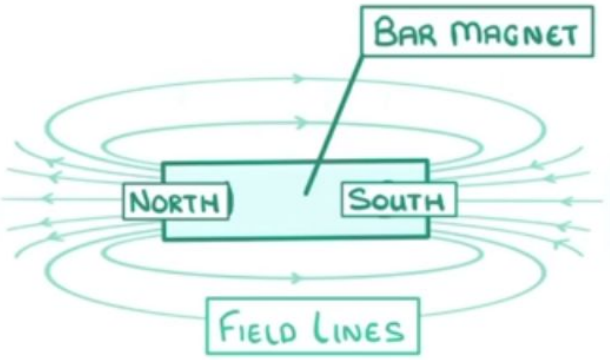
Y8 Magnetism

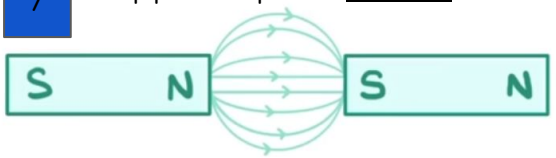
Learned	Revised	Confident
_____ % Achieved:_____		



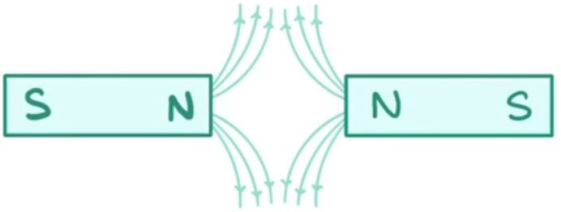
N°	Keyword	Definition
1	Magnet	A material or object that produces a magnetic field around it
2	Magnetic field	The region around a magnet where a force may be felt
3	Magnetic poles	Magnets have two poles, a north and a south. The magnetic field is strongest here
4	Electromagnet	Uses the current in a wire to create a magnetic field, it is only magnetic while the current is flowing
5	Motor	Formed from a loop of wire placed in a magnetic field

6 The magnetic metals

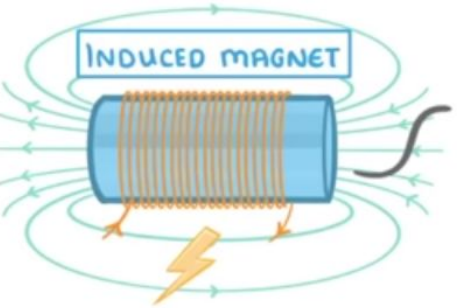
7 Opposite poles **attract**



The same poles **repel**



8 Electromagnet



N°	Facts
9	We can find the magnetic field by using a plotting compass and moving around the magnet
10	The like poles / same poles on two magnets will repel, this is how we test for a magnet. The opposite poles will attract.
11	Not all metals are magnetic, only Nickel, Cobalt and Iron are. Their alloys, such as steel are magnetic too as they contain these metals.
12	The coils of wire in an electromagnet are called a solenoid.
13	There are four ways we can increase the strength of an electromagnet: increase the current in the wire; increase the number of coils in the wire; increase the density of the coils in the wire; add an iron core to the coils of wire.

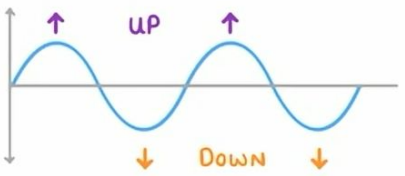
Y8 Waves

Learned	Revised	Confident

_____ % Achieved:_____

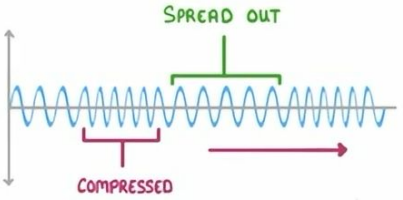
1 TRANSVERSE

'Oscillations are perpendicular to the direction of energy transfer'



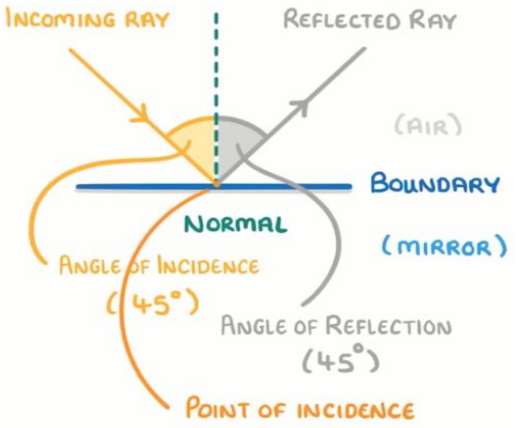
2 LONGITUDINAL

'Oscillations that are parallel to the direction of energy transfer'

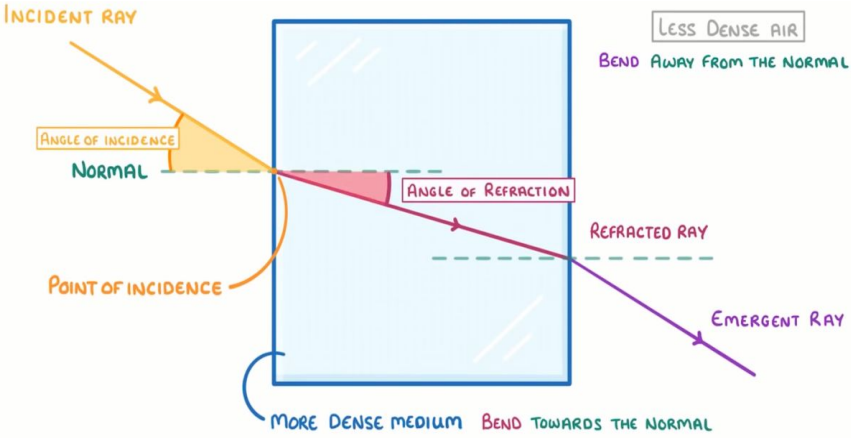


N°	Keyword	Definition
3	Amplitude	The height of the wave. It is measured in metres.
4	Compression	Region of high pressure, where the particles are closer together than normal.
5	Frequency	The number of waves per second (Hz)
6	Longitudinal	Longitudinal waves have oscillations (vibrations) that are parallel to the direction of transfer energy.
7	Rarefaction	Region of low pressure, where the particles are further apart than normal.
8	Transverse	Transverse waves have oscillations (vibrations) that are perpendicular to the direction of transfer energy.
9	Wavelength	The distance between two peaks (or two troughs). It is measured in metres

10 Reflection



11 Refraction

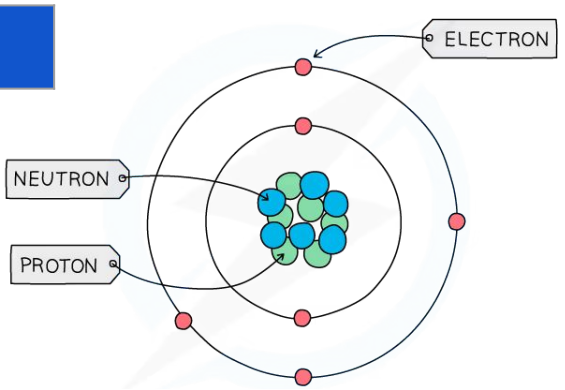


N°	Facts
12	Law of reflection: The angle of incidence is equal to the angle of reflection
13	Specular reflection happens on plane mirrors and smooth surfaces; Diffuse reflection happens on rough surfaces
14	Refraction happens when waves change speed when moving through substances with different densities e.g. air, glass and water
15	When a wave enters a more dense medium the wave bends towards the normal
16	Refraction is how rainbows form - different colours/wavelengths of light "bend" different amounts

Y8 Static electricity project

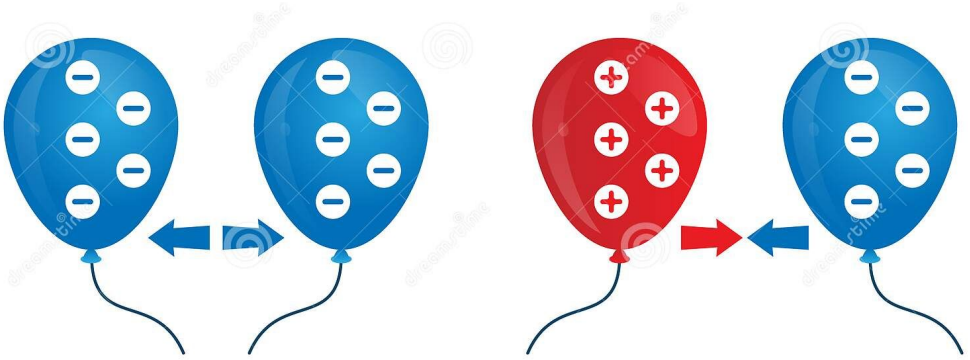
Learned	Revised	Confident
_____ % Achieved:_____		

1 **The atom**

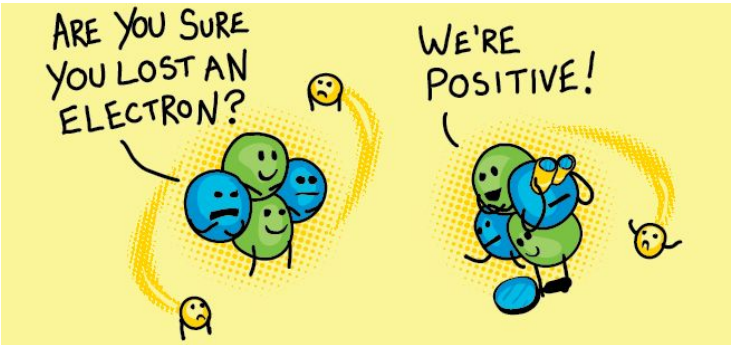


N°	Keyword	Definition
2	Electrostatic force	A force between two electrically charged objects. These forces can be attractive or repulsive.
3	Insulator	A material that does not allow current to flow through it easily, eg wood or glass.
4	Static electricity	A build-up of electrical charge on an object, which can be either positive or negative.

5



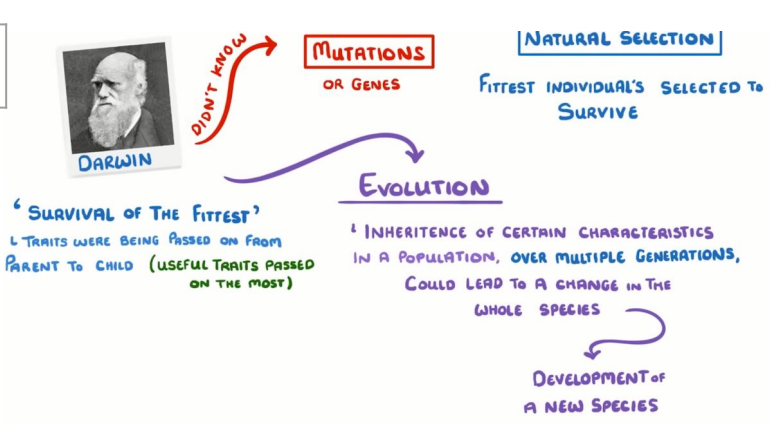
N°	Facts
6	The charges formed in static electricity is due to the movement of electrons.Insulating materials can lose or gain electrons by friction
7	Electrons are able to be lost and gained as they orbit around the edges of atoms and they have a very small mass
8	An object that gains electrons will become negatively charged, an object that loses electrons will become positively charged
9	Objects with the same charges will repel and objects with the opposite charges will attract, similar to the magnets shown here



Y8 Genetics and evolution

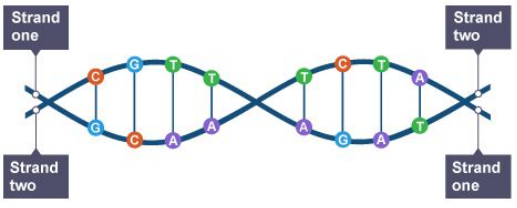
1

Learned	Revised	Confident
_____ % Achieved:_____		

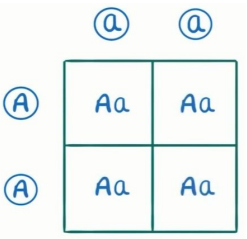


N°	Keyword	Definition
2	Adaptation	A characteristic that helps an organism to survive in its environment.
3	Alleles	Different forms of the same gene
4	Biodiversity	The variety of plant and animal life in the world or in a particular habitat, a high level of which is important and desirable
5	DNA	Deoxyribonucleic acid. This is the genetic code which makes up genes.
6	Evolution	The process by which small changes in organisms occur over long periods of time and new species are formed.
7	Extinct	All the organisms of a species die out.
8	Gene	A small section of DNA that produces a characteristic
9	Inherit	Passing on of traits from parents to their offspring
10	Species	A group of similar organisms that can breed with one another to produce fertile offspring
11	Variation	The differences between organisms in a species e.g. humans

12 DNA structure



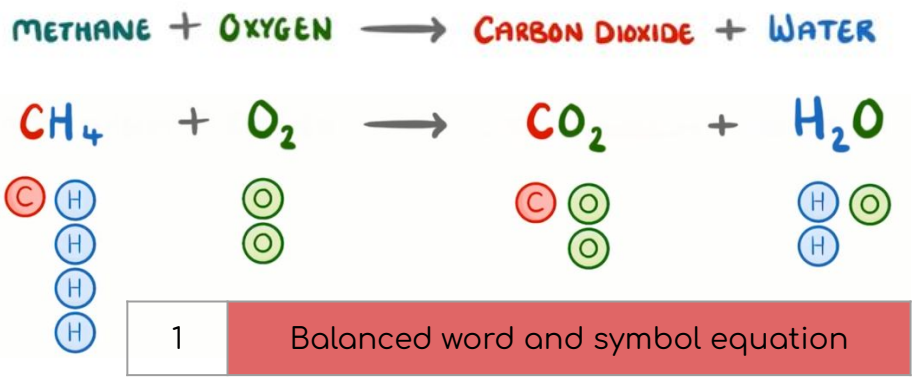
13 Punnett square



N°	Fact
14	Variation can be caused by genetics, the environment or both
15	Adaptations can be structural, behavioural or physiological.
16	Extremophiles are organisms that live in extreme environments. These places have conditions outside of the normal range that most life can live in

Y8 Chemical reactions

Learned	Revised	Confident
_____ % Achieved:_____		



1	Balanced word and symbol equation

N°	Keyword	Definition
2	Combustion	When a fuel reacts with oxygen to release useful energy. It is another name for burning
3	Displacement reaction	A more reactive element displaces/replaces a less reactive element from a compo
4	Endothermic	A physical change or chemical reaction that takes in energy from the surroundings.
5	Exothermic	A physical change or chemical reaction that releases energy to the surroundings.
6	Reactant(s)	Chemical(s) present at the start of a reaction. Reactants appear on the left of an equation, before the arrow
7	Product(s)	Chemical(s) present at the end of a reaction. Products appear on the right of an equation, after the arrow
8	Thermal decomposition	When a compound is heated causing it to break down into simpler products

9

Octane + Oxygen → Carbon dioxide + Water

Reactants
The things we *react* together

Products
The things we *produce*

N°	Fact
10	A chemical reaction always produces a new substance, atoms are rearranged but the total number stays the same
11	We can identify chemical reaction in a number of ways e.g. bubbles/fizzing, temperature changes and colour changes
12	A physical change, e.g. melting or dissolving, does not result in a new substance. These are easy to reverse as no new bonds form
13	We can represent chemical reactions in word or symbol equations Reactants → Products