

Natural Resources

Introduction

Have you ever heard people say they made something “from scratch”? That means they measured and mixed all of the ingredients themselves instead of buying the finished product. For example, if you make a chocolate cake using flour, sugar, cocoa, and baking powder instead of a boxed cake mix, you’re baking “from scratch”. Natural resources are the “scratch” found in nature. They are the raw materials used to make everything else.

When you complete this lesson, you will be able to do the following:

- a. Define a natural resource.
- b. Recognize the difference between a renewable and nonrenewable resource.
- c. Describe the uses of each of the following types of natural resources: vegetation, soil, water, minerals, and animal life.

This lesson assumes you can read a map legend.

What is a Natural Resource?

Natural resources are materials found in nature that people use to meet their needs.

For example, trees are a natural resource. People use wood to:

- ❖ Build homes.
- ❖ Make paper.
- ❖ Burn in fireplaces for warmth or in stoves for cooking.

Do you need another example? Have you ever made homemade ice cream?

First you need milk, which comes from a cow. Animals are a natural resource. Then you need sugar and vanilla. These come from plants which needs good soil in order to grow. Vegetation (plants) and soil are two more types of natural resources. You need ice, which is frozen water. Water is also a natural resource. When you make homemade ice cream, you use a mixture of ice, salt, and water that is colder than ice and water alone. Salt is a mineral, and minerals are natural resources.

How can you tell if something is a natural resource?

It will help to ask oneself this question:

Can you find it naturally in somebody’s backyard? If the answer is yes, it’s probably a natural resource. Notice the question says **somebody’s** backyard, not just yours. There are a lot of different kinds of backyards in the world. And remember that it has to be found **naturally**. The swing set in the backyard would not count because someone built it there. It did not occur naturally.

Natural Resources




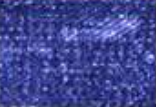










River
 Petroleum
 Clams
 Farmland
 Plants

Man-made Products

Hydroelectric Power Plant
 Gasoline
 Clam Chowder
 Potato Chips
 Medicines

Types of Natural Resources

There are five basic types of natural resources: Soil, Vegetation, Water, Minerals, and Animal Life. Each can be used to meet a wide variety of human needs.

Natural Resource	Raw Material	Food	Shelter	Energy	Clothing	Transportation
Vegetation						
Soil						
Water						
Minerals						
Animal Life						

Dirt or Topsoil is a natural resource.

Arable land, or land that is suitable for farming, is very scarce. Only ten percent of the Earth's surface is suitable for growing crops.



Climate can affect soil quality. Soil quality in dry climates is usually poor because of the lack of rain. On the other hand, soil nutrients can be washed away during heavy or constant rains.



Landforms can also affect topsoil. Erosion, the wearing away of the topsoil, has more of an impact on hilly areas. Rivers carry soil from hilly regions to lower, flatter places like floodplains and deltas.



Not only are there many kinds of soil, soil has many uses. This is true for all natural resources. Here is a picture showing how soil can be used for shelter.



Water has several important uses:

Drinking: Only 0.0007 percent of the Earth's water (seven gallons in 10,000) is fit to drink. The rest is salt water; fresh water trapped in glaciers, or polluted water.



Irrigation: water used for crops (fresh water not salt water).

Transportation: the oceans, seas, and rivers of the world allow for movement of people and goods.



Fishing: water provides many valuable sources of food.

Energy: the power of flowing water can be harnessed to turn mills and be converted into hydroelectric energy.



Water used for transportation could be thought of as nature's roads. Ocean water is generally unfit for drinking and irrigation because it is too salty. The best ways for countries in dry climates to increase agricultural production is by the use of irrigation.

Minerals

Minerals are naturally occurring substances obtained from the ground. Some examples are coal, natural gas, petroleum, iron, copper, gold, and salt. Minerals are used:

1. By themselves: Some minerals are of high value without any man-made additions. Salt and gold are good examples.
2. As ingredients: Minerals are used with other ingredients. For example, iron ore is used to make steel. Petroleum is used to make a variety of things like gasoline, plastics, and fabric.
3. As a source of energy: Coal and natural gas are used as fuel to produce heat energy.

Plants absorb traces of minerals from the Earth's surface, and those are transferred to humans through food. But minerals are not generally used for food by themselves.

Vegetation

Vegetation consists of all plant life. The uses of this natural resource are:

1. Food: used in its natural state or in agriculture (farming). This can mean subsistence farming, which is growing enough to meet the need of your family or group, or commercial farming, which is growing to sell to others.
2. Shelter Material: in the original state or cut down and processed.



3. Energy Source: used as fuel to produce heat for warmth and cooking.
4. Clothing: Cotton is an excellent example.
5. Ingredients: Plants can be used as ingredients in medicines. Some new cancer drugs are made from rainforest plants. Plants can be used for manufactured goods. Trees are used for paper and furniture as well as lumber.



Animals:

Animals are natural resources. That includes animals that are native (found in the area naturally) and animals that have been imported (brought in from another place) but now flourish in the area. Animals can be used for:

1. Food and Food Production: Animals themselves can be used for food and animal waste as fertilizer for crops.
2. Be careful what you think of as food. In the United States, we would rarely think of eating a dog or cat, but in other places they are eaten regularly. And there are lots of places where people are forbidden to eat cows and pigs.
3. Clothing: Fur and hides. Wool is a good example, or you may be wearing a pair of leather shoes right now.
4. Transportation: To ride on or to transport goods.
5. Energy: Draft animals (animals used for pulling) can power farm machinery and grain mills. Animal waste can be used as fuel. Some areas in China use methane gas produced in the pig pen for cooking in the kitchen.



Renewable and Nonrenewable

Natural resources can be renewable, which means that the supply can be built up again. They also can be nonrenewable, which means that once you use it, it cannot be replaced. Be careful about this distinction. If you exhaust your supply of a renewable resource, then it is no longer renewable. For example, if you eat all of the fish in a pond, you won't have any left to produce new fish. Plants and animals are considered renewable, because they reproduce. However, if a plant or animal becomes extinct, it is no longer renewable.

The way to decide if a resource is renewable or nonrenewable is to ask yourself, "If we use it wisely, can we **grow** more?" If the answer is yes, then it is renewable. If the answer is no, it's nonrenewable.

For example, soil would be considered nonrenewable. Once the soil has been used up, we can't get it back in our lifetime. Soil get "used up" by naturally occurring nutrients being absorbed by vegetation, or by the soil washing away (erosion).



What about erosion and decomposition making new topsoil? That happens, but the process can take years—too long to be considered renewable. What about farming practices, fertilizers, and chemicals that people add to make soil useful? The farming practices are considered using the resource wisely. And fertilizers and chemicals add to the soil. The natural process of soil creation takes too long to consider soil a renewable resource.

Nature's Superstore

It might help to think of natural resources as things you could buy if nature had a superstore. Nature's superstore would be different from a regular store, though. Nature's superstore would:

1. Sell only raw materials
2. Have different types and amounts of goods in each store in their chain.
3. Run out of some things that they would never be able to stock again.

Only raw materials occur in nature.

People use natural resources by themselves or in combination with other natural resources, like the ingredients in a recipe. When people talk about making things "from scratch," raw materials are the "scratch."

Different places on Earth have different types and amounts of natural resources. The map shows some of the natural resources of the West in North America.

