



Science focus	Electricity	Year 4	Summer Term
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What? (Key knowledge)

Generating electricity

Primary energy source	Primary energy sources are used to generate electricity. They include fossil fuels, wind, hydro and solar power, nuclear power and geothermal power.
Secondary energy source	Secondary energy sources are made from primary secondary sources. Electricity is a secondary energy source.
Non-renewable	This source of energy will eventually run out and so will no longer be able to be used to make electricity. These include fossil fuels - coal, oil and natural gas.
Renewable	A source of electricity that will not run out. These include solar, nuclear, geothermal, hydro and wind.
Alternating current (AC)	Generated electricity that is supplied through the mains produces an alternating current.
Direct Current (DC)	Generated electricity that is supplied through a battery produces a direct current.

Electrical circuits

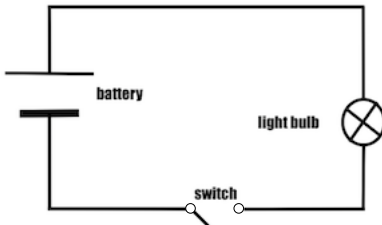
Circuit	A pathway that electricity can flow around. It includes wires and a power supply and may include bulbs, switches or buzzers.
Switches	Switches can be used to open or close a circuit. When off, a switch 'breaks' the circuit to stop the flow of electricity. When on, a switch 'completes' the circuit and allows the electricity to flow.
Insulators	Materials that are electrical insulators do not allow electricity to flow through them. Wood, plastic and glass are good insulators.
Conductors	A conductor of electricity is a material that will allow electricity to flow through it. Metals are good conductors.
Batteries	A device that stores electrical energy as a chemical that can be converted when in a complete circuit.










What? (Key Vocabulary)

Generate	To make or produce.
Flow	An electric current flows when electrons move through a conductor
Electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance.
Appliances	Pieces of equipment or devices designed to perform a particular job using electricity.
Electric current	The flow of electrical charge.

Diagrams and symbols

Simple Electric Circuit



 Switch	 Cell	 Battery
 Lamp	 Voltmeter	 Ammeter
 Resistor	 Variable resistor	 Motor

Possible Investigations

To investigate which materials are conductors and insulators when placed in an electrical circuit.