



POWELL CENTER FOR  
ECONOMIC LITERACY

## *Lesson Plan*

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### **Ergs & Utils: An Exercise in Specialization & Productivity**

#### **Time Required**

One class period

#### **Grade Level and Subject**

K-5; social studies

#### **Keystone Principles**

Principle #6 – Do what you do best, trade for the rest.

Principle #8 – Quantity and quality of available resources impact living standards.

#### **Voluntary National Content Standards in Economics**

Standard #6 – [Specialization and Trade](#)

#### **Economic Concepts**

**Division of Labor** – This is the dividing a productive process into a series of small steps with the end of promoting efficiency. Efficiency comes, in part, as a result of specialization by the workers, but also by the size of the market to be served.

**Factors of Production** – The basic ingredients of economic activity: capital resources, human resources, natural resources and entrepreneurship.

**Gains from Trade** – These are the benefits that accrue to individuals, firms or nations as a result of trading. The gains from trade are generally seen to be the additional products, services or income which results from trading with another party.

**Production** – The process of combining various resources in a way that will satisfy

wants.

**Productive Resources** – The resources need to produce a good or service – capital resources, human resources, natural resources and entrepreneurship.

**Specialization** – Devoting all or almost all of one’s resources to a specific good, service, or part of the production process in order to gain efficiency.

## Overview

Students will use productive resources (capital, human, and natural) to produce products. They will then apply specialization and the division of labor to the same resources and repeat the process, experiencing the gains in productivity.

## Objectives

Students will learn that specialization and the division of labor raise the productivity of resources. Students will realize that increased productivity means more goods and services for consumers. Students will realize that trade can enhance the ability to specialize and increase productivity.

## Materials and Handouts

- 1 pair of (safety) scissors for every student.
- 1 roll of Scotch® tape for every student.
- Handout 1: 1 “Erg” (pyramid) model for every student, and 1 “erg” model for every four students.
- Handout 2: 1 “Util” (cube) model for every student, and 1 “util” model for every four students.
- 20 sheets of recycled or scrap paper or construction paper, 8 ½” x 11” per student. 10 sheets per student for each round.
- Stopwatch, timer, or classroom clock.

## Teaching Activity

Explain to students that production takes a combination of resources (natural, human, capital, and entrepreneurship). Tell them that the ability to produce goods depends on how resources are used.

1. Show students the materials that are used to make “ergs” (pyramids) and “utils” (cubes).
2. Explain that natural resources are things that come from nature. Since paper comes from trees, we can consider this a “natural resource”.
3. Explain that capital resources are tools and ideas that help us produce goods. In this activity, scissors, tape, and the models (designs) for producing ergs and utils are capital resources.
4. Explain that human resources are any work by people that is involved in producing a good or service. In this activity, the students will be the human

- resources.
5. Explain how entrepreneurship is the combining of other resources in a “special way” to produce goods and services. In this activity, entrepreneurship may come from many places.

**First round:** Give each student one pair of scissors, one roll of tape, one erg model, one util model, and 10 sheets of paper. Tell them that when you say “Begin”, they are to try to make as many ergs and utils as they can in 7 minutes. (They can decide on the mix of products on their own – equal numbers of ergs and utils, one erg and the rest utils, etc.) They are to do this without communicating with other students. The person that produces the most COMPLETE ergs and utils in the amount of time can be given “extra credit” or some other reward such as classroom currency if you run a model economy.

Begin first round.

After six minutes, let students know they have one more minute. At the end of the allotted time, see who produced the most COMPLETE ergs and utils.

**Second round:** Put the students in groups of four. Each group should be given one pair of scissors, one roll of tape, one erg model, one util model, and the remaining 10 sheets of paper per student. Tell the students they will have one minute to discuss in their group how they want to produce the ergs and utils. They will then have seven minutes to produce as many COMPLETE ergs and utils as they can. The team that produces the most COMPLETE ergs and utils will be declared the winners. (Again, the mix does not matter.)

Begin one minute discussion.

Begin second round.

After six minutes, let students know they have one more minute. At the end of the allotted time, see which team produced the most COMPLETE ergs and utils.

After determining the “winners”, ask students the following questions:

1. Did the group produce more or less than they did as individuals? How much more or less? (There should be more and there should be significantly more, even if they combine their individual output)
2. Did they have more or less of each resource than when they worked as individuals? (They had more human resources – four people; they had the same amount of natural resources – 10 sheets of paper per person; they had fewer capital resources – one of each model instead of four, one pair of scissors instead of four, one roll of tape instead of four).
3. Why do they think they produced more or less? Were they more productive

- (output) than before? (By dividing the labor and specializing, each person was able to do something again and again and get better at it. They were more productive.)
4. Did any of the teams come up with “new ways” to do things? (Some will have cut many sheets at once, some may discover that they can cut two items out of a single piece of paper by arranging it differently, reducing waste.)

**Round Three (optional):**

(This will require additional paper.)

Ask students if all countries have the same resources. (No)

Allow students to form their own groups irrespective of size. (Don't worry if you end up with an exceptionally small group or even a student who is alone.)

Tell students you will divide the capital and natural resources. After the resources are divided, they will have one minute to organize production and seven minutes to produce ergs and utils.

Divide the remaining resources UNEQUALLY. Give one group just a couple sheets of paper; give another group a lot of paper. Give medium size groups a moderate amount of paper. Let one group have all the scissors, etc.

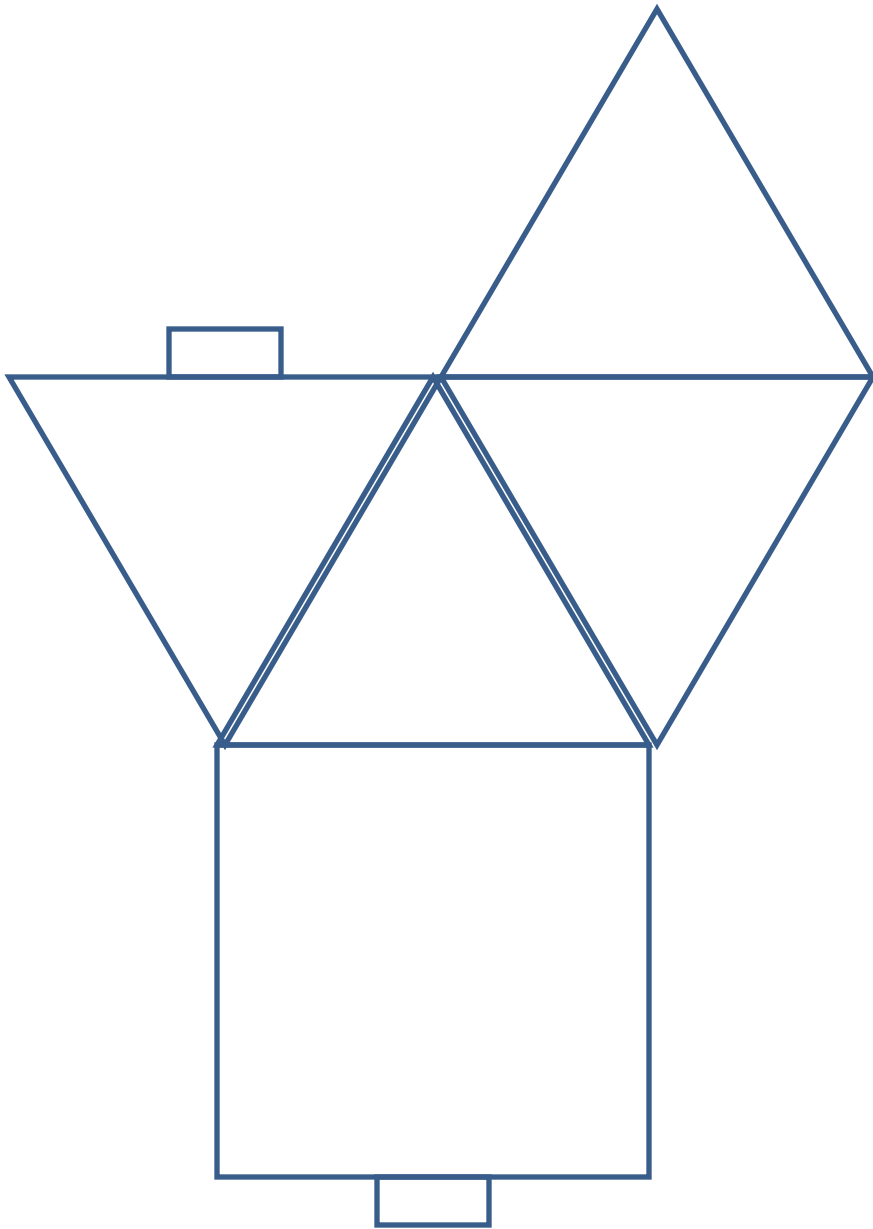
At this point you will begin hearing complaints. Ask students how they may wish to balance the resources to produce the goods. (They should trade.) Allow students to trade resources (Scissors for paper, workers for tape, etc.). It is even allowable for someone to trade resources for finished goods.

Complete round three as in previous rounds.

Ask students the following questions:

1. How much would their countries have been able to produce without trade? (Probably not very much.)
2. How does trade increase productivity and output? Did it make everyone better off? (By getting resources to groups that can use them, production increases. Failure to trade can hurt the total output.)

# Erg



# Util

