Physics

Electricity at home

- Electricity comes from mains in our home
- It is supplied from the power station through national grid
- AC means alternating current
- in AC current changes direction 50 times per second
- UK main supply is 230 watts
- Unlike DC,AC have live and neutral wires instead of positive and negative
- Cables have three wires

Appliances are connected with three core cables

Livewire (Brown)

- It carries 230 volts from main supply
- It is the most dangerous wire

Neutral wire (Blue)

- It has a colour of blue
- it complete the circuit with life wire
- it has nearly zero volts

Earth wire(green or yellow)

- It has a colour of green or yellow
- it is a safety wire
- it stops the case becoming live

Dangers of electricity

- Live wire exposed we will get a shock like if a wire is damage so we will get a shock
- If there is a damp conditions and you know wire conduct electricity so then you will get a shock
- Overloaded sockets means overheating and there will be a fire risk
- Open circuits still has voltage even it is switched off or on

Safety measures

- fuses and circuits Breakers they cut off current if it gets too high
- Insulation plastic coating prevent contact with live wires
- Some appliances have no Earth wire because casing is fully insulated
- Metal casing connected to earth wire so current flows to ground Not through the person