

### Key Vocabulary

electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol

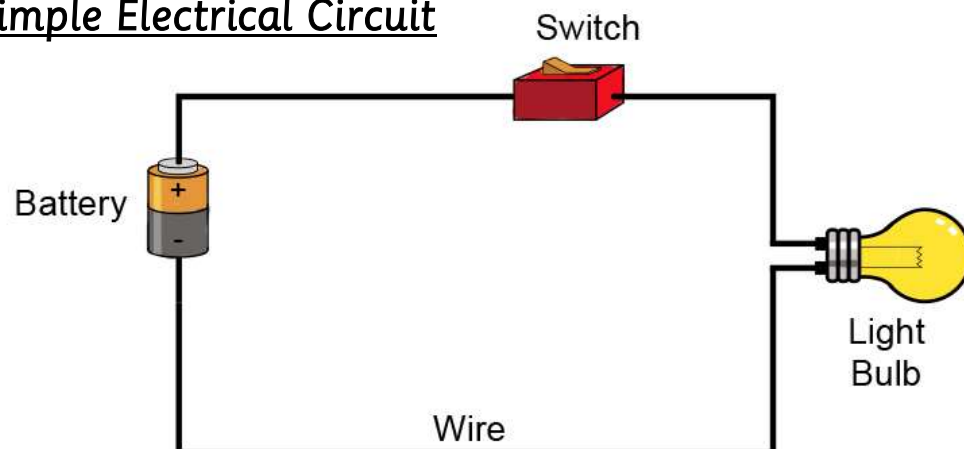
Many household devices and appliances run on electricity. Some plug in to the mains and others run on batteries

A switch can be added to the circuit to turn the component on and off.

An electrical circuit consists of a cell or battery connected to a component using wires. If there is a break in the circuit, a loose connection or a short circuit, the component will not work.

**Children in Year 4 do not need to use standard symbols for electrical components, as this is taught in Year 6.**

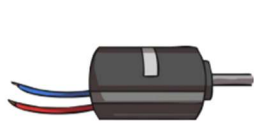
### Simple Electrical Circuit



Metals are good conductors so they can be used as wires in a circuit.

Non-metallic solids are insulators except for graphite (pencil lead).

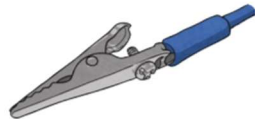
Water, if not completely pure, also **conducts** electricity.



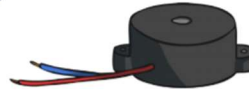
motor



wire



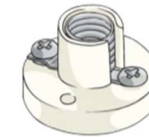
crocodile clip



buzzer



bulb



bulb holder



battery



cell

Component	a part of a circuit
Positive	one side of a cell
Negative	the opposite side of a cell
Loose connection	the cause of an imperfect circuit
Short circuit	where wires that are not supposed to be in contact with each other touch
Buzzer	makes a noise if electricity is flowing
Motor	changes electrical energy to movement
Conductor	allows electricity to pass through it
Insulator	doesn't allow electricity to pass through it

