Land Resources

**Before You Read**

What do you think? Read the two statements below and decide whether you agree or disagree with them. Place an A in the Before column if you agree with the statement or a D if you disagree. After you’ve read this lesson, reread the statements to see if you have changed your mind.

<table>
<thead>
<tr>
<th>Before</th>
<th>Statement</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Cities cover most of the land in the United States.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Minerals form over millions of years.</td>
<td></td>
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</tbody>
</table>

**Read to Learn**

**Land as a Resource**

A natural resource is something from Earth that living organisms use to meet their needs. People use soil for growing crops, harvest wood from forests, and mine minerals from the land. In each of these cases, people use land as a natural resource to meet their needs.

**Living Space**

No matter where you live, you and all living organisms use land for living space. Living space includes natural habitats, as well as the land on which buildings and streets are built. As shown in the table below, cities make up only a small percentage of land use in the United States. Most land is used for agriculture, grasslands, and forests.

<table>
<thead>
<tr>
<th>Land Use in the United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Use</td>
</tr>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>Grassland and pasture</td>
</tr>
<tr>
<td>Forest</td>
</tr>
<tr>
<td>Miscellaneous</td>
</tr>
<tr>
<td>Urban</td>
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**Key Concepts**

- Why is land considered a resource?
- What are the advantages and disadvantages of using land as a resource?
- How can individuals help manage land resources wisely?

**Building Vocabulary**

As you read, underline the words and phrases that you do not understand. When you finish reading, discuss these words and phrases with another student or your teacher.

**Key Concept Check**

1. Explain Why is land considered a resource?

2. Evaluate What is the largest category of land use in the United States?
Forests and Agriculture

Forests covered much of the eastern United States in 1650. By 1920, many of the forests had been cut. Forests have regrown, but the new trees are not as tall. Also, the forests are not as complex as the original forests. Trees are cut to get wood for fuel, paper products, and wood products and to clear land for development and agriculture.

Today, about one-fifth of the land in the United States is used for growing crops, and about one-fourth is used for grazing livestock. Though the amount of land used for agriculture has decreased, crop production has increased in some areas because of advances in farming techniques.

Mineral Resources

Coal, an energy resource, is mined from the land. Certain minerals also are mined to make products you use every day. These minerals often are called ores. Ores are deposits of minerals that are large enough to be mined for a profit. The house in the figure below identifies some common items and the mineral resources they are made from.
Metallic Mineral Resources  Ores such as bauxite and hematite are metallic mineral resources. They are used to make metal products. The aluminum in automobiles and refrigerators comes from bauxite. The iron in nails and faucets comes from hematite.

Nonmetallic Mineral Resources  Some mineral resources come from nonmetallic mineral resources, such as sand, gravel, gypsum, and halite. Other nonmetallic mineral resources are mined. The sulfur used in paints and rubber and the fluorite used in paint pigments are also nonmetallic mineral resources.

Advantages and Disadvantages of Using Land Resources

Land resources such as soil and forests are widely available and easy to access. In addition, crops and trees are renewable. This means they can be replanted and grown in a relatively short amount of time. These are advantages of using land resources. Some land resources, however, are nonrenewable. It can take millions of years for minerals to form. This is one disadvantage of using land resources. Other disadvantages include deforestation and pollution.

Deforestation

Humans sometimes cut forests to clear land for grazing, farming, and other uses. Deforestation is the cutting of large areas of forests for human activities. It leads to soil erosion and loss of animal habitats. In tropical rain forests—complex ecosystems that can take hundreds of years to replace—deforestation is a serious problem.

Deforestation also can affect global climates. Trees remove carbon dioxide from the atmosphere during photosynthesis. When large areas of trees are cut down, less photosynthesis occurs. More carbon dioxide remains in the atmosphere. Carbon dioxide helps trap thermal energy within Earth’s atmosphere. Increased concentrations of carbon dioxide can cause Earth’s average surface temperatures to increase.

Pollution

Recall that runoff from coal mines can affect soil and water quality. The same is true of mineral mines. Runoff that contains chemicals from these mines can pollute soil and water. In addition, chemical fertilizers are used on farmland to improve crop growth. Runoff containing fertilizers can pollute rivers, soil, and underground water supplies.

Reading Check 4. Identify two products in the house in the figure made from nonmetallic resources.

Reading Check 5. Name three negative results of deforestation.

Key Concept Check 6. Describe What are some advantages and disadvantages of using land resources?
Managing Land Resources

Because some land uses involve renewable resources but others do not, managing land resources is complex. For example, a tree is renewable. But forests can be nonrenewable because some can take hundreds of years to fully regrow. In addition, the amount of land is limited, so there is competition for space. Those who manage land resources must balance all of these issues.

Management Solutions

One way governments can manage forests and other unique ecosystems is by preserving them. On preserved land, logging and development is banned or strictly controlled. Large areas of forests cannot be cut. Instead, loggers cut selected trees and then plant new trees to replace the ones they cut.

Land mined for mineral resources also must be preserved. On public and private lands, mined land must be restored according to government regulations.

Land used for farming and grazing can be managed to conserve soil and improve crop yield. Crop stalks that remain in the field after harvesting help protect the soil from erosion. Farming techniques that use organic materials instead of synthetic fertilizers are also being used.

What You Can Do

You can help conserve land resources by recycling products made from land resources. You can use yard waste and vegetable scraps to make rich compost for gardening, reducing the need to use synthetic fertilizers. Compost is a mix of decayed organic material, bacteria and other organisms, and small amounts of water. Assisting with a community garden is one way you can help manage land resources wisely.

Key Concept Check

7. Relate What can you do to help manage land resources wisely?
Mini Glossary

deforestation: the cutting of large areas of forests for human activities

ore: a deposit of minerals that is large enough to be mined for a profit

1. Review the terms and their definitions in the Mini Glossary. Write a sentence describing why ores are important.

2. Fill in the diagram below to show the effects of deforestation.

3. In the space below, define a word or phrase that you were better able to understand after discussing it with another person.

What do you think NOW?

Reread the statements at the beginning of the lesson. Fill in the After column with an A if you agree with the statement or a D if you disagree. Did you change your mind?

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