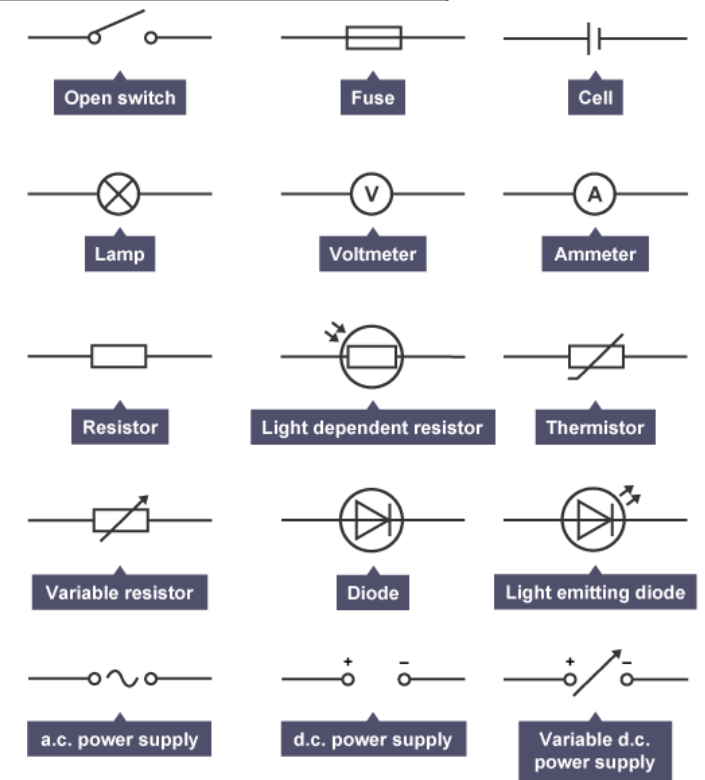


Key Terms

P3 - Knowledge Organiser – Electricity

Diagrams

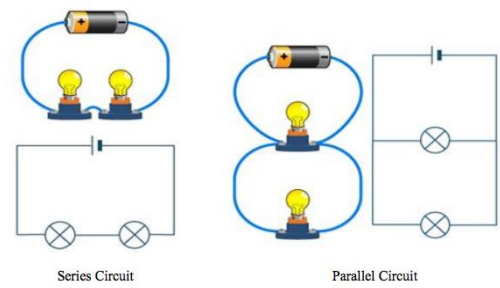
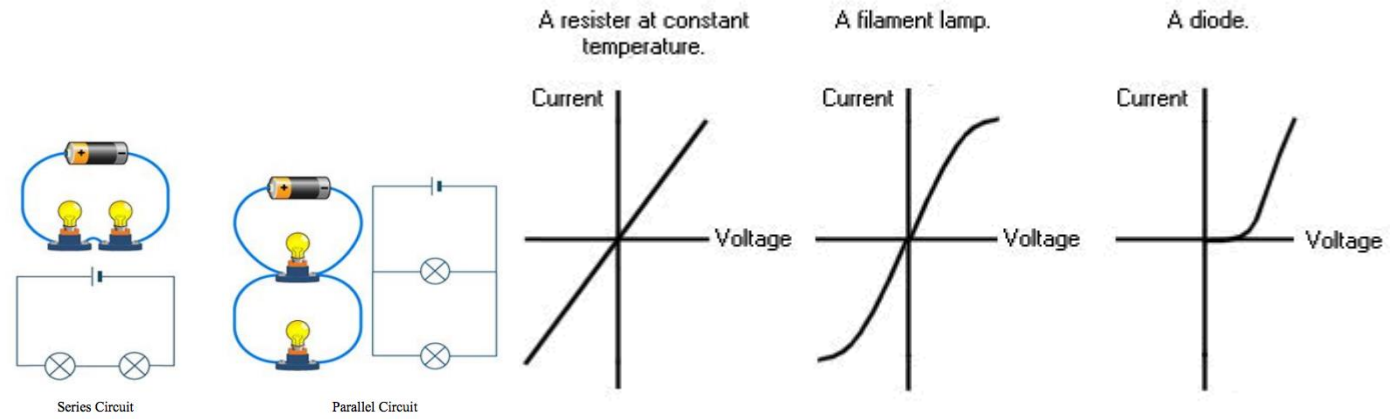
Potential difference (p.d.)	A measure of the electrical work done by a cell (or other power supply) as charge flows round the circuit. Potential difference is measured in volts (V).
Electric current	A flow of electrical charge. The size of the electric current is the rate at which electrical charge flows round the circuit.
Resistor	A component that acts to limit the current in a circuit. When a resistor has a high resistance, the current is low.
Directly proportional	When two quantities are directly proportional, doubling one quantity will cause the other quantity to double. When a graph is plotted, the graph line will be straight and pass through the origin.
Inversely proportional	When two quantities are inversely proportional, doubling one quantity will cause the other quantity to halve
Ohmic	The current flowing through an ohmic conductor is proportional to the potential difference across it. If the p.d. doubles, the current doubles. The resistance stays the same.
Non-ohmic	The current flowing through a non-ohmic resistor is not proportional to the potential difference across it. The resistance changes as the current flowing through it changes.



$P = V \times I$ power = voltage x current.
 $V = I \times R$ voltage = current x resistance.
 $Q = I \times t$ charge = current x time.
 $E = V \times Q$ energy = voltage x charge.
 $E = V \times I \times t$ energy = voltage x current x time.

$\frac{V_p}{V_s} = \frac{N_p}{N_s}$ transformer equation

Total cost = number of units x cost per unit.

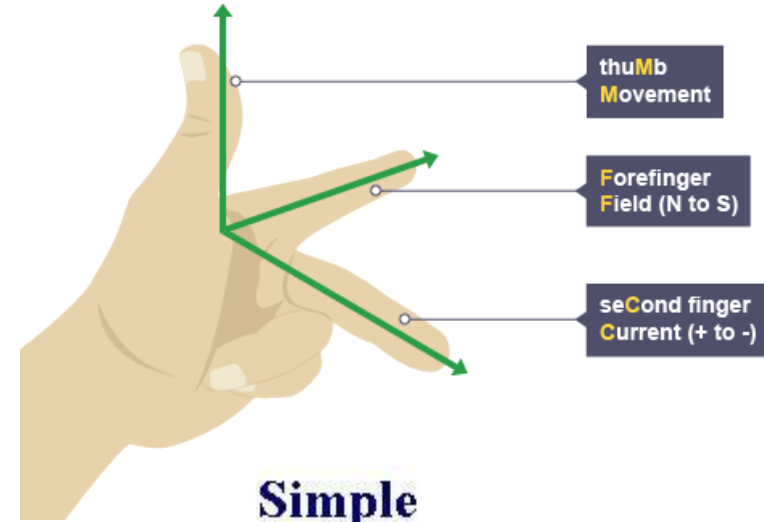
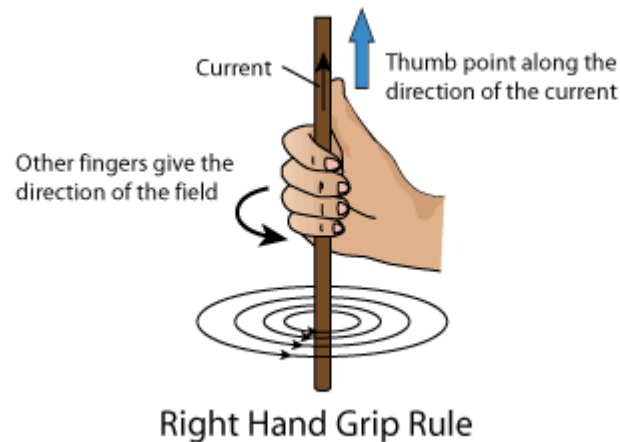
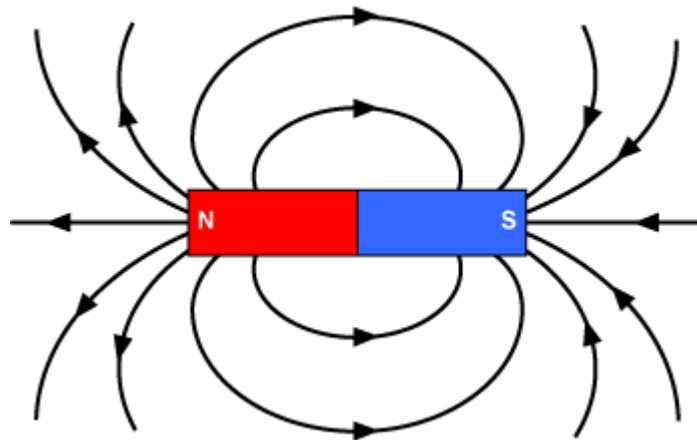


Key Terms

P3- Knowledge Organiser – Magnetism and Electromagnetism

Diagrams

Magnetic	Materials that are attracted by a magnet.
North-seeking pole	The end of the magnet that points north.
South-seeking pole	The end of the magnet that points south.
Permanent magnet	A magnet which produces its own magnetic field. It always has a north and a south pole.
Induced magnet	A magnet which becomes magnetic when it is placed in a magnetic field.
Right-hand grip rule	A way to work out the direction of the magnetic field in a current-carrying wire if you know the direction of the current.
Solenoid	A solenoid is a long coil of wire.
Flux density	The number of lines of magnetic flux in a given area. $F = B \times I \times L$ Force = magnetic flux density x current x length
Motor effect	The force produced between a conductor carrying a current within a magnetic field and the magnet producing the field



Simple Electric Motor

