

Knowledge Organiser

Year 10 Autumn 2 2021

“When I say, “**Think outside the shoe,**” I mean that any challenge, any obstacle can be addressed in a different way and it can be figured out in a different way.”

Jessica Cox



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Examples of Activities

Look, Cover, Write, Check



Step 1: Read the part of the section you want to remember.

Step 2: Read it again.

Step 3: Read it aloud.

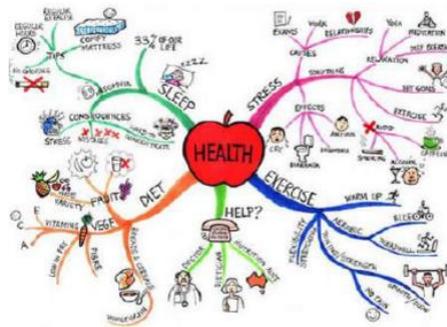
Step 4: Cover the part you are remembering with your book.

Step 5: Write as much as you can remember in your exercise book.

Step 6: Check your answers with a tick for correct answers or a cross for incorrect.

Step 7: Correct your mistakes with the information from that section.

Mind Mapping



Step 1: Read the part of the section you want to remember.

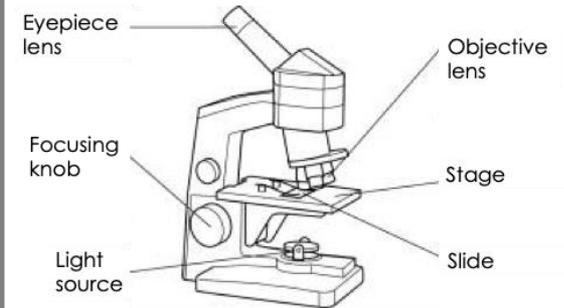
Step 2: Draw a mind map with the key information.

Step 3: Add and extra information that provides more detail about the topic

Step 4: Check your answers using the information in all three sections of the Knowledge Organiser.

Step 5: Correct any mistakes

Explaining a Diagram



Step 1: Read, cover and recreate the diagram.

Step 2: Write a paragraph explaining what is happening in the diagram and give specific examples.

Step 3: Check your answers using your class notes or ask your teacher to check in your next lesson.

Step 5: Correct any mistakes

A Christmas Carol Knowledge Organiser

Section 1: Key Vocabulary		Ebenezer Scrooge	Bob Cratchit	Fred	Jacob Marley
Tier 3 vocabulary	Definition	<i>Miserly, solitary, covetous, stubborn, remorseful, redeemed</i>	<i>Humble, devoted, caring, loyal, downtrodden</i>	<i>Persistent, forgiving, hospitable, jovial, empathetic</i>	<i>Terrifying, remorseful, exhausted, tortured</i>
Capitalism	Trade and industry are controlled by private owners for profit, rather than by the state	Ghost of Christmas Past <i>Irrepressible, commanding, illuminating, ephemeral</i>	Ghost of Christmas Present <i>Jolly, jovial, angry, judgmental,</i>	Ghost of Christmas Yet to Come <i>Foreboding, Foreshadowing, ominous, silent</i>	Tiny Tim <i>Vulnerable, innocent, pure, thoughtful</i>
Socialism	An economic system where everyone in the society equally owns the factors of production.				
Allegory	A story that can be interpreted to reveal a hidden meaning, typically a moral or political one.				
Stave	Dickens is acting as if the book is a Christmas carol, and each chapter is part of the song	Stave	Key Quotation	Info / Analysis	
Tier 2 vocabulary	Definition	Stave One Marley's Ghost	Hard and sharp as flint	Description of Scrooge at start	
			solitary as an oyster	Simile to convey his lone existence	
"I don't make myself merry at Christmas, and I can't afford to make idle people merry."	Shows his unsympathetic attitude to the poor ('idle') people.				
"It's enough for a man to mind his own business, and not to interfere with other people's."	He is obsessed with business and money.				
"I wear the chain I forged in life" <i>Jacob Marley</i>	A warning for Scrooge: Marley created his own eternal punishment through his greed.				
		"There is no light part of my penance" <i>Jacob Marley</i>	Penance = punishment		
Hostility	Unfriendliness or opposition	Stave Two Ghost of Christmas Past	From the crown of its head there sprung a bright clear jet of light	Refers to Ghost of Christmas Past. The light represents truth and enlightenment	
			"Your reclamation, then. Take heed!" <i>Ghost of Xmas Past</i>	Reclamation = recovery / change Take heed = listen and learn	
"Your lip is trembling," said the Ghost. "And what is that upon your cheek?"	Scrooge visits his old schoolhouse and first shows emotion (self-pity).				
A solitary child, neglected by his friends, is left there still	Description of Scrooge as a child. How has his childhood affected him?				
"He has the power to render us happy or unhappy [...] The happiness he gives is quite as much as if it cost a fortune."	Scrooge speaking of Fezziwig's generosity. He realises how an employer can affect his employees.				
Miser	Person who hoards wealth and spends as little money as possible.	"I have seen your nobler aspirations fall off one by one, until the master passion, Gain, engrosses you."	Scrooge's ex-fiancée (Belle) when she leaves him, because he is obsessed with 'Gain'.		
		"Remove me!" Scrooge exclaimed. "I cannot bear it!"	Scrooge, just before extinguishing the ghost's light (he can't bear the truth).		
Remorse	Deep regret or guilt Callous An insensitive and cruel disregard for others	Stave Three Ghost of Christmas Present	Scrooge entered timidly, and hung his head before this Spirit	Scrooge is more subdued when he meets the second ghost (Ghost of Xmas Present).	
			"Oh no, kind Spirit! Say he will be spared"	Scrooge shows concern and sympathy for Tiny Tim.	
"To hear the insect on the leaf pronouncing on the too much life amongst his hungry brother in the dust!"	The Ghost reminds Scrooge of his earlier words about decreasing the population of the poor. He compares Scrooge to an insect.				
"I am sorry for him [...] Who suffers by his ill whims? Himself, always."	Fred discusses his Uncle Scrooge with the family.				
Uncle Scrooge had imperceptibly become so gay and light of heart	Scrooge is delighted that his family even speak of him.				
Fate	The outcome of a situation for someone or something	"This boy is ignorance. This girl is Want. Beware them both."	The ghost warns Scrooge with personification / symbols of mankind's faults.		
		plundered and bereft, unwatched, unwept, uncared for, was the body of this man	Description of the man on the deathbed.		
Redemption	The action of saving or being saved from sin, error, or evil.	Stave Four Ghost of Christmas Yet To Come	Avarice, hard dealing, griping cares? They have brought him to a rich end, truly!	Scrooge's ironic statement about the dead man, before he realises that he is looking at himself.	
			"Are these the shadows of the things that Will be, or are they the shadows of the things that May be only?"	Scrooge asks the ghost if it too late for him to transform and alter his future.	
"Men's courses will foreshadow certain ends"	Scrooge realises that his past behaviour will determine his future				
"I don't know how long I have been among the Spirits. I don't know anything. I'm quite a baby."	Scrooge discards logic and is now carefree. He is a transformed character .				
Scrooge regarded everyone with a delighted smile.	He spreads good-will instead of fear and hatred.				
Ignorance	Lack of knowledge or information	Stave Five			
Want	A desire to possess or do (something); wish for				
Hoard	A store of money or valued objects, typically one that is secret or carefully guarded				

Key Themes:

Logic and Time

Scrooge's sense of logic is continually disrupted, helping to dismantle his cold and rational view of society. He initially dismisses the supernatural appearances, before then submitting to them. The ghosts are late to visit him, and then distort time as they seem to visit him all in one night – not over three nights as planned. This discarding of logic reflects Dickens' criticism of the heartless economic logic that was used to create the New Poor Law.

Compassion, forgiveness and Reclamation

Dickens uses different characters to demonstrate compassion and forgiveness (Fred and Bob who feel pity for him) and how these people lead happy lives. In contrast, he shows the selfish nature of mankind in the dark and sinister Stave Four. Fred shows compassion and forgiveness in Stave Five by welcoming Scrooge in for Christmas.

Poverty and Greed

Dickens wanted to highlight the plight of the poor in Victorian England, and how they are exploited by the greed of the wealthy. He used the harshness of winter to further emphasise this. He also uses Scrooge as a vehicle to show that financial wealth does not mean contentment. Scrooge is impoverished in other ways (family, friends, happiness).

Isolation versus Family

We learn quickly that Scrooge ('solitary as an oyster') and Marley are isolated, and unhappy characters. Scrooge was Marley's 'sole friend and sole mourner'. The warmth and emotional richness of families (Bob Cratchit's, Fred's, his ex-fiancee's) are used as a contrast to Scrooge's self-determined isolation. The disruption to Scrooge's childhood family life may have also contributed to his future behaviour. The message may be that family is the cornerstone of a happy society

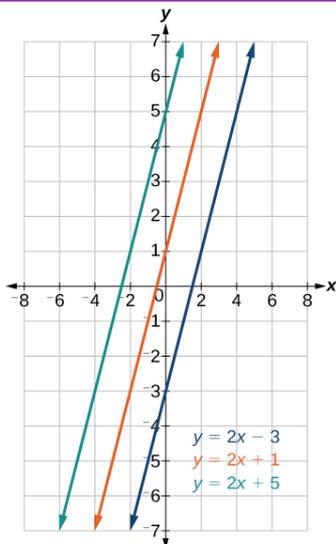
Transformation

The novella contains many examples of transformation: the transformation of young Scrooge into an embittered old man; his transformation to a benevolent man; the transformation of Marley from selfish human to eternally suffering ghost; supernatural transformation; the transformation of the future – to save Scrooge and Tiny Tim. Dickens message may have been that it is never too late to change.

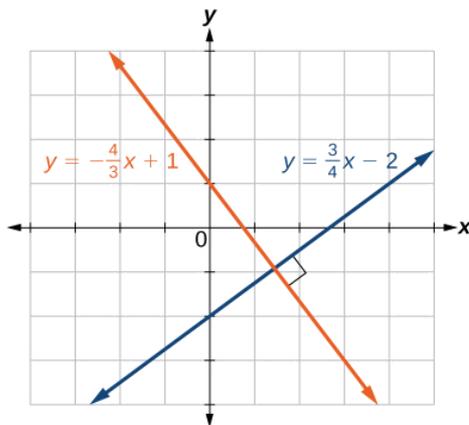
Section A: Key Vocabulary	
Transformation Vocabulary	Definition
Translation	Translate means to move a shape .
Column Vector	In a column vector, the top number moves left (-) or right (+) and the bottom number moves up (+) or down (-)
Rotation	The size does not change, but the shape is turned around a point .
Reflection	The size does not change, but the shape is 'flipped' like in a mirror .
Enlargement	The shape will get bigger or smaller . Multiply each side by the scale factor .
Scale Factor	Scale Factor = 3 means '3 times larger = multiply by 3' Scale Factor = $\frac{1}{2}$ means 'half the size = divide by 2'
Probability Vocabulary	
Probability	Definition
Probability	The likelihood/chance of something happening. It is expressed as a number between 0 (impossible) and 1 (certain) .
Mutually Exclusive	Events are mutually exclusive if they cannot happen at the same time . The probabilities of an exhaustive set of mutually exclusive events adds up to 1 .
Event	An activity you perform that may have several possible outcomes
Outcome	A result you get from an event or trial
Trial	One attempt of performing an event
Exhaustive	Outcomes are exhaustive if they cover the entire range of possible outcomes .

Section B2: Translation Examples	
Topic	Example
Translation	
Rotation	
Reflection	
Finding the centre of enlargement	<p>A to B is an enlargement SF 2 about the point (2,1)</p>
Draw straight lines through corresponding corners of the two shapes.	
The centre of enlargement is the point where all the lines cross over.	

Section C; Probability example and formulae																																																		
Probability Notation	P(A) refers to the probability that event A will occur .																																																	
Probability scale																																																		
Theoretical Probability	$\frac{\text{No. of Wanted Outcomes}}{\text{Total No. of Possible Outcomes}}$																																																	
Relative Frequency	$\frac{\text{Number of Successful Trials}}{\text{Total Number of Trials}}$																																																	
Sample Space	The set of all possible outcomes of an experiment. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>+</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> <tr> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> </tr> </table>	+	1	2	3	4	5	6	1	2	3	4	5	6	7	2	3	4	5	6	7	8	3	4	5	6	7	8	9	4	5	6	7	8	9	10	5	6	7	8	9	10	11	6	7	8	9	10	11	12
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Expected Outcomes	The probability that a football team wins is 0.2 How many games would you expect them to win out of 40? $0.2 \times 40 = 8 \text{ games}$																																																	



Parallel lines have gradients that are the same.



Perpendicular lines have gradients that are negative reciprocals of each other.

Solving Simultaneous Equations by Elimination

We need to have the same number in front of one of the letters in both equations.

Solve these simultaneous equations:

$$3x + 5y = 36 \quad \dots (1)$$

$$4x + 2y = 20 \quad \dots (2)$$

$$6x + 10y = 72 \quad \dots 2 \times (1)$$

$$20x + 10y = 100 \quad \dots 5 \times (2)$$

$$-14x = -28$$

$$x = -28 \div -14$$

$$x = 2$$

$$3 \times 2 + 5y = 36 \quad \dots (1)$$

$$6 + 5y = 36$$

$$5y = 30$$

$$y = 30 \div 5$$

$$y = 6$$

First we label the equations (1) and (2)

Now we will make the numbers in front of y the same in both equations.

To do this, first we multiply every term in equation (1) by 2, (because this is the number in front of the y in equation 2).

Next we multiply every term in equation (2) by 5, (because this is the number in front of the y in equation 1).

Now we SUBTRACT corresponding terms to eliminate y.

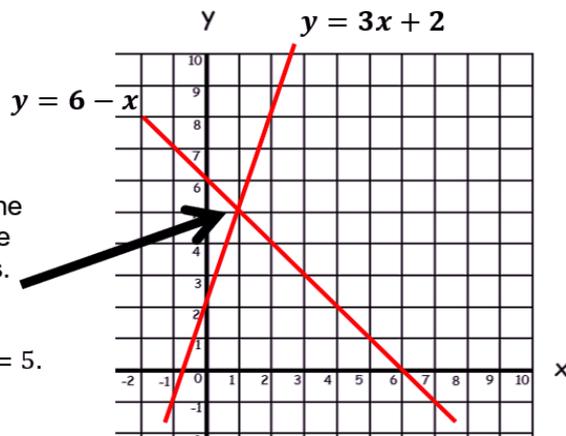
Then divide both sides by -14.

Now substitute for x = 2 into (1).

Take 6 from both sides

Divide both sides by 5 to give y.

Solve the simultaneous equations $y = 3x + 2$ and $y = 6 - x$ graphically:



The solution is the coordinate where the graphs cross.

(1, 5)

So $x = 1$ and $y = 5$.

Trial and Improvement

Solve the equation $x^2 + 3x = 45$ to one decimal place.

Target = 45		
x estimate	$x^2 + 3x$	Comment
5	40	too low
6	54	too high
5.5	46.75	too high
5.4	45.36	too high
5.3	43.99	too low
5.35	44.6725	too low

The answer is closer to 5.4

The approximate answer (1dp) is: 5.4

Solving Equations – Balance Method

Remember: “Always do the same to both sides”

Solve

$$\begin{array}{l} +6 \quad \left| \quad \frac{4x}{3} - 6 = 2 \quad \right| \quad +6 \\ \times 3 \quad \left| \quad \frac{4x}{3} = 8 \quad \right| \quad \times 3 \\ \div 4 \quad \left| \quad 4x = 24 \quad \right| \quad \div 4 \\ \quad \quad \left| \quad \boxed{x = 6} \quad \right| \end{array}$$

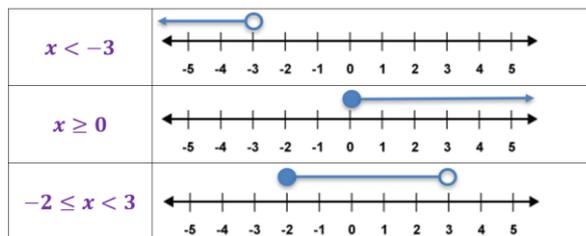
Solve

$$\begin{array}{l} -2x \quad \left| \quad 5x + 2 = 2x + 11 \quad \right| \quad -2x \\ \text{Eliminate the smaller "x"} \\ -2 \quad \left| \quad 3x + 2 = 11 \quad \right| \quad -2 \\ \div 3 \quad \left| \quad 3x = 9 \quad \right| \quad \div 3 \\ \quad \quad \left| \quad \boxed{x = 3} \quad \right| \end{array}$$

Solve

$$\begin{array}{l} \left| \quad 3(2x - 5) = 9 \quad \right| \\ \text{Expand the bracket} \\ +15 \quad \left| \quad 6x - 15 = 9 \quad \right| \quad +15 \\ \div 6 \quad \left| \quad 6x = 24 \quad \right| \quad \div 6 \\ \quad \quad \left| \quad \boxed{x = 4} \quad \right| \end{array}$$

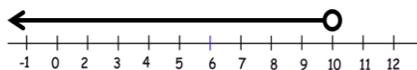
Inequalities



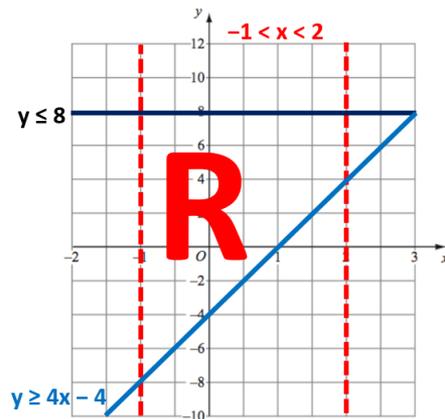
Solving Linear Inequalities

$$\begin{array}{l} 3(x - 4) < 18 \\ 3x - 12 < 18 \\ 3x < 30 \\ x < 10 \end{array}$$

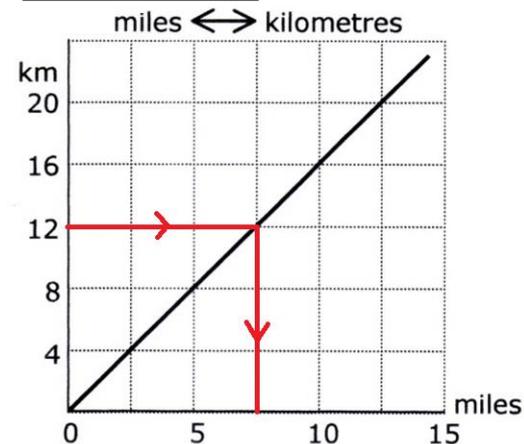
Expand the brackets
+12 to both sides
Divide both sides by 3



On the grid, label the region R that satisfies all three of these inequalities



Conversion graph



12km = 7.5miles

A rational number is a number that can be written as a fraction.

A terminating decimal has a finite number of digits.

A recurring decimal has a digit, or block of digits, that repeats.

Section A: Key Vocabulary

	Vocabulary	Definition
1	Communicable disease	A disease that can be caught and spread between people
	Microorganism	a very small single cell organism such as bacteria, fungi and viruses
	Pathogen	a microorganism which causes disease
	Immune system	the body's defence mechanism against disease
	Toxin	A poison produced by pathogenic bacteria
2	White blood cell	A type of cell involved in the immune system
	Phagocytosis	A process by which white blood cells engulf and destroy pathogens
	Antitoxin	Produced to counteract toxins
	Antibody	Produced by white blood cells which lock onto the pathogen so it then can be found and destroyed quicker
3	Vaccine	A weakened, dead or genetically modified version of a disease used to provide immunity
	Painkiller	Medicines that relieve pain by reducing symptoms but they don't tackle the cause of the disease
	Antibiotic	Medicines that are specifically used for treating bacterial infections by killing bacteria but can not be used for viral diseases
	Resistance	Occurs when pathogens develop the ability to defeat the drugs designed to kill them
	Placebo	A fake drug used in clinical trials which do not contain the active ingredient

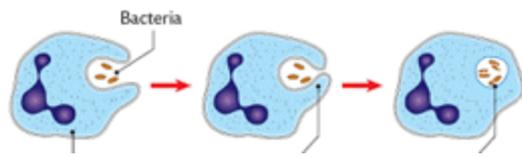
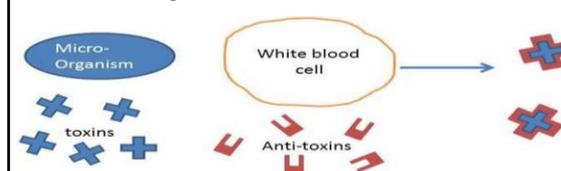
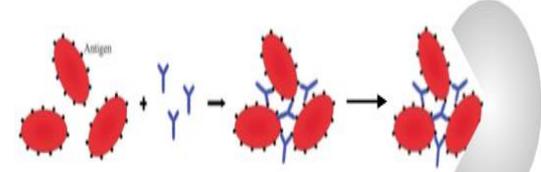
Section B: Disease transmission

Direct contact: e.g. chicken pox	Spread via flies e.g. dysentery	Spread via mosquitos e.g. malaria	Droplet infection e.g. common cold
In food e.g. food poisoning	In water e.g. cholera	Cuts in the skin e.g. tetanus	Bites from animals e.g. rabies

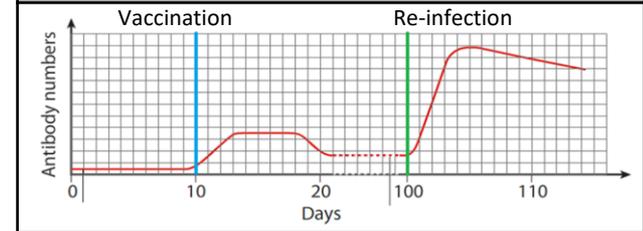
Section C: Prevention of diseases

Tissue Cooking food	Washing hands	Boiling water
Vaccination	Insect repellent	Cooking thoroughly
Face mask	Condoms	Gloves
Space		Plasters

Section D: Fighting diseases

- Phagocytosis**

- Producing antitoxins**

- Producing antibodies**


Section E: Vaccination



Section F: Scientist contributions to immunity

Ignaz Semmelweis
Hand washing and pathogens



Edward Jenner
Vaccination



Alexander Fleming
Penicillin

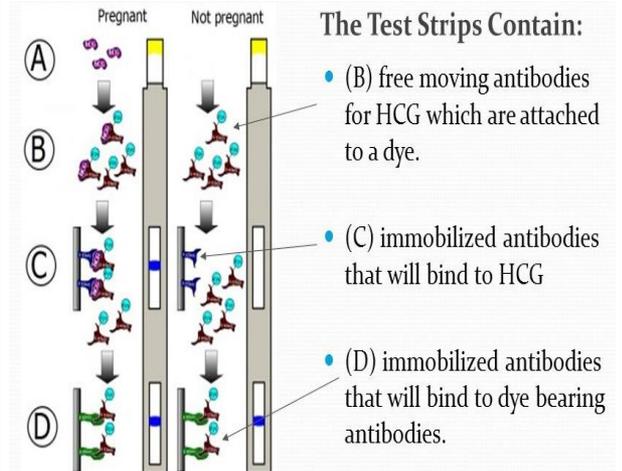


SEPARATES ONLY

Section G: Monoclonal antibodies

The Test Strips Contain:

- (B) free moving antibodies for HCG which are attached to a dye.
- (C) immobilized antibodies that will bind to HCG
- (D) immobilized antibodies that will bind to dye bearing antibodies.



Section A: Key Vocabulary

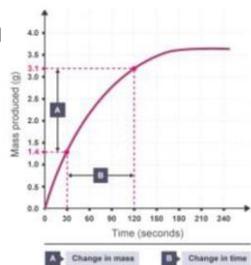
Tier 2 Keywords	Definition
Counteract	To act against something to reduces its effect
Tier 3 Keywords	Definition
Gradient	The measurement of how steep a line a line is on a graph
Tangent	A straight line that touches a curve at a point
Reaction profile	A graph that shows the energies of the reactants and products at different stages of the chemical reaction
Dynamic equilibrium	The point in a reversible reaction where the rate of the forwards and backwards reaction are equal

Section B: Calculating rate of reaction from graphs – higher tier

Finding the mean rate

- Pick two y values on graph and subtract the smallest from the largest
- Repeat this for two x values
- Mean rate

$$\text{of reaction} = \frac{\text{change in y}}{\text{change in x}}$$

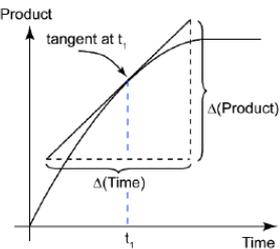


Finding the rate for a given point on the graph.

Here you need to find the gradient

- Line your ruler up across the graph, so it touches the point you want to find the gradient of
- Adjust the ruler until the space between the ruler and the curve is equal on both side:
- Draw the line, extending across the graph and pick two easy points to calculate from.

$$\text{Mean rate of reaction} = \frac{\text{change in y}}{\text{change in x}}$$



Section C Reversible reactions and dynamic equilibrium

In a reversible reaction, products are made but these can also get turned back into the reactants you started with. The rates that the reactant and products are being made at can change, so you could end up with more products or more reactants overall at a given time.

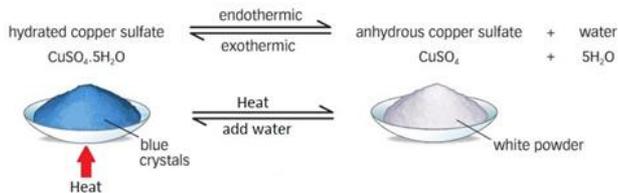
After time the reaction will reach equilibrium. At equilibrium both reactions are happening (hence dynamic) but they are happening at the same rate, so there is no overall change in the amounts being made and their concentrations remain the same. Products are being changed back into reactants as fast as they are being made!

Equilibrium does not means the concentrations are equal however. The position of equilibrium can be thought of like a balance, if it is in the middle, the concentrations would be the same, but if it lies to the right the concentration of products is greater then the concentration of the reactants. If it lies to the left there is a greater concentration of reactants than products.

As well as the type of reaction, the position of equilibrium depends on the reaction conditions i.e. temperature and concentration of reactants and products (also pressure if gases are involved)

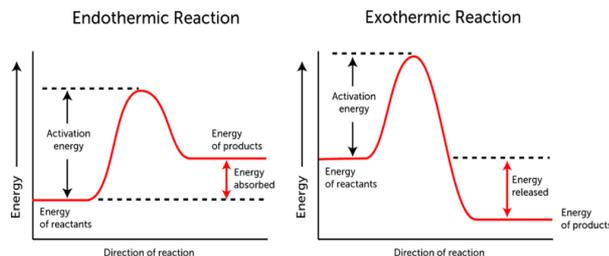
Section D: Energy profiles

For a reversible reaction one direction will be the exothermic pathway (releasing energy into the surroundings) and the opposite direction will be the endothermic pathway (taking energy from the surroundings)



The example below shows how the changes in energy from reactants to products occur of the course of a reaction. If there is more energy in the products than reactants energy has been absorbed from the surroundings cooling them (endothermic) and if the products have less energy some has been lost to the surrounding, warming them (exothermic)

Note the activation energy for each

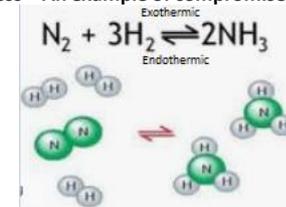


Section E: Le Chatelier's principle –higher tier

French scientist Le Chatelier explained that reversible reactions try to counteract changes made to them. "If a system is at equilibrium and a change is made to any of the conditions, then the system responds to counteract the change"

Knowing what will happen to a reaction when we change the conditions, we can shift the position of equilibrium in our favour to make a higher amount of products

The Haber process – An example of compromise



Changing

Temperature

By increasing temperature the reaction tries to decrease the temperature by following the backwards endothermic reaction. We want to shift the equilibrium to the right so a cooler temp is better, however enough energy to react is required so a temperature of 450 °C is selected.

Changing Pressure

This only affects an equilibrium involving gases. Increasing pressure causes the reaction to move to the side with fewer molecules to reduce the pressure. Decreasing the pressure moves to the side with more particles to increase the pressure. A high (but safe) pressure here will shift the equilibrium to the right (2 molecule on the rights rather than 3 on the left).

Changing concentration

Changing concentration of either reactants or products means a new equilibrium has to be set up. Increasing the concentration of reactants will shift the equilibrium to the right to make more products. Removing products as they are made also helps to shift the equilibrium to the right.

Section A: Key Vocabulary	
Tier 2 Vocabulary	Definition
Condensing	Change in state from a gas to a liquid.
Evaporating	Change in state from a liquid to a gas.
Freezing	Change in state from a liquid to a solid.
Gas pressure	Pressure is fore per unit area. The pressure of a gas is due to the force the gas particles exert on the walls of the container.
Melting	Change in state from a solid to a liquid.
Sublimation	Change in state from a solid to a gas or a gas to a solid (missing out liquid phase).
Tier 3 Vocabulary	Definition
Density	Density is defined by the equation mass/volume. It is usually measured in kg/m ³ (can be in g/cm ³).
Internal energy	The total kinetic and potential energy of all of the particles that make up the system.
Specific heat capacity	The amount of energy needed to increase the temperature of 1 kg of a substance by 1°C.
Specific latent heat	The energy needed to change the state of 1 kg of a substance with no change in temperature.

Section B: Density Equation

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} \quad \rho = \frac{m}{V}$$

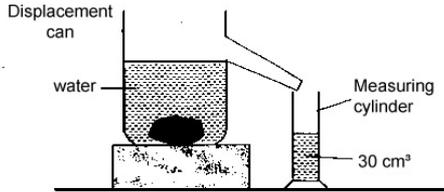
density, ρ , in kilograms per metre cubed, kg/m³
 mass, m , in kilograms, kg
 volume, V , in metres cubed, m³

Section C: Density

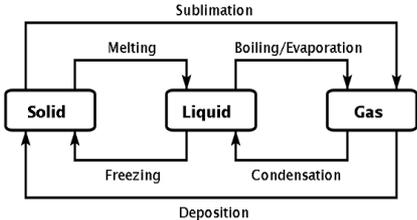
To find the density of an object, you need to find the mass and the volume.

The mass can be found using a top pan balance. For regular solids, the volume can be measured with a ruler or Vernier callipers.

For an irregular solid you would need to use the apparatus below to find the volume by displacement.



Section D: Changes of State



Mass is conserved when a change of state occurs. Changes of state are physical changes which can be reversed.

Section E: Specific Heat Capacity Equation

$$\text{Energy} = \text{Mass} \times \text{Specific heat capacity} \times \text{temperature change}$$

$$\Delta E = m c \Delta\theta$$

change in thermal energy, ΔE , in joules, J
 mass, m , in kilograms, kg
 specific heat capacity, c , in joules per kilogram per degree Celsius, J/kg °C
 temperature change, $\Delta\theta$, in degrees Celsius, °C.

Section F: Specific Latent Heat

$$\text{Energy} = \text{Mass} \times \text{Specific latent heat}$$

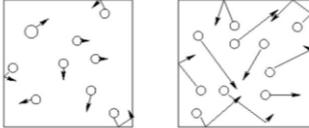
$$\Delta E = m L$$

energy, E , in joules, J
 mass, m , in kilograms, kg
 specific latent heat, L , in joules per kilogram, J/kg

Specific latent heat of fusion – change of state from solid to liquid

Specific latent heat of vaporisation – change of state from liquid to vapour

Section G: Particle motion in Gases



The molecules of a gas are in constant random motion. The temperature of the gas is related to the average kinetic energy of the molecules.

Changing the temperature of a gas, held at constant volume, changes the pressure exerted by the gas.

History – Germany and the Growth of Democracy

A: Key Vocabulary	
Kaiser	The German emperor
Militarism	Belief that a country should maintain a strong armed forces and be prepared to use it aggressively.
Bundesrat	Group made up of German state representatives who supported the Kaiser.
Reichstag	The main, elected German parliament.
Chancellor	In Germany, the chief minister, or Prime Minister in the government.
Weltpolitik	Literally meaning ‘world policy’, this was the Kaiser’s plan to turn Germany into a global power.
SPD	The Social Democratic Party, one of the largest political parties in Germany.
Socialism	Political belief that supports democracy and greater government involvement in the economy and society.
Weimar Republic	Name give to Germany’s democratic system between 1913 and 1933.
Putsch	Attempt to seize power or take control using force.
Free Corps	Right-wing German paramilitary group that was active in the early years of the Weimar Republic.
Proportional representation	Political system in which the number of politicians for a particular party is in proportion with the numbers of votes they win; it can lead to lots of small parties and an unstable government.
Stormtroopers (SA)	Hitler’s brown-shirted supporters who were employed to beat up opponents and guard meetings.
Hyperinflation	Sudden, dramatic rise in prices.
Passive resistance	Protesting against government or laws by using non-violent acts.

C: Weimar Republic Key Facts	
Germany before WW1	Ruled by Kaiser Wilhelm from 1888. He prioritised the military and getting an overseas empire. He didn’t want to listen to the people and they began to vote for the SPD . Some people even wanted to get rid of the Kaiser.
Germany after WW1	During the war, Germans suffered through shortages of food, medicines and clothing and a flu epidemic. When Germany lost, the Kaiser abdicated. After the war Germany was virtually bankrupt, politically unstable and society was divided .
The Weimar Republic	Created after elections in January 1919. The SPD won and Ebert (leader of the SPD) became the German President . Under him was the Chancellor (chosen by the President). The Reichstag was the German Parliament who discussed and introduced new laws.
Problems with Weimar?	Article 48: Part of the Weimar Constitution that gave the President the right to rule in a time of crisis without the support of the Reichstag. This could be abused. Proportional Representation: definition under key vocabulary. Many Germans did not support democracy.

D: Challenging events for Weimar			
Event	What happened?	How did the Weimar Republic deal with the crisis?	What was the long term impact on the Weimar Republic?
Spartacist Rebellion, 1919	An uprising where thousands of armed Communists tried to take over Berlin.	Ebert sent in 2000 members of the Free Corps. The leaders were arrested and murdered.	It demonstrated the weakness of Weimar because they had to rely on the right-wing Free Corps to crush the revolt.
Treaty of Versailles, 1919	Very unpopular and harsh treaty that reduced Germanys land, military and finance.	The Weimar politicians who signed it were nicknamed the ‘November Criminals’.	Eventually Hitler used the unpopularity of the Treaty of Versailles to win support by promising to abolish it.
Kapp Putsch, 1920	Led by Wolfgang Kapp, 5000 members of the Free Corps took over Berlin.	The workers of Berlin went had a general strike. The take-over ended.	This led to a left-wing takeover over a number of towns called the Red Rising. This was crushed, again, by the Free Corps.
Hyperinflation, 1923	Germany failed to pay their reparations so the French and Belgians took coal instead.	A General Strike was called and money was printed to replace the money they’d lost	The resulting hyperinflation meant people suffered at the time, but people also lost their life’s savings. This was not forgotten.
Munich Putsch, 1923	Hitler tried to take over Bavaria with the support of his Stormtroopers.	Hitler was arrested and put on trial. He was sentenced to just 5 years. He served 9 months.	Hitler was able to publicise his views through his trial. He also realised he must gain power by winning votes not by force.

E: The impact of Gustav Stresemann	
Problem	Stresemann’s Solution
Hyperinflation	Retenmark revived the currency
Germany’s reputation	1925-Locarno treaties.1926-Germany joined the League of Nations.
Reparations	Young Plan reduced reparations.
Poor economy	Dawes Plan provided money to invest
F: Germany’s Golden Age	
Cinema	Became popular. Marlene Dietrich became a world-wide star.
Nightlife	Germany became a centre for new plays Berlin was famous for nightclubs with live bands playing American jazz.
Literature	Germans had 120 newspapers and magazines to choose from.
Art	Avante-garde artists made art to make people think- it often criticised current events.
Design	The Bauhaus movement began.
Reactions: Some people loved the changes, but others wanted a return to traditional German culture.	

History – Germany and the Depression

A: Key Vocabulary

The Great Depression	Time during the 1930s when many banks and businesses failed and millions lost their jobs.
Wall Street Crash	Time in October 1929 when millions of people tried to sell their shares in companies at the same time, resulting in a huge drop in share prices; many people lost a lot of money.
radical	Very different or extreme idea or approach.
propaganda	The systematic spreading of ideas and information in order to influence people's thinking and actions, often through the use of media such as posters, film, radio and newspapers.
coalition	Government where two or more political parties combine to rule.
mass rally	Huge meeting of people, united for a common cause or occasion.
dictator	Ruler with total control over how a country is governed.
Gestapo	Part of the SS and Nazi Germany's secret police force, created by Herman Goering in 1933 and controlled by Heinrich Himmler.
concentration camp	Camp in which people are held under harsh conditions and without the freedom of the rest of society
Der Fuhrer	Supreme leader, the title adopted by Adolf Hitler.
Schutzstaffel	Full name of the SS. Originally Hitler's elite bodyguards, the SS became one of the main instruments of terror in Nazi Germany. Led by Heinrich Himmler.
Police state	Country controlled by a political police force.

B: The Depression

Causes	After the Wall Street Crash many Americans lost all their money. This meant they couldn't repay loans or buy new things and companies went out of business.
Impact on Germany (I)	Americans could also no longer buy German goods and now German companies started to go out of business.
Impact on Germany (II)	America also started to demand back the loans they have lent to Germany. Banks started demanding this money from businesses. This also led to them closing.
Impact on Germany (III)	As businesses went bust, people lost their jobs and many people faced hunger, unemployment and homelessness
Impact on Germany (IV)	People blamed Weimar for their problems and began listening to political parties who offered radical solution such as the Communists and the Nazis.

C: How did the Nazi Party grow?

The Depression	It caused people to start listening to the Nazis who offered easy solutions.
Dissatisfaction with Weimar	Democracy did not seem to be working for Germany
Appeal of Hitler	His charisma convinced people he could be trusted.
Fear of Communists	People wanted to prevent a Communist revolution at all costs.
Nazis tactics	The Nazis were experts at spreading their message using many methods.

D: Who voted for the Nazis?

Farmer	The Nazis promised farmers a better deal
Women	The Nazis promoted family life.
The middle-class	The Nazis made promises to sort out the chaos in Germany.
The rich.	They liked the promise of strong leadership and a more powerful nation.

D: How did Hitler become Chancellor?

Date	What happened in the election?
Sept 1930	Coalition government formed. Brüning becomes Chancellor but the Nazis become 2 nd largest party. Brüning has no support. In July 1932 Von Papen replaces Brüning.
July 1932	The Nazis gain the majority of votes for the first time. Hitler demands the job of Chancellor. Hindenburg refuses.
Nov 1932	Nazi votes fall slightly but is still the largest party. Von Schleicher appointed Chancellor.
Jan 1933	No chancellor could gain any popular support. Hindenburg is forced to appoint Hitler as Chancellor.

E: How did Hitler become Der Fuhrer?

Event	How did it help Hitler become Fuhrer?
Gestapo established, 7th April 1933	This section of the SS is key to Hitler's rule of terror. First concentration camp is opened in Dachau, southern Germany.
Reichstag Fire, 27th February 1933	The Reichstag burns down. Communists are blamed.
Elections, 5th March 1933	Due to many Communists being banned from taking part in the election the Nazis win more votes than ever before.
Enabling Act, 23rd March 1933	The Reichstag was forced to pass this law. It allowed Hitler to rule without them!
Night of the Long Knives, 30th June 1934	On this night Hitler dealt with the threat of the SA and its leader Ernst Rohm.
Trade Unions banned, 2nd May 1933	This took away a workers' way of complaining about pay and conditions. Leaders were jailed.
Opposition parties banned, 14th July 1933	All parties apart from the Nazis were banned. Germany was now a one-party state.
President Hindenburg dies, 2nd August 1933	Hitler immediately took over his job. Now he was Chancellor and President. He got the army to swear an oath to him. Now he was totally in control!

Geography – Urban Fieldwork

Section A: Key Vocabulary	
Key term	Definition
Enquiry	The process of investigation to find out an answer to a question
Fieldwork	Work carried out outdoors
Primary data	Data that you have collected yourself
Secondary data	Data that have been collected by someone else
Sample size	The number of measurements or subjects within a sample
Survey location/Site	Where the fieldwork is collected
Transect	A straight line or narrow section through an object or natural feature or across the earth's surface, along which observations are made or measurements taken
Qualitative data	Data collection techniques that do not involve numbers or counting e.g. photographs, videos, written descriptions
Quantitative data	Data which involves numbers or counting e.g, environmental quality survey
Sampling: Random	Where samples are chosen fairly randomly, every person in a questionnaire has the same chance of being selected
Sampling: Systematic	Working out a system to collect data, e.g. every 20 metres or every 2 nd person
Sampling: Stratified	Collecting a sample made up of different parts e.g. deliberately collecting sample from every age group so that the data includes a whole range of people found in a place
Continuous data	Shows change along a line of study e.g. land use along a road. Pedestrian flows might be continuous, for example, so are best represented using a line graph
Categories	These show classification e.g. putting environmental quality scores into groups

Section B: Methodology: How to collect data for your urban fieldwork			
	Description	Advantages	Disadvantages
Questionnaire	A questionnaire is designed and the investigator asks their chosen audience questions. A sampling technique is chosen prior to the data collection to ensure valid data	Opinions can be presented which are not communicated through some quantitative data. New ideas for fieldwork could arise by talking to people involved in your investigation.	<ul style="list-style-type: none"> Raw data may be hard to condense into an understandable format. Questionnaires can be time consuming. Sampling needs to be considered to ensure the data is representative.
Photographs	Photographs of areas within the investigation that present relevant aspects of the investigation, e.g. litter in a park or destroyed outdoor furniture.	Photos can represent things more clearly than data, especially environmental aspects. Engaging method of data presentation also (when annotated).	<ul style="list-style-type: none"> Risk of becoming irrelevant filler unless they are analysed and annotated thoroughly during analysis.
Environmental Quality Survey	The area of a chosen environment is rated using a scale, for example 1-5. Different aspects of the environment are rated such as noise, building condition, greenery etc. Before conducting, investigation sites should be chosen and your survey should be made specific to your investigation purpose.	Surveys can be conducted quickly and easily. As the rating system remains the same between investigation areas, it is useful for the comparison of areas.	<ul style="list-style-type: none"> Subjective and based on researcher's opinion. However, as long as the same person conducts all the surveys this is a systematic error which does not affect the overall results.
Land Use Survey	Prior to the survey, choose a relevant area that will be representative of what is being investigated. Walk down your chosen area and note down (tallys are useful) how an area of land is being used (entertainment, public building, commercial, service, outdoor etc.)	More up to date the digital and physical maps. Easy method of collecting data.	<ul style="list-style-type: none"> May be difficult to add a sufficient level of detail in comparison to already detailed existent mapping services. Can be hard to assess the main use of an area if it is not clear or has multiple uses.

Section C: Data Presentation			
Maps/Cartography	GID and photographs	Table(s) of data	Graphs and charts
<ul style="list-style-type: none"> Used to show location and patterns. Mini-graphs and charts can be located on maps. This makes it easier to compare patterns at locations. 	<ul style="list-style-type: none"> Use to show historic maps and show change in an urban area Useful for aerial photos of the town/city to show land use Helps to show deprivation and/or 'health' of a place 	<ul style="list-style-type: none"> Can be used to present raw data that you and your groups collected Useful to highlight patterns and trends Can be highlighted and annotated, and can help to identify anomalies (any data which look unusual) 	<ul style="list-style-type: none"> There is a wide range of graphs and charts available Make sure you chose the right chart Can show data and patterns clearly – easier to read than table data

Geography – Urban Fieldwork

Section D: Data Analysis

To analyse you need to:

- Identify patterns and trends in your results, and describe them
- Make links between different sets of data
- Identify anomalies – unusual data which do not fit the general pattern of results
- Suggest possible reasons for patterns you are unsure about – for example, why results suddenly change in a way that you cannot explain

Writing your analysis:

- Have a clear and logical format
- Start with an introductory statement
- Write about each point/data presentation in detail
- Use the correct geographical terminology
- Write in third person (avoid 'I' and 'we')
- Write in past tense

Section E: Writing the conclusion

The conclusion is the end point in your enquiry with several important ingredients. It should be shorter than the analysis and more concise. In the conclusion you need to:

- Refer to the main aim of your investigation – what did you find out? Give an answer to your enquiry question!
- State the most important data that support your conclusion – both primary and secondary
- State the most important data that support your conclusion – both primary and secondary
- Comment on the wider geographical significance of your study, e.g. why it might be important, whether your results could be useful to others, or whether you think all urban places are like this

Section D: Data Analysis – The language of analysis

Cause and effect	Emphasis	Explaining	Suggesting
As a result of ...	Above all...	This shows...	Could be caused by ...
This results in ...	Mainly...	Because....	This looks like...
Triggering this...	Mostly...	Because...	This points towards...
Consequently ...	Most significantly...	Therefore...	Tentatively...
The effects of this is...	Usually...	As result...	The evidence shows...

Section F: Quality of Life & Deprivation

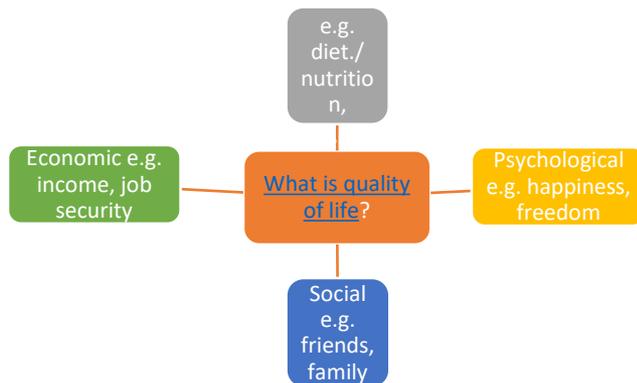
This sums up all the factors that affect a person's general well-being and happiness.

Factors affecting the quality of life often include financial security, job satisfaction, family life, health and safety.

Quality of life is a highly subjective measure of happiness as factors that play a role in quality of life vary according to personal preferences.

Quality of life is often linked to wealth and deprivation. To measure deprivation the government look at 7 factors in the **Index of Multiple Deprivation (IMD)**.

1. Income
2. Employment
3. Health and disability
4. Education, skills and training
5. Housing and services
6. Crime
7. Living environment



Section A – Town Key vocabulary

el abrigo= coat
 a mitad de precio= half price
 las afueras= outskirts
 el aparcamiento= parking
 el ayuntamiento= town hall
 el barrio =neighbourhood
 la biblioteca= library
 el billete =banknote
 la bolera = bowling alley
 el bosque = forest
 el bolso = handbag
 la caja = till la calle= street
 el cambio= change
 la cancha (de tenis etc)= tennis court
 la carnicería = butcher's
 el céntimo = cent
 el centro commercial = shopping centre
 el centro = centre
 el cine =cinema
 la ciudad = city
 el club (de jóvenes etc)= (youth) club
 la comisaría= police station
 las compras = shopping
 Correos= Post Office
 el descuento = discount
 el dinero =money
 el edificio= building
 el espacio= space
 el estanco= tobacconist's
 la fábrica = factory
 la flor = flower
 el fregadero = kitchen sink
 los grandes almacenes = department store
 la granja= farm
 el habitante= inhabitant
 la iglesia= church
 la joyería = jeweller's
 la juguetería = toy shop
 el lago= lake

la libra (esterlina)= pound (£)
 la librería = bookshop
 la máquina = machine
 el Mercado = market
 la mezzquita = mosque
 la moda = fashion
 el monedero = purse
 el museo = museum
 la paga= pocket money
 la panadería= bakery
 la papelería= stationery shop
 el paraguas= umbrella
 el parque infantil = playground
 la pastelería = pastry shop
 la peluquería= hairdresser's
 los pendientes= earrings
 la pescadería= fish monger's
 la plaza de toros = bull ring
 la plaza = square
 la población = population
 el polideportivo = sports centre
 el precio= price
 Propio= own
 el pueblo = village
 el Puente= bridge el Puerto= port

Section B – Prepositions

We use prepositions to say where things are.

Delante de- in front of
Detrás de- behind
Al lado de- next to
Cerca de- near **En-** in/ on
Lejos de- far away from
Debajo de/abajo - under
Encima de- above/ on top of
Afuera = outside
Alredador = around
A la derecha/izquierda = to the right/left

Remember **de + el = del**
 Lejos de la ciudad= far away from the city. Lejos **del** pueblo= far away from the town.

Section C – Verbs

Ahorrar= to save
 Alquilar = to rent
 Arreglar =to tidy; to fix
 Bajar =to go down
 Compartir = to share
 Comprar= to buy
 Construir = to build
 Contar = to count
 Cortar = to cut
 Costar = to be difficult/hard
 dar a = to look onto
 Deber = to owe
 Devolver = to return
 Entrar = to go in
 estar de moda= to be in fashion
 Gastar = to spend money
 hacer cola= to queue
 hacer la(s) compra(s)= to do the shopping
 Lavar= to wash
 Llevar = (puesto) to wear
 Mostrar = to show
 Pagar= to pay
 Ponerse = to put on (clothes)

Section D – Demonstrative adjectives

Demonstrative adjectives are the words that translate as this/ these and that/those. In Spanish they are:

Este/esta- this
 Estos/ estas- these
 Ese/esa- that
 Aquel/aquella- that over there
 Esos/esas- those
 Aquellos/ aquellas- those over there.
 They are placed before the noun and have to agree with the noun too.
 For example: **Aquella casa es mía-** that house over there is mine.

Section E – Home key vocab

la alfombra= carpet
 Alquilado = rented el alquiler = rent
 el anuncio = advert
 el árbol = tree el armario = wardrobe
 el ascensor =lift el aseo =bathroom
 el baño= bathroom/ bath
 la calefacción= heating
 la cama = bed el campo = countryside
 la casa (adosada)= house (semi-detached)
 el césped= lawn
 el chalet/chalé = bungalow
 la cocina= cooker/ kitchen
 el comedor= dining room
 Cómodo= comfortable
 la Cortina = curtain la cosa = thing
 el cuarto de baño= bathroom
 la dirección =address
 el dormitorio = bedroom
 la ducha = shower

la entrada = entrance
 la escalera= stairs el estante = shelf
 la estantería = shelves
 la habitación = room
 el lavabo = washbasin
 la lavadora = washing machine
 el lavaplatos= dishwasher
 la librería= bookcase
 Limpio = clean la llave = key
 la mesa = table
 el microondas= microwave oven
 los muebles = furniture
 la nevera = fridge
 la papelería = wastepaper bin
 la pared= Wall el pasillo= Corridor
 Pintado = painted
 el piso= floor/ flat
 la planta baja = ground floor
 la planta = floor/ plant
 la puerta = door

Section F – Hay, ser and estar

Ser and estar change to agree with the subject. Hay never changes.

Use ser to say what something is like	Use estar to say where something is	Use hay to say there is/ there are
Es= it is Mi dormitorio es grande. <i>My bedroom is big.</i>	Está= it is (+ location) La cama está a la derecha del armario. <i>The bed is to the right of the wardrobe.</i>	En mi dormitorio hay una mesa grande. <i>In my bedroom there is a big table.</i>
Son= they are Las paredes son blancas. <i>The walls are white.</i>	Están= they are (+ location) Los libros están en la mesa. <i>The books are on the table.</i>	En la mesa hay muchos libros. <i>On the table there are lots of books.</i>

Section G – Star phrases

Here are some expressions you can use in addition to y, pero and porque to form longer sentences.
Además- moreover, besides **Así que-** and so **Dado que-** given that
Es decir- that is to say/ in other words **Por lo tanto-** therefore
Sin embargo- however
Por un lado... por otro lado... - on the one hand...on the other hand...

Section A – Higher vocabulary

la aldea= village
 la bufanda = scarf
 la butaca = armchair
 el camisón = nightgown
 la cazadora =(leather) jacket
 la comunidad= community
 Concurrido = busy
 de lujo= luxury
 el domicilio = address
 los electrodomésticos = (electrical) appliances
 en efectivo = cash
 Enseñar = to show
 el espejo = mirror
 la esquina = corner
 el horno = oven
 la manta = blanket
 las medias = stockings
 la moqueta = fitted carpet
 el negocio = business
 el paisaje = landscape
 las persianas = shutters
 la rebeca = cardigan
 el reembolso = refund
 el reparto a domicilio =home delivery
 el semáforo = traffic lights
 el sótano = basement
 la sudadera = sweatshirt
 el surtido = range
 el tamaño = size
 el vestíbulo = entrance hall
 la vivienda = dwelling

Section B – Prepositions

We use prepositions to say where things are.

Delante de- in front of
Detrás de- behind **Afuera =** outside
Al lado de- next to **Cerca de-** near
Lejos de- far away from **En-** in/ on
Debajo de/abajo - under
Encima de- above/ on top of
Alrededor = around **Cerca =** near
A la derecha/izquierda = to the right/left
 Remember **de + el = del**
 Lejos de la ciudad= far away from the city.
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 Gastar = to spend money
 hacer cola= to queue
 hacer la(s) compra(s)= to do the shopping
 Lavar= to wash
 Llevar = to wear
 Mostrar = to show
 Pagar= to pay
 Ponerse = to put on (clothes)
 mudarse (de casa)= to move house
 Probarse = to try on

Section D – Demonstrative adjectives and pronouns

Demonstrative adjectives are the words that translate as this/ these and that/those. In Spanish they are:

Este/esta- this **Estos/ estas-** these
Ese/esa- that **Esos/esas-** those
Aquel/aquella- that over there
Aquellos/ aquellas- those over there.

They are placed before the noun and have to agree with the noun too. For example: Aquella casa es mía- that house over there is mine.

Demonstrative pronouns are the words that translate as “this one/ these ones” and “that one/ those ones”. In Spanish they are:

Éste/ ésta- this one **Éstos/ éstas-** these ones
Ése/ ésa- that one **Ésos/ ésas-** those ones
Aqué/ aquélla- that one over there
Aquellos/ aquéllas- those ones over there.

They are used instead of the noun and agree with the noun. For example: Ésa es mi tienda favorita- that one is my favourite shop.

Section B – Formulating complex questions

Some questions in Spanish begin with one of these words:

¿Cómo? – How? **¿Cuánto/a/os/as?**- How much/ many?
¿Cuándo? –When? **¿Cuál? / ¿Cuáles?** – Which?
¿Quién? – Who? **¿De quién?** – Whose?

Some questions in Spanish are a bit more complicated as the word order is different in English. For example:

¿Adónde vas? – **Where** are you going **to**?
¿A quién diste el dinero?- **Who** did you give the money **to**?
¿Con quién vas a la playa?- **Who** are you going to the beach **with**?
¿En qué habitación vas a poner la television?- **What** room are you going to put the TV **in**?
¿Cómo? can also mean... **what...like?** **¿Cómo** es tu novio?- **What** is your boyfriend **like**?

Section B – Possessive pronouns

When the noun is missing, the following possessive pronouns are used:

Mío/a/os/as- mine
Tuyo/a/os/as- yours (singular form)
Suyo/a/os/as- his/hers/its/ yours
Nuestro/a/os/as- ours
Vuestro/a/os/as- yours (plural form)
Suyo/a/os/as- theirs/yours

For example:

Mi casa es más pequeña que **la tuya**- My house is smaller than yours.
 Su dormitorio es más grande que **el mío**- His bedroom is bigger than mine.

Remember- these pronouns agree with the words they replace and not the person referred to. So **el suyo** can mean both his and hers. **La suya** can also mean his or hers.

Tu dormitorio es más grande que **el suyo**- Your bedroom is bigger than his/ hers.

Section B – Star phrases

Here are some expressions you can use in addition to **y, pero** and **porque** to form longer sentences.

Además- moreover, besides

Así que- and so

Dado que- given that

Es decir- that is to say/ in other words

Por un lado... por otro lado... - on the one hand... on the other hand...

Por lo tanto- therefore

Sin embargo- however

Section A – Key vocabulary

el alemán = German
 el arte dramático = drama
 la asignatura = school subject
 las ciencias económicas = economics
 las ciencias = science
 la cocina = food technology
 el comercio = business studies
 el dibujo = drawing/art
 el director = head teacher, principal
 Enseñar = to teach
 el español = Spanish
 el francés = French
 la gimnasia = gymnastics
 el idioma = language
 la informática = IT
 el inglés = English
 la lengua = language, tongue
 la nota = mark
 la química = chemistry
 sacar buenas/malas notas = to get good/bad marks
 el taller = workshop
 la tarea = task/homework
 Trabajador = hard working
 los trabajos manuales = handicrafts
 Atento = attentive
 Optar = to choose, to opt for
 Optativo = optional
 Riguroso = severe, harsh
 Sencillo = simple, easy

Section B – Key infinitive verbs

Estudiar = to study
 Dibujar = to draw
 Escribir = to write
 Escuchar = to listen
 Hablar = to talk
 Leer = to read
 Trabajar = to work
 Hacer = to do/make
 Enseñar = to teach
 Optar = to choose/to opt for
 Continuar = to continue
 Elegir = to choose
 Dejar = to drop
 Faltar = to skip/miss (a lesson)
 Completar = to complete
 Preguntar = to ask a question
 Participar = to participate
 Intentar = to try
 Ayudar = to help
 Aprender = to learn
 Mirar = to look
 Interrumpir = to interrupt
 Entender = to understand

Section C – Comparatives and Superlatives

To say a subject is **easier** or **more fun**, add *más* before the adjective and use *que* for 'than'. Remember that the adjectives will still agree with the noun they describe.

La historia es más fácil que la geografía.
La geografía es más divertida que la historia.

To say a subject is **the most practical** or **the hardest**, follow this pattern:

La informática es la asignatura más práctica.
El francés es la asignatura más difícil.

Section E – Personal a

The personal a is used after a verb when the object of the verb/the word that comes after a verb is a person.

E.g.
*Escuché **a** profesor = I listened to the teacher.*
*Hablé **a** mi madre. = I spoke to my mum.*
*Visité **a** mi amigo. = I visited my friend.*

The personal a is not needed after **tener, ser** or **hay**.

E.g.
Tengo dos profesores de francés. Los dos son mujeres. = I have two French teachers. Both are women.

Section F – Star phrase

Talk about other people in your work.

Estudia = He/She studies Estudiamos = We study
Estudian = They study

E.g. *Estudio el francés pero mi amigo estudia el italiano. Mi amigo y yo estudiamos el español. Mis amigos prefieren el español pero yo prefiero el francés. = I study French but my friend studies Italian. My friend and I study Spanish. My Friends prefer Spanish but I prefer French.*

Section D – The imperative

The imperative is used to give commands like 'sit down' or 'do your homework'. Here is how to form them in Spanish:

To form positive commands (telling someone to do something), remove the infinitive endings from the verb (*-ar, -er, -ir*) and add the following endings:

	tú	vosotros
-ar verbs	-a	-ad
-er verbs	-e	-ed
-ir verbs	-e	-id

To form negative commands (telling someone **not** to do something), remove the infinitive endings (*-ar, -er, -ir*) and add the following endings:

	tú	vosotros
-ar verbs	-es	-éis
-er verbs	-as	-áis
-ir verbs	-as	-áis

ART

Section A: Key Vocabulary	
Vocabulary	Definition
Formal Elements of Art	Line, Detail, Colour, Tone, Shape, Form, Texture, Pattern
Observational drawings	Drawing what you see after careful looking
Primary Sources	Using objects that you have in front of you to work from
Secondary Sources	Finding ideas to work with -from the internet / books
Combine ideas	Bringing different ideas together
Develop ideas	Moving an idea on from your starting point, changing it
Refine ideas	Making your ideas better each time you experiment
Experiment	Trying out ideas, trying different styles, layouts, materials
Select resources	Choosing different ways of working, different materials
Produce a series of outcomes	Creating several different artworks, experimenting
Artist influence & Contextual sources	Research artists and art history, examining and using their style
Annotation	Writing about your work or work of others, describing and evaluating
Techniques	Ways / methods of working in different ways with art materials
Collage	Incorporate different materials e.g. sticking papers together

Sea and Sky



Ryan Tippery

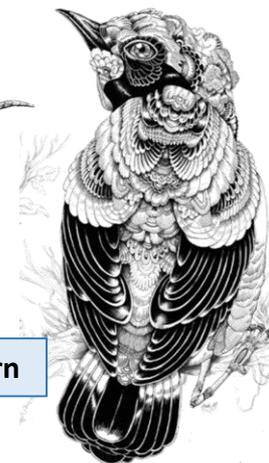


Abby Diamond

Texture



Rene Campbell



Iain Macarthur

Pattern



Elizabeth St Hilaire



Dolan Geiman

Collage

Annotate your own work:
Write about the artwork, describe, explain, evaluate, compare. Do you like it? Which parts are effective? What could you change? How? Why?

The Four Stages of Image Analysis:

Level 1 Describe - literally describe the subject.

Level 2 Analyse - formally describe in terms of line, colour, values, symmetry, style (-ism), historical context, etc...

Level 3 Interpret - assign meaning to the subject, what's being expressed, what it means, symbolizes. (What is the 'mood'.)

Level 4 Judge - use all of the above to form a personal response to the piece.



Presentation:

Key concepts, techniques and materials include:

Composition / Layout / Title / Background / Text box / Watercolour wash / Tea stain / Collage / Ripped paper / Old Book pages / maps.

❖ Extending your work :

Develop your homework and classwork further by creating a drawing, painting or collage **in the style of the artist** based on a photograph.



MUSIC – AOS1: Musical Forms and Devices



Section A: Styles

Baroque Era

1600-1750

- Main composers: Bach, Handel, Vivaldi
- Main types of music: Concerto Grosso, Suite, Opera, Trio Sonata
- Main features: melodies simple to begin with, becoming more complex; use of ornaments and terraced dynamics; use of homophony but also complex polyphony and counterpoint; orchestra was small – mainly strings with just a few woodwind and brass; use of harpsichord/organ, basso continuo and figured bass

Classical Era

1750-1810

- Main composers: Haydn, Mozart, Beethoven
- Main types of music: Symphony, Solo Concerto, String Quartet
- Main features: melodies less complex, with clear, balanced phrases; functional harmony; Alberti bass; texture mainly homophonic, but counterpoint still used; more variety and contrast, e.g. wider range of dynamics, frequent changes of mood and timbre; less use of the harpsichord and basso continuo as the piano was invented; orchestra increased in size (but still relatively small) and more use of wind and brass; forms such as sonata form, ternary, rondo, theme and variations, minuet and trio

Romantic Era

1810-1910

- Main composers: Schubert, Mendelssohn, Chopin
- Main types of music: Symphonic poem, Programmatic works, Opera
- Main features: melodies lyrical, with distinctive themes and use of leitmotif; more expressive, increased variation in dynamics and rhythms; harmony richer and more complex; national influences; orchestra expanded, particularly brass and percussion; developments in form and design, descriptive music and links to the other arts

Section B: Musical Forms

Vocabulary	Definition
Form/Structure	The way the music is organised, the overall plan
Binary form	A B A: starts in tonic key, modulates to a related key at the end of A section B: starts in new key, modulates back to the tonic at the end of the B section. Both sections are usually repeated.
Ternary form	A B A A: introduces initial ideas, usually ends in tonic key B: contrasting section (e.g. new key, new melody) A: either exact repetition of first A section or slight variation
Minuet and trio	Minuet – Trio – Minuet Minuet: section A (repeated), starts in tonic but modulates; section B (repeated), starts in new key but modulates back to tonic Trio: section A (repeated), provides contrast, ends with a modulation; section B (repeated), starts in new key but modulates back to tonic Minuet: repeat of first minuet: section A, section B (no repeats)
Rondo form	A B A C A A section keeps returning between contrasting sections A: presents theme in tonic key B: contrasting section
Variation form	Theme – Variation 1 – Variation 2 etc. Theme: could be in a certain structure (e.g. binary) Variations: Theme is transformed/varied, e.g. decorated, change of instruments, change of key, different pitches
Strophic Form	A A A A Used in many songs – music is the same in every verse and no choruses or other sections in between

Section C: Musical Devices

Vocabulary	Definition
Repetition	The exact repeat of a musical idea
Contrast	A change in the musical content
Anacrusis	A note (or notes) before the first strong beat
Imitation	When a musical idea is copied in another part
Sequence	The repetition of a motif in the same part but at a different pitch
Ostinato	A musical pattern repeated many times
Syncopation	“Off-beat”, accented notes on the weak beat
Dotted rhythms	A dot placed after a note increases its value by half again, giving a kind of jagged effect
Drone	A repeated note or notes held throughout a passage of music
Pedal	A held or repeated note against which changing harmonies are heard
Canon	Where a melody is repeated exactly in another part while the initial melody is still being played (e.g. a round)
Conjunct movement	When the melody moves by step
Disjunct movement	When the melody leaps from one note to another
Broken chord/arpeggio	A chord played as separate notes but in succession
Alberti bass	A type of broken-chord accompaniment (1-5-3-5)
Regular phrasing	The balanced parts of a melody, like phrases in a sentence
Motifs	A short melodic or rhythmic idea that has a distinctive character
Chord progressions	A series of chords related to each other in a particular key
Modulation	The process of changing key

Component 1 Exploring the Performing Arts - Section A

What is Musical Theatre?

Musical theatre is a form of theatrical performance that combines songs, spoken dialogue, acting and dance. The story and emotional content of a musical – humour, pathos, love, anger – are communicated through words, music, movement and technical aspects of the entertainment as an integrated whole.

What is Verbatim Theatre?

Verbatim theatre uses pre-existing documentary material (such as newspapers, government reports, interviews, journals, and correspondences) as source material for stories about real events and people, frequently without altering the text in performance.

What is Epic Theatre?

Epic theatre is a theatrical movement arising in the early to mid-20th century from the theories and practice of a number of theatre makers, who responded to the political climate of the time. Epic theatre emphasises the audience's perspective and reaction to the piece through a variety of techniques that deliberately cause them to individually engage in a different way. The purpose of epic theatre is not to encourage an audience to suspend their disbelief, but rather to force them to see their world as it is.

Section D: Learning Aim B1 & B2 Approach to repertoire

When exploring repertoire you will need to understand the processes, techniques and approaches used, and the interrelationships of constituent features within the created performances. You will need to consider the roles and responsibilities, creative intention, key influences and purpose whilst making comparisons between stylistic qualities, using examples to back up your knowledge. You will have to consider how practitioners contribute to the performance process and how their roles and responsibilities differ depending on the performance, style and outcome.

What processes are used in development, rehearsal and performance?

How are rehearsals conducted and what makes them successful?

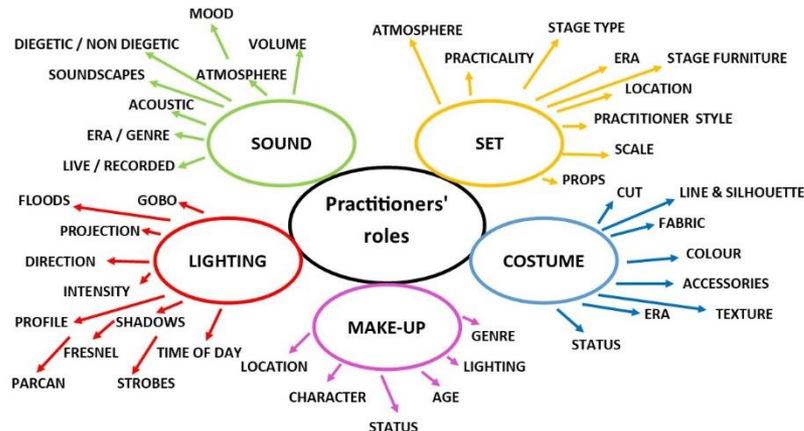
How do the practitioners' roles interrelate with one another? What is the impact?

How are ideas shared and discussed?

How does feedback help to develop and refine work during the creative process?

How can you effectively evaluate and review?

How does each repertoire compare and contrast to one another?



Section B: Learning Aim A1 Vocabulary

Creative stylistic qualities	Definition
Characterisation	The way that people are represented in a film, play, or book so that they seem real and natural.
Structure	The sequence of the play - beginning, middle, end.
Narrative	A spoken or written account of connected events; a story.
Genre	Is the type of performance you create in a certain style.
Interrelationship	The way in which two or more things or people are connected and affect one another.
Refining	Fine tune, hone it to perfection, and make it more precise.
Contextual Factor	Factors which reflect a particular context, characteristics unique to a particular group, community, society and individual.

Section C: Learning Aim A2 Vocabulary

Practitioners' roles, responsibilities and skills	Definition
Choreographer	Composes the sequence of steps and moves for a performance.
Director	Oversees and orchestrates the creative process of a theatre production.
Writer	Is responsible for writing dramatic material for the purposes of performance.
Lighting Designer	Creates the lighting, atmosphere, and time of day for the production in response to the text.
Sound Designer	Is responsible for everything that you hear as part of the performance.
Costume Designer	Create the characters' outfits/costumes and balances the scenes with texture and colour.
Set Designer	Creates the overarching look of any given set on television, in film or in the theatre.

Section A - Vocabulary

Terms 1	Definition
Brief	A set of instructions given to a theatre company before they devise a production.
Stimulus	A starting point for creating theatre.
Running time	The length or duration of a theatre production. This is often expressed in minutes.
Structure	A particular order in which scenes or sequences follow each other in drama.
Style	The way in which a story is told. For example Epic, TIE, Naturalistically.
Genre	The type of story being told i.e. tragedy, comedy, satire etc.,
Rehearse	To plan and practice performance work in preparation for an audience.
Terms 2	Definition
Apply	Put knowledge, understanding or skills into action in a particular context
Analyse	Examine methodically and in detail, typically in order to interpret.
Assess	Present a careful consideration of varied factors or events that apply to a specific situation or identify those that are the most important or relevant and arrive at a conclusion
Contribute	.To offers skills and/or ideas to the group in order to make progress
Collaborate	Work jointly with others to produce defined outcomes
Evaluate	Bring together all information and review it to form a conclusion, drawing on evidence, including strengths, weaknesses, alternative actions, relevant data or information
Reflect	To review with great consideration.
Refine	Improve initial work taking feedback into account.
Select	Choose the best or most suitable option related to specific criteria or outcomes.
Summarise	Gathers together all of the main aspects of a given situation or experience in a condensed format.

Section B Methods and Processes
Target audience examples:

Elderly, Children, Teens, Adults, Families etc.,

Structure:

Linear, Cyclical, Episodic, Montage etc.,

Theatre styles/Genres

The genre of a performance refers to the type of story being told, and the style refers to how the work is being presented on stage. A genre or style can help to give performers a framework to shape the devised work.

Tragedy, comedy, melodrama, romance, horror, Epic, Naturalism, Verbatim, TIE, Musical
Creative intentions and Purposes

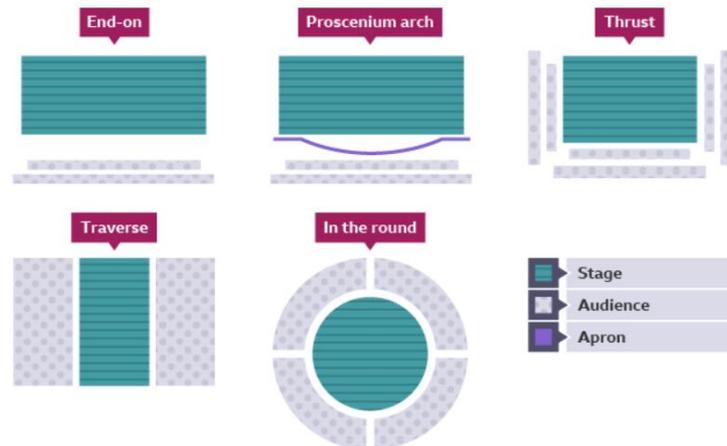
Raise awareness, educate, entertain, questions, inform, celebrate, challenge viewpoints/society etc.,

Practitioner influences

Brecht, Artaud, Stanislavski, Frantic Assembly, Kneehigh, Berkoff, Boal, DV8,

Venues and types of staging:

Community/village hall, youth centre, parks, fields, school hall, theatre etc.,



Year 10 Cambridge Sport – Autumn 2

Principles of Training

SPECIFICITY	Training should be relevant and appropriate for the individual, sport, <u>muscle</u> fibre type and movement pattern.
OVERLOAD	Training should push the performer beyond their comfort zone to <u>force</u> an adaptation.
PROGRESSION	Training demands should gradually increase over time to make sure that the performer improves.
REVERSIBILITY	Training must be maintained to prevent a loss in performance.

Can you think of examples for each principle related to your sport?

Optimising Training

The principle of OVERLOAD is also split into 4 components – these are known as the FITT principle:

FREQUENCY	HOW OFTEN YOU TRAIN
INTENSITY	HOW HARD YOU TRAIN
TIME	HOW LONG YOU TRAIN (SESSIONS / SETS / REPS / INTERVALS)
TYPE	THE METHOD USED

How could you increase each to ensure improvements?

FREQUENCY	From 4 to 5 sessions a week
INTENSITY	Ensure you work at 60 – 80% of your max heart rate / 1 REP MAX
TIME	Each session last 30 minutes instead of 20, or 6km not 4km
TYPE	Vary between continuous and interval in week 1, with circuits added in week 3.

It is important for athletes to carefully increase the FITT principles to reduce overtraining / risk of injury.

Types of Training

CONTINUOUS	Low intensity exercise over a prolonged period of time.
FARTLEK	A mixture of different intensities over different terrains – sprint, jog, walk.
INTERVAL	High Intensity bursts followed by rests – used by athletes in high intensity sports, as a rest period is required before repetition due to fatigue.
CIRCUIT	Involves a series of stations which can be fitness or skills based.
WEIGHT	Uses sets of repetitions, which can be tweaked to <u>gain strength</u> /endurance
PLYOMETRICS	Explosive movements using full range of muscle contractions.
HIGH INTENSITY INTERVAL TRAINING (HIIT)	Joe Wicks method! 80% of max heart rate for short 30 – 60s bursts.

Warm Ups

PULSE RAISER	An activity which increases heart rate and body temperature.
MOBILITY	An activity which takes the joint through the full range of motion.
STRETCHING	An activity which increases elasticity of muscles / tendons / ligaments.
DYNAMIC MOVEMENTS	An activity which involves changes in speed and direction.
SKILL REHEARSAL	An activity which mirrors the game's demands.

Cool Down

LOW INTENSITY EXERCISE	An activity that gradually decreases temperature and heart rate.
STRETCHING	Static stretches that squeeze blood back to core.

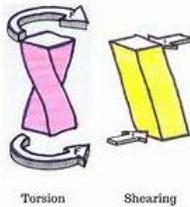
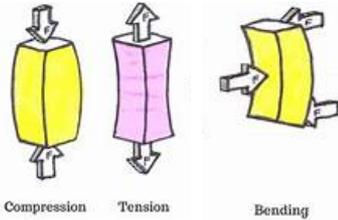
Can you list the benefits of a warm up & cool down related to your sport?



Timbers & Common specialist principles

- Timbers
- Forces and stresses
- Improving functionality
- Ecological and social footprints
- The 6 Rs
- Scales of production

Key Diagrams



Softwoods and Hardwoods



Key Vocabulary

Tier 2 Vocabulary	Definition
Discuss	Present key points about different ideas or strengths and weaknesses of an idea Set out both sides of an argument (for and against. Advantages and Disadvantages), and come to a conclusion.
Evaluate	Judge from available evidence and consider several options, ideas or arguments and come to a conclusion about their importance / success / worth.
Conclude	Make a decision after reasoning something out. Usually after evaluating something
Analyse	Break down the content of a topic, or issue, into its constituent elements in order to provide an in-depth account and convey an understanding of it.
Tier 3 Vocabulary	Definition
Carbon Footprint	The amount of Co2 emitted during a process
Compression	Occurs when a pushing force is applied to either end of a material
Deforestation	The removal of forests and conversion of the land by other uses.
Ecological	The concern with the relation of living organisms to one another and to their physical surroundings.
Laminating	Overlaying a flat object or sheet of material with a layer of protective material
Recycle	To reprocess or convert waste back into a useful material
Reinforcement	Adding strength or stiffness to a product
Shear force	Is a force that acts on an object in a direction perpendicular to its length
Tension	Occurs when a pulling force is applied to either end of a material
Torsion	Occurs when a material is being twisted
Webbing	Ribs of material that provide reinforcement inside a product.
Density	Mass of a material per unit volume
Ductility	The ability of a material to be stretched without breaking. And stay permanently in its new form
Hardwood	A wood that comes from a deciduous tree.
Softwood	A wood that comes from an evergreen tree.
Strength	The ability of a material to withstand a force that is applied to it.
Thermal Conductivity	The ability of heat to be conducted through a material
Toughness	The ability of a material to absorb impact without rupturing

Key Facts

Questions:	Answers:
Which production method produces the most expensive products?	One off Production: High material costs High labour costs
The four different types of forces are Tension, Compression, Torsion and Shear. Explain which forces are involved in this scenario. " A Key breaks as you try to open the door"	Torsion due to the twisting of the key in the lock. Shear due to the breaking of the key.
Evaluate why it is important for all individuals and organisations to minimise their carbon footprint.	To ensure that the planet will cope with a growing population To minimise the damage caused to the atmosphere and planet
Discuss what the term reduce means in context with the 6Rs	Having a rethink through thought or action. Reduce the number of parts Fit motion sensing lights to reduce energy waste. Use "energy walks" to ensure all appliances are switched off.
Explain what is meant by product miles.	The amount of miles a product travels through its life time. From raw material to end of life.

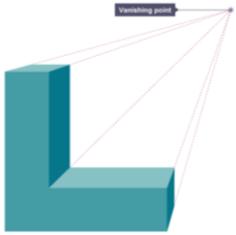
Skill 1: General practical skills		Skill 3: Preparing fruit and vegetables		Skill 8: Sauce making			
Food Preparation Skills	Techniques	Food Prep Skills	Techniques	Food Prep Skills	Techniques		
Weigh & Measure	<input type="checkbox"/> Accurate measurement of liquids and solids.	Preparing fruit and vegetables	<input type="checkbox"/> Mash, Shred, scoop, scissor snip <input type="checkbox"/> Crush, Grate, Peel, Segment <input type="checkbox"/> De-skin, De-seed <input type="checkbox"/> Blanch, Shape, Pipe <input type="checkbox"/> blend, Juice <input type="checkbox"/> prepare garnishes whilst demonstrating the technical skills of controlling enzymic browning spoilage and preventing food poisoning (wash and dry where appropriate).	Starch based	Sauce demonstrating starch gelatinisation such as... <input type="checkbox"/> Roux. All in one. Blended. Infused velouté. béchamel. <input type="checkbox"/> How starch/liquid ratios affect viscosity.		
Prepare ingredients and equipment	Can you evenly and with attention to finished product... <input type="checkbox"/> grease/oil. <input type="checkbox"/> Line <input type="checkbox"/> flour			Reduction	<input type="checkbox"/> reduction sauce to show how evaporation concentrates flavour... <input type="checkbox"/> tomato pasta sauce. curry sauce. gravy <input type="checkbox"/> meat sauce (including meat alternatives such as mycoprotein and textured vegetable protein) <input type="checkbox"/> to show how evaporation concentrates flavour and changes the viscosity of the sauce.		
Select and adjust cooking times	<input type="checkbox"/> Select and adjust the cooking process and length of time to suit the ingredient, for example to match the cut of meat, fish and alternatives.			Skill 4: Use of the cooker			
Test for readiness	Use of... <input type="checkbox"/> temperature probe, knife, skewer <input type="checkbox"/> finger or poke test <input type="checkbox"/> bite <input type="checkbox"/> visual colour check or sound to establish whether an ingredient or recipe is ready.	Food Prep Skills	Techniques	Skill 9: Tenderise and marinate			
		Using the grill	Use a range of foods... <input type="checkbox"/> Vegetables. Meat. fish or alternatives such as halloumi, seeds and nuts; char/grill or toast	Food Prep Skills	Techniques		
Judge and modify sensory properties	<input type="checkbox"/> How to taste and season during the cooking process. Change the taste and aroma through: the use of... <input type="checkbox"/> Infusions <input type="checkbox"/> herbs and spices <input type="checkbox"/> Paste <input type="checkbox"/> Jus <input type="checkbox"/> reduction. How to change texture and flavour using... <input type="checkbox"/> browning (dextrinisation, caramelisation) <input type="checkbox"/> glazing <input type="checkbox"/> add crust <input type="checkbox"/> crisp <input type="checkbox"/> crumbs. Presentation and food styling... <input type="checkbox"/> use garnishes <input type="checkbox"/> decorative techniques to improve the aesthetic qualities <input type="checkbox"/> demonstrate portioning <input type="checkbox"/> presenting and finishing.	Using the oven	<input type="checkbox"/> baking. Roasting. casseroles and/or tagines <input type="checkbox"/> braising.	Tenderise and marinate	<input type="checkbox"/> how acids denature protein. <input type="checkbox"/> marinades add flavour and moisture when preparing vegetables, meat, fish and alternatives.		
		Skill 5: Use of equipment					
		Food Prep Skills	Techniques	Food Prep Skills	Techniques		
		Using equipment	<input type="checkbox"/> Blender. Food processor. mixer <input type="checkbox"/> pasta machine, microwave oven.	Skill 10: dough			
		Food Prep Skills	Techniques	Food Prep Skills	Techniques		
		Water based methods using the hob	<input type="checkbox"/> Steaming. Boiling. Simmering. Blanching. poaching.	Making a dough (bread, pastry, pasta)	Use technical skills of... <input type="checkbox"/> Shortening. gluten formation. Pastry. pasta <input type="checkbox"/> fermentation (proving) for bread		
Dry heat & fat based methods using Hob	<input type="checkbox"/> dry frying. shallow frying. stir frying.	Shaping and finishing	<input type="checkbox"/> Roll out pastry. use a pasta machine <input type="checkbox"/> line a flan ring <input type="checkbox"/> create layers (palmiers) proving and resting <input type="checkbox"/> glazing and finishing, such as pipe choux pastry <input type="checkbox"/> bread rolls. pasta, flat breads. Pinwheels. pizza calzone.				
Skill 6: cooking methods				Skill 11: Raising agents			
Food Prep Skills	Techniques	Food Prep Skills	Techniques				
Prepare, combine and shape	<input type="checkbox"/> Roll. Wrap. Skewer. Mix. coat <input type="checkbox"/> layer meat, fish and alternatives <input type="checkbox"/> shape and bind wet mixtures (such as falafels, burgers, fish cakes or meatballs) <input type="checkbox"/> demonstrate the technical skill of preventing cross contamination and handling high risk foods correctly.	Eggs as a raising agent	<input type="checkbox"/> create a gas-in-liquid foam. whisking egg whites, <input type="checkbox"/> whisked sponge				
Skill 7: Prepare, combine and shape				Skill 12: Setting mixtures			
Food Prep Skills	Techniques	Food Prep Skills	Techniques				
Remove of heat	<input type="checkbox"/> Gelation. Use a starch to set a mixture on chilling for layered desserts such as custard.	Chemical raising agents	<input type="checkbox"/> the use of self raising flour <input type="checkbox"/> baking powder. bicarbonate of soda				
Use protein	<input type="checkbox"/> Denatured. Coagulated protein in eggs.	Steam-raising agent	<input type="checkbox"/> use of steam in a mixture (choux pastry, batter)				
		Biological raising agent	<input type="checkbox"/> Use of yeast in breadmaking				

Key Words

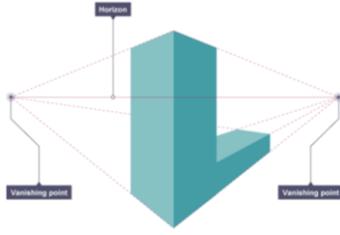
Dextrinisation
 Coagulation
 Emulsions
 Plasticity
 Aeration

Incorporate
 Stable
 Conditions
 Catalysts
 Enzymes

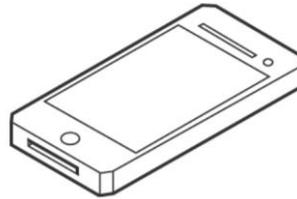
Section A – Presentation Techniques



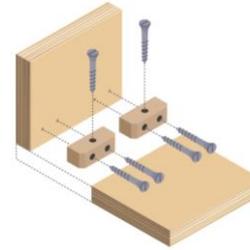
One-point Perspective



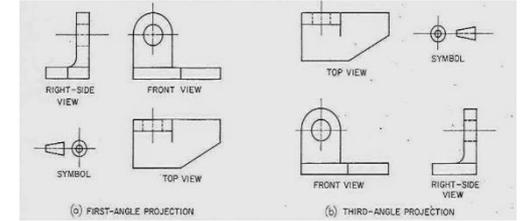
Two-point Perspective



Isometric Drawing



Exploded (Assembly) Drawing



Orthographic Drawings

Section B – CAD (Computer Aided Design)

2D Design Key Tools

The drawing tools are all located on the right hand side of your screen. At the top of your screen here, you will also find the default 'File,' 'Open' and 'Save' buttons.

Select – to select multiple items hold down SHIFT on the keyboard and click the lines you want

Draw a Circle – click to place the center, and then click to place a point on the circumference.

Draw a Rectangle – click to place a corner, and then click to place the opposite corner.

Deleting – click on a part you want to get rid of and use the DELETE button on the keyboard. To delete part of a shape, click and hold on the DEL ANY icon.

Straight line tool – click to place the start of the line, click to place end of line

Curved line tool – click to place the start of the line, click to place the first bend, second bend, etc. and right click to finish the line

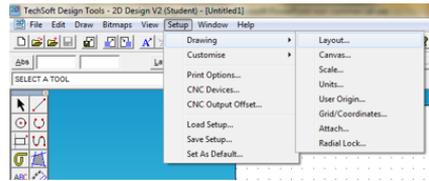
Fill – select the area you want to fill. 'Are there any islands?' Click 'Yes' if you don't want to fill these in, or 'No' if you do.

Dimensions – Click at the beginning of where you want to measure, then again at the end. This will give you the measurement in millimeters.

Text – click to place text. The box below appears

Click to change font, size etc.

Draw a box, and delete the contents



Before you start anything, please make sure your page is Setup correctly. Use the options in this toolbar to do this.

Your grid tools are all located on the left hand side of your screen.

Lock to grid – Keep this on to keep your lines straight and measurements accurate

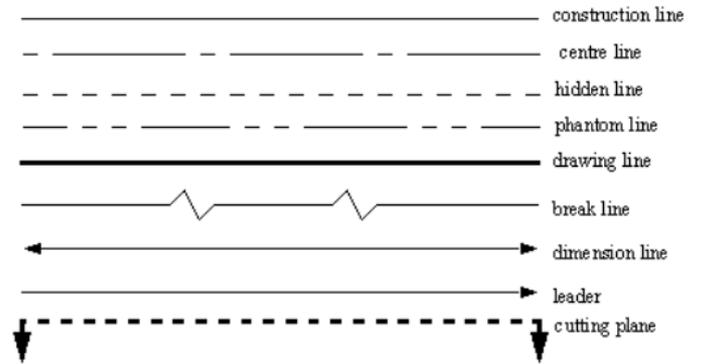
Attach – Use this tool to attach one point directly to another

Zoom in/Out

Undo – Undo or Delete your last move.



Section C – Drawing Line Styles



Section D – Modelling Materials

- Styrofoam
- HIPS
- Corrugated cardboard
- Carton board
- Fluted polypropylene
- Modelling clay
- MDF (Medium Density Fibreboard)
- Hot-melt glue

Section E – Making Techniques

- Wasting (cutting away)
- Addition (adding material)
- Fabrication (joining parts)
- Drilling (producing holes)
- Adhesion (gluing)
- Jointing (producing a joint)
- Permanent fixings
- Temporary fixings

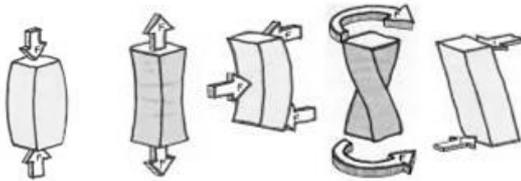
Year 10 Construction Autumn Term 2

Unit 2 LA A Science

Section A - Mass and Force	
Vocabulary	Definition
Mass	The amount of matter in an object. Measured in kilograms
Weight	Can be measured by multiplying mass by the force of gravity
Force of Gravity	9.81m/s ²
Acceleration	Measured in metres per s ²
Force	Measured in Newtons (N) or Kilo Newtons (kN)
Density	Mass per unit volume or how compact a material is.

Types of Force

Compression Tension Bending Torsion Shear



Section B- Effects of Temperature

There are three **states of matter**:

- solid – volume and shape are fixed
- liquid – volume is fixed but shape is not
- gas – neither volume nor shape are fixed.



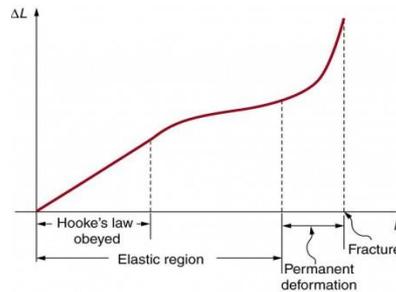
Young's Modulus of Elasticity

Young's modulus is a measure of the ability of a material to withstand changes in length when under lengthwise tension or compression.

$$\text{Modulus of elasticity} = \frac{\text{stress}}{\text{strain}}$$

Hooke's Law

Every material has a 'constant' value of elasticity. This is proven by Hooke's Law.



Effects of Temperature

Thermal Expansion	length m x temperature rise °C x coefficient
Sensible Heat	Heat stored in the material (J)
Specific heat capacity	Amount of heat required to change a unit mass of a substance by one unit of temperature.
Freeze-Thaw Action	water penetrates the concrete or masonry then repeated freezing and thawing force the breakup the concrete or masonry as the ice expands in the cracks.

Section C - Common Construction Materials

Material	Properties	Uses
1. Cement: limestone with clay and fine sands	<ul style="list-style-type: none"> Dense Good compressive and tensile strength Fast setting time Heat of hydration 	<ul style="list-style-type: none"> mortar laying floors pipes fence posts large structures e.g bridges, dams, tunnels
2. Concrete: water, cement and aggregates	<ul style="list-style-type: none"> plastic/malleable when mixed strong/durable when hardened 	<ul style="list-style-type: none"> houses/skyscrapers bridges/dams pavements
2. Aggregates: crushed and uncrushed	<ul style="list-style-type: none"> durable abrasion and skid resistant absorbent 	<ul style="list-style-type: none"> reinforcement foundations roads/railways
4. Timber: softwoods and hardwoods	<ul style="list-style-type: none"> stiffness elasticity tensile/compressive/shear strength 	<ul style="list-style-type: none"> roofing wall panelling framing windows/doors
5. Masonry: bricks and blocks	<ul style="list-style-type: none"> dense good compressive strength thermal/acoustic insulation 	<ul style="list-style-type: none"> low rise buildings walls arches and cornices
6. Plastics: processing crude oil	<ul style="list-style-type: none"> corrosion resistant low electrical conductivity low thermal conductivity High strength to weight ratio 	<ul style="list-style-type: none"> UPVC window/door frames insulation piping
7. Steel: iron and carbon	<ul style="list-style-type: none"> Formable Durable Good tensile/yield strength Thermal conductivity 	<ul style="list-style-type: none"> foundations steel frames roofing outbuildings
8. Aluminium: mixed with copper and zinc	<ul style="list-style-type: none"> light weight corrosion resistant ductile strong at low temperatures 	<ul style="list-style-type: none"> shop fronts stadiums roofing handles/catches for windows
9. Glass: made from silica	<ul style="list-style-type: none"> transparent heat resistant chemical resistant withstands pressure 	<ul style="list-style-type: none"> glazing (windows) partitions decorative cladding

A – Algorithms

Keyword	Definition
Sequence	A series of actions that is completed in a specific order
Selection	Instead of following a specific order of events, they ask a question in order to figure out which path to take next
Iteration	Like selections, loops ask questions. However, the difference is that they ask the same question over and over and over again, until a certain task is complete.



Overview

A flowchart is a **diagram** that represents a set of **instructions**. Flowcharts normally use standard symbols to represent the different **instructions**.

Name	Symbol	Usage
Start or Stop		The beginning and end points in the sequence.
Process		An instruction or a command.
Decision		A decision, either yes or no.
Input or Output		An input is data received by a computer. An output is a signal or data sent from a computer.
Connector		A jump from one point in the sequence to another.
Direction of flow		Connects the symbols. The arrow shows the direction of flow of instructions.

B – Programming Support

PSEUDOCODE

For Loop	FOR Loop ID \leftarrow range TO range statements ENDFOR	FOR x \leftarrow 1 TO 5 OUTPUT hello ENDFOR
While Loop	WHILE Boolean Expression statements ENDWHILE	count \leftarrow 1 WHILE count < 4 OUTPUT count count \leftarrow count + 1 ENDWHILE
If-else Statement	IF Boolean Expression THEN statements ELSE statements ENDIF	IF answer = Yes THEN OUTPUT correct ELSE OUTPUT incorrect END IF

WHILE LOOPS

```

count = 0
while count < 3:
    print(count)
    count = count + 1
  
```

This variable needs to be defined before the while loop can begin

Checks if count is less than 3

Increases the count variable



WHILE LOOP MISCONCEPTIONS

- Your **WHILE** line of code needs a statement with criteria (like an IF statement)
- Make sure the **WHILE** line of code finishes with a :
- You need to set the variable or Boolean flag (True or False) before the **WHILE** loop begins

MORE CODE EXPLAINED

```

chance = 1
while chance < 4:
    ans = int(input("10 + 5 = "))
    if ans == 15:
        print("You took", chance, "attempts")
        break
    else:
        print("Sorry")
        print(3 - chance, "chances left")
        chance = chance + 1

if ans == "skip":
    print("skipping")
    continue
  
```

Checks if the answer is correct

Escapes the while loop

Works out how many chances are left to get the answer

The continue command will skip the rest of the loop and return to the top

INFORMATION TECHNOLOGY

A – Physical Protection Methods



Biometric



Bolt equipment



Closing Windows
and Blinds



Locks on Doors



Swipe cards
and RFID



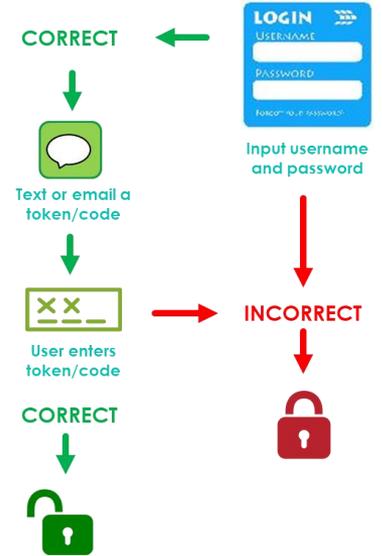
CCTV



Tag and Mark
Equipment

B – Logical Protection Methods

- **Access rights and permissions:** to control over who has access to a system, folder or file to read, edit or write
- **Authentication:** uses a token (two-step authentication) to allow access
- **Username and Passwords:** the username authorises and the password authenticates to allow access
- **Antivirus Software:** detects viruses (including Trojans and worms) to quarantine and take action
- **Encryption:** uses a method (code) to scramble and unscramble the data
- **Secure Backup:** takes a copy of the data regularly and stores away from the system



C – Destruction of Data

1. **Overwriting data:** software is used to overwrite the data with meaningless data
2. **Magnetic wipe:** removing the magnetic field part of the device means it is unreadable. Not even the basic commands to operate the device remain
3. **Physical destruction:** an expensive but thorough option, like a hard drive shredder



D – Legislations



Aims to protect the rights of the owners of data with the many key principles of the **GDPR** that rule how data should be stored and processed



The **copyright designs and patents act** makes it illegal to copy a work without permission from the owner or copyright holder.



The **computer misuse act** aims to protect data and information held on computer systems with three main parts to the act



The **health and safety at work act** provides guidance to employers and employees when working with computer systems

Business – unit 1 Exploring Enterprises

WHAT IS ENTERPRISE?



- **Learning Aim A** Examine the characteristics of enterprises

What is an enterprise? Enterprise is the term used to describe a business or company.

For an enterprise to be successful the entrepreneur must spot a **gap in the market**.

How do enterprises compete?

Enterprises face competition if their products are **not** unique.

If another enterprise sells the **same or similar** products; there are called your competition or competitors.

Every enterprise needs to:

- Decide on the features or characteristics that make its goods and services different from other enterprises.
- Ensure that customers are aware of what makes it different.

Goods are sold physically.
For example: an enterprise may sell trainers or books.

Services are offered to anyone who needs them - for example a barber or a cleaner provide a service.

How do enterprises attract & keep customers



- **Firstly:** Customers must be kept happy!
- Good customer service: attracting new customers, encourages repeat purchasing, supports loyalty and customers will freely promote your business.

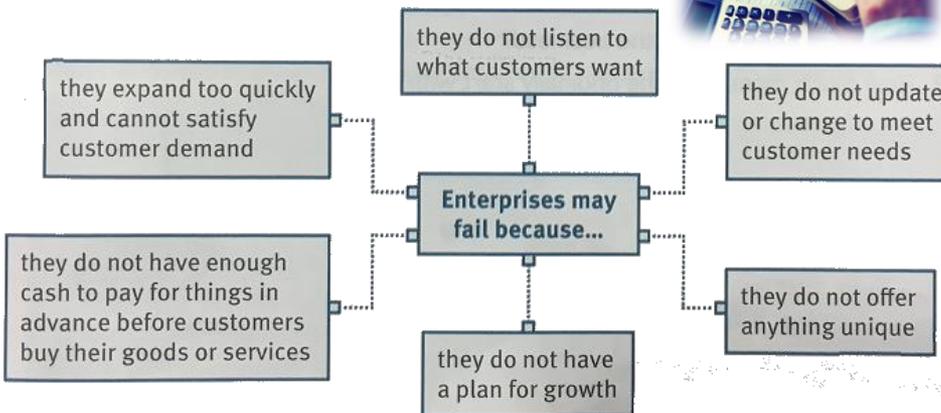
New enterprise find it hard to attract customers because:

- Customers aren't always aware of new enterprises
- The reputation hasn't been built up
- Loyalty and trust hasn't been established.

Smaller enterprise find it hard to attract new customers because:

- They don't have much money to advertise like bigger enterprises do
- Their goods/services may be more expensive as it costs them more to produce a smaller number of products.

Why might an enterprise fail?



Customer service can really support an enterprise, the business must:

- Identify customer needs
- Identify the expectation of the customer
- Offer good value products and service
- Respond to enquiries by customers
- Provide clear and honest information
- Offer after sales service



Key Terms Table A

Advocates	independent people who represent the wishes, views and preferences of people who are unable to do so for themselves due to an illness, disability or a condition.
Empathy	– The ability to understand and share another person’s feelings and experiences
Care plan	– a written statement that sets out an individual’s preferences, wishes, care and support needs, including the care that will be provided, reasons why, when they will be provided and by whom.
Dementia	– A description of the symptoms that occur when the brain is affected by specific conditions and diseases. Symptoms may include memory loss and difficulties with thinking, problem solving or language.
Jargon	words or expressions used by professionals that are difficult for others to understand
Physical disability	a physical impairment that affects an individual’s ability to do daily activities
Learning disability	a learning impairment that affects an individual’s ability to do daily activities
Dyslexia	a learning disability that affects an individual’s ability to learn to read or interpret words, letters numbers and/or other symbols.

Key Terms Table B

Cerebral palsy	– a condition that affects the body’s muscle control and movement usually caused by an injury to the brain before, during or after birth.
Care review	regular meetings to discuss the effectiveness of an individual’s care plan and if it is meeting their needs.
Active listening	being able to focus, understand, interpret and respond to what is being said or expressed.
Personal space	the physical area that immediately surrounds a person.
Positive communications	communication that is positive, honest and constructive.
Paraphrasing	– a way of restating what has been said or heard by clarifying it.
Summarising	– a way of concluding and focusing on key points
Open questions	questions that encourage the expression of feelings.
Patronising language	speaking to people so that they feel they are not very intelligent or important
Insomnia	– a condition that makes it difficult to fall asleep or stay asleep
Emotional abuse	emotional maltreatment or emotional neglect



Research Activity:

Makaton is a form of communication that uses signs and symbols to communicate
Find and draw some signs and symbols that could be used with students at Stanton Vale School

Quick Questions

- What are the four types of communication that care practitioners use?
- How could you adapt communication for an individual with learning difficulties?
- Why is a quiet environment essential for active listening?
- Explain the importance of giving an individual personal space.
- What is the meaning of the acronym SOLER?



Task

Active listening can positively influence communication.
Explain what is meant by “active listening”
Make a poster to show the SOLER theory which is a technique for active listening.





Key Knowledge

There are **four** different types of communication skills that practitioners must be able to understand and use.

- Verbal skills (clear speech, tone, pace, conveying empathy)
- Non-verbal skills (body language gestures, facial expression)
- Written communication (reports, care plans, letters, emails, texts)
- Specialist communication (sign language, Makaton, voice activated software, Braille)

Factors that positively influence communication:

Environmental factors: room at a pleasant temperature, and well ventilated/layout of room arranged carefully and safely/well lit room/ quiet room with no interruptions or distractions

Interpersonal factors : relationships built on trust and respect/observing and respecting personal space/

respecting differences in culture/ use of appropriate body language/active listening



Parent and toddler group

The Happy Days parent and toddler group plan to use a small outdoor space at the back of the village hall for the toddlers to play in and explore. The outdoor space is very small and there is a poorly lit corridor leading to it. There is a large tree outside the door and this casts a shadow over the whole area so it is poorly lit.

What barriers could affect positive communication if the children use the outside space?

Barriers to communication

Language: patronising or inappropriate language (swearing or being rude)/language differences (accents or foreign language)/ inappropriate body language (gestures lack of eye contact)/ tiredness/ aggression/ speech impairments.

Environment: noise/ inadequate space/ poor lighting

Disabilities or illness: visual or hearing impairments/ dementia/ mental health/ disorders/ effects of medication.



How many forms of communication have YOU used today?

Ron

Ron is a 78 years old who lives alone. He is experiencing severe and persistent chest pains and gets a taxi to his local hospital Accident and Emergency Department. When he arrives it is very busy and noisy, the waiting room is full and there is a long queue of people waiting to register

What barriers to positive communication are there?

Learning Outcome 2: Understand the personal qualities that contribute to effective care

Key Terms

Halal	An Arabic term that means lawful in Islam; in relation to foods it refers to the foods that can be eaten according to Islamic law.
Resilience	the ability to recover quickly from difficulties
“Safe hands”	a term that refers to being cared for or looked after in a skilled way.

Task

Using the read cover write check method, make a list of the personal qualities from the box on the left.

- Choose one of the personal qualities and describe in detail how it links to effective care.
- Support your writing with examples.

Key Knowledge

The qualities that contribute to effective care	
Patience	Allowing a patient time to express what they have to do or what they want.
Understanding	Using clear and concise verbal and listening skills
Empathy	Awareness of other peoples feelings
Respect	Knowing and understanding personal wishes
Willingness	Desire & commitment to care for and support individuals
Sense of humour	Being able to cheer up others and build relationships and trust
Cheerfulness	Provides reassurance and demonstrates

Quick Questions

- What does the term “effective care” mean?
- Identify two qualities required for effective care
- Explain the consequences of a care practitioner not having the right personal qualities.

Research Activity:

Use the internet to research the personal qualities that are required for the following three job roles:

- Mental health nurse
- Care assistant
- Nursery assistant



Eric’s long term partner Alice has recently died. Alice used to do the day to day tasks running the house and Eric is finding it difficult to manage on his own. Having mobility difficulties Eric finds it difficult to use the stairs as well as doing practical tasks like doing the laundry, vacuuming and putting the bins out.

Eric has decided he wants to employ a carer and is due to meet with two potential carers for the first time.

When they arrive at his house Eric asks each carer to introduce themselves and tell him why they are the right person for the job.

These are the introductions that the carers made:

Carer 1 – Mrs French

“Good morning, I’m Mrs French and I think I’m the right person for the job because I have had many, many years of caring experience and I know what’s best when it comes to care. In terms of why I am the right person for the job, this is because I am a very hard worker and you can be sure that you can always rely on me to get the job done”

Carer 2 – Katy

“Hello Eric I am Katy and I am very pleased to meet you today. I live locally and I may have seen you a few times in the local shops. Thank you for giving me this opportunity for an interview for a job that I really enjoy. What I like most about being a carer is all the different people I meet and get to know. I am a very patient person and I think it is always important to show respect and understanding. I enjoy supporting individuals to live their lives the way they want to.

1. Based on these introductions, which carer do you think Eric should employ?
2. Explain the reasons for your choice.
3. How did each carer’s introduction make you feel when you read it for the first time?



Learning Outcome 3: – Be able to communicate effectively within a health, social care and early years settings

Key Terms Table A

Aims	Desired outcomes for example setting out what you want to achieve.
Objectives	How you intend to meet desired outcomes for example deciding how you are going to achieve what you want.
Communication book	A way for individuals to communicate through the use of pictures, photographs, signs, symbols and words.
Ofsted	Office for Standards in Education, Children's Services and Skills. This organisation inspects and regulates services that care for children and young people and services providing education and skills for learners of all ages.
Social Services	A range of public services provided by the UK government and private organisations for example in relation to housing, healthcare and social care.
Radiography assistant	A practitioner who works under the supervision of a radiographer to diagnose a patient's illness, disease or condition and treat medical conditions through the use of x-rays and imaging.
Hospice	A service that provided treatment and support to patients who have a life-limiting illness and/or palliative care needs along with their families.

Quick Questions

1. Describe two important requirements for planning a group interaction.
2. Identify two reasons why care practitioners need to communicate clearly.
3. Give an example of how a care practitioner can show respect for an individual.
4. How can the tone of your voice give out different messages?



Task: One-to-one interaction

- Create a scenario for a one-to-one interaction.
- Describe the needs of the individual and the communication skills you will need to use.
- Develop an outline plan for the interaction.



Task: Group interaction

- Create a scenario for a group interaction.
- Describe the needs of the individuals and the communication skills you will need to use.
- Develop an outline plan for the interaction.

Examples of one to one interactions:

- A practice nurse discussing the results of a cholesterol test with a patient
- A teaching assistant reading a book with a child

Examples of group interactions:

- A reception class teacher singing a song with a group of young children.
- A multi-disciplinary meeting for a patient being discharged from hospital

How to plan for interactions:

- Timing
- Environmental factors
- A knowledge of the individuals involved, their needs and interests.
- Appropriate communication skills (active listening/body language/ appropriate language/tone/pace/ preferred method of communication.
- Respect
- Ensure that any information given during the interaction is clear and accurate

Year 10 Media GCSE– Autumn Term

Media Vocabulary	
Archetype	An original on which many copies are based. Usually characters in fictional works. EG the rebel, the mother figure and the villain.
GI	Computer-generated imagery. Application of computer graphics to printed or moving image media.
Conglomerate	A large corporation that owns a large number of media companies, such as television, radio, internet, publishing – giving them control in the market.
Connote	The meanings of a sign or media product that are made by cultural association. These are often the deeper or underlying meanings. For example, images of a sunset in a film may connote ending or closure.
Context	1. The immediate surroundings of something, ie a news photograph on the front page of The Times. 2. The wider social, cultural or historical circumstances of a media product or process.
Franchise	Collection of connected media products derived from a single original source, for example, a film – with a comic and video game also produced about the film.
Hybridisation	A type of media created through convergence resulting in a new form consisting of different media combined. Can also be used as a way of describing a media product that is a combination of different genres and styles
Intertextuality	Often media texts make references to other texts and popular culture to interest and engage the audience.
Regulation	Rules or sets of standards that are expected to be adhered to. Regulatory bodies oversee that this is being done by media companies.

Media Language and Representation -

Advertising and Marketing

1. What is CGI?
2. What is a Todorovian structure?
3. What is a stereotype?
4. What is an archetype?
5. How does the Galaxy advert use nostalgia?
6. What is hybridisation?
7. How does OMO represent femininity?
8. How have adverts changed since 1955?
9. What is context?
10. What is intertextuality?
11. What is the message of the Represent ad?
12. How does the represent advert subvert stereotypes?
13. What is the narrative of the OMO advert?
14. What non-verbal codes does the OMO advert use?
15. What does the empty chair in the represent advert connote?
16. Whom does the Represent advert target?

Media Industry – Film

1. What is star power?
2. What does the BBFC do?
3. What is a conglomerate?
4. What is an archetype?
5. What was the production budget of Dr Strange?
6. What are the benefits of making an independent film?
7. What is cultural imperialism?
8. What is media regulation?
9. What is a blockbuster?
10. What is Globalization?
11. What is independent cinema?

12. What is social realism?
13. What was the production budget of I, Daniel Blake?
14. What effect does the domination of Hollywood have on national cinema production worldwide?
15. What is the free market?
16. Who directed I, Daniel Blake? What is media regulation?

Media Language, Representation, Audience, Industry

Online, Social and Participatory Media and Games

1. How does Zoella address her audience?
2. List 5 demographic categories.
3. What is Blumler and Katz's Uses and Gratifications theory?
4. What is the web 2.0?
5. How would you describe the visual appeal of the KKH?
6. What influence might KKH have on its audience?
7. What genre is Lara Croft Go?
8. What is a franchise?
9. What is self-representation?
10. List 4 psychographic categories.
11. What is reception theory?
12. What types of characters do we meet, where are they and what are they doing in KKH?
13. What are the values of KKH?
14. How are video games regulated?
15. How does Lara Croft subvert stereotypes?
16. What does it mean to be a prosumer?