

# Y6 science knowledge organiser: electricity



Battery

A **battery** (collection of cells)/**cell** (single unit) is a device that stores energy as a chemical until it is needed.



Wire

A **wire** is used to join the components of a **circuit** together.



Bulb

A **bulb** is used to light a circuit. This can be replaced by a motor or a buzzer, or you can connect include these as well.



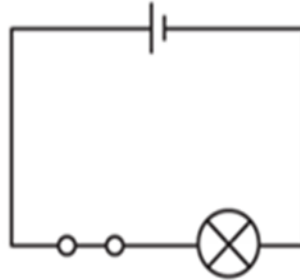
Switch (on)

A **switch** is used to stop the current travelling around the circuit. This means the electricity does not light the bulb, sound the buzzer or run the motor.



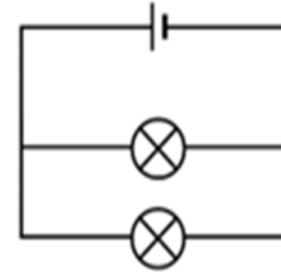
Switch (off)

## SERIES CIRCUIT DIAGRAM



Buzzer

## PARALLEL CIRCUIT DIAGRAM



Motor

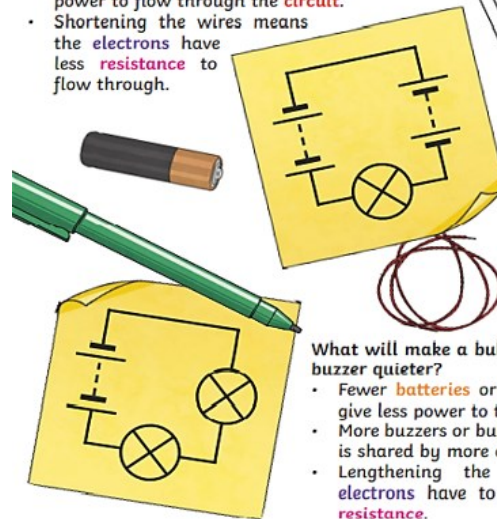


The **current** in a circuit is the flow of electrons which is measured in amps.

Alternating current is the when the flow of electric charge sometimes reverses direction.

What will make a bulb brighter or a buzzer louder?

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



**Series Circuit**

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 series **circuit** breaks, the **circuit** is broken and the flow of **current** stops.

What will make a bulb dimmer or a buzzer quieter?

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

