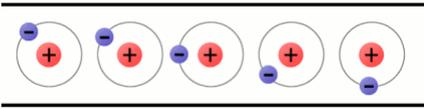


Key Concepts

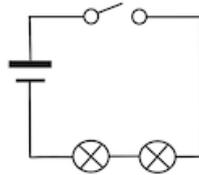
- Electrons are very small particles that travel around an electrical circuit.



- For a circuit to work, it must be complete. If there is a break in the circuit, it is incomplete and the current cannot flow through it.
- More batteries or a higher voltage creates more power to flow through the circuit.
- Shortening the wires means the electrons have less resistance to flow through.

Series Circuits

- A series circuit is a circuit that has only one route for the current to take.

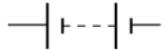
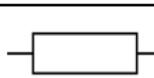
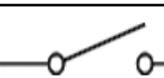
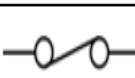


- If more bulbs or buzzers are added, the power has to be shared and so they will be dimmer or quieter.
- If just one part of this circuit breaks, the circuit is broken the flow of current stops.

Key Vocabulary

Ammeter	Measures the current in a circuit
Buzzer	An electrical device that is used to make a buzzing sound.
cell	A synonym for a battery.
component	The parts that something is made of
conductor	A substance that heat electricity can pass through or along.
current	A flow of electricity through a wire or circuit.
insulator	A non-conductor of electricity or heat. It does not let heat or electricity to pass through or along.
resistance	A force which slows down a moving object or vehicle.
resistor	A part of an electrical circuit that provides resistance to some of the current.
source	Where something comes from
voltage	The force of an electric current is measured in volts.

Circuit components and their symbols

	ammeter		battery		bulb
	buzzer		cell		motor
	resistor		switch off		switch on

Working Scientifically Skills

	Using Scientific knowledge to ask questions.		Planning different types of enquiry, controlling variables where necessary.
	Using scientific language to draw conclusions.		Recording data, taking repeat measurements where necessary and calculating a mean.
	Recognising when to use other sources to answer questions and separating opinion from fact.		

Famous Scientists

	Thomas Edison – (1847 – 1931) Inventor of the fuse.
	Benjamin Franklin (1706-1790) Showed that lightning is caused by electricity .
	Charles Augustine Coulomb (1736-1806) He invented instruments for measuring the forces between magnets and between charges. The unit for measuring an amount of electricity is named after him. One Coulomb is the amount of electricity that flows past any point when a current of one amp flows for one second.