



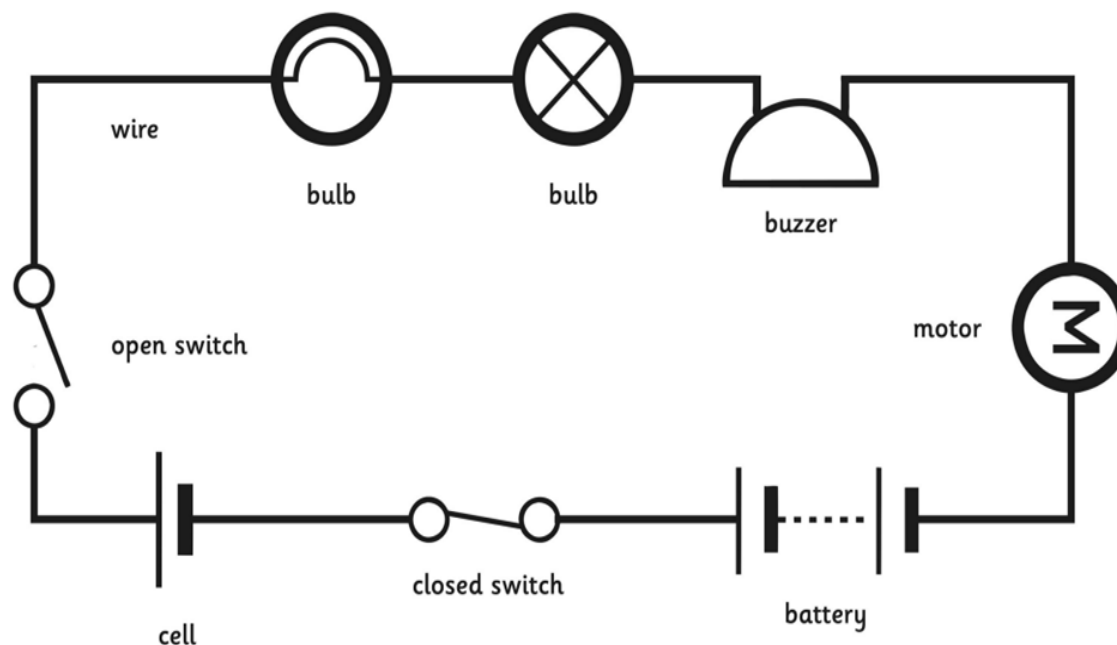
# Science – Year 6

## Spring 1 - Electricity

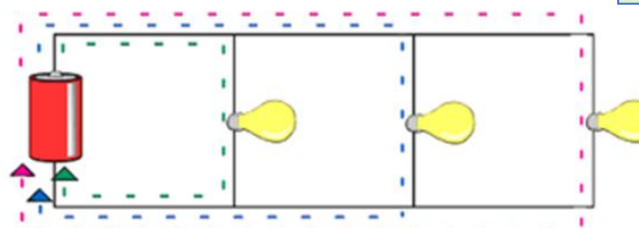


We use **scientific symbols** to represent the **components** of a **circuit** in a **diagram**.

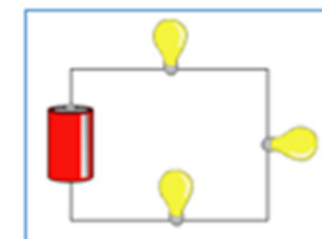
Key Vocabulary	Definition
<b>Voltage</b>	Force of an electrical current. Measured in volts (V).
<b>Current</b>	Flow of electrical charge.
<b>Resistance</b>	Reducing the electric current flow through a material.
<b>Circuit</b>	A pathway that electricity can flow around. It is based around wires and a power supply.
<b>Components</b>	The parts that something is made from.
<b>Battery</b>	Device that produces electricity, in parallel or series.
<b>Cell</b>	Device used to generate electricity. 2 or more cells together form a battery.
<b>Conductor</b>	A conductor of electricity is a material that will allow electricity to flow through it.
<b>Insulator</b>	Materials that are electrical insulators do not allow electricity to flow through them.



Component connected in a **parallel circuit** are connect across each other.

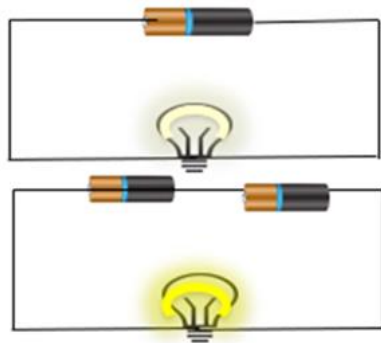


A circuit connected in a **series** contains components attached to each other, like holding hands in a circle.



## 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.

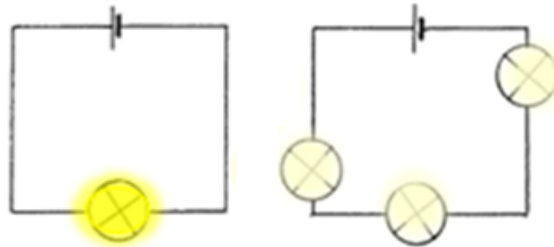


## Switches

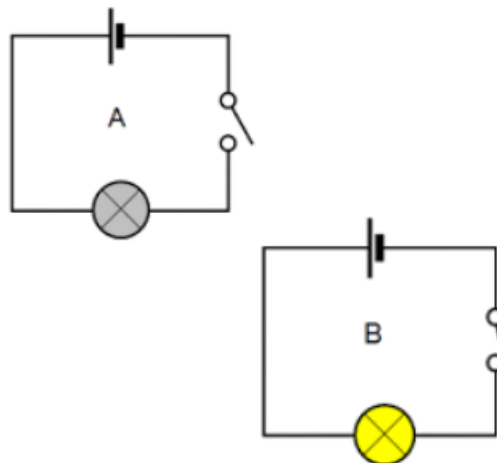
(A) When a switch is open (off) there is a gap in the circuit. Electricity cannot flow around the circuit.

(B) When a switch is closed (on) it makes the circuit complete. Electricity can flow around 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.
- **Lengthening the wires** means the electrons have to travel through more **resistance**.



## Faults in a circuit

- **Circuits need power** (usually a battery or batteries)
- Circuit must not have any breaks.
- **Switch must be on** and creating a complete circuit to work
- For bulbs to light brightly, they **must have enough power**.

