

## Activity II. Map the Distance (40 Minutes, Math/Social Studies)

### LESSON 2



#### Teacher Tip!

Use the food system activity to connect and draw comparisons to other systems and cycles, such as the water cycle or life cycle.

1. Explain that the distance our food travels depends on how many steps in the food system it goes through, and how far away the food was grown. (For example, a vegetable grown in Chile will travel farther to get to your plate than one that is grown in your garden.) Have students further explore the journey from farm to table with the following math challenge. Map the distance between different spinach farms and the students' location.

First, explain that spinach is considered a cool season crop that grows best in 50-60 °F temperatures. California, Arizona, Texas, and New Jersey grow the most fresh spinach in the United States. California's mild climate allows farmers to grow spinach all year long. China is the world's leading producer of spinach; however, most of the spinach that the United States imports comes from Mexico.

2. Next, ask students to write down the following locations,\* where spinach is grown, in their **Garden Journals**:
  - California (Monterey County)
  - Arizona (Yuma County)
  - Texas (Winter Garden agricultural region southwest of San Antonio)
  - China (Beijing)
  - Mexico (Yucatán Peninsula)
  - Farm near school: \_\_\_\_\_

**\*Note:** This is a partial list only.

Using an atlas, world map, or online map, have students first determine how many miles each spinach farm is from their hometown.

3. Next, reveal that there are 5,280 feet in a mile. That works out to approximately 2,640 steps in a mile. Have students multiply the miles from each spinach farm to their school by 2,640 to calculate the steps it would take if they were to walk the distance. Have students plot and map the distance to scale using graph paper. Provide them with a scale to follow (for example, one grid square equals 100 miles).
4. Ask students to draw conclusions about the food system. How can it be simplified and what are some benefits of a simpler supply chain? Ask students to explain how growing or eating food from **local** sources (see sidebar on p. 22 for definition) could benefit themselves, farmers, and their community. (*Knowing where your food comes from and how it's grown, certain fruits and vegetables may be easier to find, freshly picked produce tastes great, buying local supports local farmers.*) What are the disadvantages? (*Fruits and vegetables are only available during the area's growing season, limited variety.*) What are some places in your community where you can buy locally grown fruits and/or vegetables?

## DISTANCE REFERENCE

If you don't have access to an online map or atlas, use the following distances as a guide:

These distances are an approximation.

Point out to students that the task is not to get the mileage exactly right, but to give them an idea of the differences between spinach traveling internationally, and spinach traveling regionally and locally to their plate.

**Distance from California (Monterey County) to New York, NY: 2,989 miles**

**Distance from Arizona (Yuma County) to New York, NY: 2,551 miles**

**Distance from Texas (Winter Garden region) to New York, NY: 1,933 miles**

**Distance from Beijing, China to New York, NY: 6,830 miles**

**Distance from Mexico (Yucatán Peninsula) to New York, NY: 3,263 miles**



## IMPORTANT FOOD SAFETY STEPS!

Please see p. 4 for a reproducible handout to post in a visible location in your classroom. It is important that you follow these steps to keep yourself, your students, and any parents or volunteers safe and healthy.

### Hand Washing:

All persons participating in the food preparation activity (teachers, students, volunteers, parents) should wash hands before and after preparing, handling, or sampling foods.

## WHAT IS "LOCAL"?

The terms "local" or "regional" are used a lot these days in reference to food. Both words imply close geographic proximity, but what a school or community considers "close" often depends on the unique geography and climate of where it is located, and on the number of agricultural producers in the area. (For example, a rural school surrounded by agriculture might define local as within the county, while an urban school far from farm lands might define local as within the State or within 200 miles.)

## Activity III. Harvest, Prepare, and Taste Dark-Green Leafy Greens! (30 minutes, Health/Garden)

**Prepare:** If you have a school garden and have planted dark-green leafy vegetables, such as spinach or leaf lettuce, you can do this activity when they are ready for harvest. (🌿 p. 104)

Otherwise, use purchased samples of dark-green leafy vegetables, such as spinach and leaf lettuce. You'll need access to sinks for hand washing and rinsing of the greens. You will also want to supply plates, napkins, and forks for each student. Pour samples of the salad dressings into small bowls.

**Note:** The activity is written for two raw samples, but you may want to add a cooked one to compare. (For example, **Crispy Kale Chips Recipe** (p. 24).) You may want to ask your school district's Food Service Director or a local chef for assistance with this activity.

1. In this activity, explain that students will harvest (if growing in the garden), prepare, and taste a variety of **dark-green leafy vegetables**. Whether harvesting or purchasing, show and observe spinach leaves with students. Pass leaves around for students to look at, smell, and touch (but not eat!) Explain that spinach, for example, is a green, leafy plant that grows close to the ground. The stems grow straight up from the ground in clusters, and leaves usually grow 6-8 inches long. How can one pick good spinach leaves? Look for green, crisp leaves with a fresh, sweet fragrance, and a springy texture. Avoid limp, discolored, or damaged leaves.
2. Distribute the **Dark-Green Leafy Vegetable Taster** handout (pp. 67-68). First, have students try to match the pictures of some dark-green leafy vegetables with their names (for example, spinach, bok choy, collard greens, leaf lettuce, kale, and romaine lettuce).
3. Explain that broccoli and dark-green leafy vegetables, such as spinach, belong to a subgroup within the Vegetables Food Group called the **Dark-Green Vegetables Subgroup**. Vegetables in this subgroup all provide the same kinds of nutrients. Eating vegetables from this subgroup each week helps you play hard and be healthy. (Learn more about nutrients and the vegetable subgroups in Lesson 3 on p. 26.)

