

A Product's Journey

Summary: Students identify local agricultural products, explore their origins, and follow the process of such products from production to the consumer.

Objectives:

The students will:

- Identify an agricultural product based on its origin.
- Describe at least three agricultural products and tell their origins.
- Describe the journey of a local agricultural product from production to the consumer.

Materials:

Activity #1:

- a photocopied set of the food resource graphic cards from the Appendix
- empty food containers that match the food resource cards

Activity #2:

- several different products that come from trees such as: newspaper, magazines, paper towels, wrapping paper, writing paper, pencils, a block of wood, carpeting, cellophane, rayon fabric, shampoo (thickening agents), suntan lotion, shatterproof glass, cosmetics, fiber board, cork, dye, paint thinner, perfume, soap, rubber bands, maple syrup, apples, oranges, nuts, chewing gum, shoe polish, crayons, cereal box, cardboard box, etc. (some of these products aren't always, or exclusively, made from trees)
- pictures or clip art graphics of tree products (make sure to have some from each of these four categories: paper products, food products, solid wood products, and packaging)
- masking tape

Activity #3:

- the book The Milk Makers by Gail Gibbons
- 1-2 file folders per student (or alternative materials--see activity for details)
- markers/crayons/colored pencils
- scissors

Getting Started:

Activity #1:

- Copy a set of the food resource graphic cards from the Appendix. If time allows, have the students color the pictures. Laminate the cards if possible.
- Gather empty food containers that represent the food resource cards or have the students bring them in. For meat products, a drawing or plastic dog toy wrapped on the Styrofoam packaging will work. Check labels of different food products for the ingredients. Make some obvious and some more challenging for the students to figure out.
- Set the empty containers out on a table in the classroom ahead of time.



Grade Level: K-6

Topic: Following agricultural products from their origin to the consumer

PA Environment & Ecology Standards Addressed:

Agriculture and Society:

4.4.4.C: Know that food and fiber originate from plants and animals.

- Identify an agricultural product based on its origin.
- Describe several products and tell their origins.
- Describe the journey of a local agricultural product from production to the consumer.

Teaching Methods:

- Lecture/Discussion
- Hands-on activities
- Investigation

Multiple Intelligences Utilized:

- Naturalistic
- Visual/Spatial
- Interpersonal
- Intrapersonal
- Bodily/Kinesthetic

Activity #2:

- Lay all of the tree products that you gathered out on a table before the lesson begins.
- Make sure you have enough pictures/graphics of tree products for each student, and some from each of the four categories mentioned above.

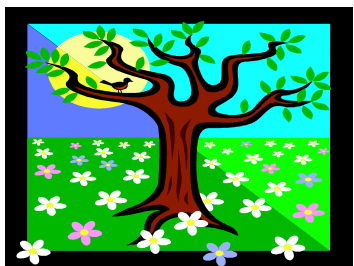
Activity #3:

- Locate the book The Milk Makers by Gail Gibbons. If your school library does not have it, the bibliographic information is listed at the end of this lesson plan. If getting this book is not possible, find a book that is similar in theme—one that describes the milk-making process. You could also choose another food product like spaghetti sauce, applesauce, french fries, etc. If books are not available for these, try web resources and then outline the process for the students yourself.

Background:

The farmer is just the first step of many in the process of food production. A particular food follows many steps after it leaves the farm and before it reaches the consumer. Some foods are sold just as they grow, in their raw form. But most are processed, or changed, somehow before they are sold at the grocery store.

Pennsylvania is the top state in hardwood production. Besides the products that can be made from hardwood, there are many others that can be made from other types of trees. You might be surprised at what some of those products are. Some examples are newspaper, magazines, paper towels, wrapping paper, writing paper, pencils, carpeting, cellophane, rayon fabric, thickening agents in shampoo, suntan lotion, shatterproof glass, cosmetics, fiber board, cork, dye, paint thinner, perfume, soap, rubber bands, maple syrup, apples, oranges, nuts, chewing gum, shoe polish, crayons, cereal boxes, and cardboard. Tree products can be broken down into four categories: paper products, food products, solid wood products, and packaging.



Fun Facts!

Did you know that cows are not the only animal that can make milk? Goats, sheep, water buffalo, and reindeer can too!



Activity #1:

Food Products Game

- Introduce the food resource cards to the students and discuss what is on each card. Talk about some products that each food could make (ex.= apples can make applesauce).
- Hand out the cards to the students (you can put them in pairs or have them do the activity by themselves) and ask them to find the food containers that go with the raw food item on their card(s) (ex.= if they have a card with corn on it they might pick out a can of corn and a box of Corn Flakes).
- Once the group is done, have each person or pair present their card and items to the group. Decide if the items they picked are derived from the original source on the card. You can discuss other products that are made from that food.



Activity #2:

It Comes From Trees

- Pennsylvania is known for hardwood production. What kinds of products can be produced from hardwoods? (lumber, buildings, shelter, etc.)
- Other types of trees give us many other products that we use every day. What are some of those things? Make a list on the chalkboard.
- Next, direct the students to look at the many items that you have displayed on the table. Have them go up one by one to choose products made from trees until they feel that they have picked them all. Assuming that there will still be items remaining on the table...explain to them that all of the items on the table are actually made from trees in some way.
- Look around the classroom. What items can you find that are products of trees?
- What are some tree products that they might have used throughout the day?
- Next, discuss the four general categories that some of the items from the table and from around the classroom could fit under: paper products, food products, solid wood products, and packaging.
- Show the students the pictures/graphics of the tree products from these four categories that you have prepared and tell them that they are going to have to be detectives in order to figure out which tree product they are.
- Hang four signs in designated areas of the room for the four categories.
- Tape a picture to each student's back and ask them to mingle around the room and ask questions about the identity of their product. They may only ask each person two questions and they should only require a "yes" or "no" answer. You may need to model some questions for them ahead of time. (ex.= "Is it used for food?" "Is this product used in our school?" "Is it made from paper?")

- If a student thinks they have identified their product they should decide which of the four categories they belong to and go to that designated area. Once there, they should discuss their choice with other students who have chosen that category and decide if anyone is in the wrong category. The other students can provide more clues if necessary.
- Once everyone is settled into a category, reveal the students' identities and ask the class to decide if everyone is in the correct category.
- Lastly, refer back to the list of tree products on the chalkboard. Did you identify more tree products than you thought could ever exist? Trees are very valuable resources in many ways.

Activity #3: From Cow To Carton

- Where does milk come from? It doesn't just magically appear at the grocery store. It takes an interesting journey from the cow to the consumer.
- Read the book The Milk Makers by Gail Gibbons. It is a short book that explains the steps that milk must go through before it reaches us. Discuss the process or perhaps illustrate the different steps together on the chalkboard or a poster board.
- Next, ask the students to make sequence stories about the process of milk production from the cow to the carton. You can use a file folder to cut panels up to the fold, number them on the front, and then have the students draw a picture of one of the steps in the sequence underneath each panel. When the panel is lifted up, it reveals the steps of the story in order. This project may require two folders glued together back to back (you can break it down into about six steps). Alternative materials can be used--use whatever supplies you have on hand or works best for you and your students.
- You could also ask them to label each picture or write captions for each picture.
- When finished, ask the students to practice telling their stories to each other in pairs. Then students can present their sequence stories to the class.

Extensions/Variations:

- **Activity #1:** Analyze the school menu for the day or week. Determine which foods are raw foods and which are processed foods. For each processed food, determine its origin.
- **Activity #1:** Photocopy two sets of the food resource graphic cards from the Appendix and use them to play the Memory card game.
- **Activity #1:** Cut large index cards in half and ask students to draw raw food items on one card and food products on the other that relate to each other (ex.= apple on one card and a jar of applesauce on the

other card). Once you have a good variety of cards, play a game with the whole class where each student gets a card, they take turns saying what is on the card, and then the student who has the corresponding card should match up with that student. You can make the game more challenging by throwing in several cards that could have more than one match (apple, apple juice, applesauce; potato, french fries, potato chips).

- **Activity #2:** Collect all of the paper products that you would otherwise throw away, over a period of time. How much paper did you collect and prevent from going into a landfill? Work some math into the activity: Count the papers. Weigh it. Measure how many inches high it is when stacked. Lastly, recycle the paper.
- **Activity #3:** Create a group mural of the steps that it takes to make milk or some other food product.

Evaluation:

Rubric: A Product's Journey



| | | | | |
|----|---|---|---|---|
| 3 | 2 | 1 | 0 | The student can identify an agricultural product based on its origin. |
| 3 | 2 | 1 | 0 | The student can describe at least three agricultural products and tell their origins. |
| 3 | 2 | 1 | 0 | The student can name at least three products that come from trees. |
| 3 | 2 | 1 | 0 | The student can describe the journey of a local agricultural product from production to the consumer. |
| 12 | 8 | 4 | 0 | Total Score: /12 |

Resources:

American Forest Foundation. (2003). Project Learning Tree: Environmental Education PreK-8 Activity Guide. American Forest Foundation: Washington, D.C.

Gibbons, G. (1985). The milk makers. Simon & Schuster: NY.

Project food, land & people. (1998). Project Food, Land & People: Chandler, AZ.

