



POWELL CENTER FOR
ECONOMIC LITERACY

Lesson Plan

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The Goat in the Rug

Time Required

Four class periods

Grade Level and Subject

Elementary; Social Studies, Reading, Math

Keystone Principles

Principle #8 - The quantity and quality of resources impact living standards

Voluntary National Content Standards in Economics

Standard #13 – [Role of Resources in Determining Income](#)

Standard #15 - [Growth](#)

Economic Concepts

Capital Resources- *Money of other goods and services used to further production.*

Choice – *The selection of one alternative among others.*

Consumer - *A person who purchases or buys goods and services.*

Consumption - *Spending by households on goods and services. The process of buying and using goods and services.*

Entrepreneur - *A person who assumes the risk of business and uncertainty of the future, to produce goods and services with the expectations of profit.*

Goods/services – *Goods are items produced by firms to be sold to other consumers, other firms, or government. Services are productive activities that are instantaneously consumed.*

Human resources - *The health, education, experience, training, skills and values of people. Also known as human capital.*

Interdependence - *The relationship between participants in the marketplace that entails an exchange of benefits between producers and consumers.*

Natural Resources - *"Gifts of nature" that can be used to produce goods and services; for*

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example, oceans, air, mineral deposits, virgin forests and actual fields of land. When investments are made to improve fields of land or other natural resources, those resources become, in part, capital resources. Also known as land.

Producer - *An individual or firm engaged in the process of creating goods and/or services to be offered for sale to consumers.*

Production - *The act, process or result of manufacturing or refining something.*

Productivity - *The ratio of a specific measure of output to a specific measure of inputs, such as output per hour of labor.*

Scarcity - *The condition that occurs because people's wants and needs are unlimited, while the resources needed to produce goods and services to meet these wants and needs are limited.*

Specialization - *A situation in which people produce a narrower range of goods and services than they consume. Specialization increases productivity; it also requires trade and increases interdependence.*

Trade - *The voluntary exchange of goods and services between individuals and firms located in different countries.*

Overview

This lesson was developed using *The Goat in the Rug*, by Charles L. Blood and Martin Link, with illustrations by Nancy Winslow Parker (Aladdin Books: New York, 1990 edition). The story is told by a goat named Geraldine who lives on a Navajo reservation with Glenmae, a Navajo weaver. Glenmae decides to make a rug, using wool taken from Geraldine. The story explains the steps Glenmae follows in order to make her rug. Geraldine explains how she gets into trouble because she does not understand what Glenmae is doing. Economic concepts of **scarcity**, **production**, **specialization**, **consumption**, and **natural, capital, and human resources** can be taught using this story and lesson.

Although this lesson is written for elementary school students, it could easily be adapted for older students. By omitting the book referenced in the lesson, it could be incorporated into the social studies curriculum as a lesson about the Industrial Revolution and the effects of specialization, or it could be used in any discussion of early or undeveloped cultures to demonstrate the lower productivity of an artisan society.

Objectives

- Students explain how Glenmae used natural resources and capital resources to make a product.
- Students explain the relationship between the physical setting of Window Rock, Arizona, and its ability to satisfy the wants and needs of its people.
- Students explain that when products are made by artisans, the items are one of a kind.
- Students simulate ways of increasing productivity through specialization on an assembly line.

Materials and Handouts

- Book: *The Goat in the Rug* (see overview)
- 7 sheets of construction paper (in various colors) for each student
- Scissors and rulers for the assembly line activity
- **Handout 1:** Assembly Line Place Mats (appended)
- **Handout 2:** Who Produces More (appended)

Teaching Activity

Explain to students that today you are going to read a book called *The Goat in the Rug*. The story is about a Native American weaver who combines her human resources with natural and capital resources to weave a rug. Define and explain the **Natural, Capital and Human Resources** terms shown under the **Economic Concepts** heading.

- Ask the students to name natural resources used to make items in their classroom—for example, trees for wooden items, sand for glass items, and perhaps aluminum, iron ore, petroleum, etc.
- Ask the students to name capital resources found in the classroom—for example, scissors, pencils, books, desks, clock, book bags, computers, etc. (Items that students or teachers use in order to perform a task or service.)
- Ask the students to name human resources needed in the school—for example teachers, principal, cafeteria workers, secretaries, building engineers, etc.
- Explain to the students that this story takes place on an Indian reservation near a place called Window Rock, Arizona.
- Ask a student to locate Arizona on a U.S. map.
- Explain that an Indian reservation is land the government has set aside for the Native Americans to live on and maintain their tribal way of life.
- Tell the students that, in the story, Glenmae uses many natural and capital resources from the Window Rock region to make a rug.
- Read and discuss the story with the students.

Artisan Activity

Explain to the students that Glenmae was an artisan. Define an artisan as a skilled worker who makes a product from start to finish by themselves. Explain that artisan's items are one of a kind, and they often take a long time to produce. Thus, artisans produce relatively few items. Tell the students that they are going to become artisans.

- Give each student an 8" x 10" sheet of construction paper and instruct the students to watch as you demonstrate the steps they are going to use to weave a paper place mat. Demonstrate how to fold the paper in half lengthwise. Start about one inch from the top of the paper and tear a line from the fold line to a point about one inch from the edge of the paper. Make several tear lines about one inch apart. Stop one inch from the bottom of the paper.
- Instruct the students to fold their paper in half lengthwise and to make about seven tear lines.

- Give each student another 8" x 10" sheet of construction paper in a different color than the first piece. Demonstrate how to tear six strips of paper about one inch wide in a lengthwise direction.
- Instruct the students to watch as you demonstrate how to weave the strips of paper in and out of the first piece. Continue until the place mat is completed. Allow the students time to complete their place mats. Record the average amount of time students needed to finish.
- Ask students to explain why they would be called artisans, and why Glenmae was an artisan.

Assembly Line Activity

Explain to the students that in the early days most items people needed for everyday life were made by artisans, but during the Industrial Revolution the idea of an assembly line took hold. Ask if anyone can define the term. Explain that, on an assembly line, each worker does one part of a job and everyone cooperates to make a product. Explain how the use of capital resources (scissors, rulers) enables workers to produce both a larger quantity and a better, more uniform quality.

Divide students into groups of six and give each group 18 pieces of 8" x 10" construction paper of various colors; also give each group three pairs of scissors and two rulers.

Instruct the students to watch as you demonstrate how to make a place mat using tools.

1. Fold one sheet of construction paper in half lengthwise.
 2. Place the ruler on the fold line; use a pencil to make one-inch marks down the paper.
 3. From the edge of the paper, measure over one inch and draw a line down the paper one inch from the edge. This line will show where to stop cutting. Cut on the lines.
 4. Take another sheet of construction paper and draw lines at one-inch intervals lengthwise down the paper.
 5. Cut the paper on these lines.
 6. Weave the strips in and out of the other piece of construction paper.
 7. Show the students the finished product.
- Tell the students that they are now workers in a factory that produces place mats.
 - Explain that the materials on the desks are their resources and only these resources can be used to make the product.
 - Tell the students to decide among themselves who will do each job. For example, two people can do folding and measuring, two cutting, and two weaving. Allow five minutes for practice after the groups have assigned jobs.
 - Instruct the students to begin their production. Allow 15 minutes for them to make as many place mats as possible. Say that you are looking for quality work.

- Ask each group to count how many place mats they successfully completed.
- Record the information on the chalkboard. Debrief (using handouts 1 and 2).
- Use this information to explain to the students that, by using their economic resources in a different way (an assembly line), they are able to increase overall production.
- In what ways is an assembly line beneficial? *Job creation, additional money available to buy other things.*
- What is the cost to Glenmae or any artisan of substituting an assembly line for their individual work? *They would no longer create the whole produce by themselves. There could be a loss of artistic control.*

Handout 1

Assembly Line Place Mats

Name

Date

Work with your group and answer the following questions in complete sentences.

1. Explain how your group was able to produce the number of place mats it produced.

2. If another group or groups produced more place mats than your group, why did this happen?

3. Explain how using an assembly line is one way in which businesses increase the number of products they make.

4. Identify the capital resources that were used to make your product.

5. How did having more capital resources affect your work?

6. Explain why workers in the factory are also called human resources

7. Name a product that is made by an artisan today.

8. Name a product that is produced on an assembly line today.

Handout 2 Who Produces More?

Name _____

Date _____

Artisans

1 artisan can make 1 place mat in _____ minutes.

Therefore, 1 artisan can make _____ place mats in 15 minutes

Example: If 1 artisan can make 1 place mat in 10 minutes, then
1 artisan can make $15/10 = 1\frac{1}{2}$ place mats in 15 minutes.

How many place mats can 6 artisans make in 15 minutes? _____

Example: If 1 artisan can make $1\frac{1}{2}$ place mats in 15 minutes, then
6 artisans can make $6 \times 1\frac{1}{2} = 9$ place mats in 15 minutes.

Assembly Line

6 assembly line workers can make _____ place mats in 15 minutes.

Which group made more place mats in 15 minutes: 6 artisans or 6 assembly-line workers?
Explain why.
