

Where Does Our Food Come From?

OVERVIEW

Students will learn about where food comes from and what is required to grow plants.

- **Before Your Visit:** Students will learn how seeds germinate and plants grow.
- **During Your Visit:**
 - o In *Our Global Kitchen*, students will use their senses to observe and investigate how food grows, and find out how it reaches our kitchens.
 - o In the Windowfarms display, students will observe plants in a vertical garden.
- **Back in the Classroom:** Students will discuss what they learned at the Museum, observe seedlings growing, and talk about cultural and family traditions.

NYS Core Curriculum:

LE 1.1b: Plants require air, water, nutrients, and light in order to live and thrive

LE 3.1b: Each plant has different structures that serve different functions in growth, survival, and reproduction.

- Seeds contain stored food that aids in germination and the growth of young plants

BACKGROUND FOR EDUCATORS

Most of the plants and animals we raise for food barely resemble their wild ancestors; they have been dramatically changed by humans. Thousands of years ago, for instance, there was no maize (corn). Today's massive cobs were bred from a wild grass.

All plants require water, light, and a growing medium (e.g. soil) in order to thrive.

BEFORE YOUR VISIT

Activity: Where Does Our Food Come From?

Objective: Students will explore familiar foods and food origins. Then the class will plant seeds.

Part 1: Class Discussion

Have students work in pairs to discuss the following:

- What is your favorite food?
- What food do you find gross or disgusting?
- Tell me about a time you were afraid of or didn't want to try a food.
- What foods do you eat but your parents don't eat?
- What foods do your parents eat but you don't eat?

Ask students to share some of their answers with the class. Write them on the board. Then have students look at the list. Ask: Where does this food come from? (*Accept all answers.*) Elicit the fact that most of our food comes from animals and plants.

Ask students for examples of animals and plants that we eat. Write down their ideas and save this information for follow-up after the Museum visit. Keep a separate list of items whose origin is unclear.

Plan how your students will explore the *Our Global Kitchen* exhibition using the group worksheets.

Divide your class into small groups of three to four and assign each to a teacher/parent chaperone who will facilitate their exploration of the dioramas.

If possible, distribute and review copies of the map and worksheets to chaperones beforehand.

Part 2: Growing Seeds

Plant seeds as a class. The easiest way to do this is to purchase a bag of dried black beans and soak them overnight. Once they sprout, you can use the instructions and materials on any of these websites:

- Using soda bottles: <http://weirdsciencekids.com/ecosystem.html>
- Using cotton balls: <http://www.theimaginationtree.com/2012/04/growing-beans-on-cotton-balls.html>
- Using baggies: <http://www.greeneducationfoundation.org>

Additional Information

- Bottle Gardens: <http://www.bottlebiology.org/index.html>

Tell students that at the Museum, they will see lots of pictures and models of foods from all kinds of plants and animals. They will use their senses to observe and describe the foods.

DURING YOUR VISIT***Our Global Kitchen: Food, Nature, Culture*****3rd floor (30–45 minutes)**

Guided by chaperones, students will use their senses to make observations about the appearance, flavor, ingredients, and origins of different foods. Ask the chaperones to write down all the types of foods the students observe on the group worksheets.

Windowfarm**1st floor, Weston Pavillion (15–30 minutes)**

Visit the vertical garden. Use the following questions to prompt conversation and observation:

- What do you notice about these plants?
- Have you ever eaten any of them? If not, would you try them? (Why or why not?)
- Why are they planted along a wall? How is this different from growing plants in a garden?

Try and get the students to observe that the plants are growing in a liquid that contains food for the plants. Ask how this compares to the way their seeds are growing in the classroom.

Note: The living plants in the vertical garden are edible greens, mostly lettuce and kale. They grow indoors, hydroponically — that is, without soil. Their roots derive nutrients from fortified water, which continuously drips through the system in a low-energy cycle. It requires technology, but without the need for soil, hydroponic gardeners can grow food almost anywhere, even in the desert or outer space. Pest and weed control is easy.

Warburg Hall of New York State Environment**1st floor (15–30 minutes)**

Find the diorama that describes how maple syrup is made. Use the following prompts to help students make observations: What do you notice in the diorama? Describe what you see. What more can we find?

BACK IN THE CLASSROOM**Activity: What Do Seeds Need to Grow?**

Students will discuss what they learned at the Museum and observe the plants they're growing.

Discuss the following with students:

- Look at your seeds. What do seeds need to grow?
(Answer: Plants require air, water, nutrients, and light in order to live and thrive.)
- What is stored in a seed that helps it grow?
(Answer: Seeds contain stored food that aids in germination and the growth of young plants.)
- Think about all the plants that you saw at the Museum. Which ones would you like to grow?

Over the next few weeks, have students observe the seeds they planted before the Museum visit. Have them measure and draw the seedlings as they grow.

Activity: Culture and Family Traditions

Have students share their ideas about cultural and family traditions. Use the following questions as prompts:

- Can you name a food that your family eats but your friends don't?
- If you could choose the meals for a day, what would your menu be?
- What food does your family eat on holidays?
- Can you think of a food that your grandmother or grandfather makes, and that they learned from their parents?
- Have you ever travelled to a new place and eaten something for the first time?
- Tell us about a time something you ate surprised you.
- Can you remember a time you were afraid to try a food? Have you tried it since then?
- Tell us about a time when you spat something out.

Group Worksheet

Instructions for the adult facilitator:

1. As you go through the exhibition, invite students to use their senses to learn more about the plants and animals that we eat.
2. Encourage contributions from all students.
3. Record as many of their observations as possible.

Location	Ask Students	Record Their Responses
Grow section	Look: Which foods come from plants?	
Grow section	Look: Which foods come from animals?	
Trade section: Aztec market-place diorama	Look: What foods are made from plants?	
Trade section: Aztec market-place diorama	Sight: What foods are made from animals?	
Cook section	Smell: What did you smell? Are these plant or animal smells?	
Cook section	Taste: How are our sense of taste and smell connected?	
Eat section: Kenyan Comfort Food meal	What dishes are made from animals? From plants?	
Eat section: Power Meal (Michael Phelps breakfast)	What dishes are made from animals? From plants?	
Eat section: Choose a meal	What dishes are made from animals? From plants?	

Group Worksheet

ANSWER KEY

Instructions for the adult facilitator:

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2. Encourage contributions from all students.
3. Record as many of their observations as possible.

Location	Ask Students	Record Their Responses
Grow section	Look: Which foods come from plants?	<i>(Answers may include: corn, cassava, potatoes, crab apples, watermelon, cabbage, peppers, rice, beans)</i>
Grow section	Look: Which foods come from animals?	<i>(Answers may include: fish, cows, test tube beef, oysters, pigs, chicken)</i>
Trade section: Aztec market-place diorama	Look: What foods are made from plants?	<i>(Answers may include: squash, pumpkin, chiles, tomato, cacao beans, vanilla, peppers, corn, prickly pear cactus, chayote, squash blossoms, maguey heads)</i>
Trade section: Aztec market-place diorama	Sight: What foods are made from animals?	<i>(Answers may include: insects, lizards, turkey, grasshoppers, maguey worms, fish)</i>
Cook section	Smell: What did you smell? Are these plant or animal smells?	<i>(Answers may include: lemon, lavender, thyme, fennel)</i>
Cook section	Taste: How are our sense of taste and smell connected?	<i>(Answers will vary. Your sense of smell helps you taste food.)</i>
Eat section: Kenyan Comfort Food meal	What dishes are made from animals? From plants?	<i>(Answers may include: from animals: chicken; from plants: grains, vegetables, tea)</i>
Eat section: Power Meal (Michael Phelps breakfast)	What dishes are made from animals? From plants?	<i>(Answers may include: from animals: cheese, eggs, cream, butter, milk; from plants, bread, strawberries, berries, maple syrup, lettuce, tomato, coffee)</i>
Eat section: Choose a meal	What dishes are made from animals? From plants?	<i>(Answers will vary.)</i>