



FOOD|FARMS & the FUTURE

Food, Farms and the Future is an educational program that teaches the importance of good nutrition, the science of agriculture and environmental sustainability. The exciting livestream you and your students experienced can be enhanced by using these lesson plans, as well as the other educational materials found on foodfarmsfuture.com.

Safeguarding the environment is important to America's pork producers and farmers who work to steward their land for future generations. Protecting resources is a priority because their livelihoods depend on it. That's what sustainable farming is all about.

This lesson plan focuses on the environment. Specifically, it explores the role that farmers have in maintaining the land, crops and animals in their care. Environmental stewardship is in the best interest of the farmers as it increases their productive yield, allows them long-lasting security in knowing their farm is sustainable and has the larger and perhaps more critical benefit of ensuring a green planet for all living beings.



ENVIRONMENTAL STEWARDSHIP

Target Audience

Students in middle and high school Family and Consumer Science classes

Objective

- Engage students in exploring the relationship between the environment and agriculture
- Identify the five factors that contribute to environmental quality and their significance
- Describe how farmers care for the environment

Purpose of Activity

Review, Identify Details, Apply Skills

21st Century Skills

Critical Thinking

Cognitive Level

Strategic and Extended Thinking

Class Time

45 minutes

Materials

- Internet access
- Environmental Stewardship handouts and writing prompts (1 per student)

Teaching Environmental Stewardship

Instruct students to think of at least three ways that humans impact the environment. Have students share and write ideas on the board. Most human activity has an impact on the environment. Farming by its very nature alters natural ecosystems to produce food, fiber and fuel for humans. Agriculturists work hard to ensure they are minimizing the impact they have on the environment. In some cases, they are even working to improve soil and water quality as well as creating habitat for wildlife.

Reveal the five main components of the relationship between the environment and agriculture.

- Soil quality and health
- Water quality and availability
- Air quality
- Biodiversity
- Animal health and welfare

Have the students review their handouts, which expand on each of the five components.

Break students into five groups. Assign each group a "component" and give them each their environmental stewardship handout with writing prompts. Explain that the students will have 20 minutes to read the handout, do some internet research and answer the two questions on their prompts. Then, the students will present to the class. The presentations should be no longer than five minutes each.

This lesson plan is adapted from:

www.agfoundation.org/sustainability/environmental-stewardship



What is air?

Air is the invisible gaseous substance surrounding the Earth, a mixture mainly of oxygen and nitrogen.

What does it do for us?

- Plants and animals need air to stay alive.
- Plants use CO₂ from the air to make food.

What are some of the primary issues surrounding the environment and air quality today?

- Human health – odor, particulate matter and ozone precursor
- Climate change – greenhouse gases and carbon sequestration



Why do farmers care about air quality?

What are examples of specific air pollution reduction practices used by farmers?

What is biodiversity?

Biodiversity is the variety of life in the world or in a particular habitat or ecosystem.

What does it do for us?

- Increases ecosystem resilience and increases production

What are some of the primary issues surrounding the environment and biodiversity today?

- Species diversity – animals, plants, insects, microbial
- How habitats and biodiversity are related



Why do farmers care about biodiversity?

How are wildlife habitats created and maintained by farmers?

What is animal health and welfare?

Animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter.

What does it do for us?

- Promotes animal well-being and produces animal food products of the highest quality

What are some of the primary issues surrounding the environment and animals today?

- Climate change – methane gas and carbon sequestration
- Feed and transportation



Why do farmers care about animal health and welfare?

What are specific strategies farmers use to keep animals healthy and safe in livestock production operations?
