

Agricultural Entrepreneurship Curriculum Map

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UNIT TITLE & ESSENTIAL QUESTION	UNIT TIMELINE	UNIT CONTENT & SKILLS	CORE TEXTS & MATERIALS	FORMATIVE & SUMMATIVE ASSESSMENTS	CSRE ALIGNMENT	NEXT GENERATION/ CORE CONTENT STANDARDS
<p>Food History/Telling Stories Through Food</p> <p>EQ: How do traditional foods help people feel connected to, and tell the stories of, their culture?</p>	<p>5-6 weeks</p>	<ul style="list-style-type: none"> - Basic internet research skills. - Determining appropriate keyword search terms - Identifying the main idea of internet sources - Choosing suitable and unbiased resources - Using citations - Incorporating ideas from multiple sources into an informative brochure that is appropriate for a wide audience. - Using creative design skills to create an interesting and visually appealing advertisement about their plant. 	<p>Future Farmers Research Project</p> <ul style="list-style-type: none"> - This project is broken into 3 sections that will be completed over the course of the unit. Each section will be prefaced with short lessons on the topics of food history, botany, horticulture, nutrition and recipes. Students focus on researching their assigned plant which they will become an expert in, including the history, nutrition, care instructions and recipes. <p>Edpuzzle Videos</p> <ul style="list-style-type: none"> - Food Waste - Agricultural Revolution 	<p>Formative:</p> <p>Future Farmers Part 1 - Food History</p> <p>Green Revolution Yes AND/Yes BUT Debate</p> <p>Summative:</p> <p>Future Farmer's Research Project Brochure</p> <ul style="list-style-type: none"> - Students will use the research they did throughout the unit to create a food story (like a recipe blog) that tells about the cultural/historical significance of the food they researched. 	<p>Fostering High Expectations and Rigorous Instruction</p> <p>In this unit, students will...</p> <p>Draw upon your past learning, prior experiences, and the richness of your cultural background to make meaning of new concepts and apply learning on an ongoing basis.</p>	<p>CCSS.ELA-Literacy.RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>WHST.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.</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>
<p>Farming - From Seeds to Compost</p> <p>EQ: How does hydroponics address the</p>		<p>Botany and Horticulture</p> <ul style="list-style-type: none"> - Understanding the growth requirements of plants and how best to evaluate that these needs are being met. - Plant life cycles 	<p>Hydroponics Materials and Lessons as provided by NY Sunworks</p> <ul style="list-style-type: none"> -Hydroponics systems, substrate, nutrients, seeds, testing equipment, lights, timers 	<p>Formative:</p> <p>Weekly Plant Maintenance/Crop Calendar Survey</p> <ul style="list-style-type: none"> - Students make observations about their plant on a weekly basis, noting any maintenance that 	<p>Identifying Inclusive Curriculum and Assessment</p> <p>In this unit, students will...</p> <p>Collaborate with peers to engage in meaningful long-term projects,</p>	<p>HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>CCSS.ELA-LITERACY.RST.11-12.3</p>

<p>physical, social and economic issues related to feeding a growing urban population?</p>		<ul style="list-style-type: none"> - Crop Calendars - planning for planting, transfer and harvest - Basic plant care - identifying signs of disease/pests,when/why/how of pruning, maintaining hydroponics systems - Plant growth requirements - Specific nutrients, experiment with light and water levels/times - Nitrogen cycle and N fixation - Plant biology vocabulary - How the hydro systems work and how to maintain them - Basic plant care - identifying signs of disease and pests,when/why/how of pruning - Integrated Pest Management 	<p>-Vermicompost Bin and Worms</p> <p>-Containers for compost conditions experiment</p>	<p>has been done or any signs of distress.</p> <p>Compositing Conditions Experiment</p> <p>Composting/Food Waste Public Product (posters/announcements/social media post)</p> <p>Summative: Future Farmers Part 2 (Botany and Plant Maintenance Poster/Brochure)</p>	<p>project-based learning activities, and field visits that allow all students to demonstrate their knowledge and growth over time and align to the varied learning styles and interests of those in the class community.</p>	<p>Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</p> <p>Science, Technology, Engineering & Mathematics Outcomes</p> <p>Agricultural Literacy Outcomes Describe how biological processes influence and are leveraged in agricultural production and processing (e.g., photosynthesis, fermentation, cell division, heredity/genetics, nitrogen fixation) (T4.6-8)</p>
<p>Agricultural Entrepreneurship - Building and Running a Farmers Market</p> <p>Is it possible to provide fresh, affordable, organic food to our community and still make a profit?</p> <p>How do community</p>	<p>Spring 2022</p>	<p>Agricultural Entrepreneurship</p> <ul style="list-style-type: none"> - Different roles necessary for a successful business - Effective advertising strategies - Food safety and preparation techniques such as sterilization, knife safety, proper cleaning techniques... - Practice customer service skills such as handling money, speaking with customers, and representing their 	<p>Materials:</p> <ul style="list-style-type: none"> - Cooking Equipment (food processor, knives, cutting board, portable burner, pots and pans, dehydrator, bowls, spoons...) - Packaging (mason jars, bags, baskets, stickers with logo, ingredient stickers, signs...) 	<p>Farmer's Market Team Goals Powerpoint</p> <p>Edpuzzle: Farm to Table Food</p> <p>Farmer's Market Business Plan</p> <p>Product Creation (pesto, dried chilis)</p> <p>Farmer's Market Team Notebook Submission</p> <p>Farmer's Market Advertising Challenge</p> <p>Farmer's Market Grand Opening and Team Debrief</p>	<p>Identifying Inclusive Curriculum and Assessment</p> <p>In this unit, students will...</p> <p>Collaborate with peers to engage in meaningful long-term projects, project-based learning activities, and field visits that allow all students to demonstrate their knowledge and growth over time and align to the varied learning styles and interests of</p>	<p>HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>Engineering Design: HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</p> <p>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be</p>

<p>gardens and farmers markets combat the injustices related to food insecurity?</p> <p>Can the agriculture industry foster my entrepreneurial spirit?</p>		<p>work with respect and pride.</p> <ul style="list-style-type: none"> - Run a farmers market to sell products grown and made in classroom garden. 			<p>those in the class community.</p>	<p>solved through engineering.</p> <p>HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.</p>
<p>Unit: Food Preservation</p> <p>EQ: How do we use different preservation techniques in times of abundance to help us to feed our community in times of scarcity?</p>		<ul style="list-style-type: none"> - Science and techniques of different food preservation methods (pickling, fermentation, dehydration, jam, brining...) - Food Safety and Canning techniques 		<p>Summative: Perfect Pickle Project</p>		
<p>Fungi (Growing Mushrooms)</p> <p>What are the perfect conditions for quick and robust mushroom growth?</p> <p>How can I safely identify edible and toxic fungi? Is it safe to forage for</p>	<p>January/February</p>		<p>Mushroom and Fungi Notes Powerpoint</p> <p>https://www.youtube.com/watch?v=45b2t7fqhJA</p> <p>https://www.youtube.com/watch?v=YXsR_vgD_7Q</p> <p>https://www.youtube.com/watch?v=51CddfWMr9Q</p>	<p>Mushrooms See - Think - Wonder</p> <p>Brainpop - Fungi</p> <p>Mushroom Cultivation Jigsaw Activity</p> <p>Mushroom Cultivation Experiment and Lab Report</p> <p>Mushroom Harvest and Cooking</p>	<p>Identifying Inclusive Curriculum and Assessment</p> <p>In this unit, students will...</p> <p>Collaborate with peers to engage in meaningful long-term projects, project-based learning activities, and field visits that allow all students to demonstrate their knowledge and growth over time and align to</p>	<p>NGSS</p> <p>HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria that account for a range of constraints as well as possible environmental impacts.</p> <p>HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p> <p>CCSS.ELA-LITERACY.RST.11-12.3</p>

mushrooms in NYC?						the varied learning styles and interests of those in the class community.	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
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CCSS.ELA-Literacy.RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

RST.11-12.1: Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

RST.11-12.7 Integrate and evaluate multiple sources of information in diverse media to address a question or solve a problem

WHST.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.

WHST.9-10.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

HS-LS2-6 Evaluate the claims, evidence, and reasoning behind currently accepted explanations or solutions to determine the merits of arguments.

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

Engineering Design:

HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.