

## Theme: Food Systems

### Big Ideas:

- A There are two different types of food systems, local and global food systems. Much of the food we eat is part of a global system of large-scale farms, distributors, processors and retailers that brings us food from all around the world.**
- B A food system includes the production, distribution and preparation of food-- its whole journey from the farm to our plate.**
- C All food comes from farms and gardens.**
- D Food in our garden is grown in a sustainable way, that is healthy for our bodies and the environment.**

### Expanded Content:

#### **E Local food system**

1. A food system includes all the aspects of food production, distribution and consumption. In a local system, food is produced close by to where it is consumed. (Note: There is no single, agreed-upon definition for "local.")
2. In a local system, consumers usually have a closer relationship with where their food comes from, sometimes including a direct relationship with the farmer who grew it.
3. Local food can be more delicious and nutritious because varieties are selected for flavor (not shipping benefits) and picked ripe.
4. Food grown on a smaller scale often has benefits for the local ecosystem, including less use of pesticides, fertilizers and fossil fuels for food production and distribution.
5. Small farms in a local food system often grow older varieties (heirloom) that can have unique characteristics and maintain biodiversity.
6. Local, sustainably grown food can be more expensive and only available in specialized venues (farmers markets, etc) making it less accessible to low-income consumers.
7. Small gardens, like the Washington Youth Garden, are part of the local food system, providing food and educational opportunities to local residents.

#### **F Global food system**

1. In the global food system, food is produced, processed, distributed and consumed all over the world.

2. In a global food system, large-scale agriculture makes it possible to produce large quantities of food to feed a growing population. Food is available cheaply and there is also wide access to imported products (tropical fruits, etc) that would otherwise be unavailable.
3. The global food system allows for processed food (like sugary drinks) to be available very cheaply, which has been associated with poor nutrition.
4. On average our food has traveled 1,500 miles to reach us. (Worldwatch Institute)
5. Large farms often grow food in monocultures-- fields with only a single crop. This type of farming requires the use of synthetic fertilizers and pesticides, which can negatively impact the environment.
6. On large-scale farms, honeybees are trucked in at peak bloom. Our agricultural production depends on this system, but many bees are suffering from colony collapse. These bees have a weakened immune system due to their diet (corn syrup), exposure to pesticides, and exposure to disease.
7. Most large farms grow a small variety of hybridized crop species productivity, shipping value and popularity. This choice has dramatically reduced biodiversity. Large farms also sometimes grow genetically modified crop varieties that are pesticide resistant.
8. The global system requires a large investment of non-renewable fossil fuel energy for the manufacture of nitrogen fertilizer, use of large tractors and farm machinery, food processing and transportation. Industrial agriculture relies on 10 calories of fossil fuel energy for every 1 calorie of food energy produced.

## **G “Organic” vs. “Sustainable”**

1. “Organic” is a term that has a legal definition (set by the U.S. Department of Agriculture), related to specific farm practices. The government has the authority to decide what products qualify as “organic” and what farms must do to earn this certification. The guidelines are intended to make farming more environmentally friendly and healthy for human consumers by prohibiting the use of pesticides and most synthetic fertilizers.
2. Farms may follow all of these regulations, but choose not to file the paperwork to be able to be certified as “Organic.” Small farms may find certain requirements to be overly burdensome.
3. Sustainable is a subjective term, used to discuss environmentally-friendly farming practices that do not depend on non-renewable resources, and could therefore continue indefinitely.

**Garden elements and activities:**

Garden element or activity	Description	Age-level appropriate content suggestions	
		6-8	9-12
Identifying, harvesting and tasting seasonal produce	Identify a variety of fruits and vegetables. When possible, stop to taste samples. Discuss growing methods. Harvest when possible.	A-D, E2, E3, E5, E7	A-D, E2, E3, E5, E7
Herb garden tour	Identify, taste and smell herbs. Discuss mint and fennel as examples of products that are utilized as flavoring for toothpaste and other processed foods. Observe how pollinators are drawn to a variety of flowers.		F6
Poptart Garden	Have students guess what percent of Strawberry Poptarts are real strawberries (only 2%). Discuss how corn and soybean crops are a significant portion of large-scale agriculture.	F1-F5	F1-F5, F7, F8
My Plate Garden	Identify and harvest vegetables from the My Plate Garden. Use the visual reminder to discuss the major food groups, their benefits, and optimal proportions.	C, E3, E5, F3	C, E3, E5, F3
Food preparation and eating together	Reinforce the source of the ingredients. Continue discussion of advantages and challenges of both food systems.	A, B, E, F1-5	A, B, E, F1-5, + E6, F7, F8
Honey tasting	Discuss the importance of bees in small and large agricultural systems. Describe current threats to bee populations in industrial agriculture.	F5, F6	F5, F6
Sensory garden	Engage all five senses, developing comfort in the outdoor garden space.	C	
Garden labor	Facilitate direct experience with garden processes, including weeding, mulching, seeding or other garden task.	D, E4, E7, F5, G	D, E4, E7, F5, F7, F8, G

## **Materials List:**

### Sensory garden

- Sunflower seeds
- Bowl for cotton seeds

### Bees

- Honey in easy-squeeze bottle

### Harvesting

- Pre-set harvest baskets
- Compost bucket next to washing stations

### In-garden tasting station

- Small table
- Knife
- Cutting board
- Bowl of water

### Food preparation/eating area

- Small tables
- Tablecloths
- Kid-friendly knives
- Cutting boards
- Large bowls
- Graters
- Large spoons, spatulas
- Bowls and forks for eating
- Compost bucket
- Additional ingredients, as needed

### Dishwashing station

- Three large bins filled halfway with water
- Sponges

- Soap
- Amonia

#### Poptarts Garden

- Pre-cut sugar cane
- Strawberry Poptarts box