

Subject	Physics
Unit/Topic	Year 10 Electricity

Key Vocabulary	Definition
Alternating current (ac)	Current that constantly changes direction.
Ammeter	Used to measure the current flowing through a component/part of a circuit. Must be connected in series.
Current	Charge flowing past a certain point per second. Measured in amps (A).
Diode	Will only allow current to flow one way through it.
Direct current (dc)	Current that flows in one direction.
Electric field	The area around a charged object where its force can be felt. The field is strongest when close to the charged object.
Light dependent resistor (LDR)	A light dependent resistor. The resistance decreases as light intensity increases.
Mains electricity	UK mains electricity is an ac supply (used when plugging appliances in). It is 230V and has a frequency of 50 Hz.
National Grid	A system of cables and transformers linking power stations to consumers.
Ohmic conductor	A conductor in which the resistance remains constant. This means the current flowing through it will be directly proportional to the potential difference.
Parallel circuit	There are two or more parallel 'branches' providing more than one path the electrons can follow around the circuit.
Potential difference	Work done when a coulomb of charge passes between two points. Measured in volts (V). A potential difference is needed for a current to flow.
Resistance	A measure of how easy it is for electrons to flow. Measured in ohms (Ω). If the resistance increases it is harder for electrons to flow so current decreases.

Series circuit	All of the components are in a single loop. There is only one path that electrons can follow around the circuit.
Static electricity	When two insulating materials are rubbed together, the friction causes electrons to move from one object to the other. The object that loses electrons becomes positively charged. The objects that gains electrons becomes negatively charged.
Step - down transformer	Used to decrease the potential difference.
Step - up transformer	Used to increase the potential difference.
Thermistor	A temperature dependent resistor. Resistance decreases as temperature increases.
Voltmeter	Used to measure the potential difference across a component. Must be connected in parallel.
Wires in 3 - core cable	<p>Live wire (blue) - carries the current from the supply to the appliance. Potential difference between the live wire and earth is 230V.</p> <p>Neutral wire (brown) - completes the circuit by carrying the current from the appliance back to the supply. The neutral wire is at or close to 0V.</p> <p>Earth wire (green & yellow) - safety wire which stops the appliance becoming live. The earth wire is at 0V. It only carries current if there is a fault.</p>