



Santa Rosa City Schools Course Proposal

Introduction to Agriculture - Discovery II

Proposal Submitted By: Lisa Piehl

- 1) Needs Statement: Discuss how this course fits into your Site and/or the District's goals. Attach minutes of meetings where this course was approved at the site or district leadership meetings.

With the Santa Rosa Junior High School's proximity to CTE programs at Santa Rosa Senior High School, the Agriculture program would like to offer a foundation-level course introducing Agriculture to 8th graders. This will allow these students who come to the Senior High campus as a 9th grader access to skill-building Agriculture courses. Adding a course at the Junior High level will increase CTE program completers, allow for the creation of robust three-course pathway sequences, and offer a needed opportunity to explore CTE more deeply at the Junior High. Lastly, starting the FFA at the Junior High School aligns with the California Department of Education and the California FFA, and enables Agriculture programs to officially add a Discovery FFA program at the Junior High School level.

This course was discussed at the CTE Dept. Chair meeting on 11/17/25.

- 2) Graduation Requirements: Specify which requirement is met. (High School only)

None, elective at Junior High level

- 3) UC a-g Requirements: Specify which requirement is met. (High School only)

N/A

- 4) Explain the rationale for course addition or modification. How does this fit in with district/site goals. If this course is replacing a current course, which course is it replacing and why? Will this course require new sections? Be explicit.

This is a new course offering. It expands the current CTE course offerings at Santa Rosa Junior High. This will also broaden the FFA program to the Junior High School, creating a new Career Technical Student Organization (CTSO) for 7th and 8th graders and providing those students with opportunities previously available only at the High School.

- 5) Explain the measurable learning outcomes

1. Agricultural Education & FFA Foundations

- Explain and illustrate the three-circle model of Agricultural Education (Classroom Instruction, FFA, SAE) and describe their personal involvement in each component.
- Identify and compare FFA degrees, awards, and leadership opportunities using the FFA Manual.
- Develop and maintain an SAE plan using AET, including accurate recordkeeping and reflection.

2. Leadership, Communication & Professional Skills

- Demonstrate parliamentary procedure skills by participating in simulated meetings and contests.
- Deliver oral presentations using impromptu, extemporaneous, and prepared public speaking formats with appropriate structure, tone, and evidence.
- Engage respectfully in debate, using credible sources and proper citations to support claims.

3. Career Awareness

- Analyze agricultural career pathways by completing career assessments and researching industry roles.
- Conduct and summarize an interview with an agricultural professional, identifying required skills and career preparation.
- Connect personal interests and strengths to potential agricultural careers.

4. Agricultural Systems, Sustainability & Science Practices

- Explain how agriculture developed over time to meet the needs of a growing population.
- Evaluate sustainability practices by analyzing environmental, economic, and social impacts within agricultural systems.

5. Plant Science & Crop Production

- Investigate factors affecting plant growth, including germination, soil media, nutrients, and water availability.
- Compare traditional and sustainable production practices and explain their impact on plant and soil health.

6. Natural Resources, Recycling & Environmental Stewardship

- Identify agricultural sources of fibers, plastics, wood, and fertilizers. Evaluate the impact of human activity on natural resource availability and environmental quality.

7. Animal Science & Animal Care

- Explain relationships between plants, animals, and humans within agricultural ecosystems.
- Demonstrate safe animal handling practices.

8. Food Systems, Processing & Nutrition

- Describe how raw agricultural products are processed into safe, consumable foods.
- Apply food safety and sanitation practices during food preparation and processing.

6) Course Description (To be used in the course catalog)

This junior high course is an introductory class designed to expose students to various facets of agriculture and the leadership organization, FFA. Students will gain knowledge in animal science, plant science, leadership skills, public speaking, and FFA opportunities. Student learning will occur through lectures, student projects, group discussions, hands-on experiences, FFA Leadership experiences, Career Development Event participation, and their Supervised Agriculture Experience program (SAEP). Students will also gain knowledge in agricultural history; the plants we grow; the resources we use; the resources we recycle; the energy we consume; the animals we care for; the food we eat; careers in agriculture; and the connection between agriculture and consumer products.

Detailed Course Design

(Course design should include the objectives, activities, assessments, and standards to be addressed in this course.)

Unit 1: All About Ag Education

Interactive notebooks, three-circle model of Agricultural Education, opening/closing ceremonies, FFA history, FFA degrees and awards, types of SAE

projects, SAE planning, recordkeeping, proficiency applications

1. How are you involved in the three circles of ag education?

- Design a Three-Circle Model Poster
- Receive an AET Tracker introduction and training and identify a Supervised Agricultural Experience (project).

Standards: AFNR-CRP.04.02

Unit 2: Leadership Development and Public Speaking

Parliamentary Procedure, purpose of parliamentary procedure, types of motions, permissible motions, debating, meeting order, FFA Creed, impromptu speaking, extemporaneous speaking, prepared public speaking, debate opening statements, reputable sources and citations, respectful disagreement

1. Opportunities are available to students in FFA

- Complete an FFA History timeline
- Create an FFA Degrees and Award Recognition flow chart using the FFA Manual
- Review Career Development Events and participate in a simulated contest in the classroom (Parliamentary Procedure, Creed, Impromptu Speech).

Standards: AFNR-CRP.03.02, AFNR-CRP.04.01, AFNR-CRP.04.02, AFNR-CRP.05.01, AFNR-CRP.07

Unit 3: Professional Agriculture

Agricultural pathways, career research, interviewing skills, engaging with professionals.

1. Career Opportunities in Ag

- Complete a Career Interest Assessment
- Interview an Agriculture Professional

Standards: AFNR-CS.02.02, AFNR-CRP.04.03, AFNR-CRP.04.01, AFNR-CS.05.01, AFNR-CS.05.02,

Unit 4: CASE- Ag In the Past

Hunter-gatherers, industrialization, plant production, selection, keeping records, population crisis, future production

1. Humans consume agricultural products and natural resources.

- Simulate a hunter-gatherer society.

2. Agriculture producers select plant varieties based on their traits and growing environment.

- Compare and contrast vegetable varieties.
- Use production information to select vegetable seeds.

3. Accurate records are an essential task during agricultural production.

- Plant vegetable seeds and keep a record of their growth and care.

4. Sustainability involves environmental, economic, and social activities supporting a growing population.

- Identify historical events that have increased the global population. Sustainably manage a virtual farm.
5. Agriculturists are addressing the needs of a growing world population.
- Construct and design a diversified growing environment with limited space.

Standards: MS-LS2-1, MS-LS2, MS-ESS3-4, RST.6-8.7

Unit 5: CASE- Plants We Grow

Seed germination, soil media, fertilizers, transplanting, plant health, floral design

1. Temperature and water availability impact a seed's germination rate.
 - Evaluate the variables related to seed germination.
2. Plants require a growing medium with air, water, and nutrients.
 - Compare soil to a mixed growing media.
 - Prepare a media in a planter and transplant plants.
3. Producers use sustainable practices to increase plant and soil health.
 - Virtually grow crops using traditional and sustainable practices.
 - Observe the effect of the 4Rs on plant growth.
4. Plants provide aesthetic benefits to humans.
 - Construct a floral arrangement to enhance an indoor area.

Standards: MS-LS2-1, MS-LS2-2, MS-LS2-4, MS-LS2-5, MS-ESS3-3, MS-ESS3-4, MS-PS1-1, MS-PS1-2, MS-PS1-3, MS-PS1-4, MS-PS1-5, MS-PS1-6

Unit 6: CASE- Resources We Use

Fibers and textiles, agricultural plastics, forestry and wood production, natural resources, natural resource availability, fertilizers

1. Clothing and plastics are comprised of plant and animal byproducts.
 - Identify sources of common animal and plant fibers.
 - Produce biodegradable plastic from agricultural crops.
2. Woods are used for structural and household items.
 - Identify the properties of wood and explain how woods are used in consumer products.
3. Human activities impact natural resource availability.
 - Evaluate the effect of human activity on natural resources availability.
4. Fertilizer selection is a sustainable practice.
 - Use sustainable practices to reduce fertilizer runoff.

Standards: MS-LS2-1, MS-ESS3-3, MS-ESS3-4, MS.PS1-2, MS.PS1-3, MS-PS1-6

Unit 7: CASE- Resources We Recycle

Recycling, reusable material, composting, decomposers, chemical elements, plant nutrients, water management, soil moisture, water filtration

Standards: MS-LS1-5, MS-LS1-6, MS-LS1-7, MS-LS2-1, MS-LS2-4, MS-ESS3-3, MS-ESS3-4, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4

1. Ecosystems are self-sustaining environments.
 - Construct and monitor a compost tower within a garden.
2. Agriculturalists use sustainable practices to conserve freshwater.
 - Virtually grow crops and implement water conservation practices.
 - Explore the influence of mulch on soil moisture and temperature.
3. Sustainable practices improve water quality.
 - Design a water filtration system to address polluted water.
4. Recycling natural resources decreases waste and pollution.
 - Compare recyclable natural resources.
 - Design a prototype using sustainable practices.

Unit 8: CASE- Energy We Consume

Thermal energy, solar energy, heat, energy sources, renewable energy, biofuel production, byproducts, nutritional values, enzyme, biomass, hydroelectric power

1. Consumers use energy from natural resources.
 - Design and construct a solar oven to cook s'mores.
 - Compare energy from multiple sources.
2. Ethanol is a renewable energy source that supports the agricultural industry.
 - Produce ethanol from corn-based sources.
3. Agricultural processing can result in byproducts with different nutritional values.
 - Compare protein and energy content of grain and distillers grain.

Standards: MS-LS2-4, MS-PS1-2, MS-PS3-3 MS-ETS1-1, MS-ETS1-4

Unit 9: CASE- Animals We Care For

Plant reproduction, pollination, animal domestication, selective breeding, genetic traits, animal handling, knot tying, responsibility, animal bedding.

1. Plants and animals are dependent upon each other.
 - Match pollinators with flowers they pollinate.
 - Pollinate cucumber flowers.
2. Throughout history, animals have played many roles in the development of human civilizations.
 - Compare precursor and modern domesticated animal species.
3. Humans used selective breeding to raise animals for specific purposes.
 - Compare breeds within a chosen species.
4. Proper handling techniques are essential for keeping the animal and handler safe.
 - Practice tying halters and knots for handling large animals.
 - Demonstrate how to hold different animal species.
5. Animal producers are responsible for selecting equipment that meets an animal's needs.
 - Select equipment to care for a specific animal.
 - Design and test animal bedding.

Standards: MS-LS1-4, MS-LS1-5, MS-LS4-4, MS-PS3-3, MS-ETS1-1, MS-ETS1-4,

AFNR-AS.01.01, AFNR-AS.02.01, AFNR-AS.02.01.02.A.

Unit 10: CASE- The Food We Eat

Food processing, raw materials, cleaning and sanitation, food safety, nutrition labels, palatability, commodities, commercial goods.

1. Food processors convert raw products into palatable food.
 - Mill flour from wheat and evaluate protein differences across flour types.
2. Food safety practices make food more available.
 - Process food products from raw commodities.
 - Compare cleaning methods for fresh fruits and vegetables.
3. Sensory properties of food influence consumer preference and acceptance.
 - Evaluate different varieties of pickles.
4. Plant and animal products contain essential nutrients.
 - Develop a food label for a jar of pickles and identify major nutrients.

Standards:MS-LS4-5, MS-ETS1-1, MS-ETS1-3

Unit 11: CASE- Ag In My Future

SAE, agricultural careers, commodities for consumption, personal planning

1. A wide variety of careers exist within agriculture.
 - Use past course experiences to plan a potential SAE Project.
 - Share SAE ideas with classmates.
 - Reflect on skills learned and safety procedures practiced during AgX.
2. Agricultural commodities are processed into useable consumer products.
 - Produce a salve and create a leather key fob from animal byproducts.
 - Explain how agricultural products follow the value chain from field to fork.
 - Prepare a salad, bread, butter, and ice cream to consume in class.

Standards: CCSS-RST.6-8.2, CCSS-RST.6-8.3, CCSS-RST.6-8.4, CCSS-RST.6-8.410, CCSS-WHST.6-8.2, CCSS-WHST.6-8.4, CCSS-WHST.6-8.6, CCSS-WHST.6-8.10

7) Is this course modeled after an approved A-G Course on the UC Portal?

Yes : District and course:_____ (can add the link)

No

8) Budget- budget figures must be included even if they are an estimate.

Projected Costs	Start-up	Ongoing
Personnel (Not to include classroom instructor unless a new section is needed)	Ag Credentialed Teacher	

Instructional Material Supplies per student (textbooks, software, etc.)	\$100	\$100
Services (training, equipment maintenance, contracts, etc.)	\$2000	
Capital Outlay (remodeling, technology, etc.)		
Total Projected Costs	\$5300	\$3300

9) Instructional Materials- must include estimates for new materials even if none have been selected. Place in the chart above.

Type	Publisher	Title	ISBN	Author	Copyright	# Have/Need

10) Funding Source(s) for Costs and Instructional Materials

Grants (indicate specific grant and grant timeline)	
Categorical Funds (include related programs)	
Career Technical Education (must be for an approved CTE course)	CTE Incentive Grant, Perkins Grant, Ag Incentive Grant - Annual
Department Funds	
Other (be specific)	

11) Appendix of Additional Documents

<i><u>* Required additional documents include meeting minutes where the course was discussed and approved</u></i>
☰ 2025-2026 CTE Dept. Chair Meeting

Signatures Page

Course name: Introduction to Agriculture - Discovery II

12) District Principal Review and Approvals:

Principal's Signatures	Site	Approved / Not Approved
<u>Kelly Briggs</u> <small>Kelly Briggs (Jan 5, 2026 11:32:15 PST)</small>	HCMS	Approve
<u>April Santos</u> <small>April Santos (Jan 5, 2026 11:37:57 PST)</small>	MJSHS	Approve
<u>Daryl Coryell</u> <small>Daryl Coryell (Jan 5, 2026 11:41:56 PST)</small>	RVMS	Approve
<u>Kimberly L Johnson-Clissold</u>	SRJSH	Approve

13) District Department Chair Review and Approvals:

Department Chair Signatures	Site	Approved / Not Approved
<u>Zachary Davis</u> <small>Zachary Davis (Dec 19, 2025 09:43:49 PST)</small>	EAHS	Approve
<u>Stephanie Thomas</u> <small>Stephanie Thomas (Dec 21, 2025 19:52:34 PST)</small>	MCHS	Approve
<u>Bao Alderson</u> #15 <small>Bao Alderson (Dec 19, 2025 09:14:57 PST)</small>	MJSHS	Approve
<u>Maureen McCabe</u> <small>Maureen McCabe (Dec 19, 2025 09:13:12 PST)</small>	PHS	Approve
<u>Colleen Spiers</u> <small>Colleen Spiers (Dec 29, 2025 16:44:47 PST)</small>	RHS	Approve
<u>Lisa Piehl</u> <small>Lisa Piehl (Dec 17, 2025 15:36:55 PST)</small>	SRJSHS	Approve

Course Catalog Information (To be filled by the District Office):

Course Number	TBD
Course Short Title:	IntroAgDII
Course Title:	Introduction to Agriculture - Discovery II
Number of Credits:	10
Grade Span:	8th grade
Graduation Requirement:	N/A
Prerequisites:	N/A
Course Department:	CTE
State Course Code:	7100
A-G Subject:	N/A
CTE Pathway:	Agriculture
Other Information:	