Physics

Power

- Power tell us how much energy is transferred every second by a device
- The battery or power source gives energy to the charge To Move It around the circuit
- The charge releases this energy when it passes through other components

Formula
Energy transfer = charge x potential difference

E = QV

Unit of energy is joule

The unit of charge is coulomb

Potential difference has a unit of volt

The motor in an electric toothbrush is attached to a three volt battery a charge of 140 coulomb passes through the circuit what is energy

E = QV

E = 3 x 140
E= 420 J

The energy goes into

- **The Kinetic energy store of the motor**
- **Thermal energy store of the surrounding**

Power current and resistance

If you don't know voltage you can use ohms law

V = IR

This is ohms law

Power = VI

P=(IR) I

P = I2 R , power formulae

Calculate the energy transfer from a 200 volt source as 1000 coulombs of charge passes
E = QV
200000J

An appliance is connected to our 12 volt source of 4 Ampere current flows what will be the power

P = 192W

Apply has power that is equal to 2300 and current is 10 ampere find the voltage

v= IR

National grid

National grid is a network of cables and Transformers that carry electricity from power stations to Home School industry across Britain

- **No matter who you pay your bill to the national grid delivers the electricity**
- **national grid connect supplier to demands like power stations to home**
- **electric city must be supplied intensely as people use it cannot we too old**

