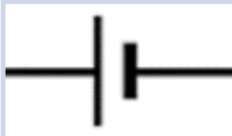


Components of a Circuit and their Symbols

Bulb



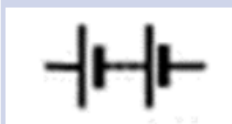
Cell



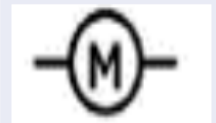
wire



Battery



Motor



Buzzer



Switch (open)

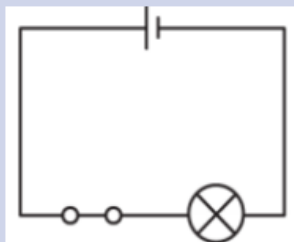


Switch (closed)



These symbols can be used to create electrical circuit diagrams.

This is a simple circuit diagram



Simple Series Circuit

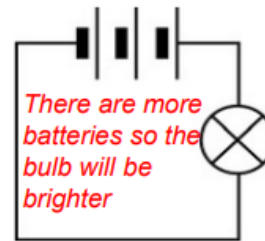
In order for electricity to flow, a circuit needs 3 things:

1. A source of electricity
2. No gaps in the circuit
3. Conductors

A **series circuit** 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.

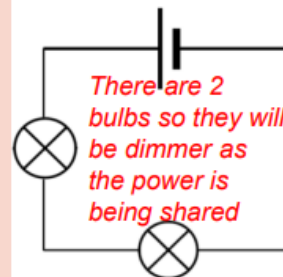
What will make a bulb brighter?

More **batteries** or a higher **voltage** create more power to flow through the circuit.



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.



Key vocabulary

Definition

Component

a part or element of a larger whole

symbol

A visual picture that stands for something.

Circuit diagram

A visual representation of an electrical circuit using symbols to represent the electrical components.

Voltage

The force that makes electricity move through a wire.

Current

The flow of electricity measured in amps.



Nikola Tesla

Tesla, whilst still a boy, thought of using Niagara Falls as an electric power source.



Alessandro Volta

Volta invented the electric cell.



Michael Faraday ©

Faraday invented the electric motor in 1821.



Electricians are:

- Scientists
- Everyday heroes
- Helping communities.



CHILDREN'S ELECTRICAL SAFETY TOP TIPS

- Obey warning signs and never put yourself or others in danger
- Stay away from power stations no matter the situation
- Never put your fingers or anything into a plug socket
- Keep all metal objects such as cutlery out of toasters
- If you see a broken wire, don't touch it and tell a parent!
- Keep water away from electricals, such as hairdryers
- Do not buy or use a fake charger.
- Never fly kites near power lines, always find open space
- Never leave anything plugged in and charging while you sleep!
- When removing a plug, turn it off and don't pull on the cord!

Remember to stay safe around electricity.