



Year 9 Knowledge Organiser HT2

Knowledge is Power

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Week 1- Key Devices & Techniques

Cyclical Structure	When a text starts and ends in the same place/mentions the same thing.
Simile	A comparison between like or as.
Personification	When a non-human object is given features or characteristics of a person.
Foreshadowing	When the writer hints at something that will happen later.
Foreboding	When the writer hints at something bad happening later in the story.

Week 2 - Key Vocabulary

Treacherous	Dangerous/Intending harm.
Asylum	Protection that a government gives people who have left their own country, usually because they were in danger.
Dehumanise	To treat somebody as if they are not human – like they are an object or an animal.
Squalid	Very dirty or unpleasant living conditions.
Arduous	Something that is very difficult and tiring, requiring a lot of effort.

Week 3 – Key Devices and Techniques

Catharsis	Getting rid of unhappy memories or strong emotions by expressing them.
Symbolism	Where an idea or object represent a bigger idea or emotion.
Metaphor	A direct comparison of one thing to another.
Pathetic Fallacy	Where nature, often the weather, mirrors the mood of the text.

Week 5 – Key Concepts

Refugee	A person who has been forced to leave their country or home, because there is a war or for political, religious or social reasons.
Asylum Seeker	A person who has left their home country as a political refugee and is seeking asylum (protection) in another.
People Trafficker	A person who illegally transports people from one country or area to another for payment.
Repatriation	The return of someone to their own country.
Granted Asylum	You have been given the legal right to live and work in the country in which you applied for asylum (protection).

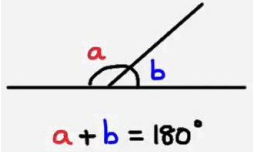
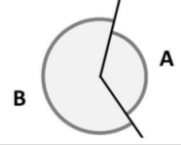
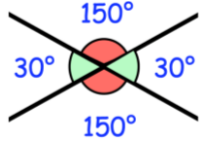
Week 4 – Key Vocabulary

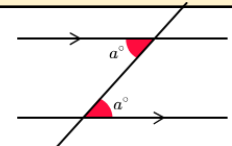
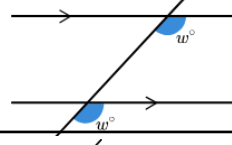
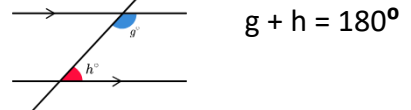
Obliterated	To completely destroy something to the point of non existence.
Euphoria	An extremely strong feeling of happiness and excitement.
Shrouded	To cover or hide something, usually with cloth.
Inconspicuous	Not attracting attention or being hard to notice.

Week 6 – The Journey

Afghanistan to Pakistan	Enaiatollah is only 10 when his mother takes him on a lorry with electricity poles and leaves him in Pakistan to fend for himself. This is done out of love to save him from the Taliban.
Pakistan to Iran	Driven in a pick up truck by people traffickers.
Iran to Turkey	Treacherous hike over mountains with people traffickers.
Turkey to Greece	In an inflatable dinghy with four others.
Greece to Italy	In a shipping container he reaches his final destination, where he is finally granted asylum.

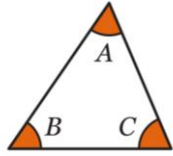
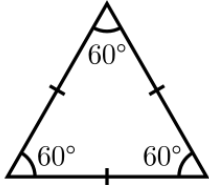
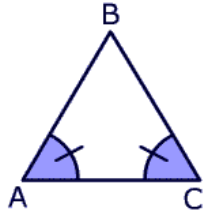
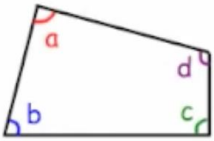
Maths

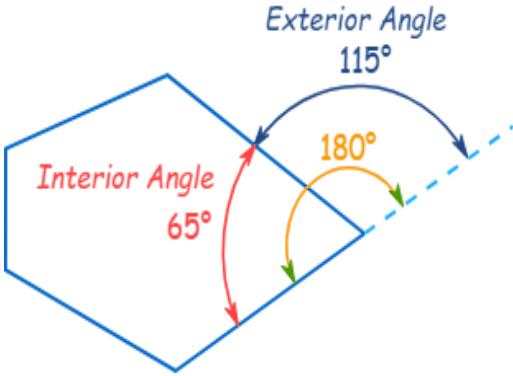
Basic Angle Facts	
Reason	Diagram
Angles on a straight line add up to 180°	
Angles around a point add up to 360°	$A + B = 360^\circ$ 
Vertically opposite angles are equal.	

Angles on Parallel Lines	
Parallel	Two lines that never meet
Reason	Diagram
Alternate angles are equal	
Corresponding angles are equal	
Co-interior angles add up to 180°	

Bearings and Map Scales	
Key Word	Definition
Compass points	Directions should on a compass: North, East, South, West
North line	A line that points directly upwards
Bearing	an angle measured clockwise from the north line (must have three digits)
Clockwise	a turn to the right (following the hands of a clock)
Anticlockwise	a turn to the left (in the opposite direction to the hands of a clock)
Protractor	a measuring instrument used to measure angles in degrees
Acute	An angle less than 90
Obtuse	An angle between 90 and 180
Reflex	An angle greater than 180
Scale drawing/model	a representation or copy of an object that is larger or smaller than the actual size of the object being represented
Scale	Tells you the relationship between the scale drawing and the original object, usually written as a ratio

Maths

Angles in Triangles and Quadrilaterals		
Name	Reason	Diagram
All triangles	Angles in a triangle add up to 180°	 $A + B + C = 180^\circ$
Equilateral triangle	All angles in an equilateral triangle are equal, so each angle is 60°	
Isosceles triangle	Base angles in an isosceles triangle are equal .	
Quadrilaterals	Angles in quadrilaterals add up to 360°	 $a + b + c + d = 360^\circ$

Angles in other Polygons		
Polygon	a closed 2D shape with 3 or more sides	
Regular	Equal sides and angles	
Irregular	Unequal sides and angles	
Interior angle	angle inside a shape	
Exterior angle	angle between any side of a shape, and a line extended from the next side.	
Formulae you need to memorise:		
n = number of sides in the shape		
Formula 1	exterior + interior = 180°	
Formula 2	$n \times \text{exterior} = 360^\circ$	
Formula 3	$(n - 2) \times 180 = \text{sum of interior angles}$	
Names and properties of polygons		
Pentagon	5 sides and angles	
Hexagon	6 sides and angles	
Heptagon	7 sides and angles	
Octagon	8 sides and angles	
Nonagon	9 sides and angles	
Decagon	10 sides and angles	

Mixtures	<i>Two or more elements or compounds not chemically combined together</i>	Can be separated by physical processes.
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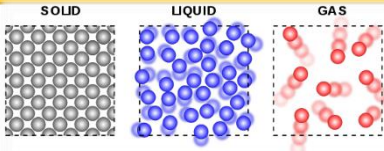
Separation techniques		
Method	Description	Example
Filtration	<i>Separating an insoluble solid from a liquid</i>	To get sand from a mixture of sand, salt and water.
Crystallisation	<i>To separate a solid from a solution</i>	To obtain pure crystals of sodium chloride from salt water.
Simple distillation	<i>To separate a solvent from a solution</i>	To get pure water from salt water.
Fractional distillation	<i>Separating a mixture of liquids each with different boiling points</i>	To separate the different compounds in crude oil.
Chromatography	<i>Separating substances that move at different rates through a medium</i>	To separate out the dyes in food colouring.

Ions	
State what an ion is	An ion is a charged particle produced by loss or gain of electrons
Describe how an atom forms an ion	An atom loses or gains electrons. Generally: <ul style="list-style-type: none"> Metals lose electrons and form positive ions Non-metals gain electrons and form negative ions
Explain why atoms form ions	Atoms will react to form ions to get a full outer shell of electrons.

Group 1 – The Alkali Metals	
State the physical properties of Group 1 metals	<ul style="list-style-type: none"> Soft Low melting point Low density Conduct electricity
Describe what will be observed when group 1 metals react with water	When group 1 metals react with water: <ul style="list-style-type: none"> pH of the solution increases (becomes alkaline) Fizzing/bubbling (H₂ gas is produced) The metal floats on water (metal is less dense than water) The metal becomes a molten sphere
Describe and explain the trend in reactivity as you go down Group 1	The Group 1 metals get more reactive down the group. This is due to the outer electron being further away from the nucleus therefore weaker electrostatic attraction, so the electron is more easily lost

Group 7 – The Halogens	
State the appearance of Group 7 elements.	Fluorine: Colourless gas Chlorine: Pale-yellow gas Bromine: Orange liquid Iodine: Grey solid with a purple vapour
Describe the trend in physical properties as you go down group 7	As you do down the group: <ul style="list-style-type: none"> colours get darker boiling point increases
Explain how reactivity increases up Group 7.	Halogens get more reactive up the group. This is due to the outer electron shell being closer to the nucleus therefore stronger electrostatic attraction, electron is more easily gained.
State what a displacement reaction is.	When a more reactive element takes the place of a less reactive element in a compound. chlorine + sodium bromide → sodium chloride + bromine

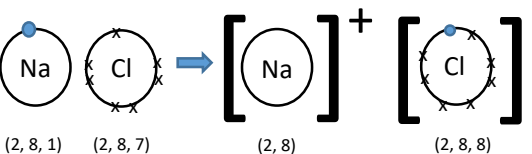
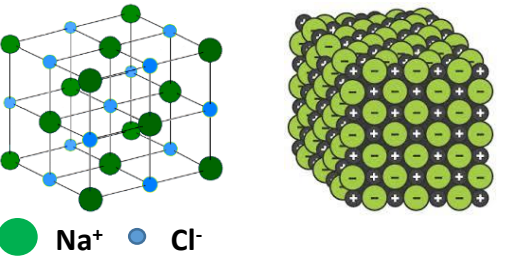
Group 0 – The Noble Gases	
Explain why Group 0 gases are unreactive.	They have a full outer shell of electrons. They do not need to lose or gain any electrons.

Solid, liquid, gas	<i>Melting and freezing happen at melting point, boiling and condensing happen at boiling point.</i>	 <p>SOLID LIQUID GAS</p> <p>The amount of energy needed for a state change depends on the strength of forces between particles in the substance.</p>	<p>(HT only)</p> <p>Limitations of simple model:</p> <ul style="list-style-type: none"> • There are no forces in the model • All particles are shown as spheres • Spheres are solid 	<i>s</i>	solid
				<i>l</i>	liquid
				<i>g</i>	gas

Chemical bonds	Ionic	<i>Particles are oppositely charged ions</i>	Occurs in compounds formed from metals combined with non metals.
	Covalent	<i>Particles are atoms that share pairs of electrons</i>	Occurs in most non metallic elements and in compounds of non metals.
	Metallic	<i>Particles are atoms which share delocalised electrons</i>	Occurs in metallic elements and alloys.

Ionic bonding		
Electrons are transferred so that all atoms have a noble gas configuration (full outer shells).	<i>Metal atoms lose electrons and become positively charged ions</i>	Group 1 metals form +1 ions Group 2 metals form +2 ions
	<i>Non metals atoms gain electrons to become negatively charged ions</i>	Group 6 non metals form -2 ions Group 7 non metals form -1 ions

Properties of ionic compounds	<i>High melting and boiling points</i>	Large amounts of energy needed to break the bonds.
	<i>Do not conduct electricity when solid</i>	Ions are held in a fixed position in the lattice and cannot move.
	<i>Do conduct electricity when molten or dissolved</i>	Lattice breaks apart and the ions are free to move.

Dot and cross diagram	 <p>(2, 8, 1) (2, 8, 7) → (2, 8) (2, 8, 8)</p>
Giant structure	 <p>● Na⁺ ● Cl⁻</p>

Ionic compounds

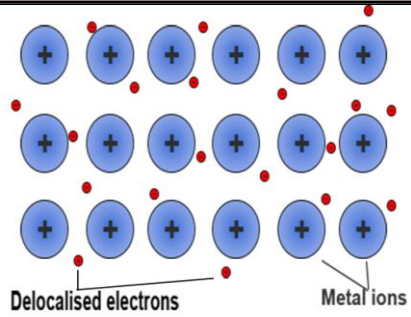
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Structure	<ul style="list-style-type: none"> • <i>Held together by strong electrostatic forces of attraction between oppositely charged ions</i> • <i>Forces act in all directions in the lattice</i>
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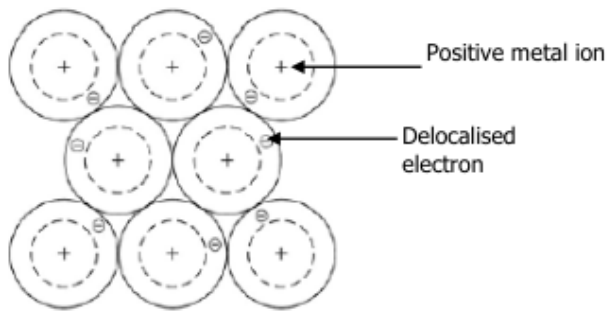
State when an ionic bond will be formed	Ionic bonds are formed when metals bond with non-metals
Describe how ionic bonds are formed	<ul style="list-style-type: none"> - Metal atoms will lose their outer electron(s) to form positive ions - Non-metals atoms will gain electrons to form negative ions - Oppositely charged ions are held together by strong electrostatic attraction

Metallic bonding

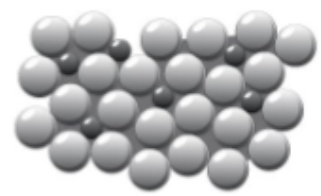
Giant structure of atoms arranged in a regular pattern



Electrons in the outer shell of metal atoms are delocalised and free to move through the whole structure. This sharing of electrons leads to strong metallic bonds.



35 A pure metal. It consists of metal ions in layers with delocalised electrons.



36 An alloy. The layers have been distorted by the presence of other elements

<i>Good conductors of electricity</i>	Delocalised electrons carry electrical charge through the metal.
<i>Good conductors of thermal energy</i>	Energy is transferred by the delocalised electrons.

Metals as conductors

<i>High melting and boiling points</i>	This is due to the strong metallic bonds.
<i>Pure metals can be bent and shaped</i>	Atoms are arranged in layers that can slide over each other.

Metals	<i>To the left of the Periodic table</i>	Form positive ions. Conductors, high melting and boiling points, ductile, malleable.
Non metals	<i>To the right of the Periodic table</i>	Form negative ions. Insulators, low melting and boiling points.

Malleable	Being able to bend or shape easily.
Ductile	Materials that can be stretched.
Brittle	Will shatter when broken and has a high melting point.
Electrostatic forces	Experienced by any charged particle in an electric field e.g. Opposite charges (+ and -) attract or Like charges (- and -, or + and +) repel.

Properties of metals and alloys

Alloys	<i>Mixture of two or more elements at least one of which is a metal</i>	Harder than pure metals because atoms of different sizes disrupt the layers so they cannot slide over each other.
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Metal Alloys

<p>Define the term 'metal alloy'</p>	A mixture of two or more elements, at least one of which is a metal
<p>Describe how the properties of metal alloys are different to pure metals</p>	<p>Metal alloys are:</p> <ul style="list-style-type: none"> - Harder - More dense
<p>Explain why metal alloys are harder than pure metals</p>	The layers cannot slide over each other easily, because the alloys have an irregular structure

History

Key Words/ Individuals

Communism	A political system in which all property is owned by the community and each person contributes and receives according to their ability and needs.
Capitalism	A political system in which a country's trade and industry is controlled by private owners for profit, not the state.
Democracy	A system of government by the whole population or all the eligible members of a state, typically through elected representatives.
Dictatorship	A government led by a ruler with total power over a country, typically one who obtained control by force.
David Lloyd George	Prime Minister of Great Britain 1919
Woodrow Wilson	President of the USA 1919
Georges Clemenceau	Prime Minister of France 1919
League of Nations	Founded in January 1920 as a result of the Paris peace conference which ended WWI.
Adolf Hitler	Dictator of Germany from 1933-1945

Key Events

Signing of the Treaty of Versailles	There were 440 Articles setting out the terms for Germany's punishment after WWI. Signed on the 28th June 1919.
Remilitarising the Rhineland	March 1936 Germany sends troops back into the Rhineland, breaking a key term of the treaty of Versailles
Anschluss	In March 1938—Germany joins with Austria in an alliance (Anschluss). This breaks another term of the treaty of Versailles.
Invasion of Poland	September 1st 1939 Germany invade Poland.
Britain enters World War II	Neville Chamberlain was 'forced' to declare war on Germany in a radio broadcast on 3rd September 1939.
Operation Dynamo	On 27th May 1940 – the British government, led by Winston Churchill, put a plan together to save troops stranded in Dunkirk.
The Blitz	A German bombing offensive against Britain in 1940-1941.
D-Day	June 6, 1944, land, air, and sea forces of the allied armies invade Normandy in what became known as the largest amphibious invasion in military history.
The Holocaust	The systematic, state-sponsored persecution and murder of six million Jews by the Nazis. Holocaust is a Greek word meaning "sacrifice by fire."

Geography

Key Word	Definition
The Himalayas	are mountains reaching across northern India and bordering countries.
Deccan Plateau	an area of raised land occupying much of central India.
Western Ghats	are hills that are often called the 'backbone of India'.
Monsoon	is the name of the wind system which dominates the Indian climate, bringing persistent rainfall during the months of June to October
Caste system	a class structure that is determined by birth
Inequality	extreme differences between poverty and wealth, as well as in peoples' wellbeing
Quality of life	The general wellbeing of people which includes income, health, education, employment and the environment.
Squatter settlement	low-quality housing, occupied by the poor, usually on the edge of cities
Global city	the most important cities in the world in terms of economic and cultural impacts
Informal economy	Part of the economy which is neither taxed nor monitored by the government. They may work cash in hand, be self employed and have no guaranteed hours or pay.
Sweat shops	workplace in which workers are employed at low wages and under unhealthy or oppressive conditions
Sanitation	the process of keeping places clean and healthy, especially by providing a sewage system and a clean water supply
Rupee	the currency of India
Bollywood	the Indian popular film industry, based in Mumbai. It is the second largest film industry in the world after Hollywood.
Thar Desert	is also known as the 'Great Indian Desert'. It forms the border between India and south eastern Pakistan
Hinduism	a major religious and cultural tradition of South Asia

Spanish

Spanish	English
la capital	Capital
casa	House
ciudad	City
costa	Coast
España	Spain
montaña	Mountain
playa	Beach
región	Region
zona	Zone
alrededores	Outskirts
afueras	Outskirts
barrio	Neighbourhood
campo	Countryside
centro	Sentre
pueblo	Town
norte	North
sur	south

Spanish	English
este	East
oeste	West
está	Is (location)
animado	Busy
antiguo	Old
bonito	Pretty
feo	Ugly
histórico	Historic
moderno	Modern
sucio	Dirty
tranquilo	Quiet
calle	street
piso	Flat
estación de tren/autobús	Train/Bus station
fábrica	Factory
iglesia	Church
mezquita	mosque

Spanish	English
piscina	Swimming pool
tienda	Shop
castillo	Castle
cine	Cinema
edificio	Building
mercado	Market
parque	Park
restaurante	restaurant
tenía	It had
había	There was
me gustaba	I liked
odiaba	I hated
vivía	I lived
en el pasado	In the past
ahora	now
antes	before
Me gustaría	I would like

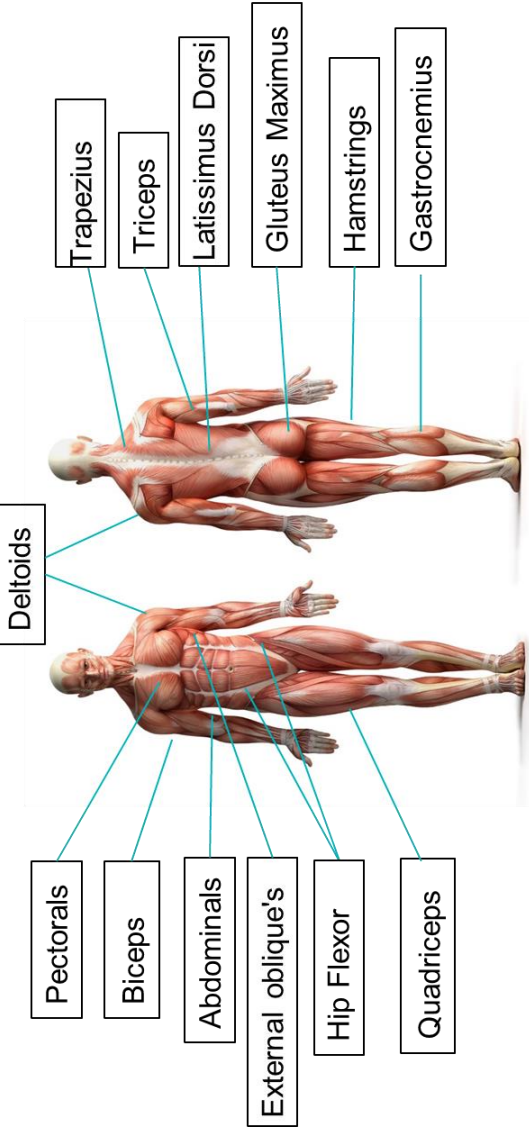
Health and Fitness

Muscular Strength	The amount of the force muscles can generate against a resistance
Muscular Endurance	The ability to use voluntary muscles, over long periods of time without getting tired
Flexibility	The range of movement at a joint
Cardiovascular Fitness (Aerobic Endurance)	The ability of the heart and circulatory system to meet the demands of the body for a long period of time
Body composition	The percentage of a body that is fat, muscle, bone and water
Coordination	The ability to move two or more body parts at the same time
Reaction Time	The time taken for a response to occur after a stimulus
Agility	The ability to change direction at speed
Balance	The ability to keep the body steady when in a static position or when moving
Speed	The time taken to cover a set distance/complete a movement
Power	The ability to combine speed and strength

Principles of training

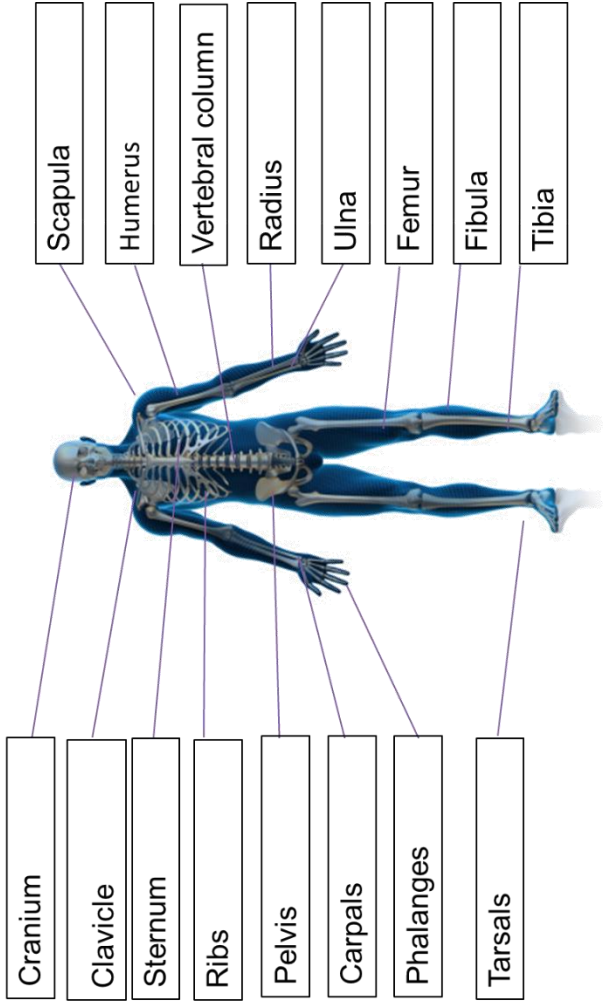
Progressive Overload	Working the body harder than normal/gradually increasing the amount of exercise you do
Reversibility	If training is not regular, adaptations will be reversed. This can happen when suffering from illness, injury or after an off season
Specificity	Training should be matched to the requirements of the sport or position the performer is in. Training must be specifically designed to develop the right muscles, type of fitness or skills
Individual needs	All PEP's would differ depending on performers goals/target, strengths /weaknesses, age/gender and current health/fitness levels
Overtraining	Occurs when you train too hard and do not allow the body enough rest/recovery time Signs include extended muscle soreness, frequent illness & increase injuries

Muscular System

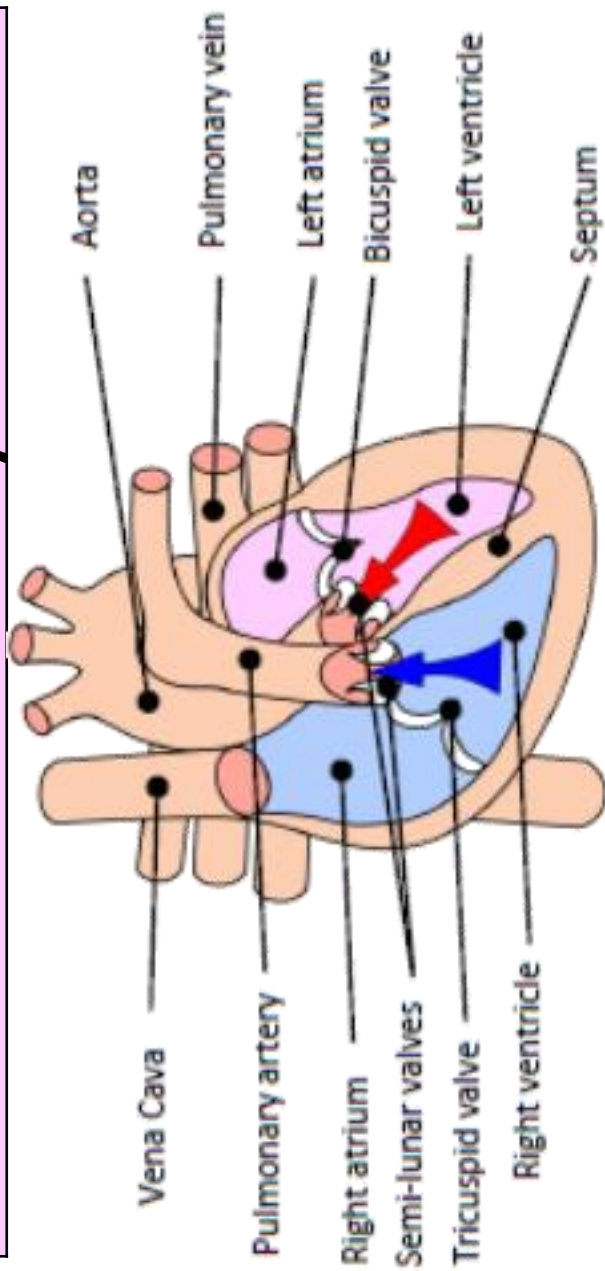


PE

Skeletal System



Cardiovascular System



Performing Arts

Constantin Stanislavski 1863 - 1938	
Style of Theatre	Naturalism
Technique	<ul style="list-style-type: none"> • The fourth wall • Emotional memory • The magic 'if' • Sense memory • Objectives • Given circumstances • Subtext • Method of physical actions
Belief	Audiences should emotionally connect with the characters. Theatre should be believable.

Frantic Assembly 1994 – Present	
Style of Theatre	Physical Theatre
Technique	<ul style="list-style-type: none"> • Chair duet • Hymn hands • Lifts • Walk the grid • Mirroring • Round-By-Through
Belief	Wanted to create non-realistic theatre through movement and music.

Bertolt Brecht 1898 – 1956	
Style of Theatre	Epic Theatre
Technique	<ul style="list-style-type: none"> • Audience are aware they are watching a performance • Audience challenged to think (often political/social issues) • Scenery and set changes happen on stage, stage directions read aloud • Multi rolling • Placards used to ask questions and repeat information • Direct address to the audience (talk to the audience, breaking the 4th wall) • Costumes are simple • Narration
Belief	Believed theatre should be used to spread a message. Audience must question what they see.

Anton Artaud 1896-1948	
Style of Theatre	Theatre of Cruelty
Technique	<ul style="list-style-type: none"> • Overwhelming sounds and bright lights to stun the audience's senses. • Audience Placement • Breath Control • Movement is expressive rather than narrative • Visceral Sounds
Belief	Everything is larger than life (costumes, lighting sound). Wanted the theatre to shock and absorb the audience.

Computing

Spreadsheets

Spreadsheet	A computer program used for accounting and recording “data” using rows and columns, into which information can be entered
Cell reference	Is the intersection between a row and a column on a spreadsheet that starts with “cell” A1.
Absolute cell reference	Ensures that the cell always remains constant even when autofill is used. E.g. \$E\$4
Formula	Are usually simple calculations. They always start with an equals sign
Functions	Are predefined formulas and are already available in Excel
Merge	Is a function that enables different nearby cells to be joined into a single larger cell
Operators	Are symbols used in a formula
Chart	Is a graphical representation of data entered in spreadsheet
Sort	Organises it in a specific way

Conditional formatting	Allows you to apply special formatting to cells that meet certain criteria
IF statement	Tests a given condition and returns one value for a TRUE result and another value for a FALSE result.

Finance

Revenue/Inflow	Money coming in to a business. Usually through sales of the product or service. Can also be from investors or a bank loan
Outflow/Costs/Expenses	Money leaving the business. May be payment for stock and materials, wages, rent, repayment of money borrowed
Profit	Is calculated using this formula Total revenue — Total costs
Cash flow forecast	This is a business accounting method used to predict future sales
Net cash flow	The difference between inflow and outflow in a given month

Art

Definition

Mark-making techniques	describes the different lines, dots, marks, patterns and textures created in a drawing. It can apply to any drawing materials. It can be loose and expressive or controlled and neat. The results will depend on your choice of media, tools and techniques
Graduated Tone	is a tone that fades smoothly from one shade to another across an area. They are often made by varying the pressure on the tool used to make the tone, but can also be made by using overlapping layers of the medium used to make the tone.
Tonal contrast	the range of tones used in a drawing. A wider range means a greater contrast. You can manipulate the contrast depending on how much you want the object or specific part of the art work to stand out. If you are drawing from observation, the contrast can depend on how bright your light source.
Highlight	the area of an object where the light effects is most intense. In painting the highlight of an object should not be pure white as it should contain some of the local colour of the object. White highlights refer to pure reflected light as for example occur on a metal object, but do not occur on or are reflected from coloured glass.
Proportion	refers to the relationship between the different sized components within one whole composition. Proportion can be used to make a composition appear more realistic or more stylised depending on the type of proportion used.
Texture	concerns the surface quality of a piece of work. In three-dimensional artwork, the term refers to how the piece feels when it's touched. In two-dimensional artwork, texture invokes the visual 'feeling' the piece gives off.
Outline	Lines that are used to define the shape or form of an object or to show key details are called outlines.
Mixed-Media	refers to a visual art form that combines a variety of media in a single artwork.
Graphite	a form of carbon and is useful as a writing and drawing tool, as only the slightest pressure is needed to leave a mark. It leaves a shiny metallic grey colour on a surface when moved across it and can be removed with an eraser.
Fine Liner	pens with plastic or fine fibre needle-point tips that generally use water-based ink but sometimes use oil-based. Tips come in various thicknesses but are all relatively thin — hence the name 'fineliner'. They are ideal for drawing, sketching, illustration, technical drawing.
Opaque	not able to be seen through; not transparent.
Depth	creating an illusion of three-dimensional space on a two-dimensional surface, which adds a sense of realism to the artwork.
Exquisite Corpse	Cadavre exquis (exquisite corpse) is a collaborative drawing approach first used by surrealist artists to create bizarre and intuitive drawings
Hybrid	created by combining different elements.
Mood board	collection of images, materials, colour palettes, text and other elements that help to communicate your art and design concepts and ideas.

Textiles

Key Word	Definition
Synthetic Fibre	Synthetic fibre, man-made textile fibre produced entirely from chemical substances, unlike those man-made fibres derived from such natural substances as cellulose or protein.
Natural Fibre	Natural fibre, any hair like raw material directly obtainable from an animal, vegetable, or mineral source.
Calico	Calico is a type of fabric made from unbleached, and often not fully processed, cotton.
Cross stitch	A decorative style of sewing that uses stitches that cross each other to form an X.
Elasticity	Elasticity is the ability of a material to resume its normal shape after being stretched or compressed.
Manufacture	The organised action of making goods for sale.
Acrylic fibre	Synthetic fibres made from a polymer.
Polymer	a substance which has a molecular structure built up chiefly or completely from a large number of similar units bonded together.

Cooking and Nutrition

Key Word	Definition
Cholesterol	A type of fatty substance made in the liver
Coeliac disease	A disease which develops from an intolerance to gluten
Allergen	A substance that causes an allergic reaction
Anaphylaxis	A serious allergic reaction that is very rapid in onset and can cause death if the throat swells and the person cannot breathe
Food Allergy	A condition where the body's immune system reacts unusually to specific foods and causes a range of mild to severe symptoms
Food intolerance	A long term condition where certain foods cause someone to feel unwell and have a range of symptoms: it is usually not life threatening
Obesity	Abnormal or excessive fat accumulation that presents a health risk.
Life stages	Stages of development that people through during their life i.e infancy, childhood, adolescence, adulthood and later adulthood
Vegan	A person who chooses to eat only plant foods and no animal foods
Peak Bone Mass	When bones have the maximum amount of minerals and are at their strongest
Yeast	A single-celled plant fungus and a raising agent which needs time, food, warmth and liquid to ferment
Fermentation	The process in which yeast produces the gas carbon dioxide
Knead	The process of working a dough mixture to make it smooth and elastic
gluten	The protein in flour that is developed when water is added to flour and mixed.
shortening	When fats or oils coat flour proteins and prevent gluten forming. This gives the product a crumbly texture
gelatinisation	This happens when starch granules are heated in a liquid, and they swell and burst when the liquid boils, absorbing the liquid and causing the liquid to thicken
roux	A mixture of fat and flour cooked together and used to thicken sauces