

## FOOD JOURNEY

- Grade Level: 4-6
- 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.
- Environment and society.
- Places and regions.
- Roles of the citizen.
- Marginal cost/benefit.
- The uses of geography.

#### Math:

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
- Understand patterns, relations, and functions.
- 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:

- A map scale and cardinal and intermediate directions can be used to describe the relative location of physical and human characteristics of Ohio and the United States. (4)
- People have modified the environment since prehistoric times. There are both positive and negative consequences for modifying the environment in Ohio and the United States. (4)

- Global and other geographic tools can be used to gather, process and report information about people, places, and environments. (5)
- Variations among physical environments influence human activities. Human activities also influence the physical environment. (5, 6)
- The choices people make have both present and future consequences. (5, 6)
- When selecting items to buy, individuals can compare the price and quality of available goods and services. (6)

**Math:**

- Multiply or divide to solve word problems involving multiplicative comparison. (4)
- Use the four operations to solve word problems involving distances. (4)
- Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. (5)
- Fluently multiply multi-digit whole numbers using the standard algorithm. (5, 6)
- Use ratio and rate reasoning to solve real-world and mathematical problems. (6)

## 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.
- Research 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. You may wish to discuss why foods are imported, such as climate and soil conditions.
- Ask students how food might travel from those locations. Students may write 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.
- 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). Make a list as a class.

### 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.
- Students may research why certain foods are imported from certain locations. For example, why do avocados often come from Mexico and California? Why do they grow best there? Are there other reasons for importing them?

### 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?