

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT



Farm to Fork with STEAM (2 Semesters)

Board Approval Date: June 17, 2021	Course Length: 2 Semesters
Grading: A-F	Credits: N/A
Proposed Grade Level(s): 7, 8	Subject Area: Elective Elective Area (if applicable): Exploratory Elective
Prerequisite(s): N/A	Corequisite(s): N/A
CTE Sector/Pathway:	
Intent to Pursue ‘A-G’ College Prep Status: No	
A-G Course Identifier:	
Graduation Requirement: No	
Course Intent: District Course Program (if applicable):	
<p>The Folsom Cordova Unified School District prohibits discrimination, intimidation, harassment (including sexual harassment) or bullying based on a person’s actual or perceived ancestry, color, disability, race or ethnicity, religion, gender, gender identity or gender expression, immigration status, national origin, sex, sexual orientation, or association with a person or group with one or more of these actual or perceived characteristics. For concerns/questions or complaints, contact the Title IX Coordinator(s) and Equity Compliance Officer(s): Curtis Wilson, cmwilson@fcusd.org (grades K-5) and Jim Huber, Ed. D., jhuber@fcusd.org (grades 6-12), 1965 Birkmont Drive, Rancho Cordova, CA 96742, 916-294-9000 ext.104625</p>	

COURSE DESCRIPTION:

The year-long course will connect personal choices in food to the micro and macro outcomes, as well as develop the STEAM knowledge and skills to make those choices. The course will focus on Science, Agriscience and Culinary Arts and how choices in food affect the individual, the local community, and the planet. The curriculum will utilize Science, Food Science, Agriscience and the school garden as a vehicle for STEAM (Science, Technology, Engineering, Arts, Math) learning, as well as promote healthy choices in food and lifestyle.

DETAILED UNITS OF INSTRUCTION:

Unit Number/Title	Unit Essential Questions	Examples of Formative Assessments	Examples of Summative Assessment
1. Nutrition Basics: My Plate	What are the differences between macro and micro-nutrients? What are the various components of “My Plate”? What are empty calories?	*Activity: Get to know MyPlate food groups	*Lab: Create a salad using produce grown in the garden.
2. Balanced Meal Planning	What is involved in a well balanced meal?	*Introduce the STAR competition “Menu Planning & Table Display”	*Have students work in teams to complete the competition: Fill out the ‘Planning Process’ page, check out the rubric to make sure all categories are addressed. *Consider having student create a menu for their very own restaurant (Recipe design, Multiple categories, Graphics, Pricing, Beverages as well as savory and sweet menu items)
3. Intro to FFA	What is the Future Farmers of America Organization What is the history of the FFA What is leadership? What are CDEs?	*FFA edpuzzle *New horizons webquest *FFA Interactive Notebook *FFA timeline	*Best Informed Greenhand Test *FFA Speech on agriculture topic of choice
4. History of FCCLA	What is Family and Consumer Science (FCS)? What are CA STAR Events? What is a STAR Event? What is the Planning Process? What are the National Programs?	*Prezi Lesson on History Of FCS: Worksheet on Prezi *FCCLA Intro Video *FCCLA Webquest: Historical Timeline *Research Planning Process	*Successfully fill out a Planning Process for a classroom project *Final Project to be voted on by class: pick a star project
5. California Agriculture	What are the top produced commodities in California? What makes California the	*Naked and hungry: Have students make a list of everything they THINK	*California Commodities: Students will make an interactive

	<p>number one most agriculturally diverse state in the country?</p> <p>What are the 5 F's of agriculture?</p> <p>How does agriculture impact your daily life?</p>	<p>comes from Agriculture and have a discussion based around that. Show students model afterwards that show the 5 F's of *Agriculture and that without it they would be naked and hungry</p> <p>*5 F's of Agriculture Project: Students will model (poster, presentation, realia etc.) to demonstrate the 5 F's of Agriculture</p>	<p>map of the State of California to showcase all the commodities produced in California</p> <p>*Taste and Teach: Choose commodities grown in California and have students try the commodity. After trying it and instructing on the commodity have students make a pamphlet showcasing what they learned on the commodity to be used as a PSA</p>
<p>6. Agriscience and Biotechnology</p>	<p>How do we conduct research?</p> <p>What are agriculturalists having to do in order to keep up with the growing population?</p>	<p>*Research 101: Have students demonstrate basic research skills with a guided exploratory lab. Students should find the problem, background research, develop a hypothesis and evaluate and transform the data they are given to them make a conclusion</p> <p>*Biotechnology: Students will learn about the models of sustainable agriculture and what agriculturalists are doing to increase yields on less land. Students will then come up with their own ideal for a new crop using concepts around biotechnology</p> <p>*Biotechnology 2: Have students conduct basic lab techniques. Also use this time to discuss careers in the field and have students choose an area they like and have an "interview with a professional" which they will then share with the class</p>	<p>*Agriscience Fair Project: Students will choose an agriculture topic that interests them (ex: what type of soil will a tomato grow better in?) and conduct that research project. They will collect data and then make a poster board to show their research. Should follow the National FFA Agriscience Fair Guidelines.</p>
<p>7. Animal Production and</p>	<p>How are animal products ethically sourced?</p>	<p>*Cows, everything but the moo: Students will evaluate</p>	<p>*Beef, It's What's for Dinner: Have students</p>

Nutrition	What products come from animal agriculture besides meat?	all of the by-products that can be used from production animals *My day with a USDA Inspector: Students will get to see how the USDA inspects to make sure that all animal products are being produced ethically and sanitarilly for the consumer. Students should have prepared questions	look into the nutritional values of different animal products and create a presentation on it. Students should be encouraged to bring a dish that incorporates that animal product in it to share with the class and support their presentation. Students should work in teams for this
8. Food Science	What is Food Science? How are dairy foods processed? How are foods evaluated (sensory)?	*Students will complete an edpuzzle on food science *Students will do a worksheet on how dairy foods are processed	*Food Evaluation: Students will evaluate chicken nuggets based on texture, color, shape, and size then provide reasons for their evaluation *Students will research a dairy and make a poster advertising their products
9. Safety & Sanitation	How do you demonstrate and apply principles of Food Safety and Sanitation on a daily basis in labs, activities, and all applications? How are global, national, state, and local agencies responsible for safety and sanitation?	*Practice the core four practices: Clean, separate, cook and chill *Brainstorm "What are some of the rules for maintaining sanitation in food handling and storage?" *Responses will become a background for exploring the "why" and "how" of improper food handling and sanitation procedures in the food laboratory and/or the kitchen at home	*"Least Wanted" Posters Group Work - Students can now work in pairs to produce a "Least Wanted" poster on a food borne illness. Their focus should be to make it humorous and engaging for the class to view. They can choose from the following: E. Coli, Campylobacter, Clostridium botulinum, Listeria monocytogenes, Salmonella, Staphylococcus aureus, Toxoplasma gondii, Vibrio vulnificus Their poster should include What illness this organism causes, how this illness is transmitted (what kinds of foods, etc.), What people are at the highest risk, it should

			be colorful, interesting to look at, and utilize humor. Have students present their posters or have students go on a "Gallery Walk" to look at each one.
10. Basic Skills & Equipment	What are some of the essential knowledge and skills needed in the use of culinary tools and equipment?	*Chef's Guess: Guess the name and use of the various Chef tools *Kitchen Math: Complete a recipe using measuring spoons and cups	*Have students work in groups to make a poster or slide presentation on the various categories of culinary tools and measurement *Students will cost out a recipe
11. Customer Service	Why is customer service vital to the Hospitality industry?	*Discuss what 'customer service' is. Include in your discussion the difference between a food allergy, preference and intolerance and their importance	*Lab: Invite staff to dine in your 'establishment' to sample some of the intriguing food students have created. Have students serve staff to get a sense of what customer service is 'all about'. (Create signage, set tables, have hosts (greeters) and servers.
12. Flowers, More Than Just a Pretty Arrangement	What is the floral industry all about? How can we use flowers other than just for looks? What is the anatomy and science of a flower?	*Flower/Fruit Anatomy: students will dissect a flower to reinforce the idea of why flowers are so important to plant propagation *Say my name, say my name: Students will be given samples of different angiosperms and be asked to identify the fruit and the flower. (I would suggest having unique plants like a flowering maple so they can see the different types)	*Edible Flowers: Have students use different types of edible plants both fruit and flower, to create a dish. Students will have to present all the parts they used and what plants they chose and why.

ESSENTIAL STANDARDS:

Middle School NGSS Science Standards:

MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impact on people and the natural environment that may limit possible solutions.

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they met the criteria and constraints of the problem.

MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

MS-ETS1-4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS1-4. Use arguments based on empirical evidence and scientific reasoning to support an explanation for how specialized plant structures affect the probability of successful reproduction of plants.

RELEVANT STANDARDS AND FRAMEWORKS, CONTENT/PROGRAM SPECIFIC STANDARDS:

Link to Common Core Standards (if applicable):

Educational standards describe what students should know and be able to do in each subject in each grade. In California, the State Board of Education decides on the standards for all students, from kindergarten through high school.

<https://www.cde.ca.gov/be/st/ss/documents/finalelaccsstandards.pdf>

Link to Framework (if applicable):

Curriculum frameworks provide guidance for implementing the content standards adopted by the State Board of Education (SBE). Frameworks are developed by the Instructional Quality Commission, formerly known as the Curriculum Development and Supplemental Materials Commission, which also reviews and recommends textbooks and other instructional materials to be adopted by the SBE.

<https://www.cde.ca.gov/ci/sc/cf/cascienceframework2016.asp>

<https://www.cde.ca.gov/ci/sc/cf/documents/scifwchapter5.pdf>

Link to Subject Area Content Standards (if applicable):

Content standards were designed to encourage the highest achievement of every student, by defining the knowledge, concepts, and skills that students should acquire at each grade level.

<https://www.cde.ca.gov/ci/ct/sf/documents/agnatural.pdf>

<https://www.cde.ca.gov/ci/ct/sf/documents/hosptourrec.pdf>

Link to Program Content Area Standards (if applicable):

Program Content Area Standards apply to programs such as International Baccalaureate, Advanced Placement, Career and Technical Education, etc.

Food Service and Hospitality Standards: B3.0 Interpret the basic principles of sanitation and safe food handling
B5.0 Demonstrate an understanding of the basics of systems operations and the importance of maintaining facilities, equipment, tools, and supplies. B6.0 Illustrate and apply the basics of food preparation and safety and sanitation in professional and institutional kitchens B7.0 Illustrate and apply the basics of baking, pastry, and dessert preparation and safety and sanitation in professional and institutional kitchens. B8.0 Apply the knowledge and skills essential for effective customer service. B9.0 Apply the basic procedures and skills

needed for food and beverage service. B10.0 Demonstrate and apply basic nutritional concepts in meal planning and food preparation B11.0 Demonstrate an understanding of the basic processes of costing and cost analysis in food and beverage production and service B12 Describe the fundamentals of successful sales and marketing methods Agriscience Standards: C1.0 Evaluate the role of agriculture in the California economy. C2.0 Examine the interrelationship between agriculture and the environment. C3.0 Analyze the effects of technology on agriculture. C4.0 Determine the importance of animals, the domestication of animals, and the role of animals in modern society. C5.0 Compare the structure and function of plants, animals, bacteria, and viruses. C6.0 Explore animal anatomy and systems. C8.0 Understand fundamental animal nutrition and feeding. C9.0 Evaluate basic animal health. C10.0 Explain soil science principles. C11.0 Analyze plant growth and development. C12.0 Understand fundamental pest management. C13.0 Design agricultural experiments using the scientific method.

TEXTBOOKS AND RESOURCE MATERIALS:

Textbooks

Board Approved	Pilot Completion Date (If applicable)	Textbook Title	Author(s)	Publisher	Edition	Date
<i>Yes</i>		<i>Guide To Good Food</i>	Largen/Bence	G-W	14th	<i>1/1/2018</i>

Other Resource Materials

CTE Online, FFA & FCCLA Leadership Guides

Supplemental Materials

Board approved supplemental materials (Including but not limited to: Film Clips, Digital Resources, Supplemental texts, DVDs, Programs (Pebble Creek, DBQ, etc.):
N/A