The Goat in the Rug

Lesson Author
Andrew T. Hill, Ph.D., Federal Reserve Bank of Philadelphia

Standards and Benchmarks (see page 14)

Lesson Description
Students listen to the book *The Goat in the Rug* about a Navajo weaver named Glenmae who uses mohair from her goat, Geraldine, and a number of resources and intermediate goods to make a traditional Navajo rug. The students are placed in groups to learn about productive resources and intermediate goods. The students play a matching game and make posters to classify the natural resources, human resources, capital resources, and intermediate goods used in the story to produce the rug.

Grade Level
2-4

Concepts
Capital resources
Human resources
Intermediate goods
Natural resources
Productive resources

Objectives
Students will
• define productive resources as capital resources, human resources, and natural resources;
• define capital, human, and natural resources;
• define intermediate goods;
• classify the things used in a production process as capital resources, human resources, natural resources, or intermediate goods; and

• explain how productive resources and intermediate goods are used to produce goods and services.

Time Required
60 minutes

Materials

• Visuals 1 and 2
• Handout 1, one copy for each group of up to four students and one for the teacher, printed on white card stock, cut apart, and paper-clipped together
• Handout 2, one for each student
• Poster paper, one sheet for each group and one for the teacher
• Poster markers, one for each group and one for the teacher
• Clear tape or a glue stick for each group
• Paper clips, eight for each group
• Index cards, one for each student

Procedure

1. Introduce the lesson by asking the following questions:
   • Have you ever made something? (Answers will vary.)
   • What did you make? (Answers will vary.)
   • What were some things you needed to make it? (Answers will vary.)

2. Tell the students that in the past you have made lemonade. Ask them what things you would have used to make lemonade. (Lemons, lemon juicer, pitcher, water, spoon, measuring cup, sugar, knife) Write these items on the board. Tell the students these items are called productive resources and intermediate goods.

3. Display Visual 1: Definitions. Tell the students that producers use many different things to make all of the goods and services people consume. Explain that productive resources are the natural resources, human resources, and capital resources used to make goods and services.
4. Explain that natural resources are things that occur naturally in and on the earth that are used to produce goods and services. Refer to the items used in the production of lemonade listed on the board. Ask the students to name the natural resources in the list. (Lemons and water) Explain that there are many different natural resources used by producers to produce different goods and services. Discuss the following:

- What are some examples of natural resources used to produce other goods and services? (Answers will vary but may include land, water, oil, sunshine, and trees.)
- What is the primary natural resource used in producing gasoline? (Oil)
- What are some natural resources used in producing vegetables? (Answers will vary but may include land, sunshine, water, and seeds.)
- What are some natural resources used in producing milk? (Answers will vary but may include cows, land, water, and grass [to feed the cows].)
- What are some natural resources used at school? (Answers will vary but may include land, sunshine, and water.)

5. Explain that human resources are the quantity and quality of human effort directed toward producing goods and services. All of the people who produce the goods and services that people consume are called human resources. Ask the students what human resource was used when you made lemonade. (You were the human resource used in making the lemonade.) Discuss the following:

- What are some examples of human resources used to produce other goods and services? (Answers will vary but may include doctors, barbers, sales clerks, and teachers.)
- What do we call the human resources that bake bread? (Bakers)
- What kind of resources are the farmers who grow vegetables? (Human resources)
- What human resources are used at school? (Answers will vary but may include teachers, custodians, secretaries, and principals.)

6. Explain that capital resources are goods that have been produced and are used to produce other goods and services. They are used over and over again in the production process. Refer to the items used in the production of lemonade listed on the board. Ask the students to name the capital resources in the list. (Lemon juicer, pitcher, spoon, measuring cup, knife) Discuss the following:

- What are some examples of capital resources used to produce other goods and services? (Answers will vary but may include factories, computers, robots, hammers, desks, and chairs.)
- What are some capital resources used in baking a cake? (Answers will vary but may include a mixer, spoon, bowl, baking pans, oven, or cooling racks.)
- What are some capital resources used at school? (Answers will vary but may include school buildings, desks, chairs, rulers, textbooks, or computers.)
7. Explain that **intermediate goods** are man-made goods that are used to produce another good or service, becoming part of that good or service. Refer to the items used in the production of lemonade listed on the board. Ask the students to name the intermediate good in the list. *(Sugar)* Explain that sugar is previously made from sugar beets or sugar cane. Sugar would become part of the lemonade. Therefore, sugar is an intermediate good in the production of lemonade. Discuss the following:

- What are some intermediate goods used to build houses? *(Answers will vary but may include lumber, nails, toilets, sinks, cabinets, or roofing materials.)*
- What are some intermediate goods used to make books? *(Answers will vary but may include paper, ink, or cardboard.)*
- What are some intermediate goods used at school? *(Answers will vary but may include paper, crayons, or pencils.)*

8. Tell the students that you are going to read the book *The Goat in the Rug* by Charles L. Blood and Martin Link. Show them the cover of the book. Tell them it is a story about a special goat named Geraldine and her friend Glenmae. Tell them to listen very carefully to the story so that they can determine all of the things used to make the rug and who is telling the story. Be sure to show the pictures as you read the story.

9. Discuss the following:

- Who is telling the story? *(Geraldine, the goat)*
- How do we know that Geraldine is telling the story? *(The story begins “My name is Geraldine and I live near a place called Window Rock…”)*
- Who is Glenmae? *(Glenmae is Geraldine’s friend. Glenmae is a Navajo weaver.)*
- What are some of the things Glenmae used to produce the rug? *(Glenmae used scissors, mohair from the goat, roots from yucca plants, water, buckets, carding combs, spindles, dye, pots, and a loom.)* As the students list the items Glenmae used to make the rug, write them on the board.

10. Explain to the students that they are going to play a special matching game. Display Visual 2: *How to Play the Matching Game* and review the instructions (which follow). Demonstrate how to play the game until you have found three matches.

- Groups of up to four students can play the game.
- The object of the game is to categorize the things Glenmae used to make the rug into four groups: natural resources, human resources, capital resources, and intermediate goods.
- Shuffle the cards (for your group) and lay them face down in the four-by-six pattern shown. Do not look at the front of the cards yet.
• Group members should take turns trying to find matching cards. A match is found when one card shows something used to make the rug and the other shows its corresponding resource category.

• Play as follows:
  • Turn over two cards to find a match.
  • If a match is found, paper-clip the cards together, set them aside, then take another turn. Keep going until you are no longer able to find a match.
  • If you do not find a match, turn the two cards back over. It is the next person’s turn.
  • Keep taking turns until all of the cards have been matched and paper clipped.

• Tip: As cards are turned over and returned to the face-down position, try to remember where each card is in the pattern because it will help you make a match on your next turn.

11. Divide the students into groups of four or fewer. Instruct the students to push their desks together to create a playing surface. Distribute one deck of cards (created in advance from Handout 1) and eight paper clips to each group of students. Give the students time to play the matching game.
12. After all of the groups have completed the matching game, distribute one sheet of poster paper and a marker to each group. Using your own sheet of poster paper, show the groups how to fold the paper into fourths, unfold the paper, draw a line along each fold, and label the top of each quadrant created. The resulting poster should look like the diagram shown below:

<table>
<thead>
<tr>
<th>Natural Resources</th>
<th>Human Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Resources</td>
<td>Intermediate Goods</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Ask groups to place their game cards in the appropriate quadrant of their poster.

14. Discuss the following:
   - What were the natural resources used in the story to make the rug? (Mohair, yucca plants, water)
   - What were the human resources used in the story to make the rug? (Glenmae)
   - What were the capital resources used in the story to make the rug? (Scissors, carding combs, buckets, spindle, large pots, loom)
   - What were the intermediate goods used in the story to make the rug? (Store-bought dyes and yarn)

15. Have the students correct their card matches based on these discussion questions. Distribute tape or a glue stick to each group. Instruct the groups to take each matched pair of cards and tape or glue the cards to the appropriate quadrant on their poster.
Lesson Plan

The Goat in the Rug

Closure

16. Review the important points of the lesson by asking the following:

- What are productive resources? (*Productive resources are the natural resources, human resources, and capital resources used to make goods and services.*)
- What do we call the “gifts of nature” used to produce goods and services? (*Natural resources*)
- What do we call the quantity and quality of human effort directed toward producing goods and services? (*Human resources*)
- What do we call the goods that have been produced and are used to produce other goods and services and that are used over and over again in the production process? (*Capital resources*)
- What do we call the man-made goods that are used to produce another good or service, becoming part of that good or service? (*Intermediate goods*)
- Why do people use productive resources and intermediate goods? (*People use productive resources and intermediate goods to produce goods and services.*)

17. Tell the students to pretend that they are going to make a turkey and cheese sandwich for a friend. Discuss the following:

- What capital resources will be used to make the turkey and cheese sandwich? (*Answer will vary but may include a knife, cutting board, or kitchen counter.*)
- What human resources will be used to make the turkey and cheese sandwich? (*Students*)
- What natural resources will be used to make the turkey and cheese sandwich? (*Answers will vary but may include land or sunlight through a window.*)
- What intermediate goods will be used to make the turkey and cheese sandwich? (*Answers will vary but may include bread, turkey, cheese, and mustard.*)

Assessment

18. Distribute an index card to each student. On the board, write the following list of items and ask the students to write a sentence on the front of their index card explaining what they would produce from the items:

- Flour, eggs, water, sugar, shortening, mixer, oven, mixing bowl, spoon, baking pan, measuring cups, you

After the students have completed their sentences, ask them to turn their card over and categorize each of the items from the list as a natural resource, a human resource, a capital resource, or an intermediate good. (*Answers will vary, but it is likely that students will identify a baked good of some type as the item they could produce from the items on the list. Natural resources: water and eggs. Human resources: the student.*)
Lesson Plan

The Goat in the Rug


19. Distribute a copy of Handout 2: Assessment to each student. Ask the students to read the directions and complete the handout.

Handout 2: Assessment—Answer Key

1. Natural
2. Human
3. Capital
4. Intermediate
5. Productive

Natural resources: sunshine, land under the house
Human resources: Eva
Capital resources: knitting needles, pattern, chair, house
Intermediate goods: yarn

20. As homework, instruct students to use the reverse side of Handout 2 to write a story about making a family dinner (instructions are on the bottom of the handout). Students should label each input as a natural, human, or capital resource or an intermediate good. They may ask an adult for help. Allow students to present their stories to the class.
Visual 1: Definitions

**Productive resources**: The natural resources, human resources, and capital resources used to make goods and services.

**Natural resources**: Things that occur naturally in and on the earth that are used to produce goods and services.

**Human resources**: The quantity and quality of human effort directed toward producing goods and services.

**Capital resources**: Goods that have been produced and are used to produce other goods and services. They are used over and over again in the production process.

**Intermediate goods**: Man-made goods that are used to produce another good or service, becoming part of that good or service.
Visual 2: How to Play the Matching Game

- Groups of up to four students can play the game.
- The object of the game is to categorize the things Glenmae used to make the rug into four groups: natural resources, human resources, capital resources, and intermediate goods.
- Shuffle the cards (for your group) and lay them face down in the four-by-six-pattern shown below. Do not look at the front of the cards yet.

```
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

- Group members should take turns trying to find matching cards. A match is found when one card shows something used to make the rug and the other shows its corresponding resource category.
- Play as follows:
  - Turn over two cards to find a match.
  - If a match is found, paper-clip the cards together, set them aside, then take another turn. Keep going until you are no longer able to find a match.
  - If you do not find a match, turn the two cards back over. It is the next person’s turn.
  - Keep taking turns until all of the cards have been matched and paper-clipped.
  - Tip: As cards are turned over and returned to the face down position, try to remember where each card is in the pattern because it will help you make a match on your next turn.
### Handout 1: Matching Game Cards (page 1 of 2)

<table>
<thead>
<tr>
<th>Glenmae</th>
<th>Scissors</th>
<th>Carding combs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store-bought</td>
<td>Mohair</td>
<td>Yucca plants</td>
</tr>
<tr>
<td>dyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Buckets</td>
<td>Spindle</td>
</tr>
<tr>
<td>Large pots</td>
<td>Loom</td>
<td>Yarn</td>
</tr>
</tbody>
</table>
### Handout 1: Matching Game Cards (page 2 of 2)

<table>
<thead>
<tr>
<th>Human resource</th>
<th>Capital resource</th>
<th>Capital resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate good</td>
<td>Natural resource</td>
<td>Natural resource</td>
</tr>
<tr>
<td>Natural resource</td>
<td>Capital resource</td>
<td>Capital resource</td>
</tr>
<tr>
<td>Capital resource</td>
<td>Capital resource</td>
<td>Intermediate good</td>
</tr>
</tbody>
</table>
Handout 2: Assessment

Name ________________________________________

Directions: Complete the sentences by filling in the correct answer in each blank in questions 1 to 5.

1. _______________ resources are things that occur naturally in and on the earth and are used to produce good and services.

2. _______________ resources are the quantity and quality of human effort directed toward producing goods and services.

3. _______________ resources are the goods that have been produced and are used to produce other goods and services. They are used over and over again in the production process.

4. _______________ goods are man-made goods that are used to produce another good or service, becoming part of that good or service.

5. _______________ resources are the natural resources, human resources, and capital resources used to make goods and services.

Directions: Read the story in the box below and identify the natural resources, human resources, capital resources, and intermediate goods in the spaces provided.

Eva decided to knit a new sweater. She went to the craft store and bought some yarn, knitting needs, and a pattern. When Eva returned home, she sat in her favorite chair by the window in the sunshine and knit the sweater according to the pattern.

Use the reverse side of this paper to write a story about making a family dinner. When your story is complete, go back to each input and label it using N for natural resource, H for human resource, C for capital resource, and I for intermediate good. You may ask an adult for help.
Standards and Benchmarks

National Standards in Economics

Standard 1: Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- Benchmark 6, Grade 4: Productive resources are the natural resources, human resources, and capital goods available to make goods and services.
- Benchmark 7, Grade 4: Natural resources, such as land, are “gifts of nature;” they are present without human intervention.
- Benchmark 9, Grade 4: Capital goods are goods that are produced and used to make other goods and services.
- Benchmark 10, Grade 4: Human capital refers to the quality of labor resources, which can be improved through investments in education, training, and health.

Common Core State Standards, English Language Arts

Reading: Literature, Grades 2-4

- Key Ideas and Details
  RL.2.1, RL.3.1, RL.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- Integration of Knowledge and Ideas
  RL.4.7: Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

Writing, Grades 2 and 4

- Research to Build and Present Knowledge
  W.4.7: Conduct short research projects that build knowledge through investigation of different aspects of a topic.
  W.2.8: Recall information from experiences or gather information from provided sources to answer a question.

Speaking and Listening, Grades 3-4

- Presentation of Knowledge and Ideas
  SL.3.4, SL.4.4: Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.