

VOCABULARY

Look for these words as you read:

fossil fuel

natural resource

nonrenewable resource



The energy from uranium is harnessed to generate fuel at a nuclear power plant.



About one-third of the electricity used in the United States is produced by burning coal.

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Nonrenewable Resources

A **natural resource** is something that is found in nature and is valuable to humans. Natural resources can be living or nonliving and include air, water, sunlight, soil, rocks, minerals, plants, and animals. They are classified into two major groups: renewable and nonrenewable.

In the Inquiry Activity, *Limited Resources*, you modeled the use of a nonrenewable resource. **Nonrenewable resources** are natural materials or sources of energy that are useful to people and cannot be replaced easily. They take millions of years to form.

Metals, such as copper, are nonrenewable resources that people mine from beneath Earth's surface. Metals are used for building and manufacturing. They are found in our homes, computers, cars, and appliances.

Many of the fuels we use are also nonrenewable. Some of the electricity we use comes from nuclear energy. Uranium is not burned. Instead, it goes through a nuclear reaction to release energy. Uranium is a metal found in rocks all over the world.

1. What makes a natural resource nonrenewable?

Fossil Fuels

A larger portion of the energy humans use comes from burning fossil fuels. A **fossil fuel** is a source of energy made from the remains of ancient, once-living things. Coal, oil, and natural gas are examples of fossil fuels.

Coal, the most plentiful fossil fuel, is found between rock layers. Coal is used mainly to generate electricity. Coal was once used to power the steam engines in locomotives and steamboats.

Crude oil is a thick, black substance that is also called petroleum. People drill into rocks to find oil and pump it to the surface. Oil can be used to produce electricity. It can be turned into gasoline and other types of fuel.

Natural gas can be found where oil is found. It is pumped out of the ground from wells and stored. Natural gas can provide energy for cooking and heating our homes.

2. Underline in the text how we use each type of fossil fuel.

New technologies are being developed for finding and using more old energy sources. However, some believe that the use of fossil fuels and nuclear power may damage the environment. Researchers are also exploring new energy sources. They consider what it costs to obtain and use it, its effect on the environment, and if it is renewable or not.

3. Highlight in the text why there are concerns about using fossil fuels.

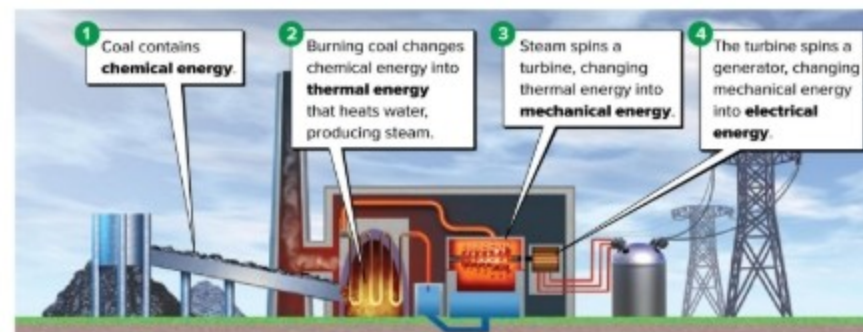
GO ONLINE Watch the video *Using Nonrenewable Resources* to see some examples of nonrenewable resources and how they are used.



Read a Diagram: Power Plant

Circle the nonrenewable resource used to produce electrical energy in the diagram below.

GO ONLINE Explore *The Energy Sequence* to learn more about how coal is used to generate electricity.



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