



I S C A A C A D E M Y

I N S P I R A T I O N F O R L I F E

SUMMER 2020

KNOWLEDGE BOOKLET

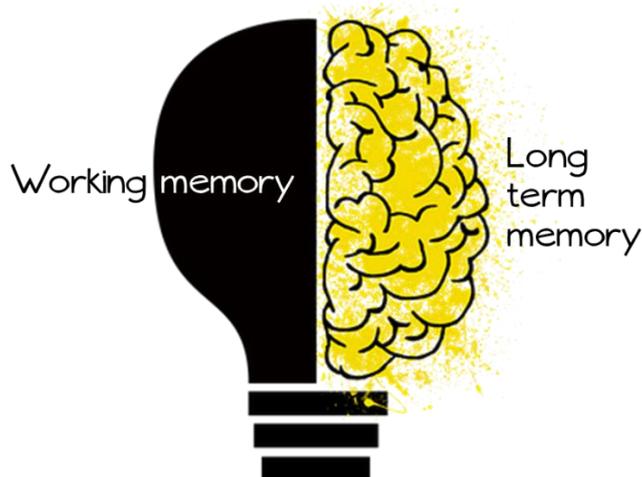
YEAR 9

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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 Summer 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

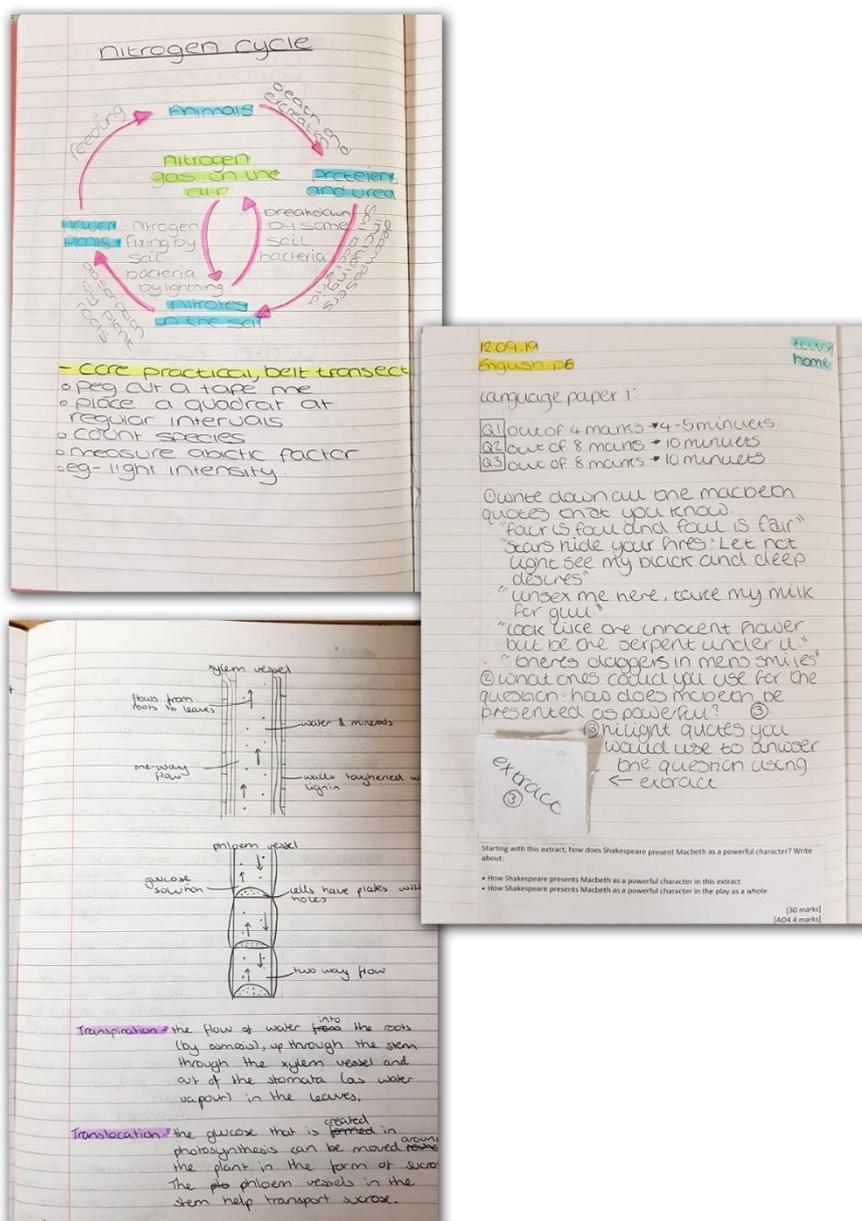
Write down the word/term on one side and a definition/explanation on the other side. Once you have notes written in your own words and summarised – move onto testing yourself quickly.

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	Option B	Option C
Thursday	Maths	Science
Friday	English	RE

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	Option C
Art Computing Dance Drama French Geography History Music Technology Spanish	Art Drama Catering French Geography History Music Technology Spanish	Catering French PE Geography History Music Spanish Photography

Week commencing	Self Check	Tutor Sign	Week commencing	Self Check	Tutor Sign
20/4/2020			1/6/2020		
27/4/2020			8/6/2020		
4/5/2020			15/6/2020		
11/5/2020			22/6/2020		
18/5/2020			29/6/2020		

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

Introducing Your Idea

The beginning of a text

Initially...
Instantly...

As the text develops

Over the course of the text...
Plausibly...
Perhaps...
Evidently...

What stands out?

Interestingly...
Of importance here is...
This idea is accentuated...
This is further emphasised...
This is reinforced...
This is juxtaposed against...

What else could it mean?

In addition...
It is worth considering...
At a deeper level...

The ending of the text

Consequently...
Towards the end of the text...
Ultimately...

'An Inspector Calls' – J.B. Priestley

Contextual Timeline

1912 - The play was set
- The Titanic sunk
- The Miner's Strike

1926 –
General
Strike

1930 – The
Depression

1939-1945
– WWII

1945 –
The play
was
written



1914-1918 –
WWI

1928 – All
men and
women over
21 could vote

Characters:

Mr Arthur Birling: A wealthy businessman, capitalist
Mrs Sybil Birling: his wife and social superior
Sheila Birling: their young daughter (younger generation)
Eric Birling: their son (younger generation)
Mr. Gerald Croft: engaged to Sheila, son of Lady Croft and Sir Croft
Inspector Goole: socialist
Eva Smith / Daisy Renton: a young working-class woman

Important Quotations:

"Unsinkable...absolutely unsinkable"
"Nobody wants war"
"Community and all that nonsense"
"Like bees in a hive..."
"I accept no blame for it at all"
"Now look at the pair of them – the famous younger generation who know it all"
"If men will not learn that lesson, when they will be taught it in fire and blood and anguish."
"The point is, you don't seem to have learnt anything."
"There are millions and millions and millions of Eva Smiths and John Smiths..."
"Cold"
"But these girls aren't cheap labour – they're people"
"Girls of that class"
"We are all to blame"
"You're not the kind of father a chap could go to when he's in trouble"
"It's better to ask for the earth than to take it."



Important Stage Directions:

"The lighting should be pink and intimate...then becomes brighter and harder"
"The sharp ring of the front door bell"
"An impression of massiveness, solidity and purposefulness"
"Cutting in"
"He moves nearer a light"
"With a little cry...runs out"



The story:

A police inspector interrupts the Birling family's celebration of the engagement of Sheila and Gerald. The story unravels to show each of the family's involvement with the death of a young working girl, Eva Smith.

Key concepts

- Social responsibility
- Social Class
- Young and Old Generation
- Gender
- Society
- Wealth
- Family
- Love

Priestley
Birling
Responsibility
Socialism
Capitalism
Welfare State
Socialism
Capitalism
Conscience
Omniscient
Microcosm
Cyclical
Patriarchal
Society
Redemption
Remorseful

The Isca Way: use these sentences, in whichever order, as a *guide* to help organise your thinking in the exam:

- The writer establishes / uses / creates ____ to ...
- This suggests / conveys / portrays...
- The word / image / phrase "----" has connotations of...
- At a deeper level... Perhaps...Possibly...Metaphorically...
- ----becomes a symbol for...Symbolically...
- Priestley is challenging...Advocating... ..Is trying to change...
- The audience thinks...Feels...Is made to understand...
Wonders whether...Is left questioning...



GCSE English Language Paper 2: Question 5: WRITING non – fiction

You will need to know the purpose, audience and form:

Purpose: why am I writing this? It could be to argue, inform, describe, persuade, or explain.

Audience: whom do you want to read this? It could be a local MP, an editor, the prime minister, the head teacher...

Form: what type of writing is this? E.g. a speech, letter, article, or leaflet.



Always use the 5 ingredients for Fantastic writing:

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



This question will be on a big topic or idea, and the examiner wants to see your perspective...

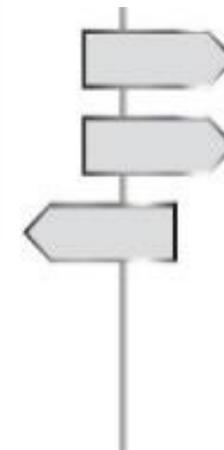
Climate change
Pollution
School life
Gender
Social injustices
Animal cruelty...

Use these signposts to navigate your reader/audience through your writing:

- Picture this... Imagine a world where... Let me start by saying...
- The simple fact is...
- When, because, until, although
- If... then...
- **Direct address:** you, us, we...
- Firstly, in addition, furthermore...
- I'd like to draw your attention to... Now stop and consider...
- So what I'd like you to take away from my talk, the lesson of all of this, is... / so why am I telling you this?...
- Thank you

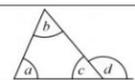
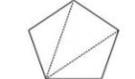
Key vocabulary:

1. Tone
2. Connotations
3. Establishes
4. Suggests
5. Conveys
6. Portrays
7. Evokes
8. Shifts
9. Viewpoint
10. Perspective
11. Furthermore
12. Emphasised
13. Additionally
14. Cyclical



Year 9 Foundation Summer

Angles in Polygons

Interior Angles (I) Exterior angles (E)	Interior angle + Exterior angle = 180° (as on a straight line) 
Exterior angle in a triangle	The exterior angle of a triangle equals the sum of the two opposite interior angles. angle d = angle a + angle b 
Sum of interior angles	For an n-sided polygon Sum of interior angles = $180 \times (n - 2)$ The sum can also be found by splitting the polygon into triangles and multiplying the number of triangles by 180 
Sum of exterior angles	For all polygons: Sum of exterior angles = 360
Regular polygons	$Exterior\ angle = 360 \div number\ of\ sides$ $number\ of\ sides = 360 \div Exterior\ Angle$ $Interior\ angle = 180 - Exterior\ angle$

Angles in Parallel lines

Alternate angles	Alternate angles on parallel lines are equal Alternate angles form a 'Z' shape 
Corresponding angles	Corresponding Angles on parallel lines are equal. Corresponding angles form an 'F' shape 
Co-interior angles	Co-interior angles add to 180 degrees. Co-interior angles form a 'C' or 'U' shape 

Sampling

Sample	A selection from the whole population
Census	A survey of the whole population
Population	The whole group
Bias	Unfair, sways the results inaccurately
Random Sample	Every member of the population has an equal chance of being included

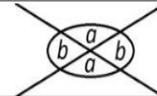
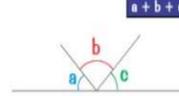
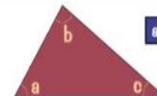
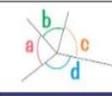
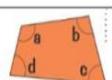
Types of Averages

Average	Advantages	Disadvantages
Mean	Every value makes a difference	Affected by extreme values
Median	Not affected by extreme values	May not change if a data value changes
Mode	Easy to find; not affected by extreme values; can be used with non-numerical data	There may not be a mode

Averages from a Frequency Table

Modal Class	The class with the highest frequency			
Median	If the total frequency is n , then the median lies in the class with the $\frac{n+1}{2}$ th value in it.			
Mean from a frequency table	Data value	Frequency	Frequency x Data Value	
	2	3	6	
	3	2	6	
	4	5	20	
		10	32	
	Times Add ↓ Divide ←			
	Mean = $32 \div 10 = 3.2$			
Estimated mean from a grouped frequency table	Data value	Frequency	Midpoint	Frequency x Data Value
	$20 \leq x < 30$	3	25	75
	$30 \leq x < 40$	2	35	70
	$40 \leq x < 50$	5	45	225
		10		370
	Times Add ↓ Divide ←			
	Mean = $370 \div 10 = 37$ There is a loss of accuracy due to using the midpoint, this is why it is only an estimate.			
Estimate of range	The maximum possible value subtract the minimum possible value			

Angle Rules

Vertically Opposite angles are equal	
Angles on a straight line add up to 180	 $a + b + c = 180^\circ$
Angles in a triangle add up to 180°	 $a + b + c = 180^\circ$
Angles around a point add up to 360°	 $a + b + c + d = 360^\circ$
Angles in a quadrilateral add up to 360°	 $a + b + c + d = 360^\circ$

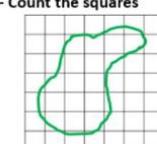
Bearing

Is the direction of a line in relation to the North-South line

- Angle measured clockwise
- Measured from north
- Always written using 3 digits

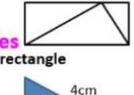
Bearing 063° 

Area and Perimeter

Irregular shapes
- Count the squares


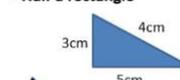
Perimeter
- Walk around the outside


Rectangles
- Squares across x number of rows
10mm
Length x Width
5mm

Parallelograms
- Like a pushed over rectangle

Base x Perpendicular height

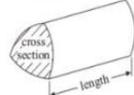
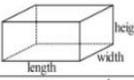
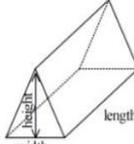
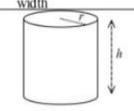
Trapeziums

- Add the parallel sides, x by the height, divide by 2
In formula booklet: $\frac{1}{2}(a+b)h$

Triangles
- Half a rectangle

Base x Height ÷ 2

Compound shapes
- Add the areas together

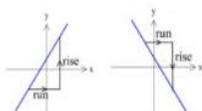
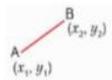

Volume and Surface Area

Surface area	The total area of all the faces of an object You can use the shape's net to help calculate the surface area	
Prism	A 3D shape that has a constant cross-section through its length. $Volume = area\ of\ cross\ section \times length$	
Cuboid	$Volume = area\ of\ cross\ section \times length$ $Volume = length \times width \times height$	
Triangular Prism	$Volume = area\ of\ cross\ section \times length$ $Volume = \frac{1}{2} \times base \times height \times length$	
Cylinder	$Volume = area\ of\ cross\ section \times length$ $Volume = \pi r^2 h$ $Total\ Surface\ Area = 2\pi r^2 + 2\pi rh$	

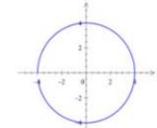
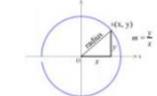
Bearings

Year 9 Higher Summer

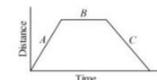
Linear Graphs

Linear Equation	A linear equation contains an x term but no higher power of x.	eg $y = 3x - 1$ $2x + 3y = 8$
$y = mx + c$	The general equation of a straight line	m is the gradient c is the y-intercept
Gradient	$\text{Gradient} = \frac{\text{change in } y}{\text{change in } x} = \frac{\text{rise}}{\text{run}}$	
	Positive gradients, line goes from bottom left to top right	This has a positive gradient
	Negative gradients, line goes from top left to bottom right	This has a negative gradient
Gradient between 2 points	If A = (x_1, y_1) and B = (x_2, y_2) The gradient of line AB = $\frac{y_2 - y_1}{x_2 - x_1}$	
Parallel lines	Parallel lines have the same gradient	
Perpendicular lines	When lines are perpendicular the product of the gradients is -1	
	If one graph has gradient m, then a perpendicular graph has gradient $-\frac{1}{m}$	
Mid-point	The mid-point is the coordinate half between two points.	If A = (x_1, y_1) and B = (x_2, y_2) the mid-point is $(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2})$

Equations of Circles

Equation of a circle	Circle with a centre of (0, 0) and radius r $x^2 + y^2 = r^2$	$x^2 + y^2 = 16$ ($r = \sqrt{16} = 4$) 
Gradient between 2 points	If A = (x_1, y_1) and B = (x_2, y_2) The gradient of line AB $m = \frac{y_2 - y_1}{x_2 - x_1}$	
Perpendicular lines	When lines are perpendicular the product of the gradients is -1 . If one graph has gradient m, the other has gradient $-\frac{1}{m}$	
Gradient of a radius to a circle	The gradient (m) of a radius to a point (x, y) on the circle $x^2 + y^2 = r^2$ is $\frac{y}{x}$	

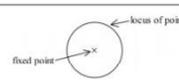
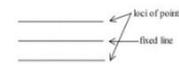
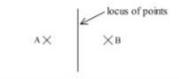
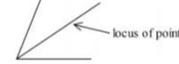
Real Life Graphs (Time)

Represent a journey	
The vertical axis represents the distance from a starting point	
The horizontal axis represents time taken	
Straight lines mean constant speed	
Horizontal lines mean no movement	
Gradient = speed	A = steady speed, B = no movement, C = steady speed back to start
$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}}$	

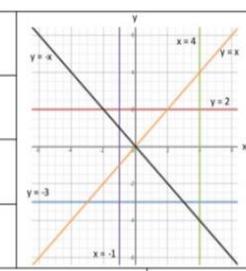
Cubic Graphs

Cubic functions	A cubic function contains an x^3 but no higher power of x. It can have an x^2 and x term	
	A cubic equation can have 1, 2, or 3 solutions	

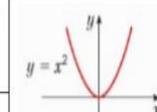
Loci

Locus 1: Circle	The locus of points that are a fixed distance from a fixed point	
Locus 2: parallel line	The locus of points a fixed distance from a fixed line	
Locus 3: Perpendicular bisector	The line that cuts another in half at right angles	
Locus 4: angle bisector	The locus of points equidistant between two fixed points	

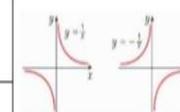
Equation of Straight Lines

'y = ' graph	Constant y co-ordinate	
	Will be parallel to the x-axis	
'x = ' graph	Constant x co-ordinate	
	Will be parallel to the y-axis	
y-intercept	The y value where a graph crossed the y-axis.	where x = 0
x-intercept	The x value(s) where a graph crosses the x-axis.	where y = 0

Quadratic Graphs

The quadratic graph a curved shape called a parabola	
$y = ax^2 + bx + c$	
A positive x^2 term will give a \cup shape	
A negative ($-x^2$) term will give a \cap shape	

Reciprocal Graphs

Reciprocal functions	Reciprocal graphs have the form $y = \frac{k}{x}$ where k is a number	
	It will have 2 asymptotes	

Accuracy and Bounds

Error interval	An error interval of x% means that the measurement could be x% larger or smaller than the one given
Error in measurements	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 $3.35 \leq x < 3.45$
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
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
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 2dp

Transformations

Rotation	A "turning" movement of an image about a fixed point	
	To describe, you need to write:	a) "Rotation" b) Angle of rotation c) Centre of rotation d) Direction of rotation
Reflection	A "flipping" movement across a mirror line	
	To describe, you need to write:	a) "Reflection" b) The equation of the line of reflection
Translation	A "sliding" movement of an image	
	To describe, you need to write:	a) "Translation" b) The column vector
Enlargement	A change in the size of the object (bigger or smaller)	
	To describe, you need to write:	a) "Enlargement" b) The scale Factor c) The centre of enlargement
Fractional Scale Factor	If a scale factor is smaller than 1, then the image will be smaller	
Negative Scale Factor	If a scale factor is negative then the image will be on the opposite side of the centre of enlargement	

CB5

Lifestyle factors that affect non communicable disease;

- Exercise and diet leading to obesity or malnutrition
- BMI
- Waist: hip ratio
- Alcohol
- Smoking

Health: A state of complete physical, mental and social well-being, not merely the absence of disease or infirmity (World Health Organisation)

Non communicable disease: Cannot be spread from person to person. Could be genetic, e.g. cystic fibrosis, or caused by lifestyle choices e.g. cirrhosis of the liver caused by alcoholism.

Communicable disease: Can be spread from an infected person to other people e.g. the flu virus

Pathogen: A disease causing microorganism e.g. bacteria, viruses, fungi and protists

Common infections

Infection	Pathogen which causes it	Symptoms/effects	How they're spread (transmitted)
Cholera	Bacteria	diarrhoea	Water
Tuberculosis (TB)	Bacteria	Lung damage	Airborne
Chalara ash dieback	Fungi	Leaf loss and bark lesions	Airborne
Malaria	Protists	Blood and liver damage	Animal vectors - mosquitoes
HIV	Virus	Destroys white blood cells, leading to AIDS	Unprotected sex with an infected person (sexually transmitted), sharing needles with an infected person
Stomach ulcers	Helicobacter	Stomach pain/ Bleeding	Oral
Ebola	Virus	Haemorrhagic fever	Bodily fluids

9 SCIENCE

Physical barriers

Hairs in the nose filter out dust that might carry pathogens. **Mucus** in the nose, throat and breathing passages traps microorganisms.

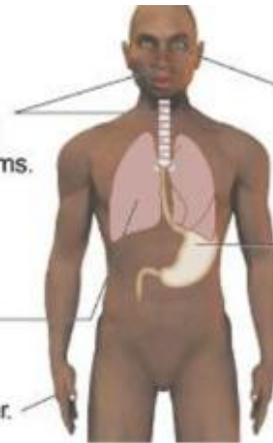
The tube in the lungs also produces mucus. Tiny hairs called **cilia** sweep out the mucus and microorganisms trapped in it.

The skin forms a protective barrier.

Chemical barriers

Tear glands make a liquid containing enzymes called **lysozymes** that kill microorganisms.

The stomach makes **hydrochloric acid** to kill harmful microorganisms in food.



1 Pathogens have antigens on their surface that are unique to them.

These lymphocytes are not activated.

2 A lymphocyte with an antibody that perfectly fits the antigen is activated.



4 Some of the lymphocytes secrete large amounts of antibodies. The antibodies stick to the antigens and destroy the pathogen. Other lymphocytes remain in the blood as memory lymphocytes, ready to respond immediately if the same antigen ever turns up again.

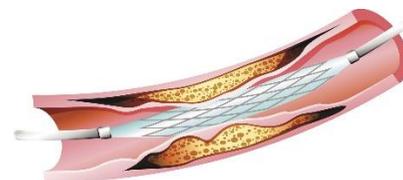
3 This lymphocyte divides over and over again to produce clones of identical lymphocytes.

B how the immune system attacks a pathogen

Treating cardiovascular disease

- Life-long medication
- surgical procedures e.g. stents
- lifestyle changes e.g. reducing BMI and quitting smoking

A stent widens the blood vessel

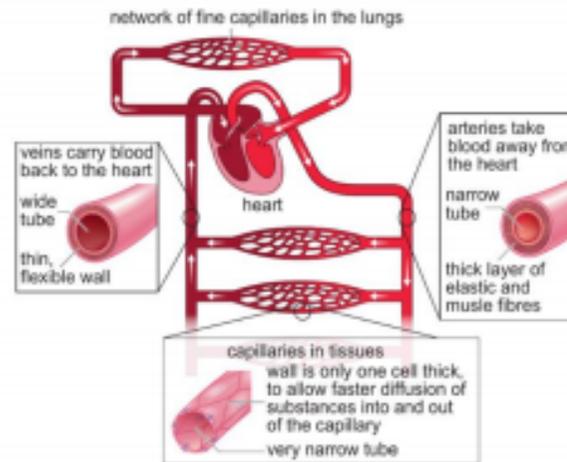


Antibiotics can be used to treat bacterial infection because they inhibit (stop) cell processes to stop them reproducing but do not damage human cells.

CB8

Unicellular organisms have a large surface area: volume ratio so they can rely on diffusion to transport substances in and out of the cell. However, multicellular organisms need transport systems, e.g. a circulatory system, due to a small surface area: volume ratio.

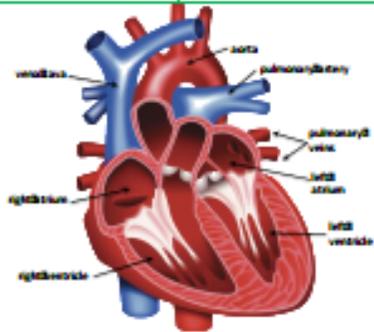
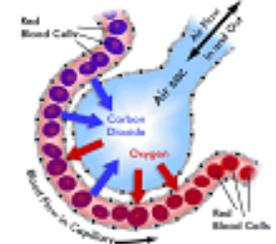
Plasma	Liquid carrying dissolved substances such as glucose, urea and carbon dioxide
Erythrocytes	Red blood cells; these contain haemoglobin to bind with oxygen so it can be carried to cells around the body
Phagocytes	White blood cells; these engulf pathogens to reduce harm
Lymphocytes	White blood cells; these produce antibodies to match the pathogens antigen and destroy it
Platelets	These cell fragments have no nuclei and are responsible for clotting blood



Gaseous exchange between the alveoli and the blood.

Adaptions

- Dense capillary network - maintains the concentration gradient
- Capillary walls are only one cell thick - shorter diffusion pathway
- Larger surface area - increases the rate of gas exchange



Right ventricle	Pumps blood to the lungs where gas exchange takes place.
Left ventricle	Pumps blood around the rest of the body. Thicker cardiac muscle wall (large force)
Coronary arteries	Carry oxygenated blood to the cardiac muscle.
Heart valves	Prevent back flow of blood

Cardiac output = stroke volume x heart rate

Heart rate = number of beats per minute (bpm)

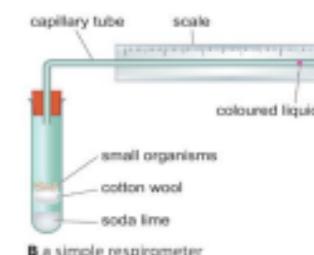
Stroke volume = volume of blood pumped per beat

Cardiac output = volume of blood pumped per minute

Moving in (raw materials)	Moving out (waste)
Glucose – for respiration	Carbon dioxide – from aerobic respiration
Oxygen – for aerobic respiration	
Amino acids – building blocks of proteins	Urea – broken down proteins
Mineral ions	

Respiration is an exothermic chemical reaction which releases energy.

Aerobic	Anaerobic
Occurs continually in all living cells to release energy for metabolic processes	Occurs during strenuous exercise when not enough oxygen is available
Takes place in the mitochondria	Takes place in the cytoplasm
Glucose + oxygen → water + carbon dioxide	Glucose → Lactic acid



Core practical: Respirometer

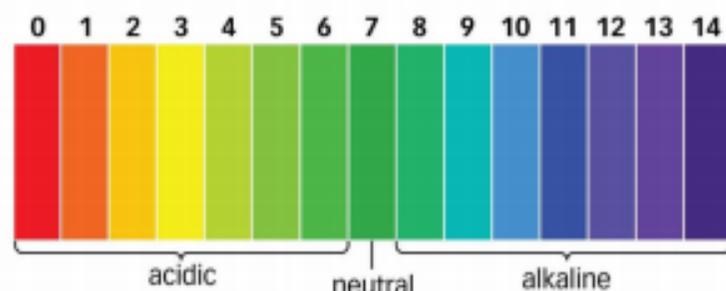
Independent variable: temperature.

Dependent variable: distance travelled by the coloured liquid over time

Conclusion: as the temperature increases, rate of respiration increases until it reaches an optimum, after which the rate decreases due to denaturing of the enzymes.

Acids	Acids produce hydrogen ions (H^+) in aqueous solutions
Alkalis	Aqueous solution of alkalis contain hydroxide ions (OH^-)

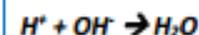
Universal indicator	Red in acid, green in neutral and blue in alkali
Litmus	Red in acid, purple in neutral and blue in alkali
Methyl orange	Red in acid, yellow in neutral and yellow in alkali
Phenolphthalein	Colourless in acid and in neutral and pink in alkali



The pH scale and indicators

A neutralisation reaction is between an acid and a base

In neutralisation reactions, hydrogen ions react with hydroxide ions to produce water:



Base	A base is any substance that reacts with an acid to form a salt and water only
Examples of soluble bases	Alkalis e.g. sodium hydroxide, potassium hydroxide

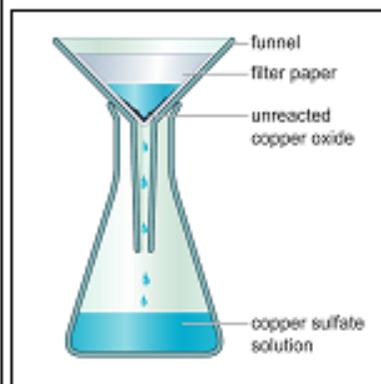
Concentrated	High mass of substance in a given volume of solution
Dilute	Low mass of substance in a given volume of solution
Strong acids	Completely ionised in aqueous solutions e.g. hydrochloric, nitric and sulfuric acids.
Weak acids	Only partially ionised in aqueous solutions e.g. ethanoic acid, citric acid.
Hydrogen ion concentration	As the pH decreases by one unit (becoming a stronger acid), the hydrogen ion concentration increases by a factor of 10.

Core practical – preparing copper sulfate

Method

Wear eye protection.

- Measure 20 cm³ of dilute sulfuric acid using a measuring cylinder and pour it into a small conical flask.
- Warm the acid in a water bath set at 50 °C. Use a thermometer to measure the temperature.
- Add a little copper oxide powder to the acid and stir.
- If all the copper oxide reacts, and disappears, add a little more. Stop when the copper oxide is in excess and no longer reacts.
- Filter the mixture and transfer the filtrate to an evaporating basin.
- Heat the evaporating basin by placing it over a beaker of water heated with a Bunsen burner as shown in diagram D on the previous page. Stop heating when crystals start to form.
- Pour the solution into a watch glass and leave for a few days to allow all the water to evaporate.



Metals	$Metal + acid \rightarrow metal\ salt + hydrogen$
Metal oxides	$Metal\ oxide + acid \rightarrow metal\ salt + water$
Metal hydroxides	$Metal\ hydroxide + acid \rightarrow metal\ salt + water$
Metal carbonates	$Metal\ carbonates + acid \rightarrow metal\ salt + carbon\ dioxide + water$

CP1-2

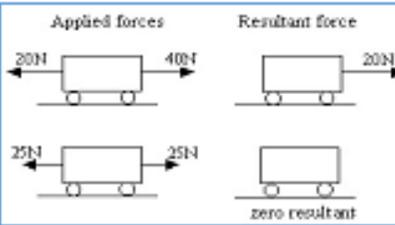
Newton's first law states: A moving object will continue to move at the same speed and direction unless an external force acts on it. A stationary object will remain still unless an external force acts on it.

Typical speeds:

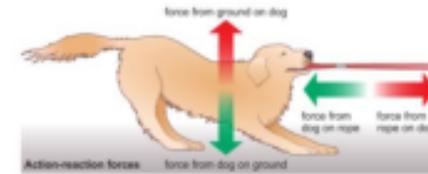
Walking:	1.4m/s
Cycling:	6m/s
Aeroplane:	250m/s
Strong breeze	10m/s
Sound	340m/s
Car in town	15m/s

Vector quantity	This is a quantity which has size (magnitude) and direction, e.g. velocity
Scalar quantity	This is a quantity which has size (magnitude) only e.g. speed
Acceleration	A measurement of how fast velocity is changing
Momentum	A combination of mass and velocity
Displacement	The distance travelled in a particular direction
Velocity	Speed in a given direction

Resultant forces show the overall size and the direction the object is moving as a result of all the forces acting on it.



Newton's third law states: For every action there is an equal and opposite reaction. See example below:



Newton's second law states: acceleration depends on the size of the force and the mass of the object

$$\text{force (N)} = \text{mass (kg)} \times \text{acceleration (m/s}^2\text{)}$$

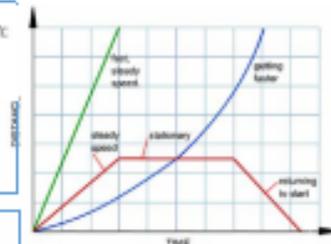
Mass: Is the amount of matter in an object (measured in kg). **Weight** is the force of gravity on an object- this changes with mass or gravitational field strength (**g**) (measured in N).

$$\text{weight (N)} = \text{mass (kg)} \times \text{gravitational field strength (N/kg)}$$

Speed can be calculated using the following equation:

$$\text{(average) speed (m/s)} = \frac{\text{distance (m)}}{\text{time taken (s)}}$$

The shape of distance-time graphs identifies the motion.

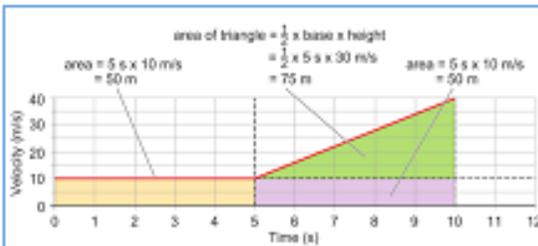
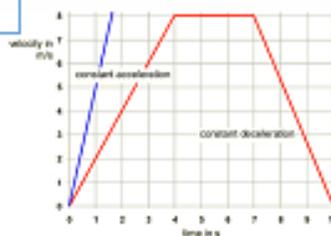


Acceleration in free fall due to gravity is 10m/s^2 ($g = 10\text{m/s}^2$).

Acceleration is calculated using the following equation:

$$\text{acceleration (m/s}^2\text{)} = \frac{\text{change in velocity (m/s)}}{\text{time taken (s)}}$$

Use the shape of velocity-time graphs to identify the motion.



Measuring Speed:

- Measure the distance (ruler, tape measure, trundle wheel).
- Measure the time (stopwatch, light gates (more accurate)).
- Speed = distance/time

HT only: Momentum: depends on the object's mass and velocity. It can be calculated using the equation:

$$\text{momentum (kg m/s)} = \text{mass (kg)} \times \text{velocity (m/s)}$$

When two objects collide the total momentum before the collision is the same as the total momentum after the collision as long as there are no external forces acting on it. This is called '**conservation of momentum.**'

Thinking distance	The <u>distance</u> travelled during the driver's reaction time – before braking
Braking distance	The <u>distance</u> travelled while braking until stopped.
Stopping distance	= thinking distance + braking distance

Factors affecting thinking distance	Factors affecting braking distance
<ul style="list-style-type: none"> • Distractions • Drugs • Alcohol • Tiredness • Speed 	<ul style="list-style-type: none"> • Mass of vehicle • Tyre friction • Road friction (e.g. wet roads) • Brake friction • Speed

Acceleration = gradient of a v/t graph. Gradient = change in velocity/change in time.

Distance travelled = area under the graph. We may need to split these into triangles or rectangles to calculate area.

HT only: Circular motion: The force that causes objects to follow a circular path is called the **centripetal force**. This force acts towards the centre of the circle. **Objects moving in a circle have a constant speed and a changing velocity – they are always accelerating.**



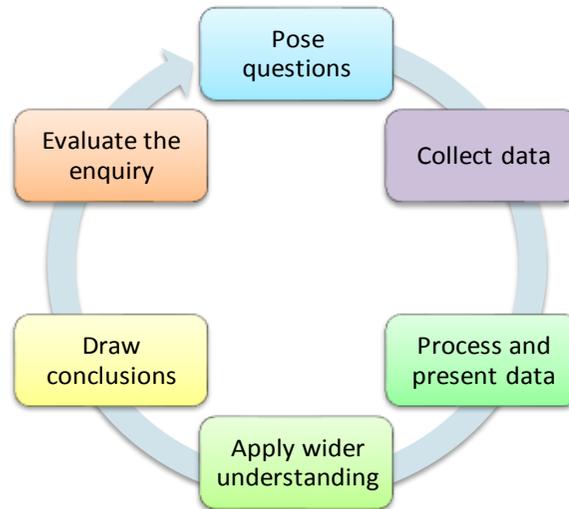
Fieldwork: Component 3



Evaluate the enquiry: At the end of a fieldwork enquiry it is important to evaluate (identify advantages and disadvantages) or state the value of the data collection techniques, the data presentation techniques and the study as a whole. This process enables researchers to learn from their mistakes and improve their future enquiries. When weaknesses in a fieldwork enquiry have been identified it is important that improvements are suggested. Towards the end of an evaluation researchers should consider to what extent their data is useful and what limitations it has.

Draw conclusions: In the conclusion you return to your original fieldwork questions and/or hypothesis and answer them using the evidence you have provided in your study. This section draws all the other sections together and acts as a summary. The more evidence that is used to back up your findings the more plausible they will be.

Pose Questions: Posing questions and hypotheses before an enquiry are fundamental in ensuring enquiries are meaningful and achievable. Hypotheses can be set up and tested, or questions can be set and answered, but it is unlikely that a clear answer will be determined because so many viewpoints are involved. Issues usually require students to make a judgement based on their evidence.



Apply wider understanding: Once fieldwork data is presented in an accessible way it needs to be analysed to reveal patterns, trends and themes. This could involve describing what the data shows and suggesting reasons why this may have occurred. This stage includes linking data to other areas of geography by applying wider understanding.

Collect data: Sample size needs to be carefully considered to ensure the amount of data collected is representative but also manageable. There are many sampling strategies to consider how to collect data fairly. They include, spatial, random, stratified, systematic and opportunistic. Fieldwork includes both primary and secondary data collection. A range of methods can be used to collect data in both human and physical areas. Methods can include bipolar surveys and questionnaires.

Process and present data: Data that has been collected has to be processed and presented to make it more accessible. Calculations (such as averages) may be used to process data. The fieldwork data can be presented in a number of ways. Presentation techniques can fall into a range of categories including cartographic (e.g. placing data on maps), graphical (e.g. plotting bar charts) or visual (e.g. field sketches). Students need to be able to justify how they present their data.

Key terminology:

Fieldwork: practical work conducted by a researcher in the natural or human environment, rather than in a classroom or office.

Hypothesis: is a statement that can be tested.

Opportunistic sampling: deciding where the information will be collected while in the field.

Primary data- data that you have collected yourself

Random sampling: where every member of the population has equal chance of being chosen.

Sample size: is the amount of data collected.

Secondary data- data that has been collected by someone else.

Spatial sampling: encompasses point sampling (choosing specific points), line sampling (collecting data at regular intervals along a line) and quadrat sampling (sampling from inside a square on the ground).

Stratified sampling: the sample contains proportionate data from different categories within the field being studied.

Systematic sampling: data collected following an agreed system/ sample e.g.

15 Key Words – Free Time activities

1. la fête – the party/festival/celebration
2. l'addition – the bill
3. l'oeuvre (f) caritative - charity work
4. le sport de combat - combat sport
5. le sport de défense - defensive sport
6. le saut à l'élastique -bungee jumping
7. la balade - walk, ride
8. l'escalade - climbing
9. les défis – challenges
10. le joueur / la joueuse – the player

Key Verbs – Free time activities

Faire la fête	To have/go to a party
Faire partie de	To belong to
Retrouver	To meet
Banaliser	To become the norm
Se sentir	To feel
Cuire	To cook
Être passionné(e) de	To be passionate about
je trouve que	I find that
je suis d'accord que	I agree that
pour moi	for me

Negatives

Made up of two parts.
 'Ne' in front of the verb, 'pas/jamais etc' after the verb.
 Ne...pas – not
 Ne...jamais - never
 Ne...plus – no more/no longer
 Ne...que – only
 Ne...personne – no one
 e.g. je **ne** joue **jamais** au golf – I **never** play golf.

French Year 9 Summer

Present tense

Je retrouve mes amis en ville – **I meet** my friends in town
Je fais partie d'une équipe de foot – **I am in** a football team
Je cuisine tous les jours – **I cook** every day

Past tense

J'ai retrouvé mes amis en ville – **I met** my friends in town
J'ai joué au foot samedi dernier – **I played** football last Saturday
J'ai cuisiné hier – **I cooked** yesterday

Future tense

Je vais retrouver mes amis en ville – **I am going to meet** my friends in town
Je vais faire partie d'une équipe de foot – **I'm going to be in** a football team
Je vais cuisiner/je cuisinerai tous les jours – **I'm going to cook / I will cook** every day

Time phrases

PAST	Le weekend dernier	Last weekend
	L'année dernière	Last year
	Hier	Yesterday
	Il y a ans/jours days/years ago
PRESENT	D'habitude / Normalement	Normally
	En ce moment / maintenant	At the moment / now
	Aujourd'hui	Today
FUTURE	Demain	Tomorrow
	Le weekend prochain	Next week
	L'année prochaine	Next year
	À l'avenir / dans le futur	In the future

10 Key words - Food

1. le bifteck – steak
2. les nouilles – noodles
3. le plat – the dish
4. cuit(e) – cooked
5. cru(e) – raw
6. rapé – grated
7. fondu(e) – melted
8. végétarien(ne) – vegetarian
9. végétalien(ne) – vegan
10. la tartine – slice of bread and butter
11. le lait – milk
12. les légumes – vegetables
13. la viande – meat
14. le / la cuisinier(-ière) - cook
15. la nourriture - food

The pronoun 'En'

'En' = it/of them/some. **But** – is not always translated into English.
 It replaces a noun that is preceded by de/du/de la/ de l'/ des.
 e.g.
 Je mange **des fruits** – I eat **fruit**
 J'**en** mange – I eat **some**

The pronoun 'Y'

'Y' = there.
 It goes in between a subject and a verb to replace a noun. It replaces a noun that is preceded by à, au / à la / en or chez.
 e.g.
 Je vais à Paris – I go to Paris.
 J'**y** vais – I go there.
 J'**y** suis allé(e) - I went there

Spanish Year 9 Summer GCSE Units 1 + 2

Ser (permanent)	To be	Estar (temporary, location)
soy	I am	estoy
eres	You are (s)	estás
es	He / she is	está
somos	We are	estamos
sois	You are (pl)	estáis
son	They are	están

Reflexive verbs to talk about Relationships

A reflexive pronoun is needed before the conjugated verb form

Me llevo bien/mal	I get on well/badly
Te comprometes	You get engaged (s)
Se llama	He / she is called
Nos apoyamos	We support each other
Os enfadáis	You get angry (pl)
Se casan	They get married

Immediate Future

This talks about what you are **going to do**
It requires the present tense of **ir + a + infinitive**

Voy a tener	I am going to have
Vas a ser	You are going to be (s)
Va a casarse	He / she is going to marry
Vamos a viajar	We are going to travel
Vais a vivir	You are going to live (pl)

Opinions

Pienso que	I think that
Creo que	I believe that
En mi opinión	in my opinion
Según mis padres	according to my parents
Mi madre dice que	My mother says that
Diría que	I would say that
Estoy seguro que	I am sure that
Desde mi punto de vista	From my point of view
Para mí	for me

Present continuous talks about what you are doing now

It requires the present tense of **estar + the gerund**
The gerund is formed from the verb stem + **-ando/iendo**

Estoy mandando un email	I am sending an email
Estás chateando con amigos	You are chatting with friends
Está haciendo compras en línea	He / she is shopping online
Estamos escribiendo las noticias	We are writing the news
Estáis descargando una película	You are downloading a film (pl)
Están compartiendo videos	They are sharing videos

Perfect Tense talks about what you have done

It requires the present tense of **haber + the past participle**
The past participle is formed from the verb stem + **-ado/ido**

He comprado un nuevo móvil	I have bought a new mobile
Has colgado una foto bonita.	You have posted a pretty photo
Ha hecho los deberes <i>irregular</i>	He / she has done the homework
Hemos visto los peligros <i>irregular</i>	We have seen the dangers
Habéis descargando una película	You are downloading a film (pl)
Han elegido un portátil rápido	They have chosen a fast laptop

10 key words on Technology

una aplicación	an app
el ciberacoso	cyberbullying
la contraseña	password
el correo basura	junk mail / spam
los desconocidos	strangers
el móvil	mobile (phone)
el portátil	laptop
la página web	webpage
la pantalla	screen
las redes sociales	social networks

10 key verbs on Technology

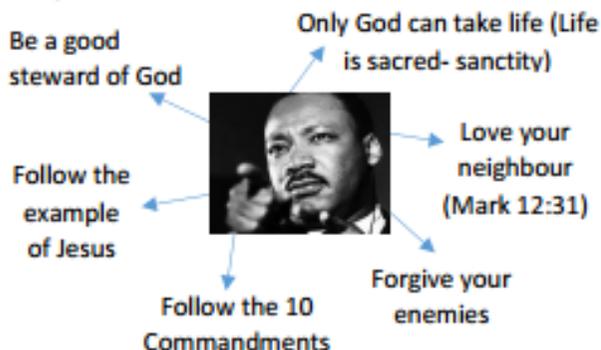
Se puede...	You/one can...
chatear con amigos	chat with friends
colgar fotos	post photos
compartir videos	share videos
descargar música	download music
mandar un correo electrónico	send an email
hacer las compras en línea	shop online
leer las noticias	read the news
mantenerse en contacto con familia	stay in touch with family
navegar por internet	surf the web



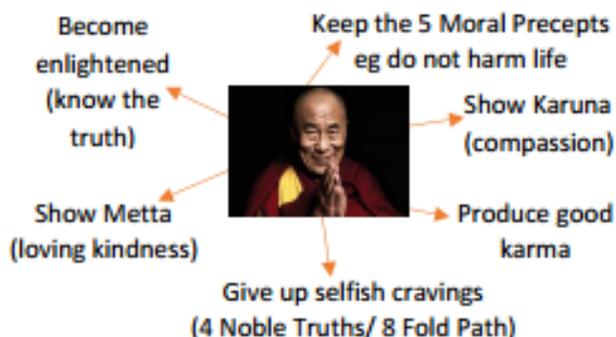
Quizlet:
IscaLanguages

Theme E- Religion, Crime and Punishment

1. Key Christian beliefs



2. Key Buddhist beliefs



3. Bad reasons for breaking the law

Greed	Hatred	Jealousy	Apathy (boredom)	Insecurity
Upbringing	Lust	Revenge	Vanity	Selfishness
Intolerance	Ignorance	Peer Pressure	Addiction	?

Other reasons for breaking the law...

- Fighting for justice
- Obeying God 'A higher law'
- Extreme poverty
- Mercy killing
- The effects of mental illness



4. Aims of Punishment

RETRIBUTION- Vengeance (revenge) for wrong doing. Justice for the victim (fairness).

DETERRENCE- Sending out a warning to others. Deterring them from committing crime. Protecting the public.

REFORMATION- Reforming the criminal. Helping them change for good.

REPARATION- Repairing the damage you have done for example through community service.

5. Types of punishment

Arguments **FOR** prison...

- It protects the public from danger
- It teaches criminals a lesson
- It gives offenders counselling
- It gives education opportunities
- Prisoners can find faith

Arguments **AGAINST** prison...

- Bullying in prison leads to suicide
- Offenders learn to become even worse than before they went in
- Criminals become addicted to drugs
- It doesn't work, 70% reoffend
- Prisons are overcrowded
- The prisoner's family suffers
- Each prisoner costs the tax payer 40k plus
- Many prisons are very old

6. Arguments FOR corporal punishment (Giving prisoners physical pain)

- ❖ It provides retribution to violent offenders and justice for the victim
- ❖ It acts as a deterrent (a warning)
- ❖ It may help prisoners to reform
- ❖ It can be used instead of expensive prison time

Arguments AGAINST corporal punishment

- ❖ It is inhumane to use violence/torture
- ❖ It makes society as bad as the criminal
- ❖ It might leave criminals wanting revenge



7. Arguments FOR capital punishment

(The death penalty)

- It provides retribution and justice for the victims
- The murderer will be dead, so the public is safe
- It can save prisons a life time of expense
- Utilitarian argument. Capital punishment may provide the maximum happiness for the greatest number of people

Arguments AGAINST the Death Penalty

- It is inhumane to kill someone
- The executioners become the murderer
- Innocent people are sometimes executed
- There is little evidence that it is a deterrent



8. Key words

What do the following mean?

Sanctity; Steward; Karuna; Metta; Enlightenment; Apathy; Retribution; Vengeance; Justice; Deterrence; Reformation; Reparation; Corporal Punishment; Capital punishment; Inhumane; Utilitarian.

9. Key Questions

- Name 5 key Christian and 5 key Buddhist beliefs
- Using the Christian beliefs, what do you think Christian views might be on: breaking the law; prisons; corporal punishment and capital punishment?
- Using the Buddhist beliefs, what do you think Buddhist views might be on: breaking the law; prisons; corporal punishment and capital punishment?
- What are the 4 aims of punishment?
- Give 3 arguments for and against prison.
- Give 3 arguments for and against corporal punishment.
- Give 3 arguments for and against capital punishment.

1. Key Christian beliefs

You cannot love both God and money
 We're all made in the image of God (So we shouldn't pre-judge people- prejudice)
 Only God can take life (Life is sacred- sanctity)
 Love your neighbour (Mark 12:31)
 Follow the example of Jesus Christ
 We're all one in Christ



5. Evidence of possible homophobia in religion

→ Many Christians think that God intended heterosexual relationships that lead to having children (*Genesis 1*).
 → Many Christians believe homosexual relationships are sinful.



Defence against accusations of homophobia in religion

→ Many Christians think we should love our gay neighbour, and some think homosexual relationships are acceptable.
 → Buddhists want to show metta to everyone, regardless of sexual orientation.



6. Support of religious freedom

→ Our government gives freedom of religious expression.
 → "Everyone has the right to freedom of thought, conscience and religion" (U.N.)
 → "Live at peace with everyone" (Romans 12)
 → Buddhist don't try to convert others.



Evidence of lack of religious freedom

→ Catholics fighting protestants in the past in Northern Ireland.
 → Christians in particular are persecuted for their faith.
 → Some Christians would see other religions as 'idols' (false gods).
 → Muslims have been persecuted by Buddhists in Myanmar and many have been killed or become refugees (homeless)



7. Key Human rights- Right to... Life; freedom from torture; freedom from slavery; equality; free movement; peaceful assembly; education; rest and leisure; shelter; free speech.
Human responsibilities- (To respect the rights of others)

8. Racism

Religion the Solution

- MLK- Civil rights movement
- Bishop Desmond Tutu (fight against apartheid in S.Africa)
- Jesus- parable of the good Samaritan

Religion part of the problem

- Few black leaders in Church of England
- Racist churches in 20th century South Africa
- Racist Buddhists in Myanmar

Negative discrimination- Acting against someone because they are different eg black.
Positive discrimination- Acting for someone because they are different eg disabled parking spaces.

9. Religion and money

Rich people should:

- Be a good steward
 - Go the middle way
 - Avoid greed (3 poisons)
 - Avoid attachment to money
 - Love their poor neighbour
 - Not exploit the poor
- 

Poor people should:

- Not be exploited (eg not have to pay huge loan interests)
 - Be responsible eg look for work, not gamble
 - 'Give even if you can only give a little'
 - Not be jealous of others
- 

2. Key Buddhist beliefs

"Give even if you only have a little"
 (The Buddha)
 Show Metta (loving kindness)
 Keep the 5 Moral Precepts eg do not harm life
 Show karuna (compassion)
 Produce good karma
 Avoid Greed, Hatred and Ignorance (the Buddhist 3 Poisons)



3. Evidence of possible sexism in religion

Buddhist male monks seen as superior to Buddhist female monks.
 God is portrayed as male in the Bible. Catholic and Orthodox churches do not allow female leadership.
 Bible verse "Women should be silent in church".



4. Defence against accusation of sexism in religion

Jesus promoted women's rights
 The Church of England employ women bishops
 The Buddha ordained nuns (made them leaders/ministers) even though he was reluctant to begin with
 Bible verses "We're all one in Christ, there is neither male or female".



10. Key words

Sanctity; Prejudice; Karuna; Metta; Ordained; Heterosexual; Homosexual; Orientation; Persecuted; Refugee; Negative/Positive Discrimination; Stewardship; Exploit; Equality; Social Justice.

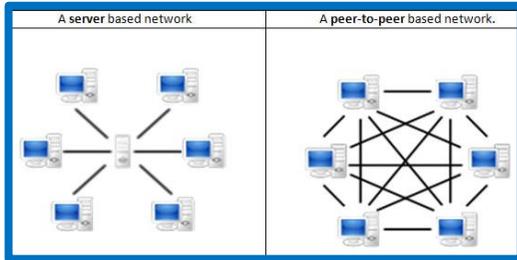
What do the following mean?

11. Key Questions

- Explain why Christians should be against all kinds of prejudice/discrimination eg against disabled people.
- Explain why Buddhists should also be against all kinds of prejudice/ discrimination.
- Religious people always support women; gay people; other religious people; black people. Do you agree?
- People should be able to do what they like with their money? Do you agree? (Give 2 detailed points of view)

GCSE OCR Computer Science: 1.3 Computer Network Connections

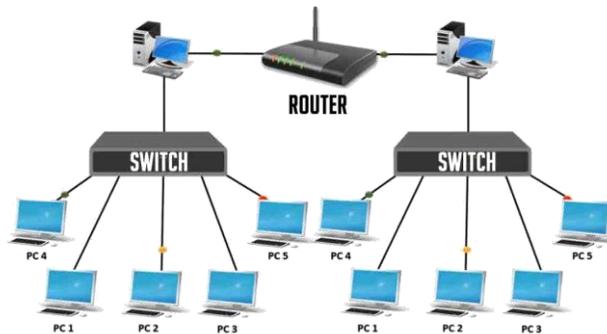
Network Organisation	
Client – Server	One or more computers are designated as servers, providing a service to clients on a network.
Peer-to-peer	A distributed system where functionality can be divided among the nodes on the network. All computers have an equal status and may partially act as a server to other devices. Peers are both suppliers and users of network data and services.



Key vocabulary	
Network	A collection of computer systems that are linked together and can share data.
Node	A device connected to a network via a link.
Links	The interface on which multiple devices can communicate. Such as a cable or wireless.
Client	A client is a piece of computer hardware or software that accesses a service made available by a server.
Server	A server is an instance of a computer program that accepts and responds to requests made by another program, known as a client.

Connection Type	
Ethernet	Sometimes called twisted copper pair – this is the “normal” cable you would use to connect a computer to a router. Speeds are up to 100 MB/s.
Coaxial	These contain a single solid copper centre cable. The most common use for these are for cable broadband, or satellite connections for Sky.
Fibre	Also known as fibre-optic cable. It contains lots of threads of glass which carry electrical impulses in the form of light. Speeds are measured in GB/s and are improving all the time.

Network Scale	
LAN	A local Area Network. All devices are connected on one site. The network may be in a single building or campus. A small geographical area. Usually maintained by a group of network administrators.
WAN	A Wide Area Network. Covers a large geographical area, this could be cities or world-wide. Connections are provided by large companies such as Virgin or BT. The largest example of a WAN you use is the internet. Your mobile phone network is another example of a WAN.
VPN	A Virtual Private Network. Requires a username and password to access this network. It can be accessed anywhere in the world; and is generally secure and or an encrypted connection. It is not a physical network.



Routers Vs Switches	
Routers	If you have access to the internet in your house; you will have a router. It routes traffic around your network. It assigns IP addresses to all devices on the network, and knows all devices connected to the network. It can provide wireless and wired connections
Switches	Extends a network by allowing more devices to connect to it. This device uses MAC addresses to send packets around the network; it is not aware of how many devices are on the network. Usually wired only.

Python Programming and Keywords

Python -> English	
<code>print('hello!')</code>	Prints a value on screen (in this case, hello!)
<code>input('')</code>	Inputs a value into the computer.
<code>x=input('')</code>	Inputs a value and stores it into the variable x.
<code>x=int(input(''))</code>	Inputs a value into x, whilst also making it into an integer.
<code>print(str(x))</code>	Prints the variable x, but converts it into a string first.
<code>if name == "Fred":</code>	Decides whether the variable 'name' has a value which is equal to 'Fred'.
<code>else:</code>	The other option if the conditions for an if statement are not met (eg. name = 'Bob' when it should be Fred)
<code>elif name == "Tim"</code>	elif (short for else if) is for when the first if condition is not met, but you want to specify another option.
<code>#</code>	# is used to make comments in code – any line which starts with a # will be ignored when the program runs.



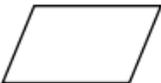
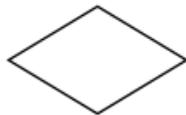
www.python.org/downloads
Version 3 or better

Key vocabulary	
Python	A high level programming language.
Programming	The process of writing computer programs.
Code	The instructions that a program uses.
Sequence	Parts of the code that run in order and the pathway of the program reads and runs very line in order.
Selection	Selects a pathways through the code based on whether a condition is true
Iteration	Code is repeated (looped), either while something is true or for a number of times
Algorithm	A set of rules/instructions to be followed by a computer system
Variable	A value that will change whilst the program is executed. (eg. temperature, speed)
Comparative Operator	When comparing data, an operator is used to solve the equality such as <>, != or ==
Syntax	The punctuation/way that code has to be written so that the computer can understand it. Each programming language has its own syntax.
Data Type	This indicates how the data will be stored. The most common data types are integer, string, and float/real.
String	A collection of letters, numbers or characters. (eg. Hello, WR10 1XA)
Integer	A whole number. (eg. 1, 189)
Float/Real	A decimal number, not a whole number. (eg. 3.14, -26.9)
Boolean	1 of 2 values. (eg. True, False, Yes, No)

www.hackerrank.com/domains/python

www.edabit.com/challenges/python3

www.coderbyte.com

Flowcharts	
	Terminator symbols indicate the start and end of a flowchart.
	Arrow , shows the flow of data through the flowchart
	Processing symbol represents a step where an action is done. Example "add 1 to score"
	Input/ Output symbol represents when data is inputted or outputted to the process.
	Decision indicates a question or branch in the process flow. There are usually 2 options "Yes, No" "True, False"

Comparative Operators	
<code>==</code>	Equal to
<code>!=</code>	Not equal to
<code>></code>	Greater than
<code><</code>	Less than
<code>>=</code>	Greater than or equal to
<code><=</code>	Less than or equal to

Venues

- Small and medium sized venues
- Large multi-use venues
- Health and safety
 - Risk assessment – the process you go through to ensure an event is safe.
 - Capacity – maximum number of audience members
 - Fire precautions
 - Policies and procedures – that all venues should have
- Performance roles

Production and Promotion:

- Record labels
 - Major – sponsored and more money.
 - Independent – going it alone and on a budget.
- Music Publishing – anything involving the distribution of music to an audience.
- Promoting (marketing)
- Broadcasting – TV, Radio, Internet
- Marketing and distribution

Commonly Confused Job Roles:

Producer – have artistic overview of a project

Promoter – is responsible for advertising of a product.

Mastering Engineer – Puts the finishing touches to a recording once it is all finished.

Manager – NEVER write this without clarifying the type of manager (tour manager, venue manager, band manager etc.)

Employment:

Freelance – working for yourself.

Contracted – Having a boss, a monthly salary, and terms to work to.

Short Term – a short amount of time (one gig or one day)

Long Term – months or years.

Tax / National Insurance – the amounts you have to pay to the government regardless of whether you are freelance or contracted.

Music Unit 1

Unions

- Musicians Union (MU) – for performers, instrumental teachers and composers.
- Equity – For actors, dancers, and choreographers.
- BECTU (Broadcasting Entertainment Cinematograph and Theatre Union). – for media and production roles.
- Monitor employment conditions
- Give advice on employment and contracts
- Support in relation to fair working conditions
- Handling of disputes

Services, Companies, and Agencies

- Royalty Collection Agencies
 - Performing Rights Society (PRS) – collects for composers
 - Phonographic Performance Limited (PPL) – collects for performers
- Artist Representation
 - Management – deals with finances, bookings, organisation.
 - Agent – books gigs.
 - Public Relations (PR) – marketing.
 - Stylist
- Hire companies – for equipment.
- Transport Companies – to transport band and equipment.

Relationships within the industry:

- How promoters match acts to venue, e.g. location and type of venue, size and scale of performance area, facilities, technical equipment/support available, audience capacity, type and intention of performance, timing and availability, financial considerations
- The importance of effective communication between those working in the industry
- How promoters and musicians evaluate the advantages and disadvantages of hiring and buying equipment
- How promoters and musicians find and select suppliers and installers of equipment
- How trade bodies such as the Music Producers Guild (MPG), the Association of Professional Recording Services (APRS), PRS for Music and PLASA support their members and their industries
- How promoters and musicians find and select transport companies for touring
- How promoters secure funding for and market events.

Year 9 Drama Devising

Common Drama Devising Techniques

Spontaneous Improvisation: where you devise drama on the spot based upon a stimulus.

Still Image: a frozen portrait.

Thought Tracking: Characters speak aloud from a still image.

Hot seating: Questioning an actor who is improvising answers in character.

Marking the moment: Using a particular style or difference to make a significant moment stand out.

Cross-cutting: 2 or more scenes that are scheduled for the same time happening on stage at once but alternating which one is 'alive'.

Flash back / Flash forward: A moment in which you show what happened in the past or the future.

Montage: A sequence of images, or short sections, showing progression over time. Usually to music.

Movement sequence: a pattern of movements repeated with no speech.

Mime: Acting without speaking in an exaggerated way.

Soundscape: Using your mouths and bodies to create a wall of sound to represent a setting or atmosphere.

Story telling: using various states of narration, direct address, tones of voice, volumes, pacing etc. to tell a story.

Verbatim: Using someone else's words from an interview or speech to create a script for your piece.

Key Terms

Devising: Creating a piece of drama from a stimulus

Stimulus: A starting point, a story, picture, piece of music, newspaper article or photograph that helps you to generate your initial ideas.

Theme: An idea or message that runs through your performance.

Episodic Structure: When your scenes are linked by theme rather than plot. They can jump about in place and time and don't even have to follow the same characters.

Eclectic style: using more than one style in your piece of drama. In your devised piece each scene could use a different

Performance Skills

Facial expressions: using your face to convey emotion.

Gesture: using your body to help emphasise speech and emotion.

Posture: the way you hold your body to convey character.

Levels: the different heights you use to show emotion, power, or authority.

Proxemics: the spacing between characters to show the relationship between them.

Positioning: the placing of characters on stage to show relationships, power, and emotion.

Projection: how well you project your character to the audience. OR. How loudly you speak.

Volume: the loudness of your voice.

Pace: How quickly you move or speak when conveying a character.

Tone: The way you use your voice to convey emotion. For example, angry or happy.

Pitch: how high or low you use your voice.

Pause: A break in speech, usually to indicate the character is thinking.

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

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.



Cooking Skills Key words: line, blind bake, pipe, boil, simmer, steam, grill, bake, roast, poach, blind bake, flute, rubbing in, whisking, gluten, roux, coulis,

Equipment key words: food processor, electric whisk, microwave, juicer, zester, piping bag/nozzle, probe, blow torch. Pasta machine

Knowledge Key words: nutrient, function (what it does), soluble (dissolves), deficiency (lack of), excess (too much), life stages (eg childhood, adult etc), obesity, vegetarian, vegan, coeliac, lactose intolerant, diabetes. Tooth decay, non-visible signs (self-esteem, depression,

Unit: Catering in Action



Nutritional Needs of specific groups of people Different life stages – childhood, adulthood, later adulthood, special diets, medical conditions, activity levels.



Deficiency
Tiredness and low energy.
Excess
Can cause obesity. Excess sugar is stored in muscle cells ready to be used later. If we don't use it all then it turns into fat. Too

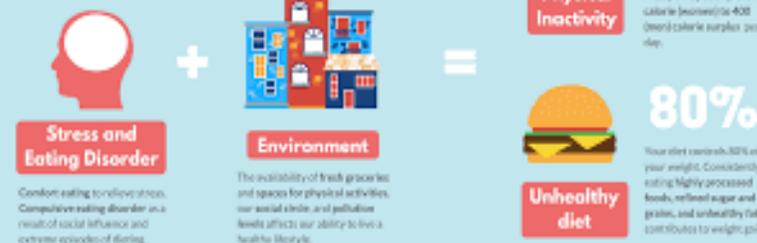
23 CATERING

Nutritional Deficiencies Disorders

Vitamins	Deficiency Disease	Symptoms
Vitamin - A	Loss of Vision	Poor vision, loss of vision in darkness
Vitamin - B ₁	Beriberi	Weak muscles and very little energy to work
Vitamin - C	Scurvy	Bleeding gums
Vitamin - D	Rickets	Bones are bent
Calcium	Weak bone & tooth decay	Weak bone and tooth decay
Iodine	Goitre	Gland in neck
Iron	Anaemia	Weakness

OBESITY: THE ORIGINS

You don't become obese overnight. Obesity is developed through long-term lack of physical activity, poor diet choices, environmental factors, mental stress, and in some cases genes.

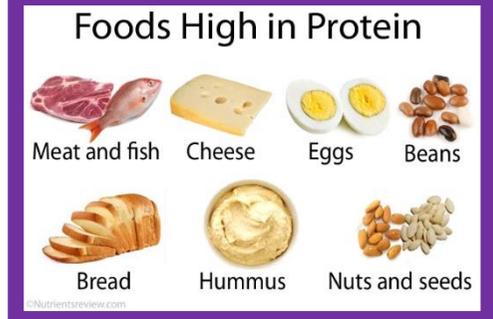


Stress and Eating Disorder
Compulsive eating, food restriction, and extreme episodes of bingeing.

Environment
The availability of fresh groceries and spaces for physical activities, our social circle, and pollution levels affects our ability to live a healthy lifestyle.

20%
Physical activity burns up to 20% of your daily caloric intake. Having a sedentary lifestyle may add up to a 300 calorie (or more) to 400 (or more) calorie surplus per day.

80%
Your diet accounts for 80% of your weight. Consistently eating highly processed foods, refined sugar and grains, and unhealthy fats contributes to weight gain.

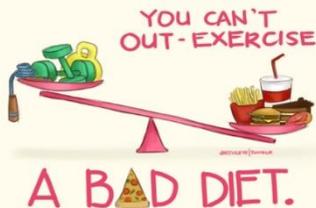


Deficiency
In young children growth slows down or stops. Failure to digest and absorb foods properly, diarrhoea, loss of fluid, dehydration. Muscle wasting and anaemia.

Excess intake
If you consume more protein than your body needs, the excess protein is used to give your body energy or turned into fat.

Potential Negative Effects of Fat

- Eating too much of some types of fats can increase our risk for: **heart disease, diabetes, and certain types of cancer.**
- Some fats increase LDL "bad" cholesterol.
- Too much fat may lead to **weight gain – obesity.**



- Obesity
- Strokes
- High Blood Pressure
- Coronary Heart Disease
- Cancer
- Tooth Decay
- Diabetes -Type 2

Research shows that caloric restriction and intermittent fasting can lead to decreases in depression and anxiety.

Eating at the same times every day helps keep your blood sugar levels steady and promotes a stable mood.

Skipping meals usually leads to overeating at the next meal which can lead to crashing and a glum mood.

Refined carbohydrates, such as sugar found in junk food, can make your blood sugar levels go up and down erratically and cause mood fluctuations.

PLASTICS

Thermosetting
Thermoplastics
Acrylic
Nylon
Formaldehyde
Recycling
Polyester
Polymer
Injection
Rotational
Microplastics

(Look up the meanings of these words).

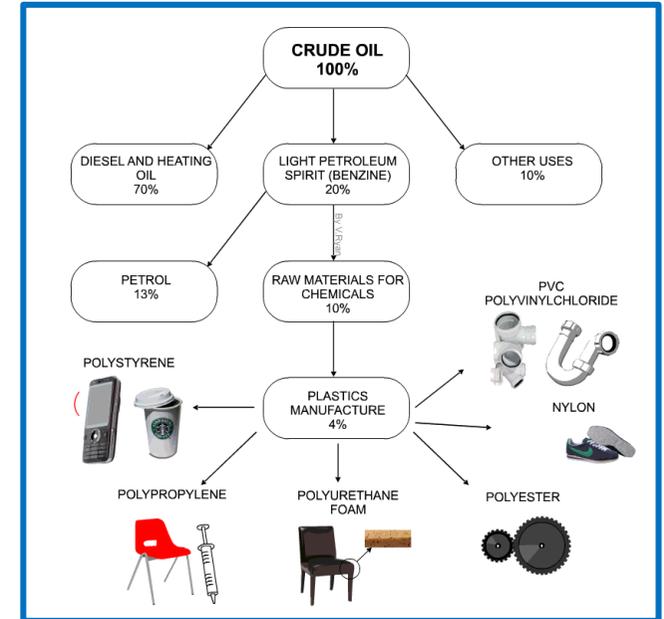
WHAT ARE THERMOPLASTICS ?

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

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.

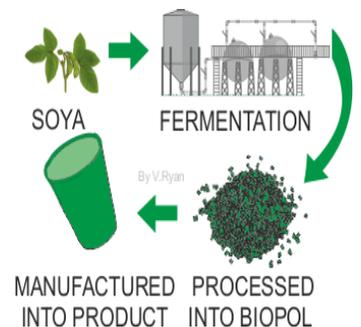
91% of plastic is never recycled.

ADVANTAGES OF PLASTICS

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

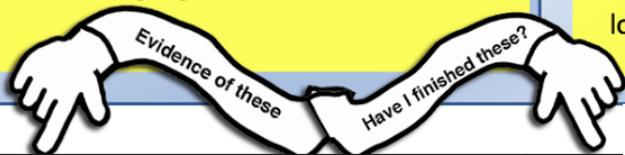
BIOPOL BIODEGRADABLE PLASTIC

Biopol is the brand name for Polyhydroxybutyrate. It is an environmentally friendly polymer. It is processed through the fermentation of corn and soya.



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

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.

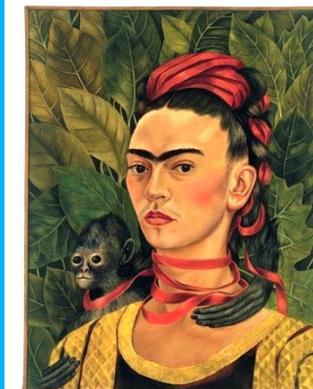
Surrealist: avant-garde, culture, symbol, communist, colonial, middle-class.



Vermeer- Old Master



Van Gogh-Modern



Frida Kahlo- Surrealism

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. 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: ink drawing, tonal painting, photography, collage.

-*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.

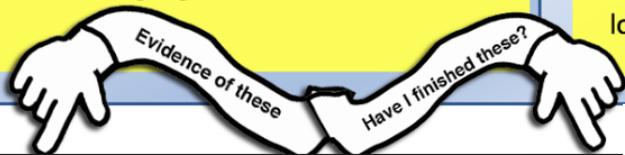
-My personal response to a work of art: I use the artist's visual language, but using my own images as starting point.

-To convey meaning: to communicate.

-A technique: a way to do something.

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 **Photography**. Portfolio Topic 1:

Photography and Design Styles

A visual style is a choice of visual elements that, combined in

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

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. 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.

-*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.

Physical Training

Components of Fitness	Definition
Agility	The ability to move and change direction, at speed, while maintaining control.
Balance	The ability of the performer to maintain their centre of mass over their base of support whilst static or dynamic
Cardiovascular Endurance	The ability of the heart and lungs to supply oxygen to the working muscles
Co-ordination	The ability to use two or more different parts of the body together, smoothly and efficiently.
Flexibility	The range of movements possible at a joint
Muscular Endurance	The ability of a muscle or muscle group to undergo repeated contractions, avoiding fatigue
Power	The product of strength and speed
Reaction time	The time taken to initiate a response to a stimulus
Strength	The ability to overcome a resistance
Speed	The maximum rate at which an individual is able to perform a movement or cover a distance in a period.

Fitness Testing	
Reasons for Fitness Testing	Limitations to Fitness Testing
<ul style="list-style-type: none"> They identify strengths and or weaknesses in a performance and the success of a training programme They monitor improvement They show a starting level of fitness They inform training requirements They compare against norms of the group and national averages They motivate and performance sets goals They provide variety to a training programme 	<ul style="list-style-type: none"> Tests are often not sport specific or too general They do not replicate movements of an activity They do not replicate competitive conditions required in sports Many do not use direct measuring or are submaximal and therefore inaccurate Some need motivation and therefore they can have questionable reliability Many must be carried out with the correct procedures to increase validity of results

7 Methods of Training		
Continuous Training	Fartlek Training	Interval Training (HIIT)
Involves exercising at a steady pace at moderate intensity for a minimum of 30 minutes with no rest.	Varying speed, terrain and work: recovery ratios.	Periods of exercising hard, interspersed with periods of rest or low intensity exercise.
Static Stretching	Weight Training	Plyometric Training
A way to stretch to increase flexibility, held (isometric) for up to 30 seconds	Choice of weight/exercise depends on fitness aim. E.g. strength/power training or muscular endurance.	use of plyometric exercises, e.g. bounding, depth jumping, to increase power
Circuit Training		
When creating a circuit you should consider the following: Space available, Number of stations, Work: rest ratio and Content/demand of circuit		

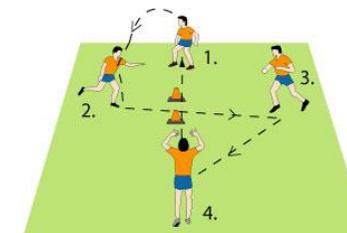
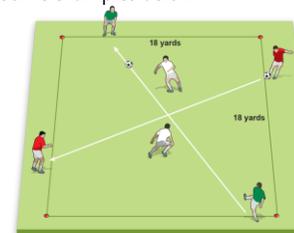
Principles of Training	
<p>SPORT Principle:</p> <p>S – Specificity: training should be focused specifically towards your chosen sport or activity.</p> <p>P – Progressive: progressively increasing the amount of exercise you do over a period of time</p> <p>O – Overload: working the body harder than normal</p> <p>R – Reversibility: process of an athletes body losing fitness levels</p> <p>T – Tedium: Making sure the training is not boring.</p>	<p>F.I.T.T Principle:</p> <p>F – Frequency (How often)</p> <p>I – Intensity (How hard)</p> <p>T – Time (How long)</p> <p>T – Type (What type)</p>

Optimising Training			
Aerobic Training		Anaerobic Training	
		Muscular Endurance	Strength
220 – Age = Max Heart Rate		Below 70% of your one rep-max	Above 70% of your one rep-max
		Low weight x High repetitions	High weight x Low repetitions
60 – 80% of your maximum Heart Rate	80-90% of your maximum Heart Rate	12-15 repetitions	4-6 repetitions

OCR Sport Studies

RO53 - Sports Leadership

Think about planning your session and sketch some ideas of drills that you have done either in PE or at clubs and could replicate or think of new ideas. Here are some examples below.



Aims & Objectives: What you want them to achieve or do?

Participants: What do you know about them that you need to plan for?

Tasks or Activities: What are you going to do with them?

Coaching Points: What do you need to tell or show them?

Resources: What equipment/resources do you need to help you?

Organisation: How are you going to organise/run the activity?

Progression: How will you develop the practice/session to make sure they are improving/developing?

Differentiation: How are you going to change it to make it accessible to all learners?

Qualities of a leader

- Motivational- be inspiring
- Enthusiastic
- Commitment
- Focus
- Appearance – how they look and portray themselves/ impression they make. – leading by example
- Sense of **humour**
- Personality
- Confidence
- Patience
- Style of leadership: autocratic, Democratic; laissez-faire
- Integrity
- Passion
- Will to win
- Knows their players.

Skills of a leader

- **Organisation skills**
- Able to make decisions
- **Communication skills**
 - Verbal e.g. giving instructions
 - Non-verbal e.g. gestures, use of whistle etc.
 - Good listener
- Knowledge of the activity- high level of sport specific knowledge of technical and tactical/use of technical terms;
- Use of language- Have a rapport;
- knowledge of rules and regulations;
- show respect for performers
- Behavior management (how they deal with behavior) and self control and discipline (how they behave themselves).
- Able to plan and structure activities
- Be able to set realistic targets to work to.
- Be able to evaluate performance and make decisions
- Ability to read the game or sporting situation.
- Appreciate and acknowledge good performance – give feedback and feed-forward.
- Create a positive and safe atmosphere for playing and learning

Key definitions and vocabulary-attributes

Appearance	What you look like and the clothes that you wear
Enthusiasm	Being enthusiastic about what you are doing to help your group enjoy what you are doing.
Confidence	Be confident about what you are doing-plan in advance what you are going to do.
Communication	Different ways of getting messages across. This can be verbal and non verbal
Organisation	Getting your equipment ready before you begin to lead your session.
Knowledge	When you can give a lot of information about a subject.
Structure	Following a set pattern to make sure your coaching session flows.
Target setting	Setting people goals of what they can achieve
Language	Talking in an appropriate way
Evaluation	Being able to give the strengths and areas for improvement of something
Leadership	Different ways of leading a group. Autocratic (strict and demanding) Democratic (laid back and gives the group more choice)
Humour	Building a positive relationship with your group by using humour.
Personality	Introvert-quiet and shy Extrovert-loud and outgoing
Conduct	Making sure you act professionally at all times
Health and safety	Making sure you know if there are any medical conditions from the people in your group, making sure the area is safe to use, having a first aid kit, making sure all of your group are wearing the correct kit.
Equality	Treating everyone equally no matter their age, race, gender etc
Rules and regulations	Making sure you follow the rules of the sport to keep your group safe and also the rules of the organisation of where you are coaching.

Differentiation by STEP:

- **SPACE** – make the space bigger or smaller to challenge. E.g.

Learning grids and channels (1v1, 2v1, 3v2, 5v3)

Students are asked to adapt space-accordingly by either limiting space or enlarging playing areas depending on experience, confidence or ability.

In attack, larger spaces are easier

In defence, larger spaces are more difficult

T- TASK – Use different levels of task or expected outcomes e.g.

Bronze-Silver-Gold.

Students

either as individuals or groups are given different tasks/starting points based on prior attainment/experience. Able students can be challenged by setting tasks that encourage them to think at higher levels through the inclusion of problem-solving, investigation and use of higher order thinking skills.

E- EQUIPMENT – Size or weight of equipment

Students are set a common task but are given different resources, depending on ability and confidence

P- PEOPLE – Change the numbers. Students have a common task

to complete but are grouped in a way that ensures success for all. Able children can sometimes be grouped with peers of similar ability and expected to perform at higher levels or given the role of leader in supporting less able

We would always encourage you to speak to the people you live with or someone in school if you have a worry or a problem. If you can't, or you want to read more about an issue affecting you or someone you know, here are some useful websites and phone numbers. They offer free, confidential advice and support.



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

Advice and help about bullying on- and offline



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



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