

## FOOD JOURNEY

- Grade Level: K-3
- Subjects: Social Studies, Math
- Suggested Time: 1-2 hours

*Discover the journey made by different foods, from point of production to your plate.*



### Materials

Chalk/whiteboard, paper and pencils, U.S. and world maps, foods brought in by class and/or teacher, copies of map (1 per student, optional), atlas or computers with internet access (optional).

### National Standards

#### Social Studies:

- The world in spatial terms.
- Places and regions.
- Environment and society.

#### Math:

- Understand meanings of operations and how they relate to one another.
- Compute fluently and make reasonable estimates.
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.
- Problem solving.
- Connections.

### Ohio 2010 Standards

#### Social Studies:

- Models and maps represent places. (K)
- Humans depend on and impact the physical environment in order to supply food, clothing and shelter. (K)
- Maps can be used to locate and identify places. (1)
- Maps and their symbols can be interpreted to answer questions about location of places. (2)
- Physical and political maps have distinctive characteristics and purposes. (3)
- Families interact with the physical environment differently in different times and places. (1)
- Human activities alter the physical environment, both positively and negatively. (2)

- Systems of transportation and communication move people, products and ideas from place to place. (3)

**Math:**

- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. (1)
- Add within 100, including adding a two-digit number and a one-digit number. (1)
- Add up to four two-digit numbers using strategies based on place value and properties of operations. (2)
- Add and subtract within 1000, using concrete models or drawings and strategies based on place values, properties of operations and/or the relationship between addition and subtraction. (2)
- Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units. (2)
- Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3)

**Objectives**

The student will be able to:

- Read food labels to determine where foods have been shipped from.
- Locate other states and countries on a map or globe.
- Calculate the fuel cost of transporting the foods to local supermarkets.
- Name foods that can be grown and purchased locally.

**Introduction**

- Ask students where the food they eat comes from. How does it get to grocery stores?
- Assign homework for students to look at the food in their homes and find an item from another state or country. Tell students they will learn where food comes from and what it takes to get from there to their plate.

**Activities**

- Ask students what foods they brought and where the food came from. Make a chart on the board or overhead.
- Students should locate those states and countries on a map or globe.
- Ask students how food might travel from those locations. Students may draw a picture of the most likely type(s) of transportation next to the food on the chart.
- Use an atlas, map with key, or web sites below to determine the approximate number of miles the food traveled. Add up the miles from all the food on the chart.
- <http://maps.nationalgeographic.com/maps> -- world map
- [www.randmcnally.com](http://www.randmcnally.com) – maps and mileage within US and Canada
- [www.mapcrow.info](http://www.mapcrow.info) – mileage between international cities

- <http://www.fuelcostcalculator.com/> -- fuel costs and calculations for travel within the US
- <http://www.dieselboss.com/fuel.htm> -- diesel fuel cost per gallon calculator for trucks.
- If appropriate for the students' ability level, calculate the approximate fuel cost for each item. Use the web sites above or local gas prices (this is more difficult for airplane, train or boat, so you may wish to limit this to US items and assume they traveled by diesel truck).
- Students may add up the fuel cost from all the food on the chart.
- For the item they brought in, students may draw a picture of its journey. If desired, provide copies of a map for students to trace their foods' possible journey. Students can include the numbers of miles, fuel cost, and type(s) of transportation.
- Ask students to imagine all the different foods they eat in a week, and how much fuel is used to transport those foods to local grocery stores. In addition to using fuel, transportation also causes polluting gases to be released into the air.
- Ask students to think of ways to reduce the amount of money, fuel, and pollution caused by transporting food. How about buying locally grown food and planting a garden?
- What types of foods can be grown in a garden in your region? Students may research this in books, on the internet, or by interviewing local gardeners (such as parents, students who live on farms, or a teacher). Draw pictures of these foods.

#### Modifications for K-1:

- While K-1 students may not have the math skills required for this lesson, they can still learn about food's journey and be exposed to geography at the same time.
- Follow the same procedure, but skip the step of determining the mileage and cost. Instead, discuss and illustrate the impact transporting food has on the environment.

#### Extensions

- Students may list the foods they eat for lunch and read the labels to determine where they came from. They may repeat the above activities to add the mileage and fuel cost for all foods. They may present this to their parents to raise awareness and encourage them to buy local foods whenever possible.
- Try growing vegetable plant seedlings under a grow light in the classroom. When the seedlings are ready, send them home with students with planting instructions.

#### Closing

After reviewing the lesson, ask students how they might inform others about how transporting food affects the environment. What can they encourage others to do?