

Energy All Around Us: Renewable and Nonrenewable Resources

What Are Natural Resources?

Natural resources are materials or things found in **nature** that people use to live, work, and survive. These resources come from the **Earth, sun, water, air, and plants**. We use them every day—for electricity, transportation, building houses, making food, and even charging phones or watching TV.

There are two main types of natural resources:

👉 **Renewable resources**

👉 **Nonrenewable resources**

What Are Renewable Resources?

A **renewable resource** is a natural resource that can be **replaced or renewed** by nature in a **short amount of time**. These resources **will not run out** as long as we use them wisely.

Renewable Resource – A resource that can be replaced naturally and used again and again.

Examples of Renewable Resources:

- **Sunlight** – We can capture sunlight with **solar panels** to make electricity.
- **Wind** – **Wind turbines** spin when the wind blows to make power.
- **Water** – Moving water from rivers or dams can make **hydroelectric energy**.
- **Biomass** - is an organic material from plants and animals that can be used as a renewable source of energy.
- **Trees** – Trees can be cut down and replanted to grow again.
- **Geothermal Energy** – Heat from deep inside the Earth that can be used for power.

Real-Life Uses:

- Many homes and schools use **solar panels** to turn sunlight into electricity.
- Some cities have **wind farms** where wind turbines make clean energy.
- People plant **new trees** after using wood for furniture or paper.

What Are Nonrenewable Resources?

A **nonrenewable resource** is a natural resource that **cannot be replaced quickly**. It takes **millions of years** for these resources to form. Once they are used up, they are **gone forever**.

Nonrenewable Resource – A resource that cannot be replaced quickly and may run out if used too much.

Examples of Nonrenewable Resources:

- **Coal** – A black rock that is burned to make electricity.
- **Oil** – A thick, black liquid found underground; used to make **gasoline** for cars.
- **Natural Gas** – A gas used for cooking and heating.
- **Nuclear Energy** – Comes from a metal called **uranium**, found in rocks deep in the Earth.



Real-Life Uses:

- Most cars use **gasoline** from oil to run.
- Some power plants burn **coal** to make electricity.
- Homes often use **natural gas** to heat water or cook food.



Why Should We Use More Renewable Resources?

Burning nonrenewable resources can cause **pollution** and add harmful gases to the air. This affects our **climate** and can make the Earth warmer—called **climate change**.

Renewable resources are **cleaner** and better for the environment. They don't run out easily and help protect nature for the future.



Benefits of Using Renewable Energy:

- **Cleaner air and water**
- **Less pollution**
- **Energy that lasts forever**
- **Better for animals, plants, and people**

Vocabulary Review

Word	Definition
Natural Resource	Something found in nature that people use.
Renewable Resource	A resource that can be replaced and used again.
Nonrenewable Resource	A resource that cannot be replaced quickly and might run out.
Pollution	Harmful materials released into air, water, or land.
Energy	Power we use to do work like turning on lights, moving cars, or cooking.
Solar Panel	A tool that captures sunlight and turns it into electricity.
Wind Turbine	A tall machine with blades that uses wind to make electricity.

Geothermal Energy	Heat from deep inside the Earth that can be used to make power.
Uranium	A rare metal found underground that is used for nuclear energy.

How You Use Resources Every Day:

- **Lights** in your home are powered by energy.
- **Gas** in your family's car may come from oil.
- **Paper** for your notebook comes from trees.
- **Water** in your sink may be powered by a pump using electricity.
- **Solar lights** outside your house use sunlight.

What Can You Do?

Here are some ways YOU can help:

- Turn off lights when you leave a room.
- Recycle paper, plastic, and metal.
- Ride a bike or walk instead of driving.
- Ask your family about using solar panels or saving energy.
- Plant a tree or help in a garden!

Sources and References:

- U.S. Energy Information Administration (EIA). [Energy Kids](#)
- Florida Department of Education. *Science Standards – SC.5.E.7.4*
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- National Geographic Kids. <https://kids.nationalgeographic.com>
- BrainPOP. *Renewable and Nonrenewable Resources* Video Lesson