

Food Systems Resource Evaluation



Ages 10 - 14

Lesson Overview:

'Local foods' are a concept that has arisen in response to increasingly industrialized food systems. In this lesson, students will explore steps in a food system and key considerations for sustainability, including water, electricity, carbon emissions, and food and plastic wastes. Students will then critically analyze the economic and social components of sustainability.

Learning Outcomes:

Students will:

- be able to identify components in a food system
- be able to differentiate between some of the major inputs and outputs required in various food systems
- Evaluate the influence on social well-being, local economy, and environmental sustainability.

Materials:

- Printed copies of:
 - Food Systems Resource Evaluation Print-out stations (1)
 - Food Systems Resource Evaluation Worksheet (1 per group or student)
- Computer and projector

LESSON

Activating Discussion:

- What are some ways in which people acquire food?
 - Gardening, grocery stores/supermarkets, restaurants, meal delivery services, farmers markets, food banks, etc.
- What is a food system?
 - The journey from the farm and the steps it takes to get to our plate.
- What is a sustainable food system? What needs to be 'sustained'?
 - Environmental sustainability: must not deplete natural resources
 - Economic sustainability: ensures farmers obtain a price for their products and provides opportunities for employment.
 - Social sustainability: must be socially responsible and make food available to all.

- What are some important factors (resources) in developing a sustainable food system?
 - Water, electricity, carbon emissions, waste (food and plastic).
 - Here is how much water goes into making your food (1:33):
<https://www.youtube.com/watch?v=n-kAv5xOwEo>

Activity

There are five stations around the room, each with a printout about that food system (home garden, local farm, farmer's markets, supermarkets, and delivery services). Each station outlines some of the important resources in developing a sustainable food system (water, electricity, carbon emissions, and waste).

Instructions:

- A leader in the group is to read the short article out loud while the other members of the group make notes in the "Food Systems Resource Evaluation" worksheet.
- Students should include notes about each food system, as each system is complex. Facts about each food system will also help the student to answer the critical thinking questions on the second page of the worksheet.
- Students will rotate between each group and come together to answer the critical thinking section of the activity.

Post-Activity Discussion

1. Which food system uses the least amount of water, CO₂, plastic, electricity, and waste?

Home gardening

2. What barriers prevent people from gardening?

Labour-intensive, for abled bodies
 Shorter growing season in northern climates
 Space for garden; more difficult in urban areas
 Garden space is typically for fruit and vegetables, little-no whole grain or proteins foods.
 Access to water, sunlight
 Cost of gardening (purchasing soil, wire, seeds, etc.)

3. What did you notice about the amount of waste produced and the length of the food system?

The longer the food system, the greater volume of waste is produced. However, some evidence suggests that meal delivery kits may be more environmentally friendly than grocery shopping. This is only available to those who can afford this as an option. Meal delivery services may also reduce creativity in the kitchen and traditional cooking practices.

4. Which food system produces the cheapest food for the consumer? What about the most expensive?

Home gardening may be cheaper (lots of initial costs, like soil, seeds, equipment, etc.). Supermarkets are also cheap as they are connected to a globalized food system.

Meal delivery services are the most expensive food system for consumers. Local farms and farmers market are also typically more expensive than supermarkets.

Appendices:

- Appendix 1 – Food Systems Resource Evaluation Print-out stations
- Appendix 2 – Food Systems Resource Evaluation Worksheet
- Appendix 3 – Food Systems Image