

Summary – Electricity

Electrical Component Symbols



Cell



Switch



Bulb



Buzzer



Resistor



Variable Resistor



Ammeter



Motor



Wire

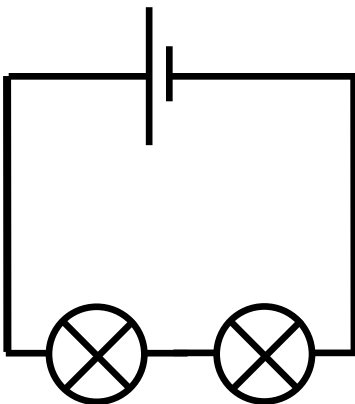


Voltmeter

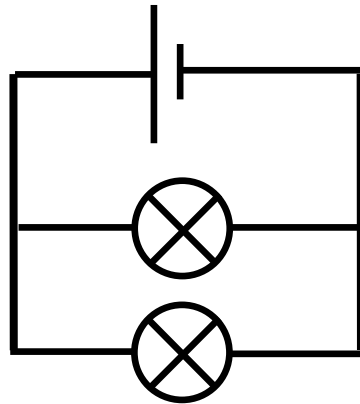
A “battery” is more than one cell joined together.

Series and Parallel

In **series** circuit, the components are joined in a **circle**. In a **parallel** circuit, the components are joined in a **chain/ladder**.



Bulbs in Series



Bulbs in Parallel

Switch

A switch is the opposite of a door. When it is **closed**, electricity will **flow through it**. When it is **open**, electricity will **not flow through it**.

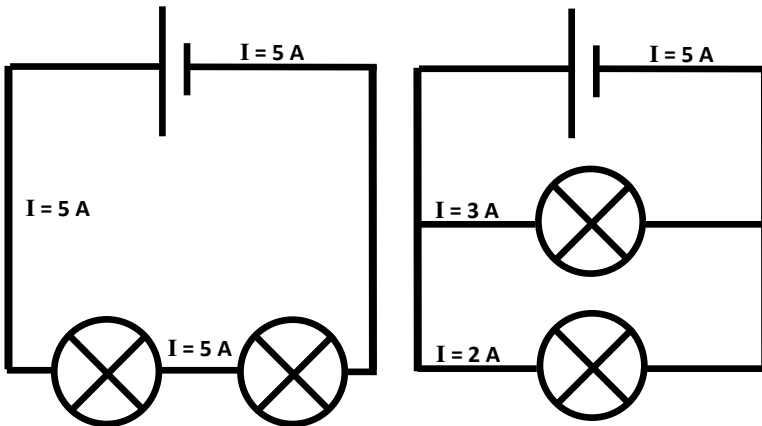
Current and voltage

Electricity is carried by **electrons**. Electrons are **in the wire** even if there is no electricity flowing. The **cell is like a “pump”** that make the electrons flow.

Current is a bit like **how fast** the electrons flow. Current has the **symbol “I”** and is measured **in amps** which have the **symbol “A”**. **Current** is measured **“through”** components.

Voltage is a bit like **how hard the cell “pumps”** the electrons. Voltage has the **symbol “V”** and is measured **in volts** which also have the **symbol “V”**. **Voltage** is measured **“across”** components”

In a **series** circuit, the **current is the same** all round the circuit. In a **parallel** circuit, the current **splits along each branch**. The current at the cell is the total current.



In a **parallel** circuit, the **voltage is the same** across every component. In a **series** circuit, the voltage **splits across each component**. The voltage across the cell is the total voltage.

Resistance

A **resistor slows down the electrons** in the same way that a narrow corridor slows down Kirkcaldy High School students! Resistance has the symbol **“R”** and is measured in ohms which have the symbol **“Ω”**.