of agriculture and the historic foundation of our country’s strength. THE EAGLE is a national symbol which serves as a reminder of our freedom and ability to explore new horizons for the future of agriculture. THE OWL, long recognized for its wisdom, symbolized the knowledge required to be successful in the industry of agriculture. The words “AGRICULTURE EDUCATION” and “FFA” are emblazoned in the center to signify the combination of learning and leadership necessary for progressive agriculture.

Colors

As the blue field of our nation’s flag and the golden fields of ripened corn unify our country, the FFA colors of NATIONAL BLUE and CORN GOLD give unity to the organization. All FFA functions and paraphernalia should proudly display the colors.

Motto

The FFA motto gives members twelve short words to live by as they experience the opportunities in the organization.

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.
Career opportunities abound within today’s agriculture industry. Career Development Events (CDEs) help students develop the abilities to think critically, communicate clearly, and perform effectively in a competitive job market. There are 40 CDEs, covering job skills in everything from communications to mechanics. Some events allow students to compete as individuals, while others allow them to compete in teams. This year we are participating / competing in Livestock Judging and Poultry Judging competitions. We have competed in Floriculture.

Public Speaking

Students have a variety of speaking opportunities. Some of these opportunities come in the form of competition from the chapter to the national level. These competitions include: creed, impromptu, prepared, extemporaneous, and job interview. Each contest is unique and builds different skill sets for students. An explanation of each contest is as follows:

- **Creed Speaking:** For our freshman students. It is a five (5) paragraph creed. Students memorize and give the creed in front of a panel of judges. After which they are asked a series of questions that last for a five minute time frame.
- **Impromptu:** This contest is still new and developing. Sophomores can compete in this speaking contest. The students have two sets of two minute speeches. One set is a quote they receive and must explain what they think and how it applies to the agriculture industry/leadership/education in a speech format. The second set is a word or a question they must answer in a speech format in the two minute time frame.
- **Prepared:** This contest is open for any student but normally only sophomores, juniors and seniors compete. Students prepare a manuscript about a topic they have researched. The manuscript is judged based on specific criteria. The students memorize and recite their speech to a panel of three judges. The speech must be between five (5) and eight (8) minutes. After the conclusion of their speech they are asked a series of questions relating to their topic to see how well the student knows their topic for a five minute time frame.
- **Extemporaneous:** This contest is open for any student but normally only sophomores, juniors, and seniors compete. Students prepare a binder with topics that have been previously released. They can have a up to five items being books or binders. Each student goes into a holding room. They draw a number. Once their number comes up they will be put in a room and draw three topics. They will choose one topic to write a two (2) to five (5) minutes speech on. They will have exactly one half hour to complete their speech. Once their one half hour is up they will be brought to a room and give their speech whether on flash cards or memorized to a panel of three judges. Once they are finished they will be asked a series of questions in a five minute time frame.
- **Job Interview:** This contest is open to any student but mostly seniors participate. This contest requires the student to make a cover letter and resume. The cover letter and resume are judged on specific criteria. Once at the contest students fill out a job application which is judged on specific criteria and pull a number for order. Once their number comes up students go into the interview and the panel of three judges interviews the participants.
Possible FFA Awards

Greenhand Degree (first year Ag students)
Star Greenhand (first year Ag students)
Chapter Degree (second year Ag students)
Start Chapter Farmer (2-3 year Ag students)
State FFA Degree (3rd or 4th year Ag students)
American FFA Degree (graduate Ag students)
Judging Team Awards
Speaking Awards
Outstanding Ag Student Award (by grade)
Proficiency Awards
Senior Active Program Completer Cords for Graduation
Fairs

In order to give our students an area to showcase the knowledge they have learned through their Supervised Occupational Experience Project, San Jacinto FFA competes at two fairs during the year. You will find us at the Southern California Fair in October at the Lake Perris Fairgrounds and at the Riverside County Fair & National Date Festival in February at the Indio Fairgrounds. Student projects that can be exhibited are beef, sheep, swine, chickens, and goats. If students are interested in participating in any of these opportunities just let an Ag Teacher know and they can get you started.

Market Goats

A goat project is a fun project that does not require as much time as large animals. You feed twice a day, clean and practice showmanship at least three (3) times a week. All other requirements will be presented at livestock meetings.

Market Goat Budget

Expenses

- Goat
- Feed
- Entry Fee
- Goat Chain
- Shavings

*TOTAL* $350.00

Receipts

- Sale of animal $275.00

(based on Indio average per head)

*Profit/Loss* $75.00
The poultry project does not require as much maintenance, as compared to other projects simply because they are small animals. You will take ownership and care for the animals from start to finish and be involved with the processing. You are required to feed according to a feeding schedule. All other requirements will be presented at livestock meetings.

Poultry Project Budget

Expenses:
- Meat Pen + 3
- Feed
- Entry Fee
- Shavings

**TOTAL** $35

Receipt
- Sale of animal: **$36**
  (sell for $12 a head)

**Profit/Loss** $1
Market Steer

Showing a steer is a lot of hard work and you have to be willing to take a lot of responsibilities. You have to make sure you walk your steer everyday. You also need to brush your steer. You must get your steer to walk with the halter and practice showmanship with the showstick. You may not choose this animal for your first animal. All other requirements will be presented at livestock meetings.

Market Steer Budget

Expenses:

<table>
<thead>
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<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Feed</td>
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<tr>
<td>Entry Fee</td>
<td>20</td>
</tr>
<tr>
<td>Shavings</td>
<td>40</td>
</tr>
<tr>
<td>Show Halter&amp;Stick</td>
<td>50</td>
</tr>
</tbody>
</table>

**TOTAL** \( \$2,940 \)

Receipt

Sale of Animal: \( \$2400 \)

(based of average sale price. 1,200lb @ $2/lb)

Profit/Loss \(- \$54\)
Market Lamb

In showing sheep, there are a lot of responsibilities. When you will have to care for this animal by feeding it twice (2) a day, water it, clean its pen, and exercise it daily. You will also need to practice showmanship so that you will be able to control your animal in the show ring. All other requirements will be presented at livestock meetings.

Market Lamb Budget

Expenses:

- Animal
- Feed
- Entry Fee
- Sock
- Shavings

**TOTAL** $350

Receipt

- Sale of Animal: $400
  
  (based on average price at Indo Fair per head)

**Profit/Loss** $50
Market Swine

A swine project is a great experience. When you begin your project, you must exercise your pig everyday in order for it to maintain a quality build. You are responsible for feeding and cleaning daily. Your swine needs to be exercised and worked with for showmanship. All other requirements will be presented at livestock meetings.

Market Swine Budget

Expenses

- Animal
- Feed
- Entry Fee
- Show Stick
- Shavings

**TOTAL** $475

Receipt

Sale of Animal: **$437.50**

*(average price at Indio Fair: 250lb hog at $1.75/lb)*

Profit / Loss: - **$ 37.50**
FFA OFFICERS

San Jacinto Chapter Officers

President: Janna Scott
Vice President: Pamela Zavala
Secretary: Sahian Bolanos
Treasurer: Adam Pendergraft
Reporter: Jill Scott
Sentinel: Cassandra Ponce
Advisor: Danielle Scoggins
Advisor: Lindsey Stiff

Riverside Section Officers

President: Mariah Harper
Vice President: Jill Scott
Secretary: Isaura Soto
Treasurer: Emilee Woodward
Reporter: Kyle Dayton
Sentinel: Michael Sumaya
Parliamentarian: Jordan Hernandez
Advisor: Ralph Mosqueda
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President: Natalie Delgado
Secretary: Emily Colby
Vice President – Miriam Delgado
Vice President – Sarah Grizzle
Vice President – Brianne Shannon
Vice President – Mariah Harper
Vice President – Hailey Baldwin
Advisor: Jack Havens, CDE

State FFA Officers

President: Luke O'Leary
Vice President: Jasmine Flores
Secretary: Genevieve Regli
Treasurer: Armando Nevarez
Reporter: Hunter Andrade
Sentinel: Bobby Marchy
State Advisor: Lloyd McCabe
Assistant State Advisor: Josiah Mayfield
State Degrees
1961: Gene Hulstrom
1968: Darrell Madole
1975: David Harvey
1977: Paul Preciado, Vince Record, John Schouten, Steve Warneke
1978: Mike Hafliger, George TenBerge
1979: Leonard Hollingsworth
1980: Joe Conijin, Calvin Smith
1982: Neal Conijin, Jefone Esquivel, Lynn Garcia, Deborah Scott, Stacey Stephens
1983-2003: No records available
2004: Ashley Abel, Krista Birmingham, Jessica Bonaime, Jackie Hesselgesse, Ernesto Marcial, Eric Palmer
2006: Divah Alshawa, Lauren DiLeva, Joanna Duarte, Riley Elrod, Jessica Garcia
2010: Rebekah Davis
2011: Charles Smith, Teffanie Zeller
2013: Hunter Berry, Abigail Porter
2014: Jasmine Shuey

American Degrees
2014 Hunter Berry
Proficiency Award Winners

2005 Swine Production Entrepreneurship: Srista Birmingham, Section Winner
2006 Beef Production Placement: Jessica Desmond, Section Winner
2012 Agriculture Sales Placement: Charles Smith, Section Winner
2013 Diversified Agriculture Production Entrepreneurship: Abigail Porter, Section Winner

State Officers

1993-1994: State Vice President, Susan Leahy, San Jacinto
2013-2014: State Sentinel, Hunter Berry, San Jacinto

Region Officers

2012-2013 Riverside Vice President, Hunter Berry, San Jacinto

Section Officers

2011-2012 Section Reporter, Kaitlyn Lacey, San Jacinto
2012-2013 Section President, Hunter Berry, San Jacinto
    Section Vice President, Abigail Porter, San Jacinto
2016-2017 Section Secretary, Jill Scott, San Jacinto
2017-2018 Section Vice President, Jill Scott, San Jacinto
Region Speaking Contest Results

2012: Abigail Porter, 3rd Place, Advanced Prepared Public Speaking
2013: Abigail Porter, 5th Place, Advanced Prepared Public Speaking

Section Speaking Contest Results

2012: Abigail Porter, 1st Place, Advanced Prepared Public Speaking
   Terry Bolanos, 4th Place, Advanced Prepared Public Speaking
   Hunter Berry, 5th Place, Advanced Prepared Public Speaking
   Dustin Rios, 3rd Place, Creed Recitation

2013: Abigail Porter, 1st Place, Advanced Prepared Public Speaking
ARTICLE I – Name and Purpose

Section A The name of this organization shall be the “San Jacinto Chapter of the National FFA Organization.” and the letters, “FFA” may be used to designate the chapter, its activities, or members thereof.

Section B The purpose for which this chapter is formed are as follows:

1. Develop competent and aggressive agriculture leadership.
2. Create and nurture a love of agricultural life.
3. Strengthen the confidence of students of vocational agriculture in themselves and their work as well as to teach students about Career Technical Education (CTE)
4. Create more interest in intelligent choice agriculture occupations
5. Encourage members in the development of individual agricultural experience programs and establishment in agricultural careers.
6. Encourage members to improve the home and its surroundings.
7. Participate in worthy undertakings for the improvement of the industry of agriculture.
8. Develop character, train for useful citizenship and foster patriotism.
9. Participate in cooperative effort.
10. Encourage and practice thrift.
11. Encourage improvement in scholastic record
12. Provide and encourage the development of organized recreational activities and Career Development Events (CDE’s)
ARTICLE II - Organization

Section A The San Jacinto Chapter of FFA is a chartered chapter of the California Association of Future Farmers of America which is chartered by the National FFA Organization.

Section B This chapter accepts in full the provisions of the constitution and bylaws of the California Association of FFA as well as those of the National FFA Organization.

Section C This constitution may be amended or changed at any regular chapter meeting by a two-thirds vote of the active members present providing it is not in conflict with the state association constitution or that of the National FFA Organization.

Section D Bylaws may be adopted to fit the needs of the chapter at any regular chapter meeting by a two-thirds vote of the active members present providing such bylaws conflict in no way with the constitution and bylaws of either the sate association or the national organization.

ARTICLE III – Membership

Section A Membership in this chapter shall be of three kinds: (1) Active; (2) Alumni; (3) Honorary, as defined by the National FFA Constitution.

Section B The regular work of this chapter shall be carried on by the active membership.

Section C Honorary membership shall be limited to the Honorary Chapter FFA Degree as defined by the National FFA Constitution.

Section D Active members in good standing may vote on all business brought before the chapter. An active member shall be considered in good standing when:

1. They attend local chapter meetings with 80% regularity.
2. They show an interest in, and take part in the affairs of the chapter.
3. Name appears on the FFA roster.
4. They are enrolled in at least one agriculture education class.

ARTICLE IV – Emblems

Section A  The emblem of the FFA shall be the emblem for the chapter.

Section B  Emblems used by the members shall be designated by the National FFA Organization

ARTICLE V – Membership Degrees and Privileges

Section A  There shall be four grades of active membership in this chapter. These grades are: (1) The Greenhand FFA Degree; (2) The Chapter FFA Degree; (3) The State FFA Degree; (4) the American FFA Degree.

Greenhand recipients are entitled to wear the bronze emblem pin, Chapter Degree recipients are entitled to wear the silver emblem pin, State Degree recipients are entitled to wear the golden emblem charm/pin, American Degree recipients are entitled to wear the golden emblem key.

Section B  Greenhand FFA Degree. Minimum qualifications as outlined in the state and national constitutions.

Section C  Chapter FFA Degree: Minimum qualifications as outlined in the state and national constitutions.

Section D  State FFA Degree: Minimum qualifications for election:
Qualifications for the State FFA Degree are those set forth in the Constitution of the State Association.

Section E  American FFA Degree. Minimum qualifications for election:

Qualifications for the American FFA Degree are those set forth in the constitution of the National FFA Organization.

Section F  FFA members can earn a chapter FFA cord or letter by being an active member for three years or active membership decided by advisor.

ARTICLE VI – Officer Elections and Officer Requirements

Section A  The candidates for office will be decided by the following criteria

1. enrolled in a current agriculture class
2. scheduled to be enrolled in an agriculture class the following year
3. scholastic record of a 2.0 or better un-weighted cumulative GPA or approval by chapter advisor
4. has the Greenhand Degree or has met the qualifications to receive the Greenhand Degree during the year of service

Section B  The selections for the election of officers will be decided by the following criteria:

1. Application
2. Interview
3. Speech
4. Chapter Vote
Section C  The officers of the San Jacinto Chapter will consist of the six constitutional officers: President, Vice President, Secretary, Treasurer, Reporter, Sentinel. The addition of non-constitutional officers will be decided upon by the Chapter Advisor(s).

Section D  The officers will be elected annually by the requirements in section A and B.

Section E  Chapter Officers must meet these requirements during their year of service:

1. Attend the Summer
2. Attend ALL officer meetings
3. Attend ALL chapter meetings
4. Attend ALL Executive Committee Meetings
5. Attend 90% of chapter activities (exception of meetings)
6. Attend the Chapter Officer Leadership Conference (Southern Region Leadership Conference)
7. Participate in one judging competition or in speaking competitions.
8. Perform the duties assigned to them by the office in which they were elected to as well as extra duties.

Section F  Failure to meet the requirements in section E will result in the following consequences:

1. First infraction – verbal warning
2. Second infraction – written warning and meeting with the Advisor(s)
3. Third infraction – removal from office

Section G  In the event that an officer is removed from office or the officer cannot continue as an officer the Chapter Advisor(s) will appoint an active member to that office for the remainder of the year.
ARTICLE VII – Meetings

Section A  Regular chapter meetings shall be held once a month during the school year and any special meetings may be called at any time.

Section B  Standard meeting equipment shall be used at each meeting. All regular meetings shall open and close with the official ceremony. Parliamentary procedure shall be used in transacting all business at each meeting.

Section C  Officer meetings will be held once a month no less than one week prior to the chapter meeting.

Section D  A majority of the active members shall constitute a quorum and must be present at any meeting at which business is transacted or a vote taken committing the chapter to any proposal or action.

ARTICLE VIII – Dues

Section A  Full local, State, and national dues shall be paid by the chapter, for all students enrolled in the Agriculture Education Program.

ARTICLE IX – Committees

Section A  Each officer will chair the committees as follows:

President – Leadership
Vice President – Banquet
Secretary – Community Outreach
Treasurer – Earnings and Savings / Budget / Fundraisers
Section B  The committee will have a Chair and Secretary as officers of the committee. A chapter officer will serve on their designated committee as an ex-officio member. Committee members should not exceed 10 individuals. The committee chair will give a monthly report at each stated chapter meeting.

Section C  Each committee will be required to submit roll for each meeting. This will include BOTH members present and absent, and will be handed into the chapter secretary no later than one full day before the stated chapter meeting.

ARTICLE X: Supervised Agriculture Experience Projects

Section A  Each member will have a Supervised Agricultural Experience Project.

Section B  Each member must have a 2.0 GPA and no outstanding balances with the FFA in order to attend any fair.

Section C  Each student with a livestock project will be required to put a down payment towards their project in the event that the animal is kept on the school property. The following pertains to students who attend both Southern California Fair and the Indio Fair:

1. Any profits made from the animal shown at the Southern California Fair will be retained by the FFA as a down payment for their Indio Fair animal project.

2. Any profits made from the animal shown at the Indio Fair will be issued to the student once the checks are received from the fair and any outstanding balances are paid.

Section E  Students forfeit their right to attend any fair with livestock for the reminder of their time in the San Jacinto FFA if they do not:

1. Attend the fair and sell their animal via livestock auction

2. Or sell their animal via a private buyer.

3. Attend scheduled work days
4. Attend scheduled showmanship practices

ARTICLE XI: Conference and Activities

Section A Each student must have a 2.0 GPA to attend any conferences or any activities that are held above the chapter level.

Section B Students must be active in the FFA in order to attend conferences. Active students must participate in the following activities:

1. Attend chapter meetings
2. Participate in section competitions
3. Participate in fundraisers
Supporting Material 6: Recruitment Brochure

The recruitment brochure was developed as a tool to inform the community and prospective students about the San Jacinto FFA Agriculture Department. The brochure includes the course available, a description of agricultural education, Career Development Event teams, contact information, and pictures of current students and activities. The brochures are passed out at any possible recruiting event, including Back to School night, and many other events.
FFA Program

FFA activities/opportunities:

- FFA offers hands-on, real-world learning experiences that can be applied to future careers in agriculture.
- FFA provides opportunities to develop leadership and communication skills.
- FFA allows students to participate in competitions and events at local, state, and national levels.

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.

Supervised Agricultural Experience (SAE):

- Students are required to have an SAE project.
- Projects must be related to agriculture.
- Projects must be well-documented and evaluated.

FFA qualifications:

- Students must be enrolled in agricultural education classes.
- Students must attend meetings and participate in activities.
- Students must complete a series of tasks and projects.

Design of the Program:

- FFA is a year-long program.
- FFA is offered in all grades.
- FFA is a part of the regular school curriculum.

Informed choices in the global agricultural, food, fiber, and natural resource systems.
All meet UC/CSU/GRAND REQUIREMENTS:

Plants, biological components, and post-harvest factors of food, fiber, and soil and soil science. In this class, students will learn about the plant and soil science for composition of basic table arrangements, and decorative materials.

Floral Design: This course serves as an introduction to skills required for composition of floral table arrangements and decorative materials.

Genetics, physiology, reproduction, nutrition, respiration, and anatomy. Animal Science focusing on the areas in mammalian production.

Animal Science: This course will provide the student with principles in relationships between soil, plants, animals and agricultural practices.

AG Soil and Chemistry: AG Systems Management This course have C+ or better. (To continue in next welding course need to mechanisms and welding. To continue in next welding course need to specialize in classroom work and experience in the agriculture.

Agriculture: Welding: This course is designed to give the student plant, animal, and human nutrition, health, and disease, and the ecology of relationships among reproduction, genetics, animal behavior, animal and plant economy.

Agriculture: This course emphasizes the life functions and relationships of plants and animals, focusing on growth and interactions.
Supporting Material 7: Graduate Follow-Up Survey

The Graduate Follow-Up Survey is distributed during the summer to all recent program completer of the San Jacinto Agriculture Department. The purpose of the survey is to track the graduates as they leave San Jacinto High School, as well as seek input as to how our program can be improved. The survey is sent via Google Forms. If necessary, graduates will also be contacted via mail or phone to complete the survey. The answers are recorded and uploaded into the R2 program, as well as included in the Comprehensive Program Plan.
SJHS Ag Graduate Follow Up Survey

Dear Recent Graduate:

As a program completer of the San Jacinto High School Agriculture Department, you were one of the few devoted FFA members and students to complete four years of instruction in Agriculture. You should be commended for your dedication to the Agriculture Industry. In addition, as an FFA advisor and teacher myself, I want to thank you personally for your devotion to our program. As the new school year starts, I hope that you find yourself with new challenges and excitement.

This year at San Jacinto High School, we are looking for new ways to better our program. You answers will help us determine how many of our students are going on to careers or furthering their education. We then look at these numbers to see if our program is being successful. In addition, we use it to take a deeper look at our FFA program and the value of the leadership component of our program. This helps continually grow and build our FFA chapter. Please if you have a few minutes, complete the following survey by October 1st, 2016. Your feedback really could help make our program more successful.

Thank you in advance for your support.

Sincerely,

Ms. Stiff
Agriculture Department Head

* Required

1. Name *

2. Email

3. What are you doing at the present time?
   Mark only one oval.
   - Attending four year college, full time
   - Attending four year college, part time
   - Attending community college, full time
   - Attending community college, part time
   - Working full time in agriculture
   - Working part time in agriculture
   - Working full time in non agriculture field
   - Working part time in part time in non agriculture field
   - Not working
   - Military

4. If you are in school, what is your major course of study?
6. What is your job title or job description?

7. Which statement best applies to your present occupation?
   *Mark only one oval.*
   - [ ] I am using most of the skills I learned in the Ag Program at SJHS.
   - [ ] I am using some of the skills I learned in the Ag Program at SJHS.
   - [ ] I am not using any of the skills I learned in the Ag Program at SJHS.

8. How would you rate the training, career guidance, and counseling received in the SJHS agriculture program?
   *Mark only one oval.*
   - [ ] Excellent
   - [ ] Good
   - [ ] Fair
   - [ ] Poor

9. Please check the following areas you feel are valuable components of FFA.
   *Check all that apply.*
   - [ ] Officer Experience
   - [ ] Judging Contests
   - [ ] Participation in chapter activities in which you work with others.
   - [ ] Livestock raising for fairs.
   - [ ] Supervised Agricultural Experience Project
   - [ ] Other: ____________________________

10. Please note any suggestions you have for improving the Instructional Program, including the following areas: classroom, shop, greenhouse, school farm, FFA, SAE, etc.
Supporting Material 8: Graduate Follow-Up Survey Results

Once our program completers have completed the graduate survey, the results are uploaded to the R2 system. This year’s data uploaded included the graduates from 2015. As a program, there were 66 seniors, however there were 18 student that had completed three or more years of agriculture.
Supporting Material 9: Department Budget

The budget is split into classes and our department budget. The department side is further divided into categories such as FFA conferences, CATA conferences and substitutes, vehicle maintenance, etc.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
<th>Haverly FD</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowers</td>
<td>2200</td>
<td>North Vista FD</td>
<td>100</td>
</tr>
<tr>
<td>Shirts &amp; Sweatshirts</td>
<td>5000</td>
<td>MFEALA</td>
<td>1000</td>
</tr>
<tr>
<td>Officer Retreat</td>
<td>100</td>
<td>Indio Fair</td>
<td>1100</td>
</tr>
<tr>
<td>Ice Cream Social</td>
<td>250</td>
<td>MiraCosta FD</td>
<td>150</td>
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<tr>
<td>Section Leadership Conference</td>
<td>250</td>
<td>Project Comp. Banquet</td>
<td>150</td>
</tr>
<tr>
<td>BBQ</td>
<td>4500</td>
<td>Warner Springs FD</td>
<td>120</td>
</tr>
<tr>
<td>UCLC</td>
<td>250</td>
<td>State Degree/Proficiency Banquet</td>
<td>120</td>
</tr>
<tr>
<td>Membership Dues</td>
<td>3000</td>
<td>Pomona FD</td>
<td>180</td>
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<td>Greenhand LC</td>
<td>450</td>
<td>State Registration</td>
<td>2100</td>
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<tr>
<td>Fallbrook FD</td>
<td>100</td>
<td>State Hotel Fees</td>
<td>2000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Income</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
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<td>Flower Sales</td>
<td>4000</td>
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<tr>
<td>Kiss the Pig</td>
<td>200</td>
</tr>
<tr>
<td>Shirts &amp; Sweatshirts</td>
<td>3000</td>
</tr>
<tr>
<td>BBQ</td>
<td>9000</td>
</tr>
<tr>
<td>Awards Banquet</td>
<td>2000</td>
</tr>
<tr>
<td>Misc. (grants, donations, etc)</td>
<td>14000</td>
</tr>
</tbody>
</table>

| Total Income            | 32,400 |
| Total Expenses          | 30,350 |
| Profit                  | 2070   |
Supporting Material 10: Advisory Committee Meeting Agendas

The San Jacinto High School Agricultural Advisory Committee meets a minimum of three times per year. The committee is responsible for advising the department and approving of any upcoming activities. The committee also reviews the Comprehensive Program Plan and approves of any changes or updates annually.
San Jacinto Agriculture Department
Advisory Committee Meeting
October 17, 2017 in Room 804 at 5 pm

Meeting Opened:

Roll Call: Ron Haringa, Rose Henderson, Matt Hixon, Steve Miller, Felix Ortiz, Vince Record, Calvin Smith, Danielle Scoggins, Lindsey Stiff, Margie Vander Hulst, Ashley Oostdam, Howard Wilson

Old Business

1. Hotel Numbers Concerns:
2. Sponsorship Account/Loan:
3. Breeding Pig Update:
4. Section Officer Candidate-(5/9/17)
5. In-Service Day- (5/16/17):
6. Graduation Floral Sales:
7. Class Scheduling:

New Business/Action Items

1. Breeder Updates
2. Course Updates
   a. Advanced Floral, Intro to Metal Fabrication and Welding, Metal Fabrication and Welding II, Metal Fabrication and Welding III/IV
3. Welding Pathway (CTE)
4. Ag Incentive Review
5. Fair Funding
6. Advisory Committee Recommendations, Industry Updates, etc.

Important Date:

State Convention: 4/22/18-4/26/18
Chapter End of Year Banquet: 5/24/18

Next advisory meeting will be held around January 2018.

Adjourned at
Meeting Opened:

Roll Call: Ron Haringa, Rose Henderson, Matt Hixon, Steve Miller, Vince Record, Calvin Smith, Danielle Scoggins, Lindsey Stiff, Margie Vander Hulst, Ashley Oostdam, Howard Wilson

**Old Business**

1. Ag Mechanics: We went through what has occurred in the shop. Howard brought up the purchasing of virtual welders. Our advisory Committee had questions for Steve about these machines and cost of welding equipment. There were issues with purchasing the virtual welders and the urgency for more important equipment put in the shop.

2. Vegetable Team: Howard gave an update on our vegetable team this past year.

3. Speech Competitions- (Jill 8th/28 and Cassandra 5th)

4. Valentine Grams

5. Parliamentary Procedure

6. Animal Science Field Trip

7. Regional Officer: We informed our committee that Jill Scott ran for our region but unfortunately did not make it.

8. Indio Fair (2/18-2/26): We went through the results of our Indio fair. We had a list of results for the committee to look at and we went over that our very own breeder pig produced a reserve FFA champion hog.

9. Project Competition: We went through the results and Janna received a novice high award. Also, Jill and Jocelyn received gold awards.


11. Banquet (5/19): We invited our committee to our awards banquet.

**New Business/Action Items**

1. Hotel Numbers Concerns: As of this year with new staff at the district they announced that we can no longer have 4 students per room and that it must be 2 per room. We wanted to let them know our concerns and see what information they had on this; however, they did not know why it changed and do understand our concerns.

2. Sponsorship Account/Loan: Our new accountant on site had issues with us having our account open during the summer and that it had to be at $10,000 all year. Calvin brought the terms of the account and Margie informed us of the requirements. She then offered to meet with Elizabeth to go through our accounts with her.

3. Breeding Pig Update: We informed the committee that our one breeder did not take and plans for both of our breeders.

4. Section Officer Candidate-(5/9/17) We informed our committee that Jill Scott was running for vice president of our Section FFA.

5. In-Service Day- (5/16/17): We went through that we are hosting the in-service and what exactly we will be doing there.

6. Graduation Floral Sales: we went through that we will be a tooth graduations.
7. Class Scheduling: We went through what we could be teaching and uncertainty but knew our numbers were high.

Next advisory meeting will be held around September 2017.
Adjourned at 7pm.

Respectfully submitted by Lindsey Stiff
Agriculture Teacher
Supporting Material 11: Advisory Committee Constitution and By-Laws

The Advisory Committee is an official organization that runs by a constitution and bylaws. The members meet three times a year to advise the San Jacinto High School Agriculture Department.
Functions and Duties of Advisory Committees

1. Help to determine what type of Agricultural Education program is offered.

2. Assist the teacher(s) in finding suitable work stations (internships, work-study, cooperative learning, partnerships) for students in both production agriculture and agri-industry occupations.

3. Help the instructor establish curriculum that has a hands-on, technological approach.

4. Help attract and encourage qualified/capable students into the Agricultural Education program.

5. Help in recruiting and providing opportunities for special-needs students.

6. Help to evaluate the effectiveness of the Ag. Education program. Guidelines for evaluation should be developed cooperatively with the advisory committee, administration, school board, and the Agricultural Education Unit of the California Department of Education.

7. Help gain support for legislation and appropriations.

8. Help the teacher(s) develop a list of capable resource persons for use as speakers, and/or judges for both in-school and out-of-school tests and contests.

9. Help obtain sponsors for appropriating funds for awards, scholarships, or needed equipment and supplies that are useful in carrying out classroom activities and F.F.A. or other youth programs.

10. Help unify the activities of the Agricultural Education program with those of other groups and agencies interested in agriculture.

11. Assist the teacher in determining skills needed for particular jobs at entry, technical and professional levels so that he/she may be included in the instructional program.
12. When appropriate, serve as resource person to instructor visiting workplace learning sites of students and participating in classroom instruction or demonstrations and accompanying or hosting field trips.

13. Study and make recommendations on problems presented to it by the school board on which further information is needed.

14. Provide the teacher with technical assistance and keep him/her aware of new developments in the agricultural industry.

15. Provide current resources to develop and maintain an Ag library of visual aids, magazines, and books concerning agriculture and agricultural occupations.

16. Serve as speakers at civic clubs, open houses, and career days to tell the story of school-industry cooperation.

17. Identify current standards for new equipment.

18. Assist in procuring opportunities to upgrade the teacher's technical skills and knowledge.
Supporting Material 12: Career and Technical Education Standards

The Career and Technical Education Standards for Agriculture and Natural Resources Industry Sector are used to guide the classes in the Agriculture Department.
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4.0 Technology

3

5.0 Problem Solving and Critical Thinking

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4

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6

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Overview

The Career Technical Education (CTE) Model Curriculum Standards publication is organized for use as a complete document or for access to individual industry sectors and pathways. The document includes Standards for Career Ready Practice—which describe the knowledge and skills that students need prior to entering a career technical education program—as part of the career technical education sequence or as integrated elements of other course work in preparation for careers and college.

Each of the 15 industry sector sections includes a description, anchor standards, pathway standards, and an academic alignment matrix. The standards can be adjusted to be part of the curriculum (grades seven through twelve), provided through adult education, or included in community college programs. The document also lists the representatives who participated in each sector’s content development and the references that were consulted to revise the CTE standards.
Standards for Career Ready Practice

California’s Standards for Career Ready Practice, which follow this overview, are based on the Career Ready Practices of the Common Career Technical Core (CCTC), a state-led initiative sponsored by the National Association of State Directors of Career Technical Education Consortium (NASDCTEc):

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. (NASDCTEc 2012, 2)

California’s 12 Standards for Career Ready Practice align with the state’s CTE anchor standards and reflect the expectations from business and industry, labor and community organizations, and secondary and postsecondary education representatives from 42 participating states.

Anchor Standards


Each anchor standard is followed by performance indicators using action verbs from the Beyond Knowledge Construct, presented in a hierarchical progression of simple tasks to more complex tasks.

Performance indicators provide guidance for curriculum design and standards measurement.
The industry-sector anchor standards have been customized with selected additions to better reflect the needs and special conditions of each industry sector.

Anchor Standard 1 (Academics) guides users to sector-specific core academic standards related to each industry sector, which are listed in the alignment matrix at the end of each sector section. Anchor standards 2–10 are deliberately aligned with one of the Common Core English language arts standards, using similar language demonstrating the natural connections between the two subjects. Anchor Standard 11 (Demonstration and Application) highlights classroom, laboratory, and workplace learning specific to the individual sector and pathways.

**Pathway Standards**

All 15 industry sectors contain multiple pathways. In order to be identified and listed for an industry sector, each pathway had to meet the following criteria:

- unique to an industry sector
- has an occupational focus
- consistent in size and scope
- composed of similar functions
- inclusive of all aspects of the industry
- includes 8–12 pathway-specific standards
- demonstrates sequence potential
- reasonable and appropriate for high school
- leads to high-skill, high-wage, or high-demand jobs
- sustainable and viable over the next 10 years

**Academic Alignment Matrix**

Each sector includes an academic alignment matrix that displays where a natural, obvious alignment occurs. Compiled by five teams of academic content experts in collaboration with industry-sector consultants, teachers, and other advisers, the alignment was selected if it was determined that the pathway standard would enhance, reinforce, or provide an application for a specific academic subject standard.

The alignment matrices include the subjects of Common Core English language arts and mathematics standards, history/social studies standards, and Next Generation Science Core Ideas. To assist with further review and implementation, each academic alignment is notated with specific pathway standards codes.
Implementation

The Standards for Career Ready Practice can be integrated with a course or incorporated into several courses over multiple school years (grades seven through twelve). The practices are expectations for all students, whether they are enrolled in a CTE program or following a more generalized course sequence. It is expected that all students who exit high school will be proficient in these practices.

The anchor standards are the basis for each of the pathways within each sector. These standards are designed to assist with the development of course curricula and instructional lesson plans; they describe what is to be taught and measured. In most cases, the teacher determines the sequence and strategies to be used to meet the needs of the student population he or she is serving.

The performance indicators that follow each standard offer guidance for both course design and student assessment. They are intended to guide course work as it is developed. The pathways organize the standards with a career focus, but they are not designed to be offered as single courses. Rather, the standards from each pathway are collected and organized into a sequence of learning. To meet local demands of business and industry and particular student populations, standards can be collected from more than one sector to create a course.

Using the academic alignment matrices as a resource, academic and CTE teachers can see where enhancements and support for both sets of standards can be initiated. CTE teachers can quickly identify academic standards that have a substantial relationship to their instruction. Likewise, academic teachers can specify individual academic standards and quickly identify related CTE standards, which will assist them in incorporating application and technology in their curricula and lessons.

The CTE Model Curriculum Standards are intended to serve the entire education community—from middle schools and high schools to postsecondary colleges and career training programs. A major aim of these standards is to prepare students for postsecondary education and training and to help them make a smooth transition into the workforce. In order for both the people and the economy of California to prosper, it is essential for all students to emerge from schools ready to pursue their career and college goals. Equipping all high school students with the knowledge and skills necessary to plan and manage their education and careers throughout their lives will help to guarantee these important outcomes. Strong CTE programs will continue to provide important educational opportunities to assist students as they pursue their dreams and strive for economic prosperity.

The CTE Model Curriculum Standards are a resource for educators and the business world for ensuring high-quality CTE learning experiences and improved student outcomes in the twenty-first-century economy.

California Standards for Career Ready Practice

Standards for Career Ready Practice describe the fundamental knowledge and skills that a career-ready student needs in order to prepare for transition to postsecondary education, career training, or the workforce. These standards are not exclusive to a career pathway, a CTE program
of study, a particular discipline, or level of education. Standards for Career Ready Practice are taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. Standards for Career Ready Practice are a valuable resource to CTE and academic teachers designing curricula and lessons in order to teach and reinforce the career-ready aims of the CTE Model Curriculum Standards and the Common Core State Standards.

1. **Apply appropriate technical skills and academic knowledge.**
   Career-ready individuals readily access and use the knowledge and skills acquired through experience and education. They make connections between abstract concepts with real-world applications and recognize the value of academic preparation for solving problems, communicating with others, calculating measures, and other work-related practices.

2. **Communicate clearly, effectively, and with reason.**
   Career-ready individuals communicate thoughts, ideas, and action plans with clarity, using written, verbal, electronic, and/or visual methods. They are skilled at interacting with others, are active listeners who speak clearly and with purpose, and are comfortable with the terminology common to the workplace environment. Career-ready individuals consider the audience for their communication and prepare accordingly to ensure the desired outcome.

3. **Develop an education and career plan aligned with personal goals.**
   Career-ready individuals take personal ownership of their own educational and career goals and manage their individual plan to attain these goals. They recognize the value of each step in the educational and experiential process and understand that nearly all career paths require ongoing education and experience to adapt to practices, procedures, and expectations of an ever-changing work environment. They seek counselors, mentors, and other experts to assist in the planning and execution of education and career plans.

4. **Apply technology to enhance productivity.**
   Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology. They understand the inherent risks—personal and organizational—of technology applications, and they take actions to prevent or mitigate these risks.

5. **Utilize critical thinking to make sense of problems and persevere in solving them.**
   Career-ready individuals recognize problems in the workplace, understand the nature of the problems, and devise effective plans to solve the problems. They thoughtfully investigate the root cause of a problem prior to introducing solutions. They carefully consider options to solve the problem and, once agreed upon, follow through to ensure the problem is resolved.

6. **Practice personal health and understand financial literacy.**
   Career-ready individuals understand the relationship between personal health and workplace performance. They contribute to their personal well-being through a healthy diet, regular exercise,
and mental health activities. Career-ready individuals also understand that financial literacy leads to a secure future that enables career success.

7. **Act as a responsible citizen in the workplace and the community.**
Career-ready individuals understand the obligations and responsibilities of being a member of a community and demonstrate this understanding every day through their interactions with others. They are aware of the impacts of their decisions on others and the environment around them and think about the short-term and long-term consequences of their actions. They are reliable and consistent in going beyond minimum expectations and in participating in activities that serve the greater good.

8. **Model integrity, ethical leadership, and effective management.**
Career-ready individuals consistently act in ways that align with personal and community-held ideals and principles. They employ ethical behaviors and actions that positively influence others. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the direction and actions of a team or organization, and they recognize the short-term and long-term effects that management’s actions and attitudes can have on productivity, morale, and organizational culture.

9. **Work productively in teams while integrating cultural and global competence.**
Career-ready individuals positively contribute to every team as both team leaders and team members. They apply an awareness of cultural differences to avoid barriers to productive and positive interaction. They interact effectively and sensitively with all members of the team and find ways to increase the engagement and contribution of other members.

10. **Demonstrate creativity and innovation.**
Career-ready individuals recommend ideas that solve problems in new and different ways and contribute to the improvement of the organization. They consider unconventional ideas and suggestions by others as solutions to issues, tasks, or problems. They discern which ideas and suggestions may have the greatest value. They seek new methods, practices, and ideas from a variety of sources and apply those ideas to their own workplace practices.
11. **Employ valid and reliable research strategies.**
Career-ready individuals employ research practices to plan and carry out investigations, create solutions, and keep abreast of the most current findings related to workplace environments and practices. They use a reliable research process to search for new information and confirm the validity of sources when considering the use and adoption of external information or practices.

12. **Understand the environmental, social, and economic impacts of decisions.**
Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact other people, organizations, the workplace, and the environment. They are aware of and utilize new technologies, understandings, procedures, and materials and adhere to regulations affecting the nature of their work. They are cognizant of impacts on the social condition, environment, workplace, and profitability of the organization.

*Note: As stated previously, California’s Standards for Career Ready Practice are based on the CCTC Career Ready Practices posted at [https://careertech.org/](https://careertech.org/) (accessed June 8, 2016).*
1.0 Academics
Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Agriculture and Natural Resources academic alignment matrix for identification of standards.

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

2.1 Recognize the elements of communication using a sender–receiver model.
2.2 Identify barriers to accurate and appropriate communication.
2.3 Interpret verbal and nonverbal communications and respond appropriately.
2.4 Demonstrate elements of written and electronic communication, such as accurate spelling, grammar, and format.
2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.
2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

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

3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.
3.2 Evaluate personal character traits, such as trust, respect, and responsibility, and understand the impact they can have on career success.
3.3 Explore how information and communication technologies are used in career planning and decision making.
3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.
3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
3.7 Recognize the importance of small business in the California and global economies.
3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate candidates.
3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options.
4.0 Technology
Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Agriculture and Natural Resources sector workplace environment. (Direct alignment with WS 11-12.6)

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

5.0 Problem Solving and Critical Thinking
Conduct short as well as more sustained research to create alternative solutions to answer a question or solve a problem unique to the Agriculture and Natural Resources sector, using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)

5.1 Identify and ask significant questions that clarify various points of view to solve problems.
5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.
5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.
5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety
Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Agriculture and Natural Resources sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)

6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
6.5 Demonstrate how to prevent and respond to work-related accidents or injuries; this includes demonstrating an understanding of ergonomics.
6.6 Maintain a safe and healthful working environment.
6.7 Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 Responsibility and Flexibility
Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Agriculture and Natural Resources sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)

7.1 Recognize how financial management impacts the economy, workforce, and community.
7.2 Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
7.3 Understand the need to adapt to changing and varied roles and responsibilities.
7.4 Practice time management and efficiency to fulfill responsibilities.
7.5 Apply high-quality techniques to product or presentation design and development.
7.6 Demonstrate knowledge and practice of responsible financial management.
7.7 Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
7.8 Explore issues of global significance and document the impact on the Agriculture and Natural Resources sector.

8.0 Ethics and Legal Responsibilities
Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms. (Direct alignment with SLS 11-12.1d)

8.1 Access, analyze, and implement quality assurance standards of practice.
8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Agriculture and Natural Resources industry sector.
8.3 Demonstrate ethical and legal practices consistent with Agriculture and Natural Resources sector workplace standards.
8.4 Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
8.5 Analyze organizational culture and practices within the workplace environment.
8.6 Adhere to copyright and intellectual property laws and regulations, and use and appropriately cite proprietary information.

8.7 Conform to rules and regulations regarding sharing of confidential information, as determined by Agriculture and Natural Resources sector laws and practices.

9.0 Leadership and Teamwork
Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Future Farmers of America (FFA) career technical student organization. (Direct alignment with SLS 11-12.1b)

9.1 Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.

9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills, as applied in groups, teams, and career technical student organization activities.

9.3 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace setting.

9.4 Explain how professional associations and organizations and associated leadership development and competitive career development activities enhance academic preparation, promote career choices, and contribute to employment opportunities.

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

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

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

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

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

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

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

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

9.13 Participate in group or team activities, including those offered by the student organization, that develop skills in leadership, cooperation, collaboration, and effective decision making.
10.0 Technical Knowledge and Skills
Apply essential technical knowledge and skills common to all pathways in the Agriculture and Natural Resources sector, following procedures when carrying out experiments or performing technical tasks. (Direct alignment with WS 11-12.6)

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

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

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

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

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

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

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

10.8 Maintain and troubleshoot equipment used in the agricultural industry.

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

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

11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued learning at the postsecondary level.

11.3 Demonstrate entrepreneurship skills and knowledge of self-employment options and innovative ventures.

11.4 Employ entrepreneurial practices and behaviors appropriate to Agriculture and Natural Resources sector opportunities.

11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.
Agriculture and Natural Resources
Pathway Standards

A. Agricultural Business Pathway
In the Agricultural Business pathway, students learn about agricultural business operation and management. Topics include accounting, finance, economics, business organization, marketing, and sales.

Sample occupations associated with this pathway:
- Agriculture Inspector
- Farm and Ranch Manager
- Sales Representative
- Business Controller
- Agricultural Credit Manager

A1.0 Demonstrate an understanding of decision-making processes within the American free-enterprise system.
  A1.1 Differentiate among the components of the American free-enterprise system and other forms of economic systems.
  A1.2 Distinguish among the main characteristics of individual proprietorships, partnerships, corporations, franchises, and cooperatives.
  A1.3 Compare the advantages and disadvantages of the types of business ownership.
  A1.4 Analyze appropriate decision-making tools and financial records to make key management decisions.
  A1.5 Analyze physical production relationships to determine optimum use levels.
  A1.6 Calculate the fixed and variable costs associated with the production of agricultural products and determine the output level that will yield maximum profit.

A2.0 Explain the fundamental economic principles of agribusiness and agricultural production.
  A2.1 Identify basic economic factors affecting agricultural production and agribusiness management decisions.
  A2.2 Communicate basic agricultural economic terminology.
  A2.3 Apply the law of supply and demand and evaluate its effect on price determination.
  A2.4 Assess how agriculture uses scarce resources to meet the needs and demands of its consumers.
  A2.5 Differentiate between elastic and inelastic supply and demand.
  A2.6 Predict how the law of diminishing returns impacts agricultural production.

A3.0 Explore the role of credit in agribusiness and agricultural production.
  A3.1 Analyze the factors that determine the cost of credit in order to select optimum credit sources (e.g., the advantages and disadvantages of borrowing from the various types of credit providers and sources for short-term, intermediate-term, and long-term credit).
A3.2 Research and discuss the criteria lenders use to evaluate repayment capacity.
A3.3 Evaluate balance sheets and cash-flow statements to determine the ability to repay loans.

A4.0 Use proper accounting principles and procedures to accomplish fiscal management and tax planning.
A4.1 Compare and contrast cash and accrual accounting systems.
A4.2 Demonstrate the use and describe the importance of budgets, income statements, balance sheets, and financial statements.
A4.3 Interpret the basis of taxation within the tax system and its impact on the economy, including the role of taxes in agribusiness.
A4.4 Analyze the role of depreciation and purchasing in tax planning and liability.
A4.5 Determine property values and complete a depreciation schedule.
A4.6 Formulate the tax obligations for an agribusiness.

A5.0 Manage risk and uncertainty.
A5.1 Explore environmental issues that impact agribusiness.
A5.2 Determine the meaning and importance of risk and uncertainty.
A5.3 Describe alternative approaches to reducing risk, including the use of insurance for product liability, property, production or income loss, and for personnel life and health.
A5.4 Maintain appropriate evidence (e.g., Point of Origin, pick/pack dates, production records) to support and defend risk management.
A5.5 Identify best practices and include in farm planning to reduce risk.
A5.6 Prepare a comprehensive risk management and contingency plan.

A6.0 Evaluate the role and value of agricultural organizations.
A6.1 Distinguish the benefits of private, public, and governmental organizations, including the value and impact of cooperatives.
A6.2 Understand how participation in organizations would be beneficial in supporting various agricultural operations.
A6.3 Identify, and electronically access, public and private agricultural organizations.

A7.0 Understand agricultural marketing systems.
A7.1 Explain how marketing functions in a free-market society.
A7.2 Compare the advantages and disadvantages of the various marketing options for agricultural products and services.
A7.3 Analyze how the law of comparative advantage affects agricultural production.
A7.4 Explore the impact of advertising, promotion, and data analysis on the marketing of agricultural products and services.
A7.5 Assess how promotion trends for agricultural products influence individuals.
A7.6 Develop a marketing plan for an agricultural product or service.

A8.0 Understand the sales of agricultural products and services.

A8.1 Determine the most effective methods for assessing customer needs and wants.
A8.2 Describe the stages in making a successful sale and the various techniques used to approach potential customers and overcome their objections.
A8.3 Examine the physiological and psychological factors that influence motivation to purchase, including the fundamental steps in making a purchase.

A9.0 Differentiate among local, national, and international agricultural markets and communicate how trade affects the economy.

A9.1 Describe how the importance of agricultural imports and exports affects state and national economies.
A9.2 Summarize how governmental, economic, and cultural factors affect international trade.
A9.3 Compare and contrast United States trade policies with those of other important trading partners.
A9.4 Research how biotechnology affects trade and global economies.
A9.5 Evaluate how different cultural values affect agricultural production and marketing.
A9.6 Explain how negotiations and bargaining agreements affect trade agreements.
A9.7 Analyze agricultural marketing strategies in other parts of the world.
B. Agricultural Mechanics Pathway

The Agricultural Mechanics pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry. Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology. Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

Sample occupations associated with this pathway:
- Agriculture Equipment Operator
- Farm Equipment Mechanic and Service Technician
- Agricultural Engineer
- Welder
- Equipment Fabricator

B1.0 Implement personal and group safety practices.
  B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
  B1.2 Integrate accepted shop management procedures and a safe working environment.
  B1.3 Safely secure loads on a variety of vehicles.

B2.0 Apply the principles of basic woodworking.
  B2.1 Identify common wood products, lumber types, and sizes.
  B2.2 Measure and lay out lumber, calculating board feet and square feet.
  B2.3 Identify, select, and implement basic fastening systems.
  B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

B3.0 Demonstrate basic electricity principles and wiring practices commonly used in agriculture.
  B3.1 Explain the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.
  B3.2 Use proper electrical test equipment for AC and direct current (DC) circuits.
  B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).
  B3.4 Implement proper basic electrical circuit and wiring techniques using nonmetallic cable and conduit as defined by the National Electric Code (NEC).
  B3.5 Interpret basic agricultural electrical plans.
  B3.6 Complete an electrical project, including interpreting a plan, following NEC code, selecting materials and components, and completing a circuit.
B4.0 Select and apply plumbing system practices commonly used in agriculture.
   B4.1 Match appropriate basic plumbing fitting skills with a variety of materials, such as copper, polyvinyl chloride (PVC), steel, polyethylene, and acrylonitrile butadiene styrene (ABS).
   B4.2 Explain the environmental influences on plumbing and irrigation system choices (e.g., filter systems, water disposal, drip vs. flood).
   B4.3 Research and communicate how various plumbing and irrigation systems are used in agriculture.
   B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, joining, and testing.

B5.0 Understand agricultural cold metal processes.
   B5.1 Identify common metals, sizes, and shapes.
   B5.2 Demonstrate basic tool-fitting skills.
   B5.3 Properly lay out materials for a given project.
   B5.4 Demonstrate basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending).
   B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Understand concrete and masonry practices commonly used in agriculture.
   B6.1 Identify and explain the use of concrete and masonry tools and demonstrate proper handling of concrete materials.
   B6.2 Practice bed preparation, concrete forms layout, and construction.
   B6.3 Complete a concrete or masonry project, including calculating volume, developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Understand oxy-fuel cutting and welding.
   B7.1 Explain the role of heat and oxidation in the cutting process.
   B7.2 Properly set up, adjust, shut down, and maintain an oxy-fuel system.
   B7.3 Flame-cut metal with an oxy-fuel cutting torch.
   B7.4 Fusion-weld mild steel with and without filler rod by using oxy-fuel equipment.
   B7.5 Repair metal objects using a variety of techniques, such as brazing or hard surfacing.

B8.0 Understand electric arc welding processes.
   B8.1 Select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
   B8.2 Read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.
B8.3 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.

B8.4 Weld a variety of joints in various positions.

B9.0 Assimilate metallurgy principles and fabrication techniques.

B9.1 Define metallurgy principles, including distortion, hardening, tempering, and annealing.

B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.

B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.

B9.4 Design project plans by using mechanical drawing techniques.

B9.5 Finish a metal project by implementing proper sequencing.

B9.6 Manipulate and finish metal by using a variety of tools, machines, and techniques (e.g., lathe, mill, CNC plasma, shears, press break, grinders, and sanders).

B9.7 Construct a welding project using any electric welding process, appropriate products, joints, and positions, which will include interpreting a plan, determining proper assembly sequence, developing a bill of materials and cutting list, selecting and acquiring materials, and developing a clear and concise fabrication contract.

B10.0 Understand small and compact engines.

B10.1 Understand and explain engine theory, including the application of mathematical and/or physical science laws for both two- and four-stroke cycle engines.

B10.2 Differentiate among types of small engines and their applications.

B10.3 Identify small-engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, and lubrication systems).

B10.4 Troubleshoot and solve problems with small engines.

B10.5 Disassemble, inspect, adjust, and reassemble a small engine.

B10.6 Look up and order parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Understand the principles and applications of various engines and machinery used in agriculture.

B11.1 Identify common agricultural machinery and implements.

B11.2 Calibrate, operate, and maintain equipment safely and efficiently.

B11.3 Summarize the theory, operation, and troubleshooting of various types of engines found on agricultural machinery, including cooling, fuel, and lubrication systems.

B11.4 Explain the theory, operation, and troubleshooting of hydraulic systems.

B11.5 Explain the theory, operation, and troubleshooting of power train and power take-off systems.

B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).
B12.0 Apply land measurement and construction techniques commonly used in agriculture.

B12.1 Describe common surveying techniques used in agriculture (e.g., leveling, land measurement, building layout, GPS).

B12.2 Draw and interpret architectural plans.

B12.3 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 Construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).

B12.7 Develop clear and concise agricultural construction contracts.
C. Agriscience Pathway

The Agriscience pathway helps students acquire a broad understanding of a variety of agricultural areas, develop an awareness of the many career opportunities in agriculture, participate in occupationally relevant experiences, and work cooperatively with a group to develop and expand leadership abilities. Students study California agriculture, agricultural business, agricultural technologies, natural resources, and animal, plant, and soil sciences.

Sample occupations associated with this pathway:

- Research Assistant/Associate
- Water Quality Specialist
- Plant Scientist
- Agriscience Teacher
- Entomologist

C1.0 Evaluate the role of agriculture in the California economy.
  C1.1 Understand the history of the agricultural industry in California.
  C1.2 Describe how California agriculture affects the quality of life.
  C1.3 Analyze the interrelationship of California agriculture and society at the local, state, national, and international levels.
  C1.4 Research the economic impact of leading California agricultural commodities.
  C1.5 Assess the economic impact of major natural resources in California.
  C1.6 Distinguish between the economic importance of major agricultural exports and imports.
  C1.7 Explore factors that affect food safety and producers’ responsibilities to consumers.

C2.0 Examine the interrelationship between agriculture and the environment.
  C2.1 Identify important agricultural environmental impacts on soil, water, and air.
  C2.2 Explain current environmental challenges related to agriculture.
  C2.3 Summarize how natural resources are used in agriculture.
  C2.4 Compare and contrast practices for conserving renewable and nonrenewable resources.
  C2.5 Research how new energy sources are developed from agricultural products (e.g., gas-cogeneration and ethanol).

C3.0 Analyze the effects of technology on agriculture.
  C3.1 Describe how technology affects the logistics of moving an agricultural commodity from producer to consumer.
  C3.2 Understand how technology influences factors such as labor, efficiency, diversity, availability, mechanization, and communication.
C3.3 Communicate public concern for technological advancements in agriculture, such as genetically modified organisms.

C3.4 Research the laws and regulations concerning biotechnology.

C3.5 Integrate the use of technology when collecting and analyzing data.

C4.0 Determine the importance of animals, the domestication of animals, and the role of animals in modern society.

C4.1 Understand the evolution and roles of domesticated animals in society.

C4.2 Differentiate between domestication and natural selection.

C4.3 Compile the modern-day uses of animals and animal by-products.

C4.4 Defend various points of view regarding the use of animals.

C4.5 Research unique and alternative uses of animals (e.g., therapeutic riding programs and companion animals).

C5.0 Compare the structure and function of plants, animals, bacteria, and viruses.

C5.1 Identify the function of cells.

C5.2 Analyze the anatomy and physiology of cells.

C5.3 Understand various cell actions, such as osmosis and cell division.

C5.4 Compare and contrast plant and animal cells, bacteria, and viruses.

C6.0 Explore animal anatomy and systems.

C6.1 State the names, and find the locations, of the external anatomy of animals.

C6.2 Explain the anatomy and major functions of vertebrate systems, including digestive, reproductive, circulatory, nervous, muscular, skeletal, respiratory, and endocrine systems.

C7.0 Comprehend basic animal genetics.

C7.1 Differentiate between genotype and phenotype and describe how dominant and recessive genes function.

C7.2 Compare genetic characteristics among cattle, sheep, swine, and horse breeds.

C7.3 Predict phenotype and genotype ratios by using a Punnett Square.

C7.4 Explain the fertilization process.

C7.5 Distinguish between the purpose and processes of mitosis and meiosis.

C8.0 Understand fundamental animal nutrition and feeding.

C8.1 Identify types of nutrients required by farm animals (e.g., proteins, minerals, vitamins, carbohydrates, fats/oils, water).

C8.2 Analyze suitable common feed ingredients, including forages, roughages, concentrates, and supplements for ruminant, monogastric, equine, and avian digestive systems.

C8.3 Understand basic animal feeding guidelines and evaluate sample feeding programs for various species, including space requirements and economic considerations.
C9.0 Evaluate basic animal health.

  C9.1 Assess the appearance and behavior of a normal, healthy animal.
  C9.2 Explain the ways in which housing, sanitation, and nutrition influence animal health and behavior.
  C9.3 Analyze the causes and controls of common animal diseases.
  C9.4 Summarize effective techniques for controlling parasites and explain why controlling parasites is important.
  C9.5 Research the legal requirements for the procurement, storage, methods of application, and withdrawal times of animal medications, and know proper equipment handling and disposal techniques.

C10.0 Explain soil science principles.

  C10.1 Recognize the major soil components and types.
  C10.2 Summarize how soil texture, structure, pH, and salinity affect plant growth.
  C10.3 Assess water delivery and irrigation system options.
  C10.4 Differentiate among the types, uses, and applications of amendments and fertilizers.

C11.0 Analyze plant growth and development.

  C11.1 Understand the anatomy and functions of plant systems and structures.
  C11.2 Identify plant growth requirements.
  C11.3 Discern between annual, biennial, and perennial life cycles.
  C11.4 Examine sexual and asexual reproduction in plants.
  C11.5 Understand photosynthesis and the roles of the sun, chlorophyll, sugar, oxygen, carbon dioxide, and water in the process.
  C11.6 Summarize the respiration process in the breakdown of food and organic matter.

C12.0 Understand fundamental pest management.

  C12.1 Classify agricultural pests (e.g., insects, weeds, disease, and vertebrates).
  C12.2 Compare chemical, mechanical, cultural, and biological methods of plant pest control.
  C12.3 Analyze the major principles, advantages, and disadvantages of integrated pest management.

C13.0 Design agricultural experiments using the scientific method.

  C13.1 State the steps of the scientific method.
  C13.2 Analyze an agricultural problem and devise a solution based on the scientific method.
D. Animal Science Pathway
In the Animal Science pathway, students study large, small, and specialty animals. Students explore the necessary elements, such as diet, genetics, habitat, and behavior, to create humane, ecologically, and economically sustainable animal production systems. The pathway includes the study of animal anatomy and physiology, nutrition, reproduction, genetics, health and welfare, animal production, technology, and the management and processing of animal products and by-products.

Sample occupations associated with this pathway:
- Veterinarian Technician
- Animal Caretaker/Kennel Operator
- Animal Breeder
- Ranch Manager
- Feed Nutritionist

D1.0 Evaluate the necessary elements for proper animal housing and animal-handling equipment.
  D1.1 Design an animal facility focusing on appropriate space and location requirements for habitat, housing, feed, and water.
  D1.2 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.
  D1.3 Interpret animal behaviors and execute protocols for safe handling of animals.
  D1.4 Defend the purpose and the safe and humane use of animal husbandry tools, such as hoof trimmers, electric shears, elastrators, dehorning tools, and scales.

D2.0 Apply principles of animal nutrition to ensure the proper growth, development, reproduction, and economic production of animals.
  D2.1 Assess the flow of nutrients from the soil, through the animal, and back to the soil.
  D2.2 Explore the principles for providing proper, balanced rations for a variety of production stages in ruminants and monogastrics.
  D2.3 Compare the digestive processes of the ruminant, monogastric, avian, and equine digestive systems.
  D2.4 Distinguish how animal nutrition is affected by the digestive, endocrine, and circulatory systems.

D3.0 Apply principles of comparative anatomy and physiology to uses within various animal systems.
  D3.1 Compare and contrast animal cells, tissues, organs, and body systems.
  D3.2 Develop efficient procedures to produce consistently high-quality animals that are well suited for their intended purposes.
  D3.3 Relate the importance of animal organs to the health, growth, and reproduction of animals.
D4.0 Demonstrate understanding of animal reproduction, including the function of reproductive organs.
   D4.1 Illustrate animal conception, including estrus cycles, ovulation, and insemination.
   D4.2 Research the gestation process and basic fetal development.
   D4.3 Explain the parturition process, including the identification of potential problems and their solutions.
   D4.4 Select animal breeding methods based on reproductive and economic efficiency.
   D4.5 Select a breeding system based on the principles of genetics.

D5.0 Discuss animal inheritance and selection principles, including the structure and role of deoxyribonucleic acid (DNA).
   D5.1 Evaluate a group of animals for desired qualities, and discern among them for breeding selection.
   D5.2 Select animals, based on quantitative breeding values, for specific characteristics.
   D5.3 Research and discuss current technology used to measure desirable traits.
   D5.4 Predict phenotypic and genotypic results of a dominant and recessive gene pair.
   D5.5 Research the role of mutations, both naturally occurring and artificially induced, and hybrids in animal genetics.

D6.0 Prescribe and implement a prevention treatment program for animal diseases, parasites, and other disorders.
   D6.1 Evaluate the signs of normal health in contrast to illness and disease.
   D6.2 Analyze the importance of animal behavior in diagnosing animal sickness and disease.
   D6.3 Research common pathogens, vectors, and hosts that cause disease in animals.
   D6.4 Evaluate preventative measures for controlling and limiting the spread of diseases, parasites, and disorders among animals.
   D6.5 Discuss procedures used at the local, state, and national levels to ensure biosecurity of the animal industry.
   D6.6 Explain the health risk of zoonotic diseases to humans, their historical influence, and future implications.
   D6.7 Discuss the impacts on local, national, and global economies, as well as on consumers and producers, when animal diseases are not appropriately contained and eradicated.

D7.0 Explore common pasture and rangeland management practices and their impact on a balanced ecosystem.
   D7.1 Evaluate a rangeland and identify methods of rangeland improvement used in an effective animal production program.
   D7.2 Summarize how rangeland management practices affect pasture production, erosion control, and the general balance of the ecosystem.
D7.3 Develop a management plan for rangelands, including how to calculate carrying capacity, for a variety of animal species and locations.

D7.4 Evaluate a plan to balance rangeland use for animal grazing and for wildlife habitat.

D8.0 Explain challenges associated with animal waste management.

D8.1 Assess treatment and disposal management systems for animal waste.

D8.2 Compare various methods for using animal waste and the environmental impacts associated with each method.

D8.3 Research the health and safety regulations that are an integral part of properly managed animal waste systems.

D9.0 Assess animal welfare concerns and management practices that support animal welfare.

D9.1 Evaluate the early warning signs of animal distress and how to rectify the problem.

D9.2 Discuss consumer concerns with animal production practices relative to human health.

D9.3 Summarize federal and state animal welfare laws and regulations, such as those dealing with abandoned and neglected animals, animal fighting, euthanasia, and medical research.

D9.4 Research the regulations for humane transportation and harvesting of animals, such as those delineated by the U.S. Department of Agriculture (USDA) Food Safety and Inspection Service and the Humane Methods of Slaughter Act.

D10.0 Demonstrate understanding of the production of large animals (e.g., cattle, horses, swine, sheep, goats) and small animals (e.g., poultry, cavy, rabbits).

D10.1 Formulate and implement optimum requirements for diet, genetics, habitat, and behavior in the production of large and small animals.

D10.2 Develop, maintain, and use growth and management records for large or small animals to make data-driven management decisions.

D11.0 Demonstrate understanding of the production of specialty animals (e.g., fish, marine animals, llamas, and tall, flightless birds).

D11.1 Assess specialty animals’ role in agriculture (e.g., fish farms, pack animals, working dogs).

D11.2 Explore the unique nutrition, health, and habitat requirements for specialty animals.

D11.3 Synthesize and implement optimum requirements for diet, genetics, habitat, and behavior in the production of specialty animals.

D11.4 Develop, maintain, and utilize growth and management records for specialty animals to make data-driven management decisions.
D12.0 Understand how animal products and by-products are processed and marketed.

D12.1 Research animal harvest, carcass inspection and grading, and meat processing safety regulations and practices and the removal and disposal of nonedible by-products, such as those outlined in Hazard Analysis and Critical Control Point, Sanitation Standard Operating Procedures, and good manufacturing practices documents.

D12.2 Compare the relative importance of the major meat, dairy, and egg classifications, including the per-capita consumption and nutritive value of those classifications.

D12.3 Discuss how meat-based, dairy, and egg retail products are produced.

D12.4 Describe how nonmeat products, such as wool, pelts, hides, and by-products, are harvested and processed.

D12.5 Evaluate how meat products and nonmeat products are marketed.

D12.6 Compare the value of animal by-products to nonagricultural industries.

D12.7 Apply point-of-origin safety and sanitation procedures in the production, harvest, handling, processing, and storing of meat products.
E. Forestry and Natural Resources Pathway

The Forestry and Natural Resources pathway helps students understand the relationships between California's natural resources and the environment. Topics include energy and nutrient cycles, water resources and management, soil conservation, wildlife preservation and management, forest and fire management, and lumber production. In addition, students study the outdoor recreation industry and multiple-use management.

Sample occupations associated with this pathway:

- Forestry Technician
- Park Ranger
- Fish Hatchery Technician
- Logging Operation Inspector
- Biological Science Technician

E1.0 Understand the importance of energy and energy cycles.

\[ \text{E1.1} \quad \text{Diagram the oxygen, carbon, nitrogen, and water cycles.} \]

\[ \text{E1.2} \quad \text{Differentiate between renewable and nonrenewable energy sources.} \]

\[ \text{E1.3} \quad \text{Differentiate between natural resource management conservation strategies and preservation strategies.} \]

\[ \text{E1.4} \quad \text{Compare the effects on air and water quality of using different forms of energy.} \]

\[ \text{E1.5} \quad \text{Analyze the way in which human activities influence energy cycles and natural resource management.} \]

E2.0 Understand air and water use, their management practices, and conservation strategies.

\[ \text{E2.1} \quad \text{Explain the government's role in regulating air, soil, and water use management practices and conservation strategies.} \]

\[ \text{E2.2} \quad \text{Research and discuss air and water conservation issues.} \]

\[ \text{E2.3} \quad \text{Define appropriate water conservation measures.} \]

\[ \text{E2.4} \quad \text{Interpret the component of a plan that monitors water quality.} \]

\[ \text{E2.5} \quad \text{Interpret the component of a plan that monitors air quality.} \]

\[ \text{E2.6} \quad \text{Analyze the way in which water management affects the environment and human needs.} \]

E3.0 Explore soil composition and soil management.

\[ \text{E3.1} \quad \text{Demonstrate techniques used to classify soils.} \]

\[ \text{E3.2} \quad \text{Explain the reasons for, and importance of, soil conservation.} \]

\[ \text{E3.3} \quad \text{Analyze soils found in the different natural resource management areas.} \]
E3.4 Develop and implement a soil management plan for a natural resource management area.

E3.5 Understand how to analyze existing soil surveys to develop effective management plans.

E4.0 Explore rangeland management.
   E4.1 Map the locations of major U.S. and California rangeland areas.
   E4.2 Summarize the interrelationship of rangeland management, the environment, wildlife management, and the livestock industry.
   E4.3 Define practices used to improve rangeland quality.
   E4.4 Analyze the carrying capacity in various rangelands for both wildlife species and domestic livestock.
   E4.5 Distinguish among different browse and forage species in California rangelands.
   E4.6 Evaluate a rangeland and develop a rangeland monitoring plan.
   E4.7 Analyze the requirements and rights accompanying public land grazing permits and the government agencies involved (e.g., Bureau of Land Management and U.S. Forest Service) and abide by specific laws pertaining to natural resource systems.

E5.0 Investigate wildlife management and habitat.
   E5.1 Describe the relationship between habitat and wildlife population.
   E5.2 List habitat requirements for different species and identify factors that influence population dynamics.
   E5.3 Determine existing wildlife species populations.
   E5.4 Explain mammalian and avian reproductive processes and infer how nutrition and habitat affect reproduction and population.
   E5.5 Differentiate among a variety of management practices used to manage wildlife populations for hunting and other recreational purposes.
   E5.6 Analyze the economic and environmental significance of sport hunting and fishing industries.
   E5.7 Research and report on the purpose, history, terminology, and challenges of the Endangered Species Act and current activities related to the Act.

E6.0 Understand aquatic resource use and management.
   E6.1 Summarize the different types of aquatic resources.
   E6.2 Identify and describe the major body parts, digestive systems, and reproductive organs of aquatic species.
   E6.3 Determine the populations of existing aquatic species using a variety of methods.
   E6.4 Analyze the relationship between water quality and aquatic species habitat.
E6.5   Explore a variety of management practices for managing aquatic species for sport fishing and other purposes.

E6.6   Make financial and production decisions and maintain growth and management records for a selected aquatic species.

E7.0   Understand the outdoor recreation industry.
   E7.1   List the potential environmental impacts of recreational activities and describe how to manage the resources affected.
   E7.2   Demonstrate basic survival skills and first aid procedures.
   E7.3   Construct and maintain trails.
   E7.4   Select appropriate recreational gear for trips of varying types and durations and how to use it safely and appropriately (for minimum environmental impact).
   E7.5   Set up a campsite for minimum environmental impact.

E8.0   Explore basic plant physiology, anatomy, and taxonomy.
   E8.1   Use scientific method to classify animals, including order, family, genus, and species.
   E8.2   Use a dichotomous key to identify plants and animals.
   E8.3   Identify local trees, shrubs, grasses, forbs, and wildlife species by common name.
   E8.4   Recognize and explain the factors that influence plant growth, such as respiration, temperature, nutrients, and photosynthesis.

E9.0   Explore the role of fire in natural resource management.
   E9.1   Differentiate between desirable and undesirable fire in forest and rangeland ecosystems.
   E9.2   Explain the significance of each of the components of the “fire triangle.”
   E9.3   Know appropriate wildland fire-suppression practices.
   E9.4   Develop a fire-control plan.
   E9.5   Use fire-control tools safely.
   E9.6   Research and report on the training requirements for fire-suppression certification.

E10.0  Implement forest management practices.
   E10.1  Describe how social, political, and economic factors can affect the use of forests.
   E10.2  Discuss the California Forest Practice Act and the requirements for Timber Harvest and Habitat Conservation Plans.
   E10.3  Analyze forest management systems (e.g., sustained yield, watershed management, ecosystem management, multiple-use management).
   E10.4  Analyze harvest and renewability (e.g., reseeding and thinning) systems and identify the impact of each on the land.
E10.5 Explain silvicultural systems and skills and use appropriate related tools.

E10.6 Identify and diagnose damage from destructive insects, diseases, and weather and choose methods for their management.

E11.0 Understand the basic concepts of measurement, surveying, and mapping.
   E11.1 Describe the Public Land Survey System.
   E11.2 Use surveying equipment, including global positioning satellites, maps, and a compass, to determine area, boundaries, and elevation differences.
   E11.3 Apply timber-cruising and log-scaling skills to determine timber and log volume for management and marketing.
   E11.4 Create a management plan map that includes layer information and data points from global information systems.

E12.0 Produce, harvest, process, and market products from natural resource industries.
   E12.1 Explain the marketing processes and manufacturing standards for a variety of natural resource products, including mining, quarrying, and drilling.
   E12.2 Process natural resource products adhering to manufacturing standards.
   E12.3 Analyze the production of specialty and seasonal products from natural resources.
   E12.4 Compare different wood types and their uses.
   E12.5 Diagram lumber manufacturing processes.

E13.0 Understand public and private land issues.
   E13.1 Interpret the differences between publicly and privately held lands.
   E13.2 Explain the differences between public land designations (e.g., State Park, National Forest, wilderness areas, wild and scenic areas).
   E13.3 Compare the role of public and private property rights and how they affect agriculture.
   E13.4 Describe the role of government in managing public and private property rights.
F. Ornamental Horticulture Pathway

The Ornamental Horticulture pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture, as well as landscaping design, installation, and maintenance.

Sample occupations associated with this pathway:

- Florist/Floral Designer
- Landscape Design/Architect
- Hydroponics Grower
- Botanical Specialist
- Nursery/Greenhouse Manager

F1.0 Compare and contrast the hierarchical classification of plants.
   F1.1 Practice how to classify and identify plants by order, family, genus, and species.
   F1.2 Demonstrate how to identify plants by using a dichotomous key.
   F1.3 Illustrate how common plant parts are used to classify the plants.
   F1.4 Distinguish how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.
   F1.5 Identify and select plants for local landscape applications.

F2.0 Summarize plant physiology and growth principles.
   F2.1 Understand plant systems, nutrient transportation, structure, and energy storage.
   F2.2 Diagram the seed's essential parts and explain the functions of each.
   F2.3 Explain how primary, secondary, and trace elements are used in plant growth.
   F2.4 Experiment with the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.
   F2.5 Differentiate the tissues seen in a cross section of woody and herbaceous plants.
   F2.6 Explore the factors that affect plant growth.

F3.0 Demonstrate plant propagation techniques.
   F3.1 Explain the different forms of sexual and asexual plant reproduction.
   F3.2 Demonstrate the various techniques for successful plant propagation (e.g., Budding, grafting, cuttings, seeds).
   F3.3 Utilize and monitor plant reproduction for the development of a saleable product.

F4.0 Develop and implement a plan for basic integrated pest management.
   F4.1 Read and interpret pesticide labels and understand safe pesticide management practices.
F4.2 Research how pesticide regulations and government agencies affect agriculture.
F4.3 Identify common horticultural pests and diseases and methods of controlling them.
F4.4 Design an integrated approach to solving plant problems.

F5.0 Summarize water and soil (media) management practices.
F5.1 Explain how basic soil science and water principles affect plant growth.
F5.2 Illustrate basic irrigation design and installation methods.
F5.3 Prepare and amend soils, implement soil conservation methods, and compare results.
F5.4 Research major issues related to water sources and water quality.
F5.5 Explain the components of soilless media and test the use of those media in various types of containers.

F6.0 Apply ornamental plant nutrition practices.
F6.1 Analyze how primary and secondary nutrients and trace elements affect ornamental plants.
F6.2 Use basic nutrient testing procedures on soil and plant tissue.
F6.3 Analyze organic and inorganic fertilizers to understand their appropriate uses.
F6.4 Read and interpret labels to properly apply fertilizers.

F7.0 Develop a plan for the selection, installation, and maintenance of turf.
F7.1 Explain the selection and management of landscape and sports field turf.
F7.2 Demonstrate how to select, install, and maintain a designated turf grass area.
F7.3 Distinguish how the use of turf benefits the environment.

F8.0 Employ nursery production principles.
F8.1 Demonstrate the proper use of production facilities and common nursery equipment.
F8.2 Use common nursery production practices.
F8.3 Demonstrate how to propagate and maintain a horticultural crop to the point of sale.
F8.4 Design a marketing and merchandising strategy to use in nursery production.

F9.0 Demonstrate the proper use of containers and horticultural tools, equipment, and facilities.
F9.1 Use different types of containers and demonstrate how to maintain growing containers in controlled environments.
F9.2 Operate and maintain selected hand and power equipment safely and appropriately.
F9.3 Select proper tools for specific horticultural jobs.
F9.4 Install landscape components and electrical, land, and water features.
F10.0 Understand basic landscape planning, design, construction, and maintenance.
   F10.1 Utilize terms associated with landscape and design in appropriate context.
   F10.2 Produce a residential design, including how to render design to scale using design technology and principles.
   F10.3 Use proper landscape planting and maintenance practices.
   F10.4 Prune ornamental shrubs, trees, and fruit trees.
   F10.5 Produce clear and concise landscape business contracts.

F11.0 Understand basic floral design principles.
   F11.1 Demonstrate 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 Develop a marketing and merchandising strategy to use in the floral industry.
G. Plant and Soil Science Pathway
The Plant and Soil Science pathway covers topics such as plant classification, physiology, reproduction, plant breeding, biotechnology, and pathology. In addition, students learn about soil management, water, pests, and equipment, as well as cultural and harvest practices.

Sample occupations associated with this pathway:
- Soil Conservationist
- Environmental Analyst
- Plant and Soil Scientist
- Crop Consultant
- Pest Control Advisor

G1.0 Apply plant classification principles.
   G1.1 Classify and identify plants by order, family, genus, and species.
   G1.2 Practice how to identify plants by using a dichotomous key.
   G1.3 Demonstrate how common plant parts are used to classify the plants.
   G1.4 Communicate the differences between, and uses of, native and nonnative plants.
   G1.5 Distinguish the differences between monocots and dicots.
   G1.6 Explain the differences between plants under production and weeds.

G2.0 Explore cell biology.
   G2.1 Compare differences between prokaryotic cells and plant and animal eukaryotic cells and how viruses differ from them in complexity and general structure.
   G2.2 Test plant cellular function reactions when plants are grown under different conditions.
   G2.3 Explain functions organelles play in the health of the cell.
   G2.4 Recognize the part of the cell that is responsible for the genetic information that controls plant growth and development.
   G2.5 Summarize plant inheritance principles, including the structure and role of DNA.
   G2.6 List which organelles in plant cells carry out photosynthesis.

G3.0 Understand plant physiology and growth principles.
   G3.1 Investigate plant systems, nutrient transportation, and energy storage.
   G3.2 Label the seed’s essential parts and describe their functions.
   G3.3 Discern how primary, secondary, and trace elements are used in plant growth.
   G3.4 Research the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.
G3.5 Identify the tissues seen in a cross section of woody and herbaceous plants.

G3.6 Conduct experiment(s) testing the factors that affect plant growth and predict plant response.

G4.0 Demonstrate an understanding of sexual and asexual reproduction of plants.

G4.1 Explain the different forms of sexual and asexual plant reproduction.

G4.2 Demonstrate the various techniques for successful plant propagation (e.g., budding, grafting, cuttings, and seeds).

G4.3 Use the proper sterile technique used in tissue culture.

G5.0 Assess pest problems and management.

G5.1 Demonstrate how to categorize insects as pests, beneficial or neutral, and describe their roles.

G5.2 Explain the role of other pests, such as nematodes, molds, mildews, and weeds.

G5.3 Compare and contrast conventional, sustainable, and organic management methods to prevent or treat plant disease symptoms.

G5.4 Use integrated pest management to prevent, treat, and control plant disease symptoms (including conventional, sustainable, and organic management methods).

G5.5 Research how biotechnology can be used to manage pests.

G6.0 Assess the role of soils in plant production.

G6.1 Understand soil types, soil texture, structure, and bulk density and explain the U.S. Department of Agriculture (USDA) soil-quality rating procedure.

G6.2 Analyze soil properties necessary for successful plant production, including pH, electrical conductivity (EC), and essential nutrients.

G6.3 Explain soil biology and diagram the cycles in nature as related to the soil food chain.

G6.4 Research how soil biology affects the environment and natural resources.

G7.0 Integrate effective tillage and soil conservation management practices.

G7.1 Plan how to effectively manage and conserve soil through conventional, minimum, conservation, and no-tillage irrigation and through drainage and tillage practices.

G7.2 Assess how global positioning systems, surveying, laser leveling, and other tillage practices conserve soil.

G7.3 Use tools such as the USDA and the local Resource Conservation District soil survey maps to determine appropriate soil management practices.

G8.0 Evaluate effective water management practices.

G8.1 Summarize California water history, current issues, water rights, water law, and water transfer through different distribution projects throughout the state.

G8.2 Research and describe the local, state, and federal agencies that regulate water quality and availability in California.
G8.3 Define the definition of a watershed and explain how it is used to measure water quality.

G8.4 Explain effective water management and conservation practices, including the use of tailwater ponds.

G8.5 Use water-testing standards and perform bioassay and macro-invertebrate protocols to assess water quality.

G9.0 Explain the concept of an “agrosystem” approach to production.

G9.1 Identify and classify the plants and animals in an agricultural system (as producers, consumers, or decomposers).

G9.2 Compare and contrast the elements of conventional, sustainable, and organic production systems.

G9.3 Differentiate among the components of “whole-system management.”

G10.0 Apply local crop management and production practices.

G10.1 Practice local cultural techniques, including monitoring, pruning, fertilization, planting, irrigation, harvest treatments, processing, and packaging practices for various tree, grain, hay, and vegetable classes.

G10.2 Explain common marketing and shipping characteristics of local commodities.

G10.3 Interpret general maturity and harvest-time guidelines for specific local plant products.

G10.4 Apply point-of-origin safety and sanitation procedures in the production, harvesting, handling, processing, and storing of edible plant products.

G11.0 Demonstrate competence in applications of scientific principles and techniques in plant science.

G11.1 Research how changing technology, such as micro-propagation, biological pest controls, and genetic engineering (including DNA extraction and gel electrophoresis), affects plant production, yields, and management.

G11.2 Explain the various technology advancements that affect plant and soil science, such as global positioning systems, global information systems, variable rate technology, and remote sensing.

G11.3 Assess how herbicide-resistant plant genes can affect the environment.

G11.4 Communicate how genetic engineering techniques have been used to improve crop yields.

G11.5 Compare and contrast the effects of agricultural biotechnology, including genetically modified organisms, on the agriculture industry and the larger society and the pros and cons of such use.
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<thead>
<tr>
<th>AGRICULTURE AND NATURAL RESOURCES</th>
<th>PATHWAYS</th>
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<tr>
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<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
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<td>9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.</td>
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<td>9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).</td>
<td>A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0</td>
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<td>9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</td>
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</table>
# Academic Alignment Matrix

## Agriculture and Natural Resources

### Reading Standards for Literacy in Science and Technical Subjects – RLST (Standard Area, Grade Level, Standard #) (continued)

<table>
<thead>
<tr>
<th>A. Agricultural Business</th>
<th>B. Agricultural Mechanics</th>
<th>C. Agriscience</th>
<th>D. Animal Science</th>
<th>E. Forestry and Natural Resources</th>
<th>F. Ornamental Horticulture</th>
<th>G. Plant and Soil Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2.0</td>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
<td>C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0</td>
<td>D5.0, D6.0, D7.0, D10.0, D11.0, D12.0</td>
<td>E1.0, E2.0, E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0, E13.0</td>
<td>F1.0, F2.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0</td>
<td>G6.0, G7.0, G8.0, G10.0</td>
</tr>
</tbody>
</table>

### Writing Standards – WS (Standard Area, Grade Level, Standard #)

<table>
<thead>
<tr>
<th>A. Agricultural Business</th>
<th>B. Agricultural Mechanics</th>
<th>C. Agriscience</th>
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</thead>
<tbody>
<tr>
<td>A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0</td>
<td>B12.0</td>
<td>C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C10.0, C11.0, C12.0, C13.0</td>
<td>D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0</td>
<td>E1.0, E2.0, E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0, E13.0</td>
<td>F1.0, F2.0, F3.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0, F11.0</td>
<td>G1.0, G2.0, G3.0, G4.0, G5.0, G6.0, G7.0, G8.0, G9.0, G10.0, G11.0</td>
</tr>
</tbody>
</table>

1-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.

9-10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

9-10.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

9-10.8 Gather relevant information from multiple authoritative print and digital sources (primary and secondary) using advanced searches effectively; assess the usefulness of each source in answering the research questions; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citations.
<table>
<thead>
<tr>
<th>AGRICULTURE AND NATURAL RESOURCES</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Agricultural Business</td>
<td>B. Agricultural Mechanics</td>
</tr>
</tbody>
</table>

**Writing Standards – WS (Standard Area, Grade Level, Standard #) (continued)**

9–10.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

| A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0 | B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B9.0, B10.0 | C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0, C13.0 | D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0 | E1.0, E2.0, E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0, E13.0 | F1.0, F2.0, F3.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0, F11.0 | G1.0, G2.0, G3.0, G4.0, G5.0, G6.0, G7.0, G8.0, G9.0, G10.0, G11.0 |

11–12.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

| A1.0, A2.0, A5.0, A7.0, A9.0 | B12.0 | C13.0 | D1.0 | E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0 | F1.0, F2.0, F3.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0, F11.0 | G1.0, G2.0, G3.0, G4.0, G5.0, G6.0, G7.0, G8.0, G9.0, G10.0, G11.0 |

11–12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

| A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0 | B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B9.0, B10.0, B12.0 | C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0, C13.0 | D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0 | E1.0, E2.0, E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0, E13.0 | F1.0, F2.0, F3.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0, F11.0 | G1.0, G2.0, G3.0, G4.0, G5.0, G6.0, G7.0, G8.0, G9.0, G10.0, G11.0 |

11–12.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

| A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0 | B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B9.0, B10.0, B12.0 | D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0 | E1.0, E2.0, E3.0, E4.0, E5.0, E6.0, E7.0, E8.0, E9.0, E10.0, E11.0, E12.0, E13.0 | F1.0, F2.0, F3.0, F4.0, F5.0, F6.0, F7.0, F8.0, F9.0, F10.0, F11.0 | G1.0, G2.0, G3.0, G4.0, G5.0, G6.0, G7.0, G8.0, G9.0, G10.0, G11.0 |

11–12.10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

| A2.0, A5.0, A7.0, A9.0, | B11.0, B12.0 | C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0, C13.0 | D1.0, D4.0, D5.0, D6.0, D7.0, D9.0 | E2.0, E3.0, E5.0, E10.0, E13.0 | F8.0, F11.0 | G5.0, G6.0, G8.0, G11.0 |
# Academic Alignment Matrix

## AGRICULTURE AND NATURAL RESOURCES

### MATHEMATICS

#### Algebra – A-CED – Creating Equations

*Create equations that describe numbers or relationships*

1. Create equations and inequalities in one variable including ones with absolute value and use them to solve problems in and out of context, including equations arising from linear functions.
   1.1 Judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>C13.0</td>
<td>E10.0</td>
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</tr>
</tbody>
</table>

#### Algebra – A-APR – Arithmetic with Polynomials and Rational Expressions

*Perform arithmetic operations on polynomials*

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication: add, subtract, and multiply polynomials, and divide polynomials by monomials. Solve problems in and out of context. (Common Core Standard A-APR-11)

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td></td>
<td>C13.0</td>
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</tbody>
</table>

#### Algebra – A-REI – Reasoning with Equations and Inequalities

*Solve equations and inequalities in one variable*

3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
   3.1 Solve equations and inequalities involving absolute value. (CA Standard Algebra I – 3.0 and CA Standard Algebra II – 1.0)

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td></td>
<td>C13.0</td>
<td>D5.0</td>
<td>E10.0</td>
</tr>
</tbody>
</table>
### Academic Alignment Matrix

#### AGRICULTURE AND NATURAL RESOURCES

<table>
<thead>
<tr>
<th>Functions – F-IF – Interpreting Functions</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Interpret functions that arise in applications in terms of the context</em></td>
<td></td>
</tr>
</tbody>
</table>
| 4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. | A1.0, A2.0  
B6.0, B9.0, B12.0  
C8.0, C10.0  
D4.0, D7.0  
E4.0, E9.0, E11.0  
F5.0, F7.0, F10.0, F11.0  
G7.0  
C13.0  
D5.0 |

<table>
<thead>
<tr>
<th>Geometry – G-CO – Congruence</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Make geometric constructions</em></td>
<td></td>
</tr>
</tbody>
</table>
| 12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line. | B6.0, B9.0, B12.0  
D1.0  
E11.0  
F5.0, F10.0  
G7.0 |

<table>
<thead>
<tr>
<th>Geometry – G-MD – Geometric Measurement and Dimensions</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Explain volume formulas and use them to solve problems</em></td>
<td></td>
</tr>
</tbody>
</table>
| 3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. | B6.0, B12.0  
D1.0, D7.0  
E4.0, E11.0  
F5.0, F10.0  
G7.0 |

<table>
<thead>
<tr>
<th>Geometry – G-MG – Modeling with Geometry</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Apply geometric concepts in modeling situations</em></td>
<td></td>
</tr>
</tbody>
</table>
| 2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot). | B4.0, B6.0, B11.0, B12.0  
D1.0, D7.0  
E4.0, E9.0, E11.0  
F5.0, F7.0, F10.0, F11.0  
G7.0  
C8.0, C10.0  
D1.0, D7.0  
E4.0, E9.0, E11.0  
F5.0, F7.0, F10.0, F11.0  
G7.0 |
# Academic Alignment Matrix

## AGRICULTURE AND NATURAL RESOURCES

<table>
<thead>
<tr>
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<th>PATHWAYS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A.</td>
</tr>
<tr>
<td></td>
<td>Agricultural Business</td>
</tr>
<tr>
<td><strong>Geometry – G-SRT – Similarity, Right Triangles, and Trigonometry</strong></td>
<td></td>
</tr>
<tr>
<td><em>Define trigonometric ratios and solve problems involving right triangles</em></td>
<td></td>
</tr>
<tr>
<td>8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.</td>
<td>B6.0, B9.0, B12.0</td>
</tr>
<tr>
<td>8.1 Know and use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles. (CA Standard Geometry – 20.0)</td>
<td></td>
</tr>
<tr>
<td><strong>Statistics and Probability – S-IC – Making Inferences and Justifying Conclusions</strong></td>
<td></td>
</tr>
<tr>
<td><em>Understand and evaluate random processes underlying statistical experiments</em></td>
<td></td>
</tr>
<tr>
<td>1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.</td>
<td>A1.0, A2.0</td>
</tr>
<tr>
<td><em>Make inferences and justify conclusions from sample surveys, experiments, and observational studies</em></td>
<td></td>
</tr>
<tr>
<td>3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.</td>
<td>A1.0, A2.0, A7.0</td>
</tr>
<tr>
<td>5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.</td>
<td>A1.0, A2.0</td>
</tr>
<tr>
<td>AGRICULTURE AND NATURAL RESOURCES</td>
<td>PATHWAYS</td>
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<tr>
<td>----------------------------------</td>
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</tr>
<tr>
<td></td>
<td>A. Agricultural Business</td>
</tr>
<tr>
<td>Statistics and Probability – S-ID – Interpreting Categorical and Quantitative Data</td>
<td></td>
</tr>
<tr>
<td><strong>Summarize, represent, and interpret data on a single count or measurement variable</strong></td>
<td></td>
</tr>
<tr>
<td>1. Represent data with plots on the real number line (dot plots, histograms, and box plots).</td>
<td>A1.0, A2.0</td>
</tr>
<tr>
<td>2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.</td>
<td>A1.0, A2.0</td>
</tr>
<tr>
<td><strong>Interpret linear models</strong></td>
<td></td>
</tr>
<tr>
<td>7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.</td>
<td>A1.0, A2.0</td>
</tr>
</tbody>
</table>

**SCIENCE**

<table>
<thead>
<tr>
<th>Scientific and Engineering Practices – SEP</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. Agricultural Business</td>
</tr>
<tr>
<td>1. Asking questions (for science) and defining problems (for engineering)</td>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
</tr>
<tr>
<td>2. Developing and using models</td>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
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<tr>
<td>AGRICULTURE AND NATURAL RESOURCES</td>
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<td>A. Agricultural Business</td>
<td>B. Agricultural Mechanics</td>
</tr>
<tr>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B9.0, B12.0</td>
<td>C2.0, C4.0, C5.0, C9.0, C12.0, C13.0</td>
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<tr>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B12.0</td>
<td>C1.0, C4.0, C5.0, C8.0, C12.0, C13.0</td>
</tr>
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<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B9.0, B12.0</td>
<td>C7.0, C13.0</td>
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<tr>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
<td>C13.0</td>
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<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
<td>C2.0, C4.0, C13.0</td>
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<tr>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
<td>C3.0, C13.0</td>
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<tr>
<td>1. Patterns</td>
<td>B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
</tr>
<tr>
<td>2. Cause and effect: Mechanism and explanation</td>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
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<tr>
<td>3. Scale, proportion, and quantity</td>
<td>B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
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<tr>
<td>4. Systems and system models</td>
<td>B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B12.0</td>
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<tr>
<td>5. Energy and matter: Flows, cycles, and conservation</td>
<td>B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B12.0</td>
</tr>
<tr>
<td>6. Structure and function</td>
<td>B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0</td>
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<tr>
<td>Crosscutting Concept – CC (continued)</td>
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<tr>
<td>7. Stability and change</td>
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<thead>
<tr>
<th>Physical Sciences – PS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS1: Matter and Its Interactions</td>
</tr>
<tr>
<td>PS1.B: Chemical Reactions</td>
</tr>
<tr>
<td>PS2: Motion and Stability: Forces and Interactions</td>
</tr>
<tr>
<td>PS2.A: Forces and Motion</td>
</tr>
<tr>
<td>PS2.B: Types of interactions</td>
</tr>
<tr>
<td>PS2.C: Stability and Instability in Physical Systems</td>
</tr>
<tr>
<td>PS3: Energy</td>
</tr>
<tr>
<td>PS3.A: Definitions of Energy</td>
</tr>
<tr>
<td>PS3.B: Conservation of Energy and Energy Transfer</td>
</tr>
<tr>
<td>PS3.C: Relationship Between Energy and Forces</td>
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<tr>
<td>PS3.D: Energy in Chemical Processes and Everyday Life</td>
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<tr>
<td>PS3.D: Energy in Chemical Processes and Everyday Life</td>
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<tr>
<td>PS4: Waves and Their Applications in Technologies for Information Transfer</td>
</tr>
<tr>
<td>PS4.A: Wave Properties</td>
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<tr>
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<td>L1: From Molecules to Organisms: Structures and Processes</td>
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<td>L1A: Structure and Function</td>
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<td>L1B: Growth and Development of Organisms</td>
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<tr>
<td>L1C: Organization for Matter and Energy Flow in Organisms</td>
</tr>
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<td>L1D: Information Processing</td>
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<tr>
<td>L1E: Interdependent Relationships in Systems</td>
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<tr>
<td>L1F: Social Interactions and Group Behavior</td>
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<tr>
<td>L1G: Inheritance of Traits</td>
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<td>L1H: Variation of Traits</td>
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<td>AGRICULTURE AND NATURAL RESOURCES</td>
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<td><strong>Life Sciences – LS (continued)</strong></td>
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<td>LS4: Biological Evolution: Unity and Diversity</td>
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<td>LS4.B: Natural Selection</td>
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<tr>
<td>LS4.C: Adaptation</td>
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<td>LS4.D: Biodiversity and Humans</td>
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<td><strong>Earth and Space Sciences – ESS</strong></td>
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<td>ESS2: Earth’s Systems</td>
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<tr>
<td>ESS2.A: Earth Materials and Systems</td>
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<td>ESS2.C: The Roles of Water in Earth’s Surface Processes</td>
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<td>ESS2.E: Biogeology</td>
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<td>ESS3: Earth and Human Activity</td>
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<td>ESS3.A: Natural Resources</td>
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<td>ESS3.B: Natural Hazards</td>
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<td>ESS3.C: Human Impacts on Earth Systems</td>
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<td><strong>Engineering, Technology, and the Applications of Science – ETS</strong></td>
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<tr>
<td>ETS1: Engineering Design</td>
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<td>ETS1.A: Defining and Delimiting an Engineering Problem</td>
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<tr>
<td>ETS1.B: Developing Possible Solutions</td>
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<td>ETS1.C: Optimizing the Design Solution</td>
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<tr>
<td><strong>AGRICULTURE AND NATURAL RESOURCES</strong></td>
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<tr>
<td>Engineering, Technology, and the Applications of Science – ETS (continued)</td>
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<tr>
<td>ETS2: Links Among Engineering, Technology, Science, and Society</td>
</tr>
<tr>
<td>ETS2A: Interdependence of Science, Engineering, and Technology</td>
</tr>
<tr>
<td>ETS2B: Influence of Engineering, Technology, and Science on Society and the Natural World</td>
</tr>
</tbody>
</table>

**HISTORY/SOCIAL SCIENCE**

**Principles of Economics – PE**

12.1 Students understand common economic terms and concepts and economic reasoning.

12.1.1. Examine the causal relationship between scarcity and the need for choices. A2.0

12.1.2. Explain opportunity cost and marginal benefit and marginal cost. A2.0

12.1.3. Identify the difference between monetary and non-monetary incentives and how changes in incentives cause changes in behavior. A2.0

12.1.4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources. A2.0 E2.0, E13.0

12.2 Students analyze the elements of America's market economy in a global setting.

12.2.1. Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand. A2.0
<table>
<thead>
<tr>
<th>Principles of Economics – PE (continued)</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<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>
<td>A1.0, A2.0</td>
</tr>
<tr>
<td>12.2.3. Explain the roles of property rights, competition, and profit in a market economy.</td>
<td>A1.0, A2.0, A3.0, A4.0, A5.0, A7.0, A8.0, A9.0</td>
</tr>
<tr>
<td>12.2.4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.</td>
<td>A2.0, A7.0, A9.0</td>
</tr>
<tr>
<td>12.2.5. Understand the process by which competition among buyers and sellers determines a market price.</td>
<td>A1.0, A2.0, A7.0, A9.0</td>
</tr>
<tr>
<td>12.2.6. Describe the effect of price controls on buyers and sellers.</td>
<td>A2.0, A7.0</td>
</tr>
<tr>
<td>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.</td>
<td>A9.0</td>
</tr>
<tr>
<td>12.2.8. Explain the role of profit as the incentive to entrepreneurs in a market economy.</td>
<td>A1.0, A2.0, A7.0</td>
</tr>
<tr>
<td>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.</td>
<td>A2.0</td>
</tr>
<tr>
<td>12.4 Students analyze the elements of the U.S. labor market in a global setting.</td>
<td></td>
</tr>
<tr>
<td>12.4.3. Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.</td>
<td>A2.0</td>
</tr>
<tr>
<td>12.4.4. Explain the effects of international mobility of capital and labor on the U.S. economy.</td>
<td>A9.0</td>
</tr>
</tbody>
</table>
### Principles of Economics – PE (continued)

12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States’ borders.

<table>
<thead>
<tr>
<th>PATHWAYS</th>
<th>A. Agricultural Business</th>
<th>B. Agricultural Mechanics</th>
<th>C. Agriscience</th>
<th>D. Animal Science</th>
<th>E. Forestry and Natural Resources</th>
<th>F. Ornamental Horticulture</th>
<th>G. Plant and Soil Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6.1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.</td>
<td>A9.0</td>
<td></td>
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</tr>
<tr>
<td>12.6.2. Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.</td>
<td>A9.0</td>
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<tr>
<td>12.6.3. Understand the changing role of international political borders and territorial sovereignty in a global economy.</td>
<td>A9.0</td>
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</tr>
<tr>
<td>12.6.4. Explain foreign exchange, the manner in which exchange rates are determined, and the effects of the dollar’s gaining (or losing) value relative to other currencies.</td>
<td>A9.0</td>
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</tr>
<tr>
<td>12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.</td>
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</tr>
<tr>
<td>12.7.5. Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.</td>
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<td></td>
<td></td>
<td></td>
<td>E2.0</td>
</tr>
</tbody>
</table>
## Academic Alignment Matrix

<table>
<thead>
<tr>
<th>AGRICULTURE AND NATURAL RESOURCES</th>
<th>PATHWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. Agricultural Business</td>
</tr>
<tr>
<td><strong>U.S. History and Geography – US</strong></td>
<td>C1.0</td>
</tr>
<tr>
<td>11.6 Students analyze the different explanations for the Great Depression and how the New Deal fundamentally changed the role of the federal government.</td>
<td></td>
</tr>
<tr>
<td>11.6.3. Discuss the human toll of the Depression, natural disasters, and unwise agricultural practices and their effects on the depopulation of rural regions and on political movements of the left and right, with particular attention to the Dust Bowl refugees and their social and economic impacts in California.</td>
<td></td>
</tr>
<tr>
<td>11.11 Students analyze the major social problems and domestic policy issues in contemporary American society.</td>
<td></td>
</tr>
<tr>
<td>11.11.5. Trace the impact of, need for, and controversies associated with environmental conservation, expansion of the national park system, and the development of environmental protection laws, with particular attention to the interaction between environmental protection advocates and property rights advocates.</td>
<td></td>
</tr>
<tr>
<td>11.11.7. Explain how the federal, state, and local governments have responded to demographic and social changes such as population shifts to the suburbs, racial concentrations in the cities, Frostbelt-to-Sunbelt migration, international migration, decline of family farms, increases in out-of-wedlock births, and drug abuse.</td>
<td></td>
</tr>
</tbody>
</table>
Contributors

Agriculture and Natural Resources
Bob Heuvel, Administrator, California Department of Education
Hugh Mooney, Education Consultant, California Department of Education

Standards Review Team
Don Borges, Director, Agricultural Education Tech Prep, Modesto Junior College
Glen Casey, Professor, California Polytechnic State University, San Luis Obispo
Karen Dalton-Wemp, Owner, Mission Vineyard Sheep
Bill Loveridge, Retired Instructor
Cindy Rohde, Instructor, Pierce Joint Unified School District
Mike Rourke, Instructor, Trinity County Office of Education
Rosco Vaughn, Professor, California State University, Fresno

Standards Writing Team
Karen Dalton-Wemp, Owner, Mission Vineyard Sheep
Jill Sperling, Instructor, Kingsburg Joint Union High School District
References


Supporting Material 13: Teaching Credential

Below is a copy of my Clear Single Subject Teaching Credential and my Clear Specialist Instruction Credential in Agriculture. Both need to be renewed every five years with the California Department of Teacher Credentialing.

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Expiration Date</th>
<th>Term</th>
<th>Document Number</th>
<th>Grade</th>
<th>Original Issue Date</th>
<th>Issue Date</th>
<th>Status</th>
<th>Special Grade</th>
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<td>1/2/2013</td>
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Supporting Material 14: Calendar of Activities

The calendar of activities is a combination of San Jacinto FFA and above chapter level events set forth by the FFA. The chapter officers review the calendar at the officer retreat each year to set monthly FFA meetings, community service events, fundraisers, and other events. This calendar is available via the district’s Google Calendar. In addition, each student will receive a digital calendar at the beginning of the year with the events for San Jacinto FFA. Furthermore, these events are on AET for their use.

San Jacinto’s calendar of activities is in our program plan. The officer’s look at the calendar and use it to add other chapter activities. Overall, the final calendar is made in August, but can have a few other activities added to it.
August
20: FFA Hosted BBQ at 2-4 pm
24: Chapter Mtg at 3:30 pm
24: Ice Cream Social at 6 pm
24: SOCAL Fair Meeting
30: Riverside Section FFA Meeting- Heritage at 4:30 pm

September
10: Riverside Section FFA Leadership Conference- Heritage at 8 am
14: Greenhand Conference- Heritage HS 8 am
14: Chapter Mtg at 3:30 pm
17. LA Fair Judging Contest at 9 am
20: Riverside Section FFA O/C Contest- Norte Vista at 5 pm
21: Riverside Section FFA Softball- West Valley at 4 pm
25: SOCAL Fair Set up- Perris at 8 am

October
1-9: SOCAL Fair
10-31: Pumpkin Patch
15: El Capitan Education Field Day- El Capitan at 8 am
12: Chapter Mtg at 3:30 pm
13-31: Tri-Tip BBQ Ticket Sells
27: Perris FFA O/C Invitational- Perris at 4:30 pm

November
3: Tri Tip BBQ at 3-6 pm
5: SOCAL FFA Leadership Conference- Indio at 8 am
16: Chapter Mtg at 3:30 pm
17: Kiss the Pig

December
3: San Diego Section Field Day- Fallbrook at 8 am
7: Chapter Mtg at 3:30 pm
10: Heritage Cup Field Day- Heritage at 8 am
15: Riverside Section Job Interview & Impromptu- Norco at 4 pm
January
18: Chapter Mtg at 3:30 pm
21: Norte Vista Field Day- Norte Vista at 8 am
26: Riverside Section FFA Speech Contests- Perris HS at 4 pm
27-28: MFE/ALA Conference- Ontario

February
4: Southern Region Officer Screening- CSU Pomona at 9 am
8: Chapter Mtg at 3:30 pm
17-26: Indio Fair
21-26: FFA Week

March
4: UC Davis Field Day
7: Riverside Section Parli Pro Contest- Jurupa Valley at 4:30 pm
9: Riverside Section FFA Olympics- Perris at 4 pm
11: Escondido Field Day at 8 am
15: Chapter Mtg at 3:30 pm
16: Section Project Competition Banquet- San Jacinto 5 pm
18: Southern Region FFA State Degree & Proficiency Banquet- La Habra at 1 pm
21: Southern Region Speech Contest Finals- Pomona at 10 am
25: Southern Region Parli Pro Finals- Pomona 10 am

April
8: Pomona Field Day
8: Southern Region FFA Mtg- Pomona at 1:30 pm
12: Chapter Mtg at 3:30 pm
20-25: State FFA Conference- Fresno
27-28: Chapter Officer Screening

May
1-19: Chapter Banquet Ticket Sales
2: Riverside Section FFA Officer Screening- Hemet at 4 pm
6: State Finals- CP SLO
9: Riverside Section Officer Elections- Perris at 4:30 pm
11: Riverside Section FFA Volleyball- Jurupa Valley at 4 pm
TBD: Chapter Banquet at 5:30 pm
Supporting Material 15: Comprehensive Program Plan

The Comprehensive Program Plan contains all information vital to the San Jacinto High School Agriculture Department. It is updated annually as part of the Agriculture Incentive Grant, either by the department, Advisory Committee, and/or the Regional Supervisor. The Plan is kept available online via Google Drive or online with the Southern Region Supervisor.
Developed by the
San Jacinto Agriculture Department

Program Plan
2017-2018

Danielle Scoggins, Advisor
Lindsey Stiff, Advisor

San Jacinto High School
500 Idyllwild Drive
San Jacinto, California 92583
<table>
<thead>
<tr>
<th>Item Addressed</th>
<th>Letter</th>
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<tbody>
<tr>
<td>Job Market</td>
<td>A</td>
</tr>
<tr>
<td>Targeted Occupations</td>
<td>B</td>
</tr>
<tr>
<td>Total Program Goals and Objectives</td>
<td>C</td>
</tr>
<tr>
<td>Program Description of Included Courses, SAE &amp; Leadership</td>
<td>D</td>
</tr>
<tr>
<td>Program and/or Course Subject Matter Content Outline</td>
<td>E</td>
</tr>
<tr>
<td>Program Completion Standards</td>
<td>F</td>
</tr>
<tr>
<td>Description of Facilities and Major Equipment</td>
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</tr>
<tr>
<td>Five Year Facility and Equipment Acquisition Schedule</td>
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<td>Staff Assignments</td>
<td>I</td>
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<tr>
<td>FFA Program of Activities</td>
<td>J</td>
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<td>School and/or Department Policies</td>
<td>K</td>
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<tr>
<td>Proficiency Standards for Program Completers</td>
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<tr>
<td>Teacher Data Sheet for Each Teacher</td>
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<td>Roster of Agriculture Advisory Committee</td>
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<td>Advisory Committee Minutes</td>
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<td>Signed Articulation Agreement and/or Evidence of Articulation</td>
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<td>Graduate Follow-up System</td>
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<td>Recruitment Activities and Materials</td>
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<td>Staff In-Service Record</td>
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<td>Staff Minutes</td>
<td>V</td>
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<tr>
<td>Department Inventory</td>
<td>W</td>
</tr>
</tbody>
</table>
A.

Job Market
Work

San Jacinto has a strong economy, and the community is anxious to make you a part of it. If you are starting a company or looking for a great job, odds are San Jacinto is the perfect choice for you.

San Jacinto has several major employers help fuel our economic growth and stability:

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mt San Jacinto College</td>
<td>Higher Education</td>
</tr>
<tr>
<td>San Jacinto Unified School District</td>
<td>Public Education</td>
</tr>
<tr>
<td>City of San Jacinto</td>
<td>Government</td>
</tr>
<tr>
<td>Edelbrock Corporation</td>
<td>Sand-cast aluminum foundry</td>
</tr>
<tr>
<td>Skyline Corporation</td>
<td>Mobile Home Mfg.</td>
</tr>
<tr>
<td>Super Wal-Mart</td>
<td>Retail</td>
</tr>
<tr>
<td>Riverside County</td>
<td>Public Service</td>
</tr>
<tr>
<td>Rama Corporation</td>
<td>Manufacturer</td>
</tr>
<tr>
<td>Stater Bros</td>
<td>Supermarket</td>
</tr>
<tr>
<td>The Press Enterprise</td>
<td>Publishing/Media</td>
</tr>
<tr>
<td>Soboba Casino</td>
<td>Gaming</td>
</tr>
<tr>
<td>Agri-Empire</td>
<td>Exporter</td>
</tr>
<tr>
<td>National Scent</td>
<td>Exporter</td>
</tr>
<tr>
<td>Hawaiian Popcorn</td>
<td>Supplier</td>
</tr>
</tbody>
</table>

http://www.sanjacintochamber.org/work ~ San Jacinto Chamber of Commerce
B. Targeted Occupations
### Targeted Occupations

Listed below are various jobs with the San Jacinto High School Agriculture Department Program Areas:

<table>
<thead>
<tr>
<th>Horticulture/Floriculture</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Management</td>
<td>Greenhouse worker, foreman, maintenance, propagator, tissue culture, grower, plant breeder</td>
</tr>
<tr>
<td>Floriculture</td>
<td>Florist, floral sales, floral delivery, floral shop operator, flower grader</td>
</tr>
<tr>
<td>Crop Production</td>
<td>Irrigator, propagator, farmhand, foreman, ranch laborer, feedlot hand, field crop grower, and general maintenance</td>
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</table>

### Agriculture Mechanics

<table>
<thead>
<tr>
<th>Mechanics</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small engine mechanic, equipment operator, parts person, shop foreman, repairman, general maintenance/mechanics, Ag electrician, ag plumber, irrigation engineer, safety inspector</td>
<td></td>
</tr>
<tr>
<td>Welding</td>
<td>Welder/helper, fabricator, specialized repair and maintenance</td>
</tr>
</tbody>
</table>

### Agricultural Science

<table>
<thead>
<tr>
<th>Animal Science</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock handler, milker, inseminator, auctioneer, vet aide, pet care, ranch laborer, brand inspector, farm hand, pest control, cattle buyer, hog buyer, livestock commission agent, livestock yard supervisor, meat inspector, milk</td>
<td></td>
</tr>
</tbody>
</table>
plant supervisor, horse trainer, artificial breeding technician, kennel operator, veterinarian, poultry hatchery manager, poultry inseminator, sheep shearer, animal physiologist, reproductive physiologist, animal behaviorist.

Lab technician, animal genetics, animal scientist, biochemist, botanist, embryologist, food chemist, entomologist, marine biologist, parasitology, pharmaceutical chemist, plant geneticist, plant pathologist, poultry scientist
C.

Total Program

Goals
San Jacinto FFA Agriculture Department Goals

1. Instill in the hearts of each member confidence in the San Jacinto FFA Chapter 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 continue to have and improve upon communication between chapter officers, advisors, and members.

4. To encourage all FFA members to observe/attend meetings and activities.

5. To make the public aware of the chapter’s success and activities

6. To distribute a newsletter to FFA members, parents, school, district and advisory committee personnel via email/Google docs and if necessary paper form.

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

8. To provide fun and organized recreational activities of interest to FFA members through chapter activities and opportunities to attend sectional recreational activities.

9. Recruitment and retention of new FFA members.
D.
Program Description of:
Courses, SAE, & Leadership
Program Description - Courses

We offer the three parts of a complete agricultural educational program at San Jacinto High School: Classroom Instruction, Hands on Training, and Leadership Development.

Our Classroom Instruction involves teaching the basic concepts of the units taught within each of our courses offered. Students are required to use their reading, writing, and thinking skills, assignments, tests, and quizzes are given.

Our hands-on training supplements the education that takes place in the classroom. Students are taught the various procedures and techniques used in areas such as: Animals, Plants, and Floriculture.

Our leadership development is taught through the FFA and our Agricultural Communications course. We teach an FFA unit in agriculture classes so that students can build on their own leadership skills, students new to the program or continuing on. We focus on leadership, responsibility, and cooperation. Students put these traits to use through the various activities they participate in during their involvement in our program.

Course Descriptions:

Agriscience Systems Management

This integrated class combines an interdisciplinary approach to laboratory science and research with agricultural management principles. Using skills and principles learned in the course, students design systems and experiments to solve agricultural management issues currently facing the industry. Additionally, students will connect the products created in this class with industry activities to link real world encounters and implement skills demanded by both colleges and careers. The course culminates with an agriscience experimental research project in which students design and conduct an experiment to solve a relevant issue. Final projects will be eligible for Career Development Event competition at FFA events. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

Agriculture Biology

Agriculture Biology is a one-year, laboratory science course, designed for the college-bound student with career interests in agriculture. This course emphasizes the life functions and interrelationships of
plants and animals, focusing on growth and reproduction, genetics, animal behavior, animal and plant taxonomy, nutrition, health and disease and the ecological relationships among plants, animals and humans. Students will be involved in “hands-on” agriculture activities and projects. Participation in FFA activities is an integral part of this course. This course satisfies the life science graduation requirement.

**Agricultural Communications**

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 organizational and school activities, and are responsible for successfully organizing, conducting, and evaluating the activities. In addition, high priority will fall and rest on studying for contests and making sure we as a chapter are ready for each contest.

**Intro to Metal Fabrication & Welding**

This course is designed to give the student specialized classroom work and experiences in the metal fabrication and welding. This includes shop safety, proper Shield Metal Arc Welding (SMAW) techniques, proper Oxygen/ Acetylene (O/A) welding techniques, sheet metal techniques, and metal fabrication concepts. Students will learn proper metal joint designs. This coursework is designed into mini segments that make up metal fabrication skills and is primarily a project oriented program.

**Metal Fabrication & Welding II**

The course is designed to give the student more advanced specialized classroom and shop experiences in metal fabrication and welding fields including: safety, Gas Metal Arc Welding (GMAW), Shield Metal Arc Welding (SMAW), Oxygen/ Acetylene (O/A), and limited milling techniques and metallurgy.

**Metal Fabrication & Welding III/IV**

Metal Fabrication & Welding III/IV is a continuation of Metal Fabrication & Welding II with more of an emphasis on projects. These can be personal, community, or school related projects. They can be as small in size or medium in scope, but must continue to build on and develop new skills. These classes promote critical thinking and problem solving skills that is imperative in industry.

**Special Projects in Metal Fabrication & Welding**

This class is designed to be taken in conjunction with Metal Fabrication & Welding III/IV or taken independently after Metal Fabrication & Welding III/IV. This class is designed for the individual student who has excelled in our other classes and is ready to move on to a broader industrial scope. Students must have instructor’s permission to sign up for this class.
Agriculture and Soil Chemistry

This course explores the physical and chemical nature of soil as well as the relationships between soil, plants, animals and agricultural practices. Students will examine properties of soil and land and their connections to plant and animal production. Using knowledge of scientific protocols as well as course content, students will develop an Agriscience research program to be conducted throughout the first semester of the course. To complete that whole project each student will investigate and test an Agriscience research question by formulating a scientific question related to the course content, formulating a hypothesis based on related research, conducting an experiment to test the hypothesis, collecting quantitative data, and forming a conclusion based on analysis of the data. The result of this research program will be an in depth research and experimentation paper that is technically written, based on scientific protocol, and cited using APA formatting. Additionally, students will develop and present a capstone soil management plan for agricultural producers, using the content learned throughout the course. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

Animal Science

This course will provide the student with principles in Animal Science focusing on the areas mammalian production, anatomy, physiology, reproduction, nutrition, respiration, and genetics. This course is intended to successfully prepare those students who plan on majoring in Agricultural Sciences at a college or university. Frequent opportunities are also given to develop and apply rational and creative thinking processes of observing, comparing, organizing, relating, inferring, applying and communicating. Also, there is an emphasis on developing values aspirations and attitudes that promote the student's understanding personal involvement with the scientific explorations and discoveries of the future. These hands-on science experiences are designed to enhance the student’s understanding of Agriculture, the environment, and society.

Plant & Soil Science

This course is designed to provide the student with theories and principles related to Plant & Soil Science. In this class students will learn about the structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and plants. This course is intended to successfully prepare students who plan on majoring in agricultural sciences at a four-year college and/or university. Specific student outcomes are: Utilize Plant & Soil Science principles as a relevant vehicle to teach biological principles and improve the science principles and scientific literacy of students. Integrate mathematic standards, Language Arts, and science principles into an academically rigorous course that increases the student’s capacity to think analytically, problem solve, and utilize effective research practices.
**Floral Design**

This course serves as an introduction to skills required for composition of basic table arrangements and decorative materials. The course includes the history of floral design and styles, identification of cut flowers and foliage, principles and elements of floral design, identification and use of tools and equipment, design styles and methods, and conditioning and handling of cut materials, raising and managing floricultural crops, the floricultural industry, and career exploration. Activities to encourage leadership, teamwork, and FFA participation will also be offered.

**Ornamental Horticulture**

Students will learn skills in ornamental and production plant growing and tending. Instruction includes plant propagation, soil mixtures and sterilization, irrigation, potting and canning, fertilizers, floral design, pesticides, greenhouse operations, plant identification, tools and materials basic landscaping and business management. This course fulfills the LUSD capstone requirement for graduation.

**Sustainable Agriculture: A Biological Approach**

The Sustainable Agriculture: A Biological Approach course is offered to first year agriculture students who are planning to major in agriculture in a college or university. The course is designed in conjunction with Agriculture Biology to meet UC requirements and California State Standards for Biological Sciences. It has been designed to provide students with a unique perspective of agriculture and its impact on American Society. It also provides students with critical thinking and leadership development skills via the Future Farmers of America (FFA), as well as foundation skills and knowledge in the seven program areas of agriculture. The Sustainable Agriculture: A Biological Approach course is designed to be both academically challenging and demanding. Students will be expected to not only acquire knowledge, but also to organize, analyze, evaluate, predict, problem solve and apply this knowledge. The student must be able to read and comprehend a variety of materials; demonstrate writing skills that convey ideas in written and visual form; speak with clarity, meaning, and confidence, exhibit creativity; use technology in research and accessing information; appreciate and respect individual and cultural differences; and demonstrate the ability to work collaboratively.
Program Description – SAE

1. Market Hogs  
2. Market Lambs  
3. Market Goats  
4. Market Steers (selected)  
5. Meat Trio (chickens)  
6. Turkey  
7. Vegetable Garden  
8. Hydroponics  
9. Ag Mechanics Projects

Program Description – Leadership

San Jacinto Agriculture Department opens the following leadership opportunities to students as follows:

1. Riverside Section Leadership Conferences (chapter officers, selected few)  
2. SoCal Leadership Conference/Chapter Officer Leadership Conference (chapter officer s)  
3. Greenhand Leadership Conference (9th grade students)  
4. Made for Excellence Conference (10th / 11th grade students)  
5. Advanced Leadership Academy Conference (11th/12th grade students)  
6. Sacramento Leadership Experience (12th grade students/. Top 40 in the state)  
7. State Leadership Conference (open to all students)  
8. CDE’s / Judging teams  
9. Speaking contests
E.

Program and/or Course Subject Matter Content Outline
Agriculture Biology
San Jacinto High School
Ms. Stiff
lstiff@sanjacinto.k12.ca.us

I. Course Description

Grade Level: 9-12

Agricultural Biology is a one-year laboratory science course 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: The molecular and cellular aspects of life, the chemical and structural basis of life, energetics of life, growth and reproduction in plants/animals, evolution of modern plans and domestic livestock species, plant and animal genetics, taxonomy of plants, animals, humans, and the environment nutrition in animals, health and disease in animals, and the similarities between animals and humans. The course is centered on an extensive laboratory component in order to connect the 36 big ideas of life science with agricultural applications, earth and physical principals and other curricular areas, including written and oral reporting skills.

II. Class Rules

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. NO cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

III. Housekeeping

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).
3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

**IV. Expectations**

1. Students will be respectful, arrive to class on time, and be prepared to learn.

2. If a student is absent, it is their responsibility to meet with the teacher to determine what assignment(s) they missed BEFORE or AFTER class. The student will have one day for everyday he/she were absent to complete the absent work.

3. Late work will be accepted ONLY ONE WEEK PAST THE DUE DATE. Students will lose 10% each day it is late.

**V. Materials Needed**

1. Pencil, pen, or other writing utensil

2. Lined paper

3. California Agriculture Education Record Book (provided)

4. Course textbooks (provided)

**VI. Grades**

Grade Breakdown Grade Percentages

- **A+** 100-97%; **A** 96-94%; **A-** 93-90%
- **B+** 89-87%; **B** 86-84%; **B-** 83-80%
- **C+** 79-77%; **C** 76-74%; **C-** 73-70%
- **D+** 69-67%; **D** 66-64%; **D-** 63-60%
- **F** 59% and below

**1. Classroom (Approximately 70%)**

Completion of assignments.................................................................50%
2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

1. Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

2. Non-Ownership- A project which the student works with, but does not own.

3. Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
Animal Science
San Jacinto High School
Mrs. Scoggins
dscoggins@sanjacinto.k12.ca.us

I. Course Description

Grade Level: 11-12

This course will provide the student with principles in Animal Science focusing on the areas mammalian production, anatomy, physiology, reproduction, nutrition, respiration, and genetics. This course is intended to successfully prepare those students who plan on majoring in Agricultural Sciences at a college or university.

II. Class Rules

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. NO cell phones, or earbuds/earphones should be out during class. If seen they will be confiscated.

III. Housekeeping

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).

3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.
IV. Expectations

1. Students will be respectful, arrive to class on time, and be prepared to learn.

2. If a student is absent, it is their responsibility to meet with the teacher to determine what assignment(s) they missed BEFORE or AFTER class. The student will have one day for everyday he/she were absent to complete the absent work.

3. Late work will be accepted ONLY ONE WEEK PAST THE DUE DATE. Students will be lose 10% each day it is late.

V. Materials Needed

1. Pencil, pen, or other writing utensil
2. Lined paper
3. California Agriculture Education Record Book (provided)
4. Course textbooks (provided)

VI. Grades

Grade Breakdown Grade Percentages

A+ 100-97%; A 96-94%; A- 93-90%
B+ 89-87%; B 86-84%; B- 83-80%
C+ 79-77%; C 76-74%; C- 73-70%
D+ 69-67%; D 66-64%; D- 63-60%
F 59% and below

1. Classroom (Approximately 70%)

Assignments .................................................................50%
Quizzes/Tests........................................................................20%

2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.
The choices for SAE projects are:

1. Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

2. Non-Ownership- A project which the student works with, but does not own.

3. Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
Floral Design
San Jacinto High School
Mrs. Scoggins
Dscoggins@sanjacinto.k12.ca.us

Course Description:

Grade Level: 9-12

The Construction of Floral Design is a one-year course that provides an introduction to artistic and creative perception, using flowers and plants as the main media. Students are introduced to the elements and principles of design such as line, shape/form, color, balance, and emphasis using a series of floral-based projects. Students will research and study floral trends, customs, cultures, as well as learn the business practices of a real floral design shop. The class will be primarily a lab-based, hands-on environment where student’s creativity will be encouraged. Students will be required to participate in FFA Activities as well as complete a Supervised Agricultural Experience Project (SAEP) as part of the course.

Class Rules

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

Expectations

1. If a student is absent, it is his/her responsibility to meet with the teacher, before or after class, regarding missed assignments. The student will have one day for every day he/she was absent to complete the work.

2. Late work will be accepted ONLY ONE WEEK PAST THE DUE DATE. Students will lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.
**Housekeeping**

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).

3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

**Materials Needed:**

Pencil, pen or other writing utensil

A three-ring binder

Lined paper for binder

California Agricultural Education Record Book (provided)

Course text books (provided)

**Grades %**

The class is graded according to this scale:

A+ 100-97; A 96-94; A- 93-90;

B+ 89-87; B 86-84; B- 83-80;

C+ 79-77; C 76-74; C- 73-70;

D+ 69-67; D 66-64; D- 63-60;

F 59 and below

**1. Classroom (Approximately 70%)**

Completion of assignments (reports, handouts, homework, projects, classroom/laboratory activities, binder checks, class participation)..........................................................50%
Quizzes/Tests........................................................................................................................................20%

2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

Non-Ownership- A project which the student works with, but does not own.

Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
Course Description:

This course explores the physical and chemical nature of soil as well as the relationships between soil, plants, animals and agricultural practices. Students will examine properties of soil and land and their connections to plant and animal production. Using knowledge of scientific protocols as well as course content, students will develop an Agriscience research program to be conducted throughout the first semester of the course. To complete that whole project each student will investigate and test an Agriscience research question by formulating a scientific question related to the course content, formulating a hypothesis based on related research, conducting an experiment to test the hypothesis, collecting quantitative data, and forming a conclusion based on analysis of the data. The result of this research program will be an in depth research and experimentation paper that is technically written, based on scientific protocol, and cited using APA formatting. Additionally, students will develop and present a capstone soil management plan for agricultural producers, using the content learned throughout the course. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

Class Rules

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

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4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

Expectations

1. If a student is absent, it is his/her responsibility to meet with the teacher, before or after class, regarding missed assignments. The student will have one day for every day he/she was absent to complete the work.
2. Late work will be accepted **ONLY ONE WEEK PAST THE DUE DATE.** Students will be lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.

**Housekeeping**

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).

3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

**Materials Needed:**

- Pencil, pen or other writing utensil
- A three-ring binder
- Lined paper for binder
- California Agricultural Education Record Book (provided)
- Course text books (provided)

**Grades %**

The class is graded according to this scale:

- A+ 100-97; A 96-94; A- 93-90;
- B+ 89-87; B 86-84; B- 83-80;
- C+ 79-77; C 76-74; C- 73-70;
- D+ 69-67; D 66-64; D- 63-60;
- F 59 and below
1. Classroom (Approximately 70%)

Completion of assignments (reports, handouts, homework, projects, classroom/laboratory activities, binder checks, class participation)..........................................................50%

Quizzes/Tests..............................................................................................................20%

2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

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3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
**Agriscience Systems Management**

Course Title: Agriscience Systems Management

Course Description: This integrated class combines an interdisciplinary approach to laboratory science and research with agricultural management principles. Using skills and principles learned in the course, students design systems and experiments to solve agricultural management issues currently facing the industry. Additionally, students will connect the products created in this class with industry activities to link real world encounters and implement skills demanded by both colleges and careers. The course culminates with an agriscience experimental research project in which students design and conduct an experiment to solve a relevant issue. Final projects will be eligible for Career Development Event competition at FFA events. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

**Class Rules**

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

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**Expectations**

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2. Late work will be accepted ONLY ONE WEEK PAST THE DUE DATE. Students will be lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.

**Housekeeping**
1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).

3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

Materials Needed:

Pencil, pen or other writing utensil

A three-ring binder

Lined paper for binder

California Agricultural Education Record Book (provided)

Course text books (provided)

Grades %

The class is graded according to this scale:

A+ 100-97; A 96-94; A- 93-90;
B+ 89-87; B 86-84; B- 83-80;
C+ 79-77; C 76-74; C- 73-70;
D+ 69-67; D 66-64; D- 63-60;
F 59 and below

1. Classroom (Approximately 70%)

Completion of assignments (reports, handouts, homework, projects, classroom/laboratory activities, binder checks, class participation)..........................................................................................................................50%

Quizzes/Tests........................................................................................................................................20%

2. Supervised Agriculture Experience Program (Approximately 15%)
It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

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3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
**Plant & Soil Syllabus**

Mrs. Scoggins  
Dscoggins@sanjacinto.k12.ca.us

Course Title: Plant & Soil

Course Description: This course is designed to provide the student with theories and principles related to Plant and Soil Science. In this class students will learn about the structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food fiber, and plants. This course is intended to successfully prepare students who plan on majoring in agricultural sciences at a four-year college and/or university. This course will also include the use of written and oral reporting skills.

**Class Rules**

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

**Expectations**

1. If a student is absent, it is his/her responsibility to meet with the teacher, **before or after class**, regarding missed assignments. The student will have one day for every day he/she was absent to complete the work.

2. Late work will be accepted **ONLY ONE WEEK PAST THE DUE DATE**. Students will be lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.
Housekeeping

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.

2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).

3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).

4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.

5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

Materials Needed:

- Pencil, pen or other writing utensil
- A three-ring binder
- Lined paper for binder
- California Agricultural Education Record Book (provided)
- Course text books (provided)

Grades %

The class is graded according to this scale:

- A+ 100-97; A 96-94; A- 93-90;
- B+ 89-87; B 86-84; B- 83-80;
- C+ 79-77; C 76-74; C- 73-70;
- D+ 69-67; D 66-64; D- 63-60;
- F 59 and below

1. Classroom (Approximately 70%)

Completion of assignments (reports, handouts, homework, projects, classroom/laboratory activities, binder checks, class participation) .................................................................50%

Quizzes/Tests ........................................................................................................20%
2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

Ownership- This is a project that the student owns. Some examples might be an animal, a crop of some kind, or potted plants in their room.

Non-Ownership- A project which the student works with, but does not own.

Work Experience- Any job related to agriculture can be considered work experience whether it is paid or unpaid. Some examples might be mowing the lawn, working for a local agriculture business, or home improvement projects.

3. FFA (Approximately 15%)

The FFA, formerly known as the Future Farmers of America, is a national organization found in thousands of high schools across the United States. The goals of the organization are to develop premier leadership, personal growth, and career success. Your son/daughter automatically became a member of the National Organization when he/she enrolled in an agriculture class. There are numerous opportunities to participate both during the school year and after school in FFA activities. These activities will be given a point value that will be reflected in students’ grades. Students are required to participate in 6 activities a semester.
**Course Description:**

**Grade Level: 9-12**

Primarily for 9th grade students interested in agriculture or non-college bound 10th graders who want to take agriculture classes (designed as a 1st year Agriculture course). Introduction to Agriculture is a one year program and hands on learning environment. Using agriculture as the learning vehicle, the course will emphasize science, animal production, plant and crop production, agricultural Business and is designed to meet the full requirement for one year of Earth Science or Elective credit necessary for graduation from high school. This course introduces the student to the scientific method and will explore microorganisms, plants, animals, evolution, ecology, and details of the human/animal body as they inter-relate in our environment and individual/animal health. This class includes FFA activities and Supervised Agricultural Experience Projects (SAEP’s) as part of the course. The involvement will include project-based learning activities, fair landscape plots, field days, and numerous community service events.

**Class Rules**

1. Class begins when the bell rings. Students are expected to be on time, in their assigned seats, and ready to learn. Students will be marked tardy if they are late or not in their assigned seat when the bell rings.

2. All students are to be respectful to their peers, adults, and the property of others and the school. Disrespectful or rude behavior will not be tolerated.

3. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.

4. Each student is responsible for bringing a pen/pencil, paper, and assignments to class each day.

5. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.

**Expectations**

1. If a student is absent, it is his/her responsibility to meet with the teacher, before or after class, regarding missed assignments. The student will have one day for every day he/she was absent to complete the work.

2. Late work will be accepted **ONLY ONE WEEK PAST THE DUE DATE.** Students will be lose 10% each day it is late.

3. Students will arrive to class on time and be prepared in their assigned seats.
Housekeeping

1. Hats, beanies, hoods and sunglasses are not to be worn by males or females indoors.
2. Grooming is not appropriate in the classroom (applying makeup, hair brushing etc.).
3. “The Classroom” is anywhere instruction is taking place. All class policies apply regardless of where the class meets (in a room, at the school farm, greenhouse or any other location).
4. Some labs and hands-on situations will require students to work with different types of lab materials and equipment. Safety is our first concern, and students will be informed of appropriate attire for various situations.
5. All other school rules will be followed and any discussion of these rules and their enforcement will take place after school.

Materials Needed:

Pencil, pen or other writing utensil
Lined paper for binder
California Agricultural Education Record Book (provided)
Course text books (provided)

Grades %

The class is graded according to this scale:
A+ 100-97; A 96-94; A- 93-90;
B+ 89-87; B 86-84; B- 83-80;
C+ 79-77; C 76-74; C- 73-70;
D+ 69-67; D 66-64; D- 63-60;
F 59 and below

1. Classroom (Approximately 70%)

Completion of assignments.................................................................50%
Quizzes/Tests.....................................................................................20%
2. Supervised Agriculture Experience Program (Approximately 15%)

It is our goal that every student will have a SAE, or a project related to agriculture, which they can pursue both during and after school hours. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. Students will be required to maintain a record book regarding their SAE project.

The choices for SAE projects are:

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Intro to Metal Fabrication and Welding
San Jacinto High School

Grade Levels: 9-12
Prerequisite: None
Instructor: Ms. Stiff
(951) 654-7374 ext.2804
lstiff@sanjacinto.k12.ca.us

Course Description
This course is designed to give the student specialized classroom work and experiences in the metal fabrication and welding. This includes shop safety, proper Shield Metal Arc Welding (SMAW) techniques, proper Oxygen/ Acetylene (O/A) welding techniques, sheet metal techniques, and metal fabrication concepts. Students will learn proper metal joint designs. We will be following the course work design by Hobart Welding Institute. This course work is designed into mini segments that make up metal fabrication skills and is primarily a project oriented program.

Instruction/ Assessment
Instruction is conducted through the instructor generated lecture material, handouts, and worksheets. Instructional videos produced by Hobart and Miller, will be used. Assessment is based on work ethic, quantity and quality of welds, and the quality of the project that is produced.

Shop Attitudes
1. Treat everyone else the same way you want to be treated.
2. You get out of this class what you put into it. This means your EFFORT!!!!
3. Autograph your work with quality.

Shop Rules (Contract to follow)
1. You must use safety glasses in the shop area at all times or this may lower your grade!!!!
2. Always wear the proper personal safety clothing.
3. Be here on time, and be in your assigned seat at the beginning of class and at the end of class.
4. Do not loiter by the door before the bell rings.
5. Do not leave the shop without permission and a WRITTEN NOTE!!!
6. Theft of any kind will be automatic removal from class.
7. Cell phones, or earbuds/earphones should not be out during class. If seen they will be confiscated.
8. Tardiness Will Negatively Affect Their Grade!!!!!
9. Technology including Chromebooks, tablets, calculators, etc. are only to be used when instructed by the teacher.
10. All students are to be respectful to their peers, adults, and the property of others

Grading

1. Assignments (reports, handouts, homework, projects, classroom/laboratory activities, class participation).........................................................50%
2. Quizzes/Tests..................................................................................20%
3. FFA..................................................................................................15%
4. SAE...............................................................................................15%

Final grading:
The class is graded according to this scale:
A +: 98-100;   A:94-97;       A-: 90-93
B +: 88-89;    B:84-87;       B-: 80-83
C +: 78-79;    C:74-77;       C-: 70-73
D +: 68-69;    D:64-67;       D-: 60-63
F   59 and below

Materials, Personal Safety Equipment, and Project Storage

The student will be able to use the shop safety glasses, welding gloves, welding helmets, and tools. The student can buy their own safety glasses and personal protection; however, it is their responsibility if it becomes lost or stolen. Students will be provided with materials to complete their project. The completed projects can ONLY be taken home if paid for, those paid projects can be kept for life. If the student choses not to pay for the class project, they will complete the project and then it will be taken a part and used again.

Return syllabus signed, it will remain in your son/daughter’s notebook.

I understand the policies of Intro to Fabrication and Welding and will abide by rules.
PART TWO: CONTENT

These are topics taught in AGRICULTURE BIOLOGY

Unit 1 – THE NATURE OF LIFE

Chapter 1: The Science of Biology

1-1: What is Science?
1-2: How Scientists Work
1-3: Studying Life

Chapter 2: The Chemistry of Life

2-1: The Nature of Matter
2-2: Properties of Water
2-3: Carbon Compounds
2-4: Chemical Reactions and Enzymes

Unit 3 - CELLS

Chapter 7: Cell Structure and Function

7-1: Life is Cellular
7-2: Eukaryotic Cell Structure
7-3: Cell Boundaries
7-4: The Diversity of Cellular Life

Chapter 8: Photosynthesis

8-1: Energy and Life
8-2: Photosynthesis: An Overview
8-3: The Reactions of Photosynthesis

Chapter 9: Cellular Respiration

9-1: Chemical Pathways
9-2: The Krebs Cycle and Electron Transport
Chapter 10: Cell Growth and Division
10-1: Cell Growth
10-2: Cell Division
10-3: Regulating the Cell Cycle

Unit 4 - GENETICS
Chapter 11: Introduction to Genetics
11-1: The Work of Gregor Mendel
11-2: Probability and Punnett Squares
11-3: Exploring Mendelian Genetics
11-4: Meiosis
11-5: Linkage and Gene Maps

Chapter 12: DNA and RNA
12-1: DNA
12-2: Chromosomes and DNA Replication
12-3: RNA and Protein Synthesis
12-4: Mutations
12-5: Gene Regulation

Chapter 13: Genetic Engineering
13-1: Changing the Living World
13-2: Manipulating DNA
13-3: Cell Transformation
13-4: Applications of Genetic Engineering

Chapter 14: The Human Genome
14-1: Human Heredity
14-2: Human Chromosomes
14-3: Human Molecular Genetics

Unit 5 - EVOLUTION

Chapter 15: Darwin’s Theory of Evolution
15-1: The Puzzle of Life’s Diversity
15-2: Ideas that Shaped Darwin’s Thinking
15-3: Darwin Presents His Case

Chapter 16: Evolution of Populations
16-1: Genes and Variation
16-2: Evolution as Genetic Change
16-3: The process of Speciation

Chapter 17: The History of Life
17-1: The Fossil Record
17-2: Earth’s Early History
17-3: Evolution of multicellular Life
17-4: Patterns of Evolution

Chapter 18: Classification
18-1: Finding Order in Diversity
18-2: Modern Evolutionary Classification
18-3 Kingdoms and Domains

Unit 2 – ECOLOGY

Chapter 3: The Biosphere
3-1: What is Ecology?
3-2: Energy Flow
3-3: Cycles of Water

Chapter 4: Ecosystems and Communities
4-1: The Role of Climate
4-2: What Shapes an Ecosystem?
4-3: Biomes

Unit 6 – MICROORGANISMS AND FUNGI
Chapter 19: Bacteria and Viruses
19-1: Bacteria
19-2: Viruses
19-3: Diseases Caused by Bacteria and Viruses

Unit 10 – THE HUMAN BODY ~ an overview of these chapters are done.
Chapter 35: Nervous System
Chapter 36: Skeletal, Muscular
Chapter 37: Circulatory and Respiratory System
Chapter 38: Digestive and Excretory System
Chapter 39: Endocrine and Reproductive System
Chapter 40: The Immune System and Disease

These are topics taught in AGRICULTURE SCIENCE 1
A. Meeting Human Needs in a Changing World
   1. Define agriculture and agribusiness.
   1. Describe how the agriculture industry meets human needs for food, fiber, and shelter.
      3. Identify the origin of food and fiber items.
      4. Describe areas of the agriculture industry that affects our quality of life.
   1. Contrast the interrelations of agriculture and society at the local, state, national, and international levels.
   1. Economic impact of leading agricultural commodities.
B. Using Applied Sciences and Technology
   1. Explain how the areas of Science relate to Agriscience.
   2. Apply the scientific method.
   3. Examine the laws and regulations concerning biotechnology.
   4. Describe the role and uses of technology.
   5. Understand public concern for technological advancements in agriculture, such as Genetically Modified Organisms (GMO’s).

C. Agriculture, the Environment and Earth’s Resources
   1. Describe key agricultural environmental impacts on earth resources: soil, water, and air.
   2. Explain ecosystems and how they work.
   3. Understand current agricultural environmental challenges.
   4. Compare and contrast practices for conserving renewable/non-renewable resources.

   1. Explain pollution and identify sources of pollution.
   1. Understand how new energy sources are developed from agricultural products

D. Using the Science of Computation
   1. Define the important terms and concepts in Agriscience measurements and computations.
   2. Explain the use and importance of standard measurement.
   3. Make measurements of length, temperature, and weights.
   4. Calculate area and volume of objects of various shapes.

E. Determining the Bases of Life
   1. Understand the purpose and anatomy of cells
   2. Describe how cells parts function.
   3. Explain and describe various cell functions.
4. Describe the differences between plant and animal cells.

5. Describe the life processes in organisms.

F. Classifying and Naming Living Things
   1. Describe the classification system for living things.
   2. Explain taxonomy.
   3. Use a classification key to identify leaves.
   4. Describe how classification systems are useful in agriscience and technology.

G. Applying Plant Science Principles
   1. Define plant science and how plants differ from animals.
   2. Label the parts of a plant and describe their functions.
   3. Explain the life cycle of a plant.
   4. Observe the effects of light on plant growth.
   5. Observe the effect of gravity on plant growth.

H. Plant Propagation and Reproduction
   1. Explain the processes for the propagation of plants.
   2. Label the parts of a plant and explain their functions.
   3. Determine viability of seeds by using germination and vigor tests.
   4. Explain the importance of imported seeds.

I. Plant Growth and Nutrients
   1. Explain factors and processes in plant growth.
   2. Understand the photosynthesis process and the roles of the sun, chlorophyll, sugar, carbon dioxide, and water in the process.
   3. Understand the anatomy and functions of plant systems and structures.
4. Explain the respiration process in food and organic matter breakdown.
5. Describe annual, biennial, and perennial life cycles.
6. Examine plant sexual and asexual reproduction.

J. Plant Insects and Pests
1. Understand the major classifications of pests.
2. Explain three conditions for pest problems.
3. Describe how pests affect plants and cause losses.
4. Examine the chemical, mechanical, cultural, and biological methods for plant pest control.
5. Explain the advantages and disadvantages of Integrated Pest Management (IPM).
6. List safety practices to follow in pest control.

K. Applying Animal Science Principles
1. Name and describe the major animal groups.
2. Describe the anatomy and physiology of animals.
3. Identify and explain the major organ systems of animals which include skeletal, nervous, circulatory, respiratory, excretory, digestive, reproductive, and mammary.
4. Understand the evolution and roles of domesticated animals.
5. Explain the differences between domestication and natural selection.

L. Animal Feeds and Nutrition
1. Examine the feed needs of animals.
2. Describe the feedstuffs that provide nutrients.
3. Explain the characteristics of good feed.
4. Understand animal feeding guidelines and evaluate sample feeding programs for various species.
1. Describe the types of nutrients required by farm animals.
1. Analyze suitable common feed ingredients for ruminant, monogastric, equine, and avian digestive systems, including roughages, concentrates, and supplements.

M. Animal Genetics and Reproduction

1. Differentiate between genotype and phenotype, and describe how dominant and recessive genes function.

1. Compare and contrast genetic characteristics among different breeds of farm animals.

1. Demonstrate how to display phenotype and genotype ratios by utilizing a Punnett Square.

4. Explain the fertilization process and the methods of insemination.

5. Understand the purpose and processes of mitosis and meiosis.

N. Animal Health and Diseases

1. Explain common animal health practices.

2. Understand the causes and control of common diseases.

3. Describe environmental influences of animal health.

4. List and examine the different types of animal diseases.

5. Describe the different types of injections.

O. Using Biotechnology to Improve Life

1. Describe biotechnology and how it is being used.

2. Identify issues associated with biotechnology.

3. Distinguish between two major areas of biotechnology.

4. List and explain examples of orgasmic biotechnology.

5. Describe the role of genetics, cells, and genomes in molecular biotechnology.

6. Describe the process of genetic engineering and the use of recombinant DNA.

7. Identify the areas of Agriscience being developed through genetic engineering.

P. Applying Principles of Soil Science

1. Describe the major soil components and types.

2. Explain the different ways that soil can be formed.
3. Understand how soil texture, structure, pH, and salinity affect plant growth.
4. Explain the different kinds of soil.
5. Explain the types, uses, and applications of soil amendments and fertilizers.
6. Explain the relation between soil and land.

Q. Marketing Technology in Agriscience
1. Describe the importance of agricultural marketing.
2. Explain ways agricultural products are marketed.
3. List and explain the major functions in agricultural marketing.
4. Describe the role of marketing infrastructure.
5. Explain the role of communication in agricultural marketing.

R. Computer Technology and Agriculture
1. Name five uses in agribusiness.
2. Name and explain the functions of the major external parts of the computer.
3. Demonstrate the use of a word processor.
4. Gain access to information highway through the internet.

S. Interpersonal Skills & Leadership Development (FFA)
1. Examine leadership traits in a leader.
2. Chart a short history and purposes of the FFA
3. List and describe the FFA degree requirements.
4. Explain and recite the FFA Creed.
5. List components of teamwork and cooperation.
6. Goal setting and creating the positive attitude.
7. Completion of a Supervised Agricultural Experience Project

T. Parliamentary Procedure & Law
1. Define Parliamentary Procedure.
2. Understand the basic concepts of Parliamentary Law.
3. Apply Parliamentary Law in a meeting setting.
4. Use effectively Parliamentary Law within a meeting.

U. Communication and Speaking Skills
1. List and describe the importance of public speaking skills.
2. Demonstrate the ability to lead a group discussion.
3. Describe the importance of being a good listener.
4. Demonstrate public speaking skills in selecting, researching and orally delivering a 5-10 minute presentation.

V. Agriculture Science Research Project
1. Development of an agriculture science project
2. Statistical management of project via Record Book
3. Instructional coordination and supervision
4. Analysis of project results

W. Professional Opportunities in Agriculture
1. Biotechnology & research fields
2. Other related agriculture science fields

These are topics taught in AGRICULTURE SCIENCE 2

A. Introduction to Agricultural Biology
1. What is agricultural biology and why is it important?
2. How does biology in agriculture impact the student?
3. What are the career opportunities for the student in agricultural biology?

B. Agricultural Research
1. Why is research important?
2. What does an agricultural researcher do?
3. How do researchers go about conducting research?
4. What are the principles of research?
a. Project formulation and development
b. Project management & data collection
c. Analysis of project results

C. Agriculture and the Environment

1. What are the characteristics of living things?
   a. Cells The Building Blocks of All Life Forms
      1. Plant and animal cell identification and function
      2. Cell structure
      3. Cellular respiration
      4. Cellular transport
      5. Cell differentiation

2. What are the inorganic characteristics that support life?
   a. Soil and Water: The Chemical Foundation
      1. Atom and molecule structure and chemical bonding

1. Soil: What are the components of soil and why are different soil samples found where they are?
   a. Basic soil components
   b. Soil formation factors and horizons
   c. Soil texture, and structure
   d. Soil organisms and organic matter
   e. Interrelationships of plants and soil

3. Water and water movement properties
4. Soil and water management

3. How do living organisms interact with the environment? Why do the weather and other abiotic factors affect living organisms?
   a. Structure and function of ecosystems
   b. The Food Web
   c. The "agricultural revolution" and the environment
d. Demographics and the environment

e. Modern agricultural practices and the environment

4. How are plants and animals classified?

   a. Taxonomy of living organisms
   b. Evolutionary relationships with other major groups
   c. Comparison of modern agricultural crops and livestock to ancestors

D. Plant Physiology, Reproduction, Photosynthesis and Growth

1. What are the structures and functions of plants?
2. How do plants grow?
   a. Seed germination
   b. Photosynthesis and respiration
3. How do plants reproduce?
   a. Sexual reproduction
   b. Asexual reproduction.
4. How have modern agricultural practices and biotechnology changed plants?
5. What is the role of plants in nutrition and medicine?

E. Animal Physiology, Reproduction, Nutrition, Health and Behavior

1. What are the internal systems of animals? How do these systems differ among species? How are they similar?
2. How do these systems interact to sustain life and promote growth?
   a. The digestive process
   b. The respiratory system
   c. The reproductive system
   d. The circulatory system
   e. The endocrine system
   f. The nervous system
3. Why do animals interact with each other? How does behavior affect
management and feeding strategies?

4. What do we feed domestic animals? How is food processed within the body? What are the important characteristics of feeds? What are the animal's nutrient requirements?
   a. Feed identification and nutrient evaluation
   b. Livestock nutrient requirements
   c. Ration formulation

5. What are the major diseases that affect animals? How do these diseases spread? How does the body prevent and fight diseases and infections? What management practices can reduce the incidence of health problems?

F. Plant and Animal Genetics
   1. How are traits passed on?
   2. How do cells reproduce?
      a. Mitosis
      b. Meiosis
   3. What are the physical and chemical structures involved in genetics?
   4. Who were some famous geneticists? What were their contributions?
   5. Why are genetics important in production agriculture?
   6. What are some future careers in genetic research?

G. Plant Pathology and Entomology
   1. What are common plant diseases?
   2. What effect do harmful insects have on development and growth?
   3. What is method of control?
   4. Identify the Orders of Insects

   1. Identify insect structures and development
   1. What are effective IPM practices?

H. Biotechnology Applications
1. What is Biotechnology?
2. What is the importance of Molecular biotechnology?
3. What is genetic engineering
4. What is tissue culturing?

Soil Structure and Function
1. What are the components, function, economic uses, and relationship to the earth?
2. What is the Geologic Cycle?
3. What is the importance of chemical and physical weathering to the Earth?
4. Describe the different types of soil formations.

Professional Opportunities in Agriculture Science & Biology
1. Biotechnology & research fields
2. Other related science fields

K. Agricultural Inter-Personal & Leadership Development
1. Completion of a Supervised Agricultural Experience Program and data collection
2. Development of listening, speaking, writing & reading skill activities
3. Critical thinking & group team building activities
4. Agriculture presentations

These are topics taught in ANIMAL SCIENCE

A. Economic Impact
1. Content and methodology
2. Demographics
3. Social economic balance
4. Plant and animal balance
5. Human health and nutrition
6. Scientific classification system
B. Plants, Animals, and their Management
   1. History and principles
   2. Habitat
   3. New scientific principals
   4. Behavioral modification and manipulation

C. Animal Anatomy and Physiology
   1. Analysis of body systems
   2. Physiological function of hormones and auxins
   3. Reproductive physiology
   4. Process of digestion

D. Animal Breeding and Genetics
   1. Process of mitosis and meiosis
   2. Cell theory of inheritance
   3. Heritability percentage of traits
   4. Artificial insemination
   5. Embryo transplants

E. Animal Phenotypic Selection and Evaluation
   1. External anatomy
   2. Skeletal identification and position
   3. Muscle volume
   4. Fat deposition
   5. Productivity and performance

F. Animal Health Care
   1. Diseases and parasites
2. Predisposing factors and conditions
3. Biological preparation, antibiotics
4. Sanitation requirements and procedures
5. Laws involving human consumption, food product retention

G. Animal Nutrition and Feeds
1. Classes of nutrients and requirements
2. Animal nutrient requirements
3. Analysis of macro and micro animals
4. Vitamin roles
5. Nutrient deficiencies
6. Balancing rations and feed practices
7. Photosynthesis

H. Common Integument and its Derivation
1. Epithelium, mesothelium and endothelium
2. Skin and its function
3. Mammary glands
4. Physiology of lactation

I. The Nervous System
1. The brain and its function
2. The spinal cord
3. The peripheral nervous system
4. The autonomic system

J. Respiratory System and Respiration
1. Structure of mammalian respiratory system
2. Physiology of respiration
3. Mechanics of breathing
4. Plant respiration

K. Animal Research Presentation
1. Current animal research and investigation
2. Data presentation
3. Summarization and conclusion

L. Professional Opportunities in Animal Science
1. Animal research fields
2. Other related animal science fields

M. Agricultural Inter-Personal & Leadership Development
1. Completion of a Supervised Agricultural Experience Program and data collection
2. Development of listening, speaking, writing & reading skill activities
3. Critical thinking & group team building activities
4. Agriculture presentations

These are topics taught in PLANT & SOIL SCIENCE

A. The Role of Higher Plants in the Living World
1. Fossil fuels
2. Food chains
3. Industrial products and environmental concerns
4. Lower forms of plant life

B. Structure of Higher Plants
1. The life cycle of a plant
2. The cell
3. Cell structure
4. The plant body
C. Naming and Classifying Plants
   1. Climate
   2. Botanical names
   3. Botanical Classifications
   4. Plant taxonomy

D. Origin, Domestication, and Improvement of Cultivated Plants
   1. Origin of cultivated plants
   2. Domestication of plants
   3. Crop plants
   4. Germplasm
   5. Genetic concepts in plant improvement

E. Propagation of Plants
   1. Propagation methods
   2. Sexual propagation
   3. Asexual propagation

F. Vegetative and Reproductive Growth and Development
   1. Vegetative growth and development
   2. Reproductive growth and development
   3. Plant growth hormones and regulators

G. Photosynthesis, Respiration, and Translocation
   1. Photosynthesis
   2. Plant respiration
   3. Electron transport system
   4. Assimilation
H. Soil and Soil Water
   1. Factors involved in soil formation
   2. Physical properties of soil
   3. Chemical properties of soil
   4. Soil organisms
   5. Soil organic matter
   6. Soil water
   7. Water quality

I. Soil and Water Management and Mineral Nutrition
   1. Land preparation
   2. Irrigation
   3. Mineral nutrition
   4. Soil Conservation

J. Climate Influences on Crop Production
   1. Climate factors affecting plant growth
   2. Climatic requirements of some crop plants
   3. Weather and climate
   4. Climatic influences on plant diseases and pests

K. Biological Competitors of Useful Plants
   1. Weeds
   2. Plant diseases
   3. Plant pests
   4. Nematodes
   5. Rodents
   6. Pesticide impacts on the environment
L. Theories of Harvest, Preservation, and Marketing
   1. Harvesting
   2. Post-harvest preservation

1. Marketing of agricultural products

M. Plant Research Project
   1. Development of environmental plant & soil science projects
      1. Statistical management of project via Record Book
   1. Instructional coordination and supervision
   1. Analysis of project results

N. Professional Opportunities in Plant & Soil Science
   1. Biotechnology & research fields
   2. Other related plant & soil science fields

O. Agricultural Inter-Personal & Leadership Development
   1. Completion of a Supervised Agricultural Experience Program and data collection
   2. Development of listening, speaking, writing & reading skill activities
   3. Critical thinking & group team building activities
   4. Agriculture presentations

These are topics taught in **PLANT & SOIL SCIENCE/ FLORAL DESIGN**

1. Theory and Design
   a. History of Floral Design
      - Identify all eras that influence floral arrangements
      - Make floral head garlands
   b. Design, Harmony and Unity
      - Distinguish between similarities and differences as used in a design
      - Make single bud arrangement
   c. Color
      - Understand that color is the single most important factor in an arrangement
      - Create a color wheel
d. Balance, Proportion and Scale
   - Explain that these three have a deciding factor in type of design arranged
   - Make a cut flower arrangement

e. Focal Point and Rhythm
   - Demonstrate that location of focal point affects rhythm
   - Make a 3-bud arrangement

f. Line, Form, Space and Depth
   - Examine types of lines used in making floral arrangements
   - Make a round arrangement

g. Texture and Fragrance
   - Lab: identify scents related to types of flowers
   - Analyze floral scents and use in an arrangement

h. Tools, Containers and Mechanics
   - Identify use and safety procedures for all floral tools
   - Create a ribbon reference guide
   - Make different examples of bows

1. Flowers and Foliage
   a. Nomenclature and Post-harvest Physiology
      - Lab: identify various parts of both flowers and leaves
      - Dissect different flowers used in arrangements

   b. Care and Handling
      - Practice proper care of cut flowers
      - Make a wrapped cut flower arrangement

   c. Flower and Foliage Forms
      - Identify different forms used for creating arrangements
      - Create a basket arrangement

1. Basic Techniques and Styles
   a. Shapes of Floral Arrangements
      - There are eleven different floral shapes used in floral industry
      - Make a topiary design
b. Seasonal, Holiday and Special Occasion Designs
   - Identify and research seasons and holidays affecting the floral industry
   - Make a holiday arrangement with accessories

c. Flowers to Wear
   - Learn proper methods for creating wearable flowers
   - Make a boutonniere and corsage

d. Everlasting Flowers
   - Identify designs that can be enjoyed year round
   - Dry cut flowers in the classroom
   - Make a silk flower arrangement

1. Beyond the Basics
   a. Oriental Style of Design
      - Research modern ways of utilizing oriental design techniques
      - Make a natural floral design
   b. Contemporary Design Styles and Techniques
      - Utilize techniques with a modern flair
      - Make a dish garden
   c. Wedding Flowers
      - Do a mock consultation for a wedding
      - Make a wedding bouquet
   d. Sympathy Flowers
      - Research meaning behind flowers
      - Make a heart shaped floral design

1. The Floral Industry
   a. Harvest and Distribution
      - Identify world wide retailers of flower used in design
      - Make an arrangement utilizing exotic flowers
   b. The Retail Flower Shop
      - Visit a retail floral shop
      - Create a reference book for a retail floral shop
c. Careers and Continuing Education
   - Career Report on options available in floral and horticulture areas

These are topics taught in **Intro to Fabrication & Welding**

1. Safety
   a. Personal
   b. Group
   c. Shop/Classroom
   e. Tools
   f. Machines
   g. Floor plan layout/workstations/tool cabinets/proper storage of tools
   h. Fire Extinguishers and Eye/Body Wash Station
   i. Classroom Management/Cleanup/Environment

2. Binder/Portfolio
   a. How to set up (overall binder and each project section)
   b. Sketch
   c. Blue prints (working drawing)
   d. Materials/Bill of Materials
   e. Plan/Procedures
   f. Parent Contract (bill of materials)

3. Soldering and Brazing
   a. Binder
   b. Safety
      c. How to
   d. Parent Contract (bill of materials)
      e. Properly solder and braze projects (Art Metal)

4. Careers/Where Metal Technology May Lead You
   a. Cover Letters
   b. Resumes
c. Applications

d. Letters of Recommendations

5. Machines/Tools (Included but not limited to: Band saw, drill press, break, shear, grinder, chop saw, portable drills)
   a. Identification
   b. Uses
   c. Safety

6. SMAW (Shielded Metal Arc Welding)
   a. Binder
   b. Parent Contract (bill of materials)
   c. Safety
      d. How to
      e. Electrodes
      f. Set Up
      g. Properly SMAW projects

7. Oxy-Fuel
   a. Binder
   b. Parent Contract (bill of materials)
   c. Safety
      d. How to
      e. Wire
      f. Set Up
      g. Properly weld projects

8. MIG (Metal Inert Gas)
   a. Binder
   b. Parent Contract (bill of materials)
   c. Safety
      d. How to
      e. Wire
9. Oxy-Fuel Cutting
   a. Binder
   b. Parent Contract (bill of materials)
   c. Safety
      d. How to
      e. Set Up
      f. Properly cut projects

10. Final
    a. SMAW, Oxy, MIG, Oxy Fuel Cutting

11. FFA/SAE (throughout year)
    a. What is program?
    b. Where are we headed? Opportunities in life can FFA bring you?
    c. Resumes (learning to show that you are the best)
    d. Portfolios
    e. Final presentation

   -1 oral presentation/semester describing education value or process of project they made
F.
Program Completion Standards
**Requirements to acquire a Graduation Cord**

A student must meet these requirements in order to receive the graduation cord when they are a senior at the annual end of the year awards banquet.

*Must be an active member that attends 80% of FFA meetings*

*Must attend 50% of chapter activities*

*Must have a 2.0 GPA or higher*

*Must be a senior that is graduating in the program*

*Must be a program completer (at least 3 years in the program)*

**Requirements to Acquire a FFA Letter**

A student must meet these requirements in order to receive the FFA Letter when they are a senior at the first chapter banquet.

*Must be an active member that attends 80% of FFA meetings*

*Must attend 50% of chapter activities*

*Must have a 2.0 GPA or higher*

*Must be a senior that is graduating in the program*

*Must be a program completer (at least 3 years in the program)*
G.
Description of Facilities and Major Equipment
Facilities & Equipment

Greenhouse

Garden area

Chicken Coop

Hand tools for working in garden area

1 Office

2 Classrooms

1 Welding Shop

6 Horse Stalls at R&J Haringa Dairy

8 Extended mare motel pens next at R&J Haringa Dairy

2 Outside goat/sheep pens at R&J Haringa Dairy

2 Back beef pens at R&J Haringa Dairy

1 Poultry Pen at R&J Haringa Dairy

8 Outside pens next to horse stalls at R&J Haringa Dairy
1 Trailer parking spot at R&J Haringa Dairy

1 Cook Trailer

1 Truck

1 Van

1 Farrowing crate
H.

Five-Year Facility
&
Equipment Acquisition Schedule
Our plan for the Agriculture Program at San Jacinto High School for the next five years will focus primarily on curriculum, class option expansion, and bringing back the school farm to full operation on campus.

2017-2018
* Expand school garden
* Create layout/plan for Welding Shop
* Start laying chicken project
* Have Agricultural Government and Civics A-G approved
* Garden/Greenhouse area tools that include but are not limited to: hoses, hand trowels, and cultivating tools/supplies
* Clippers and blades for sheep, goats, hogs and beef to be sharpened or replaced
* Wheelbarrow replacement wheels
* EZ Up Canopy
* Floral Design supplies that include but are not limited to: wire, tape, snips, containers, and wire cutters
* Begin articulation plan with Mt. SAC
* Candidates for Section FFA Office, if qualified candidate available
* Candidate for Region FFA Office, if qualified candidate available

2018-2019
* Fully implement Ag Welding as a course pathway
* Work with English and math teachers for pathways.
* Hire additional Agriculture Teacher
* Implement of articulation
* Security Cameras for Greenhouse/Garden Area
* Garden/Greenhouse area tools that include but are not limited to: hoses, hand trowels, and cultivating tools/supplies
* Clippers and blades for sheep, goats, hogs and beef to be sharpened or replaced
* Floral Design supplies that include but are not limited to: wire, tape, snips, containers, and wire cutters
* Candidates for Section FFA Office, if qualified candidate available
* Candidate for Region FFA Office, if qualified candidate available

**2019-2020**

* Implement a Farmers Market for produce during the week.
* Expand our ag welding course offerings for pathway
* Work with English and math teachers for pathways.
* Garden/Greenhouse area tools that include but are not limited to: hoses, hand trowels, and cultivating tools/supplies
* Clippers and blades for sheep, goats, hogs and beef to be sharpened or replaced
* Floral Design supplies that include but are not limited to: wire, tape, snips, containers, and wire cutters
* Candidates for Section FFA Office, if qualified candidate available
* Candidate for Region FFA Office, if qualified candidate available

**2020-2021**

* Continue implementation of Ag Welding pathway
* Wheelbarrow replacement wheels
* Implement pathways with math and English teachers included
* Garden/Greenhouse area tools that include but are not limited to: hoses, hand trowels, and cultivating tools/supplies
* Clippers and blades for sheep, goats, hogs and beef to be sharpened or replaced
* Floral Design supplies that include but are not limited to: wire, tape, snips, containers, and wire cutters
* Candidates for Section FFA Office, if qualified candidate available
* Candidate for Region FFA Office, if qualified candidate available

**2021-2022**

* Garden/Greenhouse area tools that include but are not limited to: hoses, hand trowels, and cultivating tools/supplies
* Functioning pathways with math and English teachers.
* Clippers and blades for sheep, goats, hogs and beef to be sharpened or replaced
* Wheelbarrow replacement wheels

* Floral Design supplies that include but are not limited to: wire, tape, snips, containers, and wire cutters

* Candidates for Section FFA Office, if qualified candidate available

* Candidate for Region FFA Office, if qualified candidate available
I. Staff Assignments
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**DUTIES AND ACTIVITIES AS AGREED UPON BY THE AG STAFF.**

________________________  ________________________
Danielle Scoggins          Lindsey Stiff
J.

FFA

Program of Activities

(included earlier in folder)
K.
Department Policies
San Jacinto High School Farm/Animal
Student, Parent, and FFA Advisor Contract

INTRODUCTION

The San Jacinto High School Farm (courtesy of R&J Haringa Dairy) is structured to allow students a place to keep a supervised animal project. The animal project is the responsibility of the student and will be supervised by the San Jacinto High School Agriculture Science Instructors.

Listed below are rules and regulations to be followed by all students using the San Jacinto High School Agricultural Farm. The school farm is an extension of the classroom of the San Jacinto High School Agriculture Education Program therefore all policies of the San Jacinto High School Student/Parent Handbook will be enforced.

A. QUALIFICATIONS FOR PRIORITY OF USE OF FACILITIES

1. Student must be enrolled in the Agriculture Program.
2. Student must have no discipline issues at school.
3. Student must maintain a 2.0 GPA as well as no D's or F's.
4. Student must be passing their agriculture class.
5. Purchase of livestock insurance if wanted (highly suggested).
6. Case-by-case situations will be considered by the Agriculture instructors in an overflow situation.
7. Students with previous good behavior and animal management skills may receive priority.
8. Students must not be failing any class

RULES AND REGULATIONS PERTAINING TO THE OPERATION OF THE SAN JACINTO HIGH SCHOOL AGRICULTURAL FARM.

GENERAL RULES
1. Students using the facilities of the San Jacinto High School Agricultural Farm (courtesy of R&J Haringa Dairy) will be expected to cooperate with other students using the San Jacinto High School Agricultural Farm. Lights will be turned off, gates kept closed, empty feed sacks and other trash thrown in the dumpster, stalls kept clean, animals cared for and respect will be given to other student’s property at the farm.

2. Students will be expected to follow all rules listed in this contract. Students who fail to follow the rules and regulations will need to remove their projects from the school farm. Students will have 5 days to remove project(s), or project(s) will be removed by agriculture science instructors and sold. The project will be sold in the name of the San Jacinto FFA Chapter. The money will be held in the San Jacinto FFA Account. Money owed to the San Jacinto FFA Chapter will be paid no later than one (1) week after the animal(s) are removed.

3. The San Jacinto Unified School District is drug/alcohol free. Students who break the drug free policy will be asked to remove all livestock projects within 48 hours and lose their privilege of being on the farm at any time. *Parents of students who break the drug/alcohol free policy of the San Jacinto Unified School District will lose their privilege to come on the San Jacinto High School Agricultural Farm regardless if they are their child’s transportation. Students and/or Parents who break the school policy will be referred to San Jacinto High School Agriculture Science Instructors and to the proper authorities if the need arises.

4. The use of unethical practices or improper conduct by either student or adult while at the school farm will result in that student losing all rights to the farm facilities and the student will be required to remove their animal from the farm facility as stated in General Rules #2. The Agriculture Instructors reserve the right to make the decision regarding the removal of the livestock based on the student or adult behavior. Inappropriate behavior may also result in San Jacinto High School discipline.

4a. Respect is expected from all students and adults while at the Ag Farm. If issues arise the Agriculture Instructors must be notified immediately. Every effort will be made to settle the issue between the parties involved. If an arrangement that is satisfactory to all parties as determined by the Agriculture Instructors is impossible, further action will be taken by the Agriculture Instructors such as removal of livestock from the facility, banning of individual from the Ag Farm, and possible removal from the FFA program. PLEASE RESPECT YOUR FELLOW AGRICULTURALISTS AND LIVESTOCK.

5. All students driving vehicles must be courteous as you drive. Vehicles should be kept on the road with no spinning or digging of tires. Violation of this rule will result in loss of Ag farm privileges.
All violators of the rules set forth will receive a written warning once, upon second offense student **WILL** forfeit all rights to keep animals at the farm or to use Ag farm facilities.

6. FFA Members are expected to be in good standing with the San Jacinto FFA Chapter in order to use the facilities of the school farm. Examples: FFA Record book is current, 2.0 grade point average by a specified quarter, not failing any class and a passing grade in agriculture class.

8. Students will be held responsible for the livestock pens and equipment they are using. Equipment that is tore up, abused or stolen will be the responsibility of the student and the San Jacinto FFA Chapter can be reimbursed for the loss by the party responsible.

9. There are to be no small children running around the San Jacinto Agriculture School Farm for their own safety and the safety of others. If a small child happens to be at the farm (a sibling) a parent **MUST** be present and watch their child. The parent is responsible for the behavior of the child and the consequences that present themselves because of the child’s behavior.

**LIVESTOCK ~ Initial on the lines**

______ Animals will be fed every morning by 7:30am and at night before 6:30 pm. or by special arrangement with the advisor(s).

______If a student is in a pen with other students it is the responsibility of the students to have a feed schedule.

______ Students must attend ALL scheduled weigh days, show practice days, work days, and animal preparations/clip day (this one has a date specifically for the student). We meet at the dairy from 4-5:30PM on Monday’s unless otherwise noted. A maximum of 3 of the 12 days may be missed for SOCAL Fair and a maximum of 1 day of the 10 days may be missed for Indio fair. Yes, there are extracurricular that also meet after school, therefore, the student must meet with your coaches/advisors and get cleared to come to practice. If students do not show they will not get training and will not place or feel comfortable working the animal. The animal may also not be trained and could be rejected at the fair if the animal is not worked with. When there is not a schedule showmanship practice there is schedule weigh day’s that the student must then weigh their own animal(s)
Students must work with their animals for at least 20 minutes a day Monday-Saturday (no Sundays). If a student has multiple animals then that student needs to work with each animal for 20 minutes.

Animals will not be tied and left unattended.

Pen areas must be kept clean. Pens must be cleaned at least three times a week. If there is a major problem, the student will not be allowed to have animals on the farm facility. Feed, manure and hay are to be dumped in the designated trash bin area. If you are uncertain where that is, ask.

Before a livestock project leaves the school farm, San Jacinto High School Agriculture Science Instructors will be notified by the student, parent(s) or other person(s) removing animals.

Students will not feed raw garbage to FFA Livestock Projects.

Students are required to provide their own locking feed container, if so desired.

Students with projects at the San Jacinto FFA School Farm may be asked to provide animals for livestock judging classes. Respective students will be notified before their animal is used for judging.

The student is responsible for monitoring the health of their livestock project. If an animal becomes sick, it is the students’ responsibility to notify the advisor and it is also to call a veterinarian if necessary.

It is the student and/or parents responsibility to arrange or administer medication and/or veterinary services. Students and parents may ask the advisor(s) for help. All medications are to be stored off San Jacinto High School property and the R&J Haringa Dairy.
The Chapter Advisor(s), San Jacinto High School, San Jacinto FFA or San Jacinto Unified will not be held financially responsible if a livestock project dies at the school farm or at a livestock show.

ANY animal neglected (no feed, no water), abandoned, or abused shall be removed from the farm at the owner’s expense after one written notification from the Agricultural Science Instructor(s). Copies of said warning will be sent to the parents of said student and will be reported to the proper authorities. Any student failing to care for animals will be required to remove their animals from the farm and forfeit the use of the farm and further involvement in the program.

**PENS**

The Agricultural Science Instructor will assign all pens at the San Jacinto FFA School Farm. Students/Parents will not build pens unless they have permission from the Agricultural Science Instructor(s).

Students/Parents having livestock equipment at the San Jacinto FFA School Farm will need to have their name on each item and verified with the Agricultural Science Instructor.

**FEED AND OTHER FINANCIAL RESPONSIBILITIES ~ Please initial on the line**

_____ **Animal:** It is your responsibility to purchase the animal at the time of sale. Loans are to be acquired before the date of purchase. It is not the responsibility or the duty of the Agriculture Instructors or San Jacinto FFA to loan you the capital for the project.

_____ **Feed:** Getting feed and paying for feed is the students’ responsibility. You will need to have two (2) bags to your name every Friday. If you miss you will receive one (1) warning. On the second (2) warning the student will forfeit the animal and it will be sold and the monies gained will go into the chapter account.

_____ **Equipment:** It is the students’ responsibility to have a tack box if the student wishes to keep materials in a separate spot then with the chapter’s equipment. If the student so chooses to have a tack box it must vacate the premises at the end of the fair and be housed at the students’ home, it may come back onto the premises one (1) week prior to the purchase date of the animal.
TRANSPORTATION ~ Please initial on the line

San Jacinto High School Agriculture Department Trailers and/or other equipment owned by the FFA Chapter or San Jacinto Unified School District will not be used by students or parents without the permission of the FFA Advisor, Agricultural Science Instructor, or other San Jacinto High School Personnel. FFA members requesting transportation for animal projects to school approved livestock shows will be required to notify Agricultural Science Instructor(s).

Transportation to and from the San Jacinto Agriculture Farm is not the responsibility or duty of the Agriculture Instructors. Students are not to expect and/or demand transportation to and the farm. There may come times when it is not feasible for the Agriculture Instructors to get out to the farm. When the Agriculture Instructors can give rides to and from the farm will be announced to students with animal projects.

CLEANUP

All pens and cages must be cleaned on a regular basis with all used bedding being removed and replaced with fresh bedding.

The student is responsible for keeping pen and equipment in good condition. Pens and cages will be cleaned out within one (1) week when animals are sold or removed from farm. Four (4) hour workdays will be scheduled to maintain the Ag farm. All students with livestock at the farm are required to participate.

Any student or parent not participating on workdays without previous arrangements will forfeit rights to keep animals at the farm.

The Agriculture Science Instructor will determine the date and notify all parties involved for clean up.

At the end of the feeding period, the student will be responsible to tear down, clean pen and move livestock shelters.

FAIR
Each student is responsible for his or her own fair entries and payment of entries. There will be one day that the advisor(s) will be inputting fair entries. If a student would like the advisor to enter their entry they must have payment and entry papers filled out and given to the advisor by the date specified.

Other requirements for fair will come through fair parent meetings. Those rules must be abided by.

BUYER LETTERS THANK YOU LETTERS, SET UP, & CLEAN UPDAY AT FAIR.

~Please initial on the line

SOUTHERN CALIFORNIA FAIR & RIVERSIDE COUNTY FAIR

Buyer letters: Letters asking for purchase of an animal project must:

1. Be approved by an Agriculture Instructor no later than four (4) weeks prior to the start date of fair.
2. Buyer letters must be sent out three (3) weeks prior to the start date of fair
3. You must submit three (3) copies of your buyer’s letter before mailing them out.

Thank You Letters: Thanking a buyer for purchasing your animal.

1. Be approved by an Agriculture Instructor no more than three (3) weeks after the end date of fair.
2. Thank you letters with three (3) copies must be turned in no more than two (2) weeks after the end date of fair to an Agriculture Instructor with an addressed and stamped envelope.

Buyer letters & Thank You Letters:

1. Failure to send out buyer letters and thank you letters on the set date on the calendar will subject the exhibitor to consequences.

RECORD BOOKS

The FFA record books must be kept current as stated in above rules. There is schedule record book help for students Monday’s from 3-3:45pm unless otherwise noted. There will be three dates in
which the record book will be due to be checked for completeness and being current. These dates will be as follows:

1. Check One: The second FRIDAY after the ending of the Southern California Fair.
2. Check Two: The second FRIDAY after the ending of the Riverside County Fair & National Date Festival.
3. Check Three: The FRIDAY before finals week of the spring semester.

If record books are not current the student will be subject to consequences.

SET UP AND CLEAN UP AT FAIR/FARM

Every student having an animal project at fair will assist with set up and clean up on the fair grounds / project area. Failure to help will result in losing privileges at the next stated fair or other FFA activity.

CONCLUSION

All students using the San Jacinto FFA School Ag Farm will be expected to follow the above contract. It must be signed by the student, parent, Agriculture Science Instructor and Principal then it will be copied and the copy will be given back to student.

One copy of the contract will be kept on file in the Agriculture Science Instructor’s file.

Animals will not reside at the farm until the contract is signed by all parties involved and on file in the Agriculture file.
Signatures are required below.

(We) ___________________________________________________ and

Print FFA Member name

___________________________________________________________

Print Parent/Guardian name

Understand our responsibility to use the facilities of the San Jacinto FFA School Ag Farm and what is expected during the duration of the animal project.

Signatures Required Below

_______________________________ FFA Member

_______________________________ Parent/Guardian

_______________________________ Agriculture Science Instructor

_______________________________ Agriculture Science Instructor

_______________________________ Principal

A Copy of this signature page will be given to the student for their records.
The original will stay with the advisor(s).
L. Proficiency Standards for Program Completers

California Agriculture Teachers Association has started a state-wide committee in formulating proficiency standards for each of the areas/classes that are taught in Agriculture Education. Once the new proficiency standards are developed they will be placed in this category.
M.

Teacher Data
Lindsey Stiff - Credentials and Degrees

Bachelor’s in Agricultural Science

From: California Polytechnic University of San Luis Obispo  Date: Dec. 2013

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<th>First Name: LINDSEY</th>
<th>Middle Name: NICOLE</th>
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Danielle Scoggins - Credentials and Degrees

Bachelor’s in Agricultural Science

From: California State Polytechnic University of Pomona Date: March 2013

Master’s in

From: California State Polytechnic University of Pomona Date: June 2015

| Last Name: | SCOOGGINS |
| First Name: | DANIELLE |
| Middle Name: | ANN |

Last Known County of Employment:  
Adverse and Commission Actions Indicator:  
Note: Please verify County of Employment is current  
If flag displayed, click the Adverse and Commission Actions tab. If no flag, review Status field under the All Documents tab to view any adverse action taken.

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N.

Roster of Agriculture Advisory Committee
Ron Haringa and Julie Haringa, R&J Haringa Dairy, Owner

Matthew Hixson, Assistant Superintendent of Personnel Services, SJUSD

Rose Henderson, Vice Principal/CTE Advisor, SJHS

Steve Miller, Miller, Representative

Felix Ortiz Sr., Empire Welding, Owner

Art Oostdam, Oostdam Dairy, Owner

Ashley Oostdam, SJUSD

Betty Oostdam, Oostdam Dairy, Owner

Vince Record, SJUSD

Danielle Scoggins, Agriculture Instructor, SJHS

Calvin Smith, C.L. Smith Hay & Grain Company, Owner

Lindsey Stiff, Agriculture Instructor, SJHS

Howard Wilson, Past Agriculture Instructor, SJHS
O.
Minutes of Advisory Meeting
Advisory Committee Minutes
September 30, 2015 in Room 508 at 6:00pm

Meeting Opened: 6:07 pm

Roll Call: Jordan Reeves, Calvin Smith, Matt Hixon, Ron Haringa, Vince Record, Howard Wilson, Danielle Scoggins, Lindsey Stiff

Old Business
None

New Business/Action Items

1. Pig Breeding Program: Start off with one pig, some arrangements to bring a sow to track heat and AI the sow.
   - Hixon brought up issue of livestock. We will be checking with Reeves’s contact.
   - Calvin asked if maybe we could pick one of the best sows at SOCAL fair and use them as our breeding sows.
   - Write a contract protecting Scoggin’s grandma’s animals and the school.
   - Pencil out how and where those funds are coming from for feeding those pigs

2. Garden/Dairy
   - Change it up so we do not have to harvest as much

3. Pound Busters/Aquaculture
   - Calvin: Irrigation show in Long Beach, November

4. Courses
   - Ag Gov/Econ to help create our pathways. Possibly getting a floral two.

5. Chicken Coop and Rabbit Cages

6. Additions to Leadership Team
   - They wanted to know the number for this year’s FFA roster.

7. Hosted BBQ
- Maybe change the date of the football dinner
- How are we going to fund it in the future? Add a fundraiser to it with tickets to be sold?
- Find some sponsors for it. Run it through cabinet.
- Get a suggested date for next year

8. Funding for Projects
   - See if Seth can release monies to the Ag program earlier than we are getting them

9. New Van
   - Specifications of the van were brought up and will be addressed

10. Fair
    - One of our members is singing the national anthem at our auction

Next advisory meeting will be held in January 2016

Adjourned at 7:40 pm

Respectfully Submitted,

Lindsey Stiff
Agriculture Instructor
San Jacinto High School
San Jacinto Agriculture Department
Advisory Committee Minutes
January 20th, 2016 in Room 508 at 6:00pm

Meeting Opened: 6:00 pm

Roll Call: Jordan Reeves, Calvin Smith, Frank Jimenez, Vince Record, Autumn Clark, Ron and Julie Haringa, Margie Kay Vander Hulst, Howard Wilson, Lindsey Stiff, and Danielle Scoggins.

Old Business

1. Pig Breeding Program:
   a. Students in Animal Science were taught to AI on the sow barrowed from Boytor Swine. The students were unsuccessful in their attempt to AI the sow and she was returned back to Boytor Swine Farm.

2. Garden/Dairy:
   a. Wilson gave an update about the school farm and dairy. Talked about expanding the pens at the dairy and start this project after Indio Fair.
   b. Reeves talked about funding from the district for the pens and lighting.
   c. Calvin suggested possibly assigning Neal to head the expansion of the pens.
   d. Wilson brought up installing a camera system at the school farm to ensure students tend to their animals.
   e. Ron wanted to know if the insurance policy was up to date for the dairy.
   f. Autumn brought up attending freshman orientation to increase numbers.

3. Pound Busters/Aquaculture:
   a. Wilson explained Pond Busters would setup an aquaculture system if we had funding and students to run the system.

4. Courses:
   a. Discussed the addition of new courses and course name change. Ag Soil and Chemistry and Ag Systems Management.

5. Chicken Coop and Rabbit Cages:
   a. Stiff explained her plans for her chicken coop and the usage on the school farm.

6. Additions to Leadership Teams:
   a. Discussed new Ag Issues Team.

7. Hosted BBQ:
   a. Discussed advertising on social media. Mrs. Haringa discussed hosting 2 BBQs, one in November and one in May.

8. Funding for Projects:
   a. Discussed terms of the $10,000 sponsorship money. Money cannot be used on improvements or emergencies.
   b. Guidelines discussed for using the money. Money is to be replaced back into account every year to maintain the $10,000 balance.
   c. Special sub account was opened called FFA sponsorship.

9. New Van:
   a. Jordan estimated that the van should arrive sometime in January.
10. So Cal Fair:
   a. The chapter had the champion FFA market hog, reserve champion market goat, first place in the lamb carcass contest, and placed in all chapter groups.

New Business/Action Items

1. Update on breeding program:
   a. Scoggins briefly discussed the plans on the new breeding the gilt that was purchased and donated by the Haringas. It is planned that the gilt will be bred by the Animal Science class to farrow during the school year.

2. Update on dairy and garden:
   a. Discussed with old business.

3. Pathways Meeting Update:
   a. Stiff discussed pushing through the Ag Communications and Government curriculum.
   b. Frank explained that our numbers need to increase in order to have an open position.
   c. Vince discussed the development of our new pathways.

4. Food Trailer:
   a. Wilson explained that the cook trailer passed the final inspection. Cabinets were ordered and the cook trailer will be going to Indio fair.

5. Mini grant funds and progress:
   a. Stiff talked about the funding she received for the chicken coop and that she plans to start building the coop with students this year.

6. Football BBQ projected dates:
   a. Possible dates decided for Football BBQ were Wednesday, August 24th or possibly scrimmage day.

7. Indio Fair:
   a. Scoggins passed out a list of all show days for each species. Explained that most students would be showing on Wednesday.

8. Star administrator:
   a. Discussed date for star administrator was during our 5K race.

9. State Conference:
   a. 12 students will be attending the conference.

10. New matching grant:
    a. Reeves and Vince explained the first year of funding would be $600,000, second year $400,000, and the third year $200,000.
    b. Calvin discussed pitching the new bond.

11. Department supplies:
    a. We are in need of welders.

12. End of year banquet:
    a. Announced it would be held May 20th at 5:30 pm in the school gym.

Next advisory meeting will be held in June 2016.

Adjourned at 7:44 pm

Respectfully Submitted
Meeting Opened: 11:15 am

Roll Call: Vince Record, Ashley Oostdam, Margie Kay Vander Hulst, Ron Haringa, Calvin Smith, Danielle Scoggins, Howard Wilson, Lindsey Stiff

**Old Business: Minutes moved by Record, second Scoggins.**

1. Pig Breeding Program
2. Chicken Coop and Rabbit Cages
3. Indio Fair

**New Business/Action Items**

1. Garden/Dairy: One pick harvest and joined with Hemet to sell produce. We also brought up concerns about PRRS disease and vaccinating all pigs. Update on new pens and concrete laying.
2. Courses: Welding, Ag Soils and Chemistry, Ag Gov/Civics. Vince will help with the pressure for Ag. Gov/Civics.
3. New Officer Team/Banquet: Announcement of team and our section officer.
4. SOCAL Fair (10/1-10/9)
5. Football BBQ (8/20 at 2 pm): Talked about tickets, “open house”, 500 people, flowers and setup.
6. FFA Calendar: Also available at http://sanjacintoffa.weebly.com

**Other Items**

1. 4th of July Parade: We are having an entry with officers.
2. Vehicles: Our truck was stolen and recovered and have van.
3. Habitat for Humanity: Record brought to us for students. Two Saturdays a month for 4 hours.
4. Valley Wide event on September 24th.

Next advisory meeting will be held September 8, 2016 at 5 pm in room 625.

Adjourned at 12:20 pm

Respectfully submitted,

Lindsey Stiff
Agriculture Teacher
San Jacinto High School
P.

Current Year Budget
## San Jacinto FFA Budget

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Signed Articulation Agreement and/or Evidence of Articulation
MSJC (Mount San Jacinto College) Articulation Day – October

Mt. SAC (Mount San Antonio) Articulation Day - October

2016-2017 The San Jacinto High School Agriculture Department is excited to begin the articulation process with both MSJC and Mt. SAC this year. This year the one or more teachers will try and attend both articulation days in October.
R.
Graduate Follow Up System
The San Jacinto FFA Agriculture Department’s follow up system is the process of being reworked. The system that is place now is:

Calling the graduate
Talking to parents
Email the graduate if email is available
Siblings will tell what their older sibling is up to if they are in the program
San Jacinto High School Survey (twice a year)

The anticipated protocol is to:

*Receive correct email address
*Once correct email is given; send them a quick survey either attached or on survey monkey
*Call students if phone number is still in service (i.e. has not changed)

-Once data is collected it will be complied and kept in a file.
S.

List of

Active Placement Sites
Active Placement Sites

Students that wish to work for their Supervised Agricultural Experience project have been able to work with a few of our local business people. The active placement sites that students are employed at have included:

- C.L. Smith Hay & Grain
- Scott Bro’s Dairy

Students who have worked at these placement sites either drive, are family or live on the property. As we continue to grow we hope to see an increase in our list of active placement sites.
T.

Recruitment Activities and Materials
Recruitment Examples:

Ice Cream Social?!?!

- The San Jacinto FFA Chapter is hosting an ice cream social for the parents and students of the AG teacher’s classes.
- Where: Room 508
- Time: 6 PM
- NO PURCHASE NECESSARY
New Opportunities
by: Alexis Vargas Bastida

- Volunteering at the pumpkin patch at C.L Smith Hay and Grain at 1387 W Ramona Expwy. From 12PM-9PM
- Students interested in attending Indio Fair must complete an animal applications due Oct. 9th
- Students selling annual Tri Tip tickets from Oct. 13 to Nov. 13th
- Orders will be taken for Thanksgiving turkeys beginning October $75 for dressed and frozen turkeys, deliveries in middle of November. ONLY 30 AVAILABLE
- Weekly flower sales Fridays at both lunches carnations $1, roses $2, and rainbow roses $3 (Seasonal)

Upcoming Activities
Oct. 1- Clip Goats @ 3:30PM
Oct. 2- SOCAL Fair Animals go in
Oct. 2 to 21- SOCAL Fair
Oct. 4- Wash Turkeys/ Chickens @ 8AM
Oct. 5- SOCAL Conference Registration due
Oct. 10 to 31- Pumpkin Patch at C.L Smith @ 12-9PM
Oct. 12- Columbus Day & Clean up day at SOCAL Fair
Oct. 13 to Nov. 20- Start of Selling Tri Tip BBQ Tickets
Oct. 14- Chapter Meeting @ 3:30PM
Oct. 17- SOCAL FFA Leadership Conference in Indio @ 8:30AM
Oct. 18- Poultry Processing
Oct. 20- Perris FFA O/C Invitational in Perris @ 4:30PM
Oct. 25- Poultry Processing
Career Opportunities

Thanks to Ag Council of America

Careers in Agriculture

The most obvious careers are directly related to the farm or ranch. But did you know that only 10 percent of Americans are involved in traditional farming? If that is the case, then what other careers comprise the agricultural field? There are approximately 22 million people who work in agriculture related fields. Unlike agriculture of our grandparents' day, today's agriculture offers over 200 rewarding and challenging careers.

Career Categories

Agricultural careers may be divided into various categories. These include: Agribusiness Management, Agricultural and Natural Resources Communications, Building Construction Management, Agriscience, Resource Development and Management, Parks, Recreation, and Tourism Resources, Packaging, Horticulture, Forestry, Food Science, and Fisheries/Wildlife.

Growth Job Market

According to the February 7, 2000 issue of Farm Bureau News, published semimonthly by the American Farm Bureau Federation, "Food Scientists and engineers will be in the greatest demand in the agricultural job market over the next four years, according to a new Purdue University study. Annual job openings for U.S. food and agricultural sciences graduates are projected to be around 55,000, while the number of graduates for those jobs will be slightly more than 57,000."
Howard Wilson  
Agriculture Mechanics Teacher  
email: hwilson@sanjacinto.k12.ca.us

Lindsey Stiff  
Agriculture Science Teacher  
email: lstiff@sanjacinto.k12.ca.us

Danielle Scoggins  
Agriculture Science Teacher  
email: dscoggins@sanjacinto.k12.ca.us

San Jacinto FFA
Southern Region  
Riverside Section

2015-2016 San Jacinto Chapter  
Officer Team

Small Acts  
Big Impacts

San Jacinto High School  
500 Idyllwild Dr, San  
Jacinto, CA 92583

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

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

Agriculture Courses

Ag Biology (D) – freshman  
Principles among the following topics: The  
molecular and cellular aspects of life, the  
chemical and structural basis of life,  
energetics of life, growth and reproduction in  
plants/animals, evolution of modern plants and  
domestic livestock species, plant and animal  
genetics, animals, and the environment  
nutrition in animals, and the similarities  
between animals and humans.

Sustainable Agriculture (D) – freshman  
Primarily for 9th grade students interested in  
agriculture or non-college bound 10th graders  
who want to take agriculture classes. It is a  
one year program and hands on learning  
environment. Using agriculture as the learning  
vehicle, the course will emphasize science,  
animal production, plant and crop production,  
agricultural business.

Agricultural Communications (G) –  
Sophomores-seniors  
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.

Ag & Soil Chemistry (D) – Sophomores-  
seniors  
Agriculture Chemistry is a laboratory science  
course designed for the college bound student  
with career interests in agriculture. Students  
will be involved in hands on laboratory study  
and receive an 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 laws.

Ag Systems Management (D) –  
Sophomores-Seniors  
Using skills and principles learned in the  
course, students design systems and  
experiments to solve agricultural management  
issues currently facing the industry.

Plant and Soils (E) – Sophomores-Seniors  
After completing this class, students will  
understand the importance of soil and the  
many uses of soil. They will also learn the  
different types of plants and crops.

Ag Mechanics (D) – Sophomores-seniors  
This introductory agriculture class is designed  
to give students hands-on skills in the areas of  
metal, plumbing, electrical, woodworking,  
cold metal, surveying, tool sharpening,  
crop work and tool identification.

Floral (F) – sophomores-seniors  
Students are introduced to the elements and  
principles of design such as line, shape/form,  
color, balance, and emphasis using a series of  
floral-based projects. Students will research  
and study floral trends, customs, cultures, as  
well as learn the business practices of a real  
floral design shop.

Animal Science (E) – Juniors & Seniors  
Students will attain academic skills and  
knowledge related to animal systems in  
regards to animal handling, management,  
career opportunities, and industry standards  
through hands-on learning.

Ag Business & Government (A) – Seniors  
America’s agricultural industry is the mainstay  
of the US economy and government. Understanding  
economics and regulations of this  
diverse industry are critical to its continued  
success and prosperity. The course will focus  
on the Constitution, the US Farm Bill,  
Federalism, microeconomics, macroeconomics,  
economic systems, and agricultural marketing.
U.
Staff In-Service Record
**INCENTIVE GRANT IN-SERVICE ACTIVITIES DOCUMENTATION**

**CRITERIA 4.B**  
**School Year:** 2015-2016  
**School:** San Jacinto High 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>Wilson</th>
<th>Scoggins</th>
<th>Stuff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Region Meeting</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Region In-service Day</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Spring Region Meeting</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Section In-service*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Section In-service*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Section In-service*</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Summer Conference</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>University AgEd Skills Week</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Professional Development **</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.  
2.  
3.  
4.  
5.
V.
Staff Agendas & Minutes
Formal agriculture staff meetings are held once a month. In-formal agriculture staff meetings can be everyday or every week.

Minutes will be placed in this portion as they become available on the working document which is housed on Ms. Stiff's desktop as well as on Google Drive.

The meeting agendas will be set up in the following fashion:

Date:

Attendance:

FFA Activities:

CATA Activities:

CDE Information:

Paperwork Checks:

Accounting Checks:

Due Dates:

Other:
Meeting Opened: 4:30 pm

I. We worked on entering livestock paperwork for the SOCAL fair.
   A. Delivering them in the morning tomorrow to the fair.

II. Ag Incentive Grant
   A. We went through the checklist to see what we have met in order to work on achieving more of the criteria.
   B. We also discussed finishing up with our program plan so it is complete.

II. Advisory Committee
   A. We discussed having our first advisory committee on September 30th at 6 pm. We decided to make food for the meeting.
   B. We also discussed who we need to ask to join our committee and will get the final add-ins from Matt Hixon.

II. Department Happenings
   A. We discussed our CATA Mtg on Tuesday and who we are taking.
   B. Softball tournament and who we will be taking

II. R2
   A. We will be working on the R2 tomorrow. Entering our own classes to make it easier on us.

II. Forms
   A. We updated all of our field trip and transportation forms up to January 1st.

Meeting Closed: 6:15 pm
W.

Department Inventory
San Jacinto High School

1 Greenhouse
1 Shade House
1 Chicken Coop
1 Garden area
1 Portable to use as an office
3 Classrooms (portables)
2 Small Ag Mechanics Rooms

Hydroponic set up materials
Garden tools

R&J Haringa Dairy – Use of these items are granted to us
7 Horse Stalls
1 Tack Room
1 Poultry Pen
8 Outside Pens
1 Restroom

R&J Haringa Dairy – Items that are kept there
Wheelbarrows
Feed trays
Buckets
Hoses
AGED 539 Project Description: Chicken Coop

The project for AGED 539 was to address Quality Criteria 3: Practical Application of Agricultural Skills as well as Quality Criteria 5: Facilities, Equipment, and Materials.

**Goal:**

The purpose of this project is to create a chicken coop, laying hens, for the San Jacinto High School Agriculture Department. The chicken coop will be used by the department’s students for Supervised Agricultural Experience projects and the department courses.

**Process and Design:**

To being the project, I applied for the San Jacinto Education Foundation Mini Grant. While applying for the mini grant, I had to research the dimensions to use and find a blueprint for building a chicken coop. The plans for the chicken coop were found through Barn Tractor, which had multiple examples of movable chicken coops.

A budget was developed when applying for the mini grant funds. It was calculated out that we would need close to one thousand dollars. These were available in November when the grant for one thousand dollars was awarded to the Agriculture Department for the project. Once we were awarded the grant, a purchase order for Home Depot in Hemet, California was requested and approved. Over the course of a few work days a week for a few months, the students in agriculture biology, sustainable agriculture, and agriculture mechanics were able to build the coop.
Outcome:

The chicken coop is in the process of being stocked with chickens that we will use for eggs. The chicken coop gave students an opportunity to build it for their SAE project, as well as future SAE projects. In the future, the department will sell the eggs to the school district staff as fundraising opportunities or student project money. The classes will maintain the coop and use the chickens for experiments on the soil.
Proposal - Individual Study and Special Problems

AgEd500 (1-6 units)
___ units
AgEd580 (1-6 units)
___ units
AgEd500 (1-6 units)
___ units
___500 (1-6 units) ___ units
(usually 3 units)

Name: _______ Lindsay Stiff

Address 26058 Clements Gardens Ln

Hemet, CA 92544

Phone 760-564-9642

Title: Chicken Coop

Goal or Purpose: To create an opportunity for student to gain hands-on skills, give back to soil, and SAE opportunities.

Specific Objectives (What will you be doing and how what will the final product be?):
To build a chick coop with a run (made in Ag Mechanics and outside of class)
Using the coop in courses to help students understand the relationship of animals and farmland.
Use the birds to teach students in our courses about feeds, reproduction, and how to effectively increase food production.
Develop unit to use in Sustainable Agriculture and Plant and Soil Science regarding soil amendments.

Estimated number of hours on this project: 90

Identify ways you will share the results/outcome with others (required to achieve a grade of “A”):
I have established a website and newsletter for our chapter. I post updates about what is going on in our department on both and send them out to our staff and community members. I will also work with students to create SAE’s to record the effects of having chickens rotated throughout of various beds before plants and how it affected our yields. Students will also learn these effects via their own testing of the soil in rows with and without chicken manure in our units for soils.
We also bring staff and advisory committee members to the garden and show them what we are doing and the outcome of our efforts.

Estimated expenditures on this project (budget – identify sources):
San Jacinto Unified School District offered a mini grant that was due in October in 2015. I submitted an application and all of the criteria for the grant. We were approved for the $1000 to build a chicken coop and use it for educational uses in our Ag Mechanics, Sustainable Agriculture, and Plant and Soils courses.

Chicken Coop Costs
1. Five panels, Tractor Supply, at $59.99 each (16 ft x 48 in) = $ 299.95
2. Six feedlot panel combo, Tractor Supply, at $39.99 each (16 ft x 52 in) = $239.94
3. 18 construction metal, galvanized steel corrugated roof panels (Home Depot) at $11.54 each (26 in x 6 ft) = $207.18
4. 5 lb box of #8 Phillips bulge head screws, Home Depot, at $21.97
5. Two 4 x 4 x 16 wood, Home Depot, at $25 each = $50

Total $820 without taxes
Timeline (identify dates):

Begin the project: March 2016
Complete the project: November 2016
Provide progress reports to advisor: Continuously

Signature _______________________________ Date 9/15/2016

Approval by University Advisor _______________________________
Project Proposal
(to be completed in conjunction with AGED 539)

Quality Criteria Number Addressed: 1B/D and 2F
Goal or Purpose of the Project:
To establish course pathways for our students to follow and help them follow a sequence of courses.

Specific Objectives to Accomplish (Be as detailed as possible):

Estimated number of hours on this project: 30
Estimated expenditures ($) on this project (your costs): $0
Proposed timeline for completion of the project:
1B/D
October 2016: Meeting with district to address course pathways
    Create pathways
    Talk to scheduling about course sequence
October 2016: Have new courses coded
    Create curriculum for new courses (if needed)
November 2016- future: Implement new pathways

Progress Report: How will you inform the Cal Poly faculty of your progress on a regular basis?
I will send my pathway chart and the new course proposals that will give students A-G credits for all of our courses. Within these proposals it will list what is going to be taught in the course.

For Office Use Only:
Project Approved By: [Signature]
Date of Approval: 9.15.2016
Quarter student will enroll in AGED 539: January
Project Plans
## Budget

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Individual Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 in. x 4 in. x 10 ft. Treated Wood</td>
<td>2</td>
<td>19.77</td>
<td>39.54</td>
</tr>
<tr>
<td>2 in. x 4 in. x 8 ft wood</td>
<td>30</td>
<td>$ 7.47</td>
<td>224.10</td>
</tr>
<tr>
<td>#10 3 inch screws</td>
<td>1 box</td>
<td>8.47</td>
<td>8.47</td>
</tr>
<tr>
<td>#8 2.5 inch screws</td>
<td>1 box</td>
<td>7.98</td>
<td>7.98</td>
</tr>
<tr>
<td>Plywood (3/8 in x 4 ft x 8 ft)</td>
<td>8</td>
<td>16.33</td>
<td>130.64</td>
</tr>
<tr>
<td>Hinges (3.5 in x 3.5 in)</td>
<td>8</td>
<td>1.87</td>
<td>14.96</td>
</tr>
<tr>
<td>Slide bolt gate</td>
<td>1</td>
<td>7.97</td>
<td>7.97</td>
</tr>
<tr>
<td>Chicken Wire (4 ft x 50 ft)</td>
<td>2</td>
<td>36.94</td>
<td>73.88</td>
</tr>
<tr>
<td>Paint (5 gal. white flat exterior)</td>
<td>2</td>
<td>157</td>
<td>314</td>
</tr>
<tr>
<td>White PVC Roof panel (26 in x 8 ft)</td>
<td>3</td>
<td>14.48</td>
<td>43.44</td>
</tr>
</tbody>
</table>

**Total Estimate:** 864.98 + TAX
**Project Evidence**

Students in the agriculture department were involved in the construction of the chicken coop. Students in the Agricultural Mechanics, Sustainable Agriculture, and Agriculture Biology courses assisted with constructing the coop with supplies purchased via the mini grant.

Students in the department prepped the material by cutting the material to length. As students were prepping the material, others started constructing the frame of the chicken coop.

Students in all of the courses in the department had the opportunity to get hands on experience. Finally, once the frame of the entire coop was constructed, students started putting on the walls on the coop. Once the walls were in place, the students then attached the chicken wire on the coop and painted the entire coop part of the project.

There are three labs that the students will do in Ag Soils and Chemistry, Plant and Soil Science, and Sustainable Agriculture. They will do a soil texture lab, pH lab of the different soils around the garden, and another pH lab when the chicken manure is added to the soil.
Soil Sedimentation Test (a.k.a. Tilth Test)

Objective: Determine the soil type based on components of a collected sample

Materials:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle with lid</td>
<td>Sample of soil</td>
</tr>
<tr>
<td></td>
<td>Water</td>
</tr>
<tr>
<td>Newspaper</td>
<td>Pen/Pencil</td>
</tr>
<tr>
<td></td>
<td>Permanent marker</td>
</tr>
<tr>
<td></td>
<td>Dropper</td>
</tr>
</tbody>
</table>

Activity A:

Problem: Based on how your soil feels, do you think a texture flow chart will reveal that your sample will be mainly sand, silt, clay or organic matter?

Hypothesis: *(Remember, a hypothesis is expressed as a statement in a complete sentence)*

Procedure:

1. Empty a portion of soil onto the newspaper.
2. Remove any rocks, roots, plant material or foreign items.
3. Follow the steps identified in the Texture Analysis Flow Chart to determine the soil type you have.

Result: My soil texture is ___________________________.

Conclusion: Did you prove or disprove your hypothesis? __________

Activity B:

Problem: Based on a mathematical formula and the soil texture triangle, do you think your sample will be mainly sand, silt, or clay?

Hypothesis: *(Remember, a hypothesis is expressed as a statement in a complete sentence)*

Procedure:

1. Estimate how much soil is needed to fill your bottle 1/3 to ½ way and empty that soil onto a sheet of newspaper on your desk.
2. Remove any rocks, roots, plant material or foreign items.
3. Label your bottle with your name and class period.
4. Place the debris free soil sample in your bottle. *(Hint: Either make a funnel then pick your soil up and work it through the funnel or remove the debris from your paper and use that as a chute to place soil in the bottle. Use a partner to help with this if needed.)*
5. Add water to the jar until it is at the base of the neck of the bottle.
6. Put the lid on your jar tightly.
7. Shake the jar gently until no soil is stuck on the bottom. Don’t agitate too much.
8. Place the jar where instructed. DO NOT move each others’ jars!
**Determining Soil pH**

Team member names: __________________________________________________
____________________________________________________________________
____________________________________________________________________

**Objective:** Work as a team to determine the soil pH of three different samples and recommend vegetables that could be planted.

**Major Materials:**
Soil Test Kit    Soil Samples    pH resource sheets    assorted plant & garden books

**Activity:**
1. Conduct pH test on three soil samples. While you are waiting the 10 minutes for soil to settle, answer the following using the Plant Soil Preference Handout:
   a. List 3 fruits or vegetables your team wants to plant, their pH, & why you chose each.

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>pH</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

   b. List three flowers your team wants to plant, their pH, and why you chose each.

<table>
<thead>
<tr>
<th>Plant</th>
<th>pH</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

2. Determine soil pH of samples, their level of acidity using the pH scale, and a material of similar pH

   A = pH _________    B = pH ___________    C = pH___________
   Level ______________   Level ___________   Level ___________
   Material________________    Material___________    Material_________

3. Based on the soil pH, would you change any of your choices in question #1? Why or why not?
Determining Soil pH – Individual Analysis

Answer using complete sentences.

1. What challenges did you face on your team?
   
   a. Why were they challenges?
   
   b. How did you overcome them?

2. What made your team successful? Why?

3. How did you come to agreement about what plants to use?
   
   a. Do you feel your voice was heard? Why or why not?

4. If you were to do this again, would you change anything? Why or why not?
Determining Soil pH in Garden

Team member names: ____________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

**Objective:** Work as a team to determine if added chicken manure benefits the pH of the soil for the vegetables grown in the garden.

**Major Materials:**
- Soil Test Kit
- Soil Samples
- pH resource sheets
- Assorted plant & garden books

**Activity:**
1. Conduct pH test on three soil samples that have chicken manure mixed into soil, on top of soil, and not on the soil. While you are waiting the 10 minutes for soil to settle, answer the following using the Plant Soil Preference Handout:
   a. List 3 fruits or vegetables we plant in our garden. Determine the pH needed for those plants.

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Based on the soil pH, how did the chicken manure affect the pH of the soil? Which experiment had the best soil pH for the plants we grow in the garden?

<table>
<thead>
<tr>
<th>Experiment</th>
<th>pH</th>
<th>Level</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Manure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manure of Top of Soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Manure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Determine soil pH of samples, their level of acidity using the pH scale, and a material of similar pH.

<table>
<thead>
<tr>
<th>Experiment</th>
<th>pH</th>
<th>Level</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Manure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manure of Top of Soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Manure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Based on the soil pH, how did the chicken manure affect the pH of the soil? Which experiment had the best soil pH for the plants we grow in the garden?
Determining Soil pH in Garden – Individual Analysis

*Answer using complete sentences.*

2. What challenges did you face on your team?

   a. Why were they challenges?

   

   b. How did you overcome them?

3. What made your team successful? Why?

4. If you were to do this again, would you change anything? Why or why not?

5. What are possible errors in this experiment?
Dear Parents/Guardians and Students,

We would like to welcome you to the San Jacinto FFA Chapter. Part of being in an agriculture class students are required to have a Supervised Agriculture Experience project. These SAE projects are valuable tools in teaching work ethic and responsibility. In addition, they can lead to awards and recognition in the FFA, scholarships, and future employment. This packet is for students to apply for a laying hen project to keep on the SJHS school farm and/or Haringa Dairy.

Your child has decided that they would like to volunteer their time to take care of San Jacinto FFA laying hen project. This project is a 5 month commitment that will require the student to feed and care for the animals 7 days a week at the Haringa Dairy and/or the SJHS school farm. In taking on this project you, the student, parents/guardians will not be held financially responsible for any aspect of this project. To be eligible for this project you must have and maintain a 2.0 GPA with no F’s. If your GPA is not maintained, 3 warnings will be given before the animal will be reassigned to another student.

Your child will be responsible for the overall care and health for the animals. The animals are NOT your personal property. It is the property of the San Jacinto FFA Chapter. The primary purpose of this laying hen project is to educate our Animal Science class offered to our students here at SJHS. As a result basic caring that can or will be performed by the Animal Science class include the following:

Collecting and candling eggs, vaccinating hens, or maintaining the health of the birds.

NOTE: Students within the Animal Science class have priority to complete the above tasks if the advisor/teacher uses it in their lessons.

As a result of caring for this laying hen project for the entire 6 month period you will earn split profits from the egg sales.

Things you are NOT allowed to do:

- Decide when and what medical practices will or will not be performed on the assigned animal.
- Feed anything other than designated feed.
- Decide where the animal will be housed and alter the pens housed in.
Within this packet the **applicant and parent** should answer all questions in complete sentences. The student will also need to research their specie in order to provide them with a better understanding of the daily caring and nutritional needs. Should you have further questions please see the contact information below.

Thank you,

Danielle Scoggins  
dscoggins@sanjacinto.k12.ca.us  
Lindsey Stiff  
lstiff@sanjacinto.k12.ca.us
SJHS SAE Animal Application Student Page

Student Name: __________________________________________
Ag Teacher: _____________________________________________

Grade: ______

GPA: __________

Please answer all questions below in complete sentences on a separate paper and staple to the back of this sheet.

1. Why do you feel you are a good candidate for the laying hen SAE project?
2. How will you manage your time between school work, sports/club responsibilities, family time, and caring for the laying hens?
3. What are the daily caring needs for a hen prior to laying eggs and a laying hen?
4. What kind of work ethic do you have? Please explain.
5. In the event you could not care for the laying hen one day, how would you handle the situation?
6. Explain what you hope to gain from a laying hen SAE project.

Student Name: __________________________________________

Student signature: ____________________________ Date: _______

Student Name: __________________________________________

Student signature: ____________________________ Date: _______
SJHS SAE Animal Application Parent’s Page

The questions listed below are **only** for parents/guardian of the student to answer. Parents/guardians please handwrite your responses and provide a contact phone number for Mrs. Scoggins or Ms. Stiff to contact you at.

1. What work ethic does your child have to ensure that he/she can be responsible to care for a laying hen?

2. How will you ensure that your child will be able to care for the laying hen 7 days a week at the Haringa Dairy and/or the SJHS school farm?

3. Have you read all the questions in this application and your child’s responses to each question? Would you like to add anything?

Parent contact information (phone number):
________________________________________

Parent Name: ______________________________________

Parent signature: ________________________________ Date: ____________
The Final Project

Currently there are eleven laying hens in the chicken coop. We have students collecting eggs, watering, and feeding the birds daily.