Key Vocabulary

electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance.
appliances	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
battery	A device that stores electrical energy as a chemical.
circuit	A pathway that electricity can flow around. It is based around wires and a power supply. Examples of components (parts) you can add in to a circuit are bulbs, switches, buzzers and motors.

Components (Parts) Vocabulary

cell: Normally we'd call this a battery but scientifically this is a cell. Two or more cells joined together form a battery.

bulb: Lights up in a complete circuit.

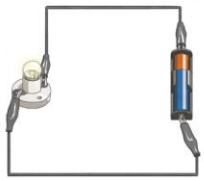
buzzer: Makes a noise in a complete circuit.

wires: Used to connect the different component in the circuit together.

motor: Produces movement in a complete circuit.

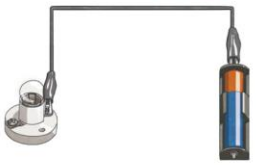
switch: Used to turn other components in the circuit on or off.

Complete Circuit



Electricity can flow. Components will work.

Incomplete Circuit



There is a break in the circuit that prevents the electricity from flowing. The components will not work.

Switches can be used to open or close a circuit. When off, a switch 'breaks' the circuit to stop the flow of electricity. When on, a switch 'completes' the circuit and allows the electricity to flow.

toggle switch

push button switch

slide switch

Key Vocabulary

mains electricity	Electricity supplied through wires to a building.
electrical conductor	A conductor of electricity is a material that will allow electricity to flow through it.
electrical insulator	Materials that are electrical insulators do not allow electricity to flow through them.

Appliances

Many everyday appliances rely on electricity for them to work. Some appliances use mains electricity (are plugged into a socket) and others have a battery to make them work. Examples of mains-powered appliances include toasters and televisions. Battery-powered appliances can include mobile phones and torches.

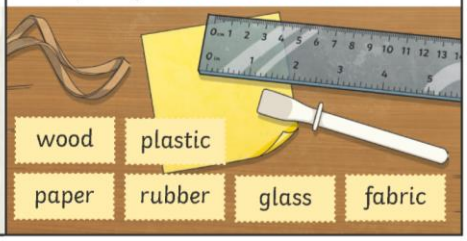
mains-powered

battery-powered

Key Knowledge

Examples of Electrical Conductors

Examples of Electrical Insulators



To work safely with circuit components in the classroom:

- None of the equipment needs to use mains power, so do not put any of it in or near plugs.
- Report any damaged or broken equipment to your teacher. Do not use it.

- Only use equipment as instructed.
- Connect equipment correctly.
- Disconnect equipment after use and put it away neatly.

Materials can be tested in a circuit to see if they are electrical conductors or electrical insulators.

10p = metal = electrical conductors

test circuit

ruler = plastic = electrical insulators