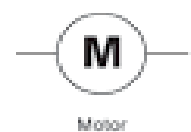
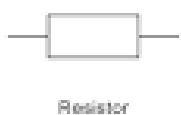
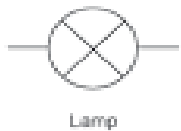
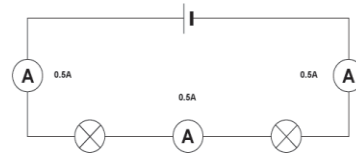


# Physics: Electricity

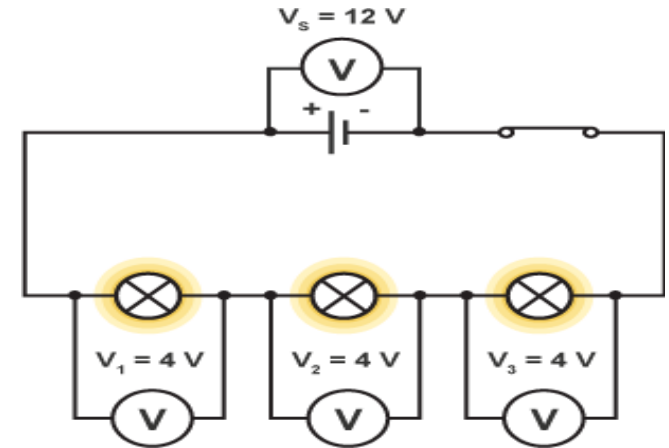
Key word	Definition
current	The rate of flow of electrons around a circuit
complete circuit	A circuit with open switches or breaks that means that a current can flow
electrons	Free electrons exist in metals. These flow around the circuit when a potential difference is applied.
conductors.	Materials which allow a current to flow through them because they have low resistance e.g metals
Insulators	Materials which allow a current to flow through them because they have low resistance e.g metals
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



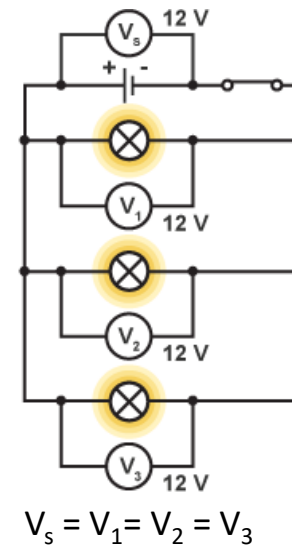
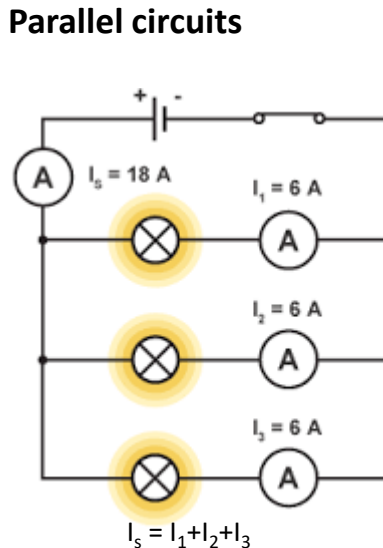
Current in a series circuit takes the same value, no matter where it is measured in the circuit



Voltage, or potential difference, across the bulbs adds up to the battery voltage.

$$V_s = V_1 + V_2 + V_3$$

## Parallel circuits



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

Voltage, or potential difference, across the bulbs is the same as the battery voltage.

