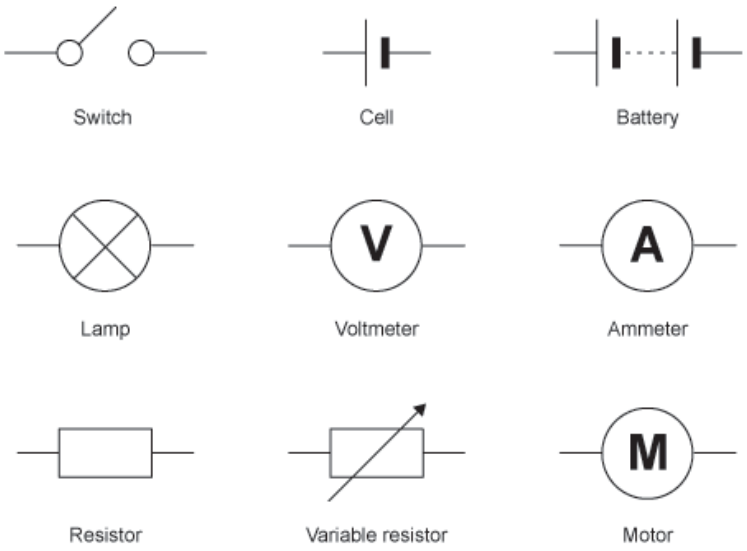
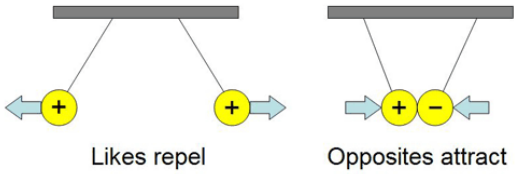
Electromagnets – Voltage and Resistance KEY LEARNING





The same charges repel (move away from) each other.
Opposite charges attract (move towards) each other.

The battery gives the electricity a push (voltage (V).
It's the amount of energy per unit of charge transferred.

Resistance makes it harder for electricity to flow.
Components with high resistance reduce the current flowing and shift energy to the surroundings.

Keywords

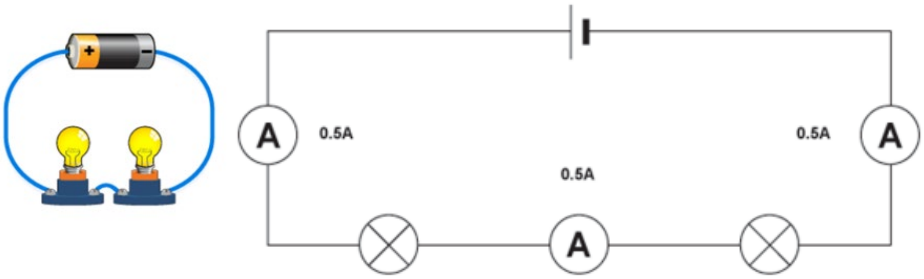
Voltage: The amount of energy shifted from the battery to the moving charge, or from the charge to circuit components, in volts (V).
Resistance: A property of a component, making it difficult for charge to pass through, measured in ohms (Ω).
Electrical conductor: A material that allows current to flow through it easily, and has a low resistance. E.g. metals.
Electrical insulator: A material that does not allow current to flow easily, and has a high resistance. E.g. plastics.

Electromagnets – Current KEY LEARNING

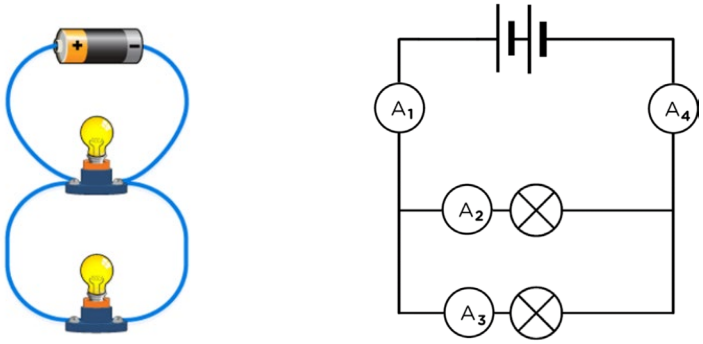
The flow of electricity along wires is called electric current.

Current carries energy to make things in the circuit work.

Current (Amps, A) is a movement of electrons and is the same everywhere in a series circuit.



Current (Amps, A) divides between loops in a parallel circuit, combines when loops meet, lights up bulbs and makes components work.



Keywords

In series: If components in a circuit are on the same loop.

In parallel: If some components are on separate loops.

Electromagnets - Key Learning
We call the flow of electricity – current.
Current carries energy to make things like bulbs work.
Two negative charges repel each other.
A negative charge will attract a positive charge.
The battery gives the electricity a push (voltage (V)).
Resistance makes it harder for electricity to flow.
Recognise that a series circuit is a single (complete) loop.
Recognise that a parallel circuit has many loops.
Conductors are good at letting electricity flow. They have a low resistance.
Insulators do not let electricity to flow. They have a high resistance.