



ELECTRICITY



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Electricity is an important part of our daily lives. It powers the lights in our homes, the devices we use, and even the machines that help us work. Let us explore what electricity is, where it comes from, and how we use it.

WHAT IS ELECTRICITY?

Electricity is a type of energy. It flows through wires and can make things light up, move, or produce sound. Electricity is made up of tiny particles called electrons, which move to create energy. This flow of electrons is called an electric current.

SOURCES OF ELECTRICITY

Electricity can come from many different sources. Some are natural, while others are created by people.

- **Natural Sources:** Wind, sunlight, and water are examples of natural sources of electricity. Solar panels capture sunlight and turn it into electricity. Wind turbines use the wind to create power.
- **Fossil Fuels:** Coal, oil, and gas are burned to produce electricity. This is common but not always good for the environment.
- **Nuclear Power:** Some power plants use energy from splitting atoms to produce electricity. This is called nuclear power.

WHAT ARE CONDUCTORS AND INSULATORS?

Electricity flows through some materials better than others. These materials are called conductors and insulators.

- **Conductors:** Conductors are materials that allow electricity to flow through them easily. Metals like copper, gold, and aluminium are good conductors. This is why wires are often made of metal.
- **Insulators:** Insulators are materials that do not let electricity pass through them easily. Rubber, plastic, and wood are good insulators. Insulators are used to cover wires and keep electricity from escaping.

HOW DOES ELECTRICITY TRAVEL?

Electricity is made in power stations and sent to homes, schools, and businesses through wires. These wires are part of a system called the power grid.



- Power Stations: This is where electricity is generated.
- Power Lines: These carry electricity over long distances.
- Transformers: These devices change the strength of the electricity so it can be used safely.

USING ELECTRICITY SAFELY

Electricity is very useful, but it can be dangerous if not used correctly.

- Never touch electrical appliances with wet hands.
- Do not put too many plugs into one socket, as this can cause a fire.
- Always ask an adult for help with electrical items if you are unsure.

SAVING ELECTRICITY

Using less electricity helps the environment and saves money. Here are some simple ways to save electricity:

- Turn off lights when you leave a room.
- Unplug devices when you are not using them.
- Use energy-saving bulbs and appliances.

FIND OUT MORE...

[Electricity Year 6 - BBC Bitesize](#)

EXAMPLE QUESTIONS:

1. What is electricity made up of, and what is the name of the flow of electrons that creates energy?
2. Name two natural sources and two man-made sources of electricity.
3. What are the differences between conductors and insulators? Provide two examples of each.
4. What are the three steps involved in how electricity travels from power stations to homes?
5. List two safety tips for using electricity and two ways to save electricity.