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THE CEDARS ACADEMY
Lionheart Educational Trust

Knowledge Organiser Booklet

Year 9

Spring Term

Ways to use your knowledge organiser

	Look, Cover, Write, Check	Self Quizzing	Mind Maps	Paired Retrieval	Definitions to Key Words
Step 1	Look at and study a specific area of your knowledge organizer. 	Use your knowledge organizer to create a mini quiz. Write down questions using your knowledge organizer. 	Create a mind map with information from your knowledge organiser. 	Like self quizzing, use your knowledge organizer to create a quiz. 	Write down the key words and definitions. 
Step 2	Cover or flip the knowledge organizer over and write down everything you remember. 	Cover or flip the knowledge organizer over and answer the questions and remember to use full sentences and key words/vocabulary. 	Add pictures to represent different facts, knowledge. Try to categorise different areas in different colours. 	Ask a family member to ask you the questions and tell you which ones you get right and which ones you get wrong. 	Try not to use your knowledge organiser to help you. 
Step 3	Check what you have written down. Correct any mistakes in a different coloured pen and add anything you missed. Repeat. 	Check your answers. Correct any mistakes in a different coloured pen and add anything you missed. Repeat. 	Try to make connections that link information together. 	Following the quiz, summarise which areas you got wrong and need to revise further. 	Use a different coloured pen to check you work and correct any mistakes you may have made. 

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English

Unit 2 – Shakespearean Tragedy

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Definition of Shakespearean Tragedy: *A **Shakespearean tragedy*** is a play in which a character (usually a good and noble person of high rank) is brought to a disastrous end in his or her confrontation with a superior force (fortune, the gods, social forces, universal values), but also comes to understand the meaning of his or her deeds and to accept an appropriate punishment.

Typical Genre Features

Most of the tragedies written by Shakespeare are revenge and ambition tragedies. Othello, Hamlet, King Lear and **Macbeth are dark tragedies showing revenge and ambition.**
Romeo and Juliet is a romantic tragedy , where there is a death of two lovers.
All Shakespearean tragedies have a tragic hero, who is a main character cursed by fate and possessing a tragic flaw.
Shakespearean tragedies play out the struggle between good and evil.

Archetypal Characters

Tragic heroes tend to respond with strong, overpowering emotions--pride, lust, grief, rage. This often results in risky attitudes and reactions.
The Shakespearean tragedies often focus on the fall of a nobleman. By presenting the audience with a man with excessive wealth or power, his eventual downfall is all the more tragic.
Shakespeare's tragic heroes are all fundamentally flawed. It is this weakness that ultimately leads to their downfall.
Shakespeare's tragic heroes often fall victim to external pressures. Fate, evil spirits and manipulative characters all play a hand in the hero's downfall.

Typical Structure

1. Exposition – Usually takes place in the first and second act. The audience learns about the general setting, the characters and their traits, problems of the play, major conflicts and the tragic hero's flaw.
2. Rising action – Extends up to the third and fourth act. The plot gathers momentum and action increases. The plot reaches a crisis and where the hero makes a decision that changes the course of the play, sealing the hero's fate
3. Falling action – Begins in the fourth act. The opposite force becomes active and begins to resist. They start plotting the removal of the hero. The power of the tragic hero starts declining.
4. Resolution – The last and final act. The opposite forces reach full power and defeat the tragic hero. This is the time when the hero recognises his faults, yet cannot do anything about it.

Social and Historical Context

- The word tragedy was derived from the Greek word *tragoidia*, meaning 'the song of the goat,' because in ancient Greece the theatre performers used to wear goatskin costumes.
- Shakespearean tragedies are highly influenced by Greek drama and Aristotle's notion of Tragedy. It was Aristotle who had first described the genre in his 'Poetics.'

The elements of a Shakespearean Tragedy

1. ***Tragic waste***: The hero usually dies along with this opponent. When good is lost along with evil, the unnecessary loss is known as tragic waste.
2. ***Conflict***: This may be external, such as a problem or a person, or internal, such as a struggle the hero engages in with his or her fatal flaw.
3. ***Catharsis***: This refers to the cleansing of the audience's emotions; you may feel pity, fear for characters and emphathise with their hardships.
4. ***Supernatural elements***: They create an atmosphere of wonder and fear and are used to advance the story.
5. ***Absence of poetic justice***: In Shakespeare's tragedies, there is a lack of poetic justice as it is not realistic that good deeds are always rewarded and evil is punished. There is partial justice in his tragedies.
6. ***Comic relief***: Shakespeare wanted to relieve the tension for the audience and lighten up the mood in particular scenes. An audience would normally find these types of scenes after a tragic event.

Notable Shakespearean Tragedies (in chronological order)

- **Titus Andronicus -1591**
- **Romeo and Juliet - 1595**
- **Hamlet - 1601**
- **Toilus and Cressida - 1602**
- **Othello - 1604**
- **King Lear - 1605**
- **Antony and Cleopatra - 1606**
- **Macbeth - 1606**
- **Timon of Athens - 1606**
- **Coriolanus - 1608**
- **Cymbeline – 1611**

Year 9 Shakespearean Tragedy Vocabulary Lists

Hubris	Fate	Hostility	Misjudgements
Catastrophe	Isolation	Calamity	Catharsis
Masculinity	Femininity	Monologue	Soliloquy
Exposition	Magnitude	Protagonist	Finality
Vengeance	Conflict	Superstition	Heinous
Valiant	Denouement	Juxtaposition	Monologue
Allusion	Catharsis	Cursed	Superior
Judgement	Resolution	Irony	Morality
Destructive	Stature	Authority	Misfortune

Maths

Block 15 – Algebraic Manipulation

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Term	A mathematical form expressed symbolically, separated by an operator (usually + or -) or in brackets. E.g. x , $2x$, $-5y^2$, 7
Coefficient	The multiplier in a **term**. E.g. $-5x$, where -5 is the coefficient of x.
Additive Inverse	The number with the same absolute value but opposite direction. E.g. 5 and -5 -0.7 and 0.7
Zero Pair	A number and its **additive inverse**, the sum of which is zero. E.g. $5 + (-5) = 0$ $(-0.7) + 0.7 = 0$
Expression	An algebraic form consisting of a number of **terms**. E.g. $a + 2$, $3b - x^2$
Equation	A mathematical statement showing that two (or more) **expressions** are equal.
Identity	An **equation** that holds for all values of the variables.
Formula	An **equation** linking sets of physical variables.

The Subject of a Formula	The subject of a formula appears once, in isolation, on one side of the equals sign. E.g. $F = M \times v^2$, where F is the subject of this formula.
Substitute	To replace the algebraic letter with a number, when we know its value.
Rearrange	To manipulate an equation/identity/formula by performing the same operations to both sides of the equals sign.

The terms $2x$ and $-2x$ make a zero pair.

$$3y + 2x = 10$$
$$-2x \quad\quad -2x$$

The same operation is performed on both sides of the equals sign. This is written underneath in a different colour.

$$\frac{3y}{3} = \frac{10 - 2x}{3}$$

This horizontal line means divide (just like in a fraction).

y is now the subject of the of this equation.

$$y = \frac{10 - 2x}{3}$$

Maths

Block 15 – Algebraic Manipulation

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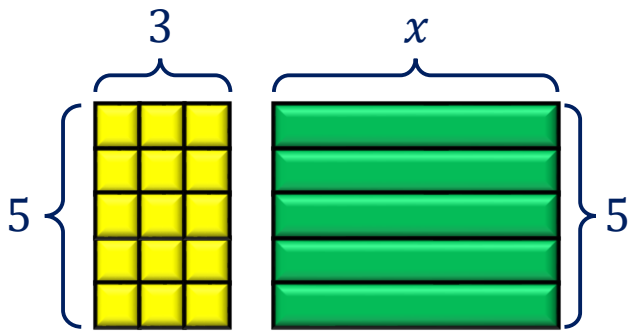
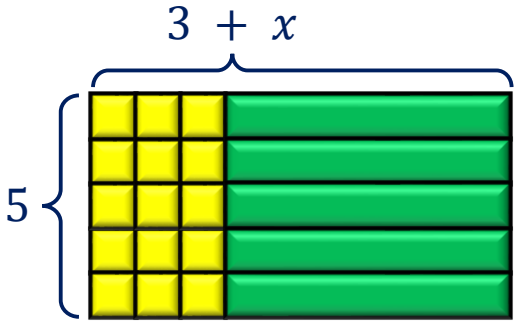
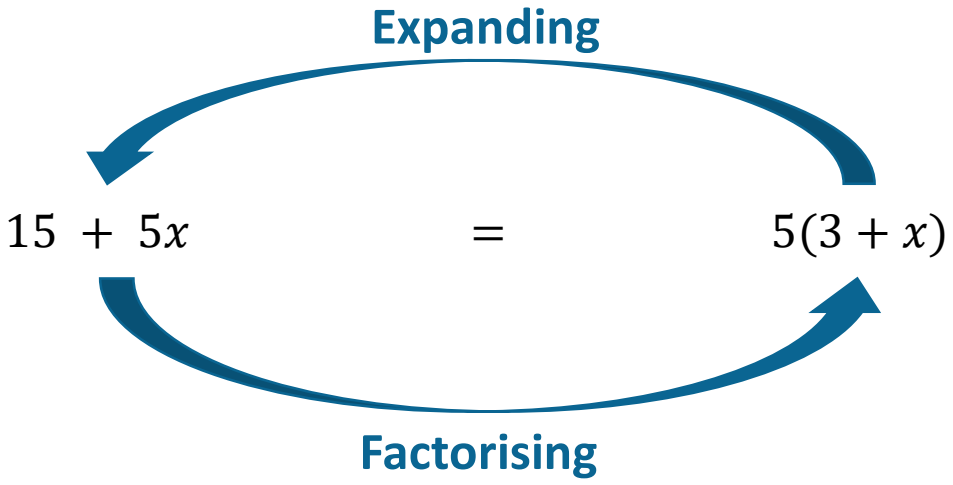
Expand	To multiply out the brackets.
Factorise	To draw out and divide by the highest common factor.







Algebraic Conventions
$1x = x$
$x + x = 2x$
$x + x + x = 3x$
$x^1 = x$
$x \times x = x^2$
$x \times x \times x = x^3$

Forming Expressions	
An integer	n
An even number	$2n$
An odd number	$2n + 1$
Three consecutive numbers	n $n + 1$ $n + 2$

Maths

Block 16 – 2D Geometry Two

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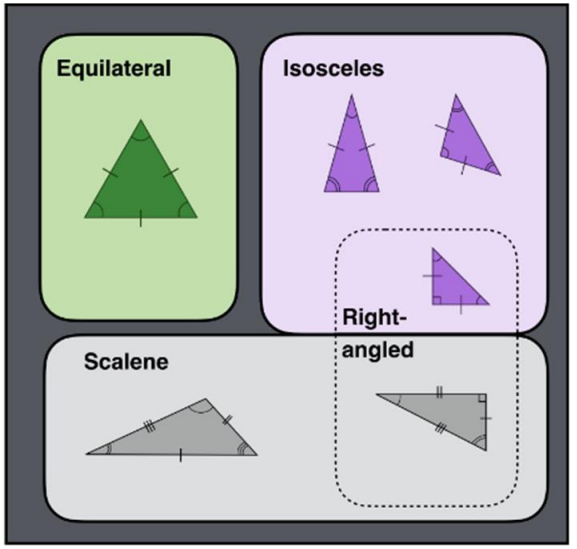
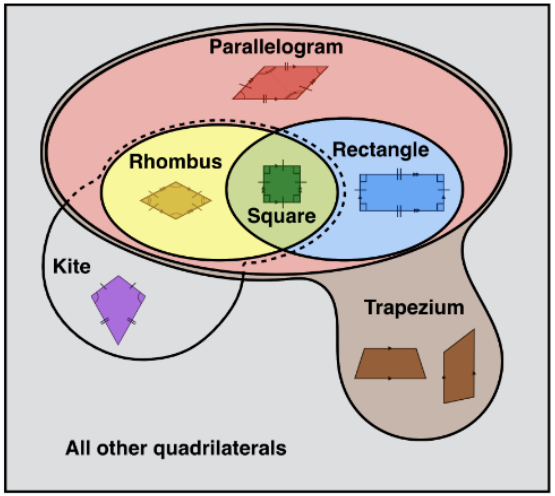
Equilateral triangle	All sides are equal length and all angles are equal.
Isosceles triangle	Two sides (called the legs) are equal length and two angles are equal. The other side is called the base.
Scalene triangle	All sides are different lengths and all angles are different.
Right-angle triangle	One angle measures 90° and is opposite the longest side, which is called the hypotenuse.
Interior angle	An angle inside a shape, between two joined sides.
Interior angles of a triangle	Sum to 180°.
Polygon	2-Dimensional closed shape where all sides are straight.
Regular Polygon	Polygon where all sides are equal length and all angles are equal.
Quadrilateral	Polygon with exactly four sides.
Interior angles of a quadrilateral	Sum to 360°.
Diagonal	Line segment joining two non-consecutive vertices of a polygon.

Parallelogram	Quadrilateral with two pairs of parallel sides.
Rhombus	Quadrilateral with all sides equal length.
Rectangle	Quadrilateral with all angles are right-angles (90°).
Square	Quadrilateral with all sides equal length and all angles right-angles.
Kite	Quadrilateral with two pairs of adjacent sides equal length.
Trapezium	Quadrilateral with one pair of parallel sides.

Triangles



Quadrilaterals



Maths

Block 16 – 2D Geometry Two

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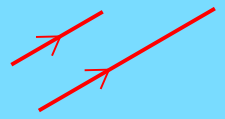
Polygon	2-Dimensional closed shape where all sides are straight.
Regular Polygon	Polygon where all sides are equal length and all angles are equal.
Quadrilateral	Polygon with exactly four sides.
Interior angles of a quadrilateral	Sum to 360°.
Diagonal	Line segment joining two non-consecutive vertices of a polygon.

Polygons	
Three sides	Triangle
Four sides	Quadrilateral
Five sides	Pentagon
Six sides	Hexagon
Seven sides	Heptagon
Eight sides	Octagon
Nine sides	Nonagon
Ten sides	Decagon

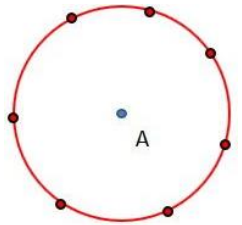
Parallel	Always the same distance apart and never meeting.
Perpendicular	At right angles (90°).
Line	Geometrical object that is straight, infinitely long and infinitely thin.
Line Segment	Part of a line that connect two points.
Ray	Part of a line with a start point but no end point.
Vertex	Point where two or more line segments meet; a corner. Vertices is the plural form.

Parallel



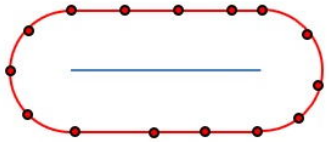
Perpendicular

The loci of points equidistant to point A.

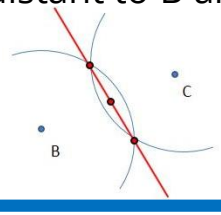


Locus (Loci plural)	The point(s) satisfied by a given set of conditions.
Equidistant	Equally distant.
Bisect	Cut into two equally sized parts.

The loci of points equidistant to a line.



The loci of points equidistant to B and C.



Maths

Block 16 – 2D Geometry Two

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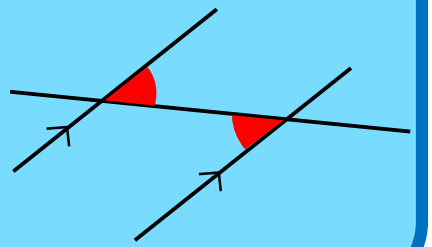
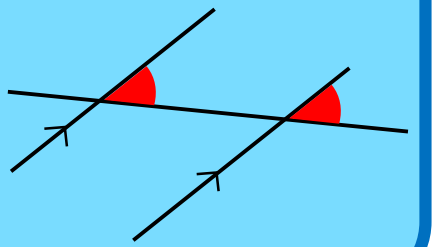
Supplementary angles	Angles that sum to 180 degrees.
Complementary angles	Angles that sum to 90 degrees.
Transversal line	A line that crosses at least two other lines.
Alternate angles	Angles formed when a transversal crosses two or more parallel lines; the angles inside the parallel lines but on opposite sides of the transversal are alternate angles.
Corresponding angles	Angles that are in corresponding positions in relation to the parallel lines AND on the same side of the transversal line. When two angles are corresponding they are equal.
Co-interior angles	Co-interior angles both lie between two lines and on the same side of a transversal. **<u>If</u>** the two lines are parallel, then co-interior angles add to 180° and so are supplementary. Co-interior angles can also be called 'Allied'

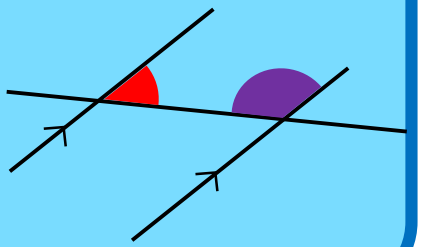
Alternate Angles



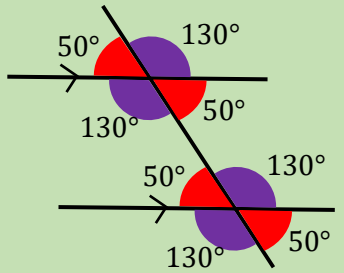
Corresponding Angles



Co-interior Angles

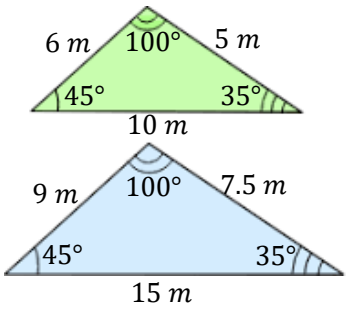


Example



Congruent	The exact same shape and size. The shape can be reflected or rotated.
Similar	The same shape but a different size. All the corresponding lengths are in the same ratio. All the angles are the same.

Similar triangles:
(1.5 times bigger)



Science

Biology Topic B1
Cell Structure and Transport

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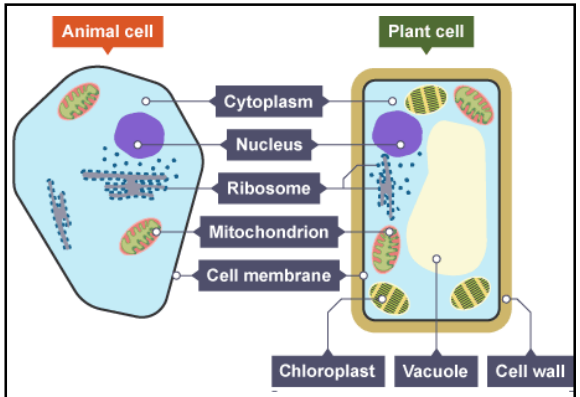
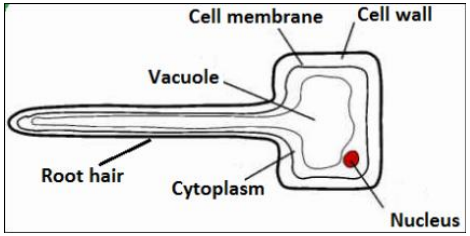
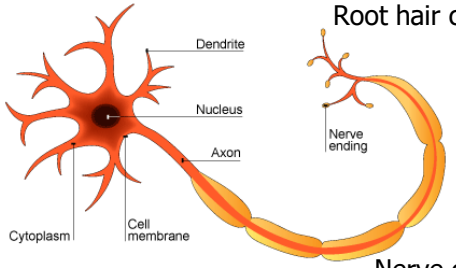
Section 1: Cell Structure		Eukaryotic		Prokaryotic
Cell Structure	**Function**	**Animal Cells**	**Plant Cells**	**Bacterial Cells**
Nucleus	Contains **genetic information** that **controls** the functions of the cell.	Y	Y	
Cell membrane	Controls what **enters** and **leaves** the cell.	Y	Y	Y
Cytoplasm	Where many **cell activities** and **chemical reactions** within the cell occur.	Y	Y	Y
Mitochondria	Provides **energy** from **aerobic respiration**.	Y	Y	
Ribosome	**Synthesises** (makes) **proteins**.	Y	Y	Y
Chloroplast	Where **photosynthesis** occurs.		Y	
Permanent vacuole	Used to **store** water and other chemicals as **cell sap**.		Y	
Cell wall	**Strengthens** and **supports** the cell. (Made of **cellulose** in plants.)		Y	Y
DNA loop	A loop of **DNA**, not enclosed within a nucleus.			Y
Plasmid	A **small circle of DNA**, may contain **genes** associated with antibiotic resistance.			Y

Section 2: Specialised Cells	
Specialised Cell	**How structure relates to function**
Sperm cell	**Acrosome** contains **enzyme** to break into egg; **tail** to swim; many **mitochondria** to provide **energy** to swim.
Nerve cell	**Long** to **transmit electrical impulses** over a distance.
Muscle cell	Contain **protein fibres** that can **contract** when energy is available, making the cells shorter.
Root hair cell	Long extension to **increase surface area** for water and mineral uptake; **thin cell wall**.
Xylem cell	**Waterproofed** cell wall; cells are **hollow** to allow water to move through.
Phloem cell	Some cells have lots of **mitochondria for active transport**; some cells have very little cytoplasm for sugars to move through easily.

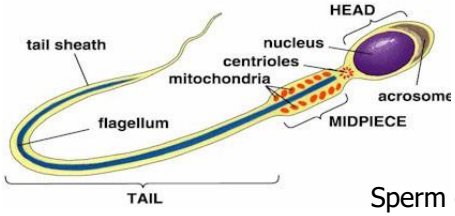




Root hair cell



Nerve cell



Sperm cell

Science

Biology Topic B1
Cell Structure and Transport

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Section 3: Microscopy	
Magnification	The degree by which an object is **enlarged**. **Magnification = size of image / size of real object**
Resolution	The ability of a microscope to **distinguish detail**.
Light microscope	Basic microscope with a maximum magnification of 1500x. **Low resolution.**
Electron microscope	Microscope with a much **higher magnification** (up to 500 000x) and resolving power than a light microscope. This means that it can be used to study cells in much finer detail.

Section 4: Orders of Magnitude		
Unit Prefix	**Size in metres**	**Standard Form**
Centimetre (cm)	0.01m	10^{-2}m
Millimetre (mm)	0.001m	10^{-3}m
Micrometre (μm)	0.000001m	10^{-6}m
Nanometre (nm)	0.000000001m	10^{-9}m

Section 7: Transport Across Membranes		
Cell Structure	**Definition**	**Uses**
Diffusion	**Spreading** out of the particles (gas/ solution) resulting in a **net movement** from an area of **higher concentration** to an area of **lower concentration.**	**Oxygen** and **carbon dioxide** in **gas exchange** (leaves and alveoli). **Urea** from **cells** into the **blood plasma** for excretion in the kidney.
Osmosis	The diffusion of water from a dilute solution to a concentrated solution through a partially permeable membrane.	Movement of water into and out of cells.
Active Transport	The movement of substances from a more dilute solution to a more concentrated solution (against a concentration gradient). Requires energy from respiration.	**Absorption** of **mineral ions** (low concentration) from soil into **plant roots**. **Absorption** of **sugar molecules** from lower concentrations in the **gut** into the **blood** which has a higher sugar concentration.

Section 8: Factors Affecting Diffusion	
Factor	**Explanation**
Difference in concentrations (**concentration gradient**)	The greater the difference in concentrations, the faster the rate of diffusion.
Temperature	Particles move more quickly at higher temperatures, so rate of diffusion increases.
Surface area of membrane	The greater the surface area the quicker the rate of diffusion.

Section 9: Adaptations of Exchange Surfaces
Large surface area
Thin membrane to provide a **short diffusion path**
Ventilation (in animals for gas exchange – maintains a concentration gradient)
Efficient blood supply (in animals – maintains a concentration gradient)

Science

Chemistry Topics 1 & 2
Atomic Structure and Periodic Table

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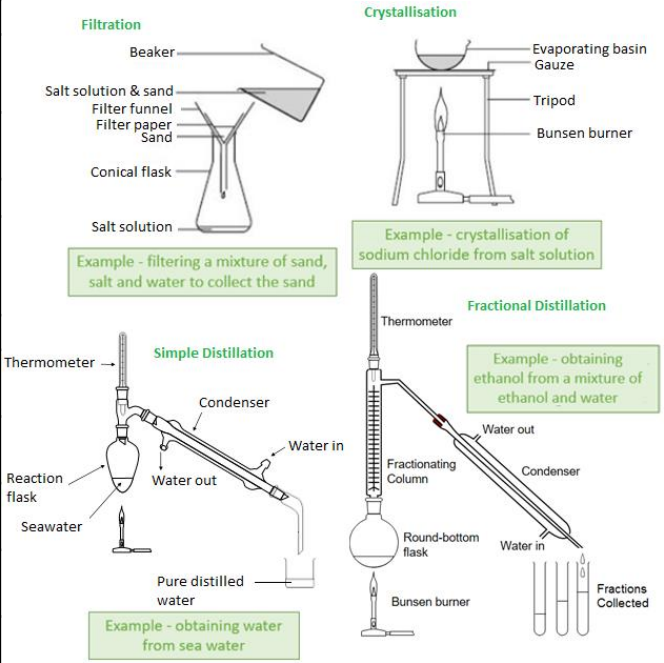
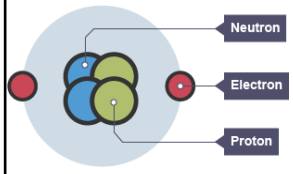
Section 1: Key Terms	
Atom	The **smallest part of an element** that can still be recognised as that element. **No** overall **electrical charge**. **Very small**, radius of 0.1nm.
Element	An element **contains only one type of atom**. Found on the Periodic Table. There are about 100 elements.
Compound	**Two or more different elements chemically bonded** with each other.
Mixture	**Contains two or more elements or compounds not chemically bonded**. Can be separated using physical methods e.g. by filtration, crystallisation, distillation and chromatography.
Filtration	A process that **separates** mixtures of **insoluble solids and liquids**.
Crystallisation	A process that **separates a soluble solid from a solvent** by **evaporating** the liquid to leave crystals.
Distillation	A process that **separates a mixture of liquids** based on their **boiling points**.
Chromatography	A process that **separates mixtures** by **how quickly they move through a stationary phase** (e.g. paper chromatography)
Isotope	An atom of the **same element with same number of protons** but **different numbers of neutrons**.
Relative atomic mass	An **average value of mass** that takes account of the **abundance of the isotopes** of the element.



Section 2: Development of Atomic Model	
Plum Pudding 	Thompson's plum pudding model shows that the atom is a **ball of positive charge** with **negative electrons embedded** in it. Was **incorrect**.
Nuclear Model 	**Rutherford's** alpha particle scattering experiment found a central area of positive charge. The nuclear model has a **positive nucleus** and **electrons in shells**. **Chadwick** later discovered **neutrons**. **Bohr** discovered the arrangement of **electrons in shells**.

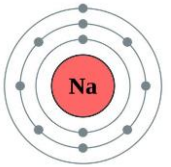
Mass number – the total number of **protons** and **neutrons**

Atomic number – the **number of protons** (the number of electrons is the same in an atom)

Electron configuration– Electrons fill the first energy level (shell) first.
Maximum electrons: **2 electrons in first shell, 8 in the 2nd, 8 in the 3rd.**

Section 3: Properties of Sub-Atomic Particles			
Sub-atomic particle	**Mass**	**Charge**	**Position in Atom**
Proton	1	+1	Nucleus
Neutron	1	0	Nucleus
Electron	Very small	-1	Orbiting in shells

$^{23}_{11}Na$



Science

Physics Topic P1
Conservation and dissipation of energy

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Section 1: Key terms	
Dissipation	Energy becoming **spread out** to the stores of surrounding objects (usually wasted thermal energy.)
Lubrication	A method of reducing unwanted energy transfers by application of a **lubricant** (e.g. **oil**) to **reduce friction**. Occurs in machines.
Insulation	A method of reducing energy transfers by the use of **insulators**. Occurs in buildings e.g. Loft insulation.
Conservation of energy	The law that states that **energy cannot be created or destroyed**.
Closed system	An isolated system in which **no energy transfers** take place **out of or into** the **energy stores** of the system.
Work	Work is done on an object when a force makes the object move.
System	Object or group of objects.
Friction	A **contact force** resisting the relative motion between two surfaces. Friction in machines always **causes energy** to be **wasted**.
Input energy	**Energy supplied** to a device.
Useful energy	Energy transferred to where it is wanted in the way it is needed.
Wasted energy	Energy that is **not usefully** transferred.
Efficiency of a device	The proportion of the total input energy that is transferred in useful ways.

Section 3: Methods of energy transfer (also known as energy carriers)	
Mechanical	Energy transferred by forces acting on objects.
Electrical	Energy transferred when an electric current flows through a device.
Radiation	Energy transferred by electromagnetic radiation (visible light, microwaves, etc.) or by sound waves.
Heating	Energy transferred by conduction, convection or radiation.

Section 2: Different kinds of energy stores	
There are a limited number of **energy stores**.	
Chemical energy	(e.g. fuel + oxygen) – Can be changed by bonds being made/broken
Kinetic energy	All **moving** objects have it.
Gravitational Potential energy	Energy stored in objects raised up against the force from **gravity** (possessed by anything that can **fall**.)
Elastic Potential energy	Energy stored in an object that has been **stretched** (stretched springs, rubber bands, elastic band etc.)
Thermal (Heat) energy	Flows from **hot** objects to colder objects.
Nuclear store	Energy stored in the **nuclei** of atoms. Can be released by the fusing or splitting of nuclei.
Magnetic	Two separated magnets that are attracting, or repelling.
Vibrational	Energy from vibrations or moving to and fro (e.g. a pendulum.
Light, electrical (as in a current) or sound are **not energy stores**. These are active processes and cannot be stored in a stable state. Electricity is a **flow of charge** that **transfers energy** from **one energy store to another**.	

Section 4: Energy transfers	
A Coal fire	Energy is shifted from a store when a fuel like coal burns. The chemical store (fuel) is depleted and the thermal store is filled.
Bow & arrow	Elastic potential energy → kinetic and thermal energy
Placing a book on a shelf	When the book is lifted onto the shelf, energy is shifted from the chemical store of your arm to the gravitational store of the book.
Apple falling from a tree	When an apple falls and gains speed, its store of gravitational potential energy decreases and its kinetic energy store increases. When it hits the ground its kinetic energy is then transferred into thermal and sound energy.

Science

Physics Topic P1
Conservation and dissipation of energy

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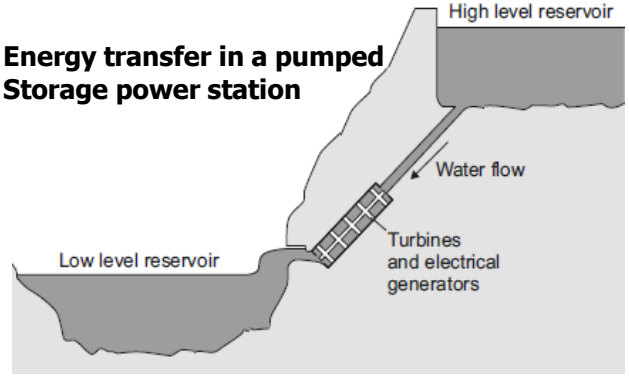
Energy transfer in a pumped Storage power station



When electricity is needed, water from the high level reservoir is allowed to flow into the low level reservoir. The flowing water generates electricity. The water in the high level reservoir stores **gravitational potential energy**. The flowing water has **kinetic energy**. The water turns the turbine which is connected to the generator. The generator produces some **sound**, this is **wasted energy**.

Section 5: Equations to learn

Equation	Units
Kinetic energy = 0.5 x mass x velocity^2 $E_k = 0.5\ m\ v^2$	Energy – Joules (J) Mass – kilograms (kg) Velocity – metres per second (m/s)
Gravitational potential energy = mass x gravitational field strength x height $E_p = m\ g\ h$	Energy – Joules (J) Mass – kilograms (kg) Gravitational field strength – Newtons per kilogram (N/kg) Height – metres (m)
Power =energy transferred ÷ time $P = \frac{E}{t}$	Power – Watts (W) Energy transferred – Joules (J) Time – seconds (s)
Power = work done ÷ time $P = \frac{W}{t}$	Power – Watts (W) Work done – Joules (J) Time – seconds (s)
Work done = force x distance moved	Work done – Joules (J) Force – Newtons (N) Distance – Metres (m)
Efficiency = $\frac{\text{useful energy output}}{\text{total energy input}}$	Energy – Joules (J)
Efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	Power – Watts (W)

Section 6: Improving efficiency (HT)

Why devices waste energy	How to reduce the problem
Friction between moving parts **causes heating**	**Lubrication** of moving parts **reduces friction**
The resistance of a wire causes wire to get **hot** when **current passes** through.	Use **wires** with **as little resistance** as possible
Air resistance causes force on a vehicle that **opposes** it's motion.	**Streamline** the **shape** of the vehicle to reduce air resistance.
Working machinery **creates sound**	**Tighten loose parts** to reduce vibration which will reduce the noise.

Section 7: Energy dissipation & Electrical appliances

An electrical appliance is designed for a particular purpose and should dissipate (waste) as little energy as possible.

Appliance	Useful energy	Wasted energy
Light bulb	**Light** emitted from glowing element	Filament heats surroundings
Electric heater	**Heating** the surroundings	Light emitted from the glowing element
Toaster	**Heating** bread	Toaster case heats up and heats air around it.
kettle	**Heating** water	Kettle itself also heats up and the air around it.
TV	Light and sound	Heating of the TV's casing and heat transferred to surroundings.

History

World War One

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Key Dates

28 June 1914	Assassination of Archduke Franz Ferdinand, heir to Austro-Hungarian throne.
4 August 1914	Germany invades France. Britain declares war on Germany.
1 July – 18 Nov 1916	Battle of the Somme
11 November 1918	Armistice declared. End of World War One.

Causes of World War One

<u>Long Term Causes</u>

Militarism	Building up of armies
Alliances	Friendships between countries
Imperialism	One country trying to take over another country
Nationalism	Love for your own country

<u>Short Term Cause</u>

Assassination of Archduke Franz Ferdinand .

Key Concepts

Cause & Consequence – Why things happen in History, what causes them, what the effects are.

Similarity & Difference – How the lives of different groups of people in the past are different and how they are different to today.

Significance – How important events and people are in the past and how much of an impact they have today.

Key Words

Cause - An event which makes another event happen

Long-term cause - A cause which took place a long time ago / had been taking place over a long time.

Short-term cause - A cause which happened just before the event it triggered e.g. assassination of Franz Ferdinand.

Artillery – Large guns which could fire explosive shells for miles.

Bayonet – A type of long knife soldiers attached to their rifles to attack the enemy.

Machine Gun – Type of gun which could fire up to 600 bullets per minute.

Mustard Gas – A type of poison gas developed by the Germans in 1917.

Rifle – long-range gun used by ordinary soldiers in the trenches.

Shells – Explosives which could be fired by the artillery and which would explode when they hit an object.

Shell-shock – A condition where soldiers who had been traumatised with the fighting would often have nightmares, or even stop talking. Now known as Post-traumatic stress disorder.

Trench – A ditch dug by soldiers to protect them from the enemy. Most men fighting in Europe in World War One stayed in trenches on the battlefield.

Western Front – The battlefields in West Europe (France, Belgium and Holland) where many British soldiers fought.

Key People

Franz Ferdinand – Archduke of Austria-Hungary. Assassinated in June 1914 in Sarajevo, Bosnia by Gavrilo Princip.

Gavrilo Princip – Serbian freedom fighter/terrorist who assassinated Franz Ferdinand.

Black Hand Gang – Group of Serbian freedom fighters/terrorists led by General Apis.

Kaiser Wilhelm II – Ruler of Germany.

Tsar Nicholas II – Ruler of Russia.

King George V – Ruler of Britain and the British Empire.

Raymond Poincaré – President of France.

Lord Herbert Kitchener – British Secretary of State for War and responsible for recruiting British troops.

Walter Tull – First black officer in British army in World War One.

Flora Sandes – Only British woman to fight on the frontline in World War One.

History

World War One

How did the war start?

Militarism

Britain spent £50million building up their armed forces to protect themselves against Germany. They developed a highly trained unit called the British Expeditionary Force. Germany built battleships based on the British design of the Dreadnought.

Alliances

In 1888 Germany, Austria-Hungary and Italy formed the Triple Alliance. In 1907 Britain, France and Russia formed the Triple Entente. Germany had developed the Schlieffen Plan to deal with a war on both fronts against France and Russia.

Imperialism

France, Germany and Britain had fought against each other for control of Africa. In 1905 and 1911 Germany threatened Britain and France by supporting Moroccan independence.

Nationalism

All countries believed their countries should be the most powerful and have the largest empire. This caused tension between France, Britain and Germany.

In the Balkans, Serbia was the strongest country and wanted to free fellow countries like Bosnia from the rule of the Austro-Hungarian Empire. This led to the Assassination of Franz Ferdinand.

Assassination of Franz Ferdinand

On 28th June 1914 the heir to the Austro-Hungarian throne, Franz Ferdinand was assassinated in Sarajevo in Bosnia. His killer was Gavrilo Princip from Bosnia who claimed he wanted to free Serbia from Austria-Hungary.

Austria then decided to punish Serbia for his death by bombing them. This led Russia to come in to defend Serbia. This led Germany to come in to defend Austria-Hungary. Germany then used the Schlieffen Plan to attack France before Russia had a chance to attack too. This led Britain to defend France. By 4th August all major European countries were at war.

It became a World War because these countries all got their empires to support them.

Key Words

Battle of the Somme – One of the worst battles in the First World War. Around 125,000 men were killed and at least 300,000 were wounded.

Blockades – using submarines and battleships to stop supply ships getting through. Germany and Britain used this against each other.

'Conchies' / Conscientious Objectors – people who refused to fight in the war due to strong religious or moral beliefs.

Creeping Barrage – Tactic developed by the British in the Battle of the Somme where artillery would fire ahead of troops so that German soldiers could not see the British advancing.

Going 'over the top' – Phrase meaning that men would climb out of their trenches to go to fight the enemy.

Home Front – The experience of the war back in Britain.

Munitions – Weapons and guns.

No-Man's Land – Area between the trenches which neither side owned.

Rationing – Government control of the amount of food people could get to prevent shortages.

Stalemate – A war where no-one is winning.

U-boats – Submarines.

WAAC – Women's Auxiliary Army Corps – formed in 1917 to put women in jobs in the army which men had previously done in order to free up men to fight.

War of Attrition – a slow war where each side tries to wear the other down by sending more and more soldiers to fight.

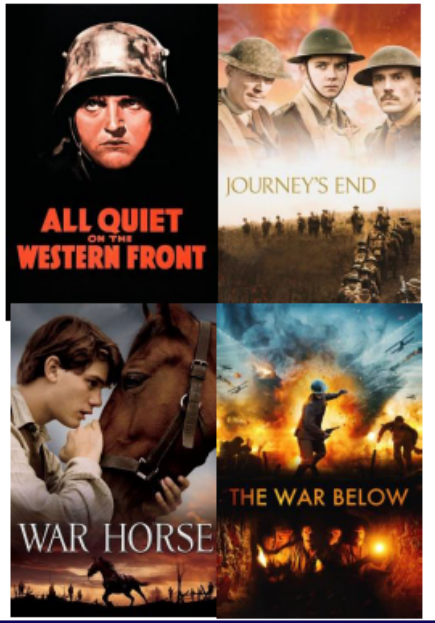
Key People

Field Marshal Douglas Haig – leader of the troops at the Battle of the Somme; nicknamed 'The Butcher of the Somme' due to the high death toll.

Queen Mary – wife of George V. Sponsored the creation of the WAAC.

Queen Alexandra – Danish mother of George V. Sponsored the creation of the Queen Alexandra's Nursing Corps.

Princess Sophia Duleep Singh – former Suffragette who also volunteered as a nurse in WW1.



History

World War One

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Conditions in the Trenches

Western Front

- Most fighting for British soldiers took place in the trenches which stretched south from Belgium to the borders of Switzerland.
- Conditions were horrible with mud, cold, fleas and rats causing problems for soldiers. Soldiers would often wait weeks before they could 'go over the top' to fight in 'No-man's land'.
- One of the bloodiest battles was the Battle of the Somme 1st July to 18th November 1916.
- It was a war of attrition where most battles won very little ground. This largely resulted in a stalemate until the USA joined on the side of Britain and France in April 1917.
- Around 5,700,000 British men (from England, Scotland, Wales and Ireland) fought in World War One.
- Around 880,000 men from Britain and the British empire died in the war; around 1,700,000 were wounded.

Home Front

- Women had to take over many men's roles including firefighters, police officers, coal delivery workers.
- Food shortages were a problem by 1917 due to German blockades of supplies and the Women's Land Army was set up to provide food.
- Bombings by Germany by plane and torpedoes from u-boats killed civilians in Britain. Around 16,000 British civilians died on the Home Front.

Role of Women

- Around 1 million women served in munitions factories dealing with dangerous chemicals such as TNT. Women's hands were dyed yellow resulting in 'canaries' nickname.
- Around 2,000 women served as nurses in World War One; in 1914 there were around 1,000 female doctors – some treated soldiers at home and some on the battlefields abroad.
- Women also served at the battlefields as ambulance drivers such as Mairi Chisholm and Elsie Knocker.
- Only one British woman served as frontline soldier. Flora Sandes served in the Serbian army until she was wounded.

Role of Empire

India

- Over 1 million Indian soldiers served Britain in World War One. They fought in France and Belgium, Egypt and East Africa, Gallipoli, Palestine, China, Singapore and Mesopotamia. Many of them served in the Indian Expeditionary Force which was formed in Eqypt in 1914 to protect the Suez Canal.
- Around 700,000 Indian soldiers lost their lives in World War One.
- Indian regiments included Sikhs, Muslims and Hindus although sometimes regiments were divided along religious lines such as the 36th Sikhs.
- There were a number of specific Sikh regiments including the Black Lions who fought in East Africa and Mesopotamia. Around 100,000 Sikhs served in the British army in World War One.
- Muslim regiments from India, Yemen and Somalia served in the British army in France, Belgium, Gallipoli, Salonica, East Africa, Mesopotamia, Egypt and Persia. At least 400,000 British Muslim soldiers served in World War One.
- Indian regiments fought alongside British regiments from mainland Britain but also from other countries in the British Empire.

Africa

- Around 60,000 black South Africans served in the British Army, with around 120,000 other black African soldiers also serving. They came from other British colonies such as Nigeria, the Gold Coast, Sierra Leone, Gambia and Somalia.
- Lionel Turpin was a sailor from British Guiana. He served in the No.32 British Expeditionary Force in the Battle of the Somme and was awarded two medals for bravery.

West Indies

- The British West Indies Regiment was made up of over 15,000 people from British colonies in the Caribbean – over 10,000 people came from Jamaica.
- Most British West Indies Regiment soldiers were used in essential non-combat roles in Egypt, Mesopotamia and some areas of Europe.

The End of World War One

World War One ended on the 11th November 1918 when Germany and France agreed to sign an Armistice. This is why Remembrance Day is the 11th November each year and we remember the war at 11 o'clock on that day.

Lest We Forget.

History

World War Two (1939-1945)

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Key Dates

11 November 1918	Armistice declared. End of World War One.
June 1919 & Jan 1920	Treaty of Versailles signed and ratified.
October 1929	Wall Street Crash. Start of Great Depression.
January 1933	Adolf Hitler becomes Chancellor of Germany.
August 1934	Adolf Hitler becomes Führer of Germany.
1935	Hitler reintroduces conscription.
March 1936	Hitler marches into the Rhineland.
March 1938	Hitler annexes Austria (Anschluss).
September 1938	Munich Agreement. Chamberlain's 'Peace in our time' statement. Hitler takes over the Sudetenland.
March 1939	Hitler takes over the whole of Czechoslovakia.
August 1939	Hitler and Stalin sign the Nazi-Soviet Pact (sometimes called the Molotov-Ribbentrop Pact)
September 1939	Hitler and Stalin invade Poland. Britain declares war on Germany.
May-June 1940	Hitler invades France. France surrenders. Britain retreats at Dunkirk.
June 1941	Operation Barbarossa sees German troops invade the USSR (Russia).
December 1941	Japanese bomb Pearl Harbour in Hawaii. USA enters the war.
January 1943	Germany loses the Battle of Stalingrad in the USSR and El Alamain in North Africa. The tide turns.
6 June 1944	D-Day landings
7 May 1945	Germany surrenders. Victory in Europe (VE).
2 September 1945	Japan surrenders. Victory in Japan (VJ).

Key Words

Cause - An event which makes another event happen

Long-term cause - A cause which took place a long time ago / had been taking place over a long time.

Short-term cause - A cause which happened just before the event it triggered e.g. assassination of Franz Ferdinand.

Anschluss – Term meaning that Germany and Austria were united. This was forbidden under the Treaty of Versailles.

Conscription – Forcing men to join up to the armed forces.

Czechoslovakia – Country which existed from 1918-1993. It included Czechia/Czech Republic and Slovakia.

D-Day – Day when British and US troops invaded France to fight the Nazi forces and liberate Europe.

Dunkirk – Famous retreat for the British where soldiers had to flee France in whatever boats they could find.

Führer – literally means 'leader'. Nazis would call Hitler their leader.

Great Depression – Economic crash of the 1930s which resulted in unemployment, hunger and homelessness throughout the world.

Nazi-Soviet Pact – treaty between Hitler (Germany) and Stalin (USSR/Russia) which agreed they would both invade and split Poland down the middle at the Oder-Niesse line.

Operation Barbarossa – Name of the Hitler's invasion plan of the USSR (Russia).

Terms - The rules which have to be followed in a peace treaty.

Treaty of Versailles – Peace treaty signed after World War One. The terms were very harsh to Germany.

Wall Street Crash – Event in the USA where the stockmarket crashed. This created the Great Depression.

Key People

Woodrow Wilson – President of the USA 1913-1921. Attempted to create peace during and after WW1.

George Clemenceau – Prime Minister of France 1917-1920. Wanted to destroy Germany through Treaty of Versailles.

David Lloyd George – Prime Minister of Britain 1916-1922. Wanted to balance punishing Germany and fighting off the threat of communism in Europe.

Adolf Hitler – Austrian leader of the Nazi Party from 1921 and of Germany from 1933-1945. Failed artist, soldier in WW1, responsible for the Holocaust.

Joseph Stalin – Leader of the USSR (Russia). Ally of Germany from 1939-1941 and then of Britain and the USA 1941-1945.

Neville Chamberlain – Prime Minister of Britain from 1937-1940. Famous for policy of Appeasement and mistakenly claiming he had 'Peace in our time' with Hitler.

Winston Churchill – Prime Minister of Britain from 1940 -1945. Famous for his 'we will fight them on the

History

World War Two (1939-1945)

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Causes of WW2

Treaty of Versailles

- Germany was forced to accept the Treaty. They called it the **Diktat.**
- Germany had to pay £6.6 billion in reparations to Britain and France; they were not allowed an air force, submarines or tanks; they were only allowed 100,000 soldiers.
- Germany lost a lot of land e.g. Alsace-Lorraine which went to France; Posen which went to Poland; and the Sudetenland which went to Czechoslovakia. Germany was not allowed to march troops into the Rhineland as this was meant to be **demilitarised.**
- The **League of Nations** was set up as part of the Treaty of Versailles. Ultimately it failed to prevent war because it had little power.

The Great Depression

- The Wall Street Crash in 1929 created the Great Depression. Millions worldwide were unemployed, homeless and hungry. This led to the growth of extremism.
- In Germany the Nazi Party became more popular, allowing Hitler to become Chancellor of Germany in January 1933 and later supreme leader (**Führer**) of Germany.

Appeasement

- During the Great Depression, Britain and France were focused on the suffering of their own people and the threat of strikes. This meant they cut back on defence spending.
- The policy of Appeasement meant that Britain and France tried to give Hitler some of what he wanted in the hope they could prevent war.
- They allowed him to march into the Rhineland in 1936, to unite with Austria in 1938, and gave him the Sudetenland in 1938. All of this just increased Hitler's belief that no-one would stop him.

Nazi Soviet Pact

- Stalin, the leader of the USSR (Russia) had tried to ally with Britain and France but they spurned him.
- Instead he signed an agreement with Hitler in 1939 which agreed they would not attack each other and would split Poland.

Key Words

Armistice – An agreement to stop fighting/ceasefire.

ATS – Auxiliary Territorial Service. Women's branch of the army. Not allowed to fight on frontline but fulfilled nearly all other roles.

Blitzkrieg – German war tactic to attack quickly and with maximum force to overrun the enemy

The Blitz – The bombing of Britain by Germany, particularly in London and other cities like Leicester, Birmingham and Coventry.

Demilitarised – No German soldiers were meant to be allowed this area.

Diktat – The German name for the Treaty of Versailles. It had been dictated (forced upon them).

Dominions – Countries in the British Empire who decided to join the war or not. There were self-governing dominions such as Australia and those who were controlled by London such as India.

League of Nations – Forerunner of the United Nations. Countries were meant to join and to discuss their problems rather than resort to war.

Maginot Line – Line of defences built up by France to attempt to prevent a German invasion

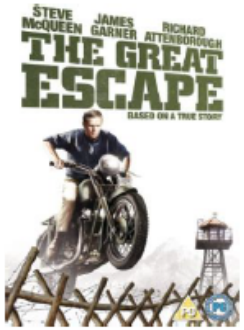
RAF – Royal Air Force – the air force in Britain made up of British but also a number of Polish airmen.

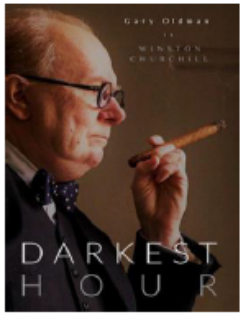
RIAF – Royal Indian Air Force.

Rhineland – An area of Germany which bordered France.

Stab in the Back Myth – Myth spread by the Nazis that Germany could have won WW1.

WAAF – Women's Auxiliary Airforce. Included female pilots who would deliver aircraft as well as fulfilling administrative roles.





These films have been selected as they are Certificate 12 or under. Please be aware that they may still have distressing scenes and it is advised parents watch all films before showing them to their children to assess their appropriateness.

History

World War Two (1939-1945)

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The Phoney War

- Despite Britain's declaration of war on Germany in September 1939 there was very little fighting from then until May 1940.
- 9th May 1940 the Phoney War ended with the invasion of France.

French Defeat

- Germany used the tactic of **Blitzkrieg** to attack fast and hard when the French were least expecting it.
- The French had set up the **Maginot Line** of defences along their German border but these were useless against the German attack through the Netherlands and Belgium.
- The Germans used their **Panzer** units to quickly overwhelm allied forces.
- By 16th May 1940 the key French city of Sedan had fallen to the Germans. The British ordered a retreat after they failed at Arras.
- From 26th May to 4th June 1940 the British forces retreated from Dunkirk – over 338,000 soldiers fled to Britain, leaving France on its own.
- On 25th June France surrendered and became ruled by the **Vichy Government.**

The Battle of Britain

- From 10th July to 31st October 1940 Hitler's air force tried to invade Britain. They were fought off by the RAF.

The Blitz

- London and other major cities were bombed by Hitler's forces during WW2.
- Many children were evacuated from cities like London to the countryside to protect them.

Home Front

- Britain's Home Front included women taking on men's roles like fire-fighters, Air Raid Patrol (ARP) wardens, as well as non-combat military roles.
- Rationing was also a feature of life on the Home Front due to German blockades of food supplies. The Women's Land Army was set up to deal with this crisis. Items like clothes and shoes were also rationed.

Key Words

Evacuation – Sending of children from the cities to the countryside to protect them from bombings by German aircraft.

Panzer – German tank, heavily armoured.

Vichy France – The area of France run by the French government which had surrendered to the Germans.

The Role of India

- Over 2.5 million Indian men (Muslims, Hindus and Sikhs as well as other religions) volunteered to serve Britain in WW2.
- Many fought against the Japanese in Burma but also in North and East Africa, Italy and Greece.
- The Royal Indian Air Force fought against Japanese pilots and the Royal Indian Navy fought in the North Atlantic and Mediterranean against Germany and Italy. There were 40,000 Indian servicemen in the British Merchant Navy.

The West Indies

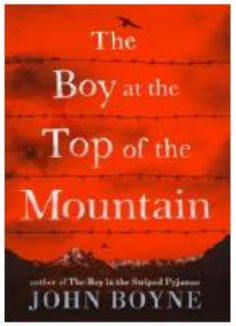
- Thousands of men from British colonies in the Caribbean such as Jamaica volunteered to fight.
- However, many Black men were not allowed to fight in the British army.
- Approximately 5,500 West Indian RAF personnel came to fight for Britain 1944-1945. West Indian women also served in the WAAF.

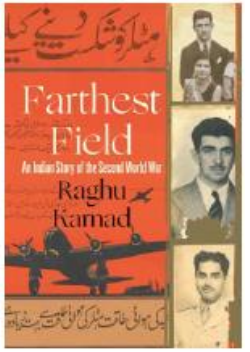
Other countries

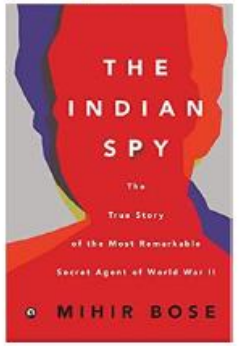
- 629,000 soldiers came from Canada; 413,000 from Australia; 136,000 from South Africa; 128,500 from New Zealand.

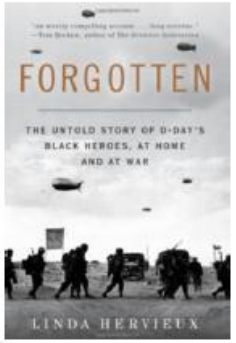
VE & VJ Day

- Germany surrendered 7th May 1945 soon after Hitler's suicide. Japan on 2nd September 1945 after the USA dropped the atomic bomb.









These books have been selected to give a range of choices. The top two are fiction for children; the other four are history books for adults so will deal with adult themes.
The good news is that more books have been written on WW2 than anything else – so go wild in your local library or bookshop!

History

The Holocaust / Shoah 1933-1945

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Key Dates

70 CE (AD)	The Romans attack Jerusalem. Many Jewish people are forced to flee to other countries.
1190	The whole Jewish community in York (around 150 men, women and children) are herded into Clifford's Tower and burned alive.
1290	King Edward I forces Jewish people out of England
1346-1353	The Black Death hits Europe. Many Jewish people are falsely blamed for spreading it and are murdered.
1596-1598	Shakespeare writes *The Merchant of Venice* which demonises a Jewish character, Shylock.
1837-1839	Charles Dickens writes *Oliver Twist*. He includes a Jewish character, Fagin, who is a thief and a murderer and who forces boys to steal from people.
1880s	Alexander II, Tsar of Russia, encourages people to murder Jewish people and burn their houses to force them out of the country.
1914-1918	First World War. Adolf Hitler is a Lance Corporal in the Bavarian Army.
1919	Treaty of Versailles signed by Germany's government. Adolf Hitler joins the German Workers' Party (DAP).
1921	Adolf Hitler takes over the DAP, re-names it the Nazi Party and submits his 25 Points.

Key Words

Holocaust – The word comes from the Greek meaning a 'burnt offering'. Jewish people in the years before the Roman attack on Jerusalem in 70CE used to burn offerings to God. This term is considered highly offensive by many Jewish people as it implies that God was pleased with the murder of the Jews by the Nazis.

Shoah – The word comes from Hebrew and means 'catastrophe' or a terrible tragedy'. This is the term that many Jewish people prefer to use as it more closely expresses the impact the murder of 6 million Jewish people by the Nazis had.

Unfortunately, many academic texts, documentaries and popular culture references still use the term Holocaust so we include it in our unit for ease of reference and to acknowledge that other groups of people were also murdered at this time.

Anti-Semitism – Hatred of Jewish people, Jewish culture, and Jewish religion.

National Socialist German Workers Party (Nazi Party) – Full name for the political party led by Adolf Hitler from 1921-1945.

Treaty of Versailles – Treaty signed by the German government in 1919 which punished Germany for World War One.

Armistice – The ceasefire signed by Germany on 11th November 1918 which ended World War One.

Stab in the Back myth – Belief spread by Hitler and the Nazis that Germany could have won the war but it was betrayed when the German government signed the Armistice and the Treaty of Versailles. Hitler blamed Jews and communists for this.

Communists – A group of people who believe that wealth should be shared out equally by the government. Some high-profile communists in Russia were Jewish so Hitler lumped them all together.

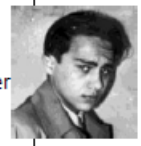
Key People

Adolf Hitler – Soldier in World War One. Leader of the Nazi Party from 1921-1945. Chancellor of Germany from 1933 and Führer of Germany from 1934-1945.

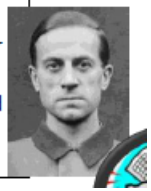
Heinrich Himmler – Leader of the SS (Hitler's private bodyguard and later his toughest and most loyal troops). The SS guarded concentration camps and carried out the mass murder of Jewish people.

Hayim Nahman Bialik – Jewish poet who called for Jews to resist their persecution. Lived in Germany so saw anti-Semitism first hand. Died in 1934. Now Israel's national poet.

Ernst von Rath – Nazi diplomat assassinated in Paris 9th November 1938. His death was used as an excuse for Kristallnacht.



Herschel Grynszpan – 17 year old Polish Jewish teenager who shot Ernst von Rath.



Dr Karl Brandt – Hitler's personal doctor and the creator of the T4 programme which murdered 300,000 disabled and mentally ill patients.

History

The Holocaust / Shoah 1933-1945

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Key Dates

1929	Wall Street Crash plunges Germany and the rest of the world into the Great Depression.
1933	The Nazi Party win the elections and Hitler becomes Chancellor of Germany. Persecution of Jews and other groups begins.
1934	Hitler becomes Führer of Germany. He now has complete power to make laws and imprison opponents.
1935	The Nuremberg Laws exclude Jewish people from citizenship in Germany.
1936	Berlin Olympics includes one Jewish person, Helene Mayer, on the German team.
1938	Kristallnacht – synagogues are burnt, and over 30,000 Jewish men and boys arrested and sent to concentration camps.
1939	Hitler invades Poland. The T4 programme starts – murdering 300,000 mentally ill and physically disabled people.
1940	Hitler invades France and Holland. Warsaw ghetto founded with more than 460,000 Jewish people imprisoned there.
1941	The Final Solution is created, authorising the systematic murder of 6 million Jewish people. The Nazis also continue the systematic murder of disabled, homosexual, Slav, Gypsy, Roma, Traveller communities throughout Europe.
1945	Hitler commits suicide. WW2 ends.
1945-1946	Nuremberg Trials.

Key Words

Twenty Five Points – Hitler's manifesto for the Nazi Party. It included anti-Semitic ideas such as 'no Jew can be a citizen of Germany'.

Mein Kampf – Hitler's autobiography written in 1924 which laid out his theories about the purity of race and how to murder Jewish and other people he thought were 'undesirable'.

Untermensch – Term used by the Nazis to describe anyone they believed was inferior to them.

Aryan – The 'pure' German race, according to the Nazis. They would have blonde or light brown hair and usually have blue or green eyes.

Slavs – Ethnic group who live in Eastern Europe including in Poland, Czechoslovakia and Russia. Hitler believed they were inferior.

T4 Aktion Programme – Systematic murder of people who were mentally ill, had severe learning difficulties, or who were physically disabled. It ran from 1939-1941 in Germany but continued throughout the war in other countries. People were murdered in their own hospitals by their doctors and nurses.

Final Solution – Known as the 'Final Solution to the Jewish Question' – a decision reached in 1941 (although confirmed in 1942 in the Wannsee Conference) that Jewish people (and other 'untermensch') should be destroyed in concentration camps.

Zyklon B – The gas used to exterminate people in the gas chambers in death camps such as Auschwitz-Birkenau.

Concentration Camp- a prison camp used to imprison people who opposed Hitler and exploit them as workers to keep the war effort going.

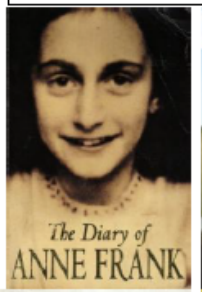
Death /Extermination Camp – a prison camp, like a concentration camp, but established with the aim of murdering people.

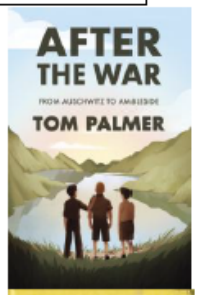
Auschwitz-Birkenau – most notorious camp in Poland, near Krakow. Approximately 1.1 million people were murdered here.

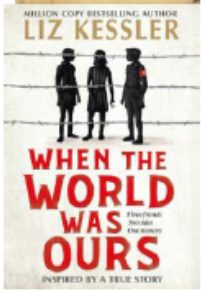
Key People

Annalies (Anne) Frank – German Jewish teenager who left a diary describing her experience of having to hide from the Nazis in an attic in Amsterdam, the Netherlands. She died in Auschwitz in 1945.

Sophie Scholl – German student and leader of the White Rose Gang which spread anti-Nazi leaflets in Munich. She was executed in 1943 by shooting.







These books have been selected as suitable for children aged 11-14 years. However, there will be parts of these books which can distress and lead to big and difficult questions. It is recommended that parents read and discuss these with their children.

History

The Holocaust / Shoah 1933-1945

LIONHEART EDUCATIONAL TRUST

Key Words

Einsatzgruppen – Groups of soldiers (often middle-aged and some former police officers) chosen to exterminate Jewish and other 'undesirable' people as the Nazis marched further into Eastern Europe.

Euthanasia – 'Mercy killing' – the Nazis believed that killing people who were 'undesirable' or members of the 'untermensch' was a mercy.

Fascism – The belief of the Nazis (and of the Italian government under Mussolini and the Spanish government under Franco during WW2) that war was good, men should be strong and brutal, and women should have children and stay at home. It also believed in the elimination of 'inferior' groups.

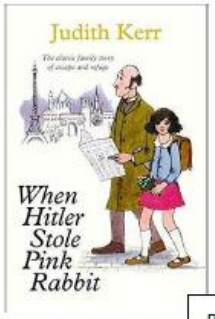
Gestapo – The Nazi secret police who would round up opponents and groups of people considered 'untermensch'.

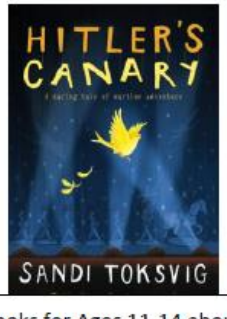
Ghetto – Area in a city, such as Warsaw in Poland, used to concentrate Jewish people into one area and starve them or work them to death. Warsaw Ghetto was founded in 1940 and cleared in 1943 with its inhabitants being sent to extermination camps.

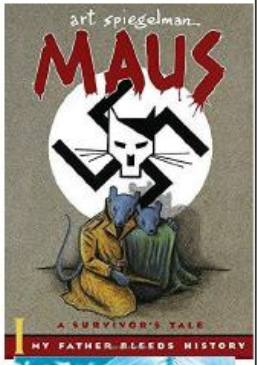
Resettlement – moving people to another location. This is what the Nazis claimed they were doing so that Jewish people did not panic. In actual fact they were being sent to extermination camps.

LGBTQ+ - Stands for Lesbian, Gay, Bisexual, Trans, Queer plus other groups. The Nazis wanted to eliminate anyone who was not heterosexual and willing to act in a way which fitted the Nazi's view of how men or women should behave. We don't have exact figures but it is estimated that around 50,000 people were exterminated by the Nazis. The majority of these were gay men.

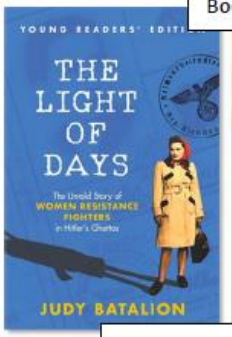
Books for Ages 11-14 about the Holocaust

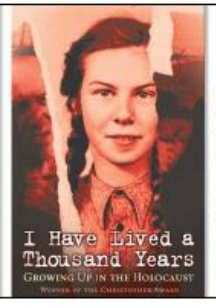


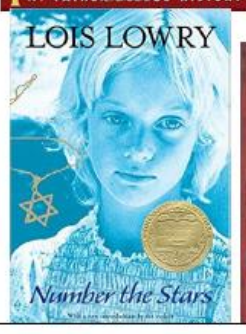


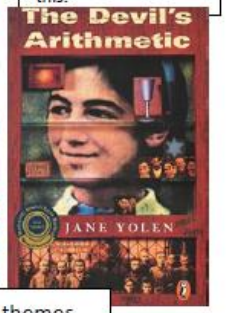


Maus is a controversial graphic novel which tells the story of the Holocaust by a man trying to collect his father's memories. Some people have praised it for its ability to present the humanity while rendering the people as animals. Some people have found it impossible to get past this.

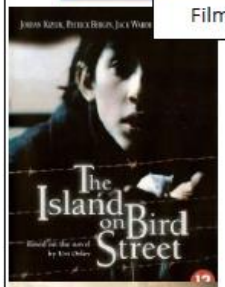


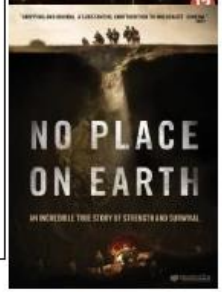


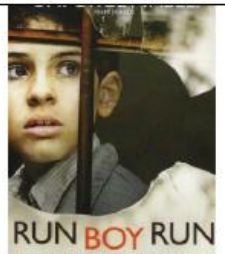




Films with 12, PG or U Certificate. This does not mean they are without distressing themes







Geography

The Middle East

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A) Middle East's physical geography

- The Middle East is a transcontinental region, located where Asia, Africa and Europe meet.
- This region is rich in oil
- There are two seasons. Winter and summer. Even winters are hot.
- The climate can be described as arid. There is little rainfall in the region.
- The northern countries receive the most rainfall including Turkey and Syria.

B) Water stress and drought

- Many countries are facing water stress including Saudi Arabia, Yemen and Oman.
- **Water stress** is where the demand for water **exceeds** the availability
- **Exceeds** means to go above
- Population growth and falling rainfall is causing an increase in water stress
- The level of water in underground **aquifers** is falling. In some places this decreasing by 6 metres per year
- An **aquifer** is an ancient supply of water deep beneath the ground
- Water stress will impact on the **social** and **economic** development of countries in the Middle East
- Farmers will not be able to grow crops or rear animals. This could lead to a rise in food prices and eventually food shortages.
- In the future water shortages could lead to conflict in the region.

C) Maths

1- Range – take the lowest number away from the highest number
2- Mean – add up all of the numbers and divide by how many numbers there are
3- Median – place the numbers in numerical order and select the middle number

Geography

The Middle East

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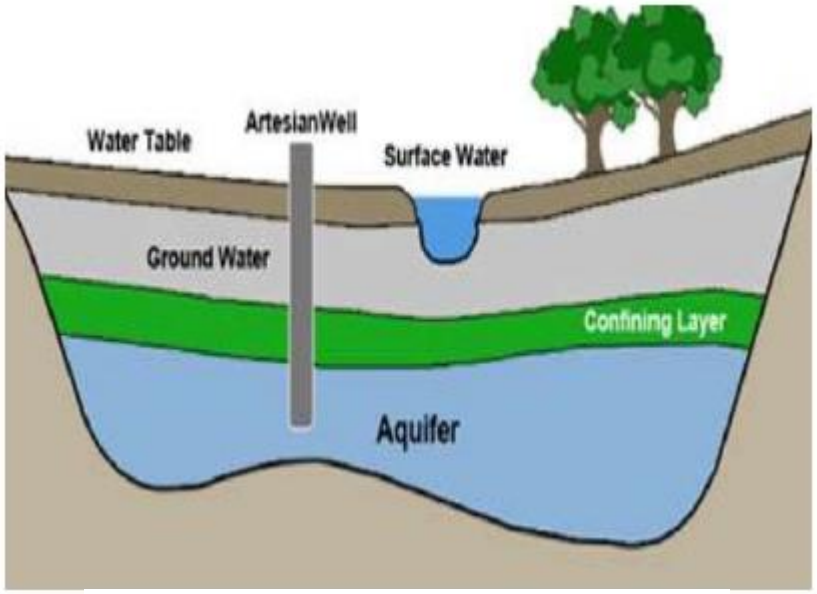


D) Causes of war/conflict

- Economic gain (to take control of another country's wealth)
- Territorial gain (to take control of land)
- Nationalism (to prove your country is superior/better than another country)
- Civil war (fighting between different groups of people within the same country)
- Revolutionary war (when large numbers of people in a country tries to topple the government or leader of a country)

E) Causes of the civil war in Syria

1- Many people in Syria had been unhappy with President Assad for a long time. There was high unemployment and corruption.
2- In 2011 15 school children were arrested for writing anti-government graffiti on a wall. People were unhappy with this and so started to protest.
3- The government responded angrily opening fire and killing 4 protesters.
4- People demanded that the president resign. Fighting broke out between the president's supporters and those against the president (called rebels)
5- Russia and Iran became involved. Carrying out air strikes against cities held by rebel groups
6- The USA has shipped weapons to support the rebels
7- The UK and France carried out air strikes against government forces after they reportedly used chemical weapons against civilians (people not involved in the fighting)

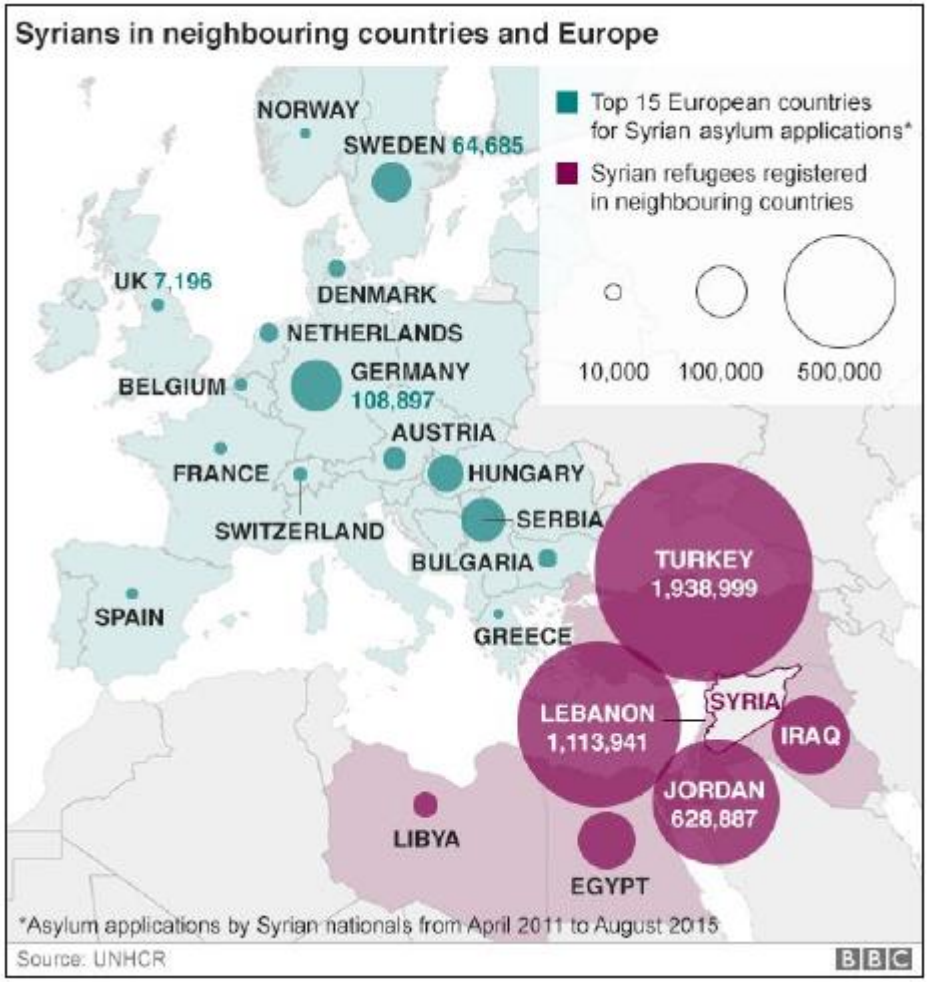
The Middle East

F) Key terms

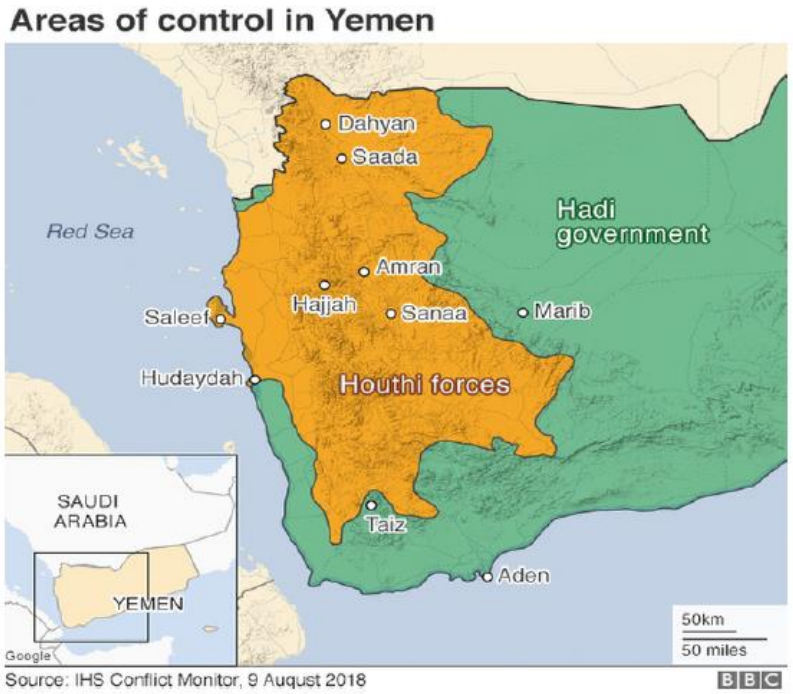
- Refugee – a person fleeing from war, persecution or natural disasters. They are protected by law. People have to prove they are a refugee if they want a safe country to accept them
- Asylum seeker – someone who claims to be a refugee, looking for a safe place to live. But whose case has not yet been proven.
- Migrant – A migrant is a person who moves from one place to another. Refugees are a type of migrant. Another type is an economic migrant. Someone who moves to another country for a job there. Refugees are very different to economic migrants.

G) Refugee movements from Syria

- Around 6 million refugees have now left Syria. 2.7 million are in Turkey and 1 million are in Jordan.
- Germany, Bulgaria and Sweden are the European countries that have accepted the most refugees from Syria.
- Only 3000 Syrian refugees have applied for asylum (safety) in the UK in comparison to 160,000 in Germany.



The Middle East



H) Conflict in Yemen

The conflict in Yemen has caused a **humanitarian crisis**. It is threatening people's health, safety and well-being on a large scale.

It has a number of social and economic consequences for the people of Yemen

1. At least 10,000 people have died in the 3 and a half years since the conflict begun. This is an estimate figure and it is expected to be more
2. Around 20 million people are **food insecure**
3. **Food security** is having reliable access to food at an affordable price
4. Hospitals and schools have been destroyed by air strikes
5. Transport infrastructure has been destroyed by air strikes making it difficult for aid to get to the places it is needed most.
6. 50% of the population struggle daily to get enough water to drink and grow food

I) Taking action

There are a number of things people in the UK can do to support people in Yemen and Syria

1. Write a letter to your local MP asking them to urge the government to support a ceasefire
2. Email the foreign secretary Jeremy Hunt through Oxfam's website asking him to ensure peace talks are successful
3. You can donate to charities like Oxfam that are busy providing lifesaving supplies to people in Yemen and Syria

Geography

Unit 3 - What are the challenges and opportunities facing Africa? Part 1.

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AFRICA IS NOT A COUNTRY.

Key Vocabulary

Triangle of Trade	The journey of exchange made of goods and slaves between Europe, the Americas and Africa.
Colonisation	The action or process of taking over control over local people of an area.
Cash crops	A crop produced for its commercial value rather than for use by the grower.
Migrate	To move from one region or habitat to another according to seasons.

Natural Resources

Africa is rich in natural resources:

- It exports 16% of the world's uranium, used to produce nuclear energy.
- In 2011, Africa produced more than half of the world's diamonds and nearly 75% of the world's platinum.
- Africa has 10% of the world's oil and gas reserves.
- Africa is rich in forests, a source of major hardwoods.
- Nigeria and Libya are 2 of the leading oil producing countries in the world.

The History of Africa.

The Slave Trade

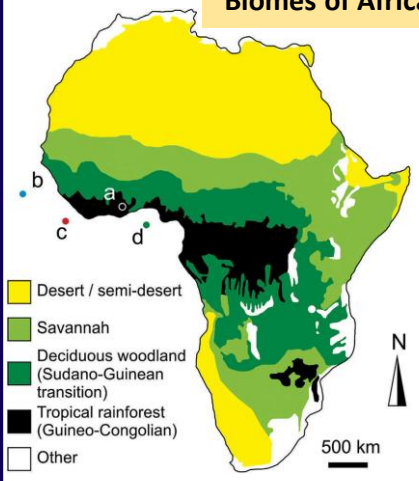
- Between the 1600's and the 1800's, 12-15 million Africans were sold into slavery.
- Europeans bought people in West Africa in exchange for goods, developing a triangle of trade.
- Slavery was abolished from 1833.

The Legacy of Colonisation.

- African countries began to gain their independence from Europe in the 1960's.
- Many countries have found the road to a strong and stable nation difficult.
- The wealth of natural resources continues to be over-exploited by European business.
- The best agricultural land is still used to grow cash crops rather than growing crops to feed the growing population of Africa.

"Africa is not poor, it is poorly managed" Ellen Johnson-Sirleaf, former president of Liberia.

Biomes of Africa



Savanna Biome

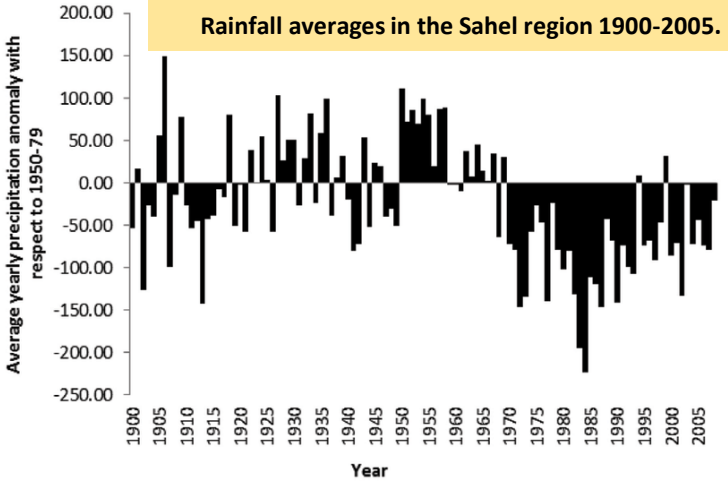
These are found to the north and south of tropical rainforests. Savanna regions have distinct wet and dry seasons. This biome has lots of wildlife within it however, animals may migrate great distances for food and water.

Is there a future for the

Desertification in the Sahel

- Droughts have occurred when the normally short rainy season is delayed or does not occur.
- Rains are very irregular in the Sahel along with rapid population increase, vegetation clearance and livestock overgrazing are causing the desert to spread southwards (desertification).

Rainfall averages in the Sahel region 1900-2005.



Geography

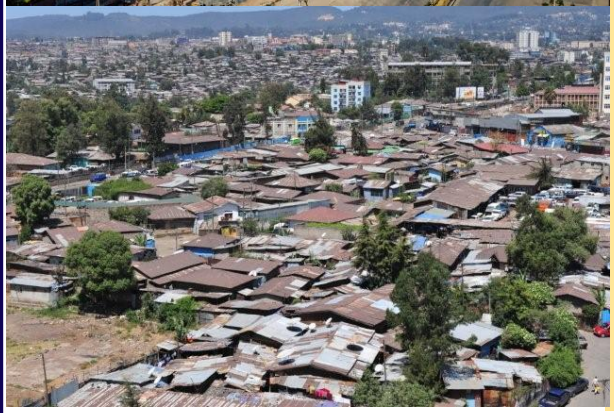
Unit 3 - What are the challenges and opportunities facing Africa? Part 2.

LIONHEART EDUCATIONAL TRUST

AFRICA IS NOT A COUNTRY.

Key Vocabulary

Landlocked	A country or region that is entirely surrounded by land.
Exports	A good or service spent to another country.



Urbanisation in Ethiopia.

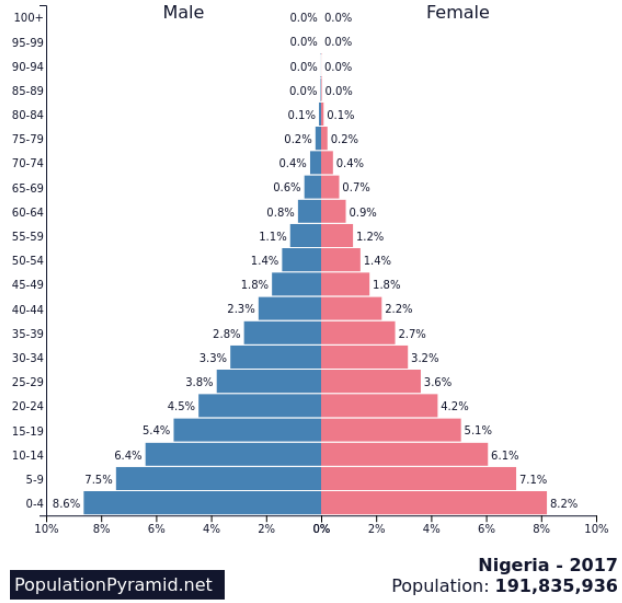
Ethiopia has the second largest population in Africa with over 100 million people. The government is trying to develop the economy of this landlocked country. Although 80% of the population is still rural, urbanisation and economic development are accelerating fast. Much of the population is located in the capital city, Addis Ababa which is located centrally in the country.

People move to the city as they think they will be better off however, they end up living in slums which is becoming a big problem. Slums are often build illegally, they offer cheap rent but they have limited access to water and toilets. This can lead to a spread of disease and lots of problems for the government to solve.

Government Projects to solve some of the problems in Addis Ababa:

- **Building:** Hundreds of thousands are built every year. These new houses are bought-t—own, and opportunities to live in them are distributed by a public lottery.
- **Infrastructure:** The Light Rail Transit, the first in Africa, opened in 2015. Built with Chinese support, it cost US$475 million.
- **Business:** Attract multinational companies to build factories in the city offering incentives and cheap labour.

Population Pyramid for Nigeria, 2017.



Trade between China and Africa.

- 15% of Africa's exports, mainly natural resources, go to China.
- China provides 21% of Africa's imports, including a range of machinery, transportation, communications equipment and manufactured goods.
- China is funding the building of factories and construction of roads, railways, ports, airports, hospitals, schools and stadiums, spending billions of dollars a year in Africa.
- More than 1 million Chinese, most of them labourers and traders, have moved to the continent in the past decade.

Geography Unit 4 – Tectonic hazards

The structure of the Earth

The Crust	Varies in thickness (5-10km beneath the ocean. Made up of serval large plates.
The Mantle	Widest layer (2900km thick). The heat and pressure means the rock is in a liquid state that is in a state of convection.
The Inner and outer Core	Hottest section (5000 degrees). Mostly made of iron and nickel and is 4x denser than the crust. Inner section is solid whereas outer layer is liquid.

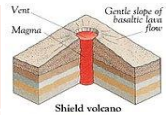
Convection Currents

The Lithosphere is divided into tectonic plates which are moving due to convection currents in the asthenosphere.

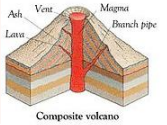
1. Radioactive decay of some of the elements in the core and mantle generate a lot of heat.
2. When lower parts asthenosphere heat up they become **less dense** and **slowly rise**.
3. As they move towards the top they cool down, become **more dense** and **slowly sink**.
4. These **circular movements** of semi-molten rock are **convection currents**
5. Convection currents create **drag** on the base of the tectonic plates and this causes them to move.

Types of volcanoes

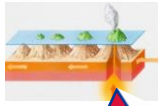
Shield	Made of basaltic rock and form gently sloping cones from layers of runny lava. Location: hot spots and constructive margins. Eruptions: gentle and predictable
Composite	Most common type found on land. Created by layers of ash and lava. Location: Destructive margins Eruptions: explosive and unpredictable due to the build of pressure within the magma chamber.
Hotspots	These happen away from any plate boundaries. They occur because a **plume of magma rises** to eat into the plate above. Where lava breaks through to the surface, **active volcanoes** can occur above the hot spot. E.g. Hawaii.



Shield volcano



Composite volcano



Case Study – Earthquake in an LIDC: Nepal earthquake, April 2015

Causes

- Pressure built up between the Indian and Eurasian plates at a COLLISION boundary. Pressure was released with no prior warnings, triggering a 7.8 magnitude earthquake.
- The focus was 15km below the surface (a shallow focus). The crust moved 3 metres in places.

Effects

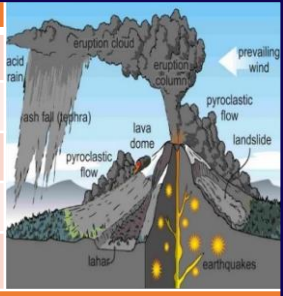
547 landslides and avalanches were triggered.
One was on Mt Everest and killed 12 people.
8635 people were killed
$10 billion damage
19009 people were injured
180 buildings in Kathmandu completely destroyed

Management

Short term emergency aid from charities (Red cross and Oxfam) was given in the form of:
10 tonnes of blankets, 50 tonnes of water, 2 tonnes of medical supplies.
The Nepalese government were criticised for not acting quickly. Many rescue efforts were conducted by the public.

Volcanic Hazards

Ash cloud	Small pieces of pulverised rock and glass which are thrown into the atmosphere.
Gas	Sulphur dioxide, water vapour and carbon dioxide come out of the volcano.
Lahar	A volcanic mudflow which usually runs down a valley side on the volcano.
Pyroclastic flow	A fast moving current of super-heated gas and ash (1000°C). They travel at 450mph.
Volcanic bomb	A thick (viscous) lava fragment that is ejected from the volcano.



Managing Volcanic Eruptions

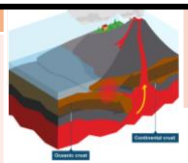
Warning signs	Monitoring techniques
Small earthquakes are caused as magma rises up.	Seismometers are used to detect earthquakes.
Temperatures around the volcano rise as activity increases.	Thermal imaging and satellite cameras can be used to detect heat around a volcano.
When a volcano is close to erupting it starts to release gases.	Gas samples may be taken and chemical sensors used to measure sulphur levels.

Preparation

Creating an exclusion zone around the volcano.	Being ready and able to evacuate residents.
Having an emergency supply of basic provisions, such as food	Trained emergency services and a good communication system.

Types of Plate Margins

Destructive Plate Margin

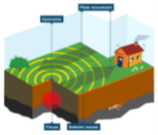


When the denser plate subducts beneath the other, friction causes it to melt and become molten magma. The magma forces its ways up to the surface to form a volcano. This margin is also responsible for devastating earthquakes.

Constructive Plate Margin

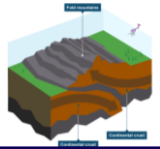
Here two plates are moving apart causing new magma to reach the surface through the gap. Volcanoes formed along this crack cause a submarine mountain range such as those in the Mid Atlantic Ridge.

Conservative Plate Margin



A conservative plate boundary occurs where plates slide past each other in opposite directions, or in the same direction but at different speeds. This is responsible for earthquakes such as the ones happening along the San Andreas Fault, USA.

Collision Zones



Collision zones form when two continental plates collide. Neither plate is forced under the other, and so both are forced up and form fold mountains. These zones are responsible for shallow earthquakes in the Himalayas.

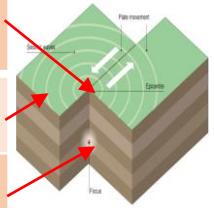
Causes of Earthquakes

Earthquakes are caused when two plates become locked causing friction to build up. From this stress, the pressure will eventually be released, triggering the plates to move into a new position. This movement causes energy in the form of seismic waves, to travel from the focus towards the epicentre. As a result, the crust vibrates triggering an earthquake.

The point directly above the focus, where the seismic waves reach first, is called the **EPICENTRE**.

SEISMIC WAVES (energy waves) travel out from the focus.

The point at which pressure is released is called the **FOCUS**.



Depth of Earthquake

Shallow Focus	Deep Focus
-Usually small and common. -Seismic waves spread and damage wide area.	-Occur on destructive margins. -Damage is localised as seismic waves travel vertically.

How do we measure earthquakes?

Mercalli Scale

- Measures how much damage is caused, based on observations, not scientific instruments.
- Base from 'Instrument' and 'Weak' to 'Extreme' and 'Cataclysmic'.
- Limitations is that its subjective due to it being based on perception.

Richter Scale

- Is a scientific measurement based on the energy released.
- Measured by seismometers using measurement from 1 – 10
- Logarithmic – each point up the scale is 10 times greater than the one before.

Earthquake Management

PREDICTING

Methods include:

- Satellite surveying (tracks changes in the earth's surface)
- Laser reflector (surveys movement across fault lines)
- Radon gas sensor (radon gas is released when plates move so this finds that)
- Seismometer
- Water table level (water levels fluctuate before an earthquake).
- Scientists also use seismic records to predict when the next event will occur.

PROTECTION

You can't stop earthquakes, so earthquake-prone regions follow these three methodsto reduce potential damage:

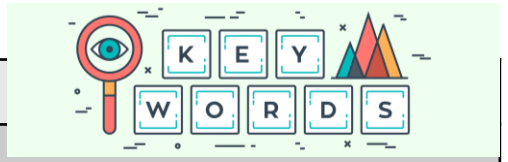
- Building earthquake-resistant buildings
- Raising public awareness
- Improving earthquake prediction

Earthquake proof buildings ideas

1. Counter-weights to the roof to help balance any swaying.	2. Roof made from reinforced cement concrete.
3. Foundations made from reinforced steel pillars, bail-bearings or rubber.	4. Windows fitted with shatter-proof glass to reduce breakage.
5. Lightweight materials that cause minimal damage if fallen during an earthquake.	6. Ensure gas pipes have an automatic shut off to prevent risk of fire.

PRE

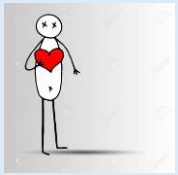
Year 9 PRE (Philosophy, Religion and Ethics): Medical Ethics



Keyword	Definition
Sanctity of life	The belief that human life is sacred and precious, and that only God can end a life
Quality of life	The extent to which life is meaningful or pleasurable
Embryo	Unborn baby inside the womb (from conception up to 9 weeks or pregnancy)
Foetus	Unborn baby inside the womb (from 9 weeks up to birth)
Conception	The point at which the sperm fuses with the egg and the baby is conceived
Abortion	When a pregnancy is deliberately ended so that it does not result in the birth of a child
Viability	The point at which a baby could be born and survive independently of the mother (usually considered to be 24 weeks)
Pro-life	The belief that abortion is morally wrong and should be made illegal
Pro-choice	The belief that women should have the choice of whether to have an abortion
Backstreet abortion	Illegal and unregulated abortions which are often dangerous and result in injury or death to the woman
IVF	In Vitro Fertilisation; when an egg is fertilised by sperm in a laboratory then then embryo is inserted into the woman's womb
Euthanasia	The act of killing or permitting the death of a person suffering from a serious illness
Assisted suicide	Providing a seriously ill person with the means to commit suicide
Voluntary euthanasia	Ending a life painlessly when someone in great pain asks for death
Non-voluntary euthanasia	Ending a person's life painlessly when they are unable to ask, but you have good reason for thinking they would want you to do so
Active euthanasia	Taking specific steps to end a person's life (e.g. by poison, suffocation, overdose)
Passive euthanasia	Withdrawing or withholding treatment that is keeping a person alive, resulting in a sooner death
Dignitas	Clinic in Switzerland where people can go through assisted suicide
Palliative care	End of life care for the terminally ill; for example, in a hospice

PRE

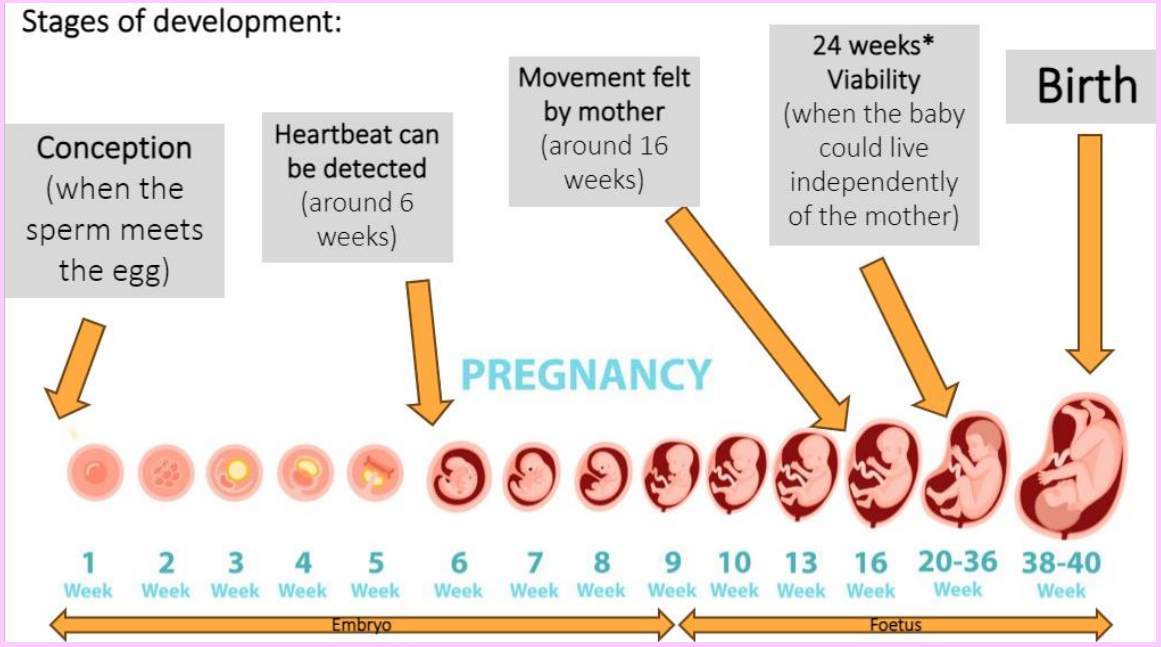
Sanctity of life vs. Quality of life



- **Sanctity of life** is accepted by all Christians; human life is precious and only God can end a life.
- The Bible says humans were made in the image of God, so human life should be protected
- *'Before I formed you in your mother's womb I knew you'* – Jeremiah 1:5

- **Quality of life** is accepted by most Humanists. Human life isn't inherently sacred; what's important is how meaningful or pleasurable it is.
- If someone if suffering with little chance of happiness, a Humanist may say life can be ended.
- *'I think those who are in great pain should have the right to choose to end their own life'* – Stephen Hawking

When does life begin?



Abortion and the law

Abortion was permitted in the UK in the **1967 Abortion Act** up to 24 weeks of pregnancy, under certain conditions:

For a woman to have an abortion, **two** doctors must agree on one of the following points:

1.The mother's life is at risk
2. There is a substantial chance that the baby may be born severely disabled
3. The mother's physical or mental health is at risk
4.There is a risk to the health of existing children

For reasons 1 or 2 abortion can legally take place at any point in the pregnancy)

PRE

Pro-life arguments	Pro-choice arguments
• Life begins at conception, the foetus is a person • Doctors take the Hippocratic Oath to 'do no harm' • Allowing abortion for disability devalues the lives of disabled people • There are more compassionate alternatives such as adoption **Catholic Church:** • Sanctity of life ('Let us make mankind in our image') • Life begins at conception ('Before I formed you in your mother's womb I knew you') • In the case of rape counselling/adoption should be considered; one sinful act shouldn't provoke another	• Nobody should be able to tell a woman what to do with her own body • Banning abortions doesn't stop them – 70,000 dies every year from backstreet abortions • Woman may have fallen pregnant due to rape • Woman is already a person so she is more important than the foetus **Liberal Christian Churches:** • Jesus taught to 'love thy neighbour'; we should show love and compassion to the woman • Abortion may be the lesser of two evils (if the mother's life is at risk or the baby will be severely disabled) • Christians should care for the poor; it is the poor who are most affected by backstreet abortions if it is illegal

IVF (In Vitro Fertilisation)

- An egg is removed and **fertilised** with sperm in a lab then returned to the woman's womb to develop.
- Can be carried out using a woman's eggs and her partner's sperm, or eggs and sperm from donors.
- IVF can be used if a couple can't get pregnant naturally (due to fertility problems, or if they are a same-sex couple)
- Postcode lottery; funding for IVF varies depending on where you live
- Can cost up to £10,000 per cycle

Should the NHS fund IVF?

Yes:
- Having a family is a Human Right
- Prevents the devastation caused by infertility
- Prevents discrimination against couples who can't conceive (e.g. same-sex couples)

No:
- The NHS should focus on saving lives rather than creating them
- There are other ways to have a family e.g. adoption
- Success rates are low so may waste money

PRE

Euthanasia – Case Studies

Tony Nicklinson: Suffered from Locked-in Syndrome following a stroke. Campaigned for doctors to be able to administer active euthanasia as he was too disabled to commit suicide. Died naturally after losing his court case.

Daniel James: 24-year old who travelled to Dignitas to die after becoming paralysed from the neck down in a sports injury.

Euthanasia and the law

- Euthanasia is **illegal** in the UK under the Suicide Act 1961; it can lead to a charge of **manslaughter or murder.**
- Doctors can administer painkillers which speed up death, if the person is nearing the end of their life.
- Life support can be switched off in a brain-dead patient
- Legal in some countries e.g. Switzerland, Canada, some US states

Arguments <u>for</u> euthanasia	**Arguments <u>against</u> euthanasia**
• People should be able to decide to die if they have a poor quality of life • Over 80% of the British public want euthanasia laws to change • Legalising euthanasia gives seriously ill people peace of mind that there is a way out if their suffering becomes too great Most Christians: • Sanctity of life ('Let us make mankind in our image') • Only God can decide when life ends ('There is no God beside me; I put to death and I bring to life') • 10 Commandments – 'You shall not kill'	• Ill, elderly and disabled people may feel pressured to accept euthanasia to avoid becoming a burden • Doctors promise to 'do no harm'; they can't be expected to kill people • We should focus on improving palliative care rather than encouraging people to die A <u>few</u> Christians • Jesus taught to 'love thy neighbour'; we should show love and compassion to seriously ill people • Medical technology has advanced so far that we no longer know when God chooses for us to die • Lesser of two evils – it would be worse to force a person to suffer

French

High Frequency Words

LIONHEART EDUCATIONAL TRUST

CORE

Time phrases/Sequencers

normally	**normalement**
often	**souvent**
usually	**d'habitude**
from time to time	**de temps en temps**
sometimes	**quelquefois/parfois**
tomorrow	**demain**
next week	**la semaine prochaine**
Summer / Autumn	**en été / en automne**
Winter / Spring	**en hiver / au printemps**
morning/afternoon/evening	**le matin/l'après-midi/le soir**
then	**puis**
always/still	**toujours**
at the moment	**en ce moment**
later	**plus tard**
in the future	**a l'avenir**
yesterday	**hier**
last night	**hier soir**
last week	**la semaine dernière**
last year	**l'année dernière**
next	**ensuite**
firstly	**d'abord**
after	**après ça**
before	**avant**
lastly	**enfin / finalement**

Key verb phrases

I have	**j'ai**
I have not	**je n'ai pas de**
I am	**je suis**
I am not	**je ne suis pas**
I would like	**je voudrais**
it is	**c'est**
it is not	**ce n'est pas**
there is	**il y a**
there is not	**il n'y a pas de**
it will be	**ce sera**
I'm going to....	**je vais** *+infinitive*
you must	**on doit** *+infinitive*
you must not	**on ne doit pas** *+infinitive*
you can	**on peut** *+infinitive*
you cannot	**on ne peut pas** *+infinitive*
it was	**c'était**
it wasn't	**ce n'était pas**
there was	**il y avait**
there wasn't	**il n'y avait pas de**
it would be	**ce serait**
it would not be	**ce ne serait pas**
if I was rich	**si j'étais riche**
in an ideal world	**dans un monde idéal**
in my dreams	**dans mes rêves**

Connectives

but	**mais**
and	**et**
because	**car/ parce que**
also	**aussi**
however	**cependant**
therefore	**donc**
as	**comme**
or	**ou**
however	**pourtant**
on the other hand	**par contre**
fortunately	**heureusement**
unfortunately	**malheureusement**
in addition	**en plus**

Negatives

not	**ne....jamais**
never	**ne...pas**

Comparisons

more... than	**plus ... que**
less... than	**moins ... que**

Quantifiers/ Intensifiers

very	**très**
too	**trop**
quite	**assez**
a bit	**un peu**
really	**vraiment**
a lot	**beaucoup**

Opinions

In my opinion	**à mon avis / selon moi**
I think that	**je pense que**
I Like	**j'aime**
I love	**j'adore**
I don't like	**je n'aime pas**
I hate	**je déteste**
I prefer	**je préfère**
My favourite ... is	**ma/mon.... préféré(e) est**
I find that	**je trouve que**

Idioms

How awful !	**Quelle horreur !**
What luck !	**Quelle chance !**
What a surprise !	**Quelle surprise !**
What an idiot!	**Quel imbécile !**
It's brilliant !	**C'est le pied !**
It's not my thing !	**Ce n'est pas mon truc !**
It's a waste of time!	**C'est une perte de temps !**
It's a waste of money!	**C'est une perte d'argent !**

French

High Frequency Words

LIONHEART EDUCATIONAL TRUST

CHALLENGE

Time phrases/ Sequencers

today	**aujourd'hui**
each/every	**chaque**
currently	**actuellement**
the next day	**le lendemain**
in my dreams	**dans mes rêves**
in an ideal world	**dans un monde idéal**
when I was little	**quand j'étais petit (e)**
when I'm older	**quand je serai plus âgé (e)**
for 5 years	**depuis 5 ans**
since I was 5 years old	**depuis l'âge de 5 ans**

Quantifiers/ Intensifiers

so	**si**
rather	**plutôt**
extremely	**extrêmement**
frankly	**franchement**
hugely	**énormément**
incredibly	**incroyablement**

Connectives

nevertheless	néanmoins
whereas	tandis que
even if	même si
furthermore	de plus
since	puisque
not at all	pas du tout

Key verb phrases

you can see	**on peut voir**
if it is	**si c'est**
there would be	**il y aurait**
there would not be	**il n'y aurait pas de**
you could	**on pourrait** *+infinitive*
you couldn't	**on ne pourrait pas**
you should	**on devrait** *+infinitive*
you shouldn't	**on ne devrait pas**
you must	**il faut** *+infinitive*
you must not	**il ne faut pas**

Negatives

no...more/longer	**ne... plus**
nothing	**ne... rien**
no one/nobody	**ne... personne**
neither ...nor	**ne... ni... ni**

Comparisons/ Superlatives

best	**meilleur (e)**
worst	**pire**
the best thing is	**la meilleure chose est**
the most important thing is	**la chose la plus importante est**
what I like the most is	**ce que j'aime le plus est**

Opinions

for me	**d'après moi**
I believe that	**je crois que**
according to...	**selon...**
I really hate	**j'ai horreur de**
I really love	**j'apprécie**
I can't stand	**je ne supporte pas**
my friends say that	**mes copains disent que**
my parents say that	**mes parents disent que**
my teachers say that	**mes profs disent que**
my mum tells me that	**ma mère me dit que**
my dad tells me that	**mon père me dit que**
I would say	**je dirais que**
I like /love it / them	**j'aime/j'adore ça**
I am for	**je suis pour**
I am against	**je suis contre**
I agree with	**je suis d'accord avec**
I disagree with	**je ne suis pas accord avec**
what I like is	**ce que j'aime c'est**
it seems that	**il semble que**
as far as... is concerned	**en ce qui concerne...**

Idioms

Although it is...	**Bien que ce soit...**
That's life !	**C'est la vie !**
What a shame !	**Quel dommage !**
What a disaster !	**Quelle catastrophe !**
What a pain !	**Quel ennui !**
It was so boring !	**C'était la barbe !**
I was over the moon!	**J'étais aux anges !**
I was bored to death!	**Je m'ennuyais à mourir !**
I've had enough!	**J'ai le cafard !**
I was so fed up!	**J'en avais marre !**

Spanish

High Frequency Words

LIONHEART EDUCATIONAL TRUST

CORE

Time phrases / Sequencers

normally	**normalmente**
often	**a menudo**
usually	**generalmente**
from time to time	**de vez en cuando**
sometimes	**a veces**
tomorrow	**mañana**
next week	**la semana próxima**
summer / autumn	**en verano / otoño**
winter / spring	**en invierno / primavera**
morning/afternoon/evening	**por la mañana/ tarde/ noche**
then	**luego / después**
always/still	**siempre / aún**
at the moment	**en este momento / ahora**
later	**más tarde / después**
in the future	**en el futuro**
yesterday	**ayer**
last night	**anoche**
last week	**la semana pasada**
last year	**el año pasado**
two years ago	**hace dos años**
next	**luego**
firstly	**primero**
after	**después (de)**
before	**antes (de)**
lastly	**finalmente**

Key verb phrases

I have	**tengo**
I have not	**no tengo**
I am	**soy / estoy**
I am not	**no soy / estoy**
I would like	**me gustaría**
it is	**es / está**
it is not	**no es / está**
there is	**hay**
there is not	**no hay**
it will be	**será**
I'm going to	**voy a** + *infinitive*
you must	**se debe** + *infinitive*
you must not	**no se debe** + *infinitive*
you can	**se puede** + *infinitive*
you cannot	**no se puede** + *infinitive*
it was	**fue**
it wasn't	**no fue**
there was	**había**
there wasn't	**no había**
it would be	**sería**
it would not be	**no sería**
if i was rich	**si fuera rico/a**
in an ideal world	**en un mundo ideal**
in my dreams	**en mis sueños**

Connectives

but	**pero**
and	**y**
because	**porque / ya que**
also	**también**
however	**sin embargo**
therefore	**por lo tanto / por eso**
as	**como**
or	**o**
however / although	**aunque**
on the other hand	**por otro lado**
fortunately	**por suerte**
unfortunately	**por desgracia**
in addition	**además**

Negatives

not	**no...**
never	**no... nunca**

Comparisons

more... than	**más... que**
less... than	**menos... que**

Quantifiers / Intensifiers

Very	muy
Too	demasiado
Quite	bastante
A bit	un poco
so	tan
Really	*adjective ending* -ísimo/a(s)
A lot	mucho

Opinions

In my opinion	en mi opinión
I think that	pienso que
I like	me gusta(n)
I love	me encanta(n)
I don't like	no me gusta(n)
I hate	odio
I prefer	prefiero
My favourite is	mi... favorito/a es...
I find it	me parece

Idioms

How great !	**¡ Qué bien !**
How bad !	**¡ Qué mal !**
How funny !	**¡ Qué divertido !**
How cool !	**¡ Qué guay !**
How boring / annoying !	**¡ Qué aburrido! ¡Qué rollo !**
How dreadful !	**¡ Qué horror !**
It's crazy !	**¡ Es una locura !**
It's a waste of time!	**¡ Es una pérdida de tiempo !**
It's a waste of money!	**¡ Es una pérdida de dinero !**

Spanish

High Frequency Words

LIONHEART EDUCATIONAL TRUST

CHALLENGE

Time phrases / Sequencers

today	**hoy**
each/every	**cada**
currently	**actualmente**
the next day	**al día siguiente**
in my dreams	**en mis sueños**
in an ideal world	**en un mundo ideal**
when i was little	**cuando era pequeño/a**
when i'm older	**cuando sea mayor**
for **5** years (now)	**desde hace 5 años**
since i was **5** years old	**desde que tenía 5 años**

Quantifiers / Intensifiers

so	**tan**
rather	**bastante**
extremely	**extremadamente**
frankly	**francamente**
entirely/ totally	**totalmente**
incredibly	**increíblemente**

Connectives

nevertheless	**aun así**
whereas	**mientras que**
even if	**aunque**
additionally	**asimismo**
since	**dado que / ya que**
not at all	**en absoluto**

Key verb phrases

you can see	**se puede(n) ver**
if it is	**si es**
there would be	**habría**
there would not be	**no habría**
you could	**podría** + *infinitive*
you couldn't	**no podría** + *infinitive*
you should	**debería** + *infinitive*
you shouldn't	**no debería** + *infinitive*
you must	**hay que** + *infinitive*
you must not	**no hay que** + *infinitive*

Negatives

no…more/longer	**ya no…**
nothing	**no… nada**
no one/nobody	**no… nadie**
neither… nor	**no… ni…**

Comparisons / Superlatives

best	**mejor**
worst	**peor**
the best thing is	**lo mejor es**
the most important is	**lo más importante es**
what I like the most is	**lo que más me gusta es**

Opinions

for me	**para mí**
as I see it	**a mi modo de ver / a mi juicio…**
I believe that	**creo que**
according to…	**según / para…**
I really hate	**detesto**
I really love	**me chifla/ me mola**
I can't stand	**no aguanto / no soporto**
my friends say that	**mis amigos dicen que**
my parents say that	**mis padres dicen que**
my teachers say that	**mis profesores dicen que**
my mum/dad tell me that	**mi madre /mi padre me dice que**
i would say	**diría que**
I like/love it / them	**me gusta(n) / me encanta(n)**
I am for	**estoy a favor de**
I am against	**estoy en contra de**
I agree with	**estoy de acuerdo con**
I disagree with	**no estoy de acuerdo con**
what I like…	**lo que me gusta..**
it seems that	**me parece que**
as for me	**por mi parte / en cuanto a mí**

Idioms

No more excuses !	**¡ Basta de excusas !**
I am fed up !	**¡ Estoy harto/a !**
What a shame !	**¡ Qué lástima !**
What a disaster !	**¡ Qué desastre !**
It sounds funny /curious !	**¡ Suena muy gracioso / curioso !**
A dream come true !	**¡ Es un sueño hecho realidad !**
It is the most exciting thing I have ever seen!	**¡ Es lo más emocionante que he visto jamás !**
It has been the most important / unforgettable experience of my life!	**¡ Ha sido la experiencia más importante / inolvidable de mi vida !**
I have enjoyed it a lot	**¡ Lo he disfrutado muchísimo !**

PE

Unit 3 - Fitness

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Fitness component	Description	Test and description	E.g. of practices to improve component of fitness
Cardiovascular endurance	The ability of the heart, lungs and blood to transport oxygen during sustained activities.	12 minute Cooper run: Maximum distance ran in 12 minutes. Multistage fitness test: Shuttle runs in time to a recorded beep, which gets gradually quicker.	A non stop activity involving jogging for 10 minutes+. E.g. a small sided possession game in netball/ football/ rugby etc.
Speed	How quickly you can move the whole body or part of a body.	30m sprint test: How fast you can run 30m.	Short sprint to receive a ball in netball/ football/ hockey etc.
Muscular endurance	To perform repeated muscular contractions over a sustained period of time.	30s sit up test: Number of sit ups in 30s	Repeated skill practice for a sustained time such as 200 passes with a partner in basketball/ rugby/ cricket etc.
Strength	The maximum force a muscle can apply.	Grip dynamometer test: Squeeze the dynamometer as hard as you can with one hand. 1 rep max test: Heaviest weight you can lift for one repetition.	Links to some sports better than others. Rugby – tackling practice. Other sports may have to be a fitness activity such as press ups within a skill circuit.
Agility	The ability to change direction at speed	Illinois agility test: How fast you can complete a circuit around cones.	Dodging practice to receive the ball in netball/ basketball etc.
Power	Speed x strength	Vertical jump test: Maximum height reached when jumping, beyond maximum reach point.	Long pass practice with partner in netball/ football etc.
Flexibility	The range of movement around a joint.	Sit and reach test: Sit with straight legs and feet against box, measure how far you can reach past feet.	Stretching before or after a practice or game.

Key terminology:

Key word	Description
Heart	A muscle which pumps blood around your body
Lungs	Organs which breathe in oxygen and breathe out carbon dioxide
Oxygen	A gas needed for creating energy
Anaerobic	High intensity exercise
Acceleration	An increase in speed
Repetition	Each time a movement is repeated
Contraction	A muscle producing a force
Balance	Remaining stable. Centre of mass stays over base of support
Force	A push or pull that changes that causes an object to speed up or slow down.
Suppleness	Moving and bending with ease.

PE

Unit 4 - Leadership

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Roles within physical activity	Description of roles	Qualities
Performer	Takes part in the activity Executes skills and tactics	• High effort levels – try to be successful • Fair – enjoyable for everyone • Sportsmanship (good etiquette) – enjoyable for everyone • Can-do attitude – resilient and continue participation
Coach	Plan and lead warm up & activities Give instructions and demonstrate Give coaching points Time activities and whole session Can do risk assessment if no official.	• Organised – good pace • Good communicator – participants understand what to do • Confident – have a good presence • Knowledgeable – improve skill level • Enthusiastic – motivate others
Official	Time a competition Enforce the rules Risk assessment Start and stop the game	• Knowledgeable – can enforce rules • Confident – have good presence • Good communicator – participants understand what is happening • Good decision maker – game is fair

Key word	Description
Gamesmanship	Bending the rules to gain an advantage e.g. distracting/ time wasting.
Deviance	Breaking the rules e.g. incorrect line call in badminton.
Risk assessment	The process of identifying dangers for a given area/ activity
Verbal communication	Speaking/ instructions/ directions/ coaching points
Nonverbal communication	Using gestures such as pointing/ signalling/ smiling/ clapping

How to do a risk assessment:

- Check participants for correct kit, footwear, hair, nails, no chewing gum
- Check the playing area is clear, undamaged and not weather affected e.g. frozen pitch
- Check equipment is in good working order
- Check spare equipment is put away

Warm up ideas:

- Stuck in the mud
- Cups and saucers with cones (one team turn cones right way round, the other team turn them upside down)
- Truck and trailer (can be dribbling a football/ basketball etc)
- Piggy in the middle
- Obstacle course

Garage Band

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Music Knowledge Organiser

- Garage Band -

Getting Started

Click this — Then this... — Choose '<u>Empty Project</u>', and then either '<u>Software Instrument</u>' (to use the keyboard) or '<u>Microphone</u>' to record live sounds with a microphone.

Save!!

Help, I Can't Hear Anything?!?

1. Make sure the **headphones** are plugged into the back of the computer (not the keyboard)
2. Turn up the **volume** (F12 on the Mac keyboard)
3. Make sure the **'MIDI/Select/Octave'** button is not lit red on the Alesis music keyboard
4. Make sure the **'Mute'** button is not lit on Garage Band

How Do I Delete? =

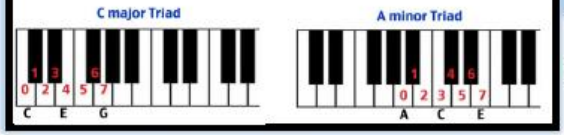
Click on (highlight) the thing you want to delete and press: delete

Solo button

Mute button — Volume slider

Press this button to view and use the pre-recorded '<u>Loops</u>' and '<u>Samples</u>'.

Start with one of these <u>chords</u>...



Choose your <u>instrument</u> here (if using a keyboard track).

All the Chords...

Chords In All Major Keys

Major Keys	I	ii	iii	IV	V	vi	vii°
C	C	Dm	Em	F	G	Am	B°
C♯	C♯	D♯m	E♯m	F♯	G♯	A♯m	B♯°
D♭	D♭	E♭m	Fm	G♭	A♭	B♭m	C°
D	D	Em	F♯m	G	A	Bm	C♯°
E♭	E♭	Fm	Gm	A♭	B♭	Cm	D°
E	E	F♯m	G♯m	A	B	C♯m	D♯°
F	F	Gm	Am	B♭	C	Dm	E°
F♯	F♯	G♯m	A♯m	B	C♯	D♯m	E♯°
G♭	G♭	A♭m	B♭m	C♭	D♭	E♭m	F°
G	G	Am	Bm	C	D	Em	F♯°
A♭	A♭	B♭m	Cm	D♭	E♭	Fm	G°
A	A	Bm	C♯m	D	E	F♯m	G♯°
B♭	B♭	Cm	Dm	E♭	F	Gm	A°
B	B	C♯m	D♯m	E	F♯	G♯m	A♯°

Chords In All Minor Keys

Minor Keys	i	ii°	III	iv	v	VI	VII
Cm	Cm	D°	E♭	Fm	Gm	A♭	B♭
C♯m	C♯m	D♯°	E	F♯m	G♯m	A	B
Dm	Dm	E°	F	Gm	Am	B♭	C
D♯m	D♯m	E♯°	F♯	G♯m	A♯m	B	C♯
E♭m	E♭m	F°	G♭	A♭m	B♭m	C♭	D♭
Em	Em	F♯°	G	Am	Bm	C	D
Fm	Fm	G°	A♭	B♭m	Cm	D♭	E♭
F♯m	F♯m	G♯°	A	Bm	C♯m	D	E
Gm	Gm	A°	B♭	Cm	Dm	E♭	F
G♯m	G♯m	A♯°	B	C♯m	D♯m	E	F♯
A♭m	A♭m	B♭°	C♭	D♭m	E♭m	F♭	G♭
Am	Am	B°	C	Dm	Em	F	G
A♯m	A♯m	B♯°	C♯	D♯m	E♯m	F♯	G♯
B♭m	B♭m	C°	D♭	E♭m	Fm	G♭	A♭
Bm	Bm	C♯°	D	Em	F♯m	G	A

Music

Electronic Dance Music

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Music and Technique	
Sample	*s*ampling is the reuse of a sound recording in another recording. This could be a melody, drum beat or any other recorded sound.
Beats Per Minute (BPM)	A way of measuring the tempo of a piece of music. Dance music often has a high BPM.
Beat	The beat is the basic measure of time that you would tap your feet to.
Bass-line	The low-pitched instrumental part that gives dance music its drive and groove.
Four to the Floor	A technique where the drummer (or drum machine) just plays four kick drum beats in a bar of four.
Synthesizer	A fully electronic musical instrument that produces audio signals. The synthesizer is often a lead instrument in Dance tracks.

Structure	
Loop	A repeating section of recorded music.
Break	A break is where all the elements of a song (e.g., synth pads, basslines, vocals), *except for percussion*, disappear.
Drop	A point in a dance track where a sudden change of rhythm or bass line occurs, which typically is preceded by a build section and break.
Intro	The opening section of a piece of music which usually goes before a verse.
Outro (Coda)	The ending section of a piece of music.

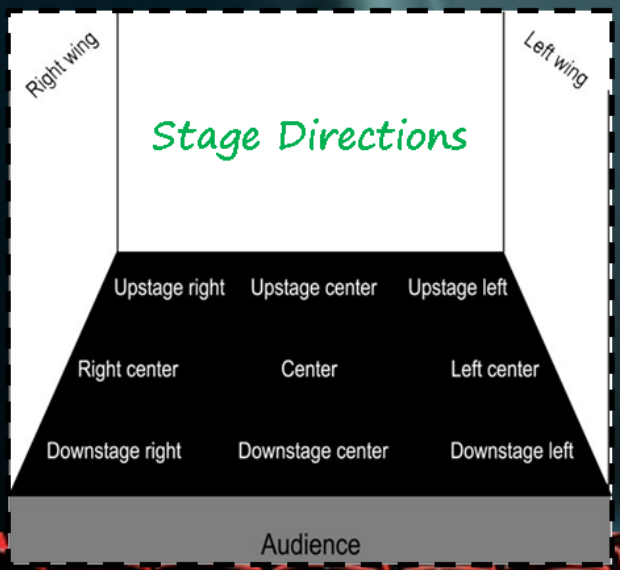
Context	
DJ (Disk Jockey)	A **disc jockey**, often ab-breviated as **DJ**, is a per-son who plays existing rec-orded music for a live audi-ence.
Producer	A producer oversees and manages the sound recording and production of a band or performer's music. A producer has many, varying roles during the re-cording process.
Genres	**1970's**—Disco Funk, R N B & Hip Hop **1980's**—New Wave, Techno & Electro **1990's**—Techno, Drum & Bass, Garage **2000's**—Dubstep, Grime & Hardstyle **2010's**—House Revival, Trap & Moombahton

Try listening to some dance music whilst doing your homework!

Drama Knowledge Organiser

KEY PHYSICAL SKILLS	
Gesture	How everyday actions, such as shaking hands or putting on a jacket, express something about a character. What single gestures, like a wave or hug can reveal about a character.
Facial Expression	How different facial expressions reflect different characters and their moods. How eye movements can convey feelings and relationships.
Over Exaggeration	Exaggeration is a representation of something in an excessive manner. Overacting is the exaggeration of gestures and speech when acting.
Body Language	The gestures, postures, and facial expressions by which a person manifests various physical, mental, or emotional states and communicates nonverbally with others.
Slow Motion	How quickly or slowly a character makes a gesture or moves across the stage and how it influences our opinion of them.

DRAMA STRATEGIES	
Freeze Frame	The action is frozen like a photograph.
Split Scene	Cutting from scene to scene.
Improvisation	Improvisation is a state of being and creating action without pre-planning. This can be when an individual or group is acting, dancing, singing, playing musical instruments, talking, creating artworks, problem solving, or reacting in the moment and in response to the stimulus.
Hot Seating	You are in role and people ask you questions about your background, behaviour and motivation.
Role on the Wall	Role on the Wall is a visual map that invites the actors to explore the inner feelings and outer influences on a character, place, or idea.
Thought Tracking	When frozen you speak the thought in the character's head aloud.
Levels	Using heights and proxemics to demonstrate meaning and relationships to the audience.



Blocking is:
- the precise staging of actors.
- working out an actors movements on the stage.

THE STAGE	
Set	The set is the constructed or created setting in which a play takes place.
Props	The props are the items used during a performance.
Costume	All the clothes and accessories an actor wears to demonstrate meaning and/or character.
Masks	Masks are a form of covering the face enabling actors to represent different people or beings leading to a more striking and effective performance.
Make-Up	Make-up is the cosmetic paint, powder and colouring used on stage to make faces and expressions visible to the audience.
Lighting	The use of artificial light to create a range of effects and moods, or to direct the audience's attention.
Sound	This includes everything the audience hears.

"All the world's a stage."

William Shakespeare

"We must all do theatre, to find out who we are, and to discover who we could become."

Augusto Boal

ADT

Y9 Food Tech–Food Hygiene

EXPLORE	DEVELOP	CREATE	EVALUATE
This is an Food Tech project where pupils will explore Food Hygiene through exploring knowledge and theory of practice.	Pupils will develop their skills of cooking through various meals and apply their knowledge of Food and hygiene practice.	Pupils will create a range of meals from a series of recipes in the booklet.	Pupils will retrieve their knowledge on practice, and applying good health and hygiene knowledge

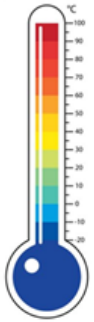
ESSENTIAL KNOWLEDGE- You will Learn That

Food poisoning can be caused by:
bacteria, e.g. through cross-contamination from pests, unclean hands and dirty equipment, or bacteria already present in the food, such as salmonella;
physical contaminants, e.g. hair, plasters, egg shells, packaging;
chemicals, e.g. cleaning chemicals.
Bacterial contamination is the most common cause. Microorganisms occur naturally in the environment, on cereals, vegetables, fruit, animals, people, water, soil and in the air. Most bacteria are harmless but a small number can cause illness. Harmful bacteria are called pathogenic bacteria.
The process of food becoming unfit to eat through oxidation, contamination or growth of micro-organisms is known as food spoilage.

Temperatures to remember
To reduce the risk of food poisoning, good temperature control is vital:

- 5-63°C – the danger zone where bacteria grow most readily.
- 37°C – body temperature, optimum temperature for bacterial growth.
- 8°C – maximum legal temperature for cold food, i.e. your fridge.
- 5°C (or below) – the ideal temperature your fridge should be.
- 75°C – if cooking food, the core temperature, middle or thickest part should reach at least this temperature.
- 75°C – if reheating food, it should reach at least this temperature. In Scotland food should reach at least 82°C.

Techniques and Processes- You will learn how



Where should food be stored in the fridge?

Cheese, dairy and egg-based products
The temperature is usually coolest and most constant at the top of the fridge, allowing these foods to keep best here.

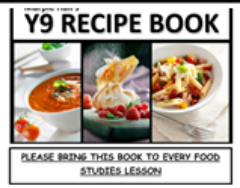
Cooked meats
Cooked meats should always be stored above raw meats to prevent contamination from raw meat.

Raw meats and fish
Raw meats and fish should be below cooked meats and sealed in containers to prevent contamination of salad and vegetables.

Getting ready to cook
Remove blazers/jumpers and roll up long sleeves. Tie up long hair and tuck in ties or head coverings. Thoroughly wash and dry hands. Put on a clean apron

Key Practice

Best-before-date
You can eat food past this date but it might not be at its best quality.



Use-by-date
You've got until the end of this date to use or freeze the food before it becomes too risky to eat.

H&S

Allergen and food intolerance awareness
There are 14 ingredients (allergens) that are the main reason for adverse reactions to food. Cross-contamination of food containing these allergens must be prevented to reduce the risk of harm. They must also be labelled on pre-packaged food and menus so that consumers can make safe choices. The 14 allergens are:

Bacterial growth and multiplication
All bacteria, including those that are harmful, have four requirements to survive and grow:

- food;
- moisture;
- warmth;
- time.

Why clean?
To remove grease, dirt and grime, and prevent food poisoning and pests.

Key terms

Allergens: Substances that can cause an adverse reaction to food. Cross-contamination must be prevented to reduce the risk of harm.

Bacteria: Small living organisms that can reproduce to form colonies. Some bacteria can be harmful (pathogenic) and others are necessary for food production, e.g. to make cheese and yogurt.

Cross-contamination: The transfer of bacteria from one source to another. Usually raw food to ready-to-eat food but can also be the transfer of bacteria from unclean hands, equipment, cloths or pests. Can also relate to allergens.

Food poisoning: Illness resulting from eating food which contains food poisoning micro-organisms or toxins produced by micro-organisms.
High risk ingredients: Food which is ready to eat, e.g. cooked meat and fish, cooked eggs, dairy products, sandwiches and ready meals.

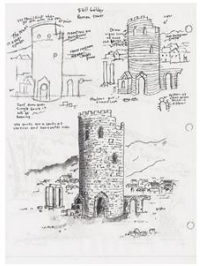
Y9 Art & Design –Fine Art & Textiles- Urban

EXPLORE	DEVELOP	CREATE	EVALUATE
This is an Art & Textiles project where pupils will explore the theme of Urban and buildings as well as the work of Harriet Popham	Pupils will develop ideas from studies of buildings and cityscapes as well as drawing and textiles tile techniques.	Pupils will draw from observation in tone a range of buildings and cityscapes to create their own designs for fabric printing and stitching.	Pupils will retrieve their knowledge on techniques, theme and artist to compare and contrast their own work with expectations. A booklet is produced including www & ebi.

ESSENTIAL KNOWLEDGE- You will Learn That

Tone

Using tone correctly can make 2D drawings look 3 dimensional.



Tone, top tips-

Remember to look at where the light hits your objects. This will be the lightest area and the opposite side will be the darkest.
Look for and try to match, different shades of grey.

Techniques and Processes- You will learn how

Polystyrene Printing

Relief printing is when you carve into a printing block that you then use to press onto paper and make a print. The lines or shapes you carve into the printing block will not have ink on them, so will not show up on your paper. Instead, the print will reveal the parts you don't draw, because they come into contact with the ink. The print will be a mirror image of what you see on your printing block!

Key Practitioners – Artists, Designers,

Urban using cityscapes and buildings as inspiration pupils will learn about perspective and develop designs for fabrics.

Harriet Popham is an artist who uses drawing, print and stitch. She combines these to create art.

Materials/ Mediums/ H&S

Health and Safety using a sewing machine

- Always tie back your hair and secure loose clothing. (take off lanyard)
- Only 1 person uses the sewing machine. Never allow someone else to touch your machine.
- Turn the machine off at the wall before threading, or if it goes wrong.
- To not crowd people using machines.
- Do not talk to people using machines
- Do not touch any dials except zigzag adjuster and length of stitch.

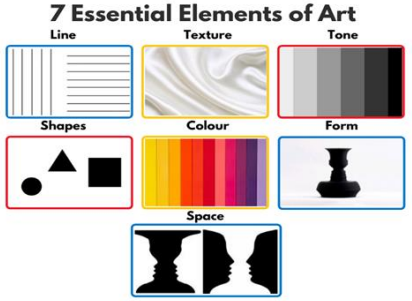
Fabric- Cotton
Thread
Mixed Media
Applique
Stitching
Tie dye

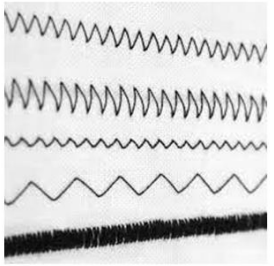
Topic Terminology

Key words-

Intricate
Detailed
Line drawing
Imaginative
Poly block print
Stitch
Mixed media
Pattern

Straight stitch





Y9 Product Design–Insect Hotel

EXPLORE	DEVELOP	CREATE	EVALUATE
Students will **explore** environmental issues; the role that insects play in pollinating plants which gives us food crops as well as biodiversity.	**Develop** 3D sketching and annotation skills as needed for GCSE NEA projects. Develop practical skills with hand tools and workshop machines – including hammering and screwing; health and safety and development of independent practice;	Students will design and create a wooden insect hotel from upcycled pallet wood, OSB, galvanised steel mesh, wood screws, 25mm panel pins and fencing staples using a limited range of workshop tools and equipment as a short,	Students will **evaluate** their practical and design work as well as the individual manufacturing processes. skills-based project that sets them up well to make small pieces of furniture for a future resistant materials / product design NEA.

ESSENTIAL KNOWLEDGE- You will Learn That

The 6 R's of Sustainability

Reduce:-
- Use less material to make things
- Use less 'non-renewable' energy resources
- Use less packaging on products
- Throw less things away (Recycle more)

Re-use:-
- Use an old product elsewhere for a different purpose
- Avoid throwing it away if it can be used for something else

Recycle:-
- Recycle your waste instead of throwing it away so that the materials can be broken down and used to make new products
- Use your recycling bins from the Council – Paper, Glass, Plastic, Food

Re-think:-
- Can we change the way we live? E.g. Turn power off at the mains
- Can we use different sources of power to manufacture? E.g. Solar Panels or Hydro Power
- Use waste land rather than destroying natural habitats

Techniques and Processes- You will learn how

Refuse:-
- If you don't need it, refuse to buy it
- Don't buy something if it has too much packaging
- Don't throw plastic away, recycle it
- Don't drive there if you can walk there

Repair:-
- If something is broken, don't throw it away, try to fix it

Key Practice

Impacts of climate change in the UK

- sea levels could rise, covering low lying areas, in particular east England
- droughts and floods become more likely as extreme weather increases
- increased demand for water in hotter summers puts pressure on water supplies
- Industry may be impacted, eg Scottish ski resorts may have to close due to lack of snow

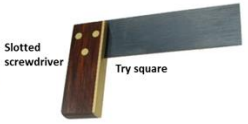
Impacts of climate change around the world

- sea level rise will affect 80 million people
- tropical storms will increase in magnitude (strength)
- species in affected areas (eg Arctic) may become extinct
- diseases such as malaria increase, an additional 280 million people may be affected

Materials and Properties

Pallet wood is wood recovered from old pallets. They can be made from **hardwood** (such as oak) or **softwood** (mainly pine) and have been either **heat-treated** or **treated with chemicals** making them **suitable for outdoor use.**

Topic Terminology



Keywords – you must know what these all mean (in a D&T context) and be able to spell them:

Marking out	Bench hook
Manufacturing	Tenon saw
Wasting	Metalwork vice
Sustainability	Woodwork vice
Accuracy	Aluminium oxide paper
Tanalised	Sanding block
Upcycle	Vertical belt sander
OSB	Grain
MDF	Fixings
Chipboard	Screw head
Plywood	Screwdriver bits

Computer Science

Introduction to Python

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Keywords	
Input	When the user enters data into a program
Output	When the program displays data to the user
Variable	An area data can be stored whilst the program is running
Concatenation	The operation of joining together two strings
Casting	When you convert from one data type into another
Sequence	Instructions being executed in order
Selection	When a program can make a choice about which line to execute based on a condition
Iteration	When a program is able to repeat blocks of code multiple times

Common Mistakes

```
Total = number1 + number2
print(total)
Print(total)
```

Capital letters in variables names and commands

```
number1 = 25
number2 = 36
total = numbr1 + number2
```

Spelling of variable names and commands

```
print("Hello World)
print(¨Hello World
```

Brackets and braces come in pairs, make sure that they are opened and closed.

Frequently used commands	
command	**comment**
print()	Used to display to the screen
input()	Allows user to enter value
int()	Converts value to integer

if <criteria>:
…
elif <criteria>:
…
else:
…
	Selection statement used to give choices (or paths) that the program can follow depending on a decision.

while <criteria>: …	Condition controlled iteration, when you don't know how may iterations need to take place.

Assignment Operators	
Description	Operator
Assign	=
Add then reassign	+=
Subtract then reassign	-=
Divide then reassign	/=
Mod then reassign	%=
Integer divide then reassign	//=

Relational Operators	
Description	Operator
Equal to	==
Less than	<
Greater than	>
Not equal to	!=
Less than or equal to	<=
Greater than or equal to	>=