

FACS: Source Search Relay (Ag)

Summary

This lesson plan emphasizes the concept that agriculture provides nearly all of the products we rely on in any given day.

Time Frame

1 class periods of 30 minutes each

Group Size

Large Groups

Life Skills

Thinking & Reasoning, Social & Civic Responsibility

Materials

- Four boxes labeled "Store," "Factory," "Farm," and "Natural World"
- Poster board (for mounting product pictures)
- Glue

Background for Teachers

Many people have the misconception that farms simply provide us with raw produce and other foods. In reality, agriculture also provides us with a wide variety of raw materials from which we are able to make clothes, books, cosmetics, medicines, sports equipment, and much more.

Students may not realize that the items they use every day come from resources that are found in the environment. These resources are either extracted from the natural world through industries such as mining, or they are used in agricultural production. Most students don't recognize the origins of the products, and they think of the sources of these products as factories or stores. It is important for students to understand that before an item ever leaves a factory or enters a store, it began as a resource or product of the natural world.

Intended Learning Outcomes

Examine and describe how agriculture and natural resources impact our quality of life.

- Recognize and explain how the agricultural system works (production to consumption) and identify related corresponding careers in agricultural and forestry production, education, communication and government services, management and business, and scientific and engineering opportunities, including career educational requirements and salary ranges.

Instructional Procedures

Activity Procedures

Cut out the attached pictures (40) of common products we see or use every day. Randomly divide the pictures into two groups. Use two colors of poster board (or card stock) and glue the pictures onto the poster board. Cut out the poster board around the pictures leaving a $\frac{1}{4}$ - $\frac{1}{2}$ inch boarder. Laminate the pictures for future use.

If you prefer to get your students involved in the preparation stage (and have time), gather a variety of

magazines or slick ads from the Sunday newspaper. Instruct your students to cut out pictures that represent items they use regularly (food, cars, soap, clothes, computer, etc.; avoid duplication). Glue these pictures onto poster board and laminate them.

Obtain four containers (boxes, plastic tubs or paper grocery bags) and label each with one of the following: "Store," "Factory," "Farms" and "Natural World." Identify a location for a relay race outside, wide hallway, or gymnasium.

Ask students what they did to get ready for school. Make a list of the common items used and foods eaten by the students. Discuss with students the types of items they use or eat everyday.

Divide the class into two teams. Divide the laminated pictures by color. If you have used red and blue poster board, you have a red and blue team. Be sure you have the same number of pictures in each pile. This lesson comes with 40 pictures to accommodate large classes but you may not need them all. If you have 26 students you will only use 26 pictures, 13 in each pile. Each student will take only one turn in the relay. If you have 25 students, you will still need 13 pictures in each pile; it is just that someone will be taking two turns. This will keep the relay fair. Tell the students where they are going for the "relay race" and that they will need to line up behind one another. Their task will be to sort the pile of pictures placed in front of each team into one of the four tubs. Be sure to have all the pictures face down. Locate the tubs 20-50 feet away from the first person in each line.

Give students the following instructions: This is the source relay; your job is to place each picture in the tub that is the source for the items we use everyday. When you are in the front of the line, pick up a card, look at the picture, then run to and place the picture in the correct tub based on the product's "source"-- either "Store," "Factory," "Natural World," or "Farm." You are looking at the product, not the packaging. The next person in line goes when the person in front of them returns, crossing over the start line or hand-tagging the person now in front of the line. The returning player should go to the end of the line. Continue the "relay race" until all of the pictures have been sorted. The first team done with the sort wins! Or do they? Now it is time to see if the pictures were sorted correctly.

Ask the students to gather around you as you go through the pictures in each box. As you hold up each picture, the students can show whether they agree or disagree with the sort. Begin with the "Farm" container. If the item contains ingredients or raw products from a farm, the item is in the correct box. Examples would be any food items such as cereal, cookies, and milk, or any clothing item made out of a natural fiber such as cotton (jeans) or wool (coat). Some items from a farm that are not eaten or worn would be paint (this contains linseed or soybean oil), or fuel such as ethanol. The "Farm" container will typically have only a few items in it. Next, look at the "Natural World" tub; it will only have a few items in it as well. Items in this tub should be products we get from the ocean, from plants or animals that occur naturally without management from humans, or from mining. Examples of items that should be in this box are: fish or shrimp (wild; however, fish and shrimp are also farmed), cars, salt, water, plastic (starts as oil, which is mined) synthetic fabrics (polyester, petroleum or oil products), computers, cell phones, any metallic items. Wood products may be in this box, but many wood products are from timber grown on farms. Let the class decide how to divide these. You might decide to "split the difference;" put one (the fish) into the "Farm" box and the wood into the "Natural World."

Remind your students that this is the "source" search. What is the "real" source of the things we use everyday? Nearly all are grown or mined -- farmed or extracted from the natural world. With this concept in mind, you are ready to take a look at the "Factory" box. A factory is a place where raw

ingredients are changed into the useful items we need or want; wood into furniture, ore into steel for cars, wheat into bread, and potatoes into chips. A factory assembles items for sale in a distribution center, a store. Everything in the "Factory" box should be sorted into either the "Farm" or "Natural World" container. After doing this, your students get it -- products have been grown or mined. They realize that like the "Factory" container, nothing should be in the "Store" container; this is just where we purchase the items. Factories and stores rely on raw ingredients from the farm and the natural world.

Every picture or product is now in either the "Farm" or "Natural World" container. At this point you'll want to remind students that farms need the natural world -- soil, water, light, and air. The "Farm" container could actually be placed into the "Natural World" container!

Questions for Discussion

Needs vs. Wants: Which of the products in the tubs do we need to survive? Which do we want for a variety of reasons?

Considering all the things we use every day, how many careers do you think there might be in the area of farming or agriculture and natural resources? From production, processing (factory), to distribution what entry level and highly skilled jobs are there?

Which items used in this activity are from renewable resources? What is a renewable resource? What is a recyclable resource? Which items are renewable/recyclable in the "Farms" container? Which are renewable/ recyclable from the "Natural World" container? Were there any items that were nonexhaustible?

How does the proper management of farms and natural resources affect our quality of life?

Do the relay a second time using only two containers, "Farm" and "Natural World." This will help you to assess student understanding.

Ask students to research some ways to conserve or manage our natural resources, including farms, and share their findings with the class.

Ask your students to create a concept web (see Utah Agriculture in the Classroom lesson plan on the 5-Fs of Agriculture) with one of the pictures used in the "Source Search" activity. Each picture should be place in the center of a piece of large paper and the web drawn to identify associations or links to careers, natural resources or other products.

Additional Activities

Do the relay a second time using only two containers, "Farm" and "Natural Resources." This will help you to assess student understanding.

Ask students to research some ways to conserve or manage our natural resources, including farms, and share their findings with the class.

Ask your students to create a concept web (see Utah Agriculture in the Classroom lesson plan on the 5-Fs of Agriculture) with one of the pictures used in the "Source Search" activity. Each picture should be place in the center of a piece of large paper and the web drawn to identify associations or links to careers, natural resources or other products.

Vocabulary

Renewable Resources:

Natural resources that can be replaced by human efforts are considered renewable. These resources can be used up without proper management. Examples: forests, fish, wildlife, agriculture, plants, animals.

Nonrenewable Resources:

These are limited natural resources that cannot be replaced or reproduced (within a generation). We

cannot manage them for renewal. Once they are gone they are gone -- forever. Examples: oil, mineral resources (lead, iron, cobalt, zinc, etc.), soil (made so slowly, 1,000 - 500,000 years).

Nonexhaustible Resources:

Natural resources that can last forever regardless of human activities. They renew themselves continuously. This does not mean that resources are not limited. Human misuse can damage these resources. Examples include surface water (little can be done to affect the total amount of water), air (we can damage the air with pollution, but we cannot use it up), and sunlight (pollution can limit this resource).

Activity adapted from Project Seasons

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