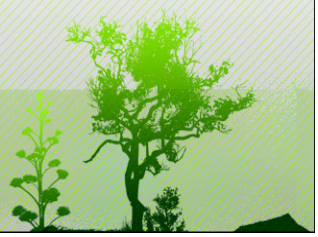
Overview

- This unit will provide fifth grade students with concepts in agricultural education that include the food and fiber systems and their interrelationships with the environment, social and political systems, and the global economy. While the National Research Council suggests that all students from K-12 leave school with some degree of agricultural literacy, many curricula still focus primarily on gardening and plant life or food and nutrition, leaving many with misconceptions and a lack of understanding of the importance of agriculture and its myriad interconnections within society. This unit will answer such questions as where our food and fiber come from; what is required to grow and harvest food and fiber; and how agriculture is connected throughout the community, economy, environment, and world that will be delivered through STEM. Students shall come away with a measurable understanding of agricultural literacy.

Individual Lesson Topics

- Characteristics of farming and agriculture
- Food and nutrition
- Dairy
- Meat
- Poultry
- Plants and horticulture
- Horses, horsepower, and simple machines
- Fiber
- Land and natural resources
- Environment and Sustainability
- Agriscience and biotechnology

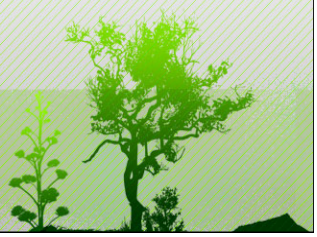


Technology Used

- Internet
  - WebQuests, research, forums, etc.
- Skype
  - Farm-based interactive teleconferenced lessons
- Inspiration
  - Concept mapping
- Google Earth
  - Geospatial understandings, engineering
- iPads
  - Augmented reality challenge, iBook readings

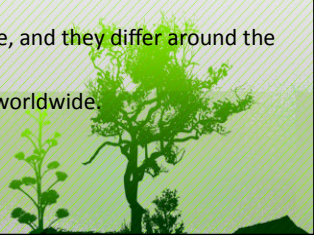
Standards Based

- National Frameworks
  - A Framework for K-12 Science Education
  - Food and Fiber Systems Literacy Framework
- National Standards and Benchmarks
  - AAAS Benchmarks for Science Literacy
  - American Association for Agricultural Education (AAAE) National Standards for Teacher Education in Agriculture
- State Standards
  - Pennsylvania Academic Standards for Environment and Ecology
- District Standards
  - Nazareth
  - Bethlehem
  - Allentown
  - Quakertown



Enduring Understandings

- Agriculture is more than just farms; it includes the processing, preservation, packaging, storage, transportation, marketing, and selling of finished products.
- Food and fiber come from a variety of plants and animals raised and harvested in different areas depending on the weather, climate, geography, the state of natural resources, and social/cultural/political influences.
- Agriculture and farms are connected to communities, economy, the environment, and other cultures.
- We rely on agriculture more than we realize and take for granted the resources (soil, fertilization, water, energy, sanitation, fuel, roads, communications, technology, weather, and prices) involved in production.
- Agriculture and its related systems are affected by geography, weather, climate, disasters, and social changes.
- All societies and cultures rely on some form of agriculture, and they differ around the world.
- Humans impact the state of agriculture and ecosystems worldwide.



Essential Questions

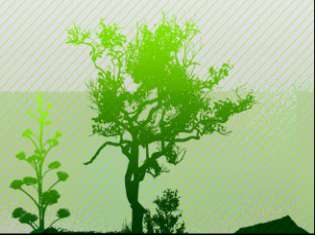
1. What are the characteristics of agriculture?
2. Why are farms important?
3. Where do our food and fiber come from?
4. What is required to grow and harvest food and fiber?
5. How are farms, communities, economy, and the environment connected?
6. How do disasters (natural, economic, social, etc.) affect agriculture?
7. How would communities, economy, and the environment be affected by the loss of farms?
8. How is agriculture similar or different in other parts of the world?

Nonperformance Tasks

- Pretest/Posttest
- Concept Map
- Quizzes
- Checks for Understanding
- Worksheets
- Observations

Performance Tasks

- Pizza Party
- Design a Garden
- Stone Soup
- Pasteurization and Cheesemaking
- Fiber and Wool
- Disaster
- Sustainability
- Food and Fiber Dialog
- A Day at the Farm



Design Principles

- Embed Learning in Complex, Realistic, and Relevant Environments
- Make Contents Accessible
- Make Thinking Visible
- Promote Autonomous Life Long Learning
- Help Students Learn from Each Other