

ELECTRICITY

What effects a circuit?

What will make a bulb brighter or a buzzer louder?

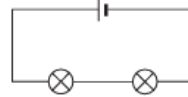
1. More batteries or a higher voltage create more power to flow through the circuit.
2. Shortening the wires means the electrons have less resistance to flow through.

What will make a bulb dimmer or a buzzer quieter?

1. Fewer batteries or a lower voltage give less power to the circuit.
2. More buzzers or bulbs mean the power is shared by more components.
3. Lengthening the wires means the electrons have to travel through more resistance.

Key vocabulary

- **series circuit** – a circuit where all the components are connected in one single loop



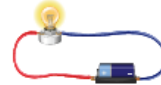
- **cell** – a portable store of energy



- **bulb** – a component that produces light



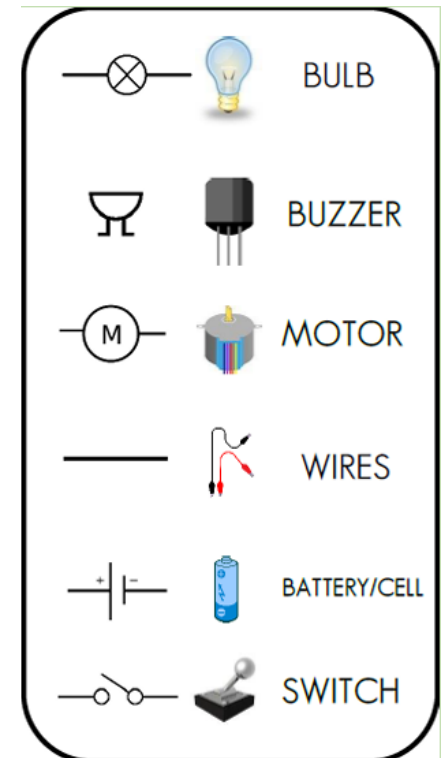
- **current** – the flow of electricity in a circuit



- **voltage** – causes the current to flow



- **buzzer** – a component that makes a buzzing or beeping sound



Key vocabulary-working scientifically

independent variable (what will change) – the voltage, or the number of cells

dependent variable (what will be measured) – the loudness of the buzzers

controlled variables (what is kept the same) – the type of cells used and the number of components in the circuit

Key facts

In a series circuit all the components are joined together and the electricity can only flow in one direction. Switches can be used to open and close circuits.

However, a circuit will not work properly if:

- the cells aren't connected correctly
- component isn't working or there's no bulb
- the circuit has gaps
- one of the components acts as an insulator.