



ISCA ACADEMY

INSPIRATION FOR LIFE

AUTUMN 2020

KNOWLEDGE BOOKLET

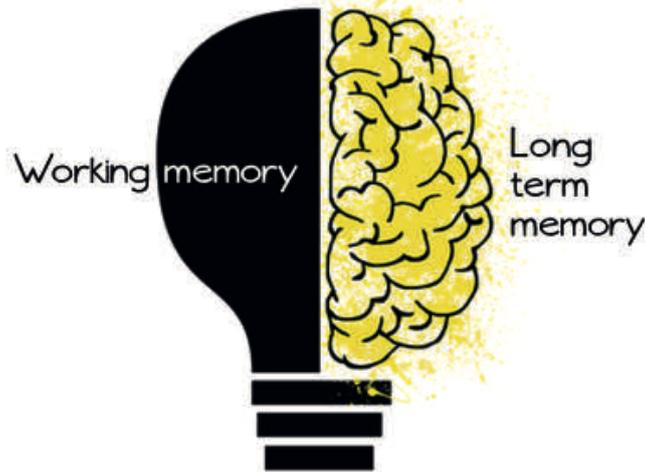
YEAR 9

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WHAT IS A KNOWLEDGE ORGANISER?

Your mind is split into two parts: the working-memory and the long-term memory. Everybody's working-memory is limited, and can very easily become overwhelmed and this is known as overload. Your long-term memory, on the other hand, is effectively a limitless storehouse for information.



You can support your working memory by storing key facts and processes in your long-term memory. These facts and processes can then be retrieved to stop your working memory becoming overloaded:

Let's look at an example, the basic number fact: $7 \times 8 = 56$

If you can instantly recall that $7 \times 8 = 56$, your working memory has more space to think about a more difficult problem, like 37×8 . The answer of 56 comes effortlessly, and you can focus on 30×8 , then add the product to the 56 in your head.

If you do not know that $7 \times 8 = 56$ straight away, you are more likely to become confused and frustrated. Being able to very quickly recall key facts is a way of hacking your working memory, making thinking about difficult stuff much easier.

This booklet contains knowledge organisers for all of your subjects for the Autumn term. Each knowledge organiser has the key information, which needs to be memorised to top up your long-term memory in order to help you master your subject and be successful in lessons. You will be expected to follow the homework schedule on page 4.

HOW TO USE YOUR KNOWLEDGE ORGANISER

Challenge yourself

Which will you choose?



Look Cover Write Check

Look at your knowledge organiser, Cover a section of it, Write out the content you have just covered from memory and Check you have recalled it correctly



Mindmaps

Place the key word/concept in the middle. Go wild with colourful, flowing shapes that link the key definitions and concepts.



Revision Clock

Draw a clock and add the topic in the middle. Then, break it down into 10 minute sections. Add notes in each segment. Cover the clock and recite all the information out loud.



Mnemonics

Creating mnemonics is a great way for remembering groups or lists of words. For example, to remember the order of planets in the solar system:

My **V**ery **E**xcited **M**other **J**ust **S**erved **U**S
Nachos



Flash Cards

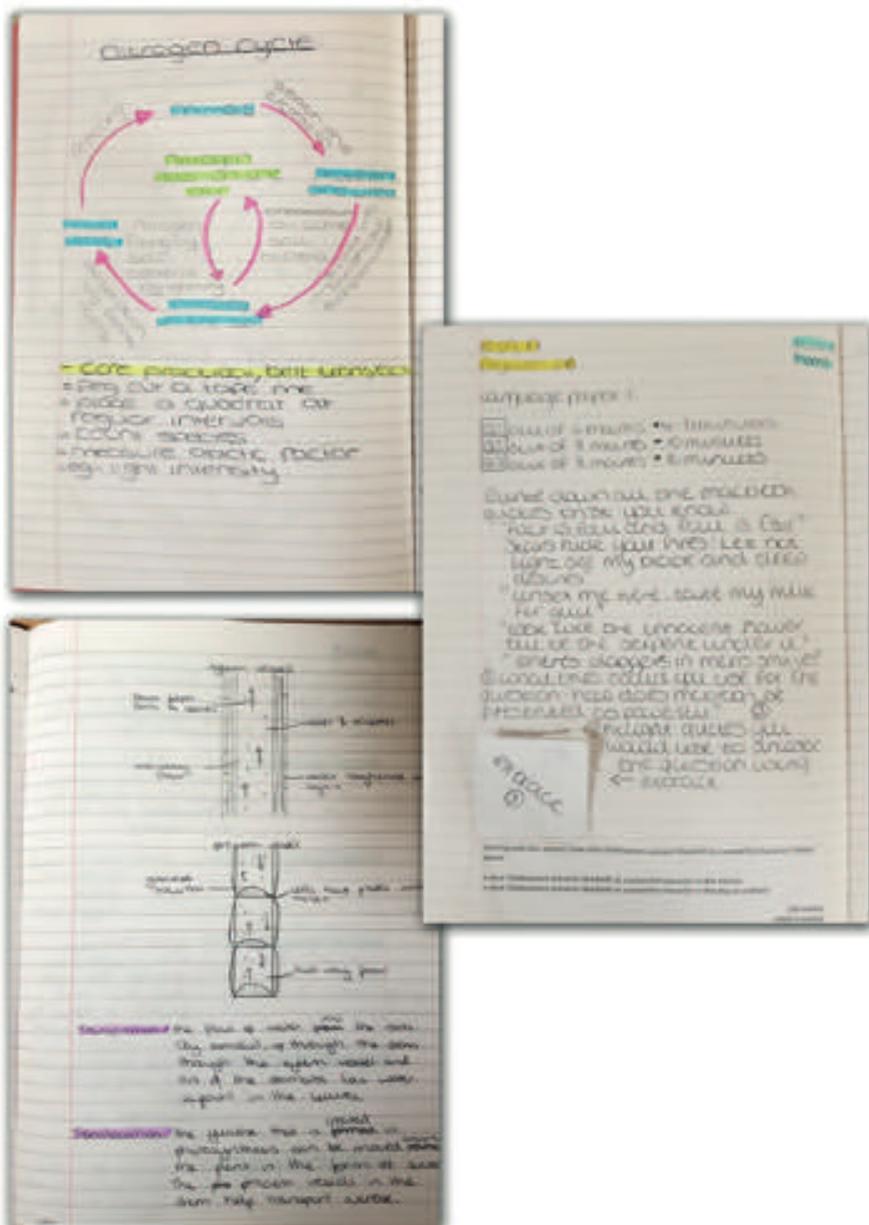
Write down the word/term on one side and a definition/explanation on the other side. Once you have notes written in your own words and summarised – move onto testing yourself quickly.

EXPECTATIONS OF YOU

1. Check the schedule on the next page to see which knowledge organisers you should use each day for your homework
2. Complete **one full page for each subject** on the schedule in your knowledge book **every day**
3. Use your knowledge organiser after you have finished to **mark and correct** your own work
4. **Sign your self-check sheet at the end of each week** after you have finished your full page each day
5. Get your self-check sheet **signed by your tutor** during your knowledge organiser tutor time session

T	on Time
A	Accurate
N	Neat
C	Complete

Homework should be **TANC**. Below is an example of homework that would meet the expected standard. If it does, your tutor will sign your log on the morning you are working in silence on your knowledge organiser.



YOUR SCHEDULE

Day	Subject	Subject
Monday	Numeracy – online	Literacy - online
Tuesday	Science	Option A
Wednesday	RE	Option B
Thursday	Maths	Science
Friday	English	PSHE (iLife)

Every Monday you will have Numeracy and Literacy homework. This will not be using your knowledge organiser, numeracy will be using SPARX and literacy will be using Doodle, both of which are online. Your English and Maths teachers will set these tasks.

Below are the option subjects you are currently studying:

Option A	Option B
Art PE GCSE PE Vocational Catering Design Technology Photography Drama iMedia	History Dance Music Catering Design Technology Photography Drama Art Computer Science

Week commencing	Self Check	Tutor Sign	Week commencing	Self Check	Tutor Sign
7/9/2020			9/11/2020		
14/9/2020			16/11/2020		
21/9/2020			23/11/2020		
28/9/2020			30/11/2020		
5/10/2020			7/12/2020		
12/10/2020			14/12/2020		
19/10/2020					

You will notice on each knowledge organiser that there are green and blue edged boxes with text in. Text in a green edged box is key vocabulary you need to learn and writing in a blue edged box are the key concepts/knowledge you will need to learn.

Key Vocabulary will be written in a green edged box like this.

Key concepts/ideas will be written in a blue edged box like this

Power and Conflict Poetry – Knowledge Organiser

Remains by Simon Armitage Content, Meaning and Purpose -Written to coincide with a TV documentary about those returning from war with PTSD. -Speaker describes shooting a looter dead in Iraq and how it has affected him. -To show the reader that mental suffering can persist long after physical conflict is over. 		Exposure by Wilfred Owen Content, Meaning and Purpose -Speaker describes war as a battle against the weather and conditions. -Imagery of cold and warm reflect the delusional mind of a man dying from hypothermia. -Owen wanted to draw attention to the suffering, monotony and futility of war. -Written in 1917 before Owen went on to win the Military Cross for bravery, and was then killed in battle in 1918: the poem has authenticity as it is written by an actual soldier. - Of his work, Owen said: “My theme is war and the pity of war”.		Kamikaze by Beatrice Garland Content, Meaning and Purpose -In World War 2, Japanese Kamikaze pilots would fly manned missiles into targets such as ships. -This poem explores a kamikaze pilot’s journey towards battle, his decision to return, and how he is shunned when he returns home. -As he looks down at the sea, the beauty of nature and memories of childhood make him decide to turn back. -Cowardice or surrender was a great shame in wartime Japan.	
Quotes: -“ Remains ” - the images and suffering remain. -“ his blood-shadow stays on the street ” -“ he’s here in my head when I close my eyes / dug in behind enemy lines ” – metaphor for a war in his head; the PTSD is entrenched. -“ his bloody life in my bloody hands ”	Form and Structure -Monologue, told in the present tense to convey a flashback (a symptom of PTSD). -First four stanzas are set in Iraq; last three are at home, showing the aftermath.	Quotes: -“ Our brains ache ” -“ the merciless iced east winds that knife us... ” - “ slowly our ghosts drag home ”	Form and Structure -Repetition of “ but nothing happens ” creates circular structure implying never ending suffering -Rhyme scheme ABBA and hexameter gives the poem structure and emphasises the monotony.	Quotes: -“ he must have wondered which had been a better way to die ” -“ dark shoals of fish flashing silver ” -“ they treated him as though he no longer existed ”: cruel irony – he chose to live but now must live as though he is dead. -“ was no longer the father we loved ”: the pilot was forever affected by his decision.	Form and Structure -Narrative and speaker is third person, representing the distance between her and her father, and his rejection by society. -The first five stanzas are ordered (whilst he is flying on his set mission). -Only full stop is at the end of Stanza Five: he has made his decision to turn back. -The final two are in italics and have longer line to represent the fallout of his decision: his life has shifted and will no longer be the same.
Charge of the Light Brigade by Alfred, Lord Tennyson Content, Meaning and Purpose - Published six weeks after a disastrous battle against the Russians in the (unpopular) Crimean War -Describes a cavalry charge against Russians who shoot at the lightly-armed British with cannon from three sides of a long valley. -Of the 600 hundred who started the charge, over half were killed, injured or taken prisoner. -It is a celebration of the men’s courage and devotion to their country, symbols of the might of the British Empire. - Although Tennyson glorifies the soldiers who took part, he also draws attention to the fact that a commander had made a mistake: “ Someone had blunder’d ”.		Bayonet Charge by Ted Hughes Content, Meaning and Purpose -Describes the terrifying experience of ‘going over the top’: fixing bayonets (long knives) to the end of rifles and leaving a trench to charge directly at the enemy. -Steps inside the body and mind of the speaker to show how this act transforms a soldier from a living thinking person into a dangerous weapon of war. -He draws a contrast between the idealism of patriotism and the reality of fighting and killing. (“ King, honour, human dignity, etcetera ”) -Published in 1957, but most-likely set in World War 1. 		War Photographer Content, Meaning and Purpose -Tells the story of a war photographer developing photos at home in England: as a photo develops he begins to remember the horrors of war – painting a contrast to the safety of his dark room. -He appears to be returning to a warzone at the end of the poem. -Duffy conveys both the brutality of war and the indifference of those who might view the photos in newspapers and magazines: those who live in comfort and are unaffected by war. 	
Quotes: -“ Into the valley of Death ”: this Biblical imagery portrays war as a supremely powerful, or even spiritual, experience. -“ jaws of Death ” and “ mouth of Hell ”: presents war as an animal that consumes its victims. -“ Honour the Light Brigade/Noble six hundred ”: language glorifies the soldiers, even in death. The ‘six hundred’ become a celebrated and prestigious group.	Form and Structure -This is a ballad, a form of poetry to remember historical events – we should remember their courage. -6 verses, each representing 100 men who took part. -First stanza tightly structured, mirroring the cavalry formation. Structure becomes awkward to reflect the chaos of battle and the fewer men returning alive.	Quotes: -“ The patriotic tear that brimmed in his eye Sweating like molten iron ”: his sense of duty (tear) has now turned into the hot sweat of fear and pain. -“ cold clockwork of the stars and nations ”: the soldiers are part of a cold and uncaring machine of war.	Form and Structure -The poem starts ‘in medias res’: in the middle of the action, to convey shock and pace. -Enjambment maintains the momentum of the charge. -Time stands still in the second stanza to convey the soldier’s bewilderment and reflective thoughts. -Contrasts the visual and aural imagery of battle with the internal thoughts of the soldier = adds to the confusion.	Quotes: -“ All flesh is grass ”: Biblical reference that means all human life is temporary – we all die eventually. -“ Half formed ghost ” -“ all flesh is grass ” -“ blood stained into a foreign dust ”: lasting impact of war – links to Remains and ‘blood shadow’.	Form and Structure -Enjambment – reinforces the sense that the world is out of order and confused. -Rhyme reinforces the idea that he is trying to bring order to a chaotic world – to create an understanding. -Contrasts: imagery of rural England and nightmare war zones. -Third stanza: A specific image – and a memory – appears before him.

5 ENGLISH

Key concepts: <ul style="list-style-type: none"> - Guilt – war continues to effect solders even once they have returned; for some it haunts them (PTSD). - Loss – these poems explore loss: loss of power, loss of life, loss of patriotism, loss of control etc. - Futility – war (and war efforts) are, at times, presented as pointless. - Powerlessness - Patriotism – the poets present varying degrees of patriotism. - Inner conflict & memory
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Vocabulary: <ul style="list-style-type: none"> Futility Hopelessness Traumatised Guilt Suffering Patriotism 	<ul style="list-style-type: none"> Inescapable conflict detachment Anger Loss Fragility Shame 	<ul style="list-style-type: none"> Eurocentric Corruption / corrupt Injustice Inequality Criticise institutions
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London Cultural Capital

Key concepts

Poverty
 Child Labour
 Crime
 Women
 Status
 Power and corruption

London by William Blake

Key Quotes

- 'Marks of weakness, marks of woe'
- 'mind-forged manacles': they are trapped in poverty
- Repetition 'In every..'
- Criticises the powerful: 'Every black'ning church appals' - the church is corrupt
- 'the hapless soldier's sigh / Runs in blood down palace walls' – soldier's suffer and die due to the decisions of those in power, who themselves live in palaces

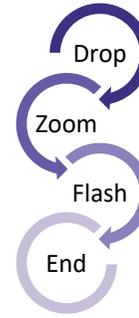
Key Vocabulary

- Corrupt:** dishonest and immoral
- Seminal:** important & influential
- Oppression:** cruel & unfair treatment
- Underbelly:** soft underside or abdomen of an animal **OR** a hidden, unpleasant or criminal part of society
- Iconic:** very famous or popular, especially being considered to represent something
- Depersonalised:** not given human characteristics or individuality, a person is never given an identity
- Romanticised:** to make something seem better or more appealing than it really is
- Injustice:** lack of fairness or justice.

Build description by using the 5 senses:



Show, don't tell: think about how you can use description to hint at something rather than explicitly telling your reader e.g. *Unable to hold her hand steady she tentatively reached out.* – this shows a reader that the character is most likely feeling nervous or lacks confidence.



Planning

- Drop:** plunge in with something dramatic/evocative/shocking/original
- Zoom:** narrow the focus to something specific – build the detail
- Flash:** go somewhere else – place/time/person/experience
- End:** create an echo, include a reflection, mark a change/contrast

The 5 ingredients for amazing writing. Use this as a checklist throughout the writing stages, list them in your plan, tick off each ingredient as you write and check back when you have finished.

ALWAYS PLAN!

1. Use powerful and ambitious vocabulary
2. Use a range of language techniques
3. Use a range of punctuation ; ! ?
4. Vary your sentences: long, short and ly, ing and ed sentence starters
5. Structure: paragraphing, one line paragraphs, cyclical structure, Drop, zoom, flash, end.

You need to use a range of language devices.

Plan where and when you will use them before you start:

- Simile – comparison using like or as
- Metaphor – comparison saying one thing is another
- Personification – giving inanimate objects human qualities
- Juxtaposition – two things with contrasting effects placed close to each other
- Cyclical – a repeated idea / word (at the beginning and end of a text/extract)
- Imagery – created a picture in the reader's head
- Foreshadowing – a hint or indication of something to come
- Focus shift – the focus of the writing changes
- Adjectives – describing words
- Verbs – action or state

Unit 1 Rounding, Estimation and Bounds		Year 9 Mathematics Higher Only Content	
1.	Integer	A whole number	
2.	Rounding	Changing a number to a simpler, easy to use value	
3.	Approximate	Not exact but close to the true answer	
4.	Decimal Place	The number of digits after the decimal point	
5.	Significant Figure	The digits of a number that express a size to a particular degree of	
6.	Estimation	A value that is close to the correct answer using a rough calculation	
ROUNDING TO A SET NUMBER OF DECIMAL PLACES			
7.	Count the number of decimal places you need. Look at the number to the right of that digit 5 or more it rounds up 4 or less it rounds down		
8.	eg 36.3486343	36.34 86343 To 2d.p. is 36.35	
ROUNDING TO SIGNIFICANT FIGURES			
9.	Count the number of digits you need from the left (zeros are not significant until after the first non-zero) Look at the number to the right of that digit to decide if it rounds up or down 5 or more it rounds up, 4 or less it rounds down (for large numbers replace remaining digits with zeros)		
10.	eg 324 627 938	32 4627938 To 2 sig. fig. is 320 000 000	
11.	eg 0.0034792	0.0034 792 To 2 sig. fig. is 0.0035	
ESTIMATING			
12.	Round each number to 1 significant figure before doing any calculation		
13.	eg $\frac{14000000}{420000000}$	$\approx \frac{4 \times 9000}{600 \times 0.5}$	$\approx \frac{3600}{300} = \frac{360}{3} = 120$
ERRORS AND BOUNDS			
14.	Error Interval	Measurements rounded to the nearest unit could be up to half a unit smaller or larger than the rounded value if x is 3.4 correct to 1 dp the error interval is $3.35 \leq x < 3.45$	
15.	Truncation	Approximating a decimal number by dropping all decimal places past a certain point without rounding	

16.	Upper Bound	The upper bound is half a unit greater than the rounded number. if $x = 13$ to the nearest whole then the upper bound is 13.5
17.	Lower Bound	The lower bound is half a unit lower than the rounded number. if $x = 14.8$ correct to 1 dp then the lower bound of x is 14.75
18.	Appropriate Accuracy	The accuracy when both the upper bound and lower bound are rounded by the same amount and give the same value if UB = 12.3512 and LB = 12.3475 Rounded to 1dp: UB = 12.4, LB = 12.3 Rounded to 2dp: UB = 12.35, LB = 12.35 Rounded to 3dp: UB = 12.351, LB = 12.348 So the appropriate accuracy is 3dp

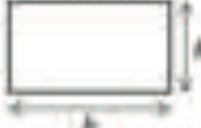
Unit 2 Roots, Indices and Standard Form		Year 9 Mathematics - Higher	
DEFINITIONS			
1.	Order of Operations	The order in which operations should be done	8 1 DM AS
			Brackets Indices Divide and Multiply Add and Subtract
2.	Standard Form	A number written in the form $A \times 10^n$ Where $1 \leq A < 10$ and n is an integer	
		Large number	$4.3 \times 10^6 = 4300000$
		Small number	$2.1 \times 10^{-3} = 0.0021$
3.	Scientific Notation	Another name for Standard Form	
4.	Surd	A surd is a number written exactly using square or cube roots e.g. $\sqrt{3}$ is a surd. $\sqrt{4}$ is not a surd because it is 2	
RULES OF INDICES			
5.	Multiplying	Add the powers	$x^2 \times x^4 = x^6$
6.	Dividing	Subtract the powers	$x^6 \div x^2 = x^4$
7.	Brackets	Multiply the powers	$(x^2)^3 = x^6$
8.	Power of 0	Always = 1	$m^0 = 1$
9.	Negative	Means "1 over"	$x^{-2} = \frac{1}{x^2}$
10.	Unit Fraction	Means root	$x^{\frac{1}{2}} = \sqrt{x}$
11.	Fractional	Means root and bracket	$x^{\frac{2}{3}} = (\sqrt[3]{x})^2$

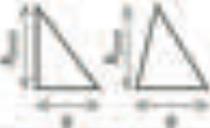
STANDARD FORM		
12.	Converting a small number into standard form	$0.00000037 = 3.7 \times 10^{-7}$
13.	Converting a very large number to standard form	$147\,100\,000 = 1.471 \times 10^8$
14.	Converting to a small ordinary number	$2.4 \times 10^{-4} = 0.000024$
15.	Converting to a large ordinary number	$5.67 \times 10^7 = 5\,670\,000\,000$
16.	Adding or subtracting numbers in standard form	The numbers must be converted into the ordinary numbers $(2.3 \times 10^4) + (6.4 \times 10^3)$ $= 23000 + 6400$ $= 29400$ $= 2.94 \times 10^4$
17.	Multiplying numbers in standard form	The format stays the same. We can use index laws to help us. $(1.5 \times 10^2) \times (3 \times 10^3)$ $= 4.5 \times 10^{2+3}$ $= 4.5 \times 10^5$
18.	Dividing numbers in standard form	The format stays the same. We can use index laws to help us. $(2.5 \times 10^{11}) \div (5 \times 10^{13})$ $= 0.5 \times 10^{-2}$ $= 5 \times 10^{-3}$

Year 9 Mathematics - Higher Unit 3 Algebraic Expressions		
DEFINITIONS		
1.	Linear	Can be represented by a straight line No indices above 1 eg $2x + 1$
2.	Quadratic	An expression where the highest index is a 2 e.g. $3x^2 + 5x + 4$
3.	Expand	Multiply out one or more brackets
4.	Factor	A factor is a number or variable that divides into another number eg factors of 6: 1, 2, 3, 6 and x
5.	Factorise	Write an expression as a product of its factors. The opposite of expanding out a bracket.
6.	Term	A part of an algebraic expression, could be a number, a variable or a product of both. e.g. $3x$
7.	Expression	One or a group of terms. May include variables, constants, operators and grouping symbols. No '=' sign e.g. $5x + 2y$

8.	Equation	A mathematical statement containing an equals sign (=), to show that two expressions are equal	e.g. $3x + 4 = 2$												
9.	Formula	A rule describing a relationship between different variables													
10.	Identity	An equation that is true no matter what values are chosen, i.e.	e.g. $3(x + 5) = 3x + 15$												
EXPANDING SINGLE BRACKETS															
12.	Multiply all of the terms inside the bracket, by the terms on the outside														
13.	$3(a + 4) = 3a + 12$	<table border="1"> <tr> <td></td> <td>$3a$</td> <td>$+12$</td> <td></td> </tr> <tr> <td>3</td> <td>$15a$</td> <td>$+12$</td> <td>$= 5a + 15$</td> </tr> </table>		$3a$	$+12$		3	$15a$	$+12$	$= 5a + 15$					
	$3a$	$+12$													
3	$15a$	$+12$	$= 5a + 15$												
FACTORISING															
14.	Find the highest common factor of the terms This goes outside the bracket Divide each term by the factor to get the new terms inside the bracket.	eg. $2x + 6$ HCF is 2 $= 2(\quad)$ $2x \div 2 = x$ $6 \div 2 = 3$ $= 2(x + 3)$													
15.	CHECK by expanding your answer	<table border="1"> <tr> <td></td> <td>x</td> <td>$+3$</td> <td>$= 2x + 6$</td> </tr> <tr> <td>2</td> <td>$2x$</td> <td>$+6$</td> <td></td> </tr> </table>		x	$+3$	$= 2x + 6$	2	$2x$	$+6$						
	x	$+3$	$= 2x + 6$												
2	$2x$	$+6$													
EXPANDING DOUBLE BRACKETS															
15.	Multiply every term in the first bracket by every term in the second bracket														
16.	FOIL e.g. $(x + 3)(x + 4)$ FIRST x^2 OUTER $+4x$ INNER $+3x$ LAST $+12$ $x^2 + 4x + 3x + 12$ $= x^2 + 7x + 12$	GRID e.g. $(x + 2)(x + 7)$ <table border="1"> <tr> <td></td> <td>x</td> <td>$+2$</td> </tr> <tr> <td>x</td> <td>x^2</td> <td>$+2x$</td> </tr> <tr> <td>$+7$</td> <td>$+7x$</td> <td>$+14$</td> </tr> </table> $x^2 + 2x + 7x + 14$ $= x^2 + 9x + 14$		x	$+2$	x	x^2	$+2x$	$+7$	$+7x$	$+14$	SMILEY FACE e.g. $(x + 3)(x + 5)$  $x^2 + 3x + 5x + 15$ $= x^2 + 8x + 15$			
	x	$+2$													
x	x^2	$+2x$													
$+7$	$+7x$	$+14$													
17.	One Step	Solving equations - one step <table border="1"> <tr> <td>$x + 4 = 7$</td> <td>$x = 12$</td> <td>$3x = 24$</td> <td>$\frac{x}{4} = 4$</td> </tr> <tr> <td>(-4)</td> <td>(-12)</td> <td>$(\div 3)$</td> <td>$(\times 4)$</td> </tr> <tr> <td>$x = 3$</td> <td>$x = 12$</td> <td>$x = 8$</td> <td>$x = 16$</td> </tr> </table>		$x + 4 = 7$	$x = 12$	$3x = 24$	$\frac{x}{4} = 4$	(-4)	(-12)	$(\div 3)$	$(\times 4)$	$x = 3$	$x = 12$	$x = 8$	$x = 16$
$x + 4 = 7$	$x = 12$	$3x = 24$	$\frac{x}{4} = 4$												
(-4)	(-12)	$(\div 3)$	$(\times 4)$												
$x = 3$	$x = 12$	$x = 8$	$x = 16$												
18.	Two Step	Requires two inverse operations to solve	$2x - 7 = 19$ $2x = 26$ $x = 13$												
19.	Involving Brackets	Expand the brackets first	$5(2x + 1) = 35$ $10x + 5 = 35$ $10x = 30$ $x = 3$												

20.	Unknowns both sides	Eliminate the x term from one of the sides	$5x + 2 = 3x - 8$ $2x + 2 = -8$ $2x = -10$ $x = -5$
REARRANGING FORMULA			
22.	If the letter to be the subject appears twice then you will need to factorise		
23.	<p>Make u the subject:</p> $y = u + at$ $(-at)$ $y - at = u$ <p>So</p> $u = y - at$	<p>Make u the subject:</p> $y^2 = u^2 + 2au$ $(-2au)$ $y^2 - 2au = u^2$ $(\sqrt{\quad})$ $\sqrt{y^2 - 2au} = u$ <p>So</p> $u = \sqrt{y^2 - 2au}$	<p>Make m the subject:</p> $j = mv - ma$ <p>(Factorise)</p> $j = m(v - a)$ $(+ (v - a))$ $\frac{j}{v - a} = m$ <p>So</p> $m = \frac{j}{v - a}$

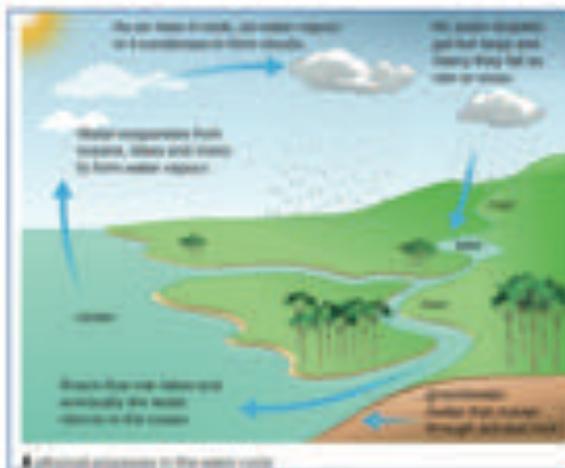
Year 9 Mathematics - Higher Unit 4 Area, Perimeter and Volume			
1.	Perimeter	The distance along the outside of a shape.	
2.	Area	The space inside a 2D shape	
3.	Surface Area	The total area of all of the faces of a 3D shape	
4.	Volume	The space inside a 3D shape	
5.	Regular	All the sides and angles of a shape are equal	
6.	Perpendicular height	The height that forms a right angle with the base length.	
7.	Radius	The distance from the centre to the circumference of a circle	
8.	Diameter	A line that passes through the centre of a circle	
9.	Circumference	Distance around the outside of a circle. (The perimeter)	
AREA AND PERIMETER (units in $\text{cm}^2/\text{mm}^2/\text{m}^2$)			
10.	Square/rectangles		base \times height

11.	Triangles		$\frac{\text{base} \times \text{height}}{2}$
12.	Parallelogram		base \times height
13.	Trapezium		$\left(\frac{a + b}{2}\right) \times h$
14.	Compound Shape	A shape made up of two or more simple shapes To find the area, split it into the simple shapes, find their areas and then add them together	
15.	Circumference of a Circle	$C = \pi d$	
16.	Area of a circle	$A = \pi r^2$	
3D SOLIDS			
17.	Prism	A 3D shape that has a constant cross-section through its length. Volume = Area Cross Section \times Length	
18.	Cuboid Prism	Volume = area of cross section \times length	
		Volume = length \times width \times height A 3D shape that has a constant cross-section through its length.	
19.	Triangular Prism	Volume = area of cross section \times length Volume = $\frac{1}{2} \times \text{base} \times \text{height} \times \text{length}$	
20.	Cylinder	Volume = area of cross section \times length Volume = $\pi r^2 \times h$ Total Surface Area = $2\pi r^2 + 2\pi rh$	

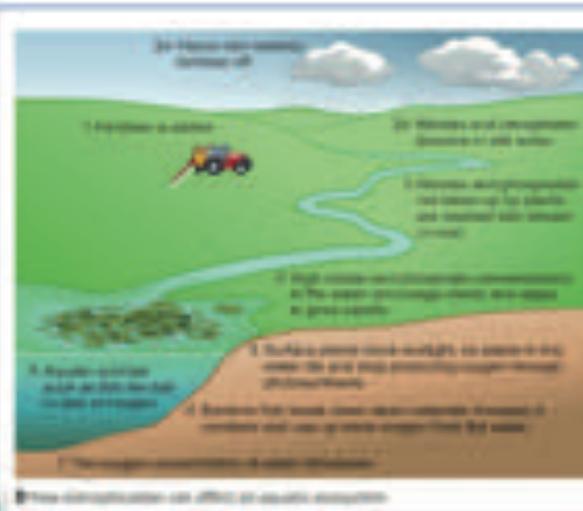
CB9

Interdependence is the interaction between organisms, and the effect of population sizes on a food web

Environment	The conditions surrounding a habitat; biotic or abiotic
Abiotic factor	Non-living factors that affect the distribution of organisms, e.g. light intensity, pH, pollution levels
Biotic factor	Living factors that affect the distribution of organisms, e.g. predators, food availability
Habitat	Place where organisms live, e.g. lake or woodland
Population	Individual species living in a habitat
Community	Populations of species living in a different habitat
Ecosystem	A community or habitat in which all the different populations of organisms live
Biodiversity	The variety of plant and animal species in an ecosystem
Parasitism	A relationship between a host and a parasite where only the parasite benefits, e.g. head lice and humans
Mutualism	A relationship where both organisms benefit from the relationship, e.g. oxpeckers and rhinos

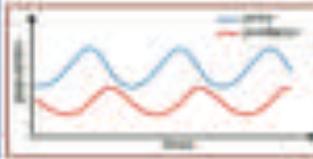


$$\text{Population size} = \frac{\text{number of organisms in all quadrats}}{\text{total size of area where organisms live}} \times \text{total area of quadrats}$$



Core Practical: Belt transect

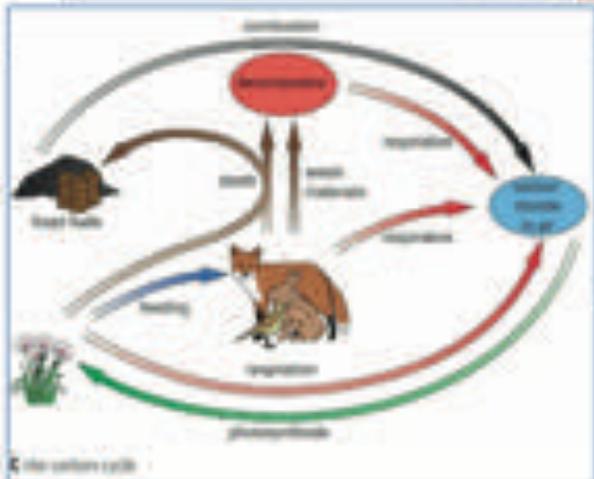
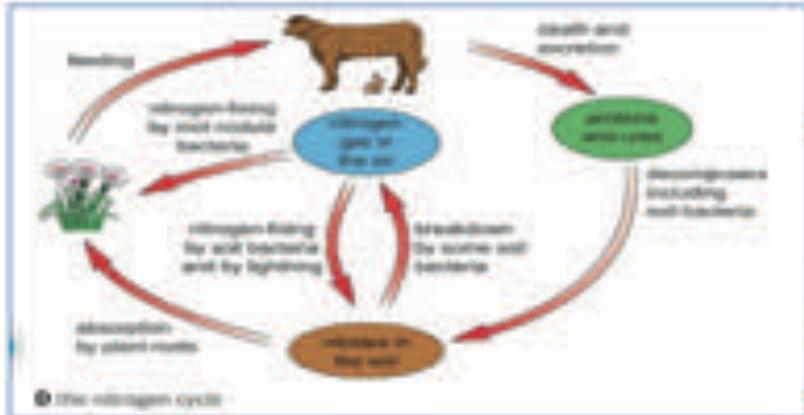
- Peg out a tape measure
- Place quadrat at regular intervals
- Count species
- Measure abiotic factor e.g. light intensity



Population of prey increases so predators have more food and reproduce/raise young therefore predator population increases. Then predators eat more prey and prey population decreases

Preserving biodiversity: We can try and maintain biodiversity by:

- Reforestation
- Conserving endangered species



Fish farming: A large number of fish are farmed in a small area for human consumption

Introduction of non-indigenous species: Species not native to the area can affect food webs

Eutrophication: The addition of more nutrients (usually by fertiliser run-off) to an ecosystem than it normally has



CC1-2

The particle theory models the states of matter, with particles described as hard spheres.

State	Particle diagram	Arrangement of particles	Movement of particles
Gas		random far apart	fast in all directions
Liquid		random close together	move around each other
Solid		regular close together	vibrate about fixed positions

State changes:

At its **melting point**, a substance begins to:

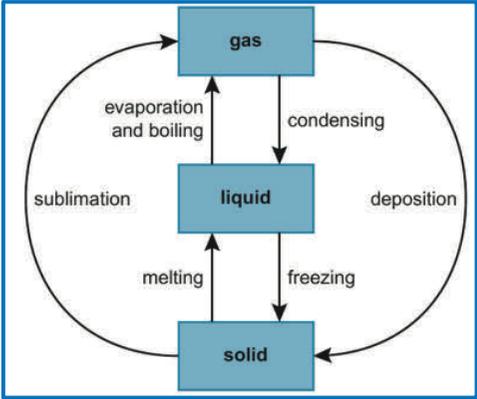
- melt if energy is transferred to the particles
- freeze if energy is transferred to the surroundings

At its **boiling point**, a substance begins to:

- boil if energy is transferred to the particles
- condense if energy is transferred to the surroundings

A substance evaporates if it changes from a liquid to a gas below its boiling point:

- particles with high enough energy leave the surface of the liquid
- the remaining particles have less energy
- the liquid cools down unless it is heated



State changes are physical changes because the particles themselves do not change. They are reversible.

Pure substances have a *sharp* melting point whereas mixtures melt over a *range* of temperatures

Filtration

Used to separate an insoluble substance from a liquid or solution to:

- Purify a liquid or solution by removing solid impurities
- Separate the solid you want from the liquid it is mixed with.

Crystallisation

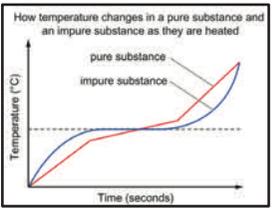
Used to produce solid crystals from a solution

- The solution is heated to remove enough solvent to produce a saturated solution
- The saturated solution is allowed to cool
- Crystals form in the solution which are separated from the liquid and dried.

Distillation

Used to separate a solvent from a solution.

A condenser has two tubes, one inside the other so that cold water can run through cooling the mixture.



Chromatography is used to:

- Distinguish between a pure and impure substance (pure will only produce one spot)
- Identify a substance by comparing patterns of spots with known substances
- Identify substances using R_f values

$$R_f = \frac{\text{distance moved by the spot}}{\text{distance moved by the solvent}}$$

Fractional Distillation

Used to separate a liquid from a mixture of miscible liquids. The column has a temperature gradient so it is hottest at the bottom and coldest at the top.

Potable drinking water must have:

- Low levels of contaminating substances
- Low levels of microbes

These are the main stages in treating fresh water to make it safe to drink.

Energy stores:

- Chemical energy – batteries, food etc.
- Thermal energy – hot materials
- Kinetic energy – moving objects
- Elastic potential energy – energy stored in stretch objects
- Gravitational potential energy – in objects up high.
- Nuclear (or atomic) energy – found inside of atoms

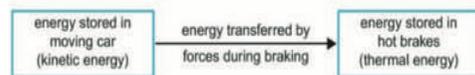
Energy transfers

- Light
- Electricity,
- Heating
- Sound
- Forces

We represent energy transfers using the diagram below. The energy store is always represented by a box and the transfer by the arrow.

Energy diagrams

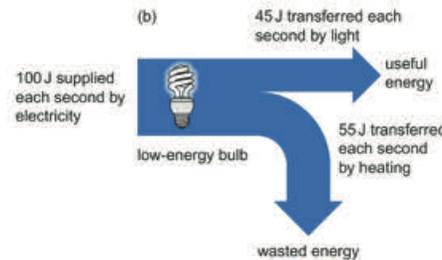
We represent energy stores and transfers using diagrams, such as diagram B.



B A flow diagram showing the energy transfers when a car brakes.

Conservation of energy states that energy cannot be created or destroyed, only transferred from one store to another.

Energy transfer diagrams called **Sankey diagrams** represent this (see below).



Efficiency can be calculated by:

$$\text{efficiency} = \frac{\text{useful energy transferred by the device}}{\text{total energy supplied to the device}}$$

When energy is wasted it is transferred to the surroundings in the form of thermal energy.

We can reduce this unwanted thermal energy transfer by:

- **Lubrication** to reduce friction
- **Thermal insulation** to stop heat energy escaping

Energy formulas to learn

Change in gravitational potential energy (J)	Mass (kg) x gravitational field strength(N/kg) x height (m)
Kinetic energy (J)	0.5 x mass (kg)x velocity ² (m/s)

Renewable energy - energy from a source that will not run out.

Non-renewable energy - a resource that cannot be readily replaced quick enough pace to keep up with consumption

Methods of generating electricity

Fossil fuels	Non-renewable. Formed from the remains of dead organisms. Examples: Coal, oil and natural gas
Nuclear fuel	Non-renewable. Energy used from radioactive elements to generate electricity. Examples: Uranium
Bio fuel	Renewable. Created from animal waste or plants and are burnt to generate thermal energy
Wind turbines	Renewable. Used to generate electricity by converting the energy transferred from wind
Hydroelectricity	Renewable. Generated by falling water trapped in reservoirs.
Tidal power	Renewable. Generates electricity using turbines in river estuaries

CP3

Conduction is vibration between solid particles which pass on thermal energy.

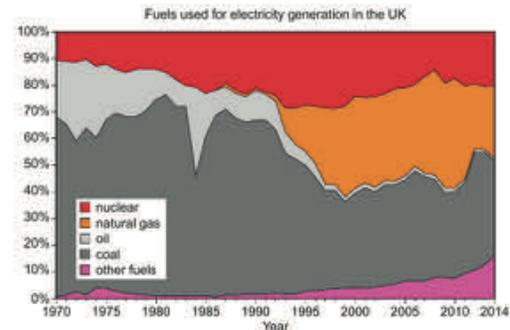
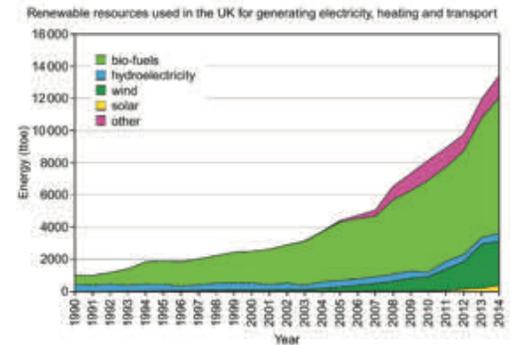
Convection is the rising of liquid or gas particles when they are warmer and less dense creating a convection current.

Radiation is how thermal energy can be transferred through a vacuum.

Absorbed: To take in energy

Emit: To give out energy

If an object has low thermal conductivity it means energy is not transferred through them easily.



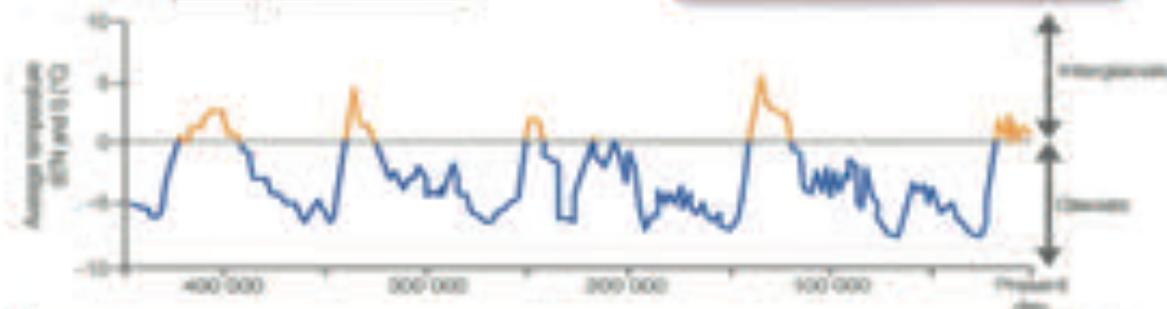
Climate definition = typical long-term patterns of weather over time.

Climate Change - Causes

OVERALL STATEMENT

The world's climate has changed naturally over time, but that change has recently been accelerated by human activities.

Evidence that climate change is natural



There have been 6 **glacial periods** (colder - permanent ice sheets across the world) and 6 **inter-glacial periods** (warmer - permanent ice sheets are only at the north and south poles) in the last 450,000 years. There have been 60 periods of each during the last 2.6 million years (the 'Quaternary period').



Essentially, Earth experiences more variation in the energy that it receives from the sun when Earth's orbit is elongated than it does when Earth's orbit is more circular.

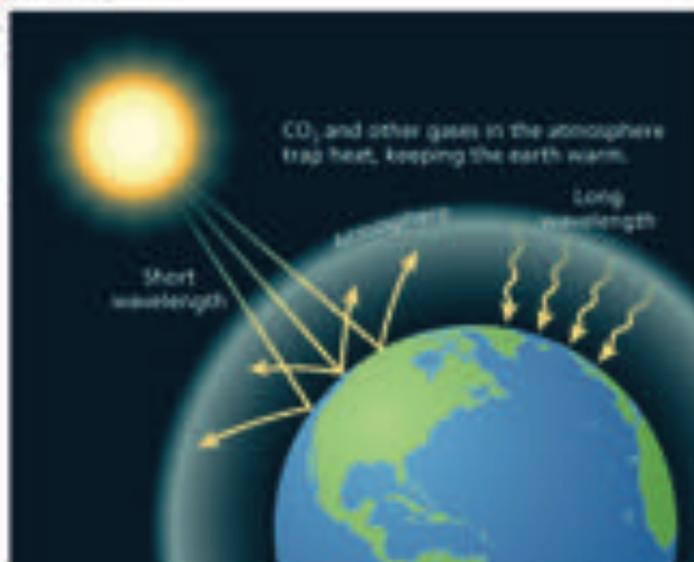
Tilt: The tilt of Earth's axis varies between 22.2° and 24.5°. The greater the tilt angle is, the more solar energy the poles receive.

Other natural causes of climate change: **The Milankovitch Cycles** - the changing orbit shape and tilt of the earth.

Evidence that climate change is caused by humankind

Global Warming

We are currently in an **inter-glacial period** therefore the warming of the globe is partly natural. But how is there more heat trapped around the earth than there was previously? The natural 'Greenhouse Effect'!



Are Humans to Blame?

Earth's average temperature has increased 1 degree Celsius in the last 100 years. Humans are causing an "enhanced greenhouse effect" by adding more and more greenhouse gases into the atmosphere, trapping more and more heat and increasing temperatures at an unsustainable rate.

The "Greenhouse" Gases are:

CARBON DIOXIDE (CO₂) - is increasing because of deforestation (trees absorb CO₂), car exhausts and burning fossil fuels (coal, gas, oil) to make electricity.

METHANE - is increasing due to landfill sites and farm animals, especially cows, which emit methane from both ends.

HALOCARBONS - in Air Conditioning units, fridges and some aerosols.

NITROUS OXIDE - from farm fertilisers and car exhausts

Climate Change – Effects & Responses

The IMPACTS of global warming

- The coast, tourism and population movement: although rising temperatures are arguably good for tourism, especially in UK, rising sea levels and extreme weather are threatening coastal lands. Increased erosion of beaches, flooding, and movement of populations further inland.
- Wildlife and habitats: Loss of habitats and species e.g. polar bears under threat due to diminishing polar ice caps.
- Water and water supplies: decline in quality and quantity of drinking water due to saltwater intrusion from coastal flooding, overflowing of sewer systems during extreme rainfall events, and increasing drought in some parts of the world.

What has been done to reduce global warming?

Global level –

- 1) Kyoto Protocol 1997 – developed countries promised to limit their greenhouse gas emissions. FAILED: USA did not agree to sign up, so China also did not sign. Without these two biggest players on the world stage, the agreement was not worth the paper it was written on.
- 2) Copenhagen Accord 2009 was an abject failure as it was not adhered to by most countries
- 3) Paris Agreement 2015 – all countries and many big businesses signed up to limit greenhouse gases and change to renewable energy sources, not fossil fuels. However, Donald Trump has withdrawn the USA from the Agreement, and nine other countries of the 197 who attended have also not signed.

National level –

Governments are increasingly urging people to limit their electricity use, e.g. switching to energy efficient lightbulbs, using electric cars etc. But this is COSTLY, and most people cannot afford a new car very often if at all, so change will be slow.



PROTESTS

Climate protesters like Extinction Rebellion have made high-profile attempts to complain that Governments are not acting fast enough to stop what is now known as a "Climate Emergency". Greta Thunberg, a 16 year old school girl from Sweden, has sparked a worldwide "climate strike" campaign by refusing to go to school on Fridays and sitting outside the Swedish Parliament in Stockholm.

Low Income Countries (LICs) who rely on agriculture or tourism (especially on the coast which they don't want to flood!) are more likely to argue that climate change is **MAN-MADE** and so something needs to be done to reduce global warming!
Example – The Maldives

The Arguments

Newly Industrialised Countries (NICs) like India (and to an extent Donald Trump's USA) whose economy relies on environmentally harmful industry for their economic development, are more likely to argue that climate change has always happened and is just **NATURAL!**

Key vocabulary:

Global cities	Cities that are well connected by the process of globalisation.
Globalisation	Flows of people, ideas, money and goods are making an increasingly complex global web that links people and places from all over the world.
Mega-cities	Urban areas (cities) that have a population greater than 10 million.
Newly Industrialised Countries (NICs)	NICs such as India, Thailand and Indonesia have a large proportion of the workforce working in the secondary (manufacturing) sector.
Re-urbanisation	The recent trend for the population of city centres to grow.
Urbanisation	The physical and human growth of towns and cities.

What makes a global city?

While all cities have a regional influence, global cities have a much greater influence. They are connected to other parts of the world through:

- Migration and culture
- Governance and decision making
- Finance and trade
- Transport hubs
- Ideas and information

There are over 300 global cities, the UK has 13.

Patterns of urbanisation:

Over half of the world's population lives in cities. But it has not always been that way. Urban areas grew in the second half of the 20th century. This process was particularly rapid in NICs. This is due to a combination of:

- Migration from rural to urban areas
- The natural increase of population when there are more births than deaths in a year

In 2015 there were 28 meg-cities and 16 of these were located in Asia, only three were in Europe.

Global Cities**Sydney- HIC Global City**

Sydney is the largest city in Australia. It has a population of 4.5 million (2015) so is not a mega-city. Nevertheless, Sydney is a very important city within Australia, the Pacific region and within the international economy.

Sydney is built on either side of a large natural harbour. The CBD is built on the south side of Sydney harbour and the suburbs sprawl to the north, south and west as much as 20km from the city centre. Sydney is a relatively modern city. It grew rapidly during the second half of the 20th century, largely as a result of international migration.

Sydney 2030:

- Improve equality through increased affordable housing and better access to community facilities
- Reduce carbon emissions

**Immigration to Sydney:**

Up until the 1970s most migrants were from European countries. Sydney has really become a global city during the 1970s where it began to accept large numbers of refugees from the conflict in Vietnam. Since then, Sydney has welcomed immigration from a large number of Asian and Pacific countries. It sees immigration as an opportunity rather than a threat.

Patterns of migration and wealth in Sydney

Average income in Sydney vary considerably. Lowest income suburb is Cabramatta in Fairfield (AU\$39,000) compared to the highest Mosman (AU\$123,000). Areas with high percentages of their population speaking a language other than English tend to have lower incomes. For example, Cabramatta has the lowest income and 80.1% of its population speak a language other than English, whereas, Woollahra's average income is AU\$99,527 and they only have 11.3% who speak a language other than English. This presents a worrying pattern of the inequality within Sydney. 'Sydney 2030' aims to address some challenges Sydney is facing.

Why is Sydney a global city?

Sydney is one of the world's most multi-cultural cities. People of different nationalities share ideas, culture, languages and food. It is very well connected to the rest of the world, especially the Pacific and South East Asian regions:

- Headquarters of 76% of Australia's domestic and foreign owned banks are located in the city.
- The city attracts 2.8 million foreign visitors a year.
- Sydney generates 30% of Australia's wealth.

Key vocabulary:

Fertility rate	The average number of children born to each woman in a country. If the fertility rate is greater than 2 the population will grow.
Formal occupations	Jobs that receive a regular wage and which are recognised and controlled by the state.
Informal occupations	The sectors of the economy that includes many types of irregular jobs as well as work such as household chores, childcare and studying.
Mass transit	A type of transport system that is able to move large numbers of people through a city, for example, an underground rail system.
Self-help	Improvement projects carried out by ordinary people rather than by businesses or governments.
Top-down development	When decisions about development are made by governments or officials rather than by ordinary people.
Wholesale clearance	The demolition of a large quantity of old unfit housing and redevelopment of new, better homes.

Global Cities: Mumbai

Population Growth

Between 1990 and 2015 Mumbai's population has grown from 12.44 to 21.04 million. This is due to a combination of natural increase and rural-urban migration. Mumbai's population growth was mostly due to natural increase during the 20th century, however, since then the fertility rates have dropped. Now many are drawn to cities like Mumbai because of the relatively well paid jobs in the manufacturing industry.

Challenges in Mumbai

Rapid economic and urban change has created several challenges for Mumbai.

- Mass congestion for Mumbai's 7.5 million commuters with dangerously overcrowded trains.
- Poor quality housing and sanitation. Often overcrowded and at risk of flooding.

However, many young graduates have found well paid jobs in Mumbai. This emerging middle class have more money to spend which helps to stimulate the economy.

Wholesale clearance

One possible solution to Mumbai's housing issues is wholesale clearance. Bherdi Bazaar is an area of mixed low quality housing that is being replaced with high quality accommodation in multi-storey buildings. This will be given to residents for free. Not all are happy with the change as they feel it is being forced on them. Space saved will be used by developers, enabling them to profit overall.



Mumbai- LIC Global City

Mumbai is India's largest city with a population of 18.4 million (2015). The city of Greater Mumbai is built on a low-lying island in the Arabian Sea. As the city has grown, it has sprawled northwards and eastwards across Thane Creek to form a large metropolitan region.

Why is Mumbai a global city?

Mumbai's economy is well connected to other locations both within India and abroad:

- The Hindi film industry (Bollywood)
- Tata Steel's headquarters are located in Mumbai
- Nhava Sheva is India's largest container port
- Mumbai airport helps to link Europe, The Middle East & Asia.



Mumbai's slums: Dharavi

Mumbai is a city of huge contrast. It has the 3rd highest office rent in the world but 60% of its population live in slums which take up just 7% of Mumbai. However, is Dharavi good or bad?

Bad: Extreme Poverty

- Long queues for toilet blocks and water taps
- Open sewers
- Flimsy buildings
- Poor air quality

Good: Sustainable community

- Residents live in low-rise self-built buildings
- Live close to work
- 80% of waste is recycled
- Many family businesses

This leads to debate as to if and how slums like Dharavi should be improved. This could be through one or both of top-down development and self-help schemes.

Year 9 History Cycle 1: The Suffrage Movement and Impact of the Great War

Chronology

1897 – NUWSS formed –
Millicent Fawcett as leader

1903 – WSPU formed – Emmeline
Pankhurst and daughters as
leaders

1908 – Mass rally of up to
500,000 in London

1909 – Marian Wallace Dunlop
becomes first activist to be
force fed

1913 – 'Cat and Mouse' Act
passed in response hunger
strikes

1918 – Representation of the
People Act

1928 – Second Representation
of the People Act

Key Knowledge

What did it look like? – Although women's rights activists had existed prior to the suffrage movement of the early 1900s (through writers such as Mary Wollstonecraft in her 'Vindication of the Rights of Woman' in 1792) it was through the **Suffragists (NUWSS)** and the **Suffragettes (WSPU)** that universal suffrage was eventually achieved. The Suffragists were created in 1897 and led by **Millicent Fawcett** and followed a **peaceful and non-confrontational** path. By 1914, they had roughly **54,000 members**. The **Suffragettes (WSPU)**, with their **bold purple, white and green** sashes, however, claimed **'deeds not words'** were more important and followed a more **violent, confrontational** path under the leadership of **Emmeline Pankhurst** from 1903.

Suffragettes as terrorists? – Initially, the WSPU's tactics were to cause disruption and some civil disobedience, such as the **'rush' on Parliament** in October 1908 when it encouraged the public to join them in an attempt to invade the House of Commons. **60,000 people gathered** but the police cordon held fast. Suffragettes chained themselves to railings and organised vocal protests. However, the lack of Government action led the WSPU to undertake more violent acts, including **attacks on property and law-breaking**. **Emily Wilding Davison even lost her life** when attempting to pin a 'votes for women' sash to the king's horse. An **arson and bombing campaign** was organised by Christabel Pankhurst in 1912 and an attempt was made to burn down the homes of two MPs who opposed allowing women the vote – these failed. Suffragettes left a bomb in the new house of David Lloyd George and nearly destroyed the house completely. Suffragettes like **Kitty Marion** took part in frequent arson and bombing campaigns like this. In **May 1913, there were 52 attacks – 29 bombings and 15 arson attacks**. Suffragettes would send vials of **phosphorous** in the post which, when broken, would cause the handler extreme burns. Some also took to **burning the words 'votes for women' into famous golf courses**. Once arrested suffragettes were often **force fed** in prison after going on **hunger strike** – a tube was forced down their nose or mouth as they were held down. **Kitty Marion, in one visit to prison, was force fed 232 times in one day**. The **'Cat and Mouse' Act was passed in 1913** as a response to frequent hunger strikes and allowed women to attend hospital when they became too weak.

Impact of war – During World War One there was an effort by the NUWSS and WSPU to **encourage women to do their part** for the war effort by taking over work that would have previously been conducted by a man. While the WSPU called a halt to campaigning throughout the war, the NUWSS continued. Millions of women during the war demonstrated that they could carry out the jobs traditionally done by men just as well – this had a lasting effect on **attitudes towards women and their role in society**. Many became **land girls** or conducted work in the **factories** now urgently required for aiding the war effort.

Universal suffrage? – David Lloyd George became Prime Minister in 1916 and held much more liberal views than the previous Prime Minister. In 1918, the **Representation of the People Act** was passed giving women the vote providing they were **over the age of 30 and either owned property or were married to a man who did**. All men were given the vote under this act from the age of 21. The **1928 Act** finally made women equal to men by allowing them the **vote at 21 with no requirement to own property**.

Key Word	Definition
Suffrage	The right to vote in political elections
NUWSS	National Union of Women's Suffrage Societies
WSPU	Women's Social and Political Union
Activist	A person who campaigns for social or political change
Reformist	A person who supports changes as opposed to abolition
Militant	Using confrontational or violent methods
Act of Parliament	A law

I say, I say...

"Often driven by their experiences of assault at the hands of bosses, the police and the government, many of those women chose to carry out a campaign of direct action that we might now struggle to understand. We have sanitised our history of the suffragettes, remembering only their defiant bravery and rousing call to arms."

Dr Fern Riddell, Historian



Chronological Understanding

1918 – Abdication of Kaiser Wilhelm II and the end of WWI

1919 – Treaty of Versailles and Spartacist Uprising in Berlin

1920 – Kapp Putsch

1923 – French invasion of the Ruhr, Hyperinflation and the Munich Putsch

1924-29 – Stresemann's economic and social reforms

Key Knowledge

End of war and the Treaty of Versailles – After WWI a new government was established in Germany, which was accountable to the Reichstag rather than the Kaiser. In order to establish peace after WWI the USA insisted that the Kaiser (Wilhelm II) was removed from power. On the 9th November, Kaiser Wilhelm abdicated. The new government was led by Chancellor Friedrich Ebert and agreed to Armistice based on America's Fourteen Points. In January 1919 an election took place but no party had a direct majority. They had to form a coalition which Ebert (of the **Social Democratic Party – SPD**) became President of. They joined with the Catholic **Centre Party (ZP)** and the **German Democratic Party (DDP)**. A coalition meant that there were some weaknesses to the government. The Treaty of Versailles was signed in 1919 and was seemingly harsh on Germany. It imposed **Article 231** – forced Germany to take the blame for the war. Reduced their military to **100,000 soldiers**. Enforced financial reparations of **€6.6 billion to be paid** to the allies. Forced Germany to give up **13% of its European territories** and could not create an **Anschluss** (union) with Austria again. Lastly, Germany could not join the newly formed League of Nations. French leader Georges Clemenceau was responsible for the harshness of the treaty as his country had lost the most during the war. Germany called the treaty a **Diktat** as they had no choice to sign. The German people claimed the politicians who signed it 'stabbed them in the back' – they called this **Dolchstoß**.

Weimar constitution – The new democratic Weimar constitution was led by the **President** and the **Chancellor**. The President was elected by the German people, whereas the **Chancellor was appointed by the President**. The President had control of the military and could choose to invoke **Article 48 in times of emergency** which allowed him to make decisions without having to get the Reichstag's approval. The **Chancellor was in charge of the day to day running of the country**. The Reichstag was made up of elected officials voted for by the **electorate** (in Germany this was **men and women over the age of 20**). The new constitution included a **Bill of Rights** which entitled **freedom of speech**. Members of Parliament were elected through **proportional representation**. Basically, the % of seats a political were given was based on what % of the vote they received.

Uprisings – In 1919, the left-wing communist group the **'Spartacists'** attempted to overthrow the new Weimar government and form a communist government similar to the **Russian revolution in 1917**. They were led by **Rosa Luxemburg and Karl Liebknecht**. They organised a **strike of roughly 100,000 workers in Berlin** and attempted to takeover government buildings. They only successfully captured a newspaper building. President Ebert used the **Freikorps and the military** to put down the uprising. **Luxemburg and Liebknecht were both killed**. In 1920, **Wolfgang Kapp** led a **right-wing putsch** against the government – this involved the **Freikorps and the army** so had to be stopped by strike action.

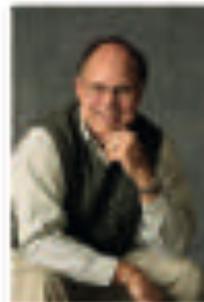
1923 – In 1923, Germany failed to pay its **reparation payment**. In response, the French military marched into the industrial heartland of Germany (**the Ruhr valley**) and took control of the **factories and Saar coal mines**. German workers were told to follow a course of **passive resistance and destroy machinery**. Due to a lack of resources, the German economy suffered and the Government began to print more money resulting in **hyperinflation**.

Key Word	Definition
Treaty	An agreement between two countries
Reparation	Repaying for something you have done wrong
Hyperinflation	When prices rapidly increase over a short period
Constitution	The laws and principles that a country uses
Putsch	An attempted revolution
Reichstag	German parliamentary building
Democracy	A system whereby the government is voted for by the people

I say, I say...

"Severe as the Treaty of Versailles seemed to many Germans, it should be remembered that Germany might easily have feared much worse. If Clemenceau had had his way instead of being restrained by Britain and America the treaty could have been much worse for Germany."

William Carr, Historian



15 Key Words

mon père	my father
ma mère	my mother
mon frère	my brother
ma sœur	my sister
ma belle-mère	my step-mother
mon beau-père	my step-father
mon demi-frère	my half-brother
ma demi-sœur	my half-sister
une famille monoparentale	a single parent family
une famille homoparentale	a single-sex family
un homme	a man
une femme	a woman
un fils	a son
une fille	a daughter
l'amitié	friendship

Adjectives – these must agree with the noun they describe

Masculine (pl)	Feminine (pl)	English
généreux	généreuse(s)	generous
gentil(s)	gentille(s)	kind
sympa(s)	sympa(s)	nice/kind
casse-pieds	casse-pieds	nuisance / annoying
égoïste(s)	égoïste(s)	selfish
désagréable(s)	désagréable(s)	unpleasant
jaloux	jalouse(s)	jealous
méchant(s)	méchante(s)	mean / unkind
amusant(s)	amusante(s)	funny
drôle(s)	drôle(s)	funny

French Year 9 Autumn

Unit 1 - Relationships

Present tense

Used to do say what you do now.

To form the present tense, remove the 'ER', 'IR', 'RE' from the infinitive and add the endings:

	ER	IR	RE
Je	-e	-is	-e
Tu	-es	-is	-es
Il/Elle/On	-e	-it	-e
Nous	-ons	-issons	-ons
Vous	-ez	-issez	-ez
Ils / Elles	-ent	-issent	-ent

The Immediate Future Tense

Used to say what you are going to do in the future.

pronoun + aller + infinitive

Je vais sortir avec mes amis. = I am going to go out with my friends.

Elle va avoir un bébé. = She is going to have a baby.

The 'Simple' Future Tense

Used to predict something you will do in the future.

pronoun + infinitive stem + ending

Je me marierai dans le futur. = I will get married in the future.

J'aurai deux enfants. = I will have two children.

Reflexive verbs

Some verbs, which express actions done to ourselves need a **reflexive pronoun** between the **pronoun** and the **verb**.

Je + me / m' + verb

nous + nous + verb

Tu + te / t' + verb

vous + vous + verb

Il/elle + se / s' + verb

Ils/elles se / s' + verb

Je m'appelle Luc. = I am called Luke.

Tu te disputes avec ta sœur. = You argue with your sister.

Possessive Pronoun

	M	F	Pl
Mine	mon	ma	mes
Yours	ton	ta	tes
His/hers	son	sa	ses

Mon père s'appelle Loïc. = My dad is called Loïc.

Ma sœur est gentille. = My sister is kind.

Comparatives

Use these structures and wrap them around the adjective. Make sure the adjective agrees with the noun it describes.

Plus...que = more...than

Moins...que = less...than...

Aussi...que = as...as...

Mon père est plus gentil que ma mère = My dad is kinder than my mum.

Superlative = the most / least

Le / la / les + plus / moins + adjective

Mon père est le plus gentil. = My dad is the kindest.

Ma sœur est la moins égoïste. = My sister is the least selfish.

10 Key Verbs

S'entendre avec	To get on with
Se disputer	To argue
Se fâcher avec	To get angry with
S'appeler	To be called
Se marier	To get married
Partager	To share
Avoir envie de	To want to
Élever	To raise
Se traiter	To treat each other
Faire confiance à	To trust

Year 9 Spanish Cycle 4 – Mi Tiempo Libre

	Spanish	English
1	En mi tiempo libre, escucho música todos los días y los miércoles monto en bici. Sin embargo nunca navego por internet.	In my free time, I listen to music every day and on Wednesdays I ride my bike. However I never surf the net.
2	A las cinco, después del insti , hago mis deberes y veo la televisión un poco con mi hermano.	At five o'clock, after going to school , I do my homework and I watch a bit of TV with my brother.
3	A veces voy a la piscina y una vez al mes mis amigos y yo vamos al cine.	Sometimes I go to the swimming pool and once a month my friends and I go to the cinema.
4	Los fines de semana me gusta ir a las tiendas. Diría que ir de compras es más emocionante que hacer los deberes pero lo malo es que es caro.	At weekends I like to go to the shops. I would say that going shopping is more exciting than doing homework but the bad thing is it is expensive.
5	En cuanto a los deportes , los lunes juego al baloncesto pero mi hermano juega al fútbol.	With regards to sports , on Mondays I play basketball but my brother plays football.
6	Cuando hace buen tiempo me encanta ir a la playa para hacer natación pero si llueve me quedo en casa.	When the weather is nice I love to go to the beach to do swimming but if it's raining I stay at home.
7	La semana que viene, si hace calor , quiero ir a la piscina. Sería flipante.	Next week, if it is hot , I want to go the swimming pool. It would be great.
8	¿Y tú? ¿Quieres salir este fin de semana? ¿Qué te gusta hacer en tu tiempo libre?	And you? Do you want to go out this weekend? What do you like to do in your free time?
9	El fin de semana pasado fui al centro de la ciudad con mi familia para el cumple de mi padre y comimos en un restaurante que se llama La Tasca.	Last weekend I went to town with my family for my dad's birthday and we ate in the restaurant which is called La Tasca.
10	Fue estupendo porque hacía buen tiempo y había comida deliciosa.	It was great because the weather was good and there was delicious food.

Week 1 - Free time	
Juego con el ordenador	I play on the computer
Voy al cine	I go to the cinema
Voy a la piscina	I go to the pool
Voy de compras	I go shopping
Escucho música	I listen to music
Vejo la televisión	I watch TV
Salgo con mis amigos	I go out with my friends
Hago mis deberes	I do my homework
Navego por internet	I surf the net
Monto en bici	I ride my bike
los fines de semana	at weekends
los jueves	on Thursdays
el domingo	on Sunday
a menudo	often
a veces	sometimes
una vez...	once...
dos veces...	twice...
...al día	...a day
...a la semana	...a week
...al mes	...a month
todos los días	every day
nunca	never

Week 2 - Time	
¿A qué hora...?	at what time
a mediodía	at midday
a medianoche	at midnight
a la una	at 1 o'clock
a las dos y cinco	at 2:05
a las tres y diez	at 3:10
a las cuatro y cuarto	at 4:15
a las seis y veinte	at 6:20
a las siete y veinticinco	at 7:25
a las ocho y media	at 8:30
a las nueve menos cuarto	at 8:45
a las once menos cinco	at 10:55
por la mañana	in the morning
por la tarde	in the afternoon / evening
por la noche	at night
antes de comer	before eating
después de ir	after going

Week 3 - Going places	
voy	I go
vas	You go
va	He / she goes
vamos	We go
vais	You go (pl)
van	They go
al cine	To the cinema
a la piscina	To the pool
al polideportivo	To the sports centre
a las tiendas	To the shops

Week 4 - Infinitive structures	
me gusta	I like
me encanta	I love
prefiero	I prefer
no me gusta	I don't like
odio / detesto	I hate
me gustaría	I would like
quiero	I want
ir de compras	to go shopping
jugar al fútbol	to play football
ver la tele	to watch TV
escuchar música	to listen to music
hacer esquí	to do skiing
salir	to go out
navegar por internet	surf the internet
porque es...	because it is...
barato	cheap
bueno	good
caro	expensive
emocionante	exciting
entretenido	entertaining
estupendo	great
fatal	awful
fenomenal	great
sano	healthy

Week 5 - Sports	
jugar	to play
juego	I play
juegas	you play
juega	he/she plays
jugamos	we play
jugáis	you play
juegan	they play
al baloncesto	basketball
al fútbol	football
al tenis	tennis
al voleibol	volleyball
hacer	to do / make
hago	I do
haces	you do
hace	he/she does
hacemos	we do
hacéis	you do
hacen	they do
atletismo	athletics
ciclismo	cycling
equitación	horseriding
esquí	skiing
natación	swimming
patinaje	skating

Weeks 6 - Weather	
cuando...	when...
si...	if...
hace buen tiempo	it's nice
hace mal tiempo	it's bad
hace sol	it's sunny
hay niebla	it's foggy
hace viento	it's windy
nieva	it's snowing
lueve	it's raining
está nublado	it's cloudy
hace calor	it's hot
hace frío	it's cold
hay tormenta	there's a storm

Week 7 + 8 - Making plans			
Voy a...	I am going to	No quiero	I don't want to
Vamos a...	We are going to	No puedo	I can't
Quisiera...	I would like	Sería	That would be
¿Quiénes venir?	Do you want to come?	Si / No	Yes / No
¿A qué hora?	at what time?	De acuerdo	OK
¿Cuándo?	when?	Claro	Of course
Immediate Future: Present tense of Ir (to go) + a + infinitive			

Weeks 9 +10 - Talking about the past			
la semana pasada	last week	escuché	I listened
hace... días	...days ago	vi	I watched
anoche	last night	comí	I ate
ayer	yesterday	jugué	I played...
fue	it was	hice	I did...
hizo	it was (weather)	fui	I went
había	there was	sali	I went out
To talk about the Past with regular verbs in the first person: -ar verbs change to é. -er and -ir verbs change to í			

RE – Evil & Suffering

Key Words:

Conflict: A serious disagreement or argument
Banish: Lacking in originality and boring
Power: The ability to direct or influence others or the course of events
Greed: intense and selfish desire for something
Reconciliation: going back to friendly relations
Psychology: The scientific study of the human mind and its functions
Consequence: the result or effect of an action
Evil: extremely immoral or wicked
Suffering: Undergoing pain, distress and hardship
Perpetual: Never ending or changing
Morality: principles concerning what is right and wrong
Ignorance: Lack of knowledge or information
Perpetuated: To continue something indefinitely

Types of Evil

Broadly speaking, evil can be broken down in to two categories. Firstly, **natural evil**, which is evil not caused by humans. This could be any form of natural disaster, for example. Secondly, **moral evil**, which are evil acts caused by humans. Examples of this could include murder, discrimination or torture.



Changing Morality

When discussing issues of **morality**, it is important to remember that people's opinions on what is right and wrong, and therefore what is good and evil may change over time, for example, women were not allowed to vote until 1928.



The Prisoner Experiment

The Stanford prison experiment attempted to investigate the **psychological** effects of **perceived** power, focussing on the power struggle between prisoners and prisoner officers. Volunteers were assigned a role by the flip of a coin and although everyone involved knew that it was an **experiment**, people quickly fell into their roles and those assigned as guards subjected the prisoners to **horrible** treatment.

Nature vs Nurture

The nature vs nurture debates the cause of human behaviour.
Nature: Our genetics determine our behaviour. Our personality traits and abilities are in our nature.
Nurture: Our environment, upbringing, and life experiences determine our behaviour. We are nurtured to behave in certain ways



Suffering as a choice

Some people choose to suffer and this could be a variety of reasons. Some people choose to suffer for beauty in the form of **piercings** or surgery. Some people choose to suffer for their political beliefs by taking the risk and standing up to a **dictator**.



The Problem of Evil

According to Christianity, God is **omnipotent** (all powerful), **omnibenevolent** (all loving), and **omniscient** (all knowing/seeing). This becomes a problem, the problem of evil, when you account for the existence of evil in the world. This is demonstrated in the below diagram.



Buddhism & Suffering

Buddhists believe that all life is **suffering** (this is the first of the **four Noble Truths**) and it is our role in this life to overcome the suffering we face. Buddhists believe that all suffering is caused by **greed, hatred and ignorance** and these 3 things are called the **3 poisons**.



The Banality of Evil

The term 'the banality of evil' was coined by Hannah Arendt after watching the 1961 trial of **Nazi** Officer Adolf Eichmann. She argued that evil acts are not necessarily **perpetuated** by evil people. Instead, evil acts can be done by people simply following orders without really thinking of what they are doing.



The Purpose of Suffering

People of different belief systems will have differing opinions on the purpose of suffering. **John Hick**, a Christian, believed that you had to experience suffering to grow your **soul** and develop into a better person. Christians also believe that **Jesus** suffered to save humanity from their sins. Jewish people believe that suffering is an essential part of being a human.



Christianity and Suffering

Christian beliefs vary regarding this issue. **John Hick's soul making theodicy** is linked to this as is the problem of evil.

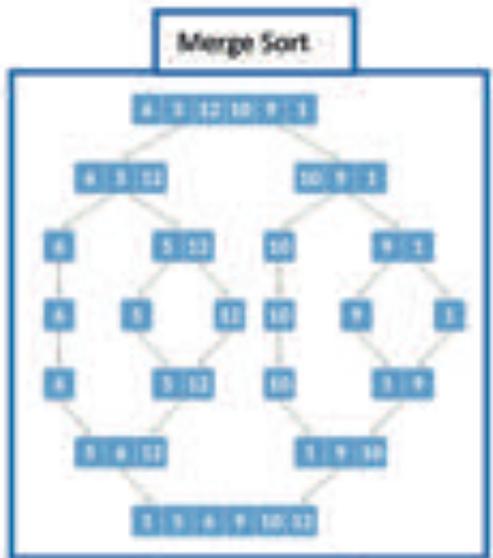
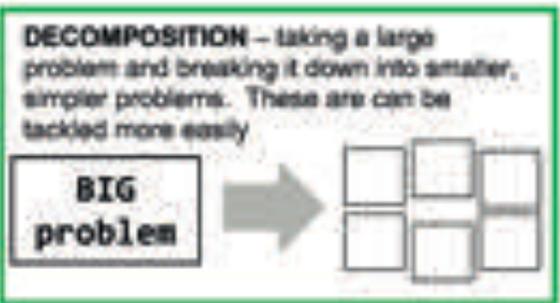
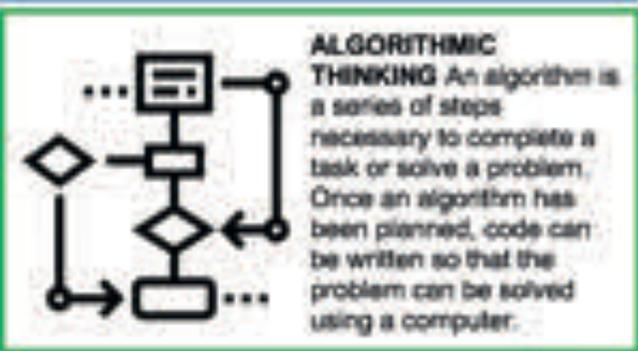
Another belief is the Story of Job which teaches Christians that suffering is a **test of your faith** and you need to work through the suffering and believe that God has a plan for you.



Computer Science 2.1

Practice the different sorts with this data
3, 8, 78, 12, 98, 1, 90, 34, 87

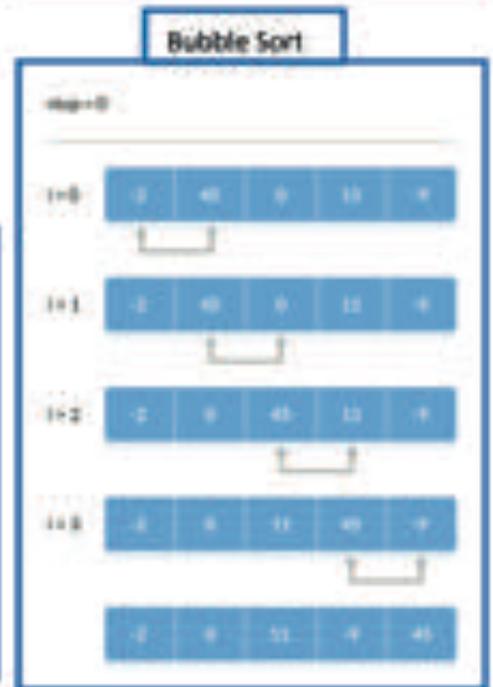
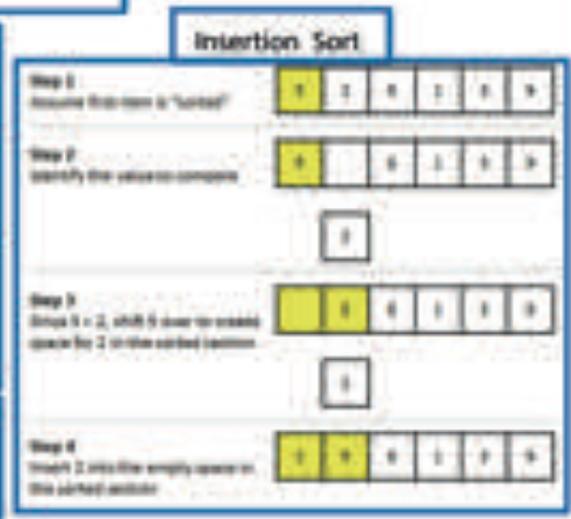
- Principles of computational thinking:**
- Abstraction
 - Decomposition
 - Algorithmic thinking
- Create, interpret, correct, complete, and refine algorithms using:**
- Pseudocode
 - Flowcharts
 - Reference language/high-level programming language
 - Identify common errors
 - Trace tables



- Standard searching algorithms:**
- Binary search
 - Linear search

- Standard sorting algorithms:**
- Bubble Sort
 - Merge Sort
 - Insertion Sort

High Level Language	Pseudocode	Reference Language
Specific syntax must be used	No formal syntax - can take any form	More formal structure than pseudocode
Used to write code	Used to present an algorithm so that a human can understand it	Used to present an algorithm to closely resemble code
FOR loop in range(10): PRINT(loop)	Loop 10 times Print loop position End loop	FOR loop = 1 to 10 PRINT(loop) NEXT loop



Computer Science 2.2

There are three main "constructs" used in high level language programming – SEQUENCING, SELECTION and ITERATION. SEQUENCING involves a block of code that executes line after line (in sequence):

```
print("Good morning")
name = input("what is your name?")
print("Hello", name)
age = int(input("how old are you?"))
print(age, "is a very good age!")
```

SELECTION involves the use of IF statements to evaluate the contents of a variable - program will execute different code depending on the value of the variable

```
question = input("Do you enjoy programming?")
if answer == "yes":
    print("awesome!")
```

ITERATION is used to repeat (loop) a block of code. This is a more efficient way of programming than to add the same code multiple times. There are two types of iteration: a count controlled loop runs a block of code a SET number of times:

```
for count in range (1,10):
    print("I have counted to", count)
```

a condition controlled loop runs a block of code until a specific condition is met - for example, a program could ask for a password until it is entered correctly.

```
correct = False
while correct == False:
    password = input("Enter your password")
    if password == correctpassword:
        correct = True
```

2.2.2 DATA TYPES

The use of data types:

- ☐ Integer
- ☐ Real
- ☐ Boolean
- ☐ Character and string
- ☐ Casting

Constants and variables can be stored as a range of DATA TYPES. It is also possible to use CASTING to convert data from one type to another

```
numberString = "123"
number = int(numberString)
pi = 3.141
pi = int(pi)
print(pi)
3
```

Data can be imported/exported from programs using FILES. This means that a program can keep its data, even when it is closed and reopened. A range of FILE HANDLING OPERATIONS are possible:

open	Prepares the file ready for use
close	Closes access to the file when it is no longer needed
read	Retrieves data from the file
write	Overwrites the file with new data
append	Saves new data into the end of the file

Programming – you must practice this weekly. See repl.it tasks.



A VARIABLE is a memory location used to store data. Programmers can label a variable using an IDENTIFIER. The contents of the memory location (and the value of the variable) can be changed by the programmer.

Giving a value to a variable is called ASSIGNING. Variables can be assigned a value directly by the programmer or INPUT by the user when running the program.

A print statement can be used to OUTPUT data – a print statement can be used to display specific text or the contents of a variable

```
name = input ("Please enter your name")
print ("Hello", name)
```

CONSTANTS are similar in principle to variables, but their value does not change throughout the program

```
print (PI = 3.14)
```

MATHEMATICAL OPERATORS allow calculations to be performed using variables and constants.

+	Addition
-	Subtraction
/	Division
*	Multiplication
DIV	Integer division
MOD	Modulus (remainder)
^	Exponent

BOOLEAN OPERATORS are used when making logical comparisons (e.g. when using IF statements)

NOT	Addition
AND	Subtraction
OR	Division
!=	Not equal to
==	Equal
<	Less than
>	Greater than
<=	Less or = to
>=	Greater than or = to

DATA TYPE	EXPLANATION	EXAMPLE
Integer	Whole number	EQDN_SCORE = 200000 RANK = 20
Float/Real	A "decimal" number	PI = 3.141 TEMPERATURE = 21.5
Character	A single character (letter, number, symbol)	SUFFIX = "J" GRADE = "A"
String	Zero or more characters	NAME = "Arthur Dent" PASSWORD = "TYZSHAZ!"
Boolean	Can be either TRUE or FALSE	HYPERMISSION = True CORRECT = False

STRING MANIPULATION

Many programming languages (including Python) have built-in functions allow programmers to manipulate strings

Description	Example	Result
Length	length = len(name)	17
Convert to upper case	capitals = name.upper()	ZAYHOD BEEBLEBROO
Convert to lower case	small = name.lower()	zayhod beebleroo
Return a substring	name.substr(ing(0,2))	Zay

There are a wide number of ways in which strings can be manipulated – a few are examples are given in the table for this example: name = "Zayhod beebleroo"

CREATIVE IMEDIA: R081 PRE-PRODUCTION SKILLS KNOWLEDGE ORGANISER

Document	Purpose	Content
Mind maps / Spider diagram	<p>Quickly generate outline ideas</p> <p>Link or connect aspects of ideas</p>	<p>Central node (main theme / idea)</p> <p>Sub-nodes (with branches linking them)</p> <p>Topics (keywords)</p> <p>Images (icons)</p>
Mood boards	<p>Visual tool used to generate ideas on a new project</p> <p>Create mood or feel for a product (be specific)</p> <p>NOT to show what product will look like</p>	<p>Images (photographs, graphics, logos)</p> <p>Colours (and scheme)</p> <p>Text (fonts, styles, quotes)</p> <p>Textures / fabrics (only if physical)</p> <p>Sound & video clips (only for websites)</p> <p>Annotations</p>
Visualisation diagrams	<p>Mock version of intended product (static)</p> <p>Draft version for client (be specific)</p>	<p>Images (graphics, logos)</p> <p>Colours (scheme)</p> <p>Text (fonts, style, text examples, titles, size, position)</p> <p>Annotations</p> <p>Dimensions</p>
Scripts	<p>Provide lines for characters so they know what to say</p> <p>Provide details about expressions or actions</p> <p>Provide stage directions for actors and production crew</p>	<p>Speech / Dialogue between characters (centred)</p> <p>Location / Set / <u>Slugline</u> (INT / EXT)</p> <p>Direction (what happens in scene)</p> <p>Character names (centred)</p> <p>Sound and sound effects (for actions, events)</p> <p>Shot type (close up, mid, long)</p> <p>Camera movement (pan, tilt, zoom)</p>
Storyboards	<p>Mock version of intended product (moving)</p> <p>Visual plan on a timeline</p> <p>Guidance on how to edit scenes</p>	<p>Camera shots (close up, mid, long)</p> <p>Camera movement (pan, tilt, zoom)</p> <p>Camera angles (over the shoulder, low / high angle)</p> <p>Timings / durations</p> <p>Location</p> <p>Sound</p> <p>Scene sketches (content, characters, scenery, speech)</p> <p>Lighting</p>

CREATIVE IMEDIA: R081 PRE-PRODUCTION SKILLS

File Formats	Software	Legislation	Risk Assessment												
<p>Audio: .mp3; .wav; .aac Video: .mp4; .wmv; .mov Image: Web - .png, .jpg, .gif Image: Print - .tiff, .pdf Animation: .flv; .swf Text: .pdf .doc</p> <p>Small file sizes are downloaded faster so best for websites</p> <p>Lossy (lose bits) VS Lossless (lose none) compression</p>	<p style="text-align: center;">Types of software:</p> <p>Graphics editing: Adobe Photoshop Word processing: Microsoft Word Project management: Spreadsheet: Microsoft Excel Desktop publishing (DTP): Publisher Audio editing: Audacity Video editing: Adobe After Effects Web browser: Google Chrome Web authoring: Adobe Dreamweaver</p>	<p>COPYRIGHT, DESIGNS & PATENT ACT</p> <p>Work or idea protected by copyright, trademark or patent law Ask for permission to use it Often you will need to pay a fee Privacy – People have this right and it should not be invaded</p> <p>DATA PROTECTION ACT</p> <ol style="list-style-type: none"> 1 Processed lawfully 2 Held for a specific purpose 3 Adequate, relevant and not excessive 4 Kept accurate 5 Not kept longer than necessary 6 Processed in accordance with subject 7 Held securely 8 Not transferred to countries without similar DPA <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th style="width: 50%;">Collecting Data</th> <th style="width: 50%;">Sorting data</th> </tr> <tr> <td>Only collect data needed</td> <td>Ensure data stored securely</td> </tr> <tr> <td>Only collect data for purpose stated</td> <td>Not pass data onto others</td> </tr> <tr> <td>Ensure data is correct</td> <td>Data is up to date</td> </tr> <tr> <td>Seek permission / Confirm Tc & Cs</td> <td>Complies with DPA</td> </tr> <tr> <td>Ensure sign up / registration is secure</td> <td></td> </tr> </table> <p>Consequences of failing to follow DPA:</p> <ul style="list-style-type: none"> - Sued - Fined 	Collecting Data	Sorting data	Only collect data needed	Ensure data stored securely	Only collect data for purpose stated	Not pass data onto others	Ensure data is correct	Data is up to date	Seek permission / Confirm Tc & Cs	Complies with DPA	Ensure sign up / registration is secure		<p>Identify the hazards / dangers Decide who might be harmed and how Evaluate the risks and decide on precautions Record your findings and implement them Review your assessment and update if necessary</p>
Collecting Data	Sorting data														
Only collect data needed	Ensure data stored securely														
Only collect data for purpose stated	Not pass data onto others														
Ensure data is correct	Data is up to date														
Seek permission / Confirm Tc & Cs	Complies with DPA														
Ensure sign up / registration is secure															
Accessibility for website	Target Audience		Location recce												
<p>Visual problems – use contrasting colours to allow people to read text easily Young members – make it easy to read as reading age lower Gender – content and colour schemes appeal to all genders Detect default language – of the user so easy for user or offer options Detect devices – depending on what it is being viewed on (e.g. mobile, tablet) load different version</p>	<p>Income – target an audience that can afford your product</p> <p>Age – different ages appeal e.g. children different from adults (consider colour, language etc.)</p> <p>Gender – male and female e.g. colour is used to differentiate</p> <p>Location – Audience live a certain distance from store</p> <p>Interest / lifestyle – target at their hobbies</p>		<p>Visit to a specific location for recording purposes Filming, audio recording or photography Check if it is suitable: Lighting? Safe? Electricity? Scenery? Distance / location / logistics Environmental issues Possible issues that may arise?</p>												
Work plans			Client requirements												
<p>Provide timescales so you don't spend too long on one thing Allow projects to meet deadline using checkpoints to stay on track Use of milestones, Contingencies & Resources What order tasks need to happen (workflow) Content: Tasks/ Activities/ Time / Duration/ Deadlines</p>			<p>Also known as brief or specification Must meet their requirements otherwise your work will not be fit for purpose</p>												

1970s:

Hippie culture and rise of Green revolution. CDs and pocket technology.

Pop – Syncopated, novelty, wide variety of instruments, pop song structure.

Rock – heavy guitar and distortion, driving drum beats

Prog Rock – orchestrated, no structure, sci-fi style stories.

Disco – ‘disco’ hi hat, soaring vocals, electronic instruments.

1990s:

Globalisation of the internet, mobiles phones and MP3.

Brit Rock / Grunge – raw sounding / Pop Punk - Greenday? / Indie Rock – melody driven / Soft Rock – Usually female and solo / Heavy Metal – fast and aggressive (same as 80s) / Nu Metal – Hard to differentiate from Heavy Metal

Britpop – Distinguishable by its distinctly British lyrical themes.

R&B – Gospel and soul influence, melisma.

HipHop – drum machines and more lyrical than the 80s version.

Electronic Music – Pop but made entirely of electronic instruments.

Year 9 MUSIC Knowledge Organiser

Autumn Term

Musical Elements

Pitch	Harmony
Tempo	Melody
Instrumentation	Rhythm
Structure	Dynamics
Texture	Timbre

1950s:

Post war – Invention of electronic instruments and use of radio.

Swing – swung hi-hat and big band instruments.

Rock and Roll – use of electronic instruments and big band instruments. Often uses 12 bar blues.

Jazz – varying types that oppose each other. Improvisation and heavy use of scales. Virtuosoic.

1960s:

Counter culture – rise of people’s freedom and speech.

British Invasion – Sounds more American and was geared towards chart hits.

Blues in Britain – Electronic version of the 50s blues with smoother vocals.

Pop – Cute and novelty using big band style instruments.

Surf rock– reverb and stacked vocals / **Folk rock** – Tells a story and is acoustic / **Psychedelic rock** – Uses clever orchestration, electronic sounds and doesn’t necessarily use a song structure.

2000s:

Youtube, DAWs, accessible internet.

Post Britpop – real bands and fewer British themes. / Garage rock revival – more distortion.

Soft rock – singer songwriter and acoustic

Heavy metal –Fast and aggressive.

New rave – Electronic, fast tempo, loops, high pitch

Pop rock – Real bands and a softer vocal / Punk – Sometimes female vocals.

1980s:

Synthesisers! Live Aid and advancement of technology.

Pop – Love songs, notable artists and novelty. / Synthpop – Heavy use of synthesisers

Urban Pop / R&B – influenced by soul and gospel, Melisma, Electronic sounds and disco beats.

Hip Hop – body percussion, drum beats, socio-political messages.

Electronic Music – uses synths and samples.

Rock – guitar backing and distortion with driving drum beats

Hard Rock – Raspy singing / Heavy Metal – Faster and more frantic

Post Punk – Lots of solos and messages

New Wave / New romantics – softer and lovey dovey.

Medea by Splendid Theatre

SPLENDID THEATRE

Splendid Productions began in September 2003 and has been growing speedily since then. Splendid create high quality, professional, political theatre with theory based practical workshops for young people across the UK.

Their specialty is bringing Brechtian technique to life for students, both in performance and by providing a workshop experience for them to explore it for themselves. Making Brecht relevant to an audience rather than a slice of theatre history, to understand and use the techniques in their own work.

The Story of Medea

After the adventures of the Golden Fleece, the Greek hero Jason took his wife Medea into exile at Corinth. However, he then left her, seeking to advance his political ambitions by marrying Glauce, the daughter of King Creon of Corinth.

The play opens with Medea grieving over the loss of her husband's love. Her elderly nurse and the Chorus of Corinthian women (generally sympathetic to her plight) fear what she might do to herself or her children. King Creon, also fearing what Medea might do, banishes her, declaring that she and her children must leave Corinth immediately. Medea begs for mercy, and is granted a reprieve of one day, all she needs to extract her revenge.

Epic Theatre Features

- Multi – role: Actors playing more than one part
- Direct address – Speaking to audience
- Ensemble cast
- Verfrumdunkseffect – techniques to get the audience to think more than feel.
- Gestus – The 'gist' of a character shown through gesture and attitude.
- Symbolic costume and props

Structure

A one act play that starts with a prologue and the final scene, before telling the rest of the story in chronological order in a flash back.

Context

Splendid are not interested in the idea of Medea as a monster or god, they are interested in the idea of her as an ordinary woman who kills her children and ask 'why that might happen'. They are interested in the idea that modern media seem to need to make people into either villains or heroes.

Ancient Greek Theatre Features

- Chorus - A group of performers who summarise the performance, represent groups in a play and often speak and move together
- Protagonist – The main actor
- Major events reported rather than seen.
- Tragedy – A play in which a disaster befalls the main character
- Fatal Flaw – The characteristic of the main character that causes their downfall.
- Catharsis – Being purged of your negative desires by pitying the main character.
- The three unities of time, place and dramatic action. – The idea that drama should not jump about in space and time

Production Features.

Boxing ring style set up, no off stage – Transitions take place in front of audience – Set is merely chairs and a rope – Sometimes chorus are off stage, amongst the audience – Costumes are simple and changed on stage, so that performers can multirole.

PHYSICAL SKILLS

Actions – moves that dancers do

Accuracy – the correct movements

Alignment – the correct positioning of body parts in relation to each other

Balance – Holding yourself steady

Coordination – being in control of multiple body parts

Control – ability to efficiently start, stop and change movements rapidly

Contraction – the shortening of a move

Characterisation – showing a character when you dance

Communication – showing meaning to the audience

Dynamic – The quality of a move

Energy – the effort put into a performance

Expression – demonstrating meaning through dance.

Extension – Lengthening a move/limb

Facial Expression – using your face to show meaning or character

Focus – Using your eyes to direct the energy in a performance

Flexibility – range of movement in the joints

Gesture – movement of a single body part to convey meaning

Interaction with others – Awareness of other dancers and how you communicate



Dance

BTEC Technical Award in Performing Arts

Component 2

Knowledge Organiser

PERFORMANCE AND INTERPRETIVE SKILLS

Awareness of performance space – using the whole stage

Awareness of audience – making sure you face the front as much as possible

Interaction with others – using eye contact with others

Focus – your attention during performances

Energy and Commitment – your level of focus

Handling and use of set and costume

Projection – how well you project the meaning of the performance to the audience

Awareness of accompaniment – your use of the song you are dancing to

Facial Expression

Stage Presence

PHYSICAL SKILLS

Mobility – ability to move smoothly/fluently

Movement memory – Remembering the sequence of moves

Pace – the speed of a move

Phrasing – How the energy is distributed in a sequence of moves

Projection – Energy the dancer uses to connect with the audience

Posture – the way you hold your body

Rhythm – patterns in moves / sounds

Relaxation – when the body is free from tension

Spatial Awareness – being conscious of the spacing around you

Strength – muscular power

Stamina – maintaining physical and mental energy for periods of time

Suspension – adding delay to a move

Swing – moving back and forth

Trust – relying on others in a cooperative move

Use of breath – when preparing for moves, the inhaling and exhaling of air

Use of weight – using the downward force of the body.



PLASTICS

Thermosetting
Thermoplastics
Acrylic
Nylon
Formaldehyde
Recycling
Polyester
Polymer
Injection
Rotational
Microplastics

(Look up the meanings of these words).

WHAT ARE THERMOPLASTICS ?

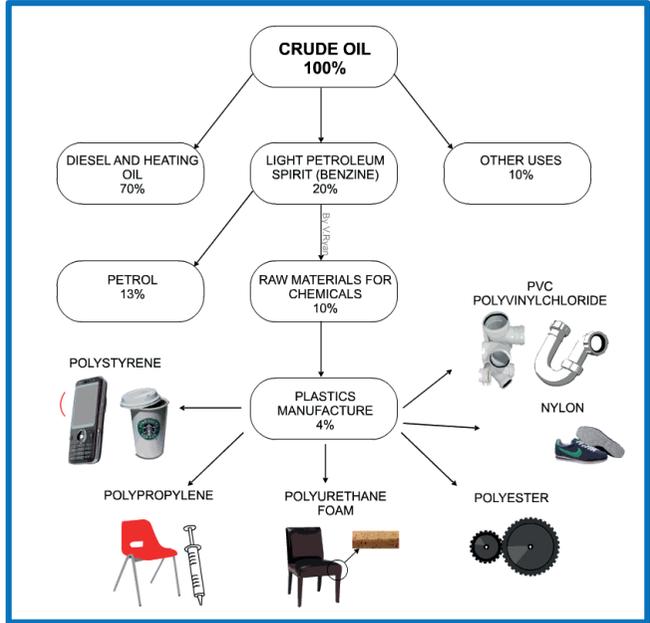
These plastics can be re-heated and re-shaped in various ways. They become mouldable after reheating as they do not undergo significant chemical change. Reheating and shaping can be repeated. The bond between the molecules is weak and becomes weaker when reheated, allowing reshaping. These types of plastics **can be recycled**.



WHAT ARE THERMOSETTING PLASTICS ?

Once heated and moulded, these plastics cannot be reheated and remoulded. The molecules of these plastics are cross linked in three dimensions and this is why they **cannot be reshaped or recycled**. The bond between the molecules is very strong.





- PLASTIC MANUFACTURING PROCESSES.**
- Injection moulding
 - Vacuum forming
 - Blow moulding
 - Compression moulding
 - Calendering
 - Rotational Moulding

- ADVANTAGES OF PLASTICS**
- Any colour available
 - Cheap to manufacture
 - Strong
 - Malleable
 - Good insulator
 - Versatile
 - Water & Chemical resistant

40% of all plastic is manufactured for packaging – used just once, then thrown away.

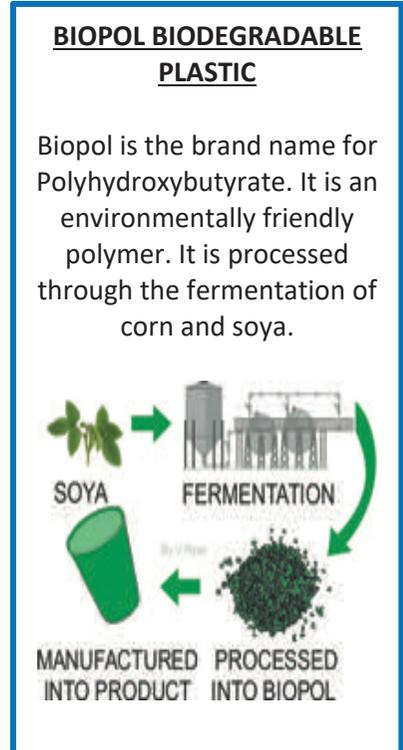
1 million plastic drink bottles are bought around the world every minute.

Half of all plastic that has ever existed was made in the past 13 years.

Microplastics exist in more than 90% of bottled water.

It is estimated that by 2050 there will be more plastic mass in the ocean than fish.

91% of plastic is never recycled.



Wood & Manmade Boards

Deciduous
Coniferous
Plywood
Hardwood
Softwood
Manufactured
Recycled
Sustainable
Warp
Gymnosperm
Angiosperm

(Look up the meanings of these words).

SOFTWOOD & HARDWOOD

Softwood refers to timber that has been cut from a coniferous or an evergreen tree (such as pine, cedar or spruce). Softwoods are frequently used as building materials. Coniferous trees can be fast growing.

Hardwood comes from deciduous trees which lose leaves annually and tend to be slower growing, and therefore the timber is usually more dense. (Oak, Ash, Maple & Birch)

Softwood is generally less expensive than Hardwood.

HAND TOOLS - USE

Coping saw = sawing curves

Tenon saw = sawing straight cuts

Files & rasps = smoothing & shaping

Plane = planing & shaping

Tri square = marking and measuring right angles

METHODS OF FIXING WOOD

- Gluing
- Screws
- Nails
- Bolts & nuts

MANMADE BOARDS

These are commonly used in the construction industry, for interior fittings and furniture. They are more stable than natural woods and are less likely to warp and twist out of shape.

Manufactured board type	Appearance	Uses	Common products
MDF - Usually manufactured from woodchips and is a uniform, smooth surface. It is made from wood and resin bonded fibres. Manufactured board.		Good choice for furniture and interior panelling. Can be painted. Resistant to moisture and insect.	
Particleboard - Manufactured from wood chips, sawdust and resin. It is made from wood and resin bonded fibres. Manufactured board.		Good for interior panelling, furniture and building. Resistant to moisture and insect. Can be painted. Resistant to moisture.	
Hardboard - Made from layers of wood chips, usually oriented vertically to provide strength. Manufactured board.		Good for interior panelling, furniture and building. Resistant to moisture and insect. Can be painted. Resistant to moisture.	
Medium density fibreboard (MDF) - Made from wood chips, usually oriented vertically to provide strength. Manufactured board.		Good for interior panelling, furniture and building. Resistant to moisture and insect. Can be painted. Resistant to moisture.	
Hardwood - A type of wood which is made from the inner part of a tree trunk. It is made from wood and resin bonded fibres. Manufactured board.		Good for interior panelling, furniture and building. Resistant to moisture and insect. Can be painted. Resistant to moisture.	



Forest Stewardship Council®

For over 25 years the FSC has promoted the responsible management of the world's forests, bringing together experts from the environmental, economic and social spheres. FSC forest management certification confirms that the forest is being managed in a way that preserves biological diversity and benefits the lives of local people and workers, while ensuring it sustains economic viability.

RECYCLING WOOD

Manufactured boards often made from waste wood materials.

- Saw dust is used to make MDF and hardboard.
 - The saw dust is held together with glue.
 - Boards are inexpensive so are often used as instead of real woods.
- Manufactured boards do however do not look as good as real woods look.
- Manufactured boards are often covered with a thin layer of real wood which is called veneer this improves their appearance.

Wood is a sustainable material, when forests are carefully managed.

This GCSE is about **presenting visual and written evidence** of my personal investigation on this topic. I don't need to memorise or revise, I just need to **produce, make and connect** my ideas using the visual language.



- No evidence = no marks
- A little evidence = a few marks
- I do what teacher says= grade 4
- I lead, I know what I want to do and I get on with it producing lots of evidence= top marks

Independent tasks and HW

Year 9 **Art and Design**. Portfolio Topic 1:

Myself and Other Artists

An investigation on self and identity through art. Exploring different approaches on these themes from the point of view of the artist.

Identity, portrait, self-portrait, crop, frame, narrative, background/figure, lighting, body language, interaction, action.

Old master: chiaroscuro, drama, wealth, merchant, mystery.

Modern master: educated, isolated, tormented, distortion.

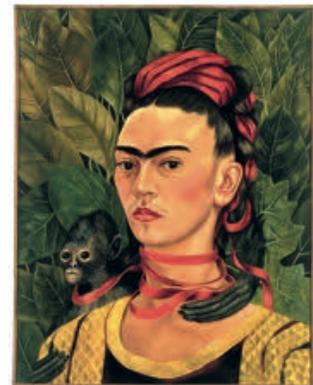
Surrealist: avant-garde, culture, symbol, communist, colonial, middle-class.



Vermeer- Old Master



Van Gogh-Modern



Frida Kahlo- Surrealism

-*I see **I think *I wonder**

-Critical understanding: I can explain the ideas carried by a work of art.

-Contextual links: I can explain the historical, political and cultural circumstances in which a work of art is created or used.

-To speculate: to explain something without being 100% sure.

-To refine: to change something in order to improve it.

-My personal response to a work of art: I use the artist's visual language, but using my own images as starting point.

-To convey meaning: to communicate.

-A technique: a way to do something.

1 I do research to know the work of artists, world cultures and styles. My chosen artists have worked on a theme similar to mine. I use this knowledge to inspire my creative work. I have proof of my **critical understanding** in my book.

- Artists pages, including:
- Copies of artists' work
 - **Description of work- ***
 - **Explanation of how it's put together and what it means ****
 - **My research making contextual links*****

2 I prove that I can make visual work. I prove that I can also **refine** my work to make it more meaningful to the theme. I show off what I do well. I can also experiment and take risks trying new ways of mixing **techniques** and **processes**.

- Test pieces:
- My personal response to artist's work
 - My mixing of two artists' styles
- Refined test pieces:
- two solutions for each test piece using techniques learnt since yr 7

3 I can spot how things could link to my project. I **record** them using cameras and drawing. **body** else sees and feels like I do. As an artist I pick what I focus on and my ideas allow me to link these items together with new meaning.

- photo shoots
- drawings
- notes: my links, descriptions and ideas

4 I can produce and **present** a visual solution to the "Theme". This is my **final piece** for the project. It conveys my ideas, my connections and my **investigations**.

- my final piece
- my whole investigation is well presented and easy to follow in my book
- my final piece /project evaluation

New techniques and processes: ink drawing, tonal painting, photography, collage.

This GCSE is about **presenting visual and written evidence** of my personal investigation on this topic. I don't need to memorise or revise, I just need to **produce, make and connect** my ideas using the visual language.

- No evidence = no marks
- A little evidence = a few marks
- I do what teacher says = grade 4
- I lead, I know what I want to do and I get on with it producing lots of evidence = top marks



Independent tasks and HW

1

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Artists pages, including:

- Copies of artists' work
- **Description of work- ***
- **Explanation of how it's put together and what it means ****
- **My research making contextual links*****

2

I prove that I can make visual work. I prove that I can also **refine** my work to make it more meaningful to the theme. I show off what I do well. I can also experiment and take risks trying new ways of mixing **techniques and processes**.

Test pieces:

- My personal response to artist's work
 - My mixing of two artists' styles
- Refined test pieces:
- two solutions for each test piece using techniques learnt since yr 7

3

I can spot how things could link to my project. I **record** them using cameras and drawing. Nobody else sees and feels like I do. As an artist I pick what I focus on and my ideas allow me to link these items together with new meaning.

- photo shoots
- drawings
- notes: my links, descriptions and ideas

4

I can produce and **present** a visual solution to the "Theme". This is my **final piece** for the project. It conveys my ideas, my connections and my investigations.

- my final piece
- my whole investigation is well presented and easy to follow in my book
- my final piece /project evaluation

New techniques and processes: Photoshop, mixed media, photography, collage, drawing.

Year 9 **Photography**. Portfolio Topic 1:

Photography and Design Styles

A visual style is a choice of visual elements that, combined in different ways, produce different effects in the audience.

Selection, manipulation, composite, campaign, commission, advertise, sales, audience, consumer, market, strategy, publication, engagement, propaganda.

Avant-garde: experimentation, manifesto, wonder, new world, locomotion, speed, mechanical.

Pop Art: popular culture, consumerism, advertising, appeal, mass communication.

Current Media Design: social media,



Avant-garde: the isms



Pop Art: Warhol/ Lichtenstein



Current Design for Media

-*I see **I think ***I wonder

-**Critical understanding:** I can explain the ideas carried by a work of art.

-**Contextual links:** I can explain the historical, political and cultural circumstances in which a work of art is created or used.

-**To speculate:** to explain something without being 100% sure.

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-**My personal response to a work of art:** I use the artist's visual language, but using my own images as starting point.

-**To convey meaning:** to communicate.

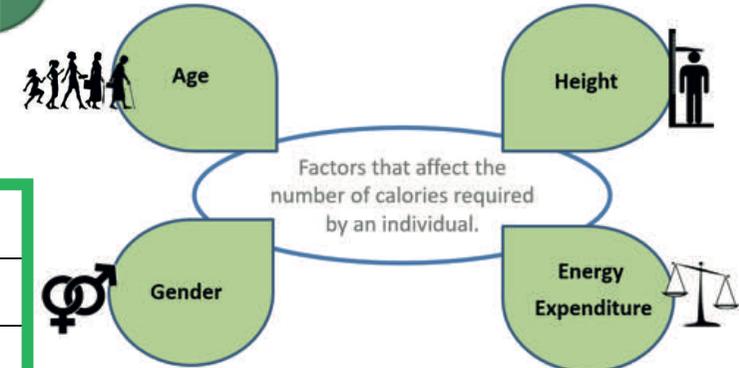
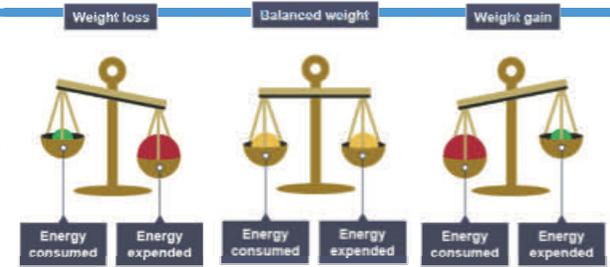
Health, Fitness and Well-being

Key definitions:

Health	A state of complete mental, physical and social well-being, and not merely, the absence of disease or infirmity
Physical Health	All body systems work, free from illness and injury. Ability to carry out everyday tasks
Mental Health	A state of mental well-being in which the person realises their own potential, can cope with normal stressful life, work productively, and able to contribute to their community
Social Health	Basic human needs met. The individual has friendship and support, some value in society, socially active and has little stress in social circumstances.
Fitness	The ability to meet/cope with the demands of the environment

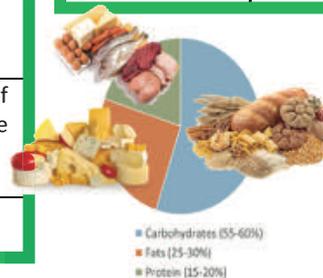


Energy is measured in calories (Kcal) and are provided through the food we eat. The average male requires 2500 Kcal per day and females 2000.



Nutrition

Protein	Used for repair and growth of muscles
Carbohydrates	Primary source of long lasting energy
Fats	Fast Energy. Secondary form of energy when carbohydrates run out
Water	Key to staying hydrated
Vitamins & Minerals	General health of the body including blood, hair, skin and nails



"A balanced diet contains lots of different types of food to provide the suitable nutrients, vitamins and minerals we require."

Consequences of a Sedentary Lifestyle

Increased risk of heart disease	High levels of salt in the diet can lead to increased blood pressure. High levels of saturated fats in the diet lead to a build of cholesterol in the arteries, causing a plaque and narrowing of the arteries.
Weight Gain & Obesity	On average a physically active man needs around 2,500 calories per day, while a woman needs 2,000. If we eat any more, the extra energy is stored for later use, mostly as fat. A lack of exercise will increase the chances of becoming overweight.
Poor self esteem	A lack of regular exercise decreases self esteem as body shape will change and may affect how you feel about your body.
Poor sleep	Studies have indicated that those who were living a sedentary lifestyle expressed poorer resting habits and sleeping patterns. A vigorous workout means the body relaxes into a deeper state.
Diabetes	A sedentary lifestyle means individuals do not get a good daily dose of physical activity. This increases the risk of obesity and developing type 2 diabetes.
Lethargy	A lack of physical activity will leave a feeling of a lack of energy and enthusiasm and continued lethargy can result in forms of depression.

Ectomorph (Tall)	-An individual with narrow shoulders and narrow hips -Very thin and often very tall -Very light weight - Large forehead -Often described as rectangular
Endomorph (Dumpy)	-An individual with wide hips and shoulders - High Percentage of body fat -Often described as pear shaped
Mesomorph (Muscular)	-An individual with wide shoulders and narrow hips -High percentage of muscle - Strong and powerful athletes -Often described as an upside down triangle



General

Childline—www.childline.org

0800 1111

Offers information and advice, 1-2-1 confidential chat (text, email, phone) and support from message boards on a wide range of issues.

This website is one of the most useful you will find and can direct you to help or information about all the other topics mentioned here, and

Safety, bullying and abuse

Child Exploitation and Online Protection (CEOP) - www.ceop.police.uk

Report inappropriate online contact, any unlawful misuse of social media, or a child protection concern to a trained police officer. You can also click this button on your platform:



NSPCC—www.nspcc.org.uk 0800 1111

Information and help about on- and offline abuse

**National Bullying Helpline—
www.nationalbullyinghelpline.co.uk 0845 22
55 787**



Health

School nurse—07520 631722

Text only for confidential advice

National Health Service—www.nhs.uk

Research and useful information on health issues

Walk-In Centre, RD&E Hospital—01392 411611

Non-urgent and sexual health needs

**Walk-In Centre, 31 Sidwell Street—01392
276892**



Healthy relationships

Thinkuknow—www.thinkuknow.co.uk

Age-related help and advice about on- and offline relationships and consent.



Drugs and alcohol

YSmart—ysmart.org.uk 01271 388162

Information about substance misuse, advice, recovery and treatment

Homeless, skills, advice, getting your voice heard

**Young Devon—www.youngdevon.org 01392
331 666**



Mental Health and well-being

Samaritans—www.samaritans.org

Call 116 123 for emergency help

Email jo@samaritans.org (response within 24 hours)

Papyrus—papyrus-uk.org 0800 068 41 41

Urgent help for you or someone you know

YoungMinds—youngminds.org.uk

Text YM to 85258 for urgent help

Happy Maps—www.happymaps.co.uk

Advice on everything from sleep problems to anxiety, bullying, self-harm, coping with divorce, autism, ADHD, gender dysphoria and more

Kooth—www.kooth.com



LGBT

X-PLORE—www.lgbtqyouthdevon.org.uk

Local support and groups for LGBTQ young people

If someone's life is at risk, you should always dial

999