

UNIT 1

Economic Survival: Resources, Production, and Scarcity

Teaching Instructions





Teaching Instructions — Unit 1

Economic Survival: Resources, Production, and Scarcity

Teaching Objectives

Students will:

Define productive resources and will identify the productive resources used to produce certain goods and services.

Define scarcity and explain why productive resources are scarce.

Understand that some productive resources are more scarce than others and that this is reflected in the prices of the resources.

Define opportunity cost and explain why every decision has an opportunity cost.

Use features on a map to identify how people work and earn income in a community.

Teaching the Economic Concepts

It is very important that students understand the basic concepts introduced in this unit. While the concepts are not extremely difficult or complex, they can still give students some difficulty. Here are some key points to emphasize:

1. **Natural Resource** — A natural resource is a gift of nature that is used to produce a good or service. Students often have difficulty differentiating a natural resource from a capital resource. You should consider a natural resource as a raw material that has not been processed or altered by humans. Some examples would be the iron ore in the ground, sunshine, water in a stream, or trees. Once a natural resource *has* been processed or altered by humans, economists, for accounting purposes, consider it a capital resource. Thus, the cut lumber used to produce a desk is officially classified as a capital resource. Students may enjoy a discussion of when a natural resource has been altered enough to be considered a capital resource.
2. **Scarcity** — Students have difficulty believing that scarcity exists in affluent societies where there seems to be an abundance of goods and services. However, even in affluent societies, people still want more goods and services.

Scarcity exists in any society or situation where there is an imbalance between relatively unlimited wants and the limited resources available to satisfy those wants. It is quite difficult to think of things that are not scarce. Some examples might include sand and water at the beach or the air you are breathing at this moment. But even air is scarce to a scuba diver or astronaut, and certainly, clean air is scarce to the inhabitants of large cities. In fact, even the air you are breathing right now is scarce if it is heated or cooled. It takes limited resources to install heating or air conditioning.

3. **Opportunity Cost** — It is very common for students to think that opportunity cost is the *sum* of all possible alternative choices. This is not true, of course. Because of scarcity, all of the possible alternatives cannot be chosen. Only the best alternative that is *not* chosen when making a decision is the opportunity cost.
4. **Using Map Features To Identify How People Work and Earn Income in a Community** — Before giving students the IP, you should explain how geographic features influence economic activity in a community.

Analyze a community map and discuss some of the obvious relationships. For example, factories usually are located near major transportation routes or near natural resources used in production. Homes may not be located immediately around factories due to aesthetic reasons; however, poorer housing sometimes is located there. Farmland usually is located on flat, fertile land near rivers or in valleys. Hilly land is used for forests, for grazing, or is left unused. Hospitals, shopping districts, and schools are located in cities and towns where they are more readily accessible. Discuss other examples. Let students give their ideas and make inferences.

Teaching Suggestions

1. It is often helpful to read the Basic Instruction (BI) as a class, with guided questions posed by the teachers. It is important that students gain a basic understanding of the fundamental economic concepts presented in Unit 1.
2. Students will very much enjoy the Individual Project (IP) of creating a map. Be sure that students answer carefully the Questions for Individual Project worksheet that is part of the IP. Encourage your students to take their time and create colorful, accurate maps. Make sure you save some of the better ones to show students in following years. Keep the bar high!

Required Materials

A transparency showing a large scale map of a community or town would be helpful. Better yet, go to web sites showing real satellite images, such as the Google Earth or Google Maps websites (www.earth.google.com and www.googlemaps.com) or www.teraserver.com.

Another obvious need for this unit and other teaching units is paper. If paper and photocopying capabilities are limited, you may have to do more oral instruction and omit photocopying parts of the teaching unit, especially the BI. To save paper, collect and reuse certain parts of this and subsequent units, such as the BI and GA instructions.

Extending the Unit

EconEdLink. This web site contains an amazing array of excellent lessons for K-12 students. A site not to be missed! See www.EconEdLink.org.

KidsEcon Posters (KEP). These colorful 12" X 18" posters highlight 22 separate economic concepts. Also available are KEP Bingo and KEP Activity Cards. The KEP website has "Literature Connection" links to lessons on specific children's books that teachers (especially elementary) can use to teach economic concepts. Middle and high school teachers will be interested in the set of five *Financial Literacy Posters*. All posters are available from the Indiana Council for Economic Education. See www.kidseconposters.com.

Lesson 1, "The Path Not Taken," from *Focus: Middle School Economics*. Students analyze the opportunity costs incurred by entrepreneur Madame C.J. Walker. Available from the National Council on Economic Education, www.ncee.net.

Lesson 2, "Resources for the Voyage," *The Voyages of Columbus: An Economic Enterprise*. Students learn all about the productive resources necessary for Columbus to explore the New World. Available from the Center for Entrepreneurship and Economic Education, University of Missouri-St. Louis. See www.umsl.edu/~econed.

Lesson 1, What Are Productive Resources?, *Middle School World Geography: Focus on Economics*. This publication is filled with lessons that blend the disciplines of geography and economics. Available from the National Council on Economic Education, www.ncee.net.

Part 1, "Study About Trading Partnerships" in *The International News Journal* contains many fine lessons and teaching activities on productive resources, specialization, and trade. These lessons are excellent for middle school students. Available from the National Council for Economic Education, www.ncee.net.

Play Dough Economics. This popular curriculum publication provides 14 lessons in which students use play dough to learn economics. Available from the National Council on Economic Education, www.ncee.net.

6 Core Economic Principles Poster. The **6 Core Economic Principles** represent six powerful ideas that explain the economic behavior of people. Students discover new insights as they apply these principles to the choices people make in the study of: civics, economics, geography, government, and history. The posters mirror the Handy Dandy Guide, used in several publications of the National Council on Economic Education. Posters are available at www.kidseconposters.com.

Virtual Economics 3.0: This CD is a treasure chest of lessons covering all the important economic concepts. Lessons are correlated to each state's economic standards. Available from the National Council on Economic Education, www.ncee.net.

Answers to Questions in Unit 1



Answers to Questions To Master Worksheet

1. Natural Resources — the land itself where the factory is located; wood; iron; water and air used in production; energy sources, such as coal, oil, or natural gas.

Human Resources — workers who cut trees or mine iron ore, workers on the assembly line, truck drivers to transport materials, managers to run the factory, etc.

Capital Resources — buildings, machines in the factory, trucks, equipment, tools, desks and computers in the office, etc.
2. Productive resources are scarce because, at a zero price, there are not enough to satisfy everyone's wants for them. This is one main reason why prices exist — to allocate these resources to individuals.
3. Possible answers: a computer is more scarce than a pen; oil is more scarce than water; a skilled worker is more scarce than an unskilled worker.
4. Price is the primary clue. The more scarce a productive resource is, the higher its price. For example, it costs more to buy a computer than it does to buy a pen. Skilled labor commands a higher wage than unskilled labor. Oil has a higher price than water.
5. If Mrs. Rodman decides to open the computer store, her opportunity cost is the money and satisfaction she forgoes by *not* starting a pizza restaurant. The pizza restaurant was her *best alternative*, i.e., what she gave up.
6. See diagram in Unit 1 — Basic Instruction.



Answers to Group Activity Response Sheet

The eight items listed by each group will vary.

- A. The group wants to take many different items on the expedition, but *space* is limited. There is a scarcity of space.
- B. Scarcity forces us to make *choices*.
- C. Answers will vary.
- D. The ninth item is the opportunity cost because it is what is *not* taken as a result of choosing the eighth item. Even though there are other items to take, it is the ninth, or the *next* item that would be chosen, which is the opportunity cost. The opportunity cost is *not* the sum of all remaining items.



Answers to Individual Project

1. Answers will vary. Examples include water, land, trees, minerals, and air.
2. Answers will vary. Examples include all buildings, docks, mines, wells, water towers, and railroads.
3. Examples of production could include factories, farms, mines, fishing boats, and cattle ranches.
4. The opportunity cost of using some land for producing a particular good or service is the highest valued item that is now *not* produced. For example, a farmer who uses his land to grow wheat gives up the income he could gain by using the land to grow corn. A person who uses land for a factory gives up the opportunity to use the land for farming or for some other use. Producers must make choices in how to use all of their productive resources, including land. These choices will always entail opportunity costs.

5. The presence of factories, complex farm holdings, highways, etc., indicates that highly skilled, and therefore, highly productive labor resources are present in the economy. These kinds of skills typically require high levels of education and/or training.
6. There are many examples. If a town is located next to a lake or sea, the inhabitants might engage in fishing. If there is a natural harbor, shipping and commerce would be common. If flat, rich land is abundant, farming would be prevalent. If the land is hilly, cattle and sheep might be raised. If there are abundant minerals, inhabitants would be engaged in mining.



Answers to Test on Unit 1 Concepts

1. Natural Resources: iron, oil, minerals, land, water, etc.

Human Resources: workers who mine iron and mineral ores, assembly-line workers, truck drivers, maintenance persons, accountants, secretaries, etc.

Capital Resources: all the necessary equipment, tools, machines, and buildings.
2. A resource or good is scarce if there is not enough to satisfy all the wants for it at a zero price. Because of scarcity, prices are necessary to allocate resources and goods.
3. Gold is more scarce than water. A brain surgeon is more scarce than a teacher. A tractor is more scarce than a shovel.
4. Price. A productive resource that has a low price (hammer) is less scarce than one that has a higher price (drill press).
5. His opportunity cost is the benefits he gives up by *not* growing corn. Every economic decision has an opportunity cost.
6. See production diagram in Basic Instruction.

UNIT 1

Economic Survival: Resources, Production, and Scarcity

Student Handouts





Trading Around the World

Introducing Economics into the Middle School Curriculum

STUDENTS: As you study the history and geography of different countries of the world, you will have the opportunity to learn about the subject of economics. This is an important subject that affects you in many ways. It also affects people living in countries everywhere. Understanding basic economics will help you understand the history and cultures of the many countries you will study this year.

HOW YOU WILL LEARN ECONOMICS: Your teacher will distribute several economic units during the year for you to complete. Each unit has three parts. The first part is called the **Basic Instruction**, or **BI**. By studying this part, you will learn basic economic concepts.

The second part of each economics unit is the **Group Activity**, or **GA**. The GA will give you practice applying concepts introduced in the BI. Your teacher will divide you into several groups. You must complete the activity or activities as a group. Your group will receive a Pass or Not Pass grade.

The last part of each economics unit is the **Individual Project**, or **IP**. You will be given an assignment that you must complete. You probably will receive a grade on the project, so *do your best work*.

After you have completed the three parts of the economics unit, your teacher will give you a Mastery Test covering all the concepts you have learned.





Basic Instruction (BI)—Unit 1

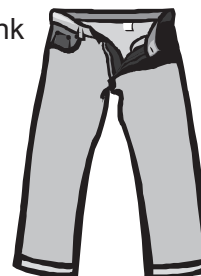
Economic Survival: Resources, Production, and Scarcity

Have you ever entered a large store such as Wal-Mart and marveled at the thousands of things you can buy? Where did all of the products on the shelves come from? How did they get there? Why are there certain kinds of products and not others? Who decides what price to charge? One thing is certain — the products don't appear by accident. They have to be produced, and then they have to be delivered to the store for you to buy. The subject of economics will help you understand how all of this takes place.

Productive Resources: What We Need to Produce Goods and Services

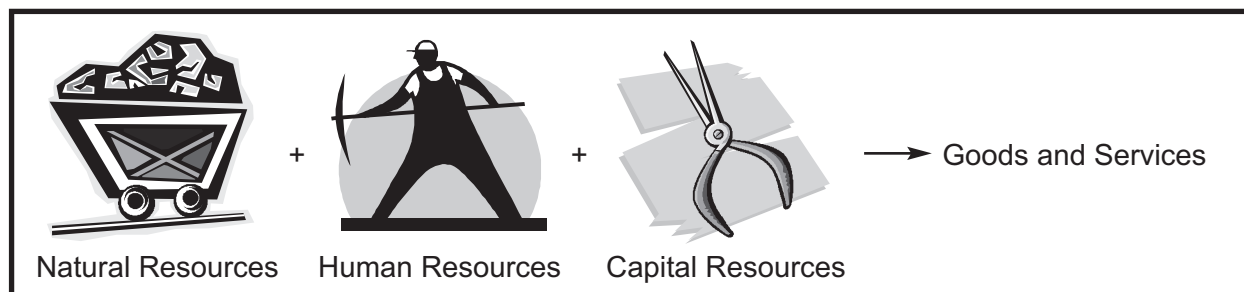
What does it take to produce a product, such as a pair of jeans? Well, economists will tell you that it takes resources, **productive resources** to be exact. That's a mouthful, but it's really not that difficult. There are three basic productive resources: natural resources, human resources, and capital resources. **Natural resources** are things such as minerals, water, trees, and land itself. Several types of natural resources are used to make a pair of jeans. It takes land to grow cotton. It takes minerals to produce the metal for the zipper and buttons. Can you identify any other natural resources needed to produce bluejeans?

Human resources, or **labor**, refers to the human effort used in production. Think of all the kinds of human resources it takes to make a pair of jeans! Farmers, truck drivers, factory workers, secretaries, and many others are all important in the production process.



Capital resources refer to the buildings, machines, tools, and equipment used in production. It takes an incredible amount and variety of capital to make a pair of jeans. In fact, it would be impossible to make bluejeans without using some kinds of capital. What kinds of capital would you need?

THE PRODUCTION PROCESS



Many economists also list a fourth basic productive resource — **entrepreneurship**. This refers to the skill, foresight, and determination it takes to start a business and produce a product. Entrepreneurs purchase natural, human, and capital resources and use them to produce goods and services. The entrepreneur hopes that many consumers will buy the goods and services so that he or she can make a profit. Entrepreneurs are the “risk takers” in the production process.

Scarcity: There's No Such Thing as a Free Lunch (or a Free Pair of Jeans!)

When you go shopping, why does it take money to get a pair of jeans? In fact, why does it take money to get just about anything? The reason is that the productive resources used to produce goods and services, including jeans, are *limited*, but human wants for goods and services are virtually *unlimited*. This creates the condition that economists call **scarcity**. *A good, service, or productive resource is scarce if there is not enough to satisfy all that people want — at a zero price.*

For example, how long do you think jeans would remain on the clothing racks at a department store if they were free? Right! Not very long! What about hammers, if they were free? Right again! Not very long! Everyone would rush to get them. At a zero price there would not be enough for everyone to have all that they want. Bluejeans and hammers are scarce. Can you think of anything that is *not* scarce?

Because jeans and hammers are scarce, people are willing to pay to get them. It's a good thing, too. The money that people pay for the jeans is what motivates the entrepreneur to produce them. After all, the entrepreneur could produce other things with his or her productive resources, such as tennis shoes, pizza, or maybe tents for camping.

Opportunity Cost: Every Choice Has One!

Economists use another fancy term you need to know — **opportunity cost**. When you make a decision, your opportunity cost is the value of your best alternative. For a producer, the opportunity cost of producing a particular good or service is what is given up by *not* producing the best alternative.

Suppose that an entrepreneur named Mr. Jones believes that bluejeans and tennis shoes are two products that consumers really want to buy. However, because the productive resources needed to produce bluejeans and tennis shoes are limited, Mr. Jones cannot produce both. If he produces tennis shoes he cannot produce bluejeans. The bluejeans would be his opportunity cost. If he decides to produce bluejeans, then he cannot produce tennis shoes. The tennis shoes would be his opportunity cost. It's important to realize that there is an opportunity cost to every producer's decision.



More or Less Scarce: Why Tiger Woods is a Millionaire

One more point and then you can get busy and answer the questions. Even though all productive resources are scarce, some are more scarce than others. This is pretty much common sense. Oil is more scarce than sand. A doctor is more scarce than a factory worker. A tractor is more scarce than a hammer. As you might guess, the more scarce something is, the higher its price. A productive resource that is very scarce has a higher price than one that is not very scarce. This is why Tiger Woods gets paid so much for his work as a golfer. His talent is very scarce indeed!

Well, that's enough for now. Here are the key points to remember:



KEY POINTS TO REMEMBER

1. All countries have limited **productive resources** — natural, human, and capital. Because human wants for these resources exceed their availability, we say that these resources are **scarce**. Some resources are more scarce than others. The more scarce the resource, the higher its **price**.
2. All countries use scarce productive resources to produce **goods** and **services**.
3. There is always an **opportunity cost** when people use productive resources. The opportunity cost is the best alternative use for those resources.





KEY TERMS TO REMEMBER

Capital Resources — Capital resources are special goods, such as equipment, machines, and buildings, that are used to produce other goods and services.

Economics — Economics is the study of how people choose to use scarce resources (natural, human, and capital) to produce and distribute goods and services. Economists are people that study economics.

Entrepreneur — Entrepreneurs are the people who organize the productive resources in order to start or expand a business. Profit provides an incentive for entrepreneurs to take calculated risks.

Human Resources (Labor) — Human resources are the people who work to produce goods and services.

Natural Resources (Land) — Natural resources are the “gifts of nature” used to produce goods and services. They are present without human intervention.

Opportunity Cost — The opportunity cost of a choice is the value of the best alternative given up. It is the most valuable alternative that you don’t choose when you make a decision.

Production Process — These are the steps that bring resources together to make goods and services.

Productive Resources — Productive resources are the natural, human, and capital resources used to make goods and services.

Scarcity — Scarcity means that because resources are limited, you can’t have everything you want. Because of scarcity, people must make choices.



Questions to Master

1. In the blanks below, identify some of the productive resources used to produce the desk or chair in which you are sitting.

Natural Resources Human Resources Capital Resources

_____	_____	_____
_____	_____	_____

2. In economics, limited productive resources are considered scarce. Explain what it means in economics for something to be scarce.

3. Some productive resources are more scarce than others. Give an example of one productive resource that is more scarce than another.

4. What is the primary clue that tells us whether one productive resource is relatively more scarce than another? Explain briefly.

5. Mrs. Rodman can use her productive resources to open a computer store or start a pizza restaurant. If she decides to open the computer store, what is the opportunity cost of her decision? Explain briefly.

6. In the space below or on the back, diagram the Production Process. Label your diagram correctly.



Group Activity (GA) — Unit 1

Economic Survival: Resources, Production, and Scarcity

Survival in the Jungle!

SITUATION: It is 1857 in Great Britain. You are very excited because your exploration group has just been selected by the British government to explore a remote jungle region of Africa. Below is the message you received from the government outlining your mission.

MISSION

Your group is hereby commissioned by Her Majesty the Queen to explore a remote jungle region of West Africa. We know there are native peoples there, but we are not sure if they will be hostile to outsiders. Your mission is to establish trading contacts with these people. You should also record natural resources and animal life found in the region. The Queen also wants you to record information about important geographical features. Medical experts report that the climate is tropical, with considerable chances for illness and disease. Make every effort to insure the safe return of group members.

YOUR GROUP TASK: Since space is very limited on the expedition, you must make some difficult decisions about what supplies to take. Your group of explorers has already packed many important basic supplies, including food, tents, and basic clothing. Unfortunately, there now remains room for only eight more items. You must choose eight items from the list below (a pack of items, such as a pack of six knives, counts as one item.)

LIST OF ITEMS

rifle with ammunition	ponchos (rain clothing)	mosquito netting
compass	clay pots	colorful jewelry
pistol with ammunition	a pack of six knives	a bundle of rope
a pack of pens and paper	a pack of medical supplies	burlap sacks
fishing equipment	a pack of six machetes	candles and flint
a book entitled <i>Treating Tropical Diseases</i>		

Group Activity Response Sheet — Unit 1



Choose a group leader and a group recorder. List the leader, recorder, and other group members:

Leader: _____ Recorder: _____

Group Members: _____

Read and discuss the mission with your members. In your own words, summarize the mission of your exploration group.



YOUR TASK: As a group, decide which eight items to take on the expedition. List them in the blanks below in the order of importance, with one being the most important. Then discuss and answer the questions below.

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

A. What is the scarcity problem that your group faces in this activity? _____

B. What does this scarcity problem force your group to do? _____

C. What item would have been your group's ninth choice? _____

D. Why is the ninth item you identified in C above the opportunity cost of choosing the eighth item?



Individual Project (IP) — Unit 1

Economic Survival: Resources, Production, and Scarcity

CREATE A MAP

Project Description:

Your assignment is to draw a map of a town or village and its surroundings. This assignment will give you the chance to apply the economic and geographic concepts you have learned. You will also see how these concepts fit together.

Specific Project Tasks:

Task 1: Choose a particular real or imaginary country. Your teacher may require you to pick a country or time period you have been studying.

Task 2: On a sheet of white paper, create a map of a typical prosperous town or village in your country. Also show the surrounding countryside. The area represented by your map should not be more than 100 square miles. You must follow the specific directions below very carefully!

Task 3: Answer the “Questions for Individual Project” worksheet and turn it in with your map.

Specific Directions for Your Map:

- a. Your map must have a title, scale, compass symbol, and legend (key) explaining the map features.
- b. Your map must show various kinds of features. You must have at least one kind of water feature, such as a river, harbor, or lake. Also show other features such as roads, wells, water towers, swamps, hills, forests, buildings, factories, railroads, mines, or hospitals.
- c. Use color to identify the features and make your map more attractive.
- d. Place your features logically, thinking how geography and economic factors fit together. For example, you wouldn't have a factory where there is no transportation (roads, railroad, river). You probably wouldn't put a neighborhood right by a factory that emits large amounts of pollution. You wouldn't place a mine in the middle of a swamp.



Questions for Individual Project

1. List at least three features on your map that represent **natural resources**.

2. List at least four features on your map that represent **capital resources**.

3. Which features on your map are examples of how people transform natural resources into more valuable goods and services? In other words, what examples of **production** are represented by features on your map?

4. Identify a farm or factory on your map. What is the **opportunity cost** of using the land for this farm or factory? Explain.



5. Do the map features give any clues about the educational training and skills of the people who live in your town or village? Explain.

6. Explain carefully how geography influences how people work and earn income in the area represented on your map. Give specific examples in your explanation.



Test on Unit 1 Concepts

1. In the blanks below, identify some of the **productive resources** used to produce a car.

Natural Resources

Human Resources

Capital Resources

2. In economics, we learn that productive resources and, thus, all goods and services are considered **scarce**. Explain what it means for something to be scarce.

3. Some productive resources are more scarce than others. Give an example of one productive resource that is **more scarce** than another.

4. What is the primary clue that tells us whether one productive resource is more scarce than another? Explain briefly.

5. Mr. Clews can use his limited area of land either to grow corn or to raise cattle. If he decides to raise cattle, what is the **opportunity cost** of his decision? Explain briefly.

6. In the space below or on the back, diagram the **Production Process**. *Label your diagram correctly.*