| Introduction to Agri-Science | School Year: 2023-2024 School: Southern Covuga Ir High School | |
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| Curriculum Map | Program: Agricultural Sciences | |
| | Teacher: Ms. Wasson | |

Course Rationale:

This course is designed to provide students with experiences in communication, the science of agriculture, plant, animal, and food systems. While surveying the opportunities available in agriculture, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. Students participating in the course will have experiences in various agriculture concepts with hands-on activities, projects, and problems. Students will explore problems, projects, and activities to learn the characteristics of agriculture science and work on major projects and problems like those facing agriculture today.

Course Outline:

| Title or Topics / Essential Questions | Content Skills (Activities to cover Essential Questions) | Major Assessments | Vocabulary | Time Frame |
|---|---|--|---|---------------|
| Introduction to Agriculture What is Agriculture? What agricultural products are produced in the United States, New York, and Cayuga County? | Define agriculture and identify the importance of agriculture. Research and identify the importance and impact of the local agriculture industry to our community, state, and world. | Evaluation Rubric: Our Agriculture Story - Interview Evaluation Rubric: Agriculture Letter Exchange Project | Agribusiness, Agriculture, Agriscience, Commodity, Community, Export, Food, Import, Industry, Local, Production, and Sector. Analyze, Collaborate, | 2-3 weeks |
| How can I communicate a clear message and | Plan, develop and design highlight pages that share a visual representation of our agriculture | Evaluation Rubric: Career Portfolio | Compare, Describe, Determine, Develop, and Summarize. | |

| visual representation of my state's and community's agriculture industry? | industry with a letter to another agriculture program in the United States. | Post-test: Agriculture's Impact | | |
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| Introduction to Food Sciences & Safety What are the sources of food that I typically consume? How does food get from a producer to a consumer? How do people get ill from food? What preventative measures can be taken to prevent foodborne illness? | Document the plant and animal food products consumed in a twenty-four-hour period. Determine the percentage of plant and animal food products they consume. Research the path a prepared food item takes from production to processing and present their findings to the class. Define and identify foodborne illnesses. Determine how to prevent or mitigate the chances of foodborne illnesses from occurring. Solve a problem related to foodborne illness outbreak. | Evaluation Rubric: Food Journal Evaluation Rubric: From Farm to Fork Evaluation Rubric: Safety in Food Evaluation Rubric: Career Portfolio Post-test: Food System and Safety | Bacteria, Consumer, Coli, FDA, Food Safety, Food Science, Microorganism, Pathogenic, Producer, Regulations, Retailer, Sanitation, and USDA Analyze, Collaborate, Describe, Determine, Develop, and Summarize. | 4-5 weeks |
| Introduction to Plant Science What are the four major parts of a plant? | Identify and sketch the four basic plant parts. | | Aquaponics, Aeroponics, Chlorophyll, Chloroplast, Complete | 4-5 weeks |

| What are the steps of germination? What is the difference between photosynthesis and respiration? What factors contribute to the need of advancements in food production? How can you contribute locally to the impact problems related to plant-based food production? | Describe the functions of plant parts. Construct a model depicting the parts of a complete flower. Conduct a germination trial to determine the germination rate of bean seeds. Identify factors of plant-based food production to maximize availability and access of food. Design, build, and utilize a prototype of a growing structure that can be used in your location/situation assigned to grow food. Produce a presentation about Room to Grow project and share with others. | Evaluation Rubric: Build a Bloom Evaluation Rubric: Bean Sprouts Evaluation Rubric: Room to Grow – Challenge Evaluation Rubric: Room to Grow – Design Evaluation Rubric: Career Portfolio | Flower, Fertilization, Germination, Germination Rate, Growth, Hydroponics, Imperfect Flower, Incomplete flower, Perfect Flower, Photosynthesis, Pollination, Medium, Nutrient, Reproduction, Respiration Analyze, Collaborate, Create, Describe, Design, Determine, Develop, and Summarize | |
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| Introduction to Animal | Make decisions based on given | Evaluation Rubric: Priority | Anatomy, Behavior, | 3-4 |
| Science | priorities and criteria and analyze | Decisions | Capacity, Condition, | weeks |

| What are the basic needs of animals? | objects as they compare ideal criteria | | Confirmation, Digestion, |
|--|--|---------------------------|--------------------------|
| ficeus of uninuis. | enteria. | | Endocrine Ethics |
| | | Evaluation Rubric: | Evaluation Instinct |
| Why are specialized | Match characteristics of various | Deception of Perception | Management. |
| management practices | animals to specialized practices | | Musculoskeletal System. |
| necessary for different | related to animals. | | Nervous System. |
| animals? | | Evaluation Rubric: The | Nutrient. Nutrition. |
| | • Determine ethical options to form an | Situation Room | Organ, Perception, |
| | opinion on the use of meat for | | Physiology, |
| What are the ethical | human consumption and related | | Reproduction System, |
| dilemmas people eating | environmental impact issues. | Evaluation Rubric: Career | Respiration System, |
| meat might face? | | Portfolio | Stimulus, Vegan, and |
| | | | Vegetarian |
| | | Post-test: Animal Science | |
| | | | Analyze, Collaborate, |
| | | | Create, Describe, |
| | | | Design, Determine, |
| | | | Develop, and |
| | | | Summarize |
| | | | |

Standards:

AFNR Common Career and Technical Core Content Standards

References (APA Format):

Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards. (2015). Retrieved from https://www.ffa.org/SiteCollectionDocuments/council_afnr_career_cluster_content_standards.pdf

Curriculum for Agricultural Science and Education. (2023).

Retrieved from https://www.case4learning.org/