



**The Abbey
School**

Knowledge Organiser

Year 9 Term 5

2023 - 2024

CONTENTS

- English **P.3-4**
- Literacy **P.5-6**
- Maths **P.7-12**
- Science **P.13-22**
- History **P.23-26**
- Geography **P.27-30**
- Art **P.31-34**
- P.E **P.35-38**
- Sports Science **P.39-44**
- R.E **P.45**
- Drama **P.46-47**
- Dance **P.48-50**
- Business **P.51-52**
- ICT **P.53-54**
- Media **P.55**
- MFL **P.56-59**
- Child Development **P.60-61**
- Health and Social **P.62-63**
- Design Technology **P.64-66**



BIG QUESTIONS:

What was life like in the Elizabethan times?

What happens in Macbeth?

How are the witches presented at the start of the play?

How are we introduced to Macbeth's character?

What do we learn about Macbeth and Banquo from their reaction to the witches?

What do we learn about Macbeth in Act 1 Scene 4?

How is Lady Macbeth introduced to us?

Why doesn't Macbeth want to murder Duncan?

How does Lady Macbeth react when Macbeth refuses to go through with the murder?

How is Macbeth's internal conflict presented?

What do Macbeth and Lady Macbeth do after the murder?

Why is the Porter significant?

How is Macduff's character portrayed?

How does Duncan's murder affect the great chain of being?

How has Macbeth changed by Act 3?

How does Macbeth persuade the murderers to kill Banquo?

How is Macbeth showing signs of mental struggle?

Context (AO3)

- *Macbeth* was most likely written in 1606, early in the reign of James I. James was a patron of Shakespeare's acting company, and of all the plays Shakespeare wrote under James's reign, *Macbeth* most clearly reflects the playwright's close relationship with the sovereign.
- A Jacobean audience would have believed in **The Great Chain of Being**. The Great Chain of Being offers the idea that there is an order to everything and if this order is disrupted there will be chaos. The Great Chain of Being is a major influence on Shakespeare's *Macbeth*. Macbeth disturbs the natural order of things by murdering the king and stealing the throne.
- People were very superstitious and believed in witches and witchcraft. Evidence of a relationship with evil spirits **condemned** a suspect to death by hanging, burning or drowning.
- Society at the time was **patriarchal**. Women were viewed as the 'weaker sex' and their roles in society were limited because of this.

Act 1

Macbeth and Banquo are two Scottish noblemen who encounter three witches on a heath. The witches give them both predictions (prophecies). One of the predictions given to Macbeth comes true almost immediately. Macbeth writes a letter to Lady Macbeth who is excited by the news and summons evil spirits to give her the courage to commit murder. Macbeth arrives to announce that King Duncan is coming to spend the night in their castle.

Act 2

Macbeth has agreed to kill Duncan. Macbeth begins to hallucinate and has visions of a bloody dagger; this represents his conscience and the doubts he is having. He does however, go on to kill Duncan with some encouragement from his wife (Lady Macbeth). Duncan is found dead at dawn by Macduff. The King's sons (Donalbain and Malcolm) flee, fearing for their lives. In their absence, Macbeth is announced King.

Act 3

Banquo begins to suspect that Macbeth was involved in Duncan's murder. Macbeth fears Banquo and so he plans to have Banquo and his son, Fleance, murdered. Banquo is killed but Fleance escapes. The ghost of Banquo appears at a feast to haunt Macbeth. The guests become suspicious of Macbeth because of his violent reaction to a ghost only he can see.

Key Quotes

- | | |
|---|--|
| <p>1. <i>"Why do you dress me in borrowed robes"</i></p> <p>2. <i>"It is too full o' the milk of human kindness to catch the nearest way"</i></p> <p>3. <i>"Hie thee hither that I may pour my spirits in thine ear"</i></p> <p>4. <i>"Look like the innocent flower but be the serpent under't"</i></p> <p>5. <i>"Stars hide your fires, let not light see my black and deep desires"</i></p> <p>6. <i>"But now I am cabined, cribbed, confined, bound in to saucy doubts and fears"</i></p> | <p>7. <i>"We have scotch'd the snake, not killed it"</i></p> <p>8. <i>"Out damned spot – out I say"</i></p> <p>9. <i>"My hands are of your colour but I shame to wear a heart so white"</i></p> <p>10. <i>"To be thus is nothing, but to be safely thus"</i></p> <p>11. <i>"Fair is foul and foul is fair"</i></p> <p>12. <i>"O, full of scorpions is my mind"</i></p> |
|---|--|

Key Themes

Ambition



The downfall of Macbeth and Lady Macbeth is caused by their fatal flaw: their ambition. Shakespeare's purpose could be to show the corrupting effects of ambition on individuals.

Evil



Shakespeare presents the theme of evil through various character's actions. Often these evil forces result in death or continued feuds.

Supernatural



A Jacobean audience would have been very interested in Macbeth due to the reoccurring theme of the supernatural.

Appearance vs Reality



Macbeth's false appearances enable him to proceed with his plan to kill Duncan and take the throne for himself.

Guilt



Shakespeare shows that guilt is an inevitable consequence of committing unnatural acts. Guilt is presented through blood, sleeplessness and hallucinations.

Kingship



Kingship is explored through Macbeth's own desire to become King and the plot is driven by the exploration of what makes a worthy King.

Homework Links

For your homework, we will be focusing on your creative writing.

Make sure you revise your GOMASSIVE techniques and use your Literacy Knowledge Organiser to help you.



Sentence Structures

- Independent Clause:** A clause that can stand alone as a sentence. E.g. The cat sat on the mat.
Contains a subject and a verb.
- Subordinate Clause:** A clause that depends on an independent clause to make sense. E.g. Without turning around, the cat sat on the mat.
- Simple Sentence:** Contains just one clause (subject + verb) E.g. Tom went to the shops.
- Compound Sentence:** Independent Clause + Conjunction (FANBOYS) + Independent Clause (For, And, Nor, But, Yet, So) E.g. Tom went to the shops and he bought some bread.
- Complex Sentence:** Contains one main clause and one or more subordinate clause/s. E.g. Although it looked difficult, they still pushed on with the challenge.
- Exclamatory:** A sentence that shows great emotions. E.g. I am appalled by your behaviour!
- Imperative:** A sentence that gives commands. E.g. Get out!
- Interrogative:** A sentence that asks a question (not rhetorical questions). E.g. How much is that?
- Declarative:** A sentence that makes a declaration. E.g. She sells sea-shells.

Sentence Openers

Adverbs Quickly, Carefully, Bravely, Quietly, Slowly, Suddenly, Happily,

Connectives Instead, Unless, Soon, Before, Eventually, While, However

Adjectives Happy and cheerful, Sweet and kind, Scared but excited, Tired and weary,

Relative Pronouns Which, That (animals and things), Who (people)



Paragraphs



Ti...you move to a new period of time

P ... you move to a different place/location

To ... you move from one topic to another

P ... you bring a new person into your writing, or change from one person to another - including dialogue (speech)

Homophones: words that sound the same but have different meanings

- Their** - means it belongs to them. E.g. I ate their sweets.
- They're** - short for they are. E.g. They are going to be cross.
- There** - refers to a place. E.g. I'm going to hide over there.
- Your** - refers to something that belongs to you. E.g. Your bag.
- You're** - contraction of 'you are.' E.g. You're going to win.

Prepositions Inside, Next to, Above, Hidden in, Behind, Under, Past

Ing Words Eating, Crying, Thinking, Laughing, Shouting, Smiling,

Ed Words Worried, Defeated, Scared, Flabbergasted, Shocked,



Punctuation

- **Full stops:** remember to use a full stop at the end of every sentence.
- **Capital Letters :** make sure every name of something has a capital letter. *E.g. California has a capital letter. Also, make sure every new sentence starts with a capital letter.*
- **Apostrophes:** you can use apostrophes to connect certain words together. *E.g. It is = It's OR to express belonging or property = John's phone*
- **Exclamation marks:** used to end a sentence to show a strong feeling of emotion like surprise, anger, or shock. *E.g. I'm so frightened!*
- **Ellipses:** used to show an omission of words, a pause in thought or to create suspense. *E.g. Suddenly, there it was ... his worst nightmare.*
- **Colons:** used to precede lists or explanations. *E.g. I went to the store and bought a lot of fruit: peaches, apples, oranges and pears. Sarah wrote a story: The Hungry Fish.*
- **Semi Colons:** used to join two related independent clauses. *E.g. We made too many mistakes; we lost the game. Also, use a semi-colon instead of a comma, usually in a list. E.g. You will need many backpacking items: a sleeping bag; torch ; tent ; and pillow.*
- **Hyphens:** you can use hyphens for a number of reasons.
 - To separate sentences with added information e.g. *I enjoy English – as well as Maths.*
 - To indicate periods of time. *E.g. 2000-2006.*
 - To form hyphenated words. *E.g. self-respect.*
 - To create emphasis. *E.g. Mum loves seafood – she absolutely adores seafood.*
- **Brackets:** use brackets to indicate added information. The sentence should still make sense when removed. *E.g. I did my homework, (it took me twenty minutes) and brought it in early.*

The 7 Main Commas Rules

- 1.) Use a comma before a conjunction, (and, but, nor, yet, or, so), to connect two independent clauses.
E.g. I had an English test last night, so I revised.
- 2.) Use a comma to set off an opening phrase.
E.g. As such, I feel there is much I can learn.
- 3.) Use a comma when using quotes to separate the quote from the rest of the sentence.
E.g. Like Bob Johnson said, "It's a great day for hockey".
- 4.) Use a comma to separate adjectives in a descriptive list.
E.g. The pizza was hot, delicious and freshly cooked.
- 5.) Use a comma to separate three or more things in a series.
E.g. Of Charles Dickens' novels, I have read "A Christmas Carol", "Oliver Twist", and "Great Expectations".
- 6.) Use a comma with phrases that present a contrast.
E.g. Learning about Hemingway can be highly advantageous for students, not only in their secondary school studies, but also in their future careers.
- 7.) Use a comma to set off a parenthetical element (added information that can be taken out without changing the meaning of the sentence).
E.g. Now, many years after their time, we as a country are faced at the starting ground where these men once were.

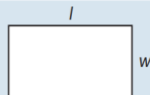
Subject: Mathematics

Topic: Recall Knowledge

Year / Group: GCSE F/H
Term: 1-6

Areas

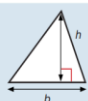
Rectangle = $l \times w$



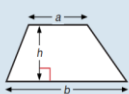
Parallelogram = $b \times h$



Triangle = $\frac{1}{2} b \times h$

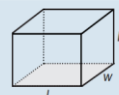


Trapezium = $\frac{1}{2} (a + b)h$

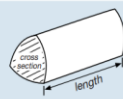


Volumes

Cuboid = $l \times w \times h$



Prism = area of cross section \times length



Cylinder = $\pi r^2 h$



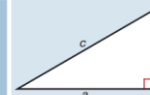
Volume of pyramid = $\frac{1}{3} \times$ area of base \times h



Pythagoras

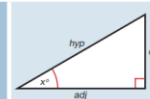
Pythagoras' Theorem

For a right-angled triangle,
 $a^2 + b^2 = c^2$



Trigonometric ratios (new to F)

$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$, $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$, $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$



Compound measures

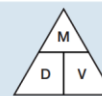
Speed

speed = $\frac{\text{distance}}{\text{time}}$



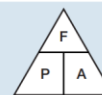
Density

density = $\frac{\text{mass}}{\text{volume}}$



Pressure

pressure = $\frac{\text{force}}{\text{area}}$

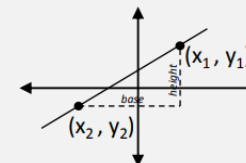


Gradient of a Line

$m = \frac{y_2 - y_1}{x_2 - x_1}$

or

$m = \frac{\text{height}}{\text{base}}$



Midpoint of two points

between (x_1, y_1) and (x_2, y_2) $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

Compound Growth & Decay

The amount after n years (or days, etc.) is:

starting amount $\times \left(1 \pm \frac{r}{100} \right)^n$

where r is the rate of change.

The \pm means $+$ for growth and $-$ for decay

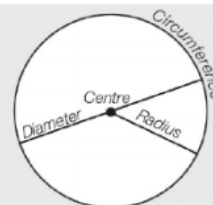
Literacy In Maths	Command Words
Evaluate ...	Work out and write your answer
Work out ...	Working out is required
Calculate ...	Working out is required. A calculator may be needed.
Solve ...	Work out the values
Prove ...	All working must be shown in steps to link reasons and values.
Expand...	Multiply out of the brackets
Draw...	Draw accurately with a pencil and equipment.
Explain ...	Use words to give reasons
Factorise	The reverse process of expanding brackets. Remove the HCF.
Estimate	Work out an approximate answer using rounded values.

Circles

Circumference = $\pi \times \text{diameter}$, $C = \pi d$

Circumference = $2 \times \pi \times \text{radius}$, $C = 2\pi r$

Area of a circle = $\pi \times \text{radius squared}$, $A = \pi r^2$



Area of a Sector

$A = \frac{\theta}{360^\circ} \times \pi r^2$

Length of an Arc

$A = \frac{\theta}{360^\circ} \times \pi d$

Set Notation

$A \cup B$

Union: in A or B (or both)

$A \cap B$

Intersection: in both A and B

$P(A \text{ or } B) = P(A) + P(B)$

$P(A \text{ and } B) = P(A) \times P(B)$

BIG QUESTIONS

How can we use and interpret expressions, equations and sequences?

Sparx Maths

U325, U755,
U870, U556,
U585, U201,
U759, U509,
U337, U213,
U978, U680,
U206, U958

Key Concepts 1

Solving equations:
Working with inverse operations to find the value of a variable.

Rearranging an equation:
Working with inverse operations to isolate a highlighted variable.

In solving and rearranging we **undo the operations** starting from the last one.

Algebra can be used to support us to find unknowns in a **contextual problem**.

We can always apply a letter to an unknown quantity, to then **set up an equation**.

It will often be used in area and perimeter problems and angle problems in geometry.

Equations

For each step in solving an equation we must do the **inverse** operation

Solve:

$$\begin{array}{rcl} 12 = 3x - 18 & & \\ +18 & & +18 \\ \hline 30 = 3x & & \\ \div 3 & & \div 3 \\ \hline x = 10 & & \end{array}$$

Solve:

$$\begin{array}{rcl} 5(x - 3) = 20 & & \\ \text{Expand} & & \\ 5x - 15 = 20 & & \\ +15 & & +15 \\ \hline 5x = 35 & & \\ \div 5 & & \div 5 \\ \hline x = 7 & & \end{array}$$

Solve:

$$\begin{array}{rcl} 7p - 5 = 3p + 3 & & \\ -3p & & -3p \\ \hline 4p - 5 = 3 & & \\ +5 & & +5 \\ \hline 4p = 8 & & \\ \div 2 & & \div \\ \hline p = 2 & & \end{array}$$

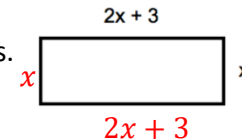
Rearrange to make r the subject of the formulae :

$$\begin{array}{rcl} Q = \frac{2r - 7}{3} & & \\ \times 3 & & \times 3 \\ \hline 3Q = 2r - 7 & & \\ +7 & & +7 \\ \hline 3Q + 7 = 2r & & \\ \div 2 & & \div 2 \\ \hline \frac{3Q + 7}{2} = r & & \end{array}$$

Solve to find the value of x when the perimeter is 42cm.

HINT: Write on all of the lengths of the sides.

$$\begin{array}{rcl} 2x + 3 + 2x + 3 + x + x & = & 42 \\ 9x + 6 & = & 42 \\ 9x & = & 36 \\ x & = & 6 \end{array}$$



We know the perimeter is 42cm

Key Concepts 2

Inequalities show the **range** of numbers that satisfy a rule.

$x < 2$ means x is less than 2

$x \leq 2$ means x is less than or equal to 2

$x > 2$ means x is greater than 2

$x \geq 2$ means x is greater than or equal to 2

On a **number line** we use circles to highlight the key values:

○ is used for less/greater than
● is used for less/greater or equal to

○ is used for less/greater than

Key Concepts 3

Arithmetic or linear sequences increase or decrease by a common amount each time.

Geometric series has a common multiple between each term.

Quadratic sequences include an n^2 . It has a common second difference.

Fibonacci sequences are where you add the two previous terms to find the next term.

Inequalities

a) State the values of n that satisfy:

$$-2 < n \leq 3$$

Cannot be equal to -2 Can be equal to 3

$$-1, 0, 1, 2, 3$$

b) Show this inequality on a number line:



Solve this inequality and represent your answer on a number line:

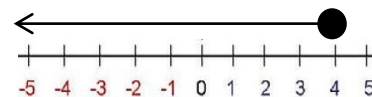
$$5x - 6 \leq 14$$

$$+6 \quad +6$$

$$5x \leq 20$$

$$\div 5 \quad \div 5$$

$$x \leq 4$$



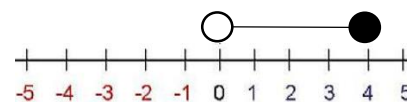
$$4 < 3x + 1 \leq 13$$

$$-1 \quad -1$$

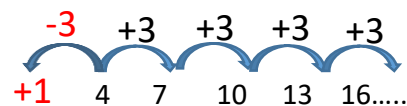
$$3 < 3x \leq 12$$

$$\div 3 \quad \div 3$$

$$1 < x \leq 4$$



Linear/arithmetic sequence:



a) State the n th term

$$3n + 1$$

Difference Times table difference

b) What is the 100th term?

$$3n + 1$$

$$3 \times 100 + 1 = 301$$

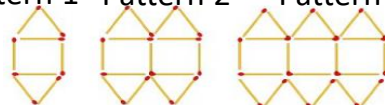
c) Is 100 in this sequence?

$$3n + 1 = 100$$

$$3n = 99$$

$$n = 33 \quad \text{Yes as 33 is an integer.}$$

Pattern 1 Pattern 2 Pattern 3



Sequences

State the n th term.

Hint: Firstly write down the number of matchsticks in each :

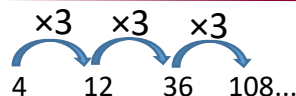
$$7n + 1$$

Pattern 1	Pattern 2	Pattern 3
8	15	22

$$+7$$

$$+7$$

Geometric sequence e.g.



Quadratic sequence e.g. $n^2 + 4$ Find the first 3 numbers in the sequence

$$\text{First term: } 1^2 + 4 = 5$$

$$\text{Third term: } 3^2 + 4 = 13$$

$$\text{Second term: } 2^2 + 4 = 8$$

Homework Links

Sparx Maths

MathsGenie.co.uk/GCSE

Corbettmaths.com/contents

bbc.co.uk/bite size/subjects

Key Vocabulary

Solve

Variable

Inequality

Integer

Linear

Term

Position

Sequence

Subject: Mathematics

9H

Topic: Ch6 Graphs

Year / Group:

Term: 5

BIG QUESTIONS

How do you plot, use and interpret a linear graph?

How do you plot, use and interpret a non-linear graph?

Sparx Maths

U509, U337, U741,
U315, U669, U848,
U193, U836, U757,
U601, U989

Real Life Graphs

Key Terms:

Axes: A fixed reference line on a grid to help show the position of coordinates.

Convert: Change a value or expression from one form to another.

Equation: A mathematical statement containing an equals sign.

Gradient: How steep a line is at any point.

Midpoint: The point halfway along a line or between two coordinates.

Conversion graph: A graph which converts between two variables.

Distance-time graph: A graph that shows a journey and the relationship between the distance reached in a given time.

Real - life graph: This is a graph that represents a situation that we would see in real life.

Intercept: Where two graphs cross.

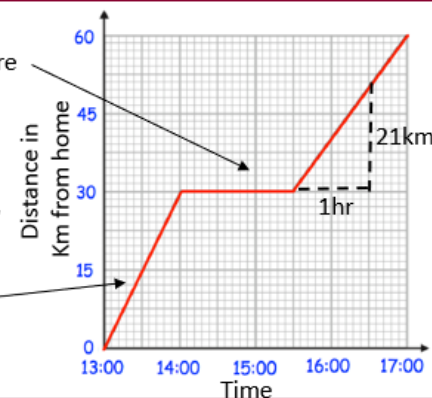
y-intercept: Where a graph crosses the y-axis.

Gradient: The rate of change of one variable with respect to another. This can be seen by the steepness.

Stationary: A person/vehicle is not moving.

Horizontal sections are where the object is stationary

Diagonal lines show the object moving away from home or moving closer to home



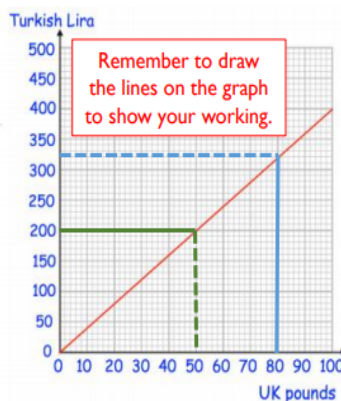
$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{Speed} = \frac{21}{1}$$

$$\text{Speed} = 21 \text{ km/h}$$

What you need to know:

Conversion graphs



Change £80 into Turkish lira

- 1) Start at 80 on the horizontal axes as this for pounds and go up vertically until you reach the line
- 2) From the line, read horizontally until you get to the axis showing lira

Change 600 Turkish lira to pounds

As this value is not shown by the graph, we have to use a value that is to help.

- 1) Start at 200 on the vertical axes and go across horizontally until you reach the line. From the line, read vertically until you get to the axes.
- 2) $200 \text{ lira} = £50$
 $600 \text{ lira} = £150$

Gradient: This is the steepness of the line. The higher the number the steeper the line. We use the formula before to calculate it:

$$\text{Gradient} = \frac{\text{difference in } y}{\text{difference in } x}$$

(3, 4) and (5, 10)

$$\text{Gradient} = \frac{10 - 4}{5 - 3} = \frac{6}{2} = 3$$

Gradient = 3

Subtract the two y values.

Subtract the two x values.

Key Concepts 1

Coordinates in 2D are written as follows:

x is the value that is to the left/right
 y is the value that is to up/down

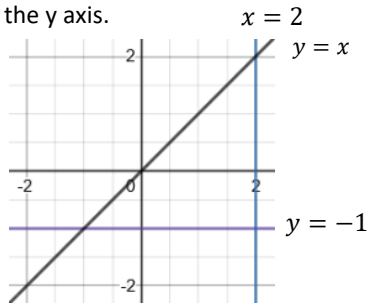
(x, y)

Straight line graphs always have the equation:

$$y = mx + c$$

m is the **gradient** i.e. the steepness of the graph.

c is the **y intercept** i.e. where the graph cuts the y axis.

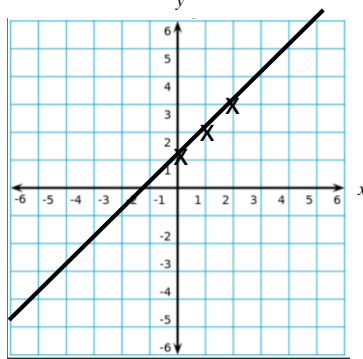


Parallel lines have the same gradient.
 e.g. $y = 2x + 3$ and $y = 2x - 1$

Perpendicular line gradients are the negative reciprocal of one another
 e.g. $y = 2x$ and $y = -\frac{1}{2}x$

Plot the graph of $y = x + 1$

x	0	1	2
y	1	2	3



Linear Graphs

Calculate the equation of this line:

$$y = mx + c$$

$$m = \frac{4}{2} = 2$$

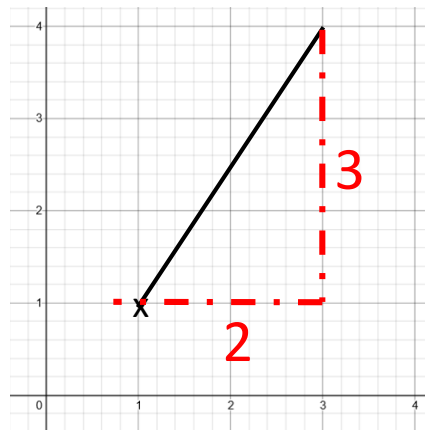
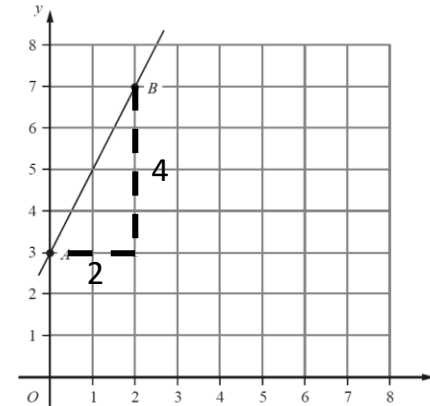
$$y = 2x + c$$

Substitute in a coordinate: (2,7)

$$7 = (2 \times 2) + c$$

$$3 = c$$

$$y = 2x + 3$$



Calculate the midpoint between the coordinates (1,1) and (3,4).

$$\text{Midpoint} = \left(\frac{3+1}{2}, \frac{1+4}{2} \right) = (2, 2.5)$$

Calculate the distance between the coordinates (1,1) and (3,4).

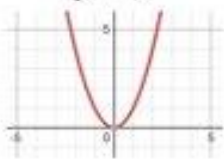
$$\text{Length} = \sqrt{2^2 + 3^2}$$

$$= 3.61$$

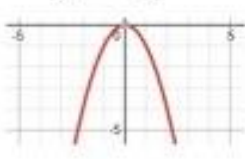
Key Concepts

A quadratic graph will always be in the shape of a parabola.

$$y = x^2$$



$$y = -x^2$$



The roots of a quadratic graph are where the graph crosses the x axis. The roots are the solutions to the equation.

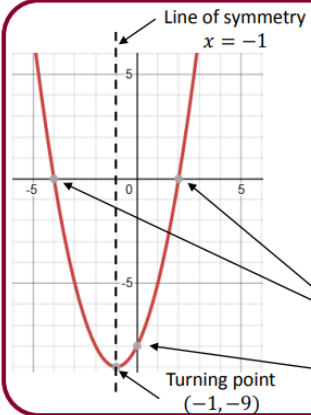
Other Graphs

Examples

$$y = x^2 + 2x - 8$$

A quadratic equation can be solved from its graph.

The roots of the graph tell us the possible solutions for the equation. There can be 1 root, 2 roots or no roots for a quadratic equation. This is dependant on how many times the graph crosses the x axis.

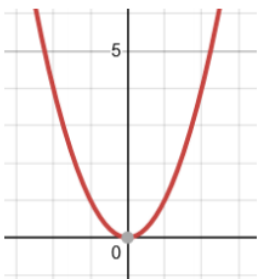


Roots $x = -4$
 $x = 2$

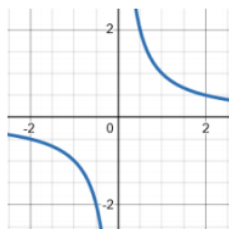
y intercept = -8

Turning point
 $(-1, -9)$

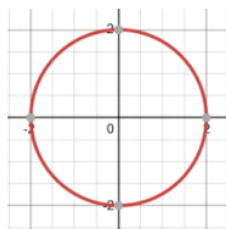
Examples



Quadratic graphs
 $y = x^2$



Reciprocal graphs
 $y = \frac{1}{x}$



Circle graphs
 $x^2 + y^2 = 4$



Cubic graphs
 $y = x^3$

$$1) x^2 + y^2 = 6$$

$$2) y = \frac{1}{x}$$

$$3) y = x^3 - 2$$

$$4) y = x^2 + 1$$

Match the graph with the correct equation:



Homework Links

[MathsGenie.co.uk/GCSE](https://www.mathsgenie.co.uk/GCSE)

Grade 4

- Real Life Graphs

Grade 5

- Quadratic Graphs

- Drawing other graphs

Key Vocabulary

Linear

Quadratic

Parabola

Cubic

Variable

Reciprocal

Gradient

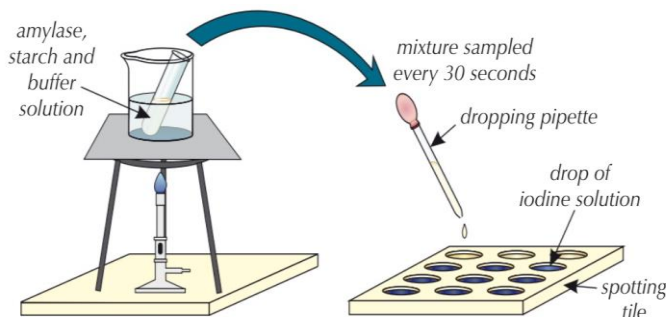
Velocity

Biology 2: Required Practical 4 – Investigating Enzyme Reactions

A) Method to investigate the effect of pH on amylase activity

1. Add one drop of **iodine** to each **spotting well**.
2. Place **2cm³** of **amylase**, **starch** and **pH 5 buffer** solution in three **different test tubes** and place in a water bath set at **35 °C** for 10 minutes.
3. Add all the contents of the test tubes together and start a **stopwatch**.
4. Use a **pipette** to transfer a drop of the solution to an iodine well **every 30 seconds** until the iodine remains **orange/brown**. When the iodine no longer changes colour starch is no longer present.
5. Record the time at which the **iodine no longer changes colour**.
6. Repeat steps 2 to 5 with **pH 6, pH7, pH8 and pH 9 buffer solutions**.

Practical set up



Key term/question	Definition/answer
1. Independent variable (what you change)	pH of the buffer solution
2. Dependent variable (what you measure)	Time taken in seconds for amylase to breakdown starch into glucose
3. Control variables of the amylase, pH buffer and starch solution (what you keep the same) (3)	<u>1.</u> The temperature (° C) <u>2.</u> Volume (cm ³) <u>3.</u> Concentration (g/dm ³)
4. Equipment used to control the temperature	Bunsen Burner or electric water bath
5. Equipment used to control the volume	Pipette
6. What does continuous sampling mean?	Results are recorded at time intervals
7. Optimal pH for amylase within the human body	7
8. What will happen to amylase below or above pH of 7?	Amylase will denature
9. Optimal temperature for enzyme activity within the human body	37 °C
10. Why is the experiment repeated two more times?	To identify any anomalies and to determine if the results are accurate .
11. Why is a pH buffer used?	To keep the pH of the solution the same
12. Why do you leave the amylase, starch and pH solution in the water bath for 10 minutes before adding the solutions together?	To ensure solutions reach the desired temperature before starting the investigation
13. How do you know that all the starch solution has been broken down?	The iodine will no longer change colour to blue/black but will remain orange/brown
14. Rate of reaction =	1000 ÷ time

B) Evaluating results

A student set up a model to represent the digestion and absorption of food molecules in the digestive system. The partially permeable tubing represents the small intestine and the water in the test tube represents the blood

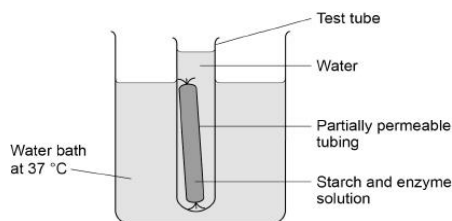


Table of results

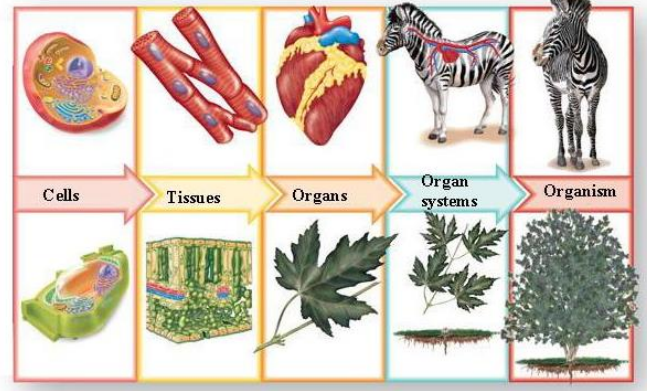
Test	Description of liquid	Result of starch test	Results of sugar test
1	Mixture inside tubing at start	✓	X
2	Water in the test tube at start	X	X
3	Mixture inside tubing after 30 minutes	✓	✓
4	Water in the test tube after 30 minutes	X	✓

Test 1 Starch ✓ glucose X 	Test 2 Starch X glucose X
Test 3 Starch ✓ glucose ✓ 	Test 4 Starch X glucose ✓

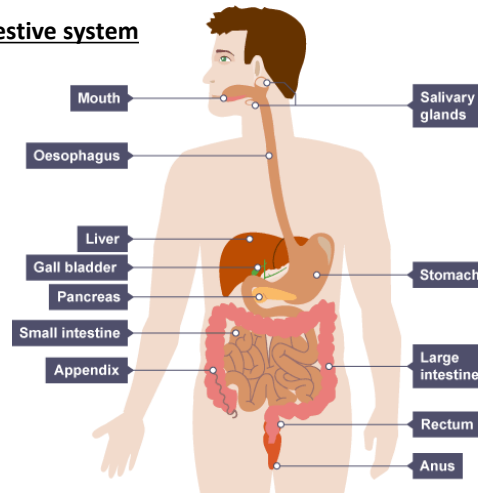
Biology 2: Organisation Knowledge Organiser

A) Organisation, Enzymes and Digestion

Levels of organisation



Digestive system

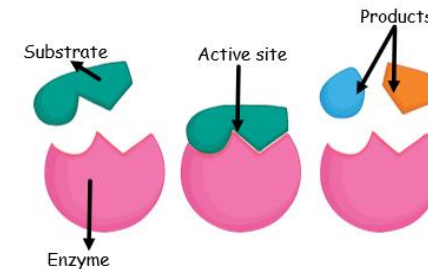


Key term/question	Definition/answer
1. Cells	Basic building blocks of all living organisms
2. Tissues	similar cells working together to perform a particular function
3. Organ	Different tissues working together to perform a particular function
4. Organ system	Different organs working together to perform a particular function
5. Organism	Different organ systems working together
6. Digestion	Large insoluble molecules are broken down into smaller soluble molecules
7. What is mechanical digestion?	Physical breakdown of food (e.g. teeth grinding, the stomach churning)
8. What is chemical digestion?	Chemical breakdown of food by enzymes
9. Function of salivary glands	Secretes the enzyme amylase
10. Three functions of the stomach (3)	<u>1.</u> Contraction of the muscular walls (mechanical digestion) <u>2.</u> Protease is secreted Hydrochloric acid is secreted
11. Functions of hydrochloric acid (2)	<u>1.</u> Lowers the pH of the stomach <u>2.</u> Kills harmful microorganisms
12. Function of the pancreas	Makes enzymes
13. Function of the liver	Makes bile
14. Function of the gall bladder	Stores bile
15. Functions of bile (2)	<u>1.</u> Neutralises the hydrochloric acid <u>2.</u> Emulsifies fats

Key term/question	Definition/answer
16. Function of the small intestine	Soluble food molecules are absorbed into the blood stream
17. Function of the large intestine	Absorbs water, leaving faeces
18. What are enzymes in the body?	Biological catalyst made of protein
19. Catalyst	Increases the speed of a reaction, without being changed or used up
20. Factors needed for optimum conditions for enzymes (2)	<u>1.</u> Temperature <u>2.</u> pH
21. Denatured	Enzyme loses its shape, so substrate won't fit into the active site.
22. Substrate	What the enzymes breaks down (e.g. starch, proteins and lipids)

Lock and key theory

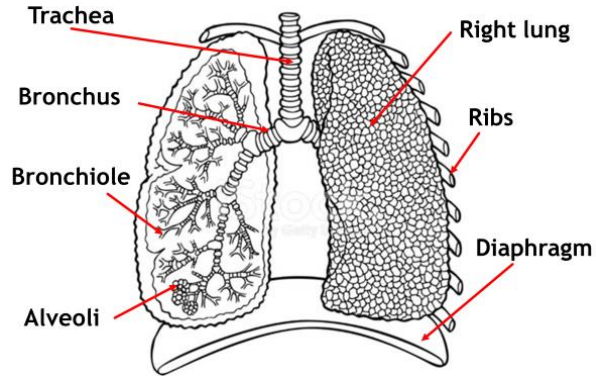
A model people use to explain how enzymes work is the lock and key theory. The enzyme is the 'lock' and the substrate is the 'key'. Substrates fit the enzymes active site, then react, turning into products.



Enzyme	Where enzyme is produced	Where enzyme is used	Function of enzyme
Carbohydrase / amylase	Salivary glands and pancreas	Mouth and small intestine	breaks down starch into glucose
Protease	Stomach, pancreas and small intestine	Stomach and small intestine	breaks down proteins into amino acids
Lipase	Pancreas and small intestine	Small intestine	breaks down lipids into glycerol and fatty acids

Biology 2: Organisation Knowledge Organiser

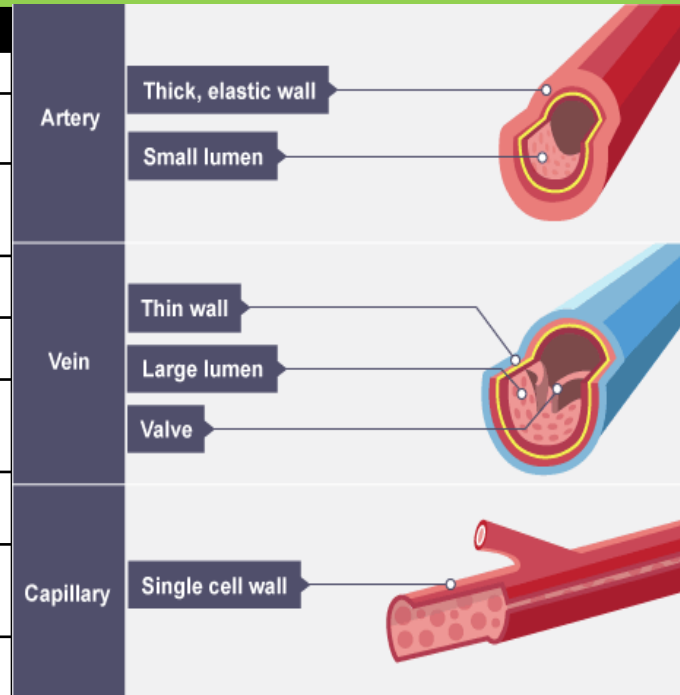
B) Respiratory System



Key term/question	Definition/answer
26. Components of blood (4)	<u>1.</u> Red blood cells <u>2.</u> White blood cells <u>3.</u> Plasma <u>4.</u> Platelets
27. Function of red blood cells	To transport oxygen to every cell of the body
28. Adaptations of red blood cells (3)	<u>1.</u> Biconcave shape to increase surface area <u>2.</u> contains haemoglobin which carries oxygen <u>3.</u> has no nucleus to give more space for carrying haemoglobin
29. Functions of white blood cells (3)	<u>1.</u> Engulf microorganisms and digests them <u>2.</u> Produce antibodies <u>3.</u> Produce antitoxins
30. Functions of plasma (4)	<u>1.</u> Carries the red blood cells, white blood cells and platelets <u>2.</u> Delivers nutrients to cells (e.g. glucose, amino acids) <u>3.</u> Transport carbon dioxide from organs to lungs <u>4.</u> Transports urea from the liver to the kidneys
31. Function of platelets	Helps blood to clot to seal a wound

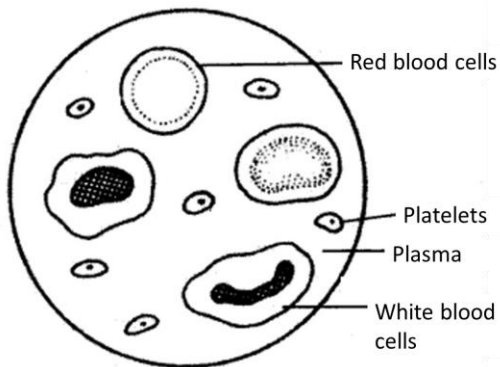
D) Circulatory System – Blood Vessels

Key term/question	Definition/answer
32. Blood vessels (3)	<u>1.</u> Arteries <u>2.</u> Capillaries <u>3.</u> Veins
33. Arteries	Blood vessel that carries blood away from the heart.
34. Artery structure (to withstand high blood pressure) (3)	<u>1.</u> Thick muscular walls <u>2.</u> Strong and elastic walls <u>3.</u> Small lumen
35. Examples of arteries of the heart (2)	<u>1.</u> Aorta <u>2.</u> Pulmonary artery
36. Capillaries	Blood vessel where exchange of materials at tissues take place.
37. Capillaries structure (to help with exchange of materials) (3)	<u>1.</u> One cell thick walls <u>2.</u> Permeable walls <u>3.</u> Very narrow to provide a large surface area
38. Veins	Blood vessel that carries blood back to the heart.
39. Veins structure (to carry blood at low pressure) (3)	<u>1.</u> Valves which prevent backflow of blood <u>2.</u> Thin walls <u>3.</u> Large lumen
40. Examples of veins of the heart (2)	<u>1.</u> Vena cava <u>2.</u> Pulmonary vein



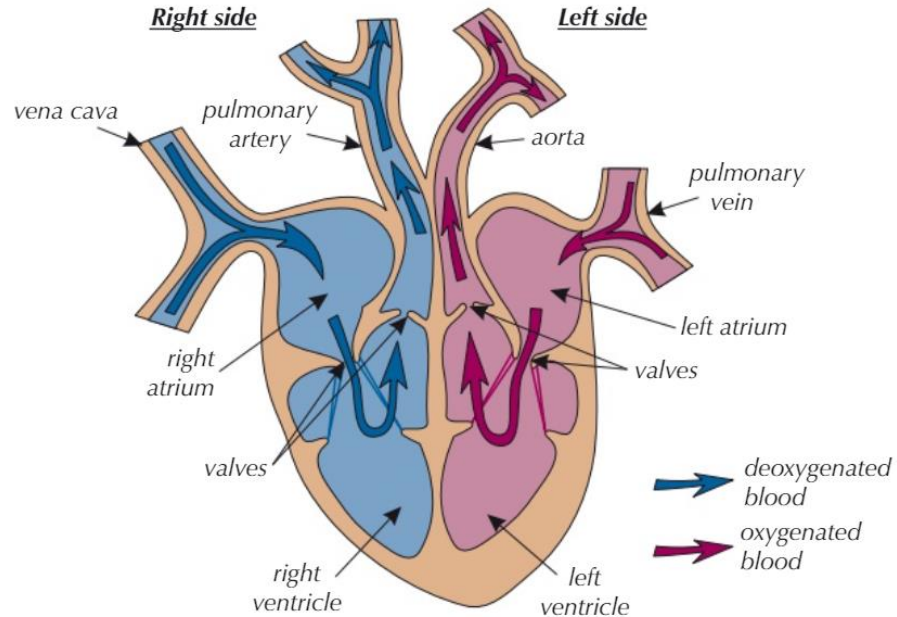
Key term/question	Definition/answer
23. Alveoli	Site of gas exchange in the lungs
24. How are alveoli adapted for efficient gas exchange? (4)	<u>1.</u> Have a large surface area <u>2.</u> Thin walls <u>3.</u> Moist lining <u>4.</u> Rich network of capillaries
25. Breaths per minute	Number of breaths ÷ number of minutes

C) Circulatory System – Components of the Blood



Biology 2: Organisation Knowledge Organiser

E) Circulatory System – The Heart



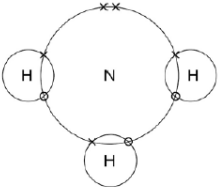
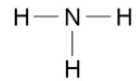
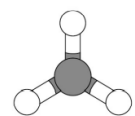
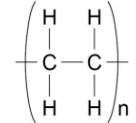
Key term/question	Definition/answer
41. Circulatory system	Transports substances to and from cells and is made of blood, blood vessels and the heart
42. Oxygenated blood	Oxygen rich blood (oxygen present)
43. Deoxygenated blood	Oxygen poor blood (no oxygen)
44. The journey of oxygenated blood through the heart starting from the lungs	Lungs → pulmonary vein → left atrium → valve → left ventricle → valve → aorta → to all the organs (except the lungs) of the body → vena cava → right atrium → valve → right ventricle → valve → pulmonary artery → blood returns to the lungs
45. Vein which returns blood to heart	Vena cava
46. Artery which carries blood to the lungs	Pulmonary artery

Key term/question	Definition/answer
47. Vein which returns blood to the heart from the lungs	Pulmonary vein
48. Artery which carries blood to the rest of the body	Aorta
49. Coronary arteries function	Provide the heart with oxygenated blood
50. Purpose of respiration	Releases energy
51. Word equation for respiration (aerobic)	glucose + oxygen → carbon dioxide + water
52. Symbol for glucose	C ₆ H ₁₂ O ₆
53. Double circulatory system (2)	<u>1.</u> Right ventricle pumps deoxygenated blood to the lungs to take in oxygen. Blood returns to the heart. <u>2.</u> Left ventricle pumps oxygenated blood to the other organs. Oxygen diffuses into the tissues and blood returns to the heart.
54. Heart's natural pacemaker location	Right atrium
55. What is the heart's natural pacemaker?	Group of cells which produce a small electrical impulse to regulate ventricle contraction
56. Rate of blood flow =	Volume of blood ÷ number of minutes
57. Cardiac output =	Heart rate x stroke volume

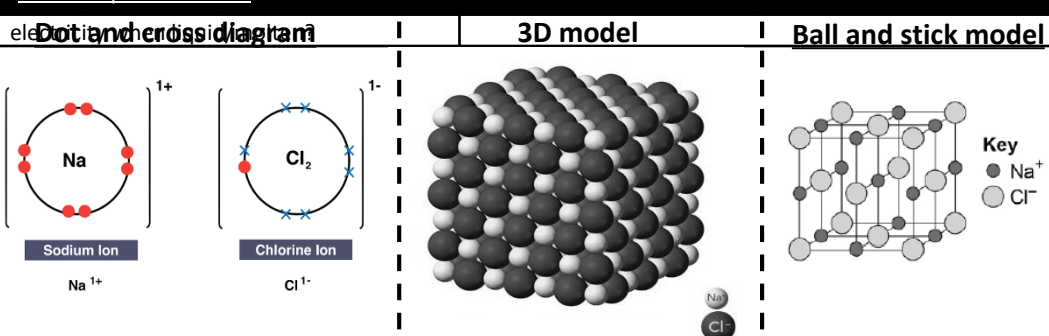
F) Health and Disease

Key term/question	Definition/answer
58. Health	A state of physical and mental well being
59. Communicable disease	Are diseases that can spread between individuals (e.g. HIV)
60. Non-communicable disease	Are disease that cannot spread between individuals (e.g. obesity)
61. Coronary heart disease	Caused by the build-up of fatty materials in the coronary arteries causing them to narrow.
62. Methods to treating coronary heart disease (3)	<u>1.</u> Using stents <u>2.</u> Using statins <u>3.</u> Artificial hearts
63. Risk factor	Factor linked to an increased likelihood of developing a certain disease.
64. Risk factors for coronary heart disease (5)	<u>1.</u> Smoking <u>2.</u> High-fat diet <u>3.</u> Lack of exercise <u>4.</u> Having high blood pressure <u>5.</u> Having high cholesterol
65. What is cancer?	Development of tumours cause by uncontrolled cell growth and division
66. Risk factors for cancer (4)	<u>1.</u> Smoking <u>2.</u> Obesity <u>3.</u> Frequent UV exposure <u>4.</u> Inheriting faulty genes

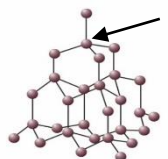
Chemistry 2 (C2): Bonding and Structure Knowledge Organiser

A) Ionic Bonding		B) Covalent Bonding	
Key term/question	Definition/answer	Key term/question	Definition/answer
1. Compound	Two or more different elements chemically bonded	19. What is covalent bonding?	Reaction between non-metals. Electrons are shared.
2. Three subatomic particles	Protons, neutrons and electrons	20. Molecule	Different atoms held together with covalent bonds. Not charged.
3. Proton mass, charge and location (3)	<u>1.</u> Mass = 1 <u>2.</u> Charge = +1 (positive) <u>3.</u> Location = nucleus	21. Examples of simple molecules	Hydrogen (H ₂), Chlorine (Cl ₂), Hydrogen chloride (HCl), Methane (CH ₄), Water (H ₂ O), Nitrogen (N ₂), Ammonia (NH ₃)
4. Neutron mass, charge and location (3)	<u>1.</u> Mass = 1 <u>2.</u> Charge = 0 (neutral) <u>3.</u> Location = nucleus	22. Why can't simple molecules conduct electricity?	No free electrons
5. Electron mass, charge and location (3)	<u>1.</u> Mass = 0 <u>2.</u> Charge = -1 (negative) <u>3.</u> Location = shells that orbit the nucleus	23. Why do simple molecules have low melting and boiling points? (2)	<u>1.</u> Weak intermolecular forces . <u>2.</u> Little energy needed overcome the forces.
6. What is an ion?	Atoms that have gained or lost electrons	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Ammonia (NH₃)</p> <p>Dot and cross diagram</p>  </div> <div style="text-align: center;"> <p>Displayed formula</p>  </div> <div style="text-align: center;"> <p>3D models</p>  </div> </div>	
7. How do metals form ions?	Lose electrons		
8. How do non-metals form ions?	Gain electrons	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>polymers</p>  <p>poly(ethene)</p> <p>where n is a large number.</p> </div> </div>	
9. What ions do metals form?	Positive ions, called cations		
10. What ions do non-metals form?	Negative ions, called anions	<div style="display: flex; justify-content: space-between;"> <div> <p>compounds with many repeating units.</p> <p>Short form of drawing</p> </div> </div>	
11. Group 1 metals ionic charge	1+ ion		
12. Group 2 metals ionic charge	2+ ion	<div style="display: flex; justify-content: space-between;"> <div> <p>compounds with many repeating units.</p> <p>Short form of drawing</p> </div> </div>	
13. Group 6 non-metals ionic charge	2- ion		
14. Group 7 non-metals ionic charge	1- ion	<div style="display: flex; justify-content: space-between;"> <div> <p>compounds with many repeating units.</p> <p>Short form of drawing</p> </div> </div>	
15. What is ionic bonding?	Metals react with non-metals. Metals give their electrons to non-metals to form a compound.		
16. What structure do ionic compounds form?	Giant ionic lattice	<div style="display: flex; justify-content: space-between;"> <div> <p>compounds with many repeating units.</p> <p>Short form of drawing</p> </div> </div>	
17. Why do ionic compounds have high melting and boiling points?	<u>1.</u> Strong electrostatic force between ions. <u>2.</u> Lots of		

Ionic compound models



C) Covalent Bonding – Allotropes of Carbon – Diamond

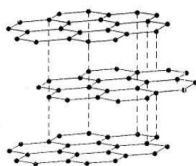
Key term/question	Definition/answer
25. Allotropes of carbon	Diamond, graphite, graphene and fullerenes
26. Number of bonds for each carbon atom in diamond	Each carbon bonds covalently to 4 carbon atoms
27. Properties of diamond (3)	<u>1.</u> Does not conduct electricity <u>2.</u> High melting and boiling points
Structure of diamond	

Chemistry 2 (C2): Bonding and Structure Knowledge Organiser

D) Covalent bonding – Allotropes of Carbon – Graphite

Key term/question	Definition/answer
28. Number of bonds for each carbon atom in graphite	Each carbon atom bonds covalently to 3 other carbon atoms
29. Properties of graphite (2)	1. Conduct electricity 2. High melting and boiling points 3. soft and slippery

Structure of graphite

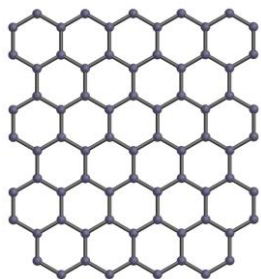


Graphite is arranged in **layers** with **weak intermolecular forces between layers**.

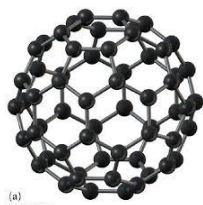
E) Covalent Bonding – Allotropes of Carbon – Graphene, Fullerene, Fullerene Nanotubes

Carbon allotrope	Structure	Properties	Uses
30. Graphene	A single layer of graphite.	Very strong. Has delocalised electrons so it is able to conduct electricity	Electronics
31. Fullerene (Buckminsterfullerene) (C ₆₀)	Hollow molecules of carbon, shaped in balls	Very strong. Hollow so can contain other chemicals within it	Drug delivery, catalysts, lubricants
31. Fullerene nanotubes	Tiny carbon cylinders	Very strong, light and flexible. Has delocalised electrons so it is able to conduct electricity.	Drug delivery, electronics, strengthening material

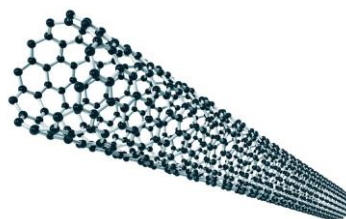
Structure of graphene



Structure of Buckminsterfullerene



Structure of fullerene nanotubes



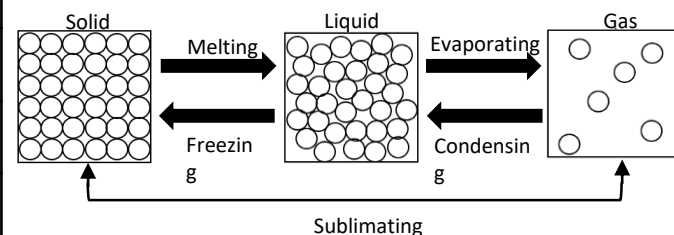
F) Metallic Bonding

Key term/question	Definition/answer
32. Why do metals have high melting points?	Strong electrostatic forces between the positive ions and delocalised electrons. Requires a large amount of energy to overcome.
33. Why are metals conductors?	Have delocalised electrons, which are free to move and flow
34. Why are metals malleable?	The layers are able to slide over each other so the metal can be bent and shaped.
35. Alloy	Mixture of two or more metals or a metal and another element.
36. Why are alloys harder than pure	layers are distorted by the presence of other elements. This

G) States of Matter

Key term/question	Definition/answer
37. What is meant by particle?	Any atom or molecule
38. States of matter (3)	1. Solid 2. Liquid 3. Gas
39. Particle arrangement in a solid (3)	1. Strong forces of attraction hold the particles close together. 2. Particles are in a fixed, regular arrangement . 3. Particles vibrate about their fixed positions
40. Particle arrangement in a liquid (3)	1. Weaker forces of attraction between particles. 2. Particles are close together but can slide past each other to form irregular arrangements . 3. Particles move in random directions at low speeds .
41. Particle arrangement in a gas (2)	1. Almost no forces of attraction between the particles. 2. Particles are free to move in random directions at high speeds .

State changes



42. Solid symbol	XX _(s)
43. Liquid symbol	XX _(l)
44. Gas symbol	XX _(g)
45. Aqueous (in solution) symbol	XX _(aq)

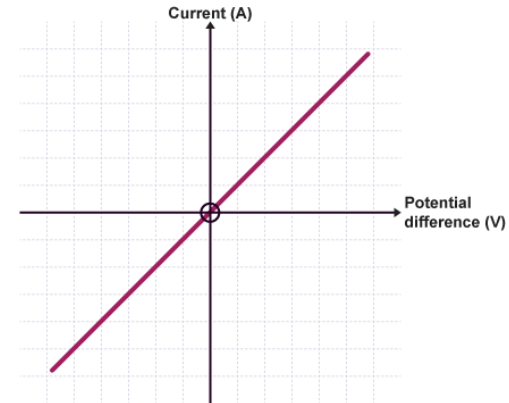
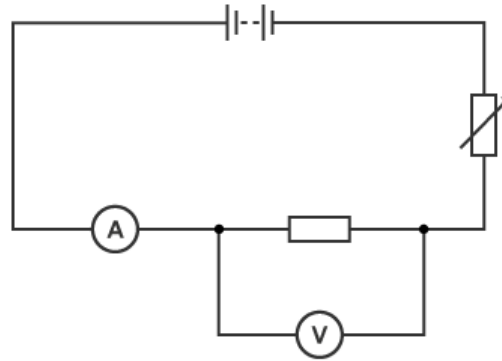
Physic 2: Required practical 16 – Investigating I-V characteristics

Method for measuring I-V characteristics

1. Connect the component to be tested, variable resistor and ammeter in series.
2. Connect the voltmeter in parallel across the component to be tested.
3. Alter the variable resistor and record the potential difference and current.
4. Continue to adjust the variable resistor to record several readings.
5. Reverse the wires to the battery to reverse the direction of potential difference.
6. The voltmeter and the ammeter will now both have negative values.
7. Continue to adjust the variable resistor to record several readings.
8. To calculate the resistance, use the equation **resistance = potential difference ÷ current**

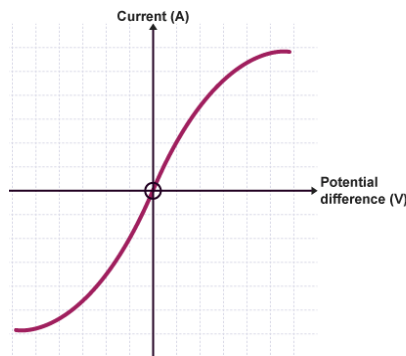
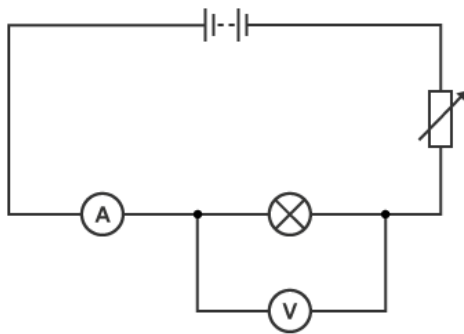
I-V Characteristics of a resistor at constant temperature

The current through a resistor at a constant temperature is directly proportional to potential difference.



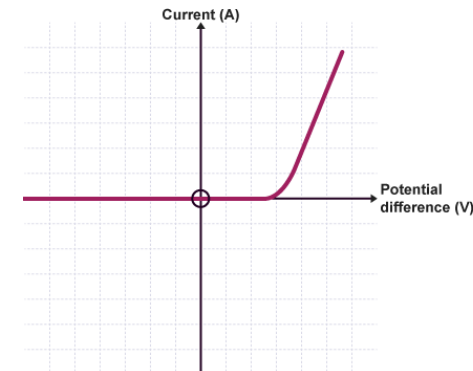
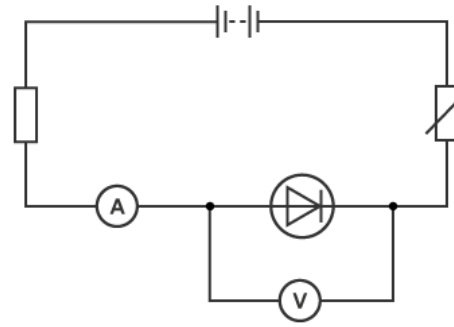
I-V Characteristics of a filament lamp

When an electrical charge flows through a filament lamp, it transfers some energy to the thermal energy store of the filament, which heats up and glows. Resistance increases with temperature, so as more current flows through the lamp, the lamp heats up more and the resistance increases. This means less current can flow per unit of potential difference, so the graph becomes shallower.



I-V Characteristics of a diode

A diode only lets current pass through it in one direction. The resistance of a diode depends on the direction of the current. If the potential difference is arranged to try and push the current the wrong way no current will flow as the diode's resistance remains very large. Therefore, a diode will only let current flow through in one direction but will have a very high resistance if the current is reversed.



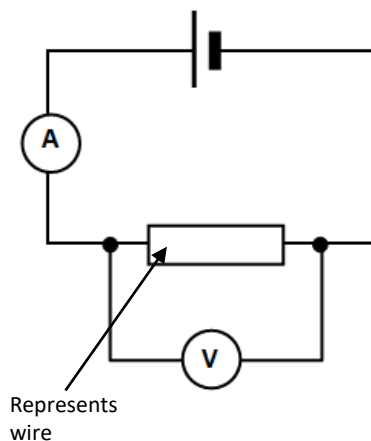
Physic 2: Required practical 15 – Investigating how the length of a wire affects resistance

Key term/question	Definition/answer
1. Independent variable	Length of wire
2. Dependent variable	Resistance
3. Control variable	<u>1.</u> Type of metal <u>2.</u> Diameter of wire <u>3.</u> Temperature
4. Formula linking potential difference, current and resistance	Potential difference = Current x Resistance $V = IR$
5. Relationship between length of wire and resistance	Directly proportional
6. Why does resistance increase as the length of wire increase?	Electrons collide with metal ions more frequently
7. How do we control the temperature?	<u>1.</u> Switch the power pack off between readings <u>2.</u> Use a low potential difference
8. Why do we not use a wire shorter than 10cm?	To prevent the wire from becoming too hot

Method for measuring resistance of a wire

1. Ruler with a wire and ammeter is attached in series.
2. Attach the voltmeter in parallel to the wire.
3. Attach two crocodile clips 100 cm apart on the wire.
4. Turn on the powerpack at 4 V and measure the current and the potential difference.
5. Reduce the length of the wire by 10 cm and measure the current and potential difference again.
6. Repeat step 6 until reaching the length of 10 cm.
7. For each length of wire use the equation **resistance = potential difference ÷ current**

Circuit set up for measuring resistance of a wire



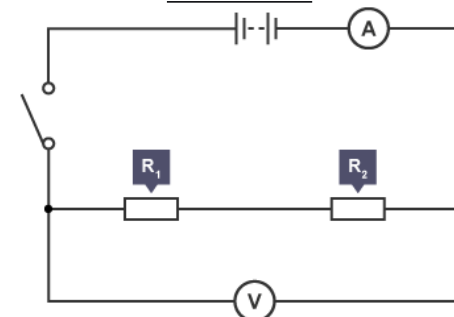
Physic 2: Required practical 15 – Resistance in series and parallel circuits

Key term/question	Definition/answer
9. Independent variable	Number of resistors
10. Dependent variable	Resistance
11. Control variable	Identical resistors
12. Rule for resistance in series?	Sum of the resistors
13. Rule for resistance in parallel?	Is less than the lowest resistor

Method for measuring resistance in series

1. Attach resistor and an ammeter in series.
2. Attach the voltmeter in parallel to the resistor.
3. Turn on the powerpack at 4 V and measure the current and the potential difference.
4. Add another identical resistor in series and measure current and potential difference again.
5. Repeat step 5 until you've added all the resistors.
6. For each resistor use the equation **resistance = potential difference ÷ current**

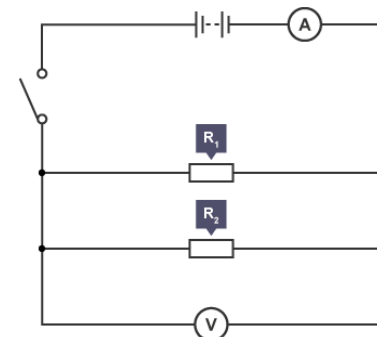
Circuit set up for measuring resistance in series circuits



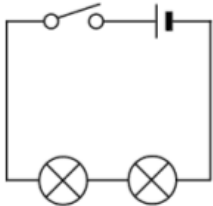
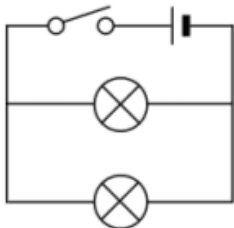
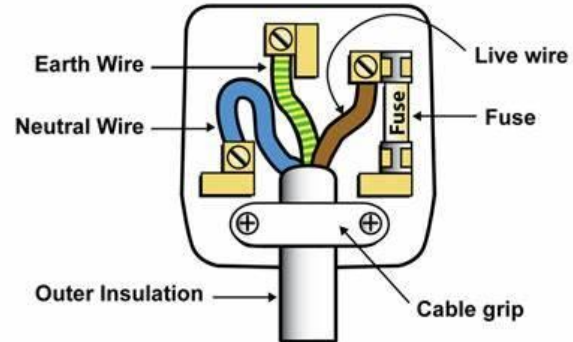
Method for measuring resistance in parallel

1. Attach resistor and an ammeter in series.
2. Attach the voltmeter in parallel to the resistor.
3. Turn on the powerpack at 4 V and measure the current and the potential difference.
4. Add another identical resistor in parallel with the first resistor and measure current and potential difference again.
5. Repeat step 5 until you've added all the resistors.
6. For each resistor use the equation **resistance = potential difference ÷ current**

Circuit set up for measuring resistance in parallel circuits

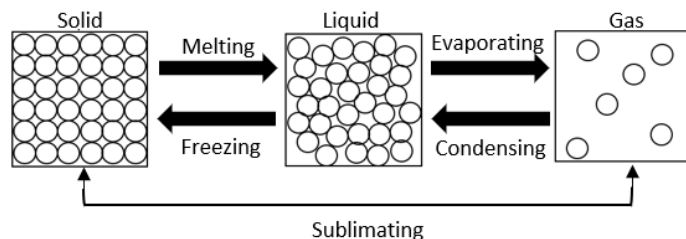


Physics 2 (P2): Electricity Knowledge Organiser

E) Series circuits		G) Domestic electricity	
Key term/question	Definition/answer	Key term/question	Definition/answer
Series circuit		Direct current	Current flows in one direction
Rule for current in series?	Is the same	Alternating current	Current flows in both directions
Rule for potential difference in series?	Shared between components	UK mains electricity frequency	50 Hz
Rule for resistance in series?	Sum of the resistors	UK mains electricity potential difference	230 V
F) Parallel circuits		Three core cables in appliances	Live, neutral and earth wires
Key term/question	Definition/answer	Live wire	Brown – carries the alternating current from the supply
Parallel circuit		Neutral wire	Blue – completes the circuit and carries current away
Rule for current in parallel?	Splits up	Earth wire	Yellow and Green – safety wire – stops the appliance becoming live
Rule for potential difference in parallel?	Is the same	Why is the live wire dangerous?	Live wire potential difference = 230 V. If touched will complete the circuit and current will flow through you, resulting in injury or death
Rule for resistance in parallel?	Is less than the lowest resistor	What is the National Grid?	A system of cables and transformers linking power stations to consumers
		What do step-up transformers do?	Increase the Potential difference (which lowers the current)
		What do step-down transformers do?	Decrease the Potential difference for use by consumers
		Why is the National Grid an efficient way of transferring energy?	Energy lost due to heating is minimised as high potential difference equals lower current
		Wires of a plug 	

Physics 3 (P3): Particle model of matter Knowledge Organiser

State changes



A) PARTICLE MODEL OF MATTER AND DENSITY

Key term/question	Definition/answer
1. What is meant by particle?	Any atom or molecule
2. States of matter (3)	<u>1.</u> Solid <u>2.</u> Liquid <u>3.</u> Gas
3. Particle arrangement in a solid (3)	<u>1.</u> Strong forces of attraction hold the particles close together. <u>2.</u> Particles are in a fixed, regular arrangement . <u>3.</u> Particles vibrate about their fixed positions
4. Particle arrangement in a liquid (3)	<u>1.</u> Weaker forces of attraction between particles. <u>2.</u> Particles are close together but can slide past each other to form irregular arrangements . <u>3.</u> Particles move in random directions at low speeds .
5. Particle arrangement in a gas (2)	<u>1.</u> Almost no forces of attraction between the particles. <u>2.</u> Particles are free to move in random directions at high speeds .
6. Particle explanation for melting	Particles have energy (through heating) to overcome the intermolecular forces that hold them in a fixed position.
7. Particle explanation for freezing (2)	<u>1.</u> Particles lose kinetic energy and move more slowly <u>2.</u> reducing spaces between particles and allowing intermolecular forces to hold particles together.
8. Why doesn't the temperature of a material change as it's changing state?	Energy goes into breaking/making bonds.
9. Density	Compactness of a substance.
10. Density equation	Density = mass ÷ volume ($\rho = m \div v$)
11. Density unit	Kg/m^3 or g/cm^3
12. Calculating volume of cube/cuboid	Height x width x length

B) INTERNAL ENERGY

Key term/question	Definition/answer
13. Internal energy	Total kinetic and potential energy of the particles in an object
14. Kinetic energy store	Energy the particles have because of their motion
15. Potential energy store	Energy the particles have because of their arrangement
16. Temperature	Average kinetic energy of particles

C) SPECIFIC LATENT HEAT

Key term/question	Definition/answer
17. Specific heat capacity	Energy needed to raise the temperature of 1 kg of a substance by 1°C
18. Specific heat capacity equation	Energy transferred = mass x specific heat capacity x temperature change ($\Delta E = mc\Delta\theta$)
19. Specific heat capacity unit	$\text{J/kg}^\circ\text{C}$
20. Specific latent heat	Energy needed to change 1 kg of a substance from one state to another without changing the temperature
21. Specific latent heat equation	Energy for state change = specific latent heat x mass ($E = mL$)
22. Specific latent heat unit	J/Kg

D) PRESSURE

Key term/question	Definition/answer
23. Pressure	Force per unit of area
24. High gas pressure	Lots of gas particles colliding with container walls
25. Low gas pressure	Not many gas particles colliding with container walls
26. Relationship between gas temperature and pressure at constant volume	Higher temperature = higher pressure
27. What happens to the speed of particles in a gas as the gas is heated?	Increases
28. What happens to pressure if the size of a container is reduced?	Increases as particles collide with container walls more often

BIG QUESTIONS

What could have disrupted the thriving life of Anglo-Saxon society to breed a new life and a new way of living?

How was Anglo-Saxon society organised?

How powerful was an Anglo-Saxon king?

How was England run?

Did England have a strong economy in Anglo-Saxon times?

Why was Harold Godwinson so important?

Why did Harold Godwinson stab his brother in the back?

Summary of the Anglo-Saxon Period

By the time of King Edward the Confessor (1042-66), England had been mostly under the control of Anglo-Saxons for 600 years. Through those centuries, England had developed a very strong government. It also had a prosperous economy, boosted by extensive trade links across the North Sea and the Channel. England was a Christian country, but Christian teachings were mixed with ancient beliefs about how people should behave. One key belief was that, in return for protection from a lord, his people owed him service. For example, in return for land to farm, a man would owe military service to his lord.

England had faced terrible threats for centuries: the Vikings. These Scandinavians had settlements along the coast of Europe. In England, their raids were followed by invasions, so that many parts of Northern England had Viking settlers. One reason the Anglo-Saxons had a very well organised government was because of the need for Anglo-Saxons to work together to deal with the Vikings. Across the channel Viking settlers had taken control of Normandy, they remained a real military threat.

Key Anglo-Saxon Vocabulary

Witan – The council that advised the king on issues of government. Made up of the most important Earls and Archbishops

Ceorls – Free peasant farmers not tied to their land

Thegns – Local lords that usually held more than 5 hides of land

Earls – The highest Anglo-Saxon aristocracy

Shire reeve – An official of the king; his sheriff. Sherriff's managed the king's estates, taxes and courts.

Danelaw – The part of England where Danish (Viking) power had been strongest and which had kept some of its Danish laws instead of Anglo-Saxon ones.

Embassy – An official visit by a representative of one ruler to another ruler

Housecarls – Highly trained troops that stayed with their lord wherever he went; a bodyguard

Fyrd – The men of the Anglo-Saxon army and fleet. Every 5 hides provides one man for the fyrd.

Geld tax – A tax on land, originally to pay off the Vikings (Danegeld). It went to the king.

Collective responsibility – The duty of all members of a tithing to hunt for a criminal (hue and cry)

Key Anglo-Saxon Dates

1042 – Edward the Confessor becomes King of England

1053 – Death of Earl Godwin. Harold Godwinson becomes Earl of Wessex

1055 – Tostig Godwinson is made Earl of Northumbria

1064- Harold's embassy to Normandy

1065- Uprising against Earl Tostig: Tostig exiled

1066 – Edward the Confessor dies

Key Individuals involved at the end of the Anglo-Saxon Period

Edward the Confessor

A very religious king. Not a warrior king, but his earls and their Thegns were a powerful military force and he relied on his earls, especially Earl Godwin, to protect England from attack.

Earl Godwin

The father of Harold Godwinson. The house of Godwin began in 1018 during King Cnut's reign, when Cnut made his favourite advisor. Godwin Earl of Wessex. Godwin was probably the son of an Anglo-Saxon Thegn.

Harold Godwinson, Earl of Wessex

Harold became the Earl of Wessex upon his father's death in 1053. His sister had married the king in 1045 which made him brother-in-law to the king himself. Becoming the Earl of Wessex had made him very rich with influence over hundreds of Thegns and a powerful position as advisor to the king. He was also a very strong military leader.

Tostig Godwinson, Earl of Northumbria

Tostig became Earl of Northumbria in 1055 after the death of Earl Siward. Northumbria had their own laws and customs compared to the southern upbringing that Tostig had received. He was not popular with the men in the North.

William of Normandy

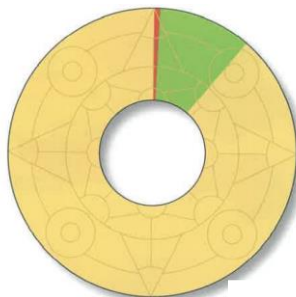
Edward the Confessor's mother was from Normandy and when the Vikings seized the throne, Edward was exiled there for 25 years. William claims Edward had promised him the throne as a result of this bond.



This map shows the Earldoms of England c. 1060.

1. Five Main Earldoms, four of them in the hands of the Godwinson family, how might this cause problems for King Edward the Confessor?
2. Using the map and the social structure in figure 1.1. Who holds all the power in Anglo Saxon England? Explain your thinking. (King, Earls, Thegns, Peasants?)
3. Could you move between social classes?

Figure 1.1



BIG QUESTIONS

Who would claim England after the death of Edward the Confessor?

Who was the best candidate to be Edward's successor?

What happened when the Vikings invaded?

Why did William win the Battle of Hastings? Part 1
Key Events and the Military

Why did William win the Battle of Hastings? Part 2
Tactics Vs Leadership



The death of Edward the Confessor, portrayed in the Bayeux Tapestry

Summary of why there were battles for the Kingdom of England in 1066

Edward the Confessor died on 5th January 1066, there was no heir to succeed him.

The Bayeux Tapestry shows the death of Edward the Confessor at his palace in Westminster. Edward is with a small circle of people: his wife Edith, who sits at his feet; Stigand, the Archbishop of Canterbury; one of Edward's ministers and Harold Godwinson. Edward is shown holding out his hands to Harold. Other sources report that Edward said to Harold 'I commend this woman (Edith) with all the kingdom to your protection.' Harold understood this to mean that he was to be king – Harold II. However, others thought that they had better claims to the throne; a situation that made the year 1066, a very eventful one.

There were to be three major battles with only two coronations. You will see how Harold Godwinson fought both Harald Hardrada and William of Normandy, leaving England in the hands of the Frenchman who would ultimately change the face of society, as they knew it.

Key dates of 1066

5 January – Edward the Confessor dies

6 January – Edward is buried

6 January – Harold's coronation ceremony takes place

8 September – after waiting for a potential invasion for 9 months Harold sends his soldiers, the fyrd, back to collect their harvest

19 September – Harold hears of Hardrada and Tostig's invasion

20 September – The Battle of Gate Fulford. The English lose and Harold leaves London

25 September – The Battle of Stamford Bridge

28 September – Harold hears that William has landed in the South, Pevensey. Harold rushes southward.

6 October – Harold reaches London to collect men and supplies, he leaves to march South on the 12th

14 October – The Battle of Hastings

Key Individuals: Claimant to the throne in 1066

Harold Godwinson – based his claim on the king's death bed words, his family connection to him (brother-in-law), and his role in recent years as the king's right-hand man, his influence with the thegns and his proven military prowess.

Edgar Aethling – As Edward's nephew, Edgar was directly descended from royal blood. At 6 years old he was left in Edward's care when his father died but Edward did not attempt to boost Edgar's chances of succession. With the threats of invasion ahead, the Witan may have been wise not to promote the teenager's claims to the throne.

Harald Hardrada – was the king of Norway. A fearsome Viking warrior who based his claim to the throne on secret Viking deals and treaties. A complicated claim but the point is, he felt his claim was strong enough to launch an invasion. He may not have originally intended to take up his claim but with the exiled Tostig at his side, he may have thought he had a better chance.

William of Normandy – His claim was based on an agreement William was said to have made between Edward the Confessor and himself around 1051, an agreement that was supposedly confirmed by Harold's embassy to Normandy in 1064. William had come to England and Edward had promised him his throne, perhaps if Edward dies childless. William had managed to obtain the Pope's backing for this claim, which proved very important in getting the support William needed to launch his invasion.

Key vocabulary

Succession – The process that decides who should be the next king or queen and 'succeed' to the throne.

Claimant – Someone who declares that something belongs to them

Shield wall – A military tactic used by both Viking and Anglo-Saxon armies. Troops are set in a line, several men deep. The men at the front overlapped their shields, with spears sticking out, to create a strong defence formation

Knight - a man who served his king or lord as a mounted soldier in armour

Mercenary - a professional soldier hired to serve in a foreign army

Homework:

Week 2 – Revise for the Week 3 Assessment

Week 5 – Why did William win. Give examples of the ways in which William's army was better than Harold's. Watch the video's below. What is the significance of the Battle of Stamford Bridge in determining the winner of the Battle of Hastings?

Homework Links

<https://www.bbc.co.uk/bitesize/guides/zyvwp39/revision/1>

<https://www.youtube.com/watch?v=m9NdbxQWdJ8>

<https://www.bbc.co.uk/bitesize/guides/zq9mv4j/revision/2>

(summarises the Battle of Stamford Bridge)

<https://www.youtube.com/watch?v=qtW7H7yPZLg>

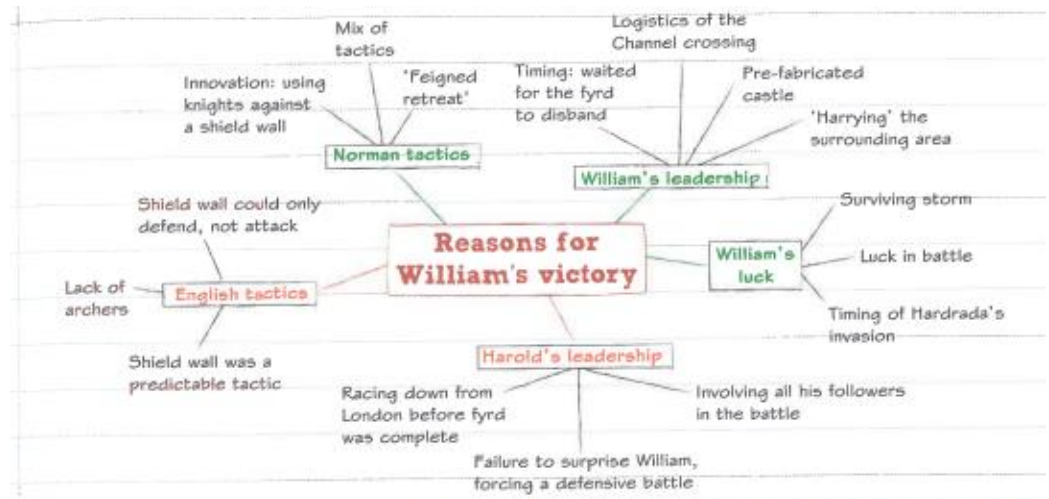
<https://www.bbc.co.uk/bitesize/guides/zq9mv4j/revision/3>

(Summarises the Battle of Hastings)

<https://www.youtube.com/watch?v=zigjVCFzZ38>

Key events of the Battle of Hastings

- 1 William's scouts spotted Harold's advancing army – Harold failed to achieve a surprise attack.
- 2 Harold's army was able to position itself along a ridge at the top of a hill. That meant that William had to attack up hill.
- 3 The battle lasted eight hours – a very long time for a medieval battle. This was perhaps because the two sides were quite evenly matched. There were different phases to the battle.
- 4 William's archers were first to attack, but the archers had to stay out of English javelin range and the English shield wall knew how to catch the arrows on their shields.
- 5 William's foot soldiers and knights were beaten back by the shield wall initially. The English **housecarls** did great damage to horses and men with their two-handed axes.
- 6 At one point the Norman army was panicking that William had been killed. William tipped back his helmet to show he was still alive.
- 7 A feigned retreat (or a real retreat) meant English fyrdsmen left the shield wall to chase after retreating Normans. The English were then surrounded and cut down.
- 8 The shield wall was gradually thinned out. Norman knights then charged through it and caused great damage. Norman archers also became more effective as the shield wall failed.
- 9 Harold and his brothers, Gyrth and Leofwine, and their housecarls, made final stands at the top of the hill, fighting to the death. Harold and his brothers died.
- 10 The rest of the English army then ran for it. The *Bayeux Tapestry* ends with the words (in Latin): 'and the English turned and fled'.



BIG QUESTIONS

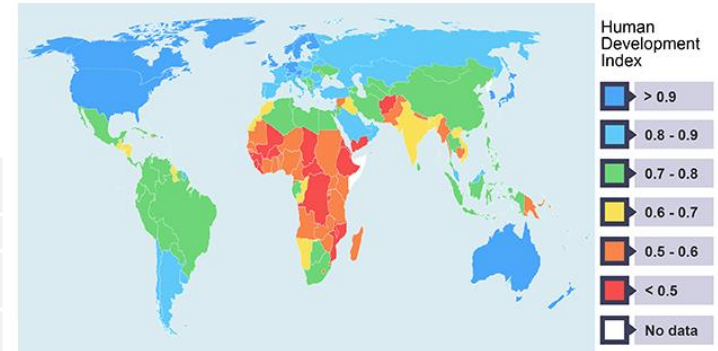
1. How do we decide how developed a country is?
2. What are developmental indicators and how useful are they?
3. What is the demographic transition model (DTM) and how is it linked to economic development of a country?
4. How do historical, natural and political factors affect how developed countries are?
5. How and why do countries develop at different speeds?
6. What are the consequences of uneven development?
7. How can we reduce the development gap?
8. What is intermediate technology and how can it help to reduce the development gap?
9. What is fair trade and how can it help to reduce the development gap?
10. What is debt relief and how can it reduce the development gap?
11. How can tourism reduce the development gap?

The level of **development** of a country shows how **economically, socially, culturally or technologically advanced** that country is. The way in which countries are classified is changing. Development is measured using the **Human Development Index (HDI)**. HDI is calculated by the **United Nations**. It measures average **life expectancy**, level of education and income for each country in the world. Each country is given a score between 0 and 1 - the closer a country gets to 1, the more developed it is.

Other measures of development

HDI is the best measure of development as it takes into account both economic and social factors. However there are many other measures of development that can be used. Some of them are:

Measure of development	Description
Access to safe water	The percentage of people who have access to safe, clean water.
Birth rate	The number of live births per 1,000 people. Birth rates are often high in a less developed country.
Death rate	The number of deaths per 1,000 people. High death rates can indicate a less developed country.
GNI per capita	Gross national income per person. The value of a country's income, divided by the number of people in that country.
Infant mortality rate	The number of babies who don't survive to the age of 1 per 1,000 live births.
Life expectancy	The average age that a person may live to.
Literacy rate	The percentage of adults who can read and write.
People per doctor	A ratio to show the number of people per doctor. A lower ratio can indicate a richer country.



The variation of HDI across the world in 2019.

HDI – this is widely recognised as a good measure of development. It takes into account economic measures, such as income, but also social measures, such as levels of education

Advantages and limitations of using one method of development

Using just one measure of development can be misleading, and it is often better to use more than one.

What is the Demographic Transition Model? - Internet Geography

Stage 1 Birth rate and death rate are high – low natural increase – low total population

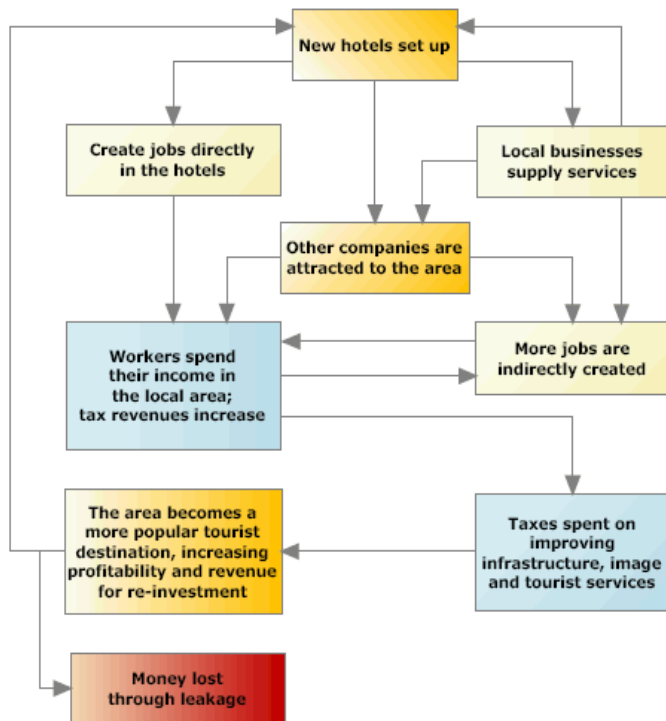
Stage 2 Birth rate is high – death rate is falling – high natural increase (population growth)

Stage 3 Falling birth rate – low death rate – high natural increase (population growth)

Stage 4 Birth rate and death rate is low – low natural increase – high total population

The Demographic Transition Model does not take into account migration.

The Tourist Multiplier Effect



Measures to reduce the development gap

There are lots of ways that can help to reduce the development gap.

Investment	Large companies can locate part of their business in other countries. This helps a country to develop as the companies build factories, lay roads and install internet cables.
Aid	Aid is when one or more countries give money to other countries. The money has to be spent on things that will benefit the population.
Using intermediate technology	Intermediate technology is using equipment and techniques that are suitable for their country of use. Many poorer countries do not have the skills to maintain expensive equipment. Small-scale, basic solutions are usually more appropriate.
Fairtrade	Fairtrade is paying producers a reasonable price for the goods that they produce. Many farmers in LICs are paid very low wages. This means that they cannot escape poverty. Fairtrade gives farmers a better chance in life.
Debt relief	Many LICs owe money to other countries. Often the repayments and interest are so expensive that indebted countries have no money left to spend on development projects. Debt relief is when debts are either reorganised to make them more manageable, or reduced.
Microfinance loans	Microfinance loans are when money is lent to LICs to help them to develop. These are often small loans with reasonable interest rates. They are available to people and businesses who may normally struggle to get credit.

Keyword terminology

Birth rate The number of births in a year per 1000 of the total population.

Death rate The number of deaths in a year per 1000 of the total population.

Demographic Transition Model A model showing how populations should change over time in terms of their birth rates, death rates and total population size.

Development The progress of a country in terms of economic growth, the use of technology and human welfare.

Development gap The difference in standards of living and wellbeing between the world's richest and poorest countries (between HICs and LICs).

Fairtrade When producers in LICs are given a better price for the goods they produce. Often this is from farm products like cocoa, coffee or cotton. The better price improves income and reduces exploitation.

Gross national income (GNI) A measurement of economic activity that is calculated by dividing the gross (total) national income by the size of the population. GNI takes into account not just the value of goods and services, but also the income earned from investments overseas.

Human Development Index (HDI) A method of measuring development in which GDP per capita, life expectancy and adult literacy are combined to give an overview. This combined measure of development uses economic and social indicators to produce an index figure that allows comparison between countries.

Intermediate technology The simple, easily learned and maintained technology used in a range of economic activities serving local needs in LICs.

International aid Money, goods and services given by the government of one country or a multilateral institution such as the World Bank or International Monetary Fund to help the quality of life and economy of another country. Life expectancy The average number of years a person might be expected to live.

Literacy rate The percentage of people who have basic reading and writing skills.

Microfinance loans Very small loans which are given to people in the LICs to help them start a small business.

Trade The buying and selling of goods and services between countries.

Homework: How tourism can reduce the development gap - Maldives case study

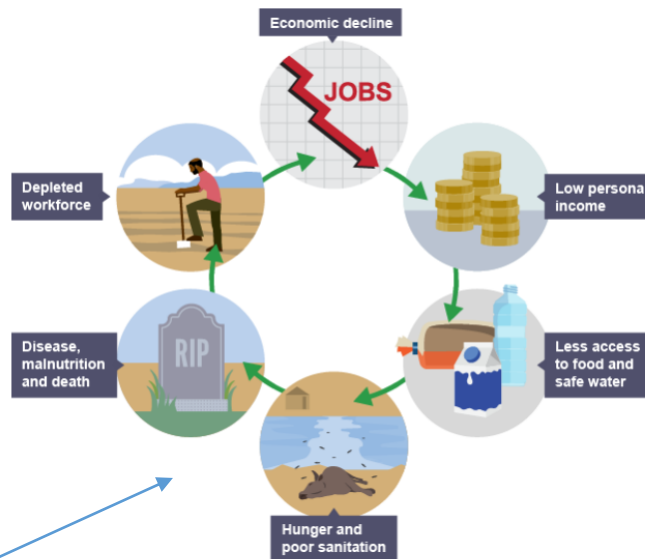
Discuss the growth, management and impact. + take the test on the website.

[How tourism can reduce the development gap - Maldives case study](#) - [Closing the development gap - AQA - GCSE Geography Revision - AQA - BBC Bitesize](#)

The cycle of poverty

For example, if a country is in a lot of debt, it cannot afford good schools. If people are poorly educated, they are less likely to understand the causes of desertification.

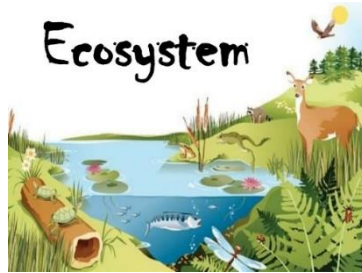
Desertification leads to poor crop growth and low incomes. This leads back to the country accumulating debt and the cycle continues.



BIG QUESTIONS

1. What is an ecosystem?
2. How do ecosystems vary in size?
3. What is the nutrient cycle and why is it so important in the tropical rainforest?
4. How have plants and animal species adapted to the rainforest?
5. How are plants and animals in a tropical rainforest interdependent?
6. Where is Malaysia/Brazil located and how much of it is tropical rainforest?
7. What is causing deforestation in the tropical rainforest?
8. What are the impacts of deforestation in the tropical rainforest?
9. How is the tropical rainforest valuable and why should it be managed?
10. How can the tropical rainforest be managed sustainably?

Ecosystem

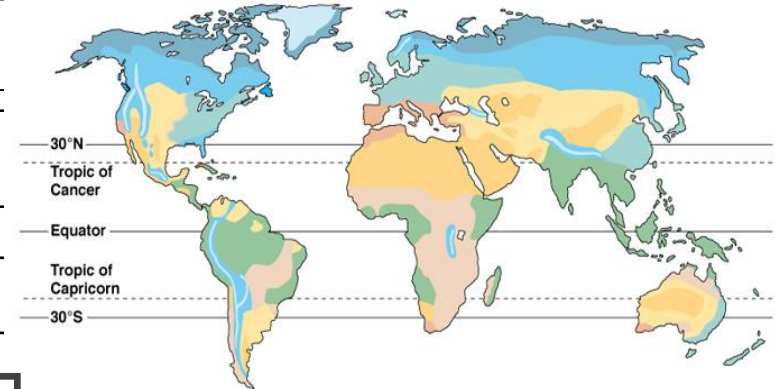


An ecosystem is a geographical area where plants, animals, landscape and climate all intersect together. It is the interaction between living and non-living things.

The **biodiversity** and **distribution of organisms** within an ecosystem is due to both **abiotic (non-living)** and **biotic (living)** factors.

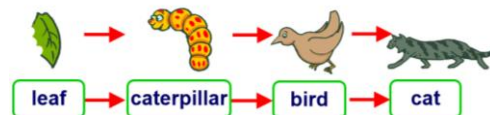
Describe and explain the distribution of biomes.

- Describe where the biomes are found using data numbers/ latitudes and place names. Use correct description words like north/east. Linear/ evenly/uneven/patterns. Add names of Biomes
- Link to type of climate. What type and why?
- Link the reasons for the biomes to be at each latitude to the climate and the cause of the climate.

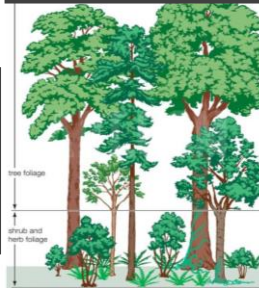


Tropical forest	Polar and high-mountain ice	Temperate deciduous forest
Savanna	Mediterranean	Coniferous forest
Desert	Temperate grassland	Tundra (arctic and alpine)

Food chains always start with a **producer**.



EXAMPLE OF A UK ECOSYSTEM: EPPING FOREST

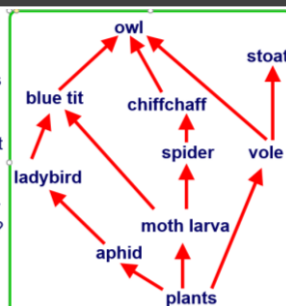


What are the feeding types of the animals in this food chain?

- consumer
- producer
- herbivore
- omnivore
- carnivore

DECOMPOSER
AN ORGANISM LIKE A FUNGUS, THAT FEEDS ON AND BREAKS DOWN DEAD PLANT OR ANIMAL MATTER. THIS MAKES ORGANIC NUTRIENTS AVAILABLE TO THE ECOSYSTEM.

1. Name the **producer** in this food web.
2. Name **two herbivores** in this food web.
3. Name two species that are **top carnivores**.
4. How many **secondary consumers** are there?
5. Which food chains include a moth larva?



A deciduous tree loses its leaves each year.

- Trees do this each year to:
- Save energy and water
- Prevent damage from frost- leaves are mainly water so will freeze and become heavier. This will damage the trees.
- Help trees to pollinate - leaves can get in the way of pollen leaving trees

Nutrient cycle

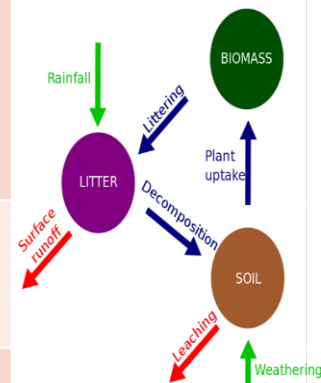
Plants take in **nutrients** to build into new organic matter. Nutrients are taken up when animals eat plants and then returned to the soil when animals die and the body is broken down by **decomposers**.

Litter

This is the **surface layer** of vegetation, which over time breaks down to become **humus**.

Biomass

The total **mass of living organisms** per unit area.



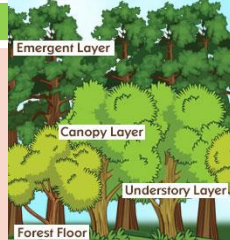
Tropical Rainforest Biome

Tropical rainforest cover about **6 per cent** of the Earth's surface yet they are home to **over half of the world's plant and animals**.



Distribution of Tropical Rainforests

Tropical rainforests are **centred along the Equator** between the Tropic of Cancer and Capricorn. Rainforests can be found in South America, central Africa and South-East Asia. **The Amazon** is the world's largest rainforest and takes up the majority of northern South America, encompassing countries such as Brazil and Peru.



Interdependence in the rainforest

A rainforest works through **interdependence**. This is where the plants and animals **depend on each other** for survival. If one component changes, there can be **serious knock-up effects** for the entire ecosystem.

Rainforest nutrient cycle

The **hot, damp conditions** on the forest floor allow for the **rapid decomposition** of dead plant material. This provides plentiful nutrients that are easily absorbed by plant roots. However, as these nutrients are in high demand from the many fast-growing plants, they do not remain in the soil for long and stay close to the surface. If vegetation is removed, the soils quickly become **infertile**.

Climate of Tropical Rainforests

- Evening temperatures rarely fall below **22°C**.
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.

Tropical Rainforests: Case Study Malaysia



Malaysia is a LIC country in south-east Asia. 67% of Malaysia is a tropical rainforest with 18% of it not being interfered with.

However, Malaysia has the fastest rate of deforestation compared to anywhere in the world

What are the causes of deforestation?

Logging

- Most widely reported cause of destructions to biodiversity.
- Timber is harvested to create **commercial items** such as furniture and paper.
- **Violent confrontation** between indigenous tribes and logging companies.

Agriculture

- Large scale '**slash and burn**' of land for ranches and palm oil.
- Increases **carbon emission**.
- **River saltation and soil erosion** increasing due to the large areas of **exposed land**.
- Increase in **palm oil** is making the **soil infertile**.

Mineral Extraction

- **Precious metals** are found in the rainforest.
- Areas **mined** can experience **soil and water contamination**.
- **Indigenous people** are becoming **displaced** from their land due to roads being built to transport products.

Tourism

- **Mass tourism** is resulting in the building of hotels in extremely **vulnerable areas**.
- Lead to **negative relationship** between the government and indigenous tribes
- Tourism has **exposed animals** to human **diseases**.

Energy Development

- The **high rainfall** creates ideal conditions for **hydro-electric power (HEP)**.
- The **Bakun Dam** in Malaysia is key for creating energy in this developing country, however, both people and environment have suffered.

Road Building

- **Roads** are needed to bring supplies and **provide access** to new mining areas, settlements and energy projects.
- In Malaysia, logging companies use an **extensive network of roads** for heavy machinery and to transport wood.

Many tribes have developed sustainable ways of survival. The rainforest provides inhabitants with...

- Food through hunting and gathering.
- Natural medicines from forest plants.
- Homes and boats from forest wood.

Impacts of deforestation

Economic development

- + Mining, farming and logging creates employment and tax income for government.
- + Products such as palm oil provide valuable income for countries.
- The loss of biodiversity will reduce tourism.

Soil erosion

- Once the land is **exposed by deforestation**, the soil is more **vulnerable to rain**.
- With **no roots to bind soil together**, soil can easily **wash away**.

Climate Change

- When rainforests are cut down, the climate becomes **drier**.
- Trees are **carbon 'sinks'**. With greater deforestation comes more greenhouse emissions in the atmosphere.
- When trees are burnt, they **release more carbon in the atmosphere**. This will enhance the **greenhouse effect**.

Adaptations to the rainforest

Orangutans

Large arms to swing & support in the tree canopy.

Drip Tips

Allows heavy rain to **run off leaves easily**.

Lianas & Vines

Climbs trees to reach sunlight at canopy.

Sustainability for the Rainforest

Uncontrolled and unchecked exploitation can cause irreversible damage such as loss of biodiversity, soil erosion and climate change.

Possible strategies include:

- **Agro-forestry** - Growing trees and crops at the same time. It prevents soil erosion and the crops benefit from the nutrients.
- **Selective logging** - Trees are only felled when they reach a particular height.
- **Education** - Ensuring those people understand the consequences of deforestation
- **Afforestation** - If trees are cut down, they are replaced.
- **Forest reserves** - Areas protected from exploitation.
- **Ecotourism** - tourism that promotes the environments & conservation

Homework

[What is an ecosystem? - Ecosystems - AQA - GCSE Geography Revision - AQA - BBC Bitesize](#)

[Sustainable Management of the Amazon Rainforest - Internet Geography](#)

Key Vocabulary

Ecosystem- a biological community of interacting organisms and their physical environment:

Nutrient Cycling – the movement and exchange of organic and inorganic matter.

Biodiversity - the variety of plant and animal life in a particular habitat.

Biomass – the total quantity or weight of organisms given in area or volume.

Adaptation – special features that help a species survive.

Inter-relationship – where two or more things are related to one another.

Biotic – living

Abiotic – non-living

Emergent – trees that tower above the canopy.

Buttress Roots – wide roots that anchor an emergent tree.

Lianas – vine plants.

Epiphytes – plants that can grow on branches of trees, without soil.

Deforestation- the removal of trees on a large scale.

Selective Logging – removing only specific, selected trees.

Subsistence Farming – growing crops or raising livestock for own use.

Soil Erosion – the wearing away of soil, which becomes infertile.

Carbon Sink – an environment which absorbs carbon dioxide from the atmosphere.

Ecotourism – tourism which works with natural environments and supports their conservation.

BIG QUESTIONS

How do artists use 3D materials, techniques and processes?

How can the use of primary and secondary sources support the development of ideas for 3D?

Can you list 5 types of media used in sculpture?

Does a sculpture have to be realistic and why?

Can you demonstrate 3 sculpture techniques?

Can you describe the properties of clay?

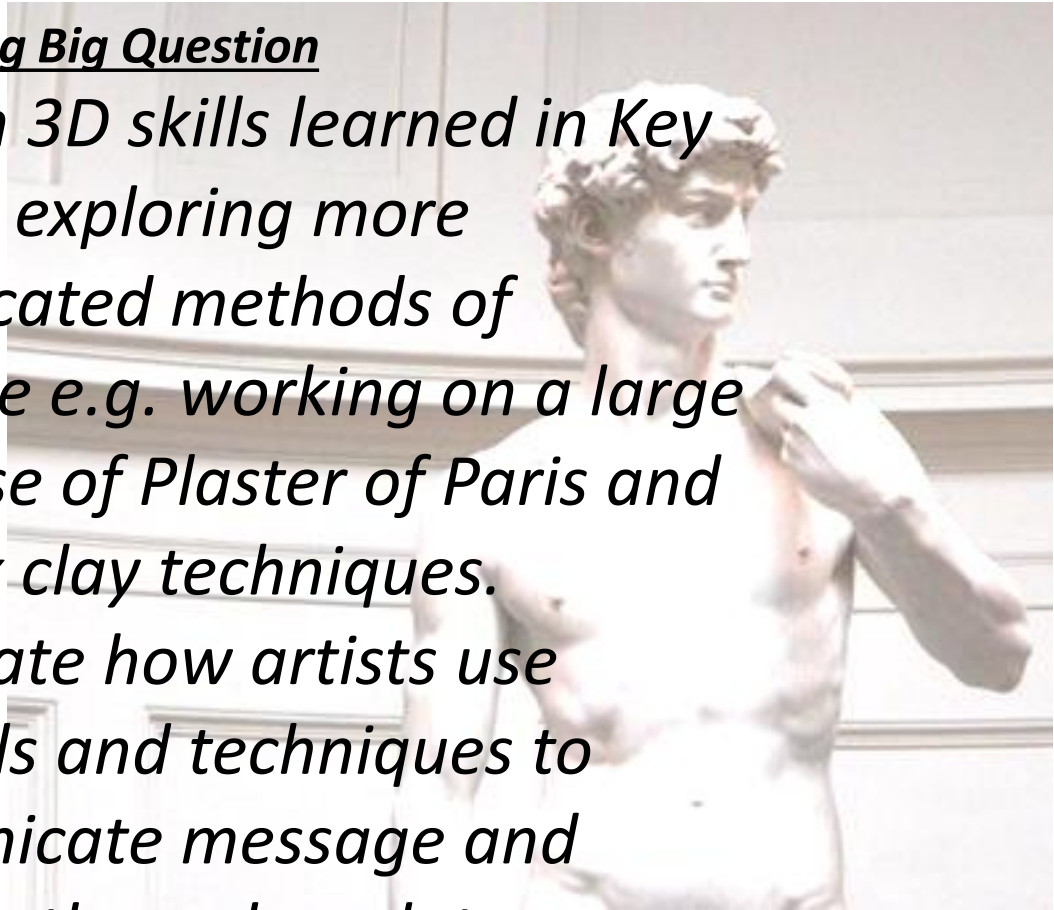
How can the scale of a piece of art affect the viewer?

Overarching Big Question

Broaden 3D skills learned in Key Stage 3, exploring more sophisticated methods of sculpture e.g. working on a large scale, use of Plaster of Paris and complex clay techniques.

Investigate how artists use materials and techniques to communicate message and meaning through sculpture.

Select and develop ideas suitable for sculpture.



Key Skills

RECORD

I will learn to record...

- images and information appropriate to a given theme
- using 2D and 3D media
- Building on my knowledge and understanding of how 3D artists communicate ideas in different ways
- 3D techniques to create meaningful work
- ideas for a sculpture linked to a given theme

DEVELOP

I will learn how to develop...

- my knowledge and understanding of 3D
- my drawing and 3D skills to a higher level
- my ability to research and use images and information to create 3D ideas
- ideas in response to a given theme, linking to artists work and my own research.
- my higher order thinking skills

REFINE

I will learn how to...

- work from observation, imagination and other sources to plan ideas for 3D work.
- Explore the properties of different 3D media
- develop an idea from one 3D media into another
- select ideas to adapt and improve in different ways

EVALUATE

I will learn how to...

- reflect on the development of my work
- make connections between my own and abstract artists' work
- suggest ways I could improve
- evaluate artists using analytical writing skills and forming opinions

PRESENT OUTCOMES

I will learn how to...

produce a finished outcome in 3D includes 2-hour exam



Homework Links

Homework- tasks linked to 'Drawing and Sculpture' (2 hours per two-week cycle)



Key Vocabulary

*I will learn the meaning of...
Shape/Form/Scale/
Proportion/Texture/
Balance/Construction
within the context of
sculpture.*

How to be ready for your end of year art exam...

This year has been all about further developing skills in specialist techniques Printmaking, Painting and Sculpture.

Your exam will be based on the 'Sculpture' project, but you will also be able to apply other skills acquired since Year 7...

- **Drawing**
- **Knowledge of colour**
- **Exploring media and techniques**
- **Showing an artist influence**
- **Developing ideas**
- **Evaluating your work**



EVALUATING ARTISTS' WORK

1. Describe the piece of art you are looking at
2. What is the name of the artist or type of art?
3. What art movement or culture does the art link to?
4. Research and list 5 or more things about the artist or culture?
5. What important things have happened in the country that the art comes from?
6. What has influenced the art E.g. other artists, people, personal experiences, society, culture, politics, gender, colour, pattern, movement, religion, travel, places, objects etc.
7. Describe the materials used to make the art
8. How has the art been produced?
9. What is being communicated through the art?
10. Which of these words best describes the mood of the picture? EMOTIONAL/POWERFUL/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/INTENSE/SCARY can you think of any other words?
11. What do you like or dislike about the picture? Explain your reasons...

ANNOTATING YOUR OWN WORK

- In this artwork I was trying to...
- The artist/culture that has influenced my work is...
- The source I have used is...
- I found the source I used at...
- In this artwork I used the technique of...
- The media I have used is...
- I like/dislike this piece because...
- My idea links to the theme because...
- I can improve this piece by...
- I could develop this work further by...

Annotate means to explain your own creations

Artist evaluation is when you write about the artist

Project evaluation is written about the whole project at the end

END OF PROJECT EVALUATION

1. Describe each stage of the project from start to finish
2. What media did you use to produce your work? E.g. Paint/Pencil/Clay etc.
3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
4. Which artist's culture have you looked at?
5. Write down 2 or more similarities between your work and the artist's work.
6. Which piece of your work best shows the Artist's style or the influence of another culture and why?
7. Describe some of your own ideas...
8. Have you used a primary or a secondary source?
9. Have you included the secondary source in your work? Where did you find it?
10. Imagine your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
11. Explain any other influences on your work e.g. personalities (*including your own*), places, memories, objects, politics, events, activities, religion, fact, fiction etc.
12. Describe how your work links to the project theme?
13. Explain what you have done well...
14. Explain how you could improve...
15. What would you do differently, if you were to repeat any part of this project?

Big Questions:

- § Sprinting - Can you successfully complete a sprint start?
- § Middle Distance - Can you effectively pace myself to complete the race?
- § Long/Triple Jump - Can you take off effectively in long jump? Can you successfully complete the triple jump (hop, skip, jump)?
- § High Jump - Can you effectively take off and land safely?
- § Shot Putt – Can you safely and effectively throw a shot putt?
- § Javelin – Can you safely and effectively throw a javelin?
- § Discuss – Can you safely and effectively throw a discus?
- § Relay - Can you effectively perform the baton change over?

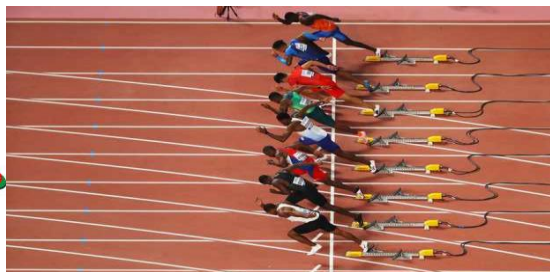


Key Skills:

- Running: An action to move quickly, with the correct technique, using arms and legs as effectively as possible.
- Jumping: The technique to propel the body into the air to either cover distance, height or both.
- Throwing: The technique used to propel an object through the air as far as possible.

Roles of an Official:

- **Starter:**
 - Ensures that runners are positioned correctly and are in the correct lane.
 - Using a starting gun, s/he will signal when the runners are to begin their race.
- **Measurer:**
 - Ensures that a legal throw or jump is measured correctly and that the distance or height is noted in the scorebook.
- **Timer:**
 - Records the finishing times for competitors in track events using a stopwatch.



Key events that we cover in Athletics:

- 100m: The quickest to cover 100m; measured in seconds and tenths of seconds. A key Component of Fitness: **SPEED**
- 800m: The fastest to cover 800m; measured in minutes and seconds. A key component of Fitness: **AEROBIC ENDURANCE**
- Long Jump: Furthest distance covered, using a one foot take-off; measured in metres and centimetres. A key Component of Fitness: **POWER**
- High Jump: Highest distance completed, using a one foot take-off; measured in metres and centimetres. A key Component of Fitness: **FLEXIBILITY**
- Javelin: The furthest a javelin can be thrown; measured in metres and centimetres. A key component of Fitness: **BALANCE**
- Shot Putt: The furthest a shot can be thrown; measured in metres and centimetres. A key Component of Fitness: **MUSCULAR STRENGTH**
- Relay: A team sprinting event where 4 runners pass a baton between them; measured in minutes and seconds. A key Component of Fitness: **COORDINATION**

Teamwork and Respect:

- Sets an example for others to follow.
- Very fair in competition.
- Always gracious in defeat and humble in victory.
- Works well in a team and supports their peers.
- Never argues with an official.

Big Questions:

- § Can you throw, catch and perform a long barrier?
- § Can you bat with accuracy and power?
- § Can you consistently perform a pitch into the strike zone?
- § Can you use key tactics and strategies in order to be successful?



Key Skills:

- Batting: Hitting the ball into space, short hits (bunting) into the diamond, long hits into the outfield (possible home run).
- Pitching (Bowling): Underarm pitch from the pitcher's circle. Must pass over the batting mat, must be between the batter's knees and shoulders to be counted.
- Catching: Can use a softball glove to aid catching. All players can wear gloves. Vital catching positions are on all 4 bases due to fielders throwing the ball into them for attempted run outs.

Leadership and Coaching:

- Can run a three-part warm up.
- Devise and run a small skill practice
- Encourages others
- Good organisation skills
- Good communication skills
- Confident in different roles: Coach, Referee, Scorer.

Teamwork and Respect:

- Sets an example for others to follow.
- Very fair in competition.
- Always gracious in defeat and humble in victory.
- Works well in a team and supports their peers.
- Never argues with the referee.

Key Rules in Softball:

- Strike: Complete swing and miss when batting. Failing to swing at a "good" ball. Three strikes and you are out.
- Foul Ball: Hitting the ball but not within the playing area (base 1 to base 3). You get unlimited foul balls but each foul ball will be counted as strike until the second foul ball. You can be caught out on a foul ball. Runners cannot run on a foul ball.
- Double Play: Batter is caught out but another runner is also run out. Can even get triple plays with exceptional fielding.
- Run Outs: Fielders get the ball to the base you are running to before you, you are now out. If you leave the base you can be out anytime if the fielders get the ball to the base, but you can overrun first base.
- Tagging: When running between bases, fielders in possession of the ball can tag you, you are now out.
- Miss-Fields: If the fielding team drop the ball/over throw the ball, bases are now open and runners can run.
- Diamond Area: Only the pitcher is allowed inside the diamond. Fielders can wait on the edge of the diamond and enter as the pitcher pitches the ball.



Big Questions:

- Can you successfully throw and catch a ball?
- Can you use the long barrier fielding technique?
- Can you accurately bowl a rounder's ball?
- Can you hit a rounder's ball with accuracy and power?

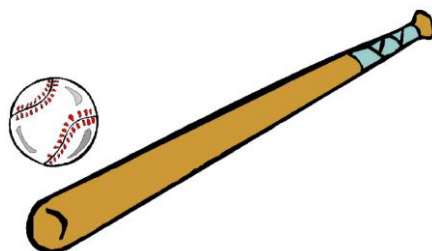


Key Skills:

- Develop an understanding of the principles of striking and fielding
- Increase their range of skills needed to participate effectively
- Develop an understanding of the rules
- Develop an understanding of the tactics required
- To understand and apply the principles of scoring
- Observe others and apply self-check techniques in order to improve their own and others' games

Leadership and Coaching:

- Knowledge of rules and regulations
- Knowledge of warm up and cool down
- Organisational skills
- Creativity and tactical vision
- Opportunity to take on different roles e.g. player, coach, scorer, umpire



Key Rules in Rounders:

- The bowler bowls the ball to the batter, who hits the ball anywhere on the Rounders pitch. The batter then runs to as many posts as possible before the fielders return the ball to touch the post the batter is heading for.
- If the batter reaches the 2nd or 3rd post in one hit, the batting team scores $\frac{1}{2}$ Rounder.
- If the batter reaches 4th post in one hit, the batting team scores a Rounder.
- A batter is out if the fielding team catch the ball hit by a batter before it touches the ground **or** by touching the post the batter is running to with the ball before the batter reaches it.
- If the batter incurs 2 no balls in a row then a penalty $\frac{1}{2}$ rounder is given to the batting team.
- There is a penalty $\frac{1}{2}$ rounder given to the batting team if the batter is obstructed by a fielder.
- Batters must always keep contact with the post, either with their hand or bat. If you don't, the fielders can stump you out at the following post.
- You don't have to move to the next post every time a ball is bowled.

Teamwork and Respect:

- Honest/Fair
- Demonstrates good sportsmanship
- Speaks to peers/teacher with respect
- Motivates others
- Compassionate

Big Questions:

- § Can I consistently rally with a partner (overhead clear)?
- § Can I serve accurately (backhand, underarm)?
- § Can I effectively play an attacking shot (drop, smash)?
- § Can apply rules and tactics effectively to score points?



Key Skills:

Overhead Clear: Force opponent to rear of court, hit at highest point, follow through and stand side on.

Smash: Aim to skim net, hit at highest point in downwards direction and transfer body weight.

Drop Shot: Stand side on, skim net and land just beyond, light tap.

Backhand Shot: Backhand grip, aim for back of court, strong follow through and stand side on

Long Serve: Drop and swing at same time, aim for back of court, stand side on and start with racket at waist height.

Short Serve: Short back swing, aim to skim net, racket in front with backhand grip.

Leadership and Coaching:

- Can compare performance using key terminology and teaching points for a variety of sports and skills
- Can use ICT to compare performance
- Know how to gain others attention



Key Rules in Badminton:

- Singles: Court long and narrow
- Doubles: Court short and wide for serving, whole court thereafter
- You can't touch or cross the net
- Can only hit the shuttle once when returning
- Games are played to 21 points
- Points are scored on every serve



Teamwork and Respect:

- Set examples to others in lessons and competitive games
- Show fair in competition
- Respect officials' decisions
- Be gracious in defeat e.g. shake hands with each other

Big Questions

- 1) How do different extrinsic factors influence the risk and severity of injury?
- 2) How do different intrinsic factors influence the risk and severity of injury?
- 3) What are the key components of a warm up?
- 4) What are the physiological and psychological benefits of a warm up?
- 5) What are the key components and physiological benefits of a cool down?
- 6) What are the types and causes of acute injuries?
- 7) What are the types and causes of chronic injuries?
- 8) How can you reduce the risk and severity of an injury or medical condition?
- 9) What are common responses and treatments to medical conditions?
- 10) What are the common causes, symptoms and treatments of medical conditions?

Topic Area 1: Different factors which influence the risk and severity of injury

Key Terms:

- ✓ **Extrinsic factors** – where the factor or risk of injury comes from outside the body
- ✓ **Intrinsic factors** – where the factor or risk of injury comes from within the body
- ✓ **Contact sports** – sports where physical contact between performers is an accepted part of play
- ✓ **Non-contact sports** – sports where participants compete alternately, or are physically separated, or the rules detail no contact.
- ✓ **Hypothermia** – a dangerous drop in body temperature below 35°C.
- ✓ **Veterans** – performers above a certain age that is specific to the sport.
- ✓ **Psychological factors** – mental factors that affect a performer.
- ✓ **Motivation** – the drive to do something.
- ✓ **Arousal** – level of activation or excitement.
- ✓ **Anxiety** – negative emotional state due to nervousness.
- ✓ **Stress** – the feelings we get when we find it difficult to cope with the demands placed on us.
- ✓ **Confidence** – belief in your own ability to master a situation.
- ✓ **Aggression** – Intention to cause harm.
- ✓ **Mental rehearsal** – going over a skill in the mind before performance.

Topic Area 2: Warm up and cool down routines

Key Terms:

- ✓ **Warm up** - exercises to prepare the body for exercise so that the chances of injury or ill effects are reduced.
- ✓ **Dynamic stretches** – active stretching exercises.
- ✓ **Adrenaline** - hormone that prepares the body for exercise.
- ✓ Lactic Acid - waste product of anaerobic exercise; it causes fatigue.
- ✓ **Anaerobic** – without oxygen; oxygen is not used to produce energy during high-intensity, short-duration anaerobic exercise.
- ✓ **Cool down** - easy exercise done after a more intense activity to allow the body to gradually move to a resting condition.
- ✓ **Maintenance stretches** - stretches designed to just maintain flexibility.
- ✓ **Static stretches** – stretches where the stretched position is held for many seconds in an attempt to improve flexibility.
- ✓ **Proprioceptive neuromuscular facilitation (PNF)** - advanced form of flexibility training, involving both the stretching and contracting of the muscles being targeted.
- ✓ **Delayed onset muscle soreness** – muscle pain that starts a day or two after an exercise workout.

Topic Area 3: Different types and causes of sports injuries

Key Terms:

- ✓ **Acute injuries** – injuries caused by impacts or collisions.
- ✓ **Chronic injuries** - injuries caused by continuous stress.
- ✓ **Soft tissue injuries** - injuries to muscles, tendons or ligaments.
- ✓ **Hard tissue injuries** – injuries to part of the skeletal system, such as fractures or dislocations.
- ✓ **Strains** - injuries to muscles.
- ✓ **Sprains** - injuries to ligaments.
- ✓ **Ligaments** - tissue that connects bone to bone and strengthens joints.
- ✓ **Abrasion** - surface damage to the skin; grazes.
- ✓ **Cut** - skin wound where the tissues of the skin become separated.
- ✓ **Laceration** - a torn or jagged wound caused by a sharp object.
- ✓ **Contusion** - bruise caused by blood leaking into the surrounding area.
- ✓ **Blister** - bubble on the skin caused by friction.
- ✓ **Fracture** - partial or complete break in a bone.
- ✓ **Dislocation** - when a bone is dislodged from its position in a joint.
- ✓ **Concussion** - head injury in which the brain is shaken inside the skull.
- ✓ **Tendonitis** - inflammation of the tendons.
- ✓ **Epicondylitis** - inflammation of an epicondyle of a bone.
- ✓ **Stress fracture** – tiny cracks in a bone caused by repetitive force, often from overuse.

Big Questions

- 1) How do different extrinsic factors influence the risk and severity of injury?
- 2) How do different intrinsic factors influence the risk and severity of injury?
- 3) What are the key components of a warm up?
- 4) What are the physiological and psychological benefits of a warm up?
- 5) What are the key components and physiological benefits of a cool down?
- 6) What are the types and causes of acute injuries?
- 7) What are the types and causes of chronic injuries?
- 8) How can you reduce the risk and severity of an injury or medical condition?
- 9) What are common responses and treatments to medical conditions?
- 10) What are the common causes, symptoms and treatments of medical conditions?

Topic Area 4: Reducing risk, treatment and rehabilitation of sports injuries and medical conditions

Key Terms:

- ✓ **Hazard** - something that can cause harm.
- ✓ **Risk** - the likelihood of danger.
- ✓ **Risk assessment** – careful examination of what, in relation to a sports activity, could cause harm to people.
- ✓ **Electrocardiogram (ECG)** - technology used to detect the rhythm and electrical activity within the heart.
- ✓ **Emergency action plan (EAP)** - written document identifying what action to take in the event of an emergency at a sporting event.
- ✓ **SALTAPS** - acronym for see, ask, look, touch, active, passive, strength.
- ✓ **DRABC** - acronym for danger, response, airway, breathing and circulation.
- ✓ **Recovery position** – position for an unconscious person that keeps their airway clear and open.
- ✓ **PRICE** - acronym for protection, rest, ice, compression, elevation.
- ✓ **Ultrasound** - use of high frequency sound waves to diagnose and treat injuries.
- ✓ **Electrotherapy** - use of electrical energy to treat injuries.
- ✓ **Hydrotherapy** - use of water to improve blood circulation, relieve pain and relax muscles.
- ✓ **Cryotherapy** - use of cold temperatures to treat injuries.
- ✓ **Contrast therapy** – use of quickly changing temperatures from hot to cold and back again to treat injuries.
- ✓ **Analgesics** – medication used to relieve pain.
- ✓ **Cast** - hard fibreglass or plaster casing designed to prevent broken bones from moving.
- ✓ **Splint** - plastic or fibreglass support for a limb injury.
- ✓ **Sling** - support, usually of folded cloth, designed to immobilise and rest the arm.

Topic Area 5: Causes, symptoms and treatment of medical conditions

Key Terms:

- ✓ **Asthma** - a condition in which the airways narrow and swell, which can make breathing difficult.
- ✓ **Inhaler** - device that allows medicine to be breathed in.
- ✓ **Nebuliser** - machine that allows medicine to be breathed in.
- ✓ **Glucose** - simple sugar found in blood used as an energy source.
- ✓ **Insulin** - a hormone that lowers blood glucose levels.
- ✓ **Diabetes** - condition in which blood sugar levels are not regulated by the body effectively.
- ✓ **Ketones** – chemicals produced by the liver during fat breakdown.
- ✓ **Diabetic ketoacidosis (DKA)** - a condition caused by excess ketones in the blood.
- ✓ **Insulin-dependent** - another name for Type 1 diabetes.
- ✓ **Insulin-resistant** – another name for Type 2 diabetes.
- ✓ **Hypoglycaemia** - low blood sugar level.
- ✓ **Hyperglycaemia** – high blood sugar level.
- ✓ **Epilepsy** – abnormal brain activity that causes recurring seizures.
- ✓ **Seizures** - bursts of electrical activity that temporarily affect how the brain works.
- ✓ **Triggers** - things that make epileptic seizures more likely.
- ✓ **Fatigue** - a feeling of overwhelming tiredness.
- ✓ **Anti-epileptic drugs (AEDs)** - medicine taken to help control seizures.
- ✓ **Ketogenic diet** - a diet high in fats and low in carbohydrates and proteins.
- ✓ **Sudden cardiac arrest (SCA)** - a condition in which the heart suddenly and unexpectedly stops beating.
- ✓ **Commotio cordis** – a sudden trauma, such as a blow to the chest directly over the heart at certain points in the heartbeat cycle, that can cause sudden cardiac arrest.
- ✓ **Electrolytes** – minerals found in blood, urine and sweat that carry an electric charge when dissolved in water.

Big Questions

- 1) How are components of fitness relevant to different sports?
- 2) Can you justify why different components of fitness are relevant for different sports?
- 3) What fitness tests are used for each component of fitness?
- 4) Can you apply the components of fitness to a skilled performance?
- 5) What are the principles of training?
- 6) What are SMART goals?
- 7) What are methods of training and their advantages/disadvantages?
- 8) What factors should you consider when designing a fitness training programme?
- 9) How do you apply the principles of training to a fitness training programme?
- 10) How do you plan a fitness training programme?
- 11) How do you record your results from a fitness training programme?
- 12) What are the strengths and areas for improvement for your fitness training programme?

Topic Area 1: Components of fitness applied in sport

Key Terms:

- ✓ **Cardiovascular endurance** - the ability of the heart and lungs to get oxygen to the working muscles for use by the body.
- ✓ **Muscular endurance** - the ability of a muscle to sustain repeated contractions.
- ✓ **Aerobic** - with oxygen; oxygen is used to produce energy during low intensity, long-duration aerobic exercise.
- ✓ **Speed** - the maximum rate at which an individual is able to perform a movement.
- ✓ **Strength** - the extent to which a muscle or muscle group can contract against resistance.
- ✓ **Power** - the exertion of rapid muscular strength; it can be remembered as strength × speed.
- ✓ **Agility** - the ability to move and change direction quickly while maintaining control.
- ✓ **Balance** - the ability to maintain a position; this involves maintaining the centre of mass over the base of support.
- ✓ **Flexibility** - the range of movement possible at a joint.
- ✓ **Co-ordination** - the ability to use two or more body parts together (simultaneously) smoothly and efficiently.
- ✓ **Reaction time** - the time taken from the onset of a stimulus to the start of the reactive movement.
- ✓ **Maximum oxygen uptake (VO2 Max)** – maximum volume of oxygen that can be consumed per minute / unit of time.
- ✓ **Protocol** - the accepted or established procedure for conducting a test.
- ✓ **Validity** - refers to how well a fitness test measures the component of fitness that it aims to test.
- ✓ **Reliability** - a fitness test is reliable if it can be repeated and gives similar results each time.
- ✓ **Maximal tests** – fitness tests that require maximal effort in order to produce a valid, comparable result.
- ✓ **Sub-maximal tests** - fitness tests that do not require maximal exertion.
- ✓ **PAR-Q** - physical activity readiness questionnaire.

Topic Area 2: Principles of training in sport

Key Terms:

- ✓ **SPOR** - principles of training: specificity, progression, overload and reversibility.
- ✓ **Specificity** - making training specific to the movements, skills and muscles that are used in the activity.
- ✓ **Progression** – gradually making training harder as it becomes too easy.
- ✓ **Overload** - working harder than normal.
- ✓ **Reversibility** – ‘use it or lose it’. If you stop training, you will lose fitness.
- ✓ **FITT** - principles of overload: frequency, intensity, time and type.
- ✓ **SMART** - principles of goal setting: specific, measurable, achievable, realistic and time bound.
- ✓ **Continuous training** - any activity or exercise that can be continuously repeated without suffering undue fatigue.
- ✓ **Aerobic training zone** – the optimal zone of training to make aerobic gains in the body to improve cardiovascular endurance and stamina.
- ✓ **Fartlek training** - ‘speed play’, which generally involves running, combining continuous and interval training with varying speed and intensity.
- ✓ **Interval training** – any training that involves periods of work and rest.
- ✓ **Circuit training** - a series of exercises performed at work stations with periods of work and rest.
- ✓ **Plyometric training** - repeated exercises such as bounding, hopping or jumping over hurdles, which are designed to create fast, powerful movements.
- ✓ **Eccentric contraction** - when a muscle contracts and lengthens.
- ✓ **Concentric contraction** - when a muscle contracts and shortens in length.
- ✓ **Resistance training** - training that involves working against some kind of force that ‘resists’ the movement.
- ✓ **Hypertrophy** - an increase in muscle size as a result of training.
- ✓ **High-intensity interval training (HIIT)** – training that involves periods of very high-intensity work and rest.

Big Questions

- 1) How are components of fitness relevant to different sports?
- 2) Can you justify why different components of fitness are relevant for different sports?
- 3) What fitness tests are used for each component of fitness?
- 4) Can you apply the components of fitness to a skilled performance?
- 5) What are the principles of training?
- 6) What are SMART goals?
- 7) What are methods of training and their advantages/ disadvantages?
- 8) What factors should you consider when designing a fitness training programme?
- 9) How do you apply the principles of training to a fitness training programme?
- 10) How do you plan a fitness training programme?
- 11) How do you record your results from a fitness training programme?
- 12) What are the strengths and areas for improvement for your fitness training programme?

Topic Area 3: Organising and planning a fitness training programme

Key Terms:

- ✓ **One rep max** – the maximum weight that can be lifted once (one repetition).
- ✓ **Adaptability** - flexibility to adapt a programme if, for any reason, the session being performed cannot be followed precisely.
- ✓ **Objective measures** – facts that provide figures/ numbers, which can allow a performer to monitor improvement.



Figure 2.36 One rep max refers to the maximum weight that can be lifted once

Topic Area 4: Evaluate own performance in planning and delivery of a fitness training programme



Figure 2.38 Stretching forms a vital part of warm up and cool down routines

Target area	Suitable activity
Cardiovascular endurance/ stamina	Specific exercises: any aerobic activity, for example cycling, swimming, jogging, walking, rowing Overload intensity: 60–80 per cent of maximum heart rate ($220 - \text{age}$) Time: 20 minutes or more of activity, three to four times per week
Muscular strength	Specific exercises: use of high resistance, for example weights, resistance machines, body weight Overload intensity: 70 per cent or more of one rep max (maximum lift); three sets of six to eight repetitions Time: 30 minutes or more
Muscular endurance	Specific exercises: use of low resistance, for example weights, resistance machines, body weight Overload intensity: less than 70 per cent of one rep max (maximum lift); three to four sets of 10–15 repetitions Time: 30 minutes or more
Agility	Specific exercises: shuttles or circuits that involve speed work while changing direction, for example sprinting round cones, ladder running Overload intensity: work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between different exercises) Time: 30 minute sessions, two or three times per week
Speed	Specific exercises: use speed ladders, sprints, interval sprints Overload intensity: work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between different exercises) Time: 30 minutes or more
Power	Specific exercises: interval training – high-intensity, short sharp activities; acceleration sprint training; plyometric training, for example box jumping and hurdle jumps Overload intensity: for example, box jumps with three to six sets of 8–15 repetitions, depending upon the stress of the exercise being done; sprints with a work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between sprints) Time: 30 minutes or more
Balance, flexibility, co-ordination or reaction time	Specific exercises: use of predesigned circuit to include flexibility stretches, co-ordination drills or balancing exercises Overload intensity: two to three sets of 12 reps with 30-second recovery intervals Time: 30 minutes or more

Big Questions

- 1) What is the function and role of the cardio-respiratory system?
- 2) How is technology used to inform us about the cardio-respiratory system?
- 3) What are the components and role of the musculo-skeletal system?
- 4) How is technology used to inform us about the musculo-skeletal system?
- 5) What are the short-term effects of exercise on the cardio-respiratory system?
- 6) What are the short-term effects of exercise on the musculo-skeletal system?
- 7) What are the long-term effects of exercise on the cardio-respiratory system?
- 8) What are the long-term effects of exercise on the musculo-skeletal system?

Topic Area 1: The cardio-respiratory system and how the use of technology supports different types of sports and their intensities

Key Terms:

- ✓ **Atria** - upper chambers of the heart that collect blood from veins.
- ✓ **Ventricles** – lower chambers of the heart that pump blood out through arteries.
- ✓ **Valves** - prevent the backflow of blood.
- ✓ **Deoxygenated** – venous blood (in veins) that does not carry oxygen.
- ✓ **Oxygenated** - arterial blood (in arteries) that carries oxygen.
- ✓ **Arteries** - blood vessels that mainly carry oxygenated blood away from the heart.
- ✓ **Capillaries** - tiny, thin walled blood vessels that join arteries (which carry blood away from the heart) and veins (which carry blood back to the heart).
- ✓ **Alveoli** - tiny air sacs in the lungs.
- ✓ **Veins** - blood vessels that mainly carry deoxygenated blood back to the heart.
- ✓ **Trachea** - tube connecting the mouth and nose to the lungs.
- ✓ **Lungs** - large spongy organs in chest; used for gas exchange.
- ✓ **Bronchi** - airways that lead from the trachea into the lungs.
- ✓ **Bronchioles** - air passages inside the lungs that connect the bronchi to the alveoli.
- ✓ **Diaphragm** - dome-shaped muscle causing inhalation and exhalation.
- ✓ **Radial pulse** - heart rate that can be felt at the wrist.
- ✓ **Carotid pulse** - heart rate that can be felt at the neck.
- ✓ **Vasoconstriction** – reduction in the diameter of a blood vessel to reduce blood flow through that vessel.
- ✓ **Vasodilation** - widening in the diameter of a blood vessel to increase blood flow through that vessel.
- ✓ **Cardiac output** – the volume of blood that the heart is able to pump out in one minute.
- ✓ **Stroke volume** – the volume of blood that leaves the heart during each contraction.

Topic Area 2: The musculo-skeletal system and how the use of technology supports different types of sports and their movements

Key Terms:

- ✓ **Clavicle** - the collarbone.
- ✓ **Scapula** - the shoulder blade.
- ✓ **Humerus** - bone in the upper arm.
- ✓ **Radius** - bone of the forearm; attaches to the thumb side of the wrist.
- ✓ **Ulna** - bone of the forearm; forms the point of the elbow.
- ✓ **Cranium** - skull bone, which surrounds the brain.
- ✓ **Ribs** - bones surrounding the heart and lungs, forming the chest cavity.
- ✓ **Sternum** - flat bone at the front of the chest, sometimes called the breastbone.
- ✓ **Vertebrae** - many single bones joined together to form the backbone.
- ✓ **Femur** - long bone of the thigh or upper leg, which extends from the hip to the knee.
- ✓ **Tibia** - the shin bone; forms knee joint with the femur.
- ✓ **Fibula** - bone in the lower leg that forms the ankle.
- ✓ **Patella** - the kneecap; covers the knee joint.
- ✓ **Deltoids** - muscles on shoulder joint that move the upper arm.
- ✓ **Trapezius** - muscle at the top of the back that moves the scapula and head.
- ✓ **Latissimus dorsi** – muscle at the side of back that moves the upper arm.
- ✓ **Pectorals** - muscles in the chest that move the upper arm.
- ✓ **Biceps** - muscles at the front of the upper arm.
- ✓ **Triceps** - muscles at the back of the upper arm.
- ✓ **Abdominals** – stomach muscles that protect internal organs.
- ✓ **Gluteals** - buttock muscles, which are used when running.
- ✓ **Hamstrings** - muscles at the back of the upper leg.
- ✓ **Quadriceps** - muscles at the front of the upper leg.
- ✓ **Gastrocnemius** - one of the calf muscles; used in walking.
- ✓ **Soleus** - one of the calf muscles; used in walking.

Big Questions

- 1) What is the function and role of the cardio-respiratory system?
- 2) How is technology used to inform us about the cardio-respiratory system?
- 3) What are the components and role of the musculo-skeletal system?
- 4) How is technology used to inform us about the musculo-skeletal system?
- 5) What are the short-term effects of exercise on the cardio-respiratory system?
- 6) What are the short-term effects of exercise on the musculo-skeletal system?
- 7) What are the long-term effects of exercise on the cardio-respiratory system?
- 8) What are the long-term effects of exercise on the musculo-skeletal system?

Key Terms (continued Topic 1):

- ✓ **Systolic blood pressure** - blood pressure when the heart is contracting.
- ✓ **Diastolic blood pressure** - blood pressure when the heart is relaxed.
- ✓ **Inhalation** - breathing in.
- ✓ **Exhalation** - breathing out.
- ✓ **Intercostal muscles** - muscles located between the ribs.
- ✓ **Diffusion** - the movement of a gas from an area of high concentration to an area of low concentration.
- ✓ **Wearable technology** - technology worn on the body during exercise to provide data.
- ✓ **Laboratory-based technology** - the use of technology inside a laboratory to provide data.
- ✓ **Field-based technology** - technology that can be used to provide data outside of a laboratory in the setting where sports take place, for example a football pitch.
- ✓ **Spirometer** - machine that produces a spirometry trace of breathing volumes.
- ✓ **Vital capacity** - amount of air expelled from your lungs when you take a deep breath and then exhale fully.
- ✓ **Pulse oximeter** - device used to measure how efficiently oxygen is being carried to the extremities by the heart (blood oxygen level).



Figure 3.18 Smartwatch

Topic Area 3: Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

Key Terms:

- ✓ **Anticipatory rise** - slight increase in heart rate before exercise.
- ✓ **ROM** - range of movement.

Key Terms (continued Topic 2):

- ✓ **Synovial joint** - a freely moveable joint.
- ✓ **Ball and socket joint** - ball shaped end of bone fits into the socket of another, for example the hip.
- ✓ **Hinge joint** - end of bone fits against another bone allowing movement in only one direction, for example the knee.
- ✓ **Gliding joint** - one bone can slide over another, for example the carpals in the wrist.
- ✓ **Pivot joint** - rounded end of one bone fits into a ring formed by the other bone, for example the vertebrae of the neck, which allow head rotation.

Topic Area 4: Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

Key Terms:

- ✓ **Fast twitch fibres** - muscle fibres that contract quickly and/or with high force; used during high-intensity work.
- ✓ **Slow twitch fibres** - muscle fibres that contract with a low force but do not fatigue quickly.
- ✓ **Bradycardia** - decrease in the resting heart rate because of training.
- ✓ **Goniometer** - device used to measure flexibility (range of movement at a joint).
- ✓ **Lung capacity** - the amount of air the lungs can hold.
- ✓ **Tidal volume** - the amount of air breathed in and out at rest.
- ✓ **Bone density** - the amount of bone mineral in bone tissue.
- ✓ **Capillarisation** - an increase in the number of capillaries as a result of endurance training.
- ✓ **Heart disease** - when the heart's blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries that supply the heart with blood.
- ✓ **Heart attack** - medical emergency in which the supply of blood to the heart is suddenly blocked.

Religion
Buddhism

Year: 9
Term: 5

- Big Questions
1. What guides Buddhists?
 2. What is the Buddhist understanding of the Samsara?
 3. What are the three marks of Existence?

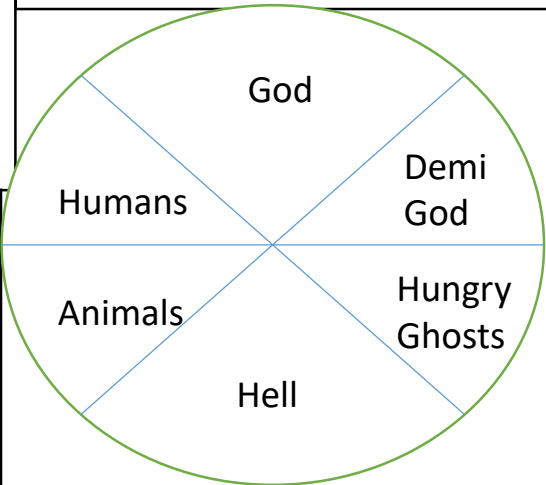
What is the middle way?

The buddha believed that in order to achieve enlightenment you need to find a middle way. This means that you don't need to have loads of luxuries, but do need to have your necessities. For example, you don't need a designer bag, but you do need food. The buddha believed that this helps you focus on the truth of life rather than getting distracted by materials.

What are the three Refuges? (three Jewels)
To take refuge means to find safety. So Buddhist can find comfort and safety in the 3 jewels:
The Buddha – they can learn from his example.
The Sangha (community) they can get help and guidance from other in the community.
The Dharma – they can learn from the teachings in the scriptures.

What is Samsara?

The samsara is the cycle of life. All beings live on the samsara . The goal within Buddhism is to reach enlightenment and escape the samsara.



Quick facts!

Holy book – various – Vedas Dhammapada.
Age of religion- 2500 years old
Place of worship – Vihara
Name of followers – Buddhist
Number in the UK – 238,626

What is dependent arising?

This is the belief that everything that is in existence exists because other things are in existence. Therefore, everything is interconnected, and everything affects everyone.

A simple formula for understanding dependent arising is:

- when this is, that is
- from the arising of this comes the arising of that
- when this is not, that is not
- when this ends, that ends

What are the 3 marks of existence?

Mark of Existence	Meaning	Explanation
Dukkha	Frustration or dissatisfaction (often understood as suffering)	Life does not necessarily provide people with what they want and things are always changing. Therefore, people usually do not achieve complete satisfaction as everything has limitations, which causes them to be dissatisfied.
Anatta	No soul	There is no fixed sense of self because everything is constantly changing. Another way of expressing this is the idea that people have no soul.
Anicca	Impermanence	Things in life are always changing. Nothing stays the same as everything is subject to change.

Key words:

Enlightenment – to be awoken or become aware of reality.
Sangha – the Buddhist community
Dharma – nature of reality the buddhas teachings.
Meditation - Meditation is a practice where an individual uses a technique – such as mindfulness, or focusing the mind on a particular object, thought, or activity – to train attention and awareness, and achieve a mentally clear and emotionally calm and stable state.
Karma – word that means action – ever action has a consequence.
Reincarnation – the idea you are reborn into a new body when you die.
Precept – a rule.
Samsara – the life cycle within dharmic religions.
Asceticism – avoiding luxuries or pleasures for spiritual gain.

BIG QUESTIONS

What is characterisation?

How can physical performance skills and vocal skills be incorporated into a performance?

How can drama techniques be incorporated into a performance?

Why is discipline important in a performance?

What are the differences between the two styles – Naturalism and Abstract Theatre?

What is the difference between devising and a scripted performance?

Performance Skills

Planned Movement	Physical actions that are organised prior to the performance and then rehearsed.
Positioning	Arranging an actor in a place/way. Where the actor is facing.
Posture	How the body is held.
Body Language	Movements with the body, that communicate feeling.
Eye Contact	Where the actor is looking.
Space	How the environment is used.
Levels	How high or low an actor is positioned on stage.
Vocal Skills	How the voice is used to communicate emotion and character.
Gestures	Using your hands to further express meaning or emotion.
Facial Expressions	Showing mood through the movement of your face.

3PBEDSLVGF

Physical performance skills are the ways the use body can be used to communicate character or meaning.

Always remember to remain disciplined when performing.

Vocal Skills

Pitch	How high or low your voice is.
Pace	How fast or slow you speak.
Pause	A moment of silence.
Projection	How far and clearly you speak enable your voice to travel across the room.
Tone	Using your voice to show mood.
Emphasis	Exaggerating particular words or phrases in a sentence.
Accent	A distinctive pronunciation which shows location. This can be linked to country or area.
Volume	How loud or quiet you are speaking.

4P'STEAV

The way in which the voice is used to communicate. Vocal skills can be used to communicate character. The more the audience can understand about a character, the greater the understanding of the narrative of the performance. **P.46**

Drama Techniques	What would it look like on stage?
Thought Track	Character telling their thoughts to the audience
Monologue	A speech spoken by one character
Choral Speaking	A group of actors speaking at the same time
Slow motion	Slowing movement down
Flashback	A scene from the past
Cross Cutting	Mixing up the order of scenes
Narration	A spoken commentary for the audience about the action on stage
Organic Sound	A sound made by the actors (not recorded)
Synchronisation	Actors moving at the same time
Canon	Moving one after the other
Multi-role	One actor playing more than one role
Hot Seating	Questioning an actor in role
Still Image	A frozen moment in a scene
Physical Theatre	Using your body to create objects
Mime	Performing an action with no props
Mirroring	2 actors facing each other moving at the same time
Split Role	One role that is played by more than one actor
Flash forward	A scene from the future
Tableau	A still image that captures the whole scene/story
Repetition	A sound/movement that is repeated
Marking the Moment	When a moment in a scene is emphasised

Style: Naturalism

Naturalism uses realistic acting and in-depth characterisation.

- Subtext
- Relationships
- Personality
- Situation
- Motivation

Movement is planned carefully, making sure every action has a meaning behind it.

Set/costume/props/sound are used as part of a Naturalistic performance however drama techniques are NOT used!

Style: Abstract Theatre

Theatre that is non-naturalistic.

Drama techniques are included in performances to present a narrative or theme in an alternative or unconventional way.

Drama techniques are used to enhance an abstract performance, making it more engaging for the audience.



BIG QUESTIONS

What are the choreographic processes?

Explain how each choreographic process has contributed to the creation of your performance?

What are choreographic devices?

How can choreographic devices be used to enhance choreography?

How has the use of choreographic devices supported the choreographic intention of the work?

What examples can be given for each choreographic device?

Choreographic Processes	Definition	Choreographic Devices	Definition
Research	Research your stimulus. What ideas can you gather from your stimulus. What is your dance idea? What information is going to help you create your dance? EG: dance is about mental health – research particular gestures one might demonstrate	Motif and development	Ways in which a movement phrase can be varied
Improvise	Create material without thought	Repetition	Performing the same action or phrase again and again
Generate	Create material with thought. Use tasks to create movement content.	Contrast	Movements or shapes that have nothing in common
Develop	Change, improve and adapt movement material with technical skills and choreographic devices.	Highlights	Important moments of a dance (WOW moments) E.g: a moment of contact, repeated gestures to reinforce theme
Select	Choose the movement which works. Select the content you like. What content best demonstrates the choreographic intention?	Climax	The most significant moment of the dance EG: fastest section or big lift
Structure	Structure the dance – Is there a beginning, middle and end, logical sequence, transitions? Does the dance flow? Is there a story? How is the dance presented?	Manipulation of Number	How the number of dancers in a group is used
Refine and Synthesise	Rehearse and make small changes. Make the dance performance ready	Unison	When dancers perform the same movement at the same time.
		Canon	When the same movement is performed by dancers one after another.

BIG QUESTIONS

Can you identify and offer specific movement examples of the 5 basic body actions?

How do expressive skills contribute to the overall performance of a piece of dance?

How do physical skills contribute to the overall performance of a piece of dance?

What is the difference between mental skills for process and mental skills for performance?

How might a dancer improve their expressive skills?

How can a physical skill be improved over time?

Physical Skills: aspects enabling effective performance

Posture – The way the body is held

Alignment – Correct placement of body parts in relation to each other

Balance – A steady or held position achieved by an even distribution of weight

Coordination – The efficient combination of body parts

Control – The ability to start and stop movement, change direction and hold a shape efficiently

Flexibility – The range of movement in the joints (involving muscles, tendons and ligaments)

Mobility – The range of movement in a joint; the ability to move fluently from action to action

Stamina – Ability to maintain physical and mental energy over periods of time

Extension – Lengthening of one or more muscles or limbs

Isolation: an independent movement of part of the body

Expressive Skills: aspects that contribute to performance artistry and that engage the audience.

Projection – The energy the dancer uses to connect with and draw the audience in

Focus – The use of the eyes to enhance performance or interpretative qualities

Spatial awareness – Consciousness of the surrounding space and its effective use

Facial expressions – use of the face to show mood, character or feeling

Phrasing – The way in which the energy is distributed in the execution of a movement phrase

Musicality – the ability to make the unique qualities of the accompaniment evident in performance

Sensitivity to other Dancers – Awareness of and connection to other dancers

Mental Skills: skills in preparation for a performance

Systematic repetition – repeating something in an ordered way

Mental rehearsal – thinking through or visualising the dance

Rehearsal discipline – attributes and skills required for refining a performance – effective use of a rehearsal and time

Planning of rehearsal – organisation of when to go over material

Response to feedback – implementing changes and making improvements based on feedback/opinion given to you

Capacity to improve – willing to make changes and better, relearn, implement or adapt to make something better

Mental Skills: skills needed during a performance

Movement memory – the automatic recall of learned movement material without conscious thought

Commitment – dedication to a performance

Concentration – the power to focus all of one's attention

Confidence – the feeling or belief that one can have in one's performance or work

Technical Skills: the accuracy of content

- **Action Content**; 5BBA, use of different body parts
- **Spatial Content**; size, direction, level, pathway
- **Dynamic Content**; flow, speed, force
- **Relationship Content**; lead and follow, mirroring, action and reaction, accumulation, complement and contrast, counterpoint, contact, formations
- **Timing Content**
- **Rhythmic Content**

The Five Basic Body Actions: 5BBA
Jump, Turn, Travel, Stillness and Gesture

Can you define each of the 5 basic body actions?

What is the overall impact of technical skills in a performance?

What is the acronym to remember physical skills/expressive skills/technical skills and mental skills?

Homework Links

<https://www.aqa.org.uk/resources/dance/gcse/dance/teach/subject-specific-vocabulary>

Key Vocabulary

You must be able to identify and define **ALL** vocabulary listed.

You must be able to distinguish what category each skill falls under

EG: strength is a physical skill NOT a mental skill

Subject: Business
Topic: Targeting and segmenting the market

Year: 9
Term: 5

BIG QUESTIONS

- Can you explain the difference between B2B and B2C markets?
- Can you recommend a suitable promotional strategy for a business operating in the B2B market?
- Can you explain how a business can segment a market?
- Can you explain why segmentation is important for business success?

Key Words

- Segmentation
- Demographic
- Geographic
- Psychographic
- Behavioural
- Target
- Market

What is Market Segmentation?

Market segmentation means dividing up the market into different groups of customers based on a number of factors. This enables the business to identify and meet the needs of its customers more accurately.

Segmentation by...	Which means some businesses focus on...	Example business
Age	Babies and toddlers, others on the teen market or older customers	Mothercare and Disney stores focus on babies and toddlers
Gender	Gender-specific items including toiletries, cosmetics, clothing and magazines	Bobbie Brown produces make-up for women
Culture	Relates to peoples religion, language, customs, ethnicity and dietary habits	Halal butchers are promoted to Muslims
Income	Luxury goods are made for high earners, whereas other businesses target those on a budget	Luxury goods businesses include Harvey Nichols, Selfridges and Gucci
Lifestyle, hobbies and interests	Relating to the way we live. People will also spend money on their hobbies and the interests that take up their spare time.	Hobbycraft target people who like arts and crafts
Location	The local market. Often, these businesses are small. An exception is firms that trade online	Local businesses include greengrocers, hairdressers, sandwich shops and dog walkers

Subject: Business
Topic: Targeting and segmenting the market

Year: 9
Term: 5

BIG QUESTIONS

- Can you define demographic, geographic, psychographic behavioural segmentation?
- Can you give examples of products aimed at different segments?
- Can you explain how a product can be aimed at people with different interests and lifestyles?
- Can you compare promotional campaigns in terms of methods used and cost?

There are 4 main types of segmentation in business:

Demographic



Age
Gender
Income
Education
Social Status
Life Stage

Psychographic



Values
Attitudes
Personality
Interest
Opinion
Lifestyle

Behavioural



Intent
Usage
Occasion
Buyer Stage
Engagement
Benefits

Geographic



Urbanicity
Location
Culture
Language
Climate
Population

Businesses use segmentation instead of going after their entire market. They're able to show relevant messages to people more likely to care (saving time and money!). It also helps with building long lasting customer relationships and improving your products and services.

Homework: Spotify and Netflix are the leaders of behavioural segmentation due to their ability to personalise the customers engagement. 1. State 4 ways in which Spotify and Netflix personalise their users interaction? 2. Explain why you think personalised playlists and programmes are so effective?

BIG QUESTIONS

1. What is a user interface?
2. What are the main types of user interfaces?
3. What are the main design principles used in a user interface?
4. Why is it important to include accessibility features in all user interfaces such as apps and websites?
5. What are the four different skill levels and why is it important to understand these when designing a user interface?

Types of interface:	<ul style="list-style-type: none"> • Text based • Speech/natural language • Graphical User Interface/ Windows, Icons, Menus, Pointers • Sensors • Menu/forms 	Factors:	<ul style="list-style-type: none"> • Performance/ response time • Ease of use • User requirements • User experience • Accessibility • Storage space
Range of uses:	<ul style="list-style-type: none"> • Computers • Handheld devices • Entertainment systems • Domestic appliances • Controlling devices • Embedded systems 	Influences:	<ul style="list-style-type: none"> • Operating systems/platforms • Types/size of screen • Types of user input • Hardware resources available • Emerging technologies

Design principles

Colours:	<ul style="list-style-type: none"> • Use of range of colours • Use of organisational house style • Ensuring that colours do not clash • Use of textures 	Font style/ size:	<ul style="list-style-type: none"> • Ensuring text style/style is readable • Use of sans serif fonts for screen reading • Avoiding decorative fonts
Language:	<ul style="list-style-type: none"> • Using appropriate language for user needs and skill level 	Amount of information:	<ul style="list-style-type: none"> • Appropriate amount of information • Making appropriate use of white space
Layout:	<ul style="list-style-type: none"> • Consistency • Keeping the layout as close as possible to user expectations • Placing important items in prominent positions • Grouping related tasks together • Use of navigational components 	User perception:	<ul style="list-style-type: none"> • Colour • Sound • Symbols • Visuals
Retaining user attention:	<ul style="list-style-type: none"> • Grabbing attention • Screen is uncluttered • Clearly labelled items/features • Use of predetermined/default values for common user inputs • Use of auto-fill • Use of tip text 	Intuitive design:	<ul style="list-style-type: none"> • Use graphics to denote what buttons do • Helpful pop-up messages • Easy-to-use help feature • Ensuring consistency • Easy reversal of actions

Audience needs of a user interface

Accessibility needs:	<ul style="list-style-type: none"> • Visual • Hearing • Speech • Motor • Cognitive
Skill level:	<ul style="list-style-type: none"> • Expert • Regular • Occasional • Novice
Demographics:	<ul style="list-style-type: none"> • Age • Beliefs/values • Culture • Past experiences

What is a User Interface?

A user interface is the means by which a person is able to interact with a computer system.

Software Features

- Visual - windows, icons, menus & pointers
- Audio - speech recognition & synthesis

Human Features

- Accessibility - high contrast schemes, text/icon resizing & text to speech
- Usability - adaptive interfaces, intuitive layouts & user experience

Wider reading

- <https://qualifications.pearson.com/en/home.html>
- BTEC Tech Award Digital Information Technology Student Book—Hodder
- Resources available on School Shared Area

Text-Based Interface

Simple text on a plain background. | Commands typed in via keyboard.

Pros

Requires little processing power.
If you know the commands, quick to perform actions.

Cons

Not very intuitive as you need to know the commands.

Uses

Technical users for performing tasks like network admin.

Menu-Based Interface

Presents the user with a list of options. | User navigates sub-menus by choosing relevant options.

Pros

Easy to use due to simplicity.
Easily adaptable to individual needs.

Cons

Can be very tedious to perform actions.
Limited options – not all tasks are possible.

Uses

Self-service kiosks, such as ATMs or self-service tills.

Graphic User Interface

Uses Windows, Icons Menus & Pointers. | User clicks on object with pointer to input commands.

Pros

Intuitive navigation – easier for beginners.
Simple drag & drop to move data around.

Cons

Can be very memory & processor intensive.
Often slower to perform simple tasks than other interfaces.

Uses

Everyday devices like PCs, tablets & game consoles.

Homework Links

Links in Teams

Homework 1: Print and then complete the flash cards task.

Homework 2: Use the hop-around-cards to match up the keywords and their meaning

Homework 3: Use the Revision document to create a fact file on the key design features of a user interface

Key Vocabulary

User interface
Human device interaction
Text interface
Command line interface
Graphical user interface
Menu user interface
Embedded systems
WIMP
Accessibility
Emerging technology
Skill level
Demographic

Big Questions:

How do films create tension?
What is cinematography?
What is framing angles and movement?
How can the camera be used to create meaning?
How can you sequence shots together effectively?
What is mise-en-scene?
How can mise-en-scene be used to create meaning?
What is editing?
How can it be used to create meaning?
How can sound be used to create meaning?
How do you combine these techniques to create tension in a film sequence?
How can you use storyboards to demonstrate these techniques?

Cinematography is the art of capturing movement on camera. The camera can be placed in different positions to capture different aspects of the subject, this in turn creates meaning for the audience. Please see your term 2 KO for examples of the different shots

Sound in film analysis divides into two

Diegetic Sound

- ✓ Inside the story world
- ✓ diegetic sound can be heard by the characters in the film

Examples

- radio sound, speech, traffic noises, weather, doors closing etc

Non- diegetic Sound

- ✓ Outside the story world
- ✓ non- diegetic sound cannot be heard by the characters in the film

Examples

- voice- over, soundtrack

The 5 Elements of Mise en Scene

- Settings & Props
- Costume, Hair & Make Up
- Facial Expressions & Body Language
- Lighting & Colour
- Positioning of characters/objects within the frame

Each aspect of mise-en-scene creates meanings and communicates them to the audience, influencing how we are feel at a certain point

Please search **How to speak movie** in YouTube to watch more information on these three important aspects of film making

Film Editing

Editing is undertaking in post-production (post-prod) where the footage shot during production is 'cut up' and reassembled to tell the story.

There are two basic types of editing: Non-continuity, and continuity.

Continuity editing is where it emphasizes smooth, coherent transitions between shots. It can also be called 'invisible editing.' Some techniques include: 180 degree rule and shot-reverse-shot.

Non-continuity editing is where the editing calls attention to itself. Some techniques include: jump cuts, freeze frame, and repetition.

There are also different types of transitions from clip to clip that you may use.

Cut - a simple transition which is used frequently in films. When one shot is immediately replaced by another.

Dissolve - an outgoing shot gradually disappearing while an incoming one appears.

Fade - fade out: gradual darkening of a shot until the image disappears.

fade in: dark screen gradually getting brighter.

Wipe - One picture chasing another off the screen.

For information on how to storyboard, please search **Indy Mogul's video Storyboarding for people who can't draw** on YouTube

BIG QUESTIONS

- 1) What is your school like?
- 2) What would you like to change about your school?
- 3) What's your school day like?
- 4) What did you do yesterday at break time?
- 5) What subjects do you like? Why?
- 6) What subjects do you dislike? Why?

Talking about my school

Je vais à (I go to)	un collège mixte (a mixed school) un collège privé (a private school)	un collège de filles (a girl's school) un collège de garçons (a boy's school)	en Angleterre. (in England.) en France. (In France.)	Je dirais que c'est (I would say that it is) Je pense que c'est (I think that it is) Mes amis disent que c'est (My friends say that it is)	moderne (modern) démodé (old-fashioned)	petit (small) énorme (enormous)
Dans mon collège (In my school)	il y a (there is)	des salles de classe (some classrooms) des laboratoires (some science labs) une piscine (a swimming pool)	un terrain de foot (a football pitch) un court de tennis (a tennis court)	et aussi (and also)	une cantine (a canteen) un cour de récréation (a playground) un gymnase (a gym)	une bibliothèque (a library) un hall (a hall)
	il n'y a (there isn't)	ni salles de classes. (any classrooms.) ni laboratoires. (any science labs.) ni piscine. (a swimming pool.)	ni terrain de foot. (a football pitch.) ni court de tennis. (a tennis court.)	Si c'était possible (If it were possible) Si j'avais le choix (If I had the choice)	je voudrais (I would like)	une piscine chauffée (a heated swimming pool) un gymnase moderne (a modern gym) un terrain de foot énorme (an enormous football pitch) una bibliothèque bien-équipée (a well-equipped library)

Talking about my school day

Normalement (Normally) Tous les jours (Everyday)	les cours commencent (lessons start)	à neuf heures (at 9) à neuf heures dix (at 9:10)	à neuf heures et quart (at 9:15) à neuf heures et demie (at 9:30)	et ils finissent (and they finish)	à trois heures (at 3) à trois heures et quart (at 3:15)	à trois heures vingt (at 3:20) à trois heures et demie (at 3:30)
Le matin (In the morning) D'abord (Firstly)	j'étudie (I study) nous étudions (we study)	les maths (maths) les sciences (science)	l'anglais (English) l'histoire (history)	et plus tard (and later) et après (and after) et l'après-midi (and in the afternoon)	j'étudie (I study) nous étudions (we study)	la géographie (geography) les langues (languages) la musique (music) l'EPS (PE)
Pendant la récré (During break time) Pendant l'heure de déjeuner (During lunch time)	je mange un sandwich (I eat a sandwich) je bois de l'eau (I drink water) je parle avec mes amis (I talk with my friends)	je joue au foot (I play football) je fais mes devoirs (I do my homework) je vais au club de musique (I go to music club)	mais hier (but yesterday)	j'ai mangé une salade (I ate a slada) j'ai bu du jus d'orange (I drank orange juice) j'ai parlé avec mes professeurs (I talked to my teachers)	j'ai joué au basket (I played basketball) j'ai fait mes devoirs (I did my homework) je suis allé au club d'échecs (I went to chess club)	

Talking about my school subjects

Je dirais que (I would say that)	J'adore (I love)	le français (French)	l'EPS (PE)	parce que (because)	c'est (it is)	très (very)	facile (easy)	et le prof est sympa (and the teacher is nice)
	J'aime (I like)	le théâtre (drama)	l'informatique (ICT)				intéressant (interesting)	
	Jaime assez (I quite like)	la géographie (geography)	les arts plastiques (art)				amusant (fun)	
	Ma matière préférée c'est (My favourite subject is)	la musique (music)	les maths (maths)				créatif (creative)	
Cependant (However) De l'autre côté (On the other hand)	Je n'aime pas (I don't like) Je déteste (I hate)	la technologie (DT)	les sciences (science)			assez (quite)	pratique (practical)	
		l'anglais (English)	les langues (languages)				utile (useful)	
		l'histoire (history)	le commerce (business)				difficile (difficult)	
							nul (rubbish)	et j'ai trop de devoirs (and I have too much homework)
							inutile (useless)	

Key Terms

Adjective – A word used to describe. (funny, boring)

Connective – A word used to extend a sentence.
(but, also)

Intensifier – A word to add detail to an adjective.
(very, quite, a little)

Infinitive – A verb that doesn't tell us when or who
is doing it. (to play, to watch)

Opinion – A phrase that tell us what we think of
something. (I like, I hate)

Justification – A phrase used to explain an opinion,
normally using because. (because it is funny)

Sequencer – A word to narrate events. (first, then, next)

Time Expression – A word used to say when or how
frequently something is done. (everyday, next year)

Mid-Term Assessment Prep

90 word piece of writing, based on 4 bullet points. (Bullet points in English)

Remember, these 90 word tasks will always follow a pattern:

Bullet point one – present tense

Bullet point three – past

Bullet point two – opinion

Bullet point 4 - future



HOMEWORK

Every week you will be set
an assignment on
sentence builders.
My homework day is:

The website is:

www.sentencebuilders.com

You should have your log-in
details stuck in your
planner. If you forget these,
you must email your teacher
or ask in lesson time for
these details.

Your knowledge organiser
has every answer that you
will need to complete your
homework. Have it open
when you do your
homework!

BIG QUESTIONS

- 1) What is your school like?
- 2) What would you like to change about your school?
- 3) What's your school day like?
- 4) What did you do yesterday at break time?
- 5) What subjects do you like? Why?
- 6) What subjects do you dislike? Why?

Talking about my school

Voy a (I go to)	un colegio mixto (a mixed school) un colegio privado (a private school)	un colegio masculino (a boy's school) un colegio femenino (a girl's school)	en Inglaterra. (in England.)	en España. (in Spain.)	Diría que es (I would say that it is) Pienso que es (I think that it is) Mis amigos dicen que es (My friends say that it is)	moderno. (modern.) antiguado. (old fashioned.)	pequeño. (small.) enorme. (enormous.)
En mi insti (In school)	hay (there is)	unas aulas (some classrooms) unos laboratorios (some science labs) una piscina (a swimming pool)	un campo de fútbol (a football pitch) una pista de tenis (a tennis court)	y también (and also)	un comedor (a canteen) un patio (a playground) un gimnasio (a gym)	una biblioteca (a library) un salón de actos (a main hall)	
	no hay (there is not)	ni aulas (any classrooms) ni laboratorios (any science labs) ni piscina (a swimming pool)	ni campo de fútbol (a football pitch) ni pista de tenis (a tennis court)	ni comedor. (nor a canteen.) ni patio. (nor a playground.) ni gimnasio. (nor a gym.)	ni biblioteca. (nor a library.) ni salón de actos. (nor a main hall.)	Si fuera posible (If it were possible) Si pudiera elegir (If I could choose)	me gustaría (I would like) una piscina climatizada (a heated swimming pool) un gimnasio moderno (a modern gym)

Talking about my school day

Normalmente (Normally) Todos los días (Every day)	las clases empiezan (classes start)	a las nueve (at 9) a las nueve y diez (at 9:10)	a las nueve y cuarto (at 9:15) a las nueve y media (at 9:30)	y terminan (and they end)	a las tres. (at 3.) a las tres y cuarto. (at 3:15.)	a las tres y veinte. (at 3:20.) a las tres y media. (at 3:30.)
Por la mañana (In the morning) Primero (Firstly)	estudio (I study) estudiamos (we study)	matemáticas (maths) ciencias (science)	inglés (English) historia (history)	y más tarde (and later) y después (and after) y por la tarde (and in the afternoon)	estudio (I study) estudiamos (we study)	geografía (geography) idiomas (languages) música (music) educación física (PE)
En el recreo (At breaktime) Durante la hora de comer (During lunch time)	como un bocadillo (I eat a sandwich) bebo agua (I drink water) hablo con mis amigos (I talk with my friends)	juego al fútbol (I play football) hago mis deberes (I do my homework) voy al club de música (I go to music club)	pero ayer (but yesterday)	comí ensalada (I ate salad) bebí zumo de naranja (I drank orange juice) hablé con mis profesor (I spoke with my teacher)	jugué al baloncesto (I played basketball) hice un nuevo amigo (I made a new friend) fui al club de ajedrez (I went to chess club)	

Talking about my school subjects

Diría que (I would say that)	mi asignatura favorita es (my favourite subject is)	el dibujo (art)	el inglés (English)	porque es (because it is)	muy (very)	divertido (fun)	y también (and also)	fácil (easy)
	prefiero (I prefer)	el español (Spanish)	el teatro (drama)			práctico (practical)		
	me gusta (I like)	el francés (French)				divertida (fun)		
	me encanta (I love)	la geografía (geography)	la música (music)			práctica (practical)		
		la historia (history)	la religión (RE)		un poco (a little)			interesante (interesting)
		la informática (ICT)	la tecnología (technology)					útil (useful)

Sin embargo (However)	no me gusta (I don't like)	el dibujo (art)	el inglés (English)	porque es (because it is)	muy (very)	aburrido (boring)	difícil (difficult)	inútil (useless)
	no me gusta nada (I really don't like)	el español (Spanish)	el teatro (drama)					
	odio (I hate)	el francés (French)				aburrida (boring)	difícil (difficult)	inútil (useless)
		la geografía (geography)	la música (music)					
Por otro lado (On the other hand)		la historia (history)	la religión (RE)		bastante (quite)			
Por el contrario (On the contrary)		la informática (ICT)	la tecnología (technology)		un poco (a little)			
					demasiado (too)			
	no me gustan (I don't like)	las ciencias (science)	las empresariales (business studies)	porque son (because they are)		aburridas (boring)	difíciles (difficult)	inútiles (useless)
	no me gustan nada (I really don't like)	las matemáticas (maths)						
		los idiomas (languages)				aburridos (boring)	difíciles (difficult)	inútiles (useless)

Mid-Term Assessment Prep

90 word piece of writing, based on 4 bullet points. (Bullet points in English)

Remember, these 90 word tasks will always follow a pattern:

Bullet point one – present tense

Bullet point three – past

Bullet point two – opinion

Bullet point 4 - future



HOMEWORK

Every week you will be set an assignment on sentence builders. My homework day is:

The website is:

www.sentencebuilders.com

You should have your log-in details stuck in your planner. If you forget these, you must email your teacher or ask in lesson time for these details.

Your knowledge organiser has every answer that you will need to complete your homework. Have it open when you do your homework!

BIG QUESTIONS

How do environmental factors affect growth and development?

Homework:

Consider why moving frequently or living in temporary housing might have negative effects for children.

Investigate what are considered to be safe levels of drinking alcohol



Learning outcome B: Understand how factors impact on children's overall development

B2 Environmental factors

Housing - positive aspects of housing (warm, dry, own space); experiencing housing needs (damp housing, overcrowding), temporary accommodation, access to garden, space to play.

Home environment - stable support from parents, contact with extended family, living with parental conflict, parents' mental or physical health, effects of exposure to drugs, alcohol or smoking.

Stability helps children to develop confidence and a sense of security

Stable support from parents	Unstable support from parents
Reliable routine for bedtime and meal times	No routine. Children go to bed very late . No regular mealtimes. Children are often hungry
Sensible, fair rules and expectations for behaviour	Parents do not put rules in place. So children act in ways that are dangerous to themselves and others.
Parents prioritise children and their wellbeing	Parents act in chaotic and confusing ways, for example drink too much alcohol or take drugs.
Children go to nursery or school regularly and parents support their learning	Children do not attend nursery or school regularly and parents are uninterested in their learning.

How Housing affects children's growth and development

Age - 0-18 months

- Babies who live in cramped housing might not have a peaceful place to sleep, as noise and light disrupt it, leaving babies restless, tearful and unhappy. A quiet space can help them to sleep well.
- The family might not have room to store suitable equipment, so there could be risks of accidents. Having more space can allow babies to move around especially as they learn to crawl and walk

Age - 18 months- 3 Years

- Those that have to move house often may find it difficult to settle. Parental stress at moving frequently might lead to family arguments and children not having attention from parents to help them learn.
- A stable family home can help parents to develop relationships within the community that can be good for the children's social development too.
- Overcrowded accommodation can mean that there is little space for their toys to help them learn. Having their own space can help them to understand about belongings and allow them to gain a sense of identity.

Age- 3-5 years

- Those who move house often might miss out on attending pre-school, nursery or school. This means that they do not start to form relationships with others and this can affect their learning.
- Living in a flat might mean that children do not have access to outdoor space to play, so they cannot develop their gross motor skills, as well as those who do.
- Having a quiet place to rest and sleep helps children to wake up refreshed and ready to learn.

Research from the following websites-

www.earlyyearsmatters.co.uk/eyfs/a-unique-child/play-learning/

Key Terms LA-B

Areas of deprivation -areas where there are potential health risks due to poverty, unemployment and lack of financial investment

Housing needs - when families do not have suitable housing

Stable - secure, even and well balanced

Conflict - a serious or violent argument

Neglect - the failure to care for a child properly



Big Questions:

What is a life event?

Homework:

Produce a personal timeline of your life from birth to older age. Note the events that have happened to you and what you expect to happen as you move through the life stages

Produce an emotions poster

Learning outcome B: Understand how individuals deal with life events

B1 Different types of life event

Health and wellbeing:

- accident/injury
- physical illness
- mental and emotional health and wellbeing

Relationship changes:

- entering into relationships
- marriage, civil partnership, long-term relationship
- divorce, separation for non-married couples
- Parenthood
- bereavement.

Life circumstances:

- moving house, school or job
- exclusion from education
- Redundancy
- Imprisonment
- changes to standards of living
- retirement



The positive and negative effects of some life circumstances

Life circumstances	Possible positive effects	Possible negative effects
Moving house	Opportunities to meet new people	Possible loss of friends/neighbours
Starting or moving school	Opportunities to make new friends	Anxiety about learning new routines and making new friends
Redundancy	Opportunities to take on new challenges	Loss of earning may impact on diet/lifestyle/choices
Retirement	More time to spend with family/reduced stress	Loss of relationship with colleagues
Imprisonment	May provide opportunities for developing new skills/making different life choices	Loss of independence/ may lower self-esteem/ loss of social contact

Website links:

[Leah Washington on having her leg amputated after the Alton Towers Smiler crash \(cosmopolitan.com\)](#)

[Simon Weston CBE | Official Website | Soldier, Survivor and Inspiration](#)

Key Terms LA-B

Health and wellbeing - events that cause changes to the body, physical or mental health or mobility

Relationship changes - the building or breakdown of friendships or relationships

Life circumstances - refer to the way a person lives, their day-to-day life and choices they make

Redundancy - no longer needed at work

Retirement - leaving a job and no longer working

Exclusion - being unable to take part in something

Bereavement - the experience of losing someone important to us

BIG QUESTIONS

Describe the process of development in artists work.

Explain why primary sources are the richest form of research.

How can Secondary sources enrich the development of 3D ideas?

Show different ways of recording your observations

Why should you plan a wide range of ideas before selecting a final one?

How can the refining process help you to fully realise intentions?

Why is it important to evaluate?

What is a prototype?

Client Brief- A new retro style sports shop has commissioned the design of quirky sport themed products to be sold as promotional items in their store. Create a prototype for a limited-edition coaster inspired by the shape and detail of a sneakers.



Key Skills

RECORD

I will learn to record...

- images and information appropriate for the sneakers theme
- using 2D & 3D media
- using technical drawing and photography
- building on my knowledge and understanding of how artists/designers use materials and imagery to create meaningful work
- ideas for a product inspired by sneakers

DEVELOP

I will learn how to develop...

- my observation skills using a range of media, techniques and processes.
- my knowledge and understanding of 3D styles and techniques
- my drawing and planning skills
- ideas in response to a given theme, linking to artists work.
- my higher order thinking skills

REFINE

I will learn how to...

- select and experiment with a range of 3D media and techniques
- select ideas to adapt and improve e.g. adjustments to size, colour and composition.
- develop a piece of work from one media into another

EVALUATE

I will learn how to...

- analyse and reflect on the development of my own work, through annotation making connections to artists and suggesting ways I could improve.
- evaluate artists using analytical writing skills and forming opinions

PRESENT OUTCOMES

I will learn how to...

Produce one or more finished prototypes in 3D



Homework Links

*Tasks linked to the theme
'Sneakers' (2 hours per cycle)*



Key Vocabulary

*Shape/Design/Primary
Papiermache/Primary
Source/Secondary
Source/Composition/
Style/Isometric*

I will be expected to recall keywords learned in previous projects and use them in the appropriate context.

EVALUATING ARTISTS'/DESIGNERS' WORK

1. Describe the piece of art/design you are looking at
2. What is the name of the artist/designer or type of art/design?
3. What part of the world does the art/design come from?
4. Research and list 5 or more things about the artist/designer?
5. Describe the materials used to make the art/design
6. How has the artist/designer made the work?
7. What is being communicated through the art/design?
8. Which of these words best describes the mood of the picture/artefact?
EMOTIONAL/POWERFUL/HUMEROUS/USEFUL/SERIOUS/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/INTENSE/ SCARY can you think of any other words?
9. What do you like or dislike about the picture/artefact? Explain your reasons...

ANNOTATING YOUR OWN WORK

- In this piece of work I was trying to...
- The artist/designer that has influenced my work is...
- In my work I used the technique of...
- The source I have used is...
- The media I have used is...
- I like this piece because...
- My idea links to the brief because...
- I can improve this piece by...
- Next, I'm going to.....

Annotate means to explain your own creations
Artist evaluation is when you write about the artist
Project evaluation is written about the whole project at the end

END OF PROJECT EVALUATION

1. Describe each stage of the project from start to finish
2. What media/materials did you use to produce your work? E.g. Paint/Pencil/Clay etc.
3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
4. Which artist/designer/culture have you looked at?
5. Write down two or more similarities between your work and the artist/designers' work.
6. Which piece of your work best shows the Artist/Designers' style or the influence of another culture and why?
7. Describe some of your own ideas...
8. Have you used a primary or a secondary source?
9. Have you included the secondary source in your work? Where did you find it?
10. Imagine if your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
11. Explain any other influences on your work e.g. personalities (*including your own*), places, memories, objects, politics, events, activities, religion, fact, fiction etc.
12. Describe how your work links to the project brief?
13. Explain what you have done well...
14. Explain how you could improve...
15. What would you do differently, if you were to repeat any part of this project