

What should I already know?

Yr. 4 - Electricity - Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.

Yr. 4 - Electricity - Identify whether a lamp will light in a simple series circuit, based on whether the lamp is part of a complete loop with a battery.

Yr. 4 - Electricity - Recognise that a switch opens and closes a circuit and associate this with whether a lamp lights in a simple series circuit.

What will I know by the end of the unit?

What are the symbols for the components in a circuit?

| Circuit Symbols | |
|-----------------|-----------------|
| Symbol | Component |
| | ammeter |
| | battery |
| | bulb |
| | buzzer |
| | cell |
| | motor |
| | resistor |
| | switch (open) |
| | switch (closed) |

How does the voltage of a cell affect a circuit?

The more voltage in a circuit, the brighter the bulb or louder the buzzer will be.
 A bulb converts energy from chemical energy to light energy.
 A buzzer converts chemical energy into sound energy.

How do the components of a circuit affect the performance?

A switch controls the movement of electrons by opening or closing a circuit.
 The longer the wires, the dimmer the bulb and quieter a buzzer will be due to more resistance.
 The shorter the wires, the brighter a bulb/ louder a buzzer will be due to less resistance.

Key vocabulary

| | |
|-------------|--|
| ammeter | measures the current in a circuit |
| appliance | a device in your home that you use to do a job such as cleaning Appliances are often electrical . |
| circuit | a flow of electricity through a wire or circuit |
| current | a complete route which an electric current can flow around |
| compo- | the parts that something is made of |
| cell | a synonym for battery |
| battery | small devices that provide the power for electrical items such as torches |
| device | an object that has been invented for a particular purpose |
| energy | the power from sources such as electricity that makes machines work or provides heat |
| electrons | too many electrons cause the circuit can 'short' (overheat/damage components) |
| motor | a device that uses electricity or fuel to produce movement |
| re-sistance | a force which slows down a moving object or vehicle |
| resistor | a part of an electric circuit that provides resistance to some of the current |
| voltage | the force of an electric current as measured in volts |
| wires | a long thin piece of metal that is used to fasten things or to carry electric current |