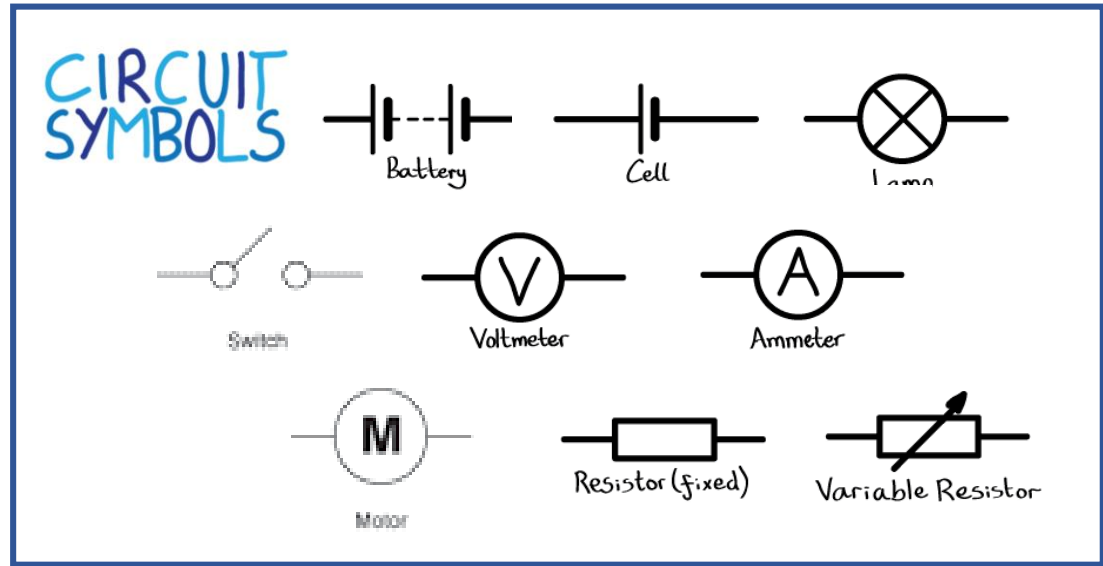


Physics: Electricity



Key Equations

$R = \frac{V}{I}$ R = resistance (Ω), V= voltage (V), I= current (A)

$P = \frac{E}{t}$ P=power (W), E= energy (J), t= time (s)

Key word	Definition
Current	The rate of flow of electrons around a circuit.
Complete circuit	A circuit with closed switches and no breaks which means a current can flow.
Electrons	Free electrons exist in metals. These flow around the circuit when a potential difference is applied.
Conductors	Materials which allow a current to flow through them because they have low resistance e.g metals.
Insulators	Materials which do not allow a current to flow through them.
Potential difference	This is the energy transferred to the electrons by the battery and the energy transferred to the components, otherwise known as voltage.
Resistance	Opposition to the flow of current by the material.
Power	The rate of energy transfer.

Series Circuits

Current in a series circuit takes the same value, no matter where it is measured in the circuit.

Potential difference (voltage) across the bulbs adds up to the battery voltage.

Parallel circuits

Current through the branches of a parallel circuit adds up to the current from the battery.

Potential difference (voltage) across the bulbs is the same as the battery voltage.

