



Saving Earth's Resources

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Resources

How does a normal day start? Maybe you eat some cereal. Perhaps you ride a bus to school. You use resources. Anything from nature that a living thing can use is a **resource**.

▶ **Renewable resources** are resources that can be replaced during a human lifetime. Your cereal might have been made from corn, wheat, or rice. Corn, wheat, or rice are renewable resources. You eat these plants, but new ones can be grown. Plants provide us with many renewable resources.

▶ The sun and wind are other important renewable resources.

▶ These windmills are collecting wind, a renewable resource. The wind's energy is used to produce electricity.



▶ Coal, taken from Earth, is a nonrenewable resource that can be burned to make heat.



▶ **Nonrenewable resources** are resources that, once they are used up, cannot be replaced within a human's lifetime.

▶ Oil is a nonrenewable resource. Oil is used for many things, like heating homes or making gasoline. Once all the oil is taken from a well, there will be no more at that well. It cannot be replaced like corn or rice.



▶ Many metals taken from Earth are important resources. Copper and iron are two examples. They are used in electrical wires and during construction.



COMPARE AND CONTRAST How are coal and corn alike?
How are they different?


Earth Is Important!

Earth is a very important resource. We use the land on top of Earth, and we use resources taken from inside Earth, too. We use water found on Earth. We even use Earth's air to breathe.

People use land for many reasons. Farmers grow crops for food and to make cloth. Foresters plant trees to use in building and making paper. Miners take coal, oil, and metals from inside Earth.

Earth is an important resource for animals too. Animals use the land for housing and food.





There's a whole world under water! Our oceans, lakes, and rivers are filled with life.

Water is another resource that comes from Earth. People need water for washing, drinking, and growing crops. Some animals, such as fish, shrimp, and whales, live in the water.

Even though we can't see it, air is an important resource that people and animals need to stay healthy and alive.



MAIN IDEA AND DETAILS Name one resource that Earth provides.

Land Pollution

Every time people use the land, they change it in some way. Some changes are good. For example, planting trees can help keep soil in place and help provide homes for animals.

- Some changes damage the land. Miners who are not careful can destroy land or harm plants and animals.
- Litter is bad for the environment. Animals may eat it and get sick. Garbage in landfills can have bad effects, too. Sometimes, harmful trash is thrown away in the wrong place. Other trash takes a long time to break down.

Laws say that after land has been mined, it must be cleaned up. However, that can take years.





■ This trash can harm the land, the animals, and the water beneath the land.

■ Construction damages land, too. A whole forest may be cleared before building a new community. Animals that live in the forest lose their homes.

■ People sometimes change land by polluting it. This is called land pollution. **Pollution** is harmful material that is put into the environment.


■ Land pollution can be caused when people put trash in the wrong place. The trash can harm plants and animals. The trash can decompose and pollute the water underground. People and animals depend on this water to drink.




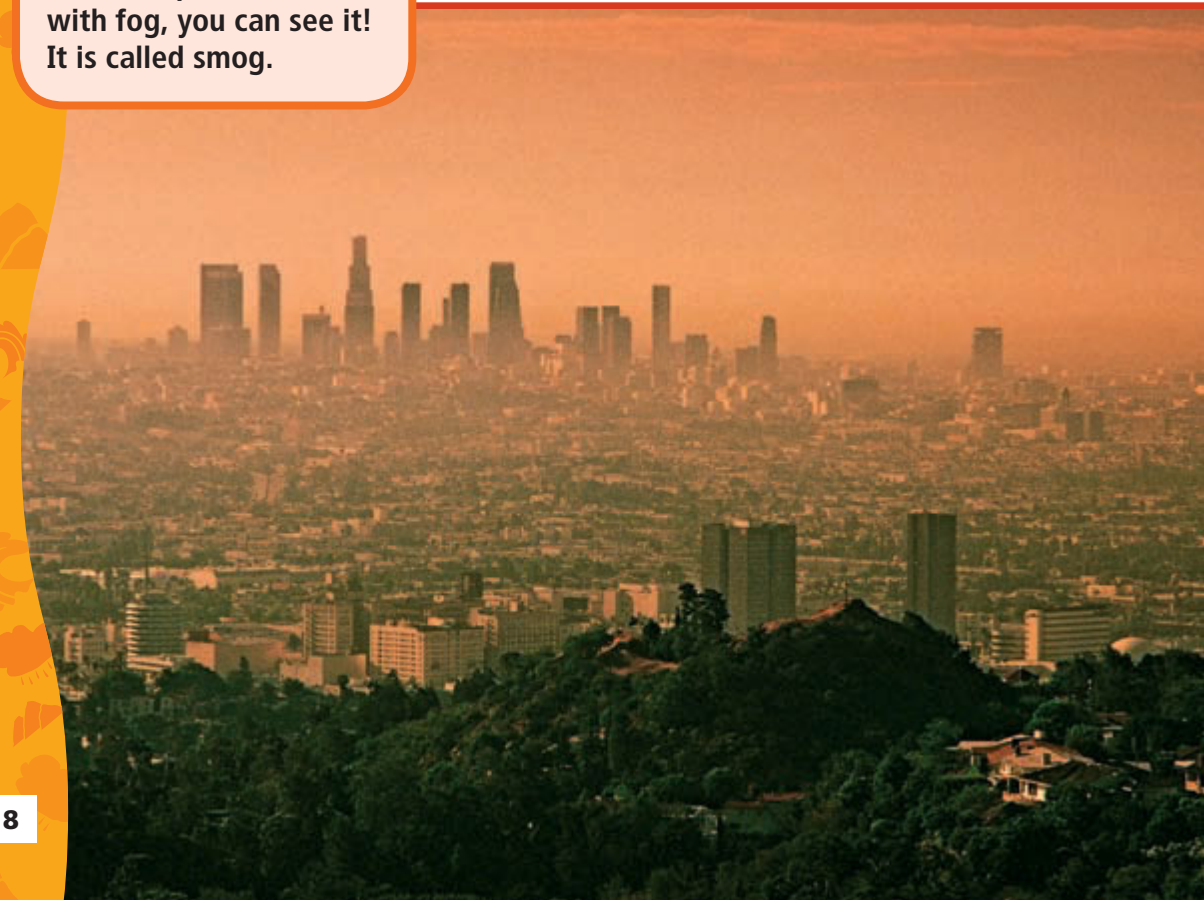
CAUSE AND EFFECT How can throwing trash in the wrong place damage what you drink?


Air Pollution

You breathe in air. So it seems pretty smart to keep it clean! Still, people cause air pollution every day. Anything that emits smoke or chemicals causes air pollution. Smoke and gases make it harder for people to breathe.

 Cars pollute the air by emitting smoke and gas. One gas is called carbon monoxide. This is a poisonous gas. Other modes of travel cause air pollution, too. Planes, trains, and buses emit smoke and gases. They add to pollution in the air.

 When air pollution mixes with fog, you can see it! It is called smog.





▶ The wind carries air pollution for miles. Trees and plants in its path may be damaged or killed.

▶ Factories can also pollute the air. Have you ever passed a factory? If so, you may have noticed smoke coming out of smokestacks. Many factories use chemicals that are poisonous. These chemicals enter the air as smoke. Animals and people that live near factories breathe the chemicals. The air pollution can make people and animals sick.

▶ Some people burn their trash. This makes smoke. Trash can often contain chemicals. When trash is burned, chemicals enter the air in the smoke.



CAUSE AND EFFECT Name one cause of air pollution.

Water Pollution

Water can also get polluted. People sometimes throw trash in lakes and rivers. Beachgoers may leave trash on the shore. Water pollution can also happen from home, if people throw out trash the wrong way. Oil, paints, and other chemicals need to be thrown away in a special place. If they are poured into the sink, they will pollute water sources.

Land pollution can lead to water pollution. Farmers use chemicals on their crops. When it rains, the chemicals can run into the land, and then into water.

Ships carry oil around the world. If they spill oil, animals that depend on the sea can be hurt. This penguin from South Africa is covered in oil.





These animals live in shallow ocean water. They have nowhere to go if the oceans become too polluted.

Air pollution can lead to water pollution. First, rain or snow mixes with chemicals in the air. Many times, those chemicals are pollutants. The polluted precipitation falls to Earth. It may fall in lakes, rivers, or in the ocean. Precipitation that has been polluted can fall on land, seep into underground water, or flow into a body of water.

Animals, people, insects, and plants all drink water. Drinking polluted water can make them sick. If water becomes polluted, animals and plants living in the water may die.

Fast Fact

Fish like to hide under plants along shores. Some states now sink dead trees and branches along shores for fish to hide under.



CAUSE AND EFFECT How does air pollution cause water pollution?

Conservation

Many people are trying to use fewer nonrenewable resources. If a nonrenewable resource is used up, it is gone forever. Saving resources by using them wisely is called **conservation**.

One way to save nonrenewable resources is to use other resources. Some homes use the sun's energy to make electricity. This conserves natural resources. Scientists are working on cars that won't need to use oil.

This home is helping to save nonrenewable resources by using solar energy to heat it, instead of oil or gas.





Thanks to water treatment plants like this one, polluted water can be cleaned and used again.

Renewable resources need care, too. They need to be kept clean. There will always be water, but if it is polluted, it can't be used.

Companies cut down acres of trees each day. Now, many companies that cut down trees plant new ones right away. This way, there will always be trees.

Zoos help conserve animals. As humans use more land, more animals lose their homes. Zoos breed some animals to make sure they won't disappear from our planet.

Fast Fact


Have you heard about the new car that runs on air? The engine uses air under pressure, strong enough to power a car!




MAIN IDEA AND DETAILS Why is it important to conserve resources?

You Can Help!


Fast Fact

-  Food and lawn trimmings can be recycled in a compost pile. These piles return nutrients to the soil. They are great for gardening!


It is easy to **reduce**, or to use fewer resources. Turn the lights and TV off when you leave a room. You might suggest walking or riding your bike instead of being driven somewhere. Both are ways to conserve oil and gas.

-  You can **reuse** resources, or use them again. Fix old clothes or toys. Does your family own a


used car? That's reusing resources.

-  You can also **recycle**. Recycling uses a resource by breaking it down and making something new. Paper, glass, plastic, and many metals can be recycled.

-   **MAIN IDEA AND DETAILS** Name three ways you can help conserve resources.

-  Many towns provide places where you can recycle resources.













■ Corn is a renewable resource. Once the plants are used, new ones can be grown in their place.






Summary

The Earth provides many resources. Some resources, like the sun and wind, are renewable. They can be replaced during a human lifetime. Others, such as coal and oil, are nonrenewable resources. When they are used up, there will be no more. The actions of people can pollute resources. However, people can help, too. Conserving resources helps. Cleaning up pollution makes the environment better. Anyone can take a part in making the world cleaner by reducing, reusing, and recycling.

Glossary

-  **conservation** (kahn•ser•VAY•shuhn) Saving resources by using them wisely (12, 13, 14, 15)
-  **nonrenewable resource** (nah•rih•NOO•uh•buhl REE•sawrs) A resource that, when it is used up, cannot be replaced during a human's lifetime (3, 12, 15)
-  **pollution** (puh•LOO•shuhn) Any harmful material in the environment (6, 7, 8, 9, 10, 11, 13, 15)
-  **recycle** (ree•sy•kuhl) To reuse a resource by breaking it down and making a new product (14, 15)
-  **reduce** (ree•DOOS) To use less of a resource (14, 15)
-  **renewable resource** (rih•NOO•uh•buhl REE•sawrs) A resource that can be replaced during a human lifetime (2, 13, 15)
-  **resource** (REE•sawrs) A material that is found in nature and that is used by living things (2, 3, 4, 5, 12, 13, 14, 15)
-  **reuse** (ree•YOOZ) To use a resource again and again (14, 15)

Think and Write

-  **1.** How does pollution affect life on Earth?
-  **2. CAUSE AND EFFECT** What effect does mining have on Earth?
-  **3. MAIN IDEA AND DETAILS** Give an example of a nonrenewable resource. Tell how it is used.
-   **4. Persuasive Writing** Imagine you have a friend who thinks that it's okay to litter. Write a speech explaining why you disagree.

Hands-On Activity

Why not practice your conserving skills? With a trusted adult, plan a class trip to clean up a local beach, park, or street.

School-Home Connection

Share this reader with a family member. Together, collect materials around the house that can be recycled.

GRADE 3

OL Book 8

WORD COUNT

1 2 2 5

GENRE

Expository Nonfiction

LEVEL

See TG or go Online



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