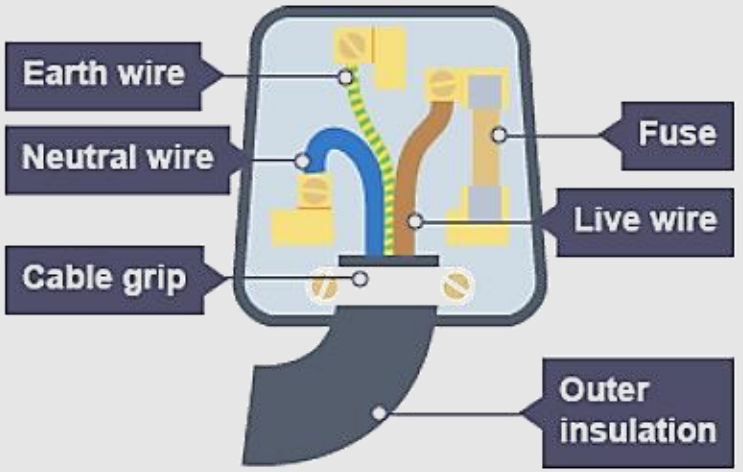
Physics: Domestic Uses and Safety

Key word	Definition
Earth Wire (Green + Yellow)	Provides a low resistance path for current to flow to earth.
Neutral Wire (Blue)	This wire has a voltage of 0V and completes the electrical circuit.
Live Wire (Brown)	Live wire carries the potential difference and has a voltage of 230 V.
Fuse	This melts when the current is too help and helps increase the safety of electrical devices.
Conductor	Materials such as copper transfer electricity easily and are used in electrical cables.
Insulator	Materials such as plastic do not transfer electricity easily. They coat cables to prevent shocks.
Pin	This is the part of a plug which goes into the wall. There are three which connect to the cables inside.

Top Facts

The UK mains supply is **230 V**.

The frequency of the UK mains supply is **50 Hz**



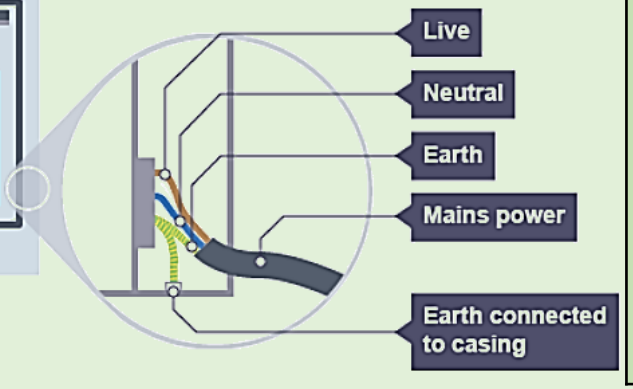
Plugs

It is important you remember the positions of the different coloured cables in a plug.

Blue	The **L** in blue tells you it goes to the left pin.
Stripe	The **T** in stripe tells you it goes to the top pin.
Brown	The **R** in brown tells you it goes to the right.

Earthing

Without the earth wire, if a fault occurs and the live wire becomes loose, it could touch the metal case of the cooker. The next person who uses the appliance could get electrocuted.



In normal operation current goes in through the live and out through the neutral. If the fault above occurs, current goes in through the live and out through the earth, blowing the fuse and cutting the appliance off from the mains.