

Electricity - Year 4

Prior learning:

In Year 2, you identified and compared the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

cell: Normally, we would 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.

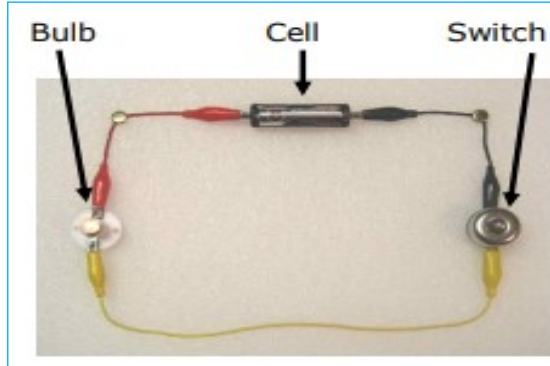
buzzer: Makes a noise in a complete circuit.

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

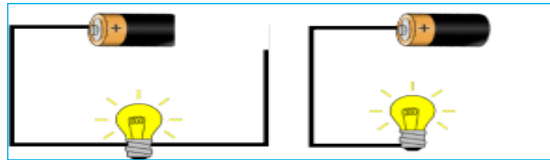
motor: Produces movement in a complete circuit.

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

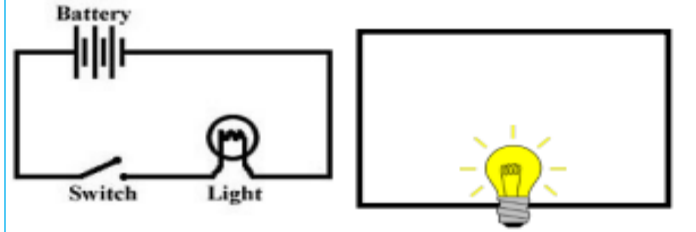
Switches can be used to open or close a circuit. When off, a switch 'breaks' the circuit to stop the flow of electricity. When on, a switch 'completes' the circuit and allows the electricity to flow.



If there is a break in the circuit that prevents the electricity from flowing. The components will not work. This is an incomplete circuit.



Series Circuit: A circuit where the components are connected in a loop. Electricity flows through each component in a single pathway.



Key vocabulary Definitions

electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance.
generate	To make or produce.
renewable	A source of electricity that will not run out. These include solar, geothermal, hydro and wind.
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.
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 includes wires and a power supply and may include bulbs, switches or buzzers.

ELECTRICAL CONDUCTORS

CONDUCTOR allows the energy to pass through it

Steel

Silver Gold

Sea Water Copper

ELECTRICAL INSULATORS

INSULATOR does not allow the energy to pass through it

Wood

Glass Rubber

Plastic Oil



Future learning:

In Year 6, you will use recognised symbols when representing a simple circuit. You will link the brightness of a lamp or the volume of a buzzer to the number and voltage of cells.

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.

