



Electricity is an **energy**. This energy can be used to power electrical items.

Electrical energy is caused by **electrons** (the particles in atoms) moving about to make a current.

Electricity can be created in a variety of ways such as:

- burning fossil fuels (oil, gas, coal) at power stations,
- using wind power generated by wind turbines,
- using solar power generated by the sun,
- using water power (sometimes called hydropower) generated by running or falling water.

Electricity is transported to our homes, schools and places of work through wires and cables.

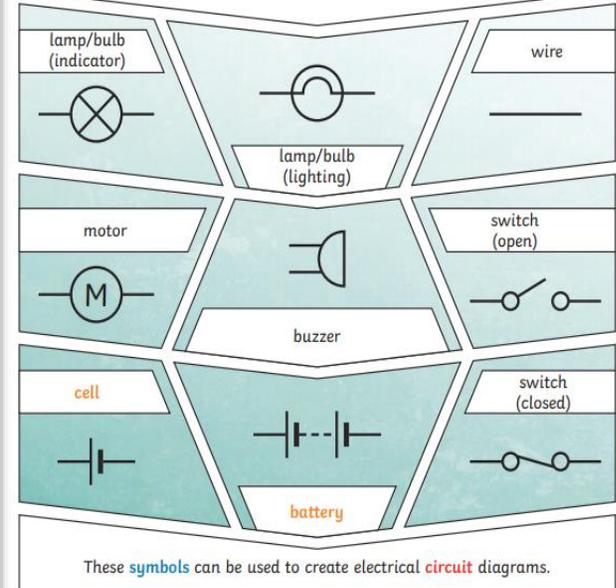
Electricity can also be stored in cells (sometimes called batteries).

Try it at home

- How important is electricity to us?** Make a list of everything in your home that you can find that needs electricity. Which are battery powered? Which are powered by the mains? Present these creatively!
- Get creative**
Make a model of your favorite electric-powered device.
- Writing**
Research Benjamin Franklin and create a short fact file/biography about this famous scientist.

Key Knowledge

Components of a Circuit and Their Symbols

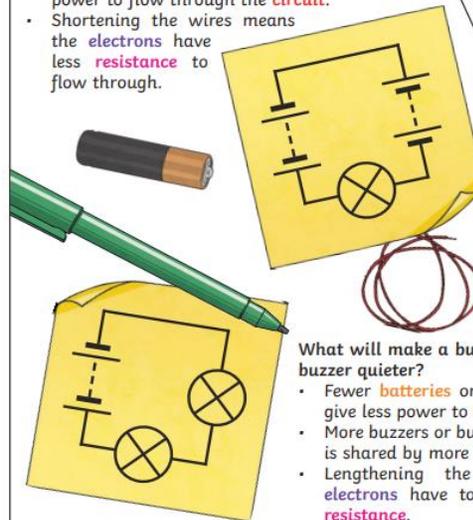


Key Vocabulary

circuit	A path that an electrical current can flow around.
symbol	A visual picture that stands for something else.
cell/battery	A device that stores energy as a chemical until it is needed. A cell is a single unit. A battery is a collection of cells .
current	The flow of electrons , measured in amps .
amps	How electric current is measured.
voltage	The force that makes the electric current move through the wires. The greater the voltage , the more current will flow.
resistance	The difficulty that the electric current has when flowing around a circuit .
electrons	Very small particles that travel around an electrical circuit .

What will make a bulb brighter or a buzzer louder?

- More **batteries** or a higher **voltage** create more power to flow through the **circuit**.
- Shortening the wires means the electrons have less **resistance** to flow through.

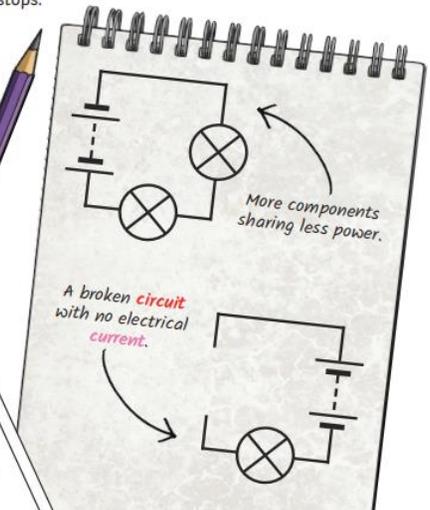


What will make a bulb dimmer or a buzzer quieter?

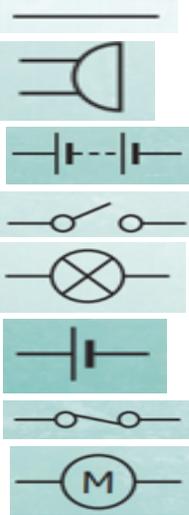
- Fewer **batteries** or a lower **voltage** give less power to the **circuit**.
- More buzzers or bulbs mean the power is shared by more components.
- Lengthening the wires means the electrons have to travel through more **resistance**.

Series Circuit

A **circuit** that has only one route for the **current** to take. If more bulbs or buzzers are added, the power has to be shared and so they will be dimmer or quieter. If just one part of this series **circuit** breaks, the **circuit** is broken and the flow of **current** stops.





1. What is electricity?		5. Match the symbol to the electrical component			
Magic		lamp buzzer wire motor open switch closed switch cell battery			
Energy					
Lightning					
2. How is electricity transported?					
through pipes					
through the air					
WIFI					
Cables and wires					
3. How is electricity stored?				6. Match the word to its meaning	
cells				Voltage	A path that an electric current can flow around.
plug sockets		Current	A device that stores energy until it is needed.		
it can't be stored		Resistance	The flow of electrons (measured in amps).		
4. Which of these are used to create electricity?		Circuit	The force that makes the electric current move through the wires.		
The Sun		Cell/Battery	The difficulty that the electric current has when flowing around a circuit.		
Water		Electrons	Very small particles that travel around an electrical circuit.		
Wind					
Oil					