

Unit A: Recognizing the Role of Agriculture in Society

Lesson 3: Understanding Agribusiness in Today's World

Student Learning Objectives: Instruction in this lesson should result in students achieving the following objectives:

1. Identify the scope of the food industry.
2. Explain historical events and trends that have led to the development of today's agriculture industry.
3. Identify the basic needs of humans.
4. Explain the basic economic concepts of supply and demand.
5. Describe factors that influence what people eat and use for clothing and shelter.

Recommended Teaching Time: 2 hours

List of Resources: The following resources may be useful in teaching this lesson:

Cooper, Elmer E. *Agriscience Fundamentals and Applications*. Albany, New York: Delmar Publishers, 1997. (Unit 32)

Morgan, Elizabeth M., et al. *AgriScience Explorations*, Second Edition. Danville, Illinois: Interstate Publishers, Inc., 2000. (Textbook, Chapter 16)

List of Equipment, Tools, Supplies, and Facilities:

Writing surface
Blank Paper for each student
Timer or Clock
Copies of Student Worksheet
Apple
Almond
Piece of Candy

Terms: The following terms are presented in this lesson (shown in bold italics):

Carbohydrates
Consumer
Climate
Customs
Demand
Distributor
Fiber

Food
Food industry
Grader
Harvester
Media
Nutrients
Packer
Preferences
Processor
Producer
Proteins
Retailer
Shelter
Standard of Living
Supply
Trucker
Water
Wholesaler

Interest Approach: *Ask students to fold a piece of paper into thirds, then unfold. Students will use these folded lines as column dividers. At the top of each column the students should write one of the following "Needs," "Wants," and "No Use." Students should begin to think (but not to write) about products that they need, want, and those that they think they will never use. Tell students that they have one minute to write down as many products as they can, you should tell them when to start and stop writing for this activity. Present this activity with enthusiasm so that students feel like it is a competition to write down the most products. This feeling within students will excite them and motivate them to work hard to accomplish the task and participate in the lesson. Upon completion of the activity, share answers with the entire class. This can be done by writing "Needs," "Wants," and "No Use" on the chalkboard and having students write one product in each column on the board. Discuss these answers and how they relate to business activities in Afghanistan. Help students discover these important points:*

- 1. All people have the same basic needs.*
- 2. Some products are wanted by more people than others.*
- 3. Products that have no use to some people, are usable by others*
- 4. Producers of products (businesses) try to make enough products for the people that want or need them without producing too much.*

Summary of Content and Teaching Strategies

Objective 1: Identify the scope of the food industry.

Anticipated Problem: What is the scope of the food industry?

- I. The **food industry** is the industry involved in the production, processing, storage, preparation, and distribution of food for consumption by living things. The food industry involves many functions.
 - A. The **producer** grows the crop and determines its readiness for harvest.
 - B. The **harvester** removes the edible portions from the plant in the field.
 - C. The **trucker** is responsible for transportation of the product anywhere along the way from farm to consumer.
 - D. The **packer** is responsible for inserting the food into containers such as boxes or bins for shipment to the processing plant.
 - E. The **grader** inspects the food for freshness and determines size and quality. A grader establishes under what criteria the food will be sold and consumed.
 - F. The **processor** is involved in cleaning, separating, handling, and preparing a food product before it is ready to be sold to the distributor.
 - G. The **distributor** stores the food until a request is received to transport the food to a regional market.
 - H. The **wholesaler** purchases fresh or processed food in large quantities and sells to the retailer.
 - I. The **retailer** sells directly to the consumer. The retailer is at the end of the marketing chain.

*****To help students master this objective, lead them in a discussion by pretending their food is on a journey. Begin by asking them the question: How does our food get from the farmer to our dinner plate? Discuss each step (listed in order above) by having students draw a picture to represent each vocabulary word. If possible, name businesses that play a role in this process. During this discussion, help students realize that sometimes, some steps may not be included. For example, if a family grows their own food to eat, the food will not travel through steps E through I. It is also possible for the producer (farmer and family members) to be responsible for all the steps listed above.***

Objective 2: Explain historical events that have led to the development of today's agriculture industry.

Anticipated Problem: What historical events have led to the development of today's agriculture industry?

- II. History helps us understand our future. Events that occurred in the past have an impact on the agricultural practices of today.
 - A. The methods that are used to produce food change over time.

- B. Factors within Afghanistan that can control and influence the agriculture industry.
 - 1. The way businesses are operated.
 - 2. How trade may occur with other countries.
 - 3. The use of technology in the production of goods.

*****To help students master this objective, begin by reviewing the history of agriculture in Afghanistan from Lesson 1. Ask the students questions about how these events have changed the way food is produced and how agribusinesses interact. Then, conduct research to discover how different factors have influenced the agriculture industry. Divide students into 3 groups and assign one topic to each group:**

- 1. Factors controlling the way businesses are operated.
- 2. Factors controlling how trade may occur with other countries.
- 3. Factors controlling the use of technology in the production of goods.

Upon completion of the findings, have students present this information to the class. Ask questions after each presentation to assist the students in understanding how these factors influence the agriculture industry.

Objective 3: Identify the basic needs of humans.

Anticipated Problem: What needs must be met for humans to survive?

- III. The basic human needs are food, fiber, and shelter.
 - A. Basic needs support human life. They provide the nutrition that helps the body grow, repair itself, and reproduce. They also provide protection from the weather, dangerous animals, and other hazards of life. Most food and fiber is carefully produced to meet human needs.
 - B. **Food** is the solid and liquid material humans consume that provides essential nutrients.
 - 1. **Nutrients** are substances necessary for an organism to live and grow. Humans receive nutrients from foods in the form of carbohydrates, proteins, fats, vitamins, minerals, and water.
 - a. **Carbohydrates** are starches and sugars the body turns into energy.
 - i. Wheat that is used to make bread provides carbohydrates
 - b. **Proteins** are important in body growth and repair.
 - i. Meats such as lamb, goat, and poultry provide protein

- ii. Nuts also provide protein; however, protein is available in smaller quantities in nuts than in meats.
 - c. Fats provide energy for the body.
 - i. Fats can be found in many foods such as meat and other processed foods.
 - d. Vitamins and minerals are needed for good health.
 - i. Fruits, nuts, and vegetables provide many vitamins and minerals.
 - ii. Milk also provides calcium, an important mineral for bones.
 - e. **Water** is needed to transport food substances in the body.
- C. **Fiber** primarily includes materials used to make clothing and shelter. Fiber is produced by animals, by plants, and by manufacturing. There are natural and synthetic fibers.
1. Synthetic fibers are made in mills from various products, such as petroleum.
 2. Natural fibers are those produced by plants and animals.
- D. **Shelter** is housing for humans. Some of the products used in providing shelter are produced by trees.

*****To help students master this objective have students repeat short sayings after you deliver the information. For example, you would say "The basic needs for human life are food, fiber, and shelter." (Ask the class) "What are the basic needs?"**

(Students respond) "Food, Fiber, and Shelter"

Then you continue, " Basic needs support human life. They provide the nutrition that helps the body grow, repair itself, and reproduce. They also provide protection from the weather, dangerous animals, and other hazards of life. Most food and fiber is carefully produced to meet human needs." (Ask the class again) "What are the basic needs?"

(Students respond) "Food, Fiber, and Shelter"

Continue delivering this information, asking the students to respond to different questions to help them remember the main points.

Objective 4: Describe factors that influence what people eat and use for clothing and shelter.

Anticipated Problem: What factors influence what people eat and use for clothing and shelter?

- IV. People make choices about food, fiber, and shelter. They have strong likes and dislikes, or **preferences**.
 - A. Food and fiber are produced to satisfy human needs. If a commodity is not

desired, there is no reason to produce it.

- B. **Consumers**, those who purchase products or services, have certain needs—food, shelter, and clothing—that must be met. There are several factors that can influence consumer choices.
1. **Climate**, or the nature of the weather, influences the types of products that can be grown in an area.
 2. **Customs** are the long established ways of doing things. Adults often prefer to purchase the same types of products they grew up eating or using.
 3. **Standard of living** refers to the income of people and the products available to them. People with more money often choose different foods and types of housing.
 4. **Media** are the businesses and organizations that distribute information to the general public. Media provides news and information to the people which may or may not be accurate. By announcing that one food may be healthier than another, people may choose to purchase more of the healthier food than they have in the past.

*****To help students master this objective, show students an apple, almond, and a piece of candy (other objects may be used—one should be desired by a young child, the others desired by a high school student) Ask students which of these items they would most like to have. Discuss the reasons students might choose one product over another. Allow students to discuss and debate which product is more desirable. Then ask a student with a young sibling which product his younger brother or sister would have chosen. Use these responses to begin a discussion about how people's choices change over time and the reasons why their choices may change.**

Objective 5: Explain the basic economic concepts of supply and demand.

Anticipated Problem: What are the basic economic concepts of supply and demand?

- V. **Demand** is the quantity of a product (or service) buyers are willing to purchase from the market at a given price.
- A. When prices are low, buyers are willing to purchase greater quantities of a product. At higher prices, buyers are willing to purchase fewer quantities of a product.
 - B. Certain economic factors can cause demand to increase or decrease.
 1. Changes in consumer preferences

2. Changes in personal income
 3. Number of buyers in the market
- II. **Supply** is the quantity of a product (or service) that sellers are willing to provide to the market at a given price.
- A. When prices are high, sellers are willing to provide larger quantities of their products to the market. At lower prices, sellers are willing to provide smaller quantities of their products to the market.
 - B. Certain economic factors can cause supply to increase or decrease.
 1. Changes in production systems
 2. Prices of related goods
 3. Number of sellers in the market

*****To help students master this objective, continue the discussion from Objective**

4. Questions might include:

1. *When consumers prefer almonds over apples, which one will they purchase more of? (Almonds, this product has a higher demand)*
2. *If people start to earn a higher income, will they continue to purchase low cost products or will they begin to purchase higher cost products? (They will begin to purchase more higher cost products. The demand for higher cost products will increase if they are a product that people want and with higher incomes, they can now afford to buy them.) ***To help students understand this point, use two comparable products with differing prices as an example.*
3. *Who puts almonds (also called supplies) on the market? (The almond growers)*
4. *If almonds became easier to produce, what would happen to the supply? Would it increase or decrease? (It would increase)*
5. *Why would the supply of almonds increase? (Because growers could produce them more easily and other people might start growing almonds)*

Reinforce this information by having students complete WS: 3-1.

Review/Summary: Develop questions to ask students using the lesson objectives and information. Divide students into two teams. Students will take turns participating in answering questions for their team one at a time. Ask one student from each to use a piece of chalk to write the answer to the question on the board. The student who writes the correct answer on the board first earns one point for their team. The team with the most points at the end of the game wins.

Application: Have students research an area of agriculture, documenting the trends that have occurred and what affect they have on us today.

Evaluation: A sample test is attached to evaluate student's knowledge of the lesson objectives.

Answers to Sample Test

Part One: Matching

1=a, 2=e, 3=d, 4=l, 5=k, 6=b, 7=h, 8=j, 9=l, 10=f, 11=g

Part Two: Completion

1. carbohydrates, fats
2. food, fiber, shelter
3. grader
4. media

Part Three: Short Answer

1. The four major factors that influence consumer choices are climate, customs, standard of living, and media.
2. Student answers will vary, but be sure to check that they have listed the steps in order. Producer, harvester, trucker, packer, grader, processor, distributor, wholesaler, retailer.
3. Demand for silk will increase and demand for cotton will decrease. This is because silk is a more desirable product and is more affordable to purchase now than it was in the past.
4. Student answers will vary.

Sample Test

Name _____

Test

Understanding Agribusiness in Today's World

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | | |
|----------------|------------------|-----------------------|
| a. supply | e. food industry | i. nutrients |
| b. demand | f. water | j. standard of living |
| c. customs | g. packer | k. customs |
| d. preferences | h. retailer | l. shelter |

- _____ 1. Quantity of product or service buyers are willing to purchase from the market at a given price.
- _____ 2. Producing, processing, storage, preparation, and distribution of food.
- _____ 3. Opinions that dictate what is produced.
- _____ 4. Substances necessary for an organism to live and grow.
- _____ 5. Long established ways of doing things.
- _____ 6. Quantity of a product or service that sellers are willing to provide to the market at a given price.
- _____ 7. Sells goods directly to the consumer.
- _____ 8. Refers to the income of people and the products available to them.
- _____ 9. The housing of humans.
- _____ 10. Needed to transport food substances in the body.
- _____ 11. Places goods into boxes or containers to be transported.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

1. _____ and _____ provide the body with energy.
2. The basic human needs are _____, _____, and _____.
3. The _____ inspects goods, then sorts goods by size and quality.
4. _____ distributes information to the public.

Sample Test

Name_____

Test

Understanding Agribusiness in Today's World

Part Three: Short Answer

Instructions. Use complete sentences and correct spelling to provide the information below.

1. Name 4 reasons for consumer preferences and give an example of each.

2. Select an agriculture product. Describe each step of this product takes on its journey from the farm to the consumer.

3. The price of silk fabric has significantly decreased from one year ago and is now the same cost as cotton fabric. How does this affect demand for cotton and silk. Be sure to fully explain your answer.

4. List one factors that influences each of the following segments of the agriculture industry.
 1. Business operations-

 2. Trade with other countries-

 3. Use of technology in the production of goods-

WS: 3-1 Answer Key

Understanding Supply and Demand

Instructions. Identify each description below as affecting Supply or Demand by writing S for supply or D for demand in each blank.

- S** 1. An insect infestation ruins ½ of the almond crop this year.
- D** 2. The media announces that tobacco use causes cancer.
- D** 3. A new company has opened for business in town, hires many employees, and pays significantly more than these individuals have received in the past.
- S** 4. An unusual amount of rainfall has doubled the wheat crop.
- D** 5. It is discovered that poultry is healthier than lamb because it contains less fat.

Instructions. Answer the questions below relating to the increase or decrease of supply or demand.

6. Tractors, mechanical planters, and mechanical harvesters become more widely used. This allows farmers to have more time because they do not have to use their own manual labor. Does this cause supply of wheat to increase or decrease? Why?

Supply of wheat will increase because it is easier to produce more wheat using the machines.

7. Last year, there were 10 almond growers. This year there are 15 almond growers. Does this cause supply of almonds to increase or decrease? Why?

Supply of almonds will increase because more growers (sellers) have entered the market.

8. The population of a nearby town doubled in size. Does this cause demand for bread to increase or decrease? Why?

Demand for bread (and all food products) will increase because there are more buyers in the market.

9. The price for consumers to purchase goat meat went up. How does this affect the demand for goat meat? How does this affect the demand for other meats like poultry?

Demand for goat meat will decrease because of the higher cost. Demand for other meats that are less expensive will increase because they are more affordable for consumers.

WS: 3-1

Understanding Supply and Demand

Instructions. Identify each description below as affecting Supply or Demand by writing S for supply or D for demand in each blank.

- _____ 1. An insect infestation ruins $\frac{1}{2}$ of the almond crop this year.
- _____ 2. The media announces that tobacco use causes cancer.
- _____ 3. A new company has opened for business in town, hires many employees, and pays significantly more than these individuals have received in the past.
- _____ 4. An unusual amount of rainfall has doubled the wheat crop.
- _____ 5. It is discovered that poultry is healthier than beef because it contains less fat.

Instructions. Answer the questions below relating to the increase or decrease of supply or demand.

- 6. Tractors, mechanical planters, and mechanical harvesters become more widely used. This allows farmers to have more time because they do not have to use their own manual labor. Does this cause supply of wheat to increase or decrease? Why?

- 7. Last year, there were 10 almond growers. This year there are 15 almond growers. Does this cause supply of almonds to increase or decrease? Why?

- 8. The population of a nearby town doubled in size. Does this cause demand for bread to increase or decrease? Why?

- 9. The price for consumers to purchase goat meat went up. How does this affect the demand for goat meat? How does this affect the demand for other meats like poultry?