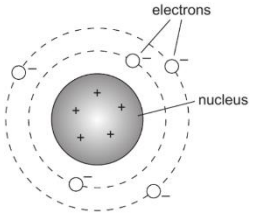
9J Force Fields and Electromagnets

1. Force Fields	
Force Field	The area around something where a non-contact force can affect things.
Non-Contact Force	A force which can affect something from a distance.
Magnetic Field	The space around a magnet where it can affect magnetic materials or other magnets.
Repel	To push away. Two of the same poles will repel each other.
Attract	To draw together. A north and a south pole will attract each other.
Earth's Magnetic Field	Protects the Earth from charged particles emitted by the Sun
Mass	The amount of matter that something is made up of- measured in grams / kilograms.
Gravitational Field	The space around any object with mass where its gravity attracts other masses.
Gravitational Field Strength	The force with which a gravitational field pulls on each kilogram of mass. Earths gravitational field strength is approximately 10 N/Kg.
Weight	The amount of force with which gravity pulls things. Measured in Newtons. Weight = mass x gravitational field strength
Gravitational Potential Energy (GPE)	Energy stored in objects in high places that can fall down.

2. Static Electricity	
Static Electricity	A positive or negative charge on an insulating material caused when rubbing transfers electrons from one material to another.
Nucleus	The central part of an atom- has a positive charge.
Electrons	Small particles moving around the nucleus in an atom- have a negative charge
Atom	
Charges	Something with a charge of static electricity can attract uncharged objects. Two charged objects can attract or repel each other.
Electric Field	The space around an object with a charge of static electricity where it can affect other objects.

3. Electromagnets	
Electromagnets	A coil of wire with electricity flowing in it that has a magnetic field around it.
Increasing Electromagnet Strength	Increasing the number of coils. Increasing the current in the wire. Using a magnetic material as a core.
Relays	A small current is used to switch on a circuit that carries a much bigger currne.t
Motor Effect	The force produced when a wire carrying a current is placed in a magnetic field.
Electric Motor	A coil of wire in a magnetic field. The coil spins when a current flows through it.