



*Day in the Life: A Farmer*  
**Grade: 9-12**

**Description:**

Where does the food we eat come from? Students will learn about agriculture, building an understanding of the roles of farmers, the use of agricultural tools, and the physical characteristics of different regions in the United States. Students will learn how different regions are suitable for different crops and how modern advancements in technology allow farmers to grow, store, and transport a variety of foods to grocery stores at any time of the year.

**Preparation for the Excursion**

To ensure the most meaningful learning experience for your students, it is recommended that students engage in activities prior to the excursion. The video resources provide students with a context for the virtual excursion. The additional resources and activities offer opportunities for curricular connections and integration within your larger unit of study. The excursion is intended to complement a comprehensive unit.

**Video Link:**

[http://easylink.playstream.com/21\\_CenturyLearning/occupations/farmer\\_46.rm](http://easylink.playstream.com/21_CenturyLearning/occupations/farmer_46.rm)

**Fun Fast Facts:**

(Fun facts taken from the USDA for Kids website:

<http://www.usda.gov/news/usdakids/index.html>)

- There are over 2 million farms in the nation, growing food that feeds the world.
- The average American eats 25 pounds of rich each year.
- Only seven states produce rice. They are California, Arkansas, Florida, Louisiana, Missouri, Mississippi and Texas.
- Potatoes are grown in all 50 states in the U.S., and in about 125 countries throughout the world.
- Farmers have been using lasers for 25 years to level their fields.
- Potato chips are America's favorite snack. We eat 1.2 billion pounds each year.
- The average child will eat 1,500 peanut butter and jelly sandwiches by high school.

**Lesson Outcomes:**

- Brainstorm careers in agriculture.
- Research a chosen career dealing with agriculture in respects to health, nutrition, and safety.
- Design and model a paper vest to tell class members about their occupation.

**Materials:**

- Blackboard or overhead
- Chalk or overhead maker
- Brown grocery sacks (one for each student)
- Crayons or markers /presentation boards
- Scraps of construction paper
- Old magazines
- Glue Scissors

**Challenge Questions:**

- What is agriculture?
- What careers do you know about that would deal with agriculture, especially in the areas of health, nutrition, and safety?
- Why are health, nutrition, and safety so important to us as consumers?

**Lesson At A Glance:**

Of all the careers available to today's young people, none is more vital to the future of the world than a career in agriculture. It is important to understand that agriculture as we know it today has taken on a broader meaning. It now includes areas such as finance, research, education, communications, engineering, and conservation, along with those who cultivate the land to raise crops and raise livestock. It is also a term that encompasses the manufacturing and distribution of farm equipment and supplies and the processing, storage, and distribution of farm commodities. The new word coined for today's agriculture is agribusiness.

Agribusiness is the largest single industry in the United States and one that is getting bigger and bigger all the time. As the population grows, the agriculture industry increases to meet the increased demands for food and fibers. At the same time, the introduction of new products and methods add to the industry's diversity.

Agricultural careers are any career that involves food, fiber, flower, and/or forestry. The planting, growing, harvesting, storing, transporting, making, processing, selling, and or buying of food and fiber are all part of agriculture. Careers such as food scientist, clothing store salespersons, restaurant owners, teachers that teach about plants and animals, and agriculture reporters are all careers related to agriculture.

The agriculture industry is made up of many sectors of careers. Many of the careers involve health, nutrition, or safety. Dietitians help others learn how to eat properly and take care of their bodies. Safety Inspectors make sure that quality, healthy meat is available to consumers. All of these are health, nutrition, and safety careers in agriculture because they deal with food and/or fiber.

**Some careers in health, safety, and nutrition are:**

Animal Cytologist	Animal Geneticist	Animal Nutritionist
Animal Scientist	Bacteriologist	Biochemist
Botanist	Dairy Nutrition Specialist	Embryologist
Entomologist	Food Chemist	Hydrologist

Marine Biologist	Microbiologist	Organic Chemist
Parasitologist	Pharmaceutical Chemist	Plant Cytologist
Plant Ecologist	Plant Geneticist	Plant Nutritionist
Plant Pathologist	Veterinarian	Veterinary Pathologist
Virologist	Food & Drug Inspector	Meat Inspector
Ag Safety Engineer	Safety Inspector	Food Processing Supervisor
Ag Extension Agent	Food Scientist	Meat Plant Supervisor
Agronomist	Food Engineer	Quality Control Supervisor
Nutritionist	Nutrition Counselor	Water Quality Specialist
Nutrition Counselor	Restaurant Manager	Dietitian

### **Steps:**

1. Begin with discussing what agriculture is and what it encompasses. Ask the students if they know that agriculture involves everything that deals with food, forestry, flowers, and fiber. (Fiber is cotton, wool, etc.) The planting, growing, harvesting, storing, transporting, making, processing, selling, and buying of food, fiber, forestry, and flowers are all part of agriculture. There are many careers that sometimes are not thought of as agricultural careers.
2. Next, move the discussion to talk about health, nutrition, and safety careers in agriculture. Ask the students to think of agricultural careers that are also healthy, nutrition, and safety careers. Refer to the list of careers found in the introduction of this lesson.
3. Ask the students to each choose an agricultural career that is in the health, nutrition, or safety field. The students should research their career to find out what that person does and what type of education is needed. They can do this through encyclopedias, the Internet, career books or brochures, and/or guidance counselors. The students may also want to write to universities or community colleges for any information they have on a certain career.
4. After the research is conducted, let each student create a vest from a paper bag or a presentation board to demonstrate what he or she would do in their chosen career. The students can use magazines cut-outs, crayons, and markers to show what he or she does. The students can also include skills that they would need to have.
5. Set aside time for students to stand, wearing their vest or showing their presentation board, and tell their classmates about the occupation they have selected.
6. The vest can be put on display for others to see in order to learn about careers or a “career show” could be given to other classroom

### **Related Activities:**

1. Invite visitors in agriculture careers to visit the classroom to speak about what they do for a living.
2. Visit a college or university where agriculture classes are taught.
3. Research other agriculture careers.

4. Conduct an interview of someone who works in an agricultural career and videotape the interview to show to others.
5. Create a poster that shows how safety and health factors are important in the career you choose.
6. Make a bumper sticker that tells others about your career.

## **Lesson 2**

### **Lesson Outcomes:**

- Understand why specialization leads to interdependence.
- Determine the economic impact of drought on a local economy.

### **Materials:**

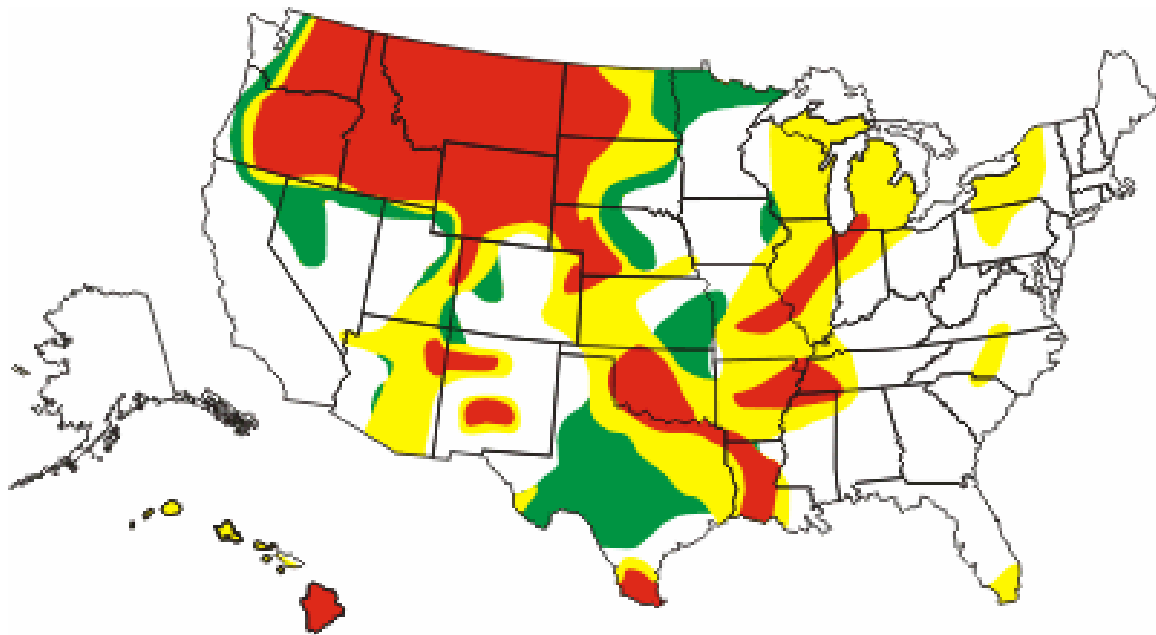
- Drought Condition Chart
- Question and answer sheet
- The Story of Bonedry
- Chart paper for Extension Activity





### **Lesson At a Glance:**

Introduce the concepts of *specialization* and *interdependence*. *Specialization* is a situation in which people produce a narrower range of goods and services than they consume, which increases productivity. *Interdependence* is a situation in which decisions made by one person affect decisions made by other people, or events in one sector of the economy affect other sectors of the economy. When people specialize, they do not try to provide for all their economic wants themselves; instead, for some wants, they depend on others. This is the basis of interdependence.

Water is a natural resource that is essential in the production of many goods and services. The United States has been experiencing drought conditions in various parts of the country for several years. Drought can affect local communities in a number of ways. Students participating in this lesson will learn about interdependence in a local community and see some ways in which interdependence can adversely affect the community when a drought occurs.

Current Drought Conditions 2005-2006



-  Recovering from drought, but should be monitored closely for recurring conditions or lingering impacts
-  Labeled as a drought area by the US Drought Monitor. Portions of states within this region have been "declared" as drought areas by the state or federal government
-  Labeled as a drought area by the US Drought Monitor. States within this region have not been "declared" as drought areas by the state or federal government
-  Drought watch areas

**Steps:**

1. Direct the students to examine current drought conditions by looking at the drought monitor map (see resources). Ask the students whether their state is in any kind of a drought condition. If it is not, have the students look at states that are experiencing drought; where they find instances of drought, they should note the level of severity. Ask the students what percentage of the entire U.S. is in some degree of drought condition.

2. The students then examine a hypothetical farming community called Bonedry. ( read attached story) Bonedry has been in a severe agricultural drought for several years. The students' task will be to calculate the economic impact of the drought for the town, using the information summarized in the story. Present the questions following the story to the students.

**Bonedry once was home to 50 farmers, with an average farm-family income of \$75,000 annually. Farmers are entrepreneurs; they operate their farms in expectation of making a profit, and they run the risk of not making any profit in certain years. The recent lack of moisture in Bonedry has reduced crop yields and profits from those crops. As a result, 10 of these farmers have left the area. The local farm implement company experienced a decrease in sales of 10% (annual sales had been \$1.5 million). Due to the decrease in sales, the farm implement company cut one employee who had earned an annual salary of \$40,000. Due to the decreased population, the local grocery store saw a decrease in sales of 8% (annual sales had been \$900,000) and local restaurants experienced a 15 percent drop in revenues (annual revenues had been \$500,000). Because of the decrease in sales of goods and services, Bonedry received 19 percent less in sales-tax revenues, which had been \$420,000 annually. This loss of tax revenue caused the town to cut two police officers, each of whom each had earned annual salaries of \$38,000.**

## Questions:

1. Farmers depend on rain to grow their crops.  
What is the loss of farm income?
  
2. Farm implement companies depend on farmers to buy their products.  
What is the loss of sales revenue for the implement company?
  
3. Employees at the farm implement company depend on the company for their wages.  
What are the loss of employee wages?
  
4. The local grocery store and local restaurants depend on the local population to buy their goods and services.
  - a) What is the loss of sales revenue for the grocery store?
  
  - b) What is the loss of revenue for local restaurants?
  
5. The city government of Bonedry depends on sales tax revenues to provide city services  
What is the loss of city sales tax revenue?
  
6. Local police officers depend on the city to pay their salaries.  
What is the loss of police officer income?
  
7. What is the total annual dollar impact for Bonedry?

**Answer Key:**

1. (10 farmers x \$75,000 = \$750,000)
2. (\$1,500,000 x .10 = \$150,000)
3. (\$40,000)
4. a. (\$900,000 x .08 = \$72,000)    b) (\$75,000)
5. (\$420,000 x .19) = \$79,800)
6. (\$38,000 x 2 = \$76,000)
7. (\$1,242,800)

**Have students consider the following questions:**

1. Why does a drought have broad effects in addition to its effects on farmers and other agricultural industries
2. What other sectors in addition to agriculture might be hardest hit by a drought? *[Possibilities include recreation, such as fishing and water sports, camping (in extreme drought conditions, state and federal parks are often closed to campers to avoid potential wildfires).*
3. How might drought affect urban areas?

**Assessment Activity:**

Based on the interdependence activity above, have students construct an interdependence chart for your own city or area (but without dollar amounts) showing different businesses or organizations that would be affected by a drought. The students should show as many organizations or groups of people who might be affected as possible.

**Resources:**

<http://www.drought.unl.edu/risk/us/usimpacts.htm> The NDMC, established in 1995, is based in the School of Natural Resources at the University of Nebraska–Lincoln. The NDMC’s activities include maintaining an information clearinghouse; drought monitoring, including participation in the preparation of the U.S. Drought Monitor and maintenance of the web site ([drought.unl.edu/dm](http://drought.unl.edu/dm)); drought planning and mitigation; drought policy; advising policy makers; collaborative research; K–12 outreach; workshops for federal, state, and foreign governments and international organizations; organizing and conducting seminars, workshops, and conferences; and providing data to and answering questions for the media and the general public

[www.marcopoloeducation.org](http://www.marcopoloeducation.org)

[www.agclassroom.org](http://www.agclassroom.org) Agriculture in the Classroom is a grassroots program coordinated by the United States Department of Agriculture. Its goal is to help students gain a greater awareness of the role of agriculture in the economy and society, so that they may become citizens who support wise agricultural policies.

[www.usda.gov](http://www.usda.gov) United States Department of Agriculture The USDA is responsible for the safety of meat, poultry, and egg products. USDA is a research leader in everything from human nutrition to new crop technologies that allow us to grow more food and fiber using less water and pesticides. The site contains information on farming and food consumption for every state.