Year 9 Knowledge Organiser

English

English – Year 9 – HT1 – Of Mice and Men

Summary- Position in the Curriculum

Written in 1937, 'Of Mice and Men' tells the story of George Milton and Lennie Small, two displaced migrant ranch workers, who move from place to place in California in search of new job opportunities during the Great Depression in the United States. The novella is studied within its context, a key skill required in English; students relate factors such as the Great Depression, racism and segregation, prejudice and discrimination, and women's rights to their study and understanding of the text. In doing so, students engage with the characteristics of tolerance and respect, building upon work from Year 8, such as the study of 'Noughts and Crosses,' and also preparing students for the Inequality and Discrimination Unit in HT3.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Segregation	The action or state of setting someone or something apart.	Steinbeck cared about **social justice** and in the text highlights the prejudice and discrimination experienced by marginalised groups due to race, gender, age and disability.	1. *What do we learn about the relationship between George and Lennie in Chapter One?*
Hierarchy	A system in which members of an organisation or society are ranked according to status.	'Of Mice and Men' is written using an **omniscient narrator** but gives very little insight in to the internal thoughts and feelings of characters, leaving the reader to interpret.	2. *Curley and Slim both have authority on the ranch, but they achieve respect in different ways. Why do the men on the ranch respect them?*
Inevitable	Certain to happen and unavoidable.	In the novel, every character has a **dream** but none of the characters achieve them. Steinbeck is commenting on the impossibility of the American Dream.	3. *What are the main events of Chapter Three and how do they link to previous events? And what predictions can you make for the rest of the novel?*
Cyclical Structure	There is a sense of things happening in an order and then being repeated.	The theme of **loneliness** is at the heart of the novel. All characters, except George and Lennie, experience and suffer from loneliness. By the end of the novel, George is lonely too.	4. *What do we learn about Crook's life in Chapter Four and how does this reflect the experiences of African Americans during the time the novel was set?*
Foreshadowing	An indication of what is to come later in the text.	Steinbeck makes frequent references to **animals and nature**, both literally and figuratively. Steinbeck explores the contrasts of Nature Vs Man by comparing characters to animals.	5. *In what ways was Curley's wife's fate predictable? And does your opinion of her change in this chapter?*

Key Quotations:

"Guys like us, that work on ranches, are the loneliest guys in the world."
"A girl was standing there looking in. She had full-rouged lips and wide-spaced eyes, heavily made up."
"And the meanness and the plannings and the discontent were all gone from her face."
'We gonna get a little place."

Rabbits	Itinerant Worker	John Steinbeck	The American Dream	Film: Lennie and George
				

English – Year 9 – HT2 – 19th Century Fiction

Summary- Position in the Curriculum

Students will explore a range of 19th Century fiction extracts. In doing so they will build upon their contextual knowledge of the Victorian era established when studying *Sherlock Holmes* in Year 8, knowledge they can take to their study of *Jekyll and Hyde* in Year 10. Students will not only explore the context, but will spotlight individual writers and their common themes and stylistic features, increasing their confidence in reading 19th Century extracts which is a requirement of GCSE English Language. They will develop their own creative writing abilities by recreating the styles and 'voices' of these Victorian writers.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Recreative Writing	Studying the style of a writer and then 'copying' that style in your own writing.	The 19th Century is considered to be the **Golden Age of the novel** – it was during the Victorian era that the novel became the leading literary genre in English.	1. *Choose three of the 19th Century writers listed below and create Writer Profile Cards, including biographical information, novels, themes and style.*
Broadside	A form of newspaper that reported crimes: included a summary, picture and song.	Charles Dickens is one the most famous 19th Century writers, writing novels such as *Oliver Twist* and *A Christmas Carol*. His novels often focused on **social** concerns, particularly **poverty**.	2. *Research the Victorian era: schools, crime, technology, London and the divide between the rich and poor.*
Ragged School	Charitable organisations provided free schooling for destitute children.	Many Victorian novel focused on **crime and punishment** – the Victorians had an appetite for crime stories and read Broadsides and Penny Dreadfuls about real-life crimes.	3. *Imagine you have been sent to a Victorian workhouse – write a series of diary entries documenting a typical week.*
Aesthetic Movement	Writers who aimed to produce art that was beautiful rather than having deeper meaning.	In 1880 a law made it compulsory for all children aged 5 to 10 to attend school. **Education** often featured in Victorian novels, such as *Jane Eyre* and *Hard Times*.	4. *Write a description of a setting of your choice in the style of one of the 19th Century writers you have studied.*
Poor Laws	Introduced in 1834, a law which involved sending the poor to workhouses, which some saw as similar to prisons.	Oscar Wilde was an Irish writer who was part of the **aesthetic movement** and promoted the idea of 'art for art's sake' – art need not have a moral or didactic purpose and should be judged for whether it is beautiful or not and produces revery.	5. *Research Victorian criminal cases and write your own Broadside: remember to summarise the case, do a drawing and write a song about the crime that can be sung in the pub!*

Writers in the unit:

*Charles Dickens * Edgar Allen Poe * Charlotte Bronte * Oscar Wilde * Joseph Conrad * R. L. Stevenson * Fydor Dostoevsky * H.G. Wells*

Queen Victoria	Charles Dickens	Victorian School	The Poor Laws	Treasure Island
				

English – Year 9 – HT3 – Inequality and Discrimination

Summary- Position in the Curriculum

The unit uses non-fiction and fiction texts to ignite social engagement in students and discourage apathy, allowing students to engage with historical and contemporary social issues including trade unions and the 'Black Lives Matter' movement. We introduce GCSE Language Paper 2 skills, although the link to GCSE is implicit. The extracts span a range of forms, genres, time periods and cultures and allow students to develop their skills of understanding and critical reading. Students develop their ability to make critical comparisons of texts with a focus on synthesis and comparison of techniques. The thematic connection between the extracts provides a springboard for character education, particularly social responsibility, and provides stimulus for spoken responses, namely debates and structured responses, and written responses including argumentative writing in various forms.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Discrimination	Making prejudicial assumptions based on characteristics, such as gender, class or race.	Having a **protected characteristic** means that you have a right not to be treated less favourably by reason of that characteristic, for example age, gender or race.	1. *What forms of discrimination exist in the 21st Century and how is this discrimination experienced?*
Inequality	A lack of fair treatment or opportunities for people.	**Fiction** and **non-fiction** texts have historically been used to expose prejudice and discrimination in society and as vehicles to fight for equality.	2. *What are the similarities and differences between fiction and non-fiction texts in terms of style and form?*
Bias	Prejudice for or against one person or group.	Writers can draw upon a vast repertoire of **persuasive devices** to increase the impact of their arguments, with different techniques creating opposing effects.	3. *Why does Solomon Northup use indirect speech and create a clinical tone when documenting his experiences of being an enslaved man?*
Indirect speech	When the main points of a person's speech are reported rather than written in full.	Some forms of art and media still **represent** groups in society in biased and negative ways, particularly the working classes, but there has been a shift towards more positive representation.	4. *How do John Pilger and Tony Parsons employ different persuasive devices and styles when sharing their views about homelessness?*
Representation	The description or portrayal of a person or group of people.	**Trade unions** are groups of employees who join together to maintain and improve their conditions of employment.	5. *Why do trade unions encourage strike action?*

Key Texts:

12 Years A Slave (Solomon Northup) * *The Hate U Give* (Angie Thomas) * *Crongton Knights* (Alex Wheatle) * *The Man With No Name* (Tony Parsons) * *Beggars of Britain* (John Pilger) * *Road to Wigan Pier* (George Orwell)

Solomon Northup	Trade Union Strikes	Persuasive Methods	Representation	Film: The Hate U Give
				

English – Year 9 – HT4 – Unseen Poetry

Summary- Position in the Curriculum

This unit uses a range of poems from across genres, time periods and cultures to develop a student's ability to respond to a poem independently. The lessons encourage students to look at the 'bigger picture' of the poem before honing in on the micro details, ensuing that they can analyse within the context of the meaning of the poem. They will utilise their prior knowledge of poetic conventions and their ability to engage critically with how these have been used – but they are taught the skills and strategies to approach and respond to an unseen poem without teacher explanation. Students are also taught comparison skills, making links and connections between poems using what/how/why skills. As with the *Inequality and Discrimination* unit, the thematic link of the poems provides various opportunities for explicit character education teaching.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Rhyme Scheme	The pattern of rhyme within a poem, identified using a letter system.	The writer is not always the speaker; although poems can be autobiographical, poets often utilise a **narrative persona** and write in character.	1. *What are the differences between poetry and prose - and what language and structural methods are specific to poetry?*
Rhythm	The flow or movement of a line or series of lines.	Although not all poems require a **storyline**, some do – and poets have to be 'expert packers of suitcases' to develop a narrative within the conventional confines of poetry.	2. *Who is the speaker in a poem? Does it have to be the writer? What is an autobiographical poem? What is a narrative persona?*
Enjambment	When one line runs in to another with no punctuation	A poem can express a range of emotions, and writers select vocabulary carefully to create **mood** and **tone**.	3. *How do poems introduce and develop narratives and storylines?*
Imagery	Language used to engage our senses. The descriptions are vivid and engage us with sights, sounds, smells, taste and touch.	The **structure** of a poem is not accidental and will have an effect on the overall mood. For example, a poem about chaos and disorder may not follow a **rhyme scheme** and line and stanza/verse lengths might vary.	4. *How do you identify tone of voice and themes in poetry? Can you identify turning points (voltas) and changes in mood?*
Narrative persona	A created character who is the speaker in a poem.	Analysing **language devices** shouldn't be technique spotting – you should consider the effects of the writer's choices.	5. *What are the effects of a poet's decisions about rhyme scheme, stanza length and line length? How has a writer used imagery and symbolism in a poem and what are the effects on the reader?*

Poets in the unit:

Sylvia Plath * Tony Harrison * Robert Browning * William Shakespeare * Simon Armitage * Wilfred Owen * Maya Angelou * Thomas Hardy * John Agard * William Butler Yeats *

Maya Angelou	Rhyme Scheme	Poetry VS Prose	Poet Laureate	Imagery
				

English – Year 9 – HT5 – Reading Short Stories

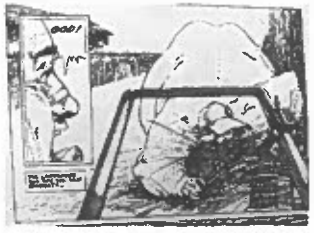
Summary- Position in the Curriculum

Short stories can usually be read in one sitting. Their concise length means that certain story elements are emphasised and used in specific ways. In this unit, short stories are used to explore the writer's use of structure. A range of twentieth/twenty-first century stories are analysed with a focus on organisation and construction, and these stories are also used as source material for re-creative writing. Although the structure of short stories is the main focus of this unit, we also look at genre, narrative point of view, characterisation and themes and motifs. In HT6, students will take inspiration from the stories studied in this unit when they write their own short story.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Genre	The category of story, for example sci-fi, drama, romance, comedy etc.	Many stories are **structured** following these narrative stages: exposition, development, complication, climax, resolution/denouement.	1. *Choose a character from one of the stories. What do we learn about them through their looks, actions, speech, thoughts/feelings and effects on others?*
Characterisation	The creation or construction of a fictional character.	A writer selects a **narrative perspective**, for example 3rd person omniscient, 1st person limited, retrospective first person. Different perspectives have advantages and disadvantages.	2. *Choose a description of a setting from one of the stories. How does the writer use the senses to help the reader picture the scene?*
Structure	How the text is organised and the way the story is ordered and shaped.	**Direct characterisation** involves a writer explicitly telling a reader what a character is like: *Mr. Ramsay – he is absorbed in himself, he is tyrannical, he is unjust...*	3. *Create a reverse plan of one of the stories you have read, making notes about the exposition, development, complication, climax and resolution.*
Point of view	The narrator's position in relation to the story being told.	**Indirect characterisation** involves a writer implicitly revealing and showing what a character is like: *He dragged the last smoke from his cigarette and then, with callused hands and forefinger, crushed out the glowing end.'*	4. *Re-write the ending of the one the stories you have read so that it is completely different. For example, if it is a resolved ending, can you turn it to a cliff hanger?*
Theme	A message conveyed by a text that has relevance and meaning beyond the individual text.	Writers can **end** stories in a variety of ways. Possible methods include cliff-hanger, twist, ambiguous, moral and resolved/ cyclical.	5. *Draw a setting and character from one of the short stories and annotate your picture with quotations form the story.*

Writers studied:

*Stephen King * Shirley Jackson * William DeMille * Angela Carter * Raymond Bradbury * Ira Sher * Samuel Beckett * Yuri Nagibin*

The Lawnmower Man	The Lottery	Ruthless	The Werewolf	All Summer in a Day
				

English – Year 9- HT 6-Writing Short Stories

Summary- Position in the Curriculum

This unit focuses on the application of the learning from the previous Half Term (HT5). Students will work towards writing either the opening to a short story, or a whole short story, after having studied several short stories in the last half term. They will build upon their knowledge of creative writing, which is a large focus of our year 7 curriculum, and has been interwoven in to the teaching in year 8 and 9. This unit also pairs particularly well with the creative re-writing tasks that pupils will have completed when they studied extracts from 19th century texts in Half Term Two (HT2). It is essentially a chance for students to consolidate their knowledge; and to produce succinct and interesting piece of 'flash fiction'.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Plot	The sequence of events within a piece of fiction, these are cleverly arranged by a writer.	Writers consider all aspects of the characters they create. Characters are well developed when careful choices about their costume, dialogue, actions, the use of props, setting and their names are made.	1. *How might a character be developed by making a character profile?*
Dialogue	A conversation between two people within a piece of writing.	Writers use dialogue to provide an insight in to their characters as we learn more about them from not just what they say, but how they say it.	2. *How should dialogue be structured correctly? How can dialogue be used to develop relationships between characters in a text?*
Sensory Imagery	Language used to describe the 5 senses; sight, touch, hearing, smell and taste.	A good piece of creative writing employs a variety of language devices to help the reader imagine what is going on. Sensory imagery offers an effective way to bring a setting to life.	3. *How can descriptions of sight, touch, hearing, smell and taste be used to bring a setting/character to life?*
Metaphor	The process of comparing one unlike thing to another.	Readers are able to picture stories in their minds-eye when aspects of what is described are compared to things they are familiar with. Using word association is a great way to create precise metaphors. Colour imagery is a useful tool too.	4. *How do writers craft precise metaphors? How can language devices such as colour imagery be used effectively in a piece of writing?*
Editing	The process whereby a writer amends and carefully adapts their writing to make it more succinct and interesting.	All writers draft and re-draft their work. The process of reviewing a piece of fiction to check that it makes sense, has a good sense of pace and paints a clear picture for the reader is a fundamental part of good creative writing.	5. *How does a writer structure their text, building from the exposition to the denouement? How can I summarise the plot of my story in 6 words (using Ernest Hemingway as inspiration)?*

Key Quotations: *"A short story should be just enough to read in one sitting"*- Edgar Allen Poe

"Short stories offer their readers a slice of life"- Anton Checkhov

"it is a writer's job to trot along behind his characters with a paper and pencil trying to keep up long enough to put down what he says and does."- William Faulkner

"Must have a definite design... it must have a plot"- Somerset Maughn

Plot (Freytag's Pyramid)	Sensory Imagery	Ernest Hemingway	Genre	Editing
				

Maths

Yr. 9 Maths Knowledge Organiser: Autumn 1 – Reasoning with Algebra (Chapter 1)

By the end of this half-term, you should be able to:

1.1 – Straight line graphs

- Compare gradients
- Compare intercepts
- Understand and use $y = mx + c$
- Find the equation of a line from a graph
- Interpret gradient and intercepts of real-life graphs

1.2 – Forming & solving equations

- Solve inequalities with negative numbers
- Solve equations with unknowns on both sides
- Solve inequalities with unknowns on both sides
- Substitute into formulae and equations
- Rearrange formulae

1.3 – Testing conjectures

- Use factors, multiples and primes
- Reason true, false, always & sometimes
- Make conjectures with number/algebra
- Expand binomials
- Explore the 100 grid

Keywords

Gradient: the steepness of a line.

Intercept: where two lines cross.

The *y*-intercept: where the line meets the *y*-axis.

Parallel: two lines that never meet with the same gradient.

Co-ordinate: a set of values that show an exact position on a graph.

Linear: linear graphs (straight line) – linear common difference by addition/ subtraction.

Asymptote: a straight line that a graph will never meet.

Reciprocal: a pair of numbers that multiply together to give 1.

Perpendicular: two lines that meet at a right angle.

Preparing for Assessment

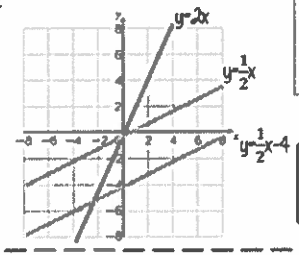
- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge

Compare Gradients

$y = mx + c$

The coefficient of x (the number in front of x) tells us the gradient of the line



The greater the gradient – the steeper the line

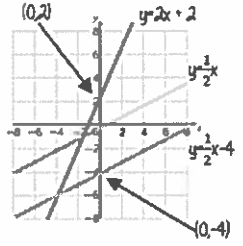
Positive gradients

Negative gradients

Parallel lines have the same gradient

Compare Intercepts

$y = mx + c$ ← The value of c is the point at which the line crosses the y-axis. Y intercept



The coordinate of a y intercept will always be (0,c)

Lines with the same y-intercept cross in the same place

y = mx + c

The coefficient of x (the number in front of x) tells us the gradient of the line

$y = mx + c$ ← The value of c is the point at which the line crosses the y-axis. Y intercept

y and x are coordinates

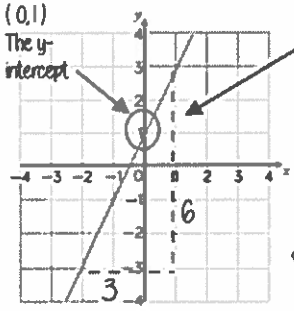
The equation of a line can be rearranged. E.g.

$y = c + mx$

$c = y - mx$

Identify which coefficient you are identifying or comparing

Find the equation from a graph



The Gradient $\frac{6}{3} = 2$

$y = 2x + 1$

The direction of the line indicates a positive gradient

Positive gradients

Negative gradients

Inequality: an inequality compares who values showing if one is greater than, less than or equal to another.

Variable: a quantity that may change within the context of the problem.

Rearrange: Change the order.

Inverse operation: the operation that reverses the action.

Substitute: replace a variable with a numerical value.

Solve: find a numerical value that satisfies an equation.

Multiples: found by multiplying any number by positive integers.

Factor: integers that multiply together to get another number.

Prime: an integer with only 2 factors.

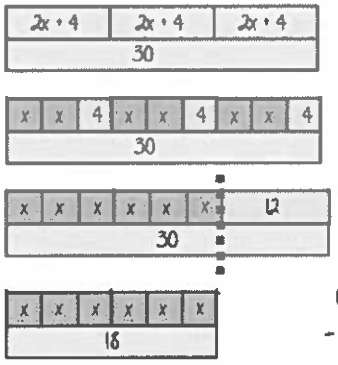
HCF: highest common factor (biggest factor two or more numbers share).

LCM: lowest common multiple (the first time the times table of two or more numbers match).

Binomial: a polynomial with two terms.

Quadratic: a polynomial with four terms (often simplified to three terms).

Solve equations with brackets (R)



$3(2x + 4) = 30$

Expand the brackets

$6x + 12 = 30$

$-12 \quad -12$

$6x = 18$

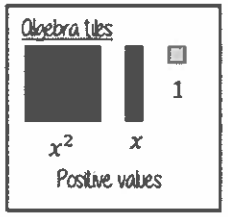
$\div 6 \quad \div 6$

$x = 3$

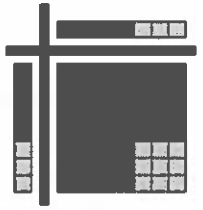
Expanding binomials

$2(x + 2) \equiv 2x + 4$

Algebra tiles can represent a binomial expansion. Has two terms.



$(x + 3)(x + 3) \equiv x^2 + 6x + 9$



This is a quadratic. It has four terms which simplified to three terms.

The order of the binomial has no impact on the outcome.
e.g. $(x + 3)(3 + x)$

Rearranging Formulae (two step)

In an equation (find x)

$4x - 3 = 9$

$+3 \quad +3$

$4x = 12$

$\div 4 \quad \div 4$

$x = 3$

In a formula (make x the subject)

$xy - s = a$

$+s \quad +s$

$xy = a + s$

$\div y \quad \div y$

$x = \frac{a + s}{y}$

The steps are the same for solving and rearranging

Rearranging is often needed when using $y = mx + c$

e.g. Find the gradient of the line $2y - 4x = 9$

Make y the subject first $y = \frac{4x + 9}{2}$

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

Equations with unknown on both sides

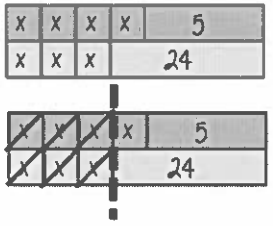
$4x + 5 = 3x + 24$

$-3x \quad -3x$

$x + 5 = 24$

$-5 \quad -5$

$x = 19$



Principled **Resilient** **Open** **Understanding** **Disciplined**

Yr. 9 Maths Knowledge Organiser: Autumn 2 – Constructing in 2 & 3 Dimensions (Chapter 2)

By the end of this half-term, you should be able to:

2.1 – Three dimensional shapes

- Name 2D & 3D shapes
- Recognise prisms
- Sketch and recognise nets
- Draw plans and elevations
- Find areas of 2D shapes
- Find surface area for cubes, cuboids, triangular prisms and cylinders
- Find the volume of 3D shapes

2.2 – Constructions & congruency

- Draw and measure angles
- Construct scale drawings
- Find locus of distance from points & lines
- Construct perpendiculars from points, lines & angles
- Identify congruence
- Identify congruent triangles

Keywords

2D: two dimensions to the shape e.g. length and width.

3D: three dimensions to the shape e.g. length, width and height.

Vertex: a point where two or more-line segments meet.

Edge: a line on the boundary joining two vertices.

Face: a flat surface on a solid object.

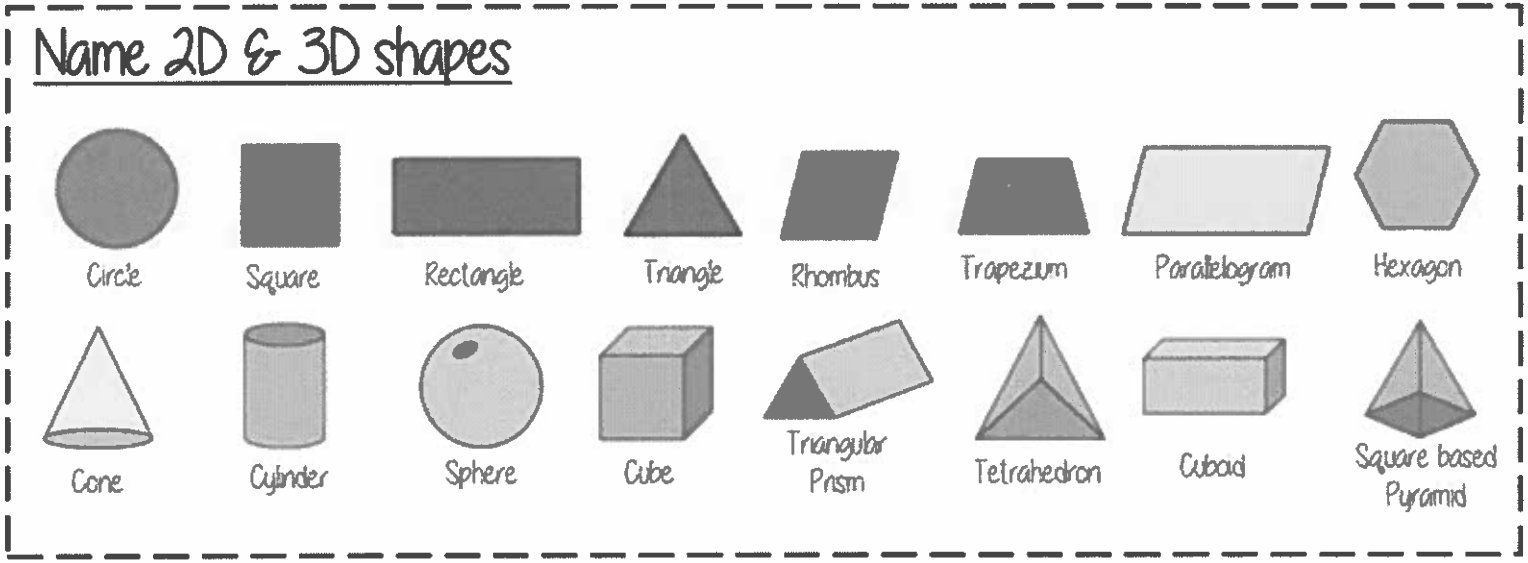
Cross-section: a view inside a solid shape made by cutting through it.

Plan: a drawing of something when drawn from above (birds eye view).

Preparing for Assessment

- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge



Perspective: a way to give illustration of a 3D shape when drawn on a flat surface.

Protractor: piece of equipment used to measure and draw angles.

Locus: set of points with a common property.

Equidistant: the same distance.

Discorectangle: (a stadium) – a rectangle with semi circles at either end.

Perpendicular: lines that meet at 90°.

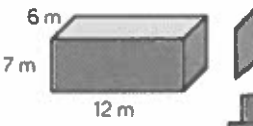
Arc: part of a curve.

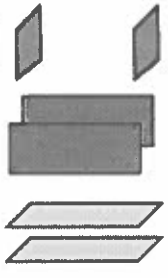
Bisector: a line that divides something into two equal parts.

Congruent: the same shape and size.

Surface area

Sketching nets first helps you visualise all the sides that will form the overall surface area





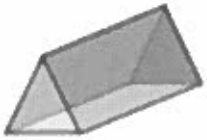
Sides 6 x 7, 6 x 7

Front and back 12 x 7, 12 x 7

Top and Bottom 12 x 6, 12 x 6

Sum of all sides is surface area

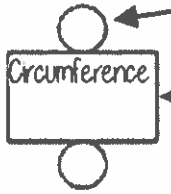
For cubes and cuboids you can also find one of each face and double it



For other shapes - not all the sides are the same, so calculate the individually

Surface area - cylinders

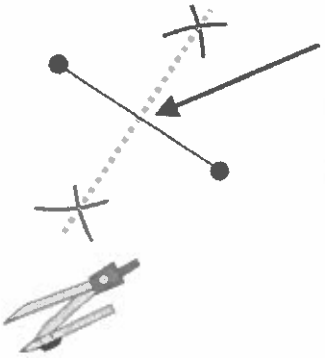
The area of the circle $\pi \times \text{radius}^2$



The width of this face is the same as the circumference $\pi \times \text{diameter} \times \text{height}$

$2 \times \pi \times \text{radius}^2 + \pi \times \text{diameter} \times \text{height}$

Locus equidistant from two points



Also a perpendicular bisector

Because if the points are joined, this new line intersects it at a 90°

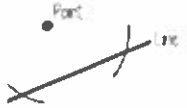
Join the intersections with a ruler

All points on this line are equidistant from both points

Keep the compass the same size and draw two arcs from each point

Construct a perpendicular from a point

Use a compass and draw an arc that cuts the line. Use the point to place the compass



Keep the compass the same distance and now use your new points to make new interconnecting arcs

Connecting the arcs makes the bisector

If P is a point on the line the steps are the same

Principled **Resilient** **Open** **Understanding** **Disciplined**

Yr. 9 Maths Knowledge Organiser: Spring 1 – Reasoning with Number (Chapter 3)

By the end of this half-term, you should be able to:

3.1 – Numbers	3.2 – Using percentages	3.3 – Maths & money
• Identify integers, real and rational numbers • Work with directed number • Solve problems with number • Find HCF/ LCM • Add, subtract, multiply & divide fractions • Write numbers in standard form	• Use FDP equivalence • Calculate percentage increase and decrease • Express percentage change • Solve reverse percentage problems • Solve percentage problems (calculator and non-calculator problems)	• Solve problems with bills and bank statements • Calculate simple interest • Calculate compound interest • Calculate wages and taxes • Solve problems with exchange rates • Solve unit pricing problems

Keywords

Integer: a whole number that is positive or negative.

Rational: a number that can be made by dividing two integers.

Irrational: a number that cannot be made by dividing two integers.

Inverse operation: the operation that reverses the action.

Product: the result of a multiplication.

Percent: parts per 100 – written using the % symbol.

Decimal: a number in our base 10 number system. Numbers to the right of the decimal place are called decimals.

Fraction: a fraction represents how many parts of a whole value you have.

Preparing for Assessment

- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge

Integers, real and rational numbers

Rational – root word: ratio

Real numbers: $\frac{2}{3}$ stems from 2 | ($\frac{2}{3}$ of the whole)

Irrational numbers: $\sqrt{2}$ the solution is a decimal that never ends and does not repeat

The square root of a negative is not a real number and cannot be found

Reverse Percentages

40% of my number is 16. What am I thinking of?

Original Number (100%)

4 4 4 4 4 4 4 4 4 4

16

40% = 16
10% = 4
100% = 40

140% of my number is 84. What is the original number?

Original Number (100%)

6 6 6 6 6 6 6 6 6 6 6 6 6 6

84

140% = 84
10% = 6
100% = 60

Try to scale down to 10% or 1% and then scale back up to 100%

Equivalent: of equal value.

Reduce: to make smaller in value.

Growth: to increase/ to grow.

Integer: whole number, can be positive, negative or zero.

Profit: the income minus any expenses/ costs.

Credit: money being placed into a bank account.

Debit: money that leaves a bank account.

Balance: the amount of money in a bank account.

Expense: a cost/ outgoing.

Deposit: an initial payment (often a way of securing an item you will later pay for).

Multiplier: a number you are multiplying by. (Multiplier more than 1 = increasing, less than 1 = decreasing).

Per Annum: each year.

Currency: the type of money a country uses.

Unitary: one – the cost of one.

Simple Interest

For each year of investment the interest remains the same

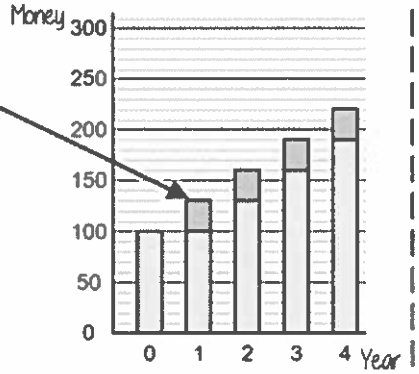
$$\frac{\text{Principal amount} \times \text{Interest Rate} \times \text{Years}}{100}$$

Principal amount is the amount invested in the account

e.g. Invest £100 at 30% simple interest for 4 years

$\frac{100 \times 30 \times 4}{100} = £120$

This account earned £120 interest
At the end of year 4 they have £220



Compound Interest

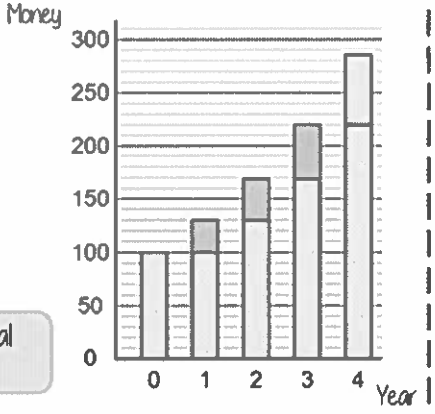
Interest is added to the current value of investment at the end of each year so the next year's interest is greater.

$$\text{Principal amount} \times \text{Multiplier}^{\text{Years}}$$

e.g. Invest £100 at 30% compound interest for 4 years

$100 \times 1.3^4 = £285.61$

This account has £285.61 in total at the end of the 4 years.



Unit Pricing

4 Oranges	5 cupcakes
£1	£1.20

$4 = £1.00 \div 2$

$2 = £0.50 \div 2$

$1 = £0.25$

$5 = £1.20 \div 5$

$1 = £0.20$

Cost per Unit

To calculate unit per cost you divide by the cost

Cupcakes are the best value as one item has the cheapest value

There is a directly proportional relationship between the cost and number of units

Principled **Resilient** **Open** **Understanding** **Disciplined**

Yr. 9 Maths Knowledge Organiser: Spring 2 – Reasoning with Geometry (Chapter 4)

By the end of this half-term, you should be able to:

4.1 – Deduction	4.2 – Rotation & translation	4.3 – Pythagoras' Theorem
• Identify angles in parallel lines • Solve angle problems • Make conjectures with angles • Make conjectures with shapes	• Identify the order of rotational symmetry • Rotate a shape about a point on the shape • Rotate a shape about a point not on a shape • Translate by a given vector • Compare rotations and reflections	• Use square and cube roots • Identify & calculate the hypotenuse • Find a missing side in a right-angled triangle when given any two sides • Use Pythagoras' theorem on axes • Explore proofs of Pythagoras' theorem

Keywords

Parallel: two straight lines that never meet with the same gradient.

Perpendicular: two straight lines that meet at 90°.

Transversal: a line that crosses at least two other lines.

Sum: the result of adding two or more numbers.

Conjecture: a statement that might be true but is not proven.

Equation: a statement that says two things are equal.

Polygon: a closed 2D shape made from straight edges.

Counterexample: an example that disproves a statement.

Preparing for Assessment

- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge

Solving angle problems

Link angle facts to algebra → Form an equation → State the reason → Solve

Angles on a straight Line
180°

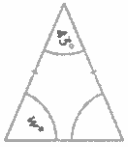
$2x + 4x = 180°$

The sum of angles on a straight line is 180°

$2x + 4x = 180°$
$6x = 180°$
$x = 30°$

Vertically opposite angles
Equal

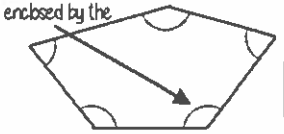
Angles around a point
360°



Triangles
Sum of angles is 180°

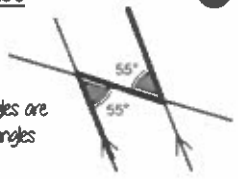
Isosceles have the same base angles

Interior Angles
The angles enclosed by the polygon



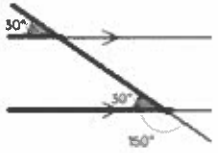
(number of sides – 2) x 180

Alternate angles (R)



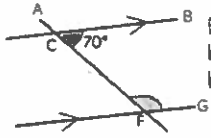
Because alternate angles are equal the highlighted angles are the same size

Corresponding angles (R)



Because corresponding angles are equal the highlighted angles are the same size

Co-interior angles (R)



Because co-interior angles have a sum of 180° the highlighted angle is 110°

Os angles on a line add up to 180° co-interior angles can also be calculated from applying alternate/ corresponding rules first

Rotate: a rotation is a circular movement.

Symmetry: when two or more parts are identical after a transformation.

Regular: a regular shape has angles and sides of equal lengths.

Invariant: a point that does not move after a transformation.

Vertex: a point two edges meet.

Horizontal: from side to side.

Vertical: from up to down.

Square number: the output of a number multiplied by itself.

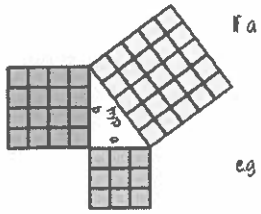
Square root: a value that can be multiplied by itself to give a square number.

Hypotenuse: the longest side on a right-angled triangle. Always opposite the right angle.

Opposite: the side opposite the angle of interest

Adjacent: the side next to the angle of interest.

Determine if a triangle is right-angled



If a triangle is right-angled, the sum of the squares of the shorter sides will equal the square of the hypotenuse

$a^2 + b^2 = \text{hypotenuse}^2$

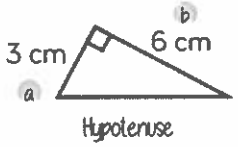
e.g. $a^2+b^2 = hypotenuse^2$

$3^2 + 4^2 = 5^2$

$9 + 16 = 25$

Substituting the numbers into the theorem shows that this is a right-angled triangle

Calculate the hypotenuse



Either of the short sides can be labeled a or b

$a^2 + b^2 = \text{hypotenuse}^2$

1 Substitute in the values for a and b

$3^2+6^2 = \text{hypotenuse}^2$

$9 + 36 = \text{hypotenuse}^2$

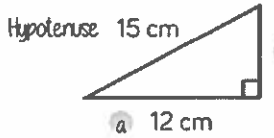
$45 = \text{hypotenuse}^2$

2 To find the hypotenuse square root the sum of the squares of the shorter sides

$\sqrt{45} = \text{hypotenuse}$

$6.71cm = \text{hypotenuse}$

Calculate missing sides



Either of the short sides can be labeled a or b

$a^2 + b^2 = \text{hypotenuse}^2$

$12^2+b^2 = 15^2$

1 Substitute in the values you are given

$144 + b^2 = 225$

$-144 \quad -144$

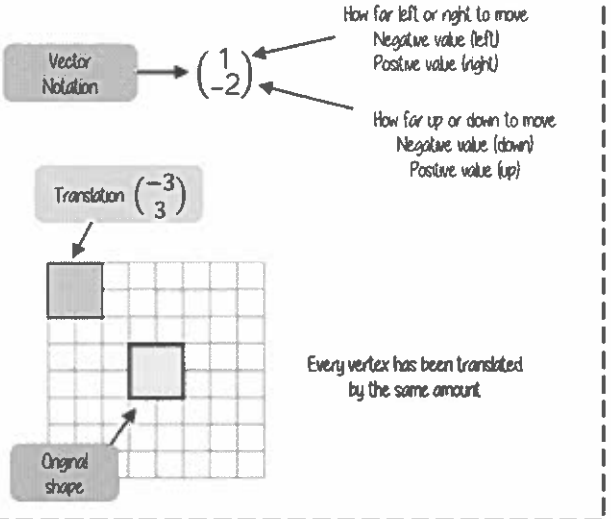
Rearrange the equation by subtracting the shorter square from the hypotenuse squared

Square root to find the length of the side

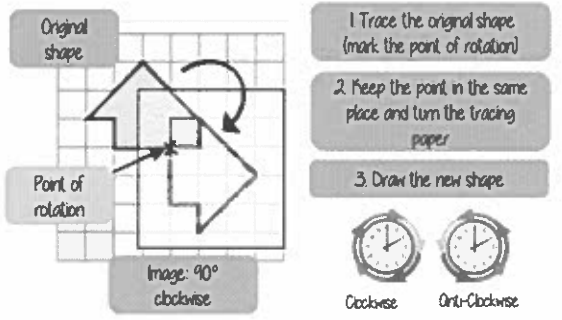
$b^2 = 111$

$b = \sqrt{111} = 10.54\ cm$

Translation and vector notation



Rotate from a point (in a shape)



Principled **Resilient** **Open** **Understanding** **Disciplined**

Yr. 9 Maths Knowledge Organiser: Summer 1 – Reasoning with Proportion (Chapter 5)

By the end of this half-term, you should be able to:

5.1 – Enlargement & similarity	5.2 – Solving ratio & proportion problems	5.3 – Rates
• Recognise enlargement and similarity • Enlarge a shape by a positive/fractional scale factor • Enlarge a shape from a point • Work out missing sides and angles in a pair of similar shapes	• Solve problems with direct proportion • Use conversion graphs • Solve problems with inverse proportion • Solve ratio problems • Solve 'best buy' problems	• Solve speed, distance, time questions • Use distance time graphs • Solve density, mass, volume problems • Solve flow problems & use flow graphs • Interpret rates of change and their units

Keywords

Similar Shapes: shapes of different sizes that have corresponding sides in equal proportion and identical corresponding angles.

Scale Factor: the multiple describing how much a shape has been enlarged.

Enlarge: to change the size of a shape (enlargement is not always making a shape bigger, can become smaller).

Corresponding: objects (or sides) that appear in the same place in two similar situations.

Image: the picture or visual representation of the shape.

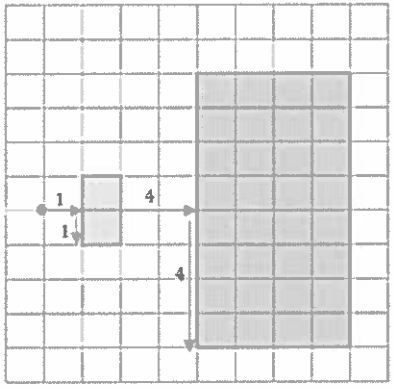
Preparing for Assessment

- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge

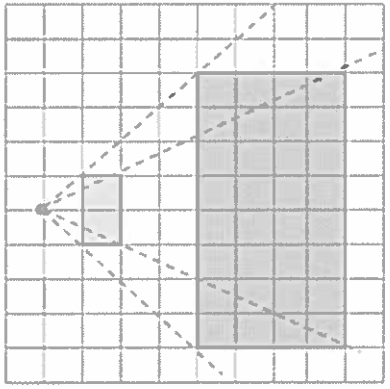
Enlarge a shape from a point

Scaled distances method



Scale the distance between the point of enlargement and each corresponding vertices

Rays method



Multiply the distance from the centre of corresponding vertices by the scale factor along the ray

Rates of change & units

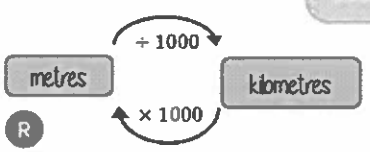
Common rates of change relationships

Revisit your conversions between units of length and capacity

Speed: miles per hour

Exchange rates: euros per pounds

Density: mass per volume



Density, Mass, Volume

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

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

volume of prism = Area of cross section × Depth R

Proportion: a comparison between two numbers.

Ratio: a ratio shows the relative size of two variables.

Direct proportion: as one variable is multiplied by a scale factor the other variable is multiplied by the same scale factor.

Inverse proportion: as one variable is multiplied by a scale factor the other is divided by the same scale factor.

Convert: change.

Mass: a measure of how much matter is in an object commonly measured by weight.

Origin: the coordinate (0, 0).

Volume: the amount of 3D space a shape takes up.

Substitute: putting numbers where letters are – replacing numbers into a formula.

Best Buys

Have a directly proportional relationship

To calculate best buys you need to be able to compare the cost of one unit or units of equal amounts

	Shop A	Shop B
	4 cans for £1.20	3 cans for 93p
	£1.20 ÷ 4	£0.93 ÷ 3
Cost per item	1 can is £0.30 Or 30p	1 can is £0.31 Or 31p

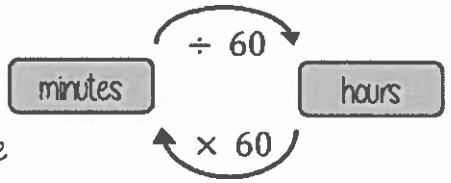
Shop A is the best value as it is 1p cheaper per can of pop

	Shop A	
	4 cans for £1.20	3 cans for 93p
	4 ÷ £1.20	3 ÷ £0.93
Cost per pound	£1 buys 3.333 cans of pop	£1 buys 3.23 cans of pop

Shop A is still shown as being the best value but pay attention to the unit you are calculating, per item or per pound

Best value is the most product for the lowest price per unit

Speed, Distance, Time



Before calculations – make sure you are working in the same units as the speed

Learn or learn how to rearrange the formular for speed, distance and time

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

Substitute in the variables given

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

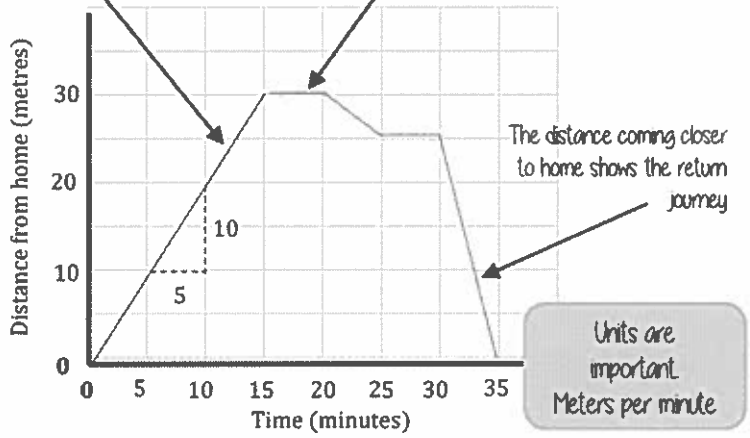
Distance – Time graphs

Gradient = speed

The steeper a gradient the faster the speed

$\frac{10}{5}$ = 2 metres per min

Horizontal lines represent staying still



The distance coming closer to home shows the return journey

Units are important. Meters per minute

Principled **Resilient** **Open** **Understanding** **Disciplined**

Yr. 9 Maths Knowledge Organiser: Summer 2 – Representations & Revision (Chapter 6)

By the end of this half-term, you should be able to:

6.1 – Probability

- Find single event probability
- Find relative frequency
- Find expected outcomes
- Find independent events
- Use diagrams to work out probabilities

6.2 – Algebraic Representation

- Draw quadratic graphs
- Interpret quadratic graphs
- Interpret other graphs including reciprocals
- Represent inequalities

Keywords

Probability: the chance that something will happen.

Relative Frequency: how often something happens divided by the outcomes.

Independent: an event that is not affected by any other events.

Chance: the likelihood of a particular outcome.

Event: the outcome of a probability – a set of possible outcomes.

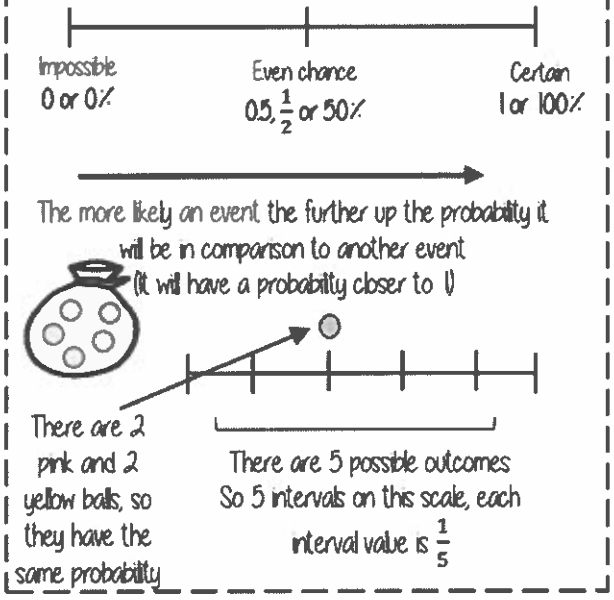
Biased: a built-in error that makes all values wrong by a certain amount.

Preparing for Assessment

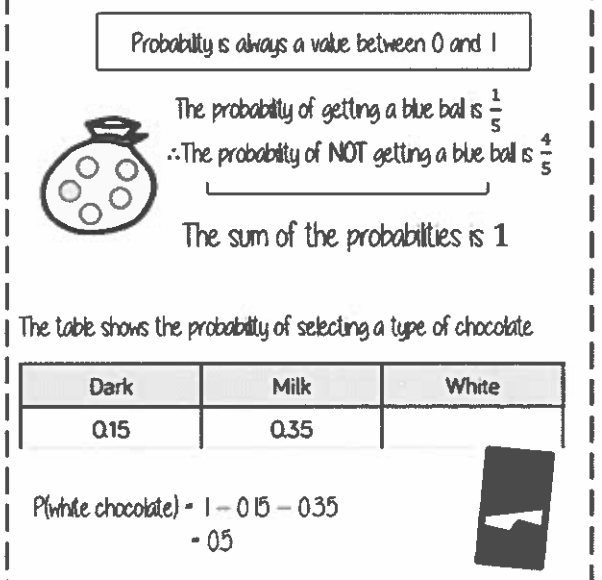
- Login to **Maths Watch** and complete your independent tasks each week. Attempt all questions and aim to get at least 80% correct. Remember, you can watch the videoclip attached to each question to help you understand the topic better.
- Use **'Read, Cover, Write, Check'** to test your understanding on the key words and core knowledge in this organiser.

Core Knowledge

The probability scale



Single event probability



Quadratic: a curved graph with the highest power being 2 - square power.

Inequality: makes a non-equal comparison between two numbers.

Reciprocal: a reciprocal is 1 divided by the number.

Cubic: a curved graph with the highest power being 3 - cubic power.

Origin: the coordinate (0, 0).

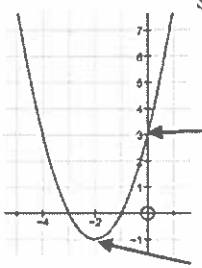
Parabola: a 'u' shaped curve that has mirror symmetry.

Quadratic Graphs

$y = x^2 + 4x + 3$

If x^2 is the highest power in your equation then you have a quadratic graph

It will have a parabola shape



Intersection with the y axis

Substitute the x values into the equation of your line to find the y coordinates

x	−4	−3	−2	−1	0	1
y	3	0	−1	0	3	8

Coordinate pairs for plotting $(-3, 0)$

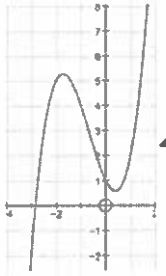
Plot all of the coordinate pairs and join the points with a curve (freehand)

Quadratic graphs are always symmetrical with the turning point in the middle

Interpret other graphs

Cubic Graphs

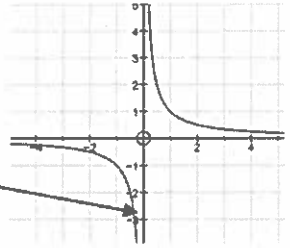
$y = x^3 + 2x^2 - 2x + 1$



If x^3 is the highest power in your equation then you have a cubic graph

Reciprocal Graphs

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



Reciprocal graphs never touch the y axis

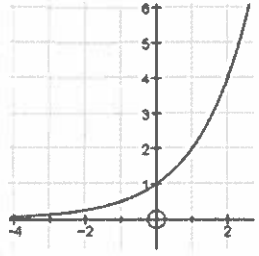
This is because x cannot be 0

This is an asymptote

Exponential Graphs

$y = 2^x$

Exponential graphs have a power of x

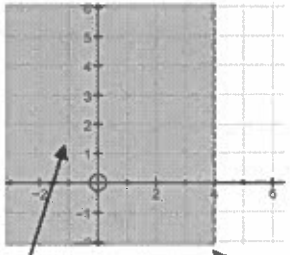


Represent Inequalities

Multiple methods of representing inequalities

$x < 4$

All values are less than 4

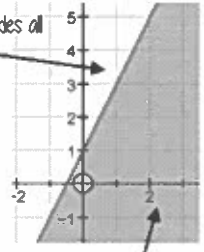


The shaded area indicates all possible values of x

The dotted line shows that the inequality does not include these points

The solid line shows that the inequality includes all the points on this line

$y \geq 2x + 1$



The shaded area indicates all possible solutions to this inequality

Principled **Resilient** **Open** **Understanding** **Disciplined**

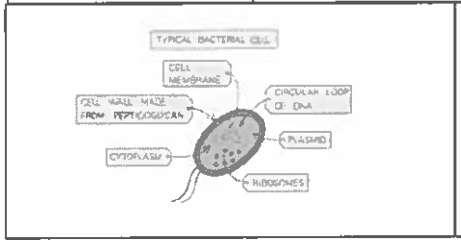
Science

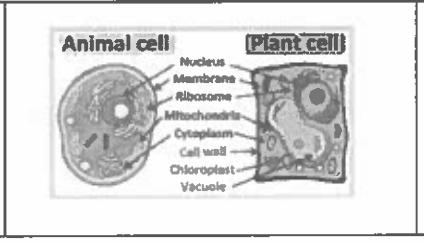
Biology B1- Cell biology

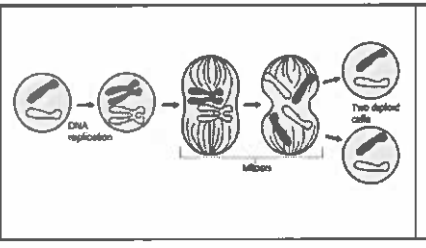
Summary- Position in the Curriculum

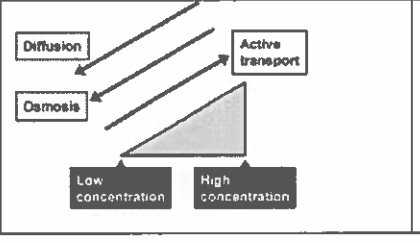
Cell Biology is the study of cells, their structure, function, and processes. This topic covers the cell theory, types of cells, cell structures and their functions, and the processes that occur within cells. Cells are the basic unit of all forms of life. In this section we explore how structural differences between types of cells enable them to perform specific functions. For an organism to grow and repair, cells must divide by mitosis. We also talk about stem cell technology- a new branch of medicine that allows doctors to repair damaged organs by growing new tissue from stem cells.

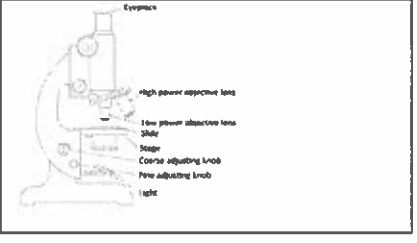
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Cell	The basic unit of life.	Cells may be specialised to carry out a particular function: sperm cell, nerve cell and muscle cell in animals, and root hair cells and xylem, phloem in plants. Cells can be viewed under a microscope and magnification calculated using the following formula: Magnification = image size/ actual size.	Revision and self-study questions are below. Answer 1 per week for Self- Study. You can draw on your notes, this organiser, your memory and own research.
Organelle/subcellular structure	Specialized structures within a cell that perform specific functions.	Most animal cells contain a nucleus, cytoplasm, a cell membrane, mitochondria and ribosomes. Plant cells in addition have chloroplasts and a permanent vacuole filled with sap. Plant and algal cells also have a cell wall made of cellulose.	*1. Describe the main differences between prokaryotic and eukaryotic cells.*
Prokaryotic cell	A cell without a nucleus, such as bacteria.	Bacterial cells (prokaryotic cells) are much smaller than eukaryotic cells. They have cytoplasm and a cell membrane surrounded by a cell wall. The genetic material is not enclosed in a nucleus. It is a simple DNA loop.	*2. Compare and contrast the processes of diffusion and active transport. Give examples. Define osmosis. Explain how osmosis is different from diffusion.*
Eukaryotic cell	A cell with a nucleus, such as plant and animal cells.	Plant and animal cells are eukaryotic cells. They have a cell membrane, cytoplasm and genetic material enclosed in a nucleus.	
Mitosis and cell cycle	A process of division producing two genetically identical daughter cells.	During the cell cycle the genetic material is doubled and then divided into two identical cells. Before a cell divides, it grows and increases the number of subcellular structures. The DNA replicates to form two copies of each chromosome. Each set is then pulled to each end of the cell and the nucleus divides.	*3. Describe the stages of the cell cycle, including mitosis.*
Diffusion	Movement of particles from an area of high concentration to low concentration.	Substances may move in and out of cells via diffusion. These include oxygen and carbon dioxide in gas exchange. Factors that affect diffusion include concentration gradient, temperature and surface area of the membrane.	*4. Explain how electron microscopy has increased understanding of subcellular structures.*
Osmosis	Movement of water across a semi-permeable membrane from an area of high-water potential to low water potential.	Water may move across cell membranes via osmosis. Plants rely on osmosis to support their stems and leaves. Turgor pressure (when there is lots of water inside) makes cells rigid. If water is lost by osmosis, the vacuole and cytoplasm shrink and cell membrane pulls away from cell wall- cell becomes plasmolysed.	*5. Describe different types of stem cells. Evaluate the practical risks and benefits, as well as social and ethical issues, of the use of stem cells in medical research and treatment.*
Active transport	Movement of substances against a concentration gradient, requiring energy.	Active transport allows mineral ions to be absorbed into plant root hairs. It also allows sugar molecules to be transported from the gut into the blood stream.	











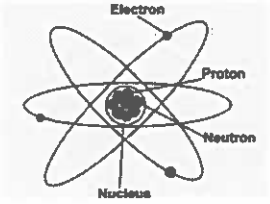
Chemistry – Atomic structure and the Periodic table

Summary- Position in the Curriculum

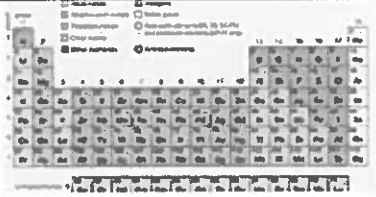
The periodic table provides chemists with a structured organisation of the known chemical elements from which they can make sense of their physical and chemical properties. The historical development of the periodic table and models of atomic structure provide good examples of how scientific ideas and explanations develop over time as new evidence emerges. The arrangement of elements in the modern periodic table can be explained in terms of atomic structure which provides evidence for the model of a nuclear atom with electrons in energy levels

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Atom	The basic unit of a chemical element, consisting of a nucleus surrounded by electrons. The atom is the smallest entity that retains the properties of an element	Atoms, Elements, and Compounds: All substances are made of atoms, the smallest part of an element that can exist. Compounds are formed from elements through chemical reactions, combining two or more elements in fixed proportions, represented by formulae.	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Proton	A subatomic particle found in the nucleus of every atom, carrying a positive electric charge equal in magnitude to that of an electron but of opposite sign.	Development of the Atomic Model: Scientific models of the atom have evolved from the indivisible sphere to the nuclear model with protons in the nucleus and electrons in orbits, influenced by experimental evidence such as the alpha particle scattering experiment.	1. *Describe and explain why Mendeleev periodic table was later accepted.*
Group	A column of elements in the periodic table of the chemical elements. Elements in a group typically have similar properties and electron configurations in their outer shell.	Subatomic Particles and Atomic Structure: The atom comprises protons with positive charges and neutrons with no charge in the nucleus, and electrons with negative charges in orbits. The number of protons determines an element's atomic number.	2. *Discuss how the alpha particle scattering experiment contributed to the development of the nuclear model of the atom.*
Alkali Metals	The group 1 elements, excluding hydrogen. They are very reactive metals	The Periodic Table: Organized by increasing atomic number, the periodic table arranges elements so those with similar properties are in the same group, explaining the table's structure through atomic structure and electron configuration.	3. *Describe the structure of an atom in terms of its subatomic particles and explain how the atomic number and mass number are determined.*
Halogen	The group 7 elements. They are non-metals and are very reactive.	The relative atomic mass of an element accounts for isotope abundance, averaging atom masses against carbon-12's 1/12th mass. Isotopes, differing only in neutron count, alter atomic mass but not chemical properties	4. *Considering two isotopes of chlorine, Cl-35 and Cl-37, with natural abundances of approximately 75% and 25% respectively, how would you calculate the relative atomic mass of chlorine?*
Electron	A negatively charged particle that orbits the nucleus of an atom in electron shells.	Electronic Structure: Electrons in an atom occupy the lowest available energy levels, with electron configurations indicating the distribution of electrons among the various shells. This arrangement can be represented by numbers (e.g., 2,8,1 for sodium) or diagrams, reflecting how electron configurations influence chemical properties and reactions.	5. *Describe and explain the trend in reactivity for group 1 and group 7*

Image

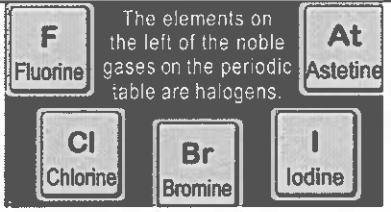


Image



Image

Image



Image

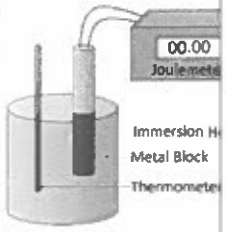
Physics – Energy and energy resources

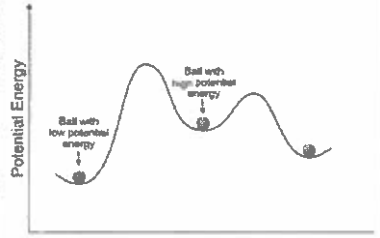
Summary- Position in the Curriculum

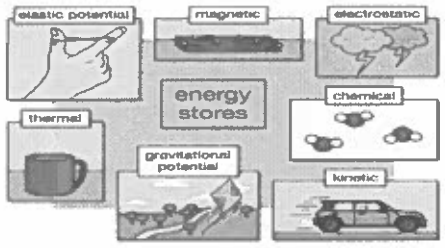
The concept of energy emerged in the 19th century. The idea was used to explain the work output of steam engines and then generalised to understand other heat engines. It also became a key tool for understanding chemical reactions and biological systems. Limits to the use of fossil fuels and global warming are critical problems for this century. Physicists and engineers are working hard to identify ways to reduce our energy usage.

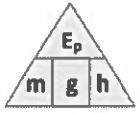
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Conservation of energy	Energy cannot be created or destroyed, only transferred from one form to another	**Kinetic Energy (KE) stores** describe the energy an object has because it is moving. kinetic energy = 0.5 × mass × s peed^2 Ek = 1/2 × m× v^2 Ek in joules, J mass, m, in kilograms, kg, speed, v, in metres per second, m/s	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Closed system	An object or a group of objects for which the total energy is constant	**Elastic potential energy stores** describe the energy stored in a springy object when you stretch or squash it. Elastic potential energy = 0.5 × spring constant × extension^2 Ee = 1/2× k ×e^2 Ee, in joules, J, spring constant, k, in newtons per metre, N/m extension, e, in metres, m	1. Calculate the specific heat capacity of iron, mass 2kg, when 78 kJ of energy are transferred to the iron block for 5 minutes from 20 to 80°C
Specific heat capacity, c	The specific heat capacity of a substance is the amount of energy required to raise the temperature of one kilogram of the substance by 1°C	**Gravitational potential energy (GPE) stores** are used to describe the energy stored in an object because of its position, such as an object above the ground. GPE = mass × gravitational field strength × height Ep = m× g× h Ep, in joules, J mass, m, in kilograms, kg gravitational field strength, g, in newtons per kilogram, N/kg, height, h, in metres, m	2 Discuss the advantages and disadvantages of using wind power, hydroelectric power, geothermal power, nuclear power and fossil fuels to generate electricity.
Renewable energy	Energy from natural sources that is always being replenished so it never runs out	**Power(P)** is defined as the rate at which energy is transferred or the rate at which work is done. power = energy transferred / time P = E/ t power = work done/ time P = W/ t Power is measured in Watts, W Work done = Energy transferred, measured in Joules 1 W = 1 J/s	2. Calculate the velocity of the 2 kg mass just before it hits the rocks when it is dropped from a height of 16 m above the surface of the rocks.
Biofuel	Any fuel taken from living or recently living materials, such as animal waste	The **energy efficiency** for any energy transfer can be calculated using the equation: efficiency = useful output energy transfer/ total input energy transfer efficiency = useful power output/total power input	3. Describe an experiment to measure the specific heat capacity of an aluminium block using **Fig 1**
Dissipated energy	Any energy that is not transferred to useful energy stores is said to be wasted because it is lost to the surroundings	**Specific heat capacity** can be calculated using the equation Δ E = m× c × Δ θ rearranged to c = ΔE/m×Δθ E =change in thermal energy, J c is the specific heat capacity in J/kg°C m is mass in Kg Δ θ = change in temp °C	4. Mr Ibrar wants to reduce the heating bills of his house. Explain how the teacher can reduce the rate of energy transfer from the walls, lofts and windows from his house.

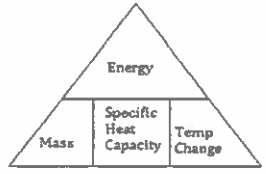
Fig 1









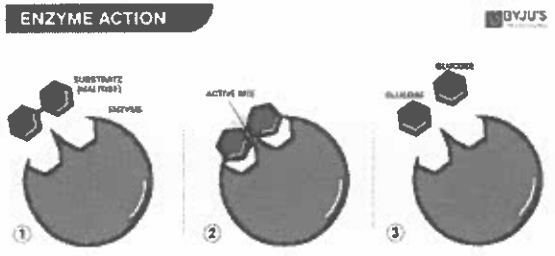


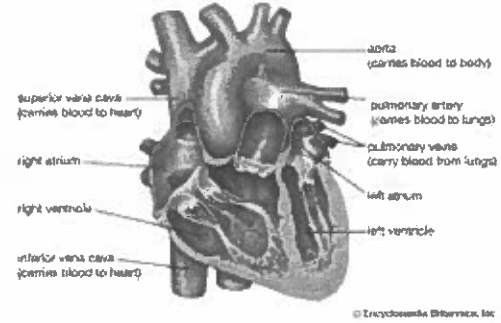
Biology B2- Organisation

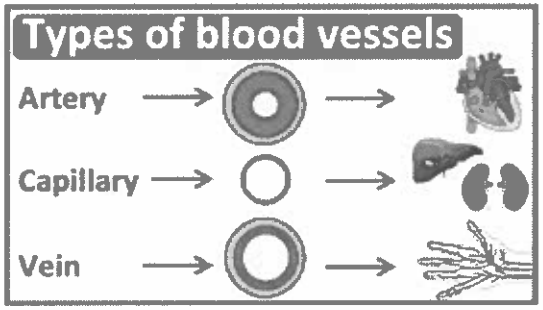
Summary- Position in the Curriculum

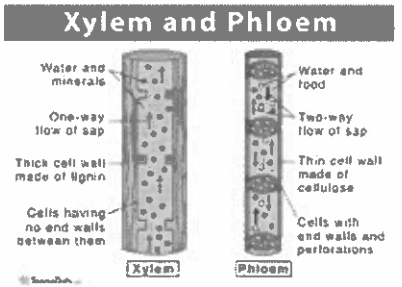
This topic covers the hierarchical structure of multicellular organisms, focusing on cells, tissues, organs, and organ systems. It explores the functions of different systems in animals and plants, including the digestive system which provides the body with nutrients, and circulatory systems which provides it with oxygen. We also learn about transport systems in plants and how it is dependent on environmental conditions to ensure that leaf cells are provided with the water and carbon dioxide that they need for photosynthesis.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Tissue, Organ and Organ system	A group of similar cells that work together to perform a specific function. A collection of tissues that work together to perform a specific function or group of functions. A group of organs that work together to perform complex functions.	Cells are basic structural and functional unit of life. Groups of similar cells are called a tissue (e.g., muscle tissue, epithelial tissue), whilst organs are made up different tissues (e.g., heart, lungs). Groups of organs that work together are called organ system (e.g., digestive system, circulatory system). Damage to any of these systems can be fatal. Many interventions would not be necessary if individuals reduced their risks through improved diet and lifestyle.	Revision and self-study questions are below. Answer 1 per week for Self- Study. You can draw on your notes, this organiser, your memory and own research.
Digestive system	The system that breaks down food into absorbable units that enter the blood for distribution to body cells.	Digestive system breaks down food into smaller molecules that can be absorbed into the bloodstream. Its key organs are mouth, oesophagus, stomach, small intestine, large intestine, liver, pancreas.	*1. Explain the hierarchical organization of multicellular organisms.*
Enzyme	A protein that acts as a biological catalyst, speeding up chemical reactions in cells.	Enzymes aid digestion by breaking down polymer molecules into smaller soluble molecules. Amylase breaks down starch, protease breaks down proteins, lipase breaks down lipids.	*2. How does the structure of the villi in the small intestine aid in nutrient absorption?*
Circulatory system	The system that transports blood and other materials throughout the body.	Circulatory system transports nutrients, oxygen, and hormones to cells and removes waste products. Key Components include: heart, blood vessels (arteries, veins, capillaries), blood. Heart has four chambers (two atria, two ventricles) and pumps blood throughout the body. Blood Vessel are: arteries carry blood away from the heart, veins carry blood to the heart, capillaries exchange materials with tissues.	*3. Describe the role of enzymes in the digestive system. Discuss the importance of the liver and pancreas in digestion.*
Non- communicable disease	Diseases that are not spread through infection or through other people, but are typically caused by unhealthy behaviours	Coronary heart disease and cancer are non- communicable diseases. In CVD layers of fatty material build up inside coronary arteries narrowing them. Stents and statins are used to manage the condition. Heart valves may become faulty. They can be replaced. Cancer is the result of changes in cells that lead to uncontrolled growth and division. Lifestyle factors may affect the risk of non- communicable diseases: diet, exercise, smoking, alcohol.	*4. What are the functions of the different types of blood vessels in the circulatory system? How does the heart ensure unidirectional flow of blood?*
Plant organ system	In plants typically these are root hair cells, xylem and phloem- to aid transport system.	Vascular bundle is made up by two tissue types: xylem which transports water and minerals from roots to leaves and phloem transporting sugars from leaves to the rest of the plant. Transpiration: loss of water vapor from the leaves through stomata	*5. Compare and contrast the roles of xylem and phloem in plants. Describe the process of transpiration and its significance in plants*









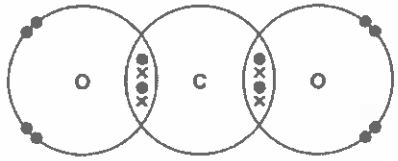
Chemistry – Bonding, Structure, and the Properties of Matter

Summary- Position in the Curriculum

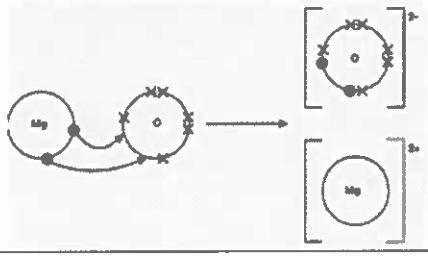
Chemists use theories of structure and bonding to explain the physical and chemical properties of materials. Analysis of structures shows that atoms can be arranged in a variety of ways, some of which are molecular while others are giant structures. Theories of bonding explain how atoms are held together in these structures. Scientists use this knowledge of structure and bonding to engineer new materials with desirable properties. The properties of these materials may offer new applications in a range of different technologies.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Ionic Bonding	The electrostatic attraction between oppositely charged ions.	**States of Matter**: Solids, liquids, and gases can be represented by particle models. Changing state involves energy transfer to overcome forces between particles.	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Covalent Bonding	The sharing of pairs of electrons between atoms	**Properties of Ionic Compounds**: High melting/boiling points due to strong electrostatic forces in the lattice. Conduct electricity when molten or dissolved as ions are free to move	1. Describe how ionic, covalent, and metallic bonds are formed and give examples.
Metallic Bonding	The attraction between delocalized electrons and positive metal ions.	**Properties of Small Molecules**: Usually gases or liquids with low melting/boiling points due to weak intermolecular forces. Do not conduct electricity.	2. Explain the properties of substances based on their type of bonding and structure.
Intermolecular Forces	Forces of attraction or repulsion which act between neighbouring particles (atoms, molecules, or ions).	**Giant Covalent Structures**: Very high melting/boiling points. Examples include diamond and graphite. Strong covalent bonds must be broken to change state.	3. Compare and contrast the structures and properties of diamond and graphite.
Alloys	A mixture of two or more elements, at least one of which is a metal, designed to have specific properties.	**Properties of Metals and Alloys**: Metals have high melting/boiling points due to strong metallic bonds. Alloys are harder than pure metals due to distorted atomic layers.	4. Recognize and explain the significance of polymers and giant covalent structures.
Electron	A negatively charged particle that orbits the nucleus of an atom in electron shells.	**Metals as Conductors**: Good conductors of electricity and heat because delocalized electrons carry charge/energy.	5. Discuss the uses and properties of graphene and fullerenes in technology.

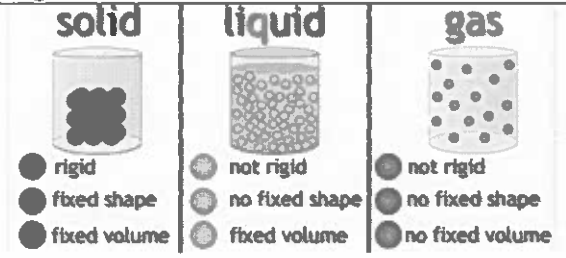
Image



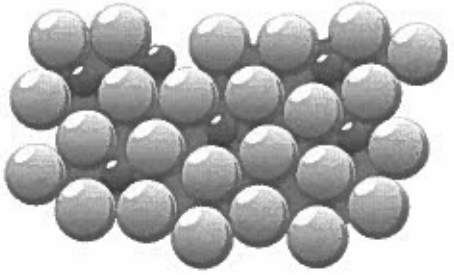
Image



Image



Image

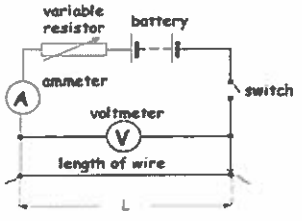
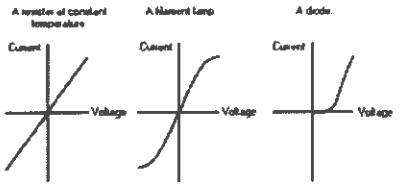
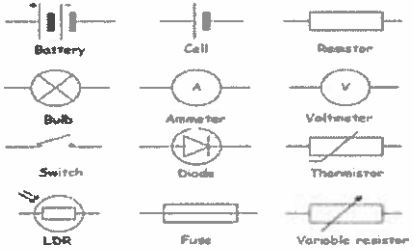
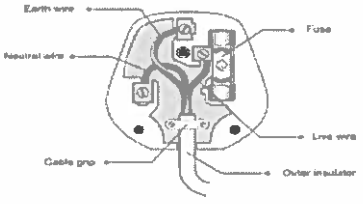


Physics 2 – Electricity

Summary- Position in the Curriculum

Electric charge is a fundamental property of matter everywhere. Understanding the difference in the microstructure of conductors, semiconductors and insulators makes it possible to design components and build electric circuits. Electrical power fills the modern world with artificial light and sound, information and entertainment, remote sensing and control. If we all continue to demand more electricity this means building new power stations in every generation – but what mix of power stations can promise a sustainable future?

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Electric current	Electric current is a flow of electrical charge	**Electric current** - The size of the electric current is the rate of flow of electrical charge. A current has the same value at any point in a single closed loop. Charge flow = current × time Q = I × t t = time, measured in seconds, s Q = charge low, measured in Coulombs, C I = Current, measured in Amps, A	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Ohm's law	The current through a resistor at constant temperature is directly proportional to the potential difference across the resistor	**Resistance** in the circuit slows down the flow of charge (the current). Resistance is measured in Ohms, Ω. Current, potential difference or resistance can be calculated using the equation, V = I × R V = potential difference in volts, V I = Current in Amps, A R is resistance in ohms, Ω	***1.*** A current of 40 mA flows through a lamp for 300 seconds. Calculate the charge flow that passes through the lamp.
Potential difference (voltage)	A measure of the work done, or energy transferred to the lamp by each coulomb of charge that passes through it. The unit is volt (V)	**Series circuit** – current is the same through each componebt, potential diffrence is shared by each componebt and the total resistance is some of the resistance of each component. **Parallel circuit** – potential difference across each component is the same, the total current through the whole circuit is the sum of the currents through the separate components and the total resistance of two resistors is less than the resistance of the smallest individual resistor.	***2*** A length of wire is connected to a 9.0 V power pack and an ammeter. The reading on the ammeter is 0.25 A. Calculate the resistance of the wire. Give the unit.
Diode	A non-ohmic conductor that has a much higher resistance in one direction than in the other direction, so the current flows in one direction only.	**Power** of the appliance, in watts, is the energy it transfers in joules/second. Power = potential difference × current P = V × I Power = Current² × resistance P = I² × R Energy transferred = power×time Energy transferred = charge×potential difference E = P × t E = Q × V	***3*** Describe an experimental method which will allow 10Q students to investigate how the resistance of a wire depends on its length. Include circuit diagrams, variables and safety aspects.
Alternating current (AC)	Electric current in a circuit that repeatedly reverses its direction	The potential difference between the **live wire** (brown) and earth (0 V) is about 230 V. The **neutral wire** (blue) is at, or close to, earth potential (0 V). The **earth wire** (green & yellow) is at 0 V, it only carries a current if there is a fault.	***4*** Describe how a metal case of an electrical appliance is connected to earth
National grid	The National Grid is a system of cables and transformers linking power stations to consumers.	**Step-up transformers** are used to increase the potential difference from the power station to the transmission cables then **step-down transformers** are used to decrease, to a much lower value, the potential difference for domestic use.	***5*** Write and explain how the resistance of a filament lamp changes when the current through is increased.

Image	Image	Image	Image
Fig 1 			

History

Year 9 HISTORY-Half Term 1.1

Summary- Position in the Curriculum

Yr.9 pupils begin their study with a political history unit. This helps them to gain a solid foundation of the political spectrum, raising and answering questions about how societies organise themselves and why extreme change and revolution might take place in the world. Pupils will use this knowledge to understand the post-1945 events and changes further into Yr.9. Pupils will also develop their conceptual understanding by comparing similarity and difference between the two extremes of the political spectrum- communist Russia and Fascist Germany.

Terminology	Definitions
Ideology	A system of ideas and ideals, usually our political views. They can include ideas about money and wealth, politics and decision making, and how society is organised.
Democracy (centre)	Rule by the people; this usually involves the people of a country voting for people to represent them and make decisions for them about how to rule the country.
Communism (left-wing)	A political system based on the ideas of Karl Marx. In the perfect communist society, everyone would work together for the common good, everyone would be equal and there would be no need for money.
Fascism (right-wing)	A far-right form of government in which most of the country's power is held by one ruler or a small group, under a single party.
Revolution	When a government is overthrown and replaced by another leader or group that aims to make huge changes.

Core Knowledge

THE POLITICAL SPECTRUM is a way of seeing different political views in relation to one another. (see the diagram below).

In Germany (before 1934): The German parliament is called the **Reichstag.** The **President** was voted for every 7 years and was the most important person in the government. The **Chancellor** was the leader of the Reichstag and was chosen by the President.

Russian society before the revolution was very unfair. There was a handful of very rich nobles but 80% of the population was made up of peasants. A growing number of peasants had moved to cities such as Moscow and St Petersburg to work in factories. The living and working conditions in these cities were very bad.

Rasputin – a faith healer who had a lot of influence over the Tsarina because he seemed to be able to cure her son's life-threatening illness.

Preparing for Assessment

Revision and self-study questions are below.

Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *Can you describe 3 long-term causes of the Russian Revolution?*
2. *Describe the key political beliefs of Communists, Fascists and Democrats.*

Find an example of a country that was/iis governed by each political ideology.

3. *Explain 3 reasons why Hitler became Chancellor in 1933.*
4. *Explain 3 similarities and 3 differences between Communist Russia and Fascist Germany.*

Extra challenge: Understand your own political viewpoint- take the political compass quiz and discuss your results with your parents: https://www.politicalcompass.org/

Karl Marx was a German writer who believed that the workers were being exploited by their bosses. He said that the workers would rise up against the bosses and take control of the factories.

Tsar Nicholas II was the emperor of Russia from 1894 to 1917. He was a poor leader; one of his worst decisions was to personally lead the Russian army in WW1.

The Tsarina – Alexandra, the wife of Tsar Nicholas II.

Vladimir Lenin was a ruthless leader. He led Russia through civil war, famine and hardship. He was the first Communist leader of Russia. He died in 1924. and was succeeded by a man named Joseph Stalin. Russia was now called the USSR or 'the Soviet Union'.

Josef Stalin- Stalin became leader after Lenin and wanted to turn the Soviet Union into a great power, which would show the world how good Communism was. He wanted to turn it into a modern, industrial country and catch up with the powerful countries in the West, like the USA and Britain.

Adolf Hitler sets up the Nazi Party in 1920 and becomes Chancellor in January 1933. This happened for a variety of reasons – Hitler's strengths, inbuilt problems of the Weimar Republic, and the weaknesses of others.

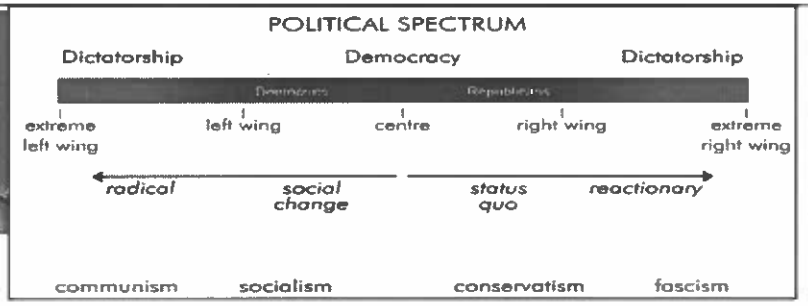
In 1934 Hitler became complete dictator in Germany. The country became a one-party-state.

Control in the Nazi Dictatorship:

1) Removal –From 1933 to 1934, Hitler removed all opposition and established himself as Fuhrer.

2) Control –There was an attempt to control and influence attitudes. This was done by propaganda and terror.

3) Opposition –The youth and the churches opposed the regime.



Year 9 HISTORY-Half Term 1.2

Summary- Position in the Curriculum

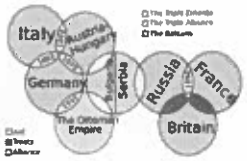
This study focuses on major conflict in the 20th century. Pupils will explore causation by looking at the Long-term and short-term causes of the First World War. By exploring the consequences of the decision-making at the end of this war, pupils will be able to understand how and why the world was once again at war by 1939.

Part 1: Why did World War 1 breakout in 1914?

Long-term cause 1: European powers were expanding their ***empires*** in Africa, creating competition and rivalry for land and resources.

Long-term cause 2: European powers were spending their wealth on their ***military.*** This caused tension and fear that war could happen and countries expanded their armed forces to defend themselves.

Long-term cause 3: European powers formed ***alliances*** with other countries and swore to defend each other if they were attacked.



The Spark

28th June 1914: Franz Ferdinand and his wife are assassinated in Sarajevo. Austria-Hungary declare war on Serbia in retaliation for the murder-The alliances are triggered.

Key terminology

Triple Alliance: A political alliance between Germany, Austria-Hungary and Italy
Triple Entente: A political alliance between Britain, France and Russia
Arms Race: A competition between countries to make the most weapons
Nationalism: The belief that your nation is more important or superior to any other.
Imperialism: When a country wants to take over other countries to create an Empire
Militarism: Belief that a country should have a very strong military and many weapons.
Dreadnought: A type of battleship, many built by the navies of Britain and Germany.

Franz Ferdinand: The heir to the throne of Austria-Hungary. His murder in 1914 is seen as the final straw which led to war.

Gavrilo Princip: A terrorist for the Black Hand Gang. He assassinated Franz Ferdinand in June 1914.

Kaiser Wilhelm II: The Emperor of Germany until 1918. He wanted Germany to become the most powerful state in Europe. Enter the war to protect Serbia.

Tsar Nicholas II: The Russian Emperor. He made the decision to enter the war to protect Serbia.

Part 2: How did the world find itself in a Second World war by 1939?

Appeasement: Giving in to a potential enemy in order to avoid war. Britain was eager to avoid fighting another war. While Hitler continued to break the Treaty of Versailles, Britain operated a policy of appeasement, in the hope that war could be avoided. By the late 1930s, however, it was clear that preparations needed to be made in the likely event of war.

How did World War 2 unfold?

- Adolf Hitler became Chancellor of Germany in **January 1933**. As a result, German foreign policy changed dramatically.
- Hitler had promised to reverse the terms of the Treaty of Versailles. He wished to build up the strength of the German forces, He also wanted the return of any German land that had been lost.
- In **March 1936**, German troops remilitarised the Rhineland.
- In **March 1938**, Germany united with Austria.
- By **September 1938**, Hitler had turned his attention to Czechoslovakia. Hitler wanted them to unite with Germany.
- The Munich Conference of **October 1938** between Hitler and Neville Chamberlain resulted in the Sudetenland being given to Germany on the condition that Hitler made no more demands.
- In **March 1939**, Germany occupied the remainder of Czechoslovakia.
- On **23 August 1939**, Hitler signed the Nazi-Soviet Pact with the Soviet Union. This was to divide Poland between both countries.
- **1 September 1939** – Germany invaded Poland.

How did the First World War end?

Remembrance: On the 11am of the 11th month 1918 (November 11th). This became known as Armistice Day – the day Germany signed an armistice (an agreement for peace) which caused the fighting to stop. The reason poppies

The Treaty of Versailles- June 1919

- LAND – Lost their overseas Empire which was divided amongst the victorious allies.
- ARMY – reduced to 100,000 men, no air force and only 6 battleships.
- MONEY- reparations set at £6600 million to be paid to the allies.
- BLAME: Germany had to accept guilt for starting the war.

Preparing for Assessment

Revision and self-study questions are below.

Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *Describe the key features of each long-term cause and explain how they directly contributed to the outbreak of war.*
2. *Retell the causes, events and consequences of the death of Franz Ferdinand.*
3. *Describe the Treaty of Versailles LAMB and explain why Germany were so upset after the war*
4. *Explain what appeasement means and give 3 reasons why Britain had this policy.*
5. *Give 2 arguments to support the decision to appease Hitler. Can you challenge it?*

Year 9 HISTORY-Half Term 2.1

Summary- Position in the Curriculum

This unit fits into the wider 20th century study. It will help pupils to recognise the impact of political change within a country and how war can escalate this. It will also build upon the unit studied earlier in the year when Nazi political ideologies were studied. This unit allows pupils to explore and recognise the dire consequences of these ideologies in action, how and why it was and is able to happen.

Terminology	Definitions
Antisemitism	Anti-Semitism is the term used for the discrimination of the Jews. Anti-Semitism has been common in Europe for many centuries.

Three Historical Reasons for Anti-Semitism:

1. Jews were blamed for the crucifixion of Christ.
2. Jews were blamed for the Black Death although many Jews were killed by the disease.
3. Jews were driven out of many Western European countries in the Middle Ages. They were expelled from England in 1290, from France in 1306 and 1394. These are some of the actions made created prejudice and discrimination towards Jewish people in communities all over Europe.

Core Knowledge

What was the Holocaust? Key definitions.

- The mass murder of Jews under the German Nazi regime during the period 1941–5. More than 6 million European Jews, as well as members of other persecuted groups, were murdered at concentration camps such as Auschwitz.
- Holocaust comes from Hebrew and means destruction or completely burnt. Many Jews use the term Shoah which comes from the Hebrew and means catastrophe.

Hitler takes power in Germany...

July 1932 the Nazis were the largest party in the Reichstag. Hitler was made Chancellor on the 30th January 1933. Hitler started his persecution of the Jews with immediate effect:

Why did the Nazis persecute certain groups in society?

At the end of WW1 the allies imposed a harsh peace treaty on the Germans. They lost land, money and were forced take the blame for starting the war. Adolf Hitler, the leader of the Nazi party blamed enemies inside Germany for losing the war. This included Jews, Gypsies, Homosexuals, and communists. He wanted to make Germany great by removing those he thought of as ***inferior,*** leaving only pure German people left.

Hitler's Persecution of the Jews

1st April 1933: Hitler's first action directly against the Jews was a Boycott of all Jewish businesses.	April 11, 1933: Nazis issued a decree defining a non-Aryan as "anyone descended from non-Aryan, especially Jewish, parents or grandparents."	May 10, 1933: Burning of books in Berlin and throughout Germany. In Sept - Nazis established the Reich Chamber of Culture, then excluded Jews from the Arts.	Summer 1935: Placards saying Jews not wanted displayed in resorts, public buildings, restaurants and cafes . (these were removed during the 1936 Olympic Games).	November 9th 1938: A massive, coordinated attack on Jews throughout the German Reich. This has come to be known as Kristallnacht or The Night of Broken Glass.

How did the Holocaust happen?

The Nazis invaded Eastern Europe and used The ***Einsatzgruppen*** who were special mobile killing squads created in 1939.

In 1941 the Einsatzgruppen would move through Nazi controlled areas and round up Jews, gypsies, undesirables and disabled people. They rounded them up and shot them.

The Final Solution: The Wannsee Conference was a meeting of senior Nazi held in the Berlin suburb of Wannsee on 20 January 1942. Here, it was decided that all Jewish people in German occupied Europe would be deported to occupied Poland and murdered.

1. **The Death Camps: Auschwitz Birkeneau, Chelmno, Treblinka, Belzec, Sobibor, Majdanek** in the far east of Poland. The death camps used gas chambers to murder Jews and others on an industrial scale. Jews were brought from all over Europe.

Preparing for Assessment Revision and self-study questions. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.	1. Summarise Hitler's views and explain why some groups were targeted by the Nazis.	*2. Describe two ways in which Nazi persecution of Jews before the war was different from persecution during the war.*	*3. .Can you find 3 examples to show how Jewish people did resist the Nazis?*	*4 .Describe how the treatment of Jews and other minority groups changed between 1933-1945.*	*5. Can you give 3 reasons to explain why Holocaust memorial Day on the 27th January is so important today?*

Year 9 HISTORY-Half Term 3.1

Place in the curriculum:
This unit forms part of our post-1945 studies, and explores the concept of democracy and human rights since 1945. It focuses on developments in America, whereby human rights had technically existed since 1948, but did not apply to many citizens, creating a deeply segregated and unfair American society. Pupil will explore the context to this, the reason and methods used by the Civil rights campaigners to challenge this in the 1950s, and the level of success by 1960.

Terminology

Declaration of Human Rights	(UDHR) is a document that acts like a global road map for freedom and equality – protecting the rights of every individual, everywhere.
Civil Rights	The rights of citizens to political and social freedom and equality.
Emancipation	The end of slavery and freeing of all enslaved people.
Segregation	The action or state of setting someone apart from Others. In this case, separation by race.
Legislation	Laws passed by the government.
Desegregation	A legal process of ending the separation and isolation of different racial and ethnic groups.
Prejudice	A preconceived opinion that is not based on reason or actual experience.
Discrimination	The unjust or prejudicial treatment of different people.
Supreme Court	The most powerful court in America. Has the power to set precedents that lead to changes in the law.
What was the Civil Rights movement?	The civil rights movement was a struggle by African Americans in the mid-1950s to late 1960s to achieve Civil Rights equal to those of whites, including equal opportunity in employment, housing, and education, as well as the right to vote, the right of equal access to public facilities, and the right to be free of racial discrimination

Core Knowledge

Equality and Human Rights

The UDHR was adopted by the newly established United Nations on 10 December 1948, in response to the actions during the Second World War. Its adoption recognised human rights to be the foundation for freedom, justice and peace.
The Declaration outlines 30 rights and freedoms that belong to all of us and that nobody can take away.

What are the United Nations?

After the atrocities of the Second World War and before, the leaders of 3 countries (Britain, Russia, USA) decided to set up a club of nations and invited all other countries of the world to join (except Germany and Japan). WHY NOT?
It was hoped that problems between nations could be settled through discussion and not fighting. It was named the United Nations and held its first meeting in April 1945. Representatives of 51 countries were there.

Preparing for Assessment

Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *Describe 3 key features of the UN and the creation of the UDHR.*
2. *Can you confidently describe why America can called a melting pot by 1920?*
3. *If the government technically gave black people rights and protection by law, can you give 3 reasons to explain why so many people faced discrimination in the USA?*
4. *Outline the life and success of one African-American before 1940*
5. *Explain the causes and consequences of the Little rock incident and the Montgomery Bus Boycott.*

Civil Rights 1950s

Context	Problems	Action	Challenge	Protest
Slavery was abolished in America in 1865. In 1870, the American constitution (laws) stated that no one should be denied the right to vote because of their race, colour or previous work.	African-Americans were still kept in badly- paid jobs. Many American states passed 'Jim Crow laws which stopped black people using the same schools, buses and swimming baths as white people.	In 1909, the NAACP was formed. It held silent marches to protest about the way black people were treated. In the 1920's, black Americans became writers, poets, film stars and dancers. It was in the 1920's that black people first began to say: 'Black is beautiful'. They called this 'artistic action' to get equality.	America in the 1950s was very divided. Segregation existed in many schools and in many aspects of life, people had to live separately because of their race. In 1954 the American Supreme Court ruled that segregation in schools was illegal. The first precedent was set.	- Events at Little Rock, Arkansas, 1957 - The Montgomery Bus boycott, 1955. - Woolworth lunch counter and the sit-in protests. 

Background check- who was American by 1948?

- The First Americans- Native Americans who had lived in North America for thousands of years.
- Old immigrants: White Europeans settlers who had lived in the US since the 1600s.
- Black Americans: Millions of African men, women and children had been taken to the US as part of the slave trade between c.1600-1860.
- New immigrants: a wave of European migrants from 1850 onwards, E.g. many came from eastern Europe, Poland, Ireland, Italy.

- By 1920, American society was made up of more religions, more colours, more cultures and more languages than any other country in the world. But in the early 1920's the government began cutting down the number of immigrants by introducing new laws.

Year 9 HISTORY-Half Term 3.1

Place in the curriculum:
This unit forms part of our post-1945 studies, and explores the concept of democracy and human rights since 1945. It focuses on developments in America, whereby human rights had technically existed since 1948, but did not apply to many citizens, creating a deeply segregated and unfair American society. Pupils will explore the context to this, the reason and methods used by the Civil rights campaigners to challenge this in the 1960s, and the level of success by 1970. It also includes case studies exploring the campaign for Civil Rights in Britain, the actions taken to end Apartheid in South Africa, and the history of campaigning for gender and LGBTQ+ equality in Britain.

Terminology

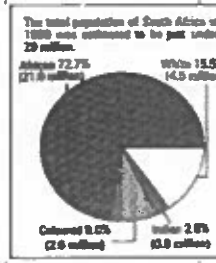
Desegregation	a legal process of ending the separation and isolation of different racial and ethnic groups.
Political movement	A collective attempt by a group of people to change government policy or society.
NAACP	The National Association for the advancement of coloured people.
ANC	African National Congress. Established in 1912, the ANC was initially focused on non-violent methods to fight against apartheid in South Africa
Apartheid	A policy in South Africa where segregation existed on grounds of race.

What were the American Civil Rights activists fighting for in the 1960s?

1) To end everyday discrimination 2) To change attitudes
3) To vote without intimidation 4) For economic equality 5) For a just society

Who was Nelson Mandela?

He was a south African politician and campaigner. He was President of South Africa between 1994 and 1999.
He campaigned for justice and equality, and spent 27 years in jail for this.
He was the first Black President of South Africa, and worked to remove apartheid and make South Africa a fair and safe place. He was awarded the Nobel peace prize for his work.



In 1910, South Africa gained independence, although the country was still controlled by white **settlers** who made up just 15% of the population.

In 1948, the white government introduced the policy of **Apartheid**, which was based on the idea that **Europeans were naturally superior** to black Africans.

Apartheid Laws removed black rights. Black people couldn't vote or marry white people.

Segregation Black Africans lived in separate **homelands** and could not attend white schools.

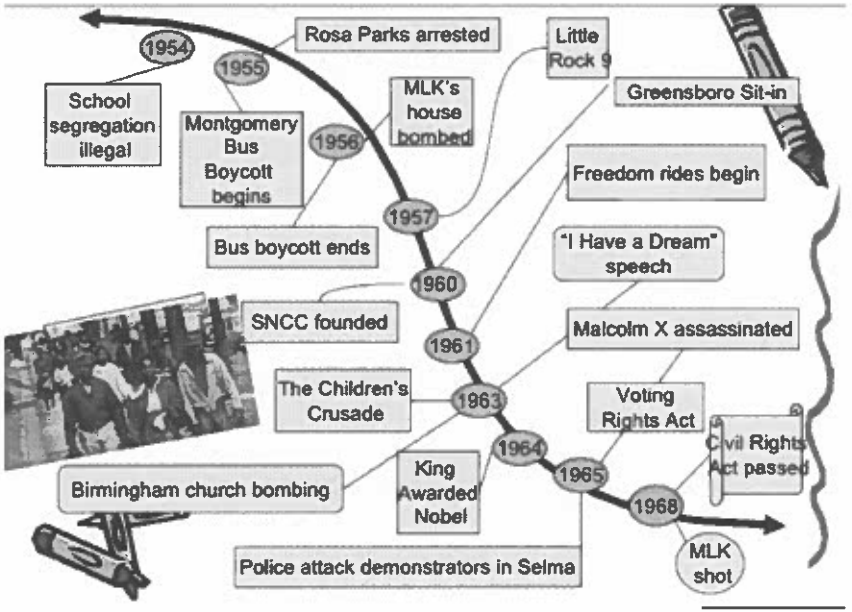
Opposition **Nelson Mandela**, an **anti-apartheid** leader, was in put prison for 27 years for resisting

Who was Martin Luther King?

Civil rights leader and minister. He first experienced segregation when he was 6 – not allowed to play with best friend. He Helped to lead the Montgomery Boycott. Inspired by Gandhi – peaceful protests. 1963 – Made "I Have a Dream" speech at the March on Washington to 250,000 people. 1964 – Awarded Nobel Peace Prize. 1968 – Assassinated the day after giving a speech, by James Earl Ray.

Core Knowledge

The campaign for civil Right in the USA- 1960s



Did Britain civil rights movement?

Black people have been in Britain since Roman times. Many migrated from the British Empire to the UK after WW2, as there was a shortage of workers.
- The civil rights movement challenged racism and discrimination. The 1963 Bristol Bus Boycott stopped a bus company from refusing to employ black workers. In 1965 racial discrimination was banned.

LGBTQ+ Rights in the UK

Homosexuality was illegal in the UK until 1967.
- Teaching positively about it was illegal in schools until 2003.
- Campaigners changed attitudes to being LGBTQ+ e.g. through Pride marches and other campaigns.
- Same sex couples were finally allowed to marry in 2013.
- The fight for equality continues, with transgender rights now a major area of debate.

Preparing for Assessment

Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *Describe Martin Luther King's aims.*
2. *Choose 3 events on the timeline and outline what happened.*
3. *Did the use of violent tactics achieve more than non-violent protest in the Civil Rights campaign in America?*
4. *Can you find 3 similarities and 4 differences between the Campaigns for equality in the USA and South Africa?*
5. *How far has the world progressed since 1948? What have been the biggest achievements in the campaign for equality? What is left to do?*

Year 9 HISTORY-Half Term 3.2

Place in the curriculum: How has migration shaped British society over the last 100 years?
You will compare case studies focusing on specific context that explains why colonies broke away from the British Empire and why Britain was unable to maintain it after the Second World War.
You will explore patterns of migration in different phases, looking at who migrated and why, what were the experiences, actions and contributions of different groups of people.

Case study 1: India

Ruled by the Muslim Mughal Empire in the 17th century. Most Indians were Hindus. Rich Mughal culture included architecture (Taj Mahal), art, music, literature. The British East India Company traded with Mughal India from 1600. In the 18th century it took most of India from the Mughals and the French (who also wanted an Empire). The government took full control of India in 1857. India was used to benefit Britain - 40% of India's wealth paid for Britain's military. 74,000 Indian soldiers died in WW1, 89,000 in WW2. Famine killed 3m Indians in 1943, but Winston Churchill refused food relief. India became independent in 1947, but split into two new states: India (mainly Hindu) and Pakistan (mainly Muslim). During the Partition, millions of Hindus, Muslims and Sikhs left their homes to move to either India or Pakistan. This mass movement of refugees was accompanied by terrible violence between the two faiths and hundreds of thousands of people were killed, either on the journey or on the border, between India and Pakistan. Pakistan and India have fought three wars, to gain full control over the region, in 1947, 1965 and 1999.

Case study 2: Creation of Israel

Jewish people came from Palestine. From the 4th century AD most moved away, settling around the world. Many were persecuted. After years of persecution, Jewish communities wanted a national Jewish home. In 1917 the British government promised to support this. Britain controlled Palestine from 1920 and allowed Jewish immigration. After the atrocities of the Holocaust, many displaced Jews looked to Palestine as a safe home for Jews. In 1948 the United Nations split Palestine into Jewish and Arab states, with Jerusalem as an international city. Arab countries didn't accept this, and so, violence commenced. Israel won the war. Up to 750,000 Palestinians were forced to migrate from their homes, and not allowed to return. Israel occupied Jerusalem

Context: The British Empire by 1900

19th century: Canada, Australia and New Zealand were allowed to self-govern. The British sold Indian opium to China to pay for the tea they imported. When the Chinese emperor tried to resist, Britain defeated China in the Opium Wars. Britain raced to capture huge amounts of new territory in the 'Scramble for Africa' (1891-1919). After the First World War Britain was given some of Germany's colonies, including Palestine in the Middle East.

The end of the British Empire

Towards the end of the 19th Century, a number of states became 'dominions' meaning that they remained part of the empire, but governed themselves. During the First and Second World War, Britain relied heavily upon its empire in order to win. The countries who supported Britain began to take an increasingly independent view. Furthermore, the wars left Britain weakened and less interested than it had previously been. By the late 1970s, the empire became reduced to a few pockets of territory around the world.

Independence movements

Nationalists were often punished harshly by the British. Mahatma Gandhi's non-violent protest highlighted Indian treatment. Millions of men from the Empire fought for Britain in the world wars. Many demanded independence when they returned home.
Decolonisation and Legacy: Many countries became independent after WW2. By the 1960s most had left the Empire. Some joined the Commonwealth, a group of independent countries. The last colony, Hong Kong, was loaned from China in 1898, and returned in 1997. Britain still has 14 overseas territories.
Decolonisation was often difficult, as British rule limited countries' development. Divisions in societies sometimes led to violence.

Preparing for Assessment

Revision and self-study questions:
1) Describe 2 examples of colonial involvement in the World Wars.

2) Explain why the British Empire broke apart after 1945.

3) Explain 2 consequences of the British empire breaking apart.

4) Draw a timeline of key migration moments to/from Britain since 1900.

5) What are your top 10 'multi-cultural Britain' examples today?

Migration in the 20th century

Empire Windrush was the first immigrant ship to Britain after the 1948 British Nationality Act. Many passengers on Windrush had previously fought for Britain in WW2. What was the experience of immigrants from the Caribbean, post-WW2? Many immigrants faced discrimination in accessing housing and work. Many on board Windrush came to seek work. Many intended to stay only a few years. Some did return home, but most settled permanently. There was a labour shortage in Britain, and there had been advertisements for cheap travel to Britain via the Empire Windrush. A hurricane in Jamaica, low price of sugar (the main industry) and little tourism meant that migration to Britain appealed to many. Several Caribbean islands were members of the British Commonwealth, and it was common to think of Britain as the 'Motherland'. Early post-war workers made a huge contribution to the British economy and economic growth. Many took low skilled and low paid work they were over-qualified for. There were some specific jobs/industries that advertised for immigrant workers (in some cases, going to actively recruit in the Caribbean). These include: Nursing and other work in the newly formed NHS. Hotels and restaurants. Public transport. Manufacturing and construction.

1947 Indian Independence. India and Pakistan partitioned → 1952 Mau Mau rebellion starts. Last until 1956 → 1956 Suez Crisis → 1957 Ghana granted independence → 1960 Harold Macmillan's Winds of Change Speech. Nigeria gains independence → 1961 Tanzania gains independence → 1962 Uganda gains independence → 1963 Kenya gains independence → 1964 Malawi and Zambia gain independence → 1980 Zimbabwe gain full independence

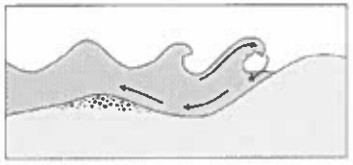
Geography

Geography – (KS3) Coasts – Year 9

Summary - Position in the Curriculum

Coasts is the first topic of Year 9 Geography. This topic begins with the physical characteristics of Coasts. You will learn about constructive and destructive waves. The topic also covers coastal erosion, hard and soft engineering to defend the coast which you need to learn for your end of unit assessment.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Coast	The part (edge) of the land which meets the sea or ocean.	*Learn the main aspects of this topic.*	*Revision and self-study questions are below.*
Erosion	The wearing away and removal of material by a moving force such a breaking wave.	*Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.*	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Soft Rock	A rock that is less resistant (weaker) to erosion. E.g. Boulder Clay	**Constructive waves**: Strong swash, weak backwash. **Destructive waves**: weak swash, strong backwash.	1. *What is the difference between constructive and destructive waves?*
Hard Rock	A rock that is more resistant (stronger) to erosion. E.g. Granite.	Wave action erodes softer rock easily creating bays. Headlands remain on either side of bays as more resistant.	2. *Explain how headlands and bays are formed?*
Weathering	When rock is broken down in one place.	**Long, fetch, and strength.**	3. *What are the 3 factors that determine the size of a wave?*
Headlands	A rocky coastal promontory (point/outcrop) made of rock that is resistant to erosion.	Waves approach beach at an angle. Swash and backwash move sediment along the beach in a zig-zag pattern.	4. *Explain how longshore drift occurs.*
Bays	Consisting of softer rock eroded by the sea to form a semi-circular shape.	**Hard engineering** strategies such a rock armour & sea walls are very strong and effective ways to protect the coastline but expensive. **Soft engineering** strategies such as beach nourishment are cheaper and more environmentally sustainable.	5. What is more effective in protecting the coast; hard or soft engineering?
Transportation	The movement of eroded material.		
Hard Engineering	Using concrete or large artificial structures to defend against natural processes, either coastal, fluvial or glacial.		
Soft Engineering	Managing erosion by working with natural processes to help restore beaches and coastal ecosystems or to reduce the risk of river flooding.		
Waves	**Constructive waves**: Low, small waves that surge up the beach – building the beach. **Destructive waves**: High, tall waves plunge onto the beach – destroying the beach.		
Longshore Drift	Transport of sediment along a stretch of coastline caused by waves approaching the beach at an angle.		

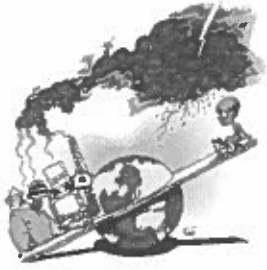
Constructive Wave	Destructive Wave	Hard Engineering – Sea Wall	Soft Engineering – Beach Profiling	Scan QR Code for Further Learning
				

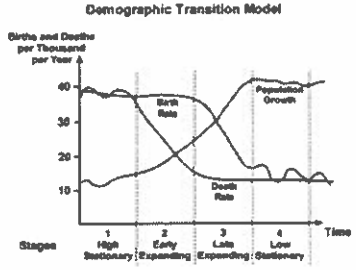
Geography (KS3) – Development – Year 9

Summary - Position in the Curriculum

Development is the second topic Year 9 Geography. This topic is important as it investigates the causes and solutions to the development gap that exists in our World today. You will learn about High Income Countries (HIC's), Middle Income Countries (MIC's) and finally Low-Income Countries (LIC's). What makes a country developed and how other countries face challenges in developing their country.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Development	Economic and social progress that leads to an improvement in the quality of life for an increasing proportion of the population.	*Learn the main aspects of this topic.*	*Revision and self-study questions are below.*
Human Development Index (HDI)	A method of measuring development where GDP per capita, life expectancy and adult literacy are combined to give an overview.	*Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.*	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Gross National Income (GNI)	Measurement of economic activity calculated by diving the gross (total) national income by the size of the population.	Different factors affect a country's level and speed of development including social, economic, environmental and political factors.	1. *State and explain ONE social, economic, environmental, and political factor affecting a country's level of development.*
Birth Rate	The number of births a year per 1000 of the total population.	Landlocked, corruption in government, education, natural resources, justice etc.	2. *What factors prevent an LIC from developing?*
Death Rate	The number of deaths a year per 1000 of the total population	Birth rate is a reliable measure of development. As a country develops, women are likely to be educated.	3. *Explain why birth rates are high in LIC's (low-income countries) and death rates are low in HIC's (high income countries).*
Infant Mortality	Number of babies that die under one year of age, per 1000 live births.	There is a clear link between a country's development and the wealth of its people.	4. *'Levels of development are closely linked to health' – explain.*
Development Gap	Difference in standards of living and wellbeing between the world's richest and poorest countries.	Brandt line is from 1980 when countries were less developed. Now many countries like South Korea, Singapore, UAE are developed.	5. Discuss whether the Brandt Line is still relevant today.
Aid	When a country or non-governmental organisation (NGO) such as Oxfam donates resources to another country to help it develop or improve people's lives.		
NEE	Countries that have **begun** to experience **high rates of economic development**, usually with **rapid industrialisation**. They differ from low-income countries in that **they no longer rely primarily on agriculture**, have made **gains in infrastructure** and **industrial growth**, and are experiencing increasing incomes and high levels of **investment**; for example, the so-called **BRICS** countries; Brazil, Russia, India, China and South Africa.		





Brazil · Russia · India · China · South Africa

FAIRTRADE INTERNATIONAL

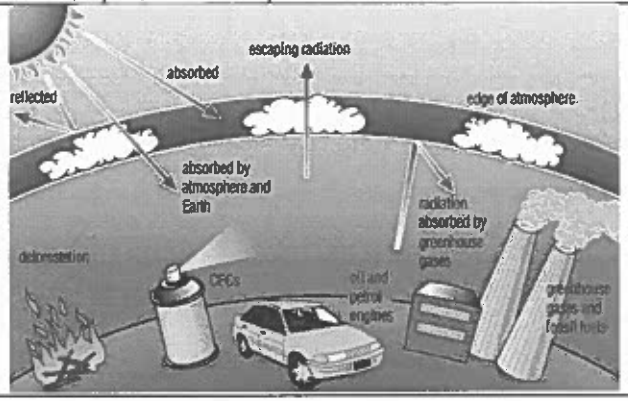
Geography – (KS3) – Climate Change – Year 9

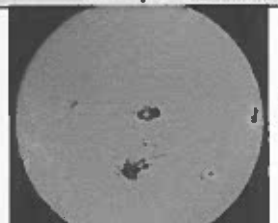
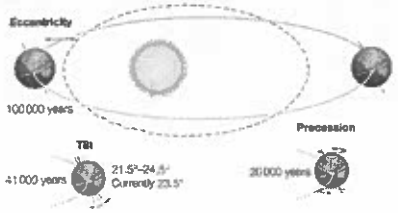
Summary - Position in the Curriculum

Climate Change is the third topic of Year 9 Geography. This topic is important as it begins with the Enhanced Greenhouse Effect and how human activities are releasing greenhouse emissions into the atmosphere. You will also learn about natural causes of climate change.

Terminology	Definitions
Greenhouse Gas	An atmospheric gas that absorbs (heat) infrared radiation, thereby, contributing to the greenhouse effect.
Carbon Footprint	A measure of all the greenhouse gasses we individually produce, through burning fossil fuels for electricity or transport expressed as tonnes (or kg) of carbon dioxide equivalent.
Climate Change	A long-term change in the Earth's climate, especially a change due to an increase in the average atmospheric temperature.
Orbital Change	Changes in the pathway of the Earth around the Sun.
Global Warming	A gradual increase in the world temperature by increased greenhouse gases.
Sunspots	Dark patches on the Sun's surface, caused by magnetic activity inside the Sun. More patches mean the solar output is greater.
Deforestation	The cutting down and removal of trees to clear an area of forest.
Ice Cores	Ice pole that is drilled from ice sheets in cold places like Antarctica which store hidden secrets to how climate was like in the past. Carbon Dioxide bubbles are trapped in the ice which allow scientists to determine the global temperature of the past.
Enhanced Greenhouse Effect	The warming of the Earth's atmosphere due to human activity increasing the layer of greenhouse gasses.
Methane	A Greenhouse gas emitted by cattle, rice paddy fields and sewage treatment.
Weather	The hour-hour, day-to-day state of the atmosphere.
Climate	The average weather over 30 years.
Nitrous Oxide	A greenhouse gas emitted from cars and agricultural fertilisers etc.
CFC's	A greenhouse gas called: Chlorofluorocarbon.

Core Knowledge	Preparing for Assessment
Learn the main aspects of this topic.	*Revision and self-study questions are below.*
Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Ice cores: trapped CO_2 gas bubbles. U-shaped valleys. Fossils of Animals.	1. *What evidence is there that climate was different in the past?*
Cars, cattle & rice farming, cement production, factories, fertilisers etc.	2. *What human activities create greenhouse gas emissions?*
GHG's trap heat from sunlight.	3. *Explain the Enhanced Greenhouse Effect.*
Volcanic eruption, orbital theory, sunspot theory, asteroid collision theory.	4. *Explain natural causes of climate change.*
Use renewable energy: solar, wind, geothermal etc. Walk, Cycle,	5. *How can we reduce greenhouse gas emissions?*



Coal Fired Power Station	Sunspots	Milankovitch Cycles	Deforestation	Scan QR Code for Further Learning
				

Geography – (KS3) Resource Management – Year 9 (1 of 2)

Summary - Position in the Curriculum

Resource Management is the 4th topic of Year 9 Geography. This topic begins with the definitions of resources and how there is global inequality. The topic also covers the significance of food, water, and energy.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Resource	A resource is anything that can be used to meet a human need.	*Learn the main aspects of this topic.*	*Revision and self-study questions are below.*
Resource Management	Control and monitoring of resources so that they do not become depleted or exhausted.	*Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.*	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Inequality	Differences between poverty and wealth, as well as wellbeing and access to jobs, housing, education etc.	Anything that can be used to meet a human need. E.g. food, oil, water etc	1. *What is a resource?*
Energy Security	Uninterrupted availability of energy sources at an affordable price.	Improved well-being, wealthier, country is more secure leading to development.	2. *What are the benefits of resources?*
Energy Insecurity	A situation where a country has to rely on others to supply most of its energy. This dependence makes a country politically vulnerable.	Water transfer schemes. Manage water pollution, reduce waste, harness rain.	3. *How can water supply be secured?*
Carbon Footprint	A measure of all the greenhouse gasses we individually produce, through burning fossil fuels for electricity or transport expressed as tonnes (or kg) of carbon dioxide equivalent.	Food, water and energy are the 3 most important resources for countries to develop.	4. *Explain the significance of food, water and energy to economic and social well-being.*
Renewables	A resource which is not diminished when it is used; it recurs and cannot be exhausted (for example wind and tidal energy).	Coal is being phased out, Wind, tidal and solar are increasing, More renewables.	5. *Explain how less developed countries can increase food supply.*
Food Insecurity	Being without reliable access to sufficient quantity of affordable, nutritious food.		
Food Security	When people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.		
Water Security	The reliable availability of an acceptable quantity and quality of water for health, livelihoods and production.		
Water Insecurity	When water availability is not enough to ensure the population of an area enjoys good health, livelihood and earnings. This can be caused by water insufficiency or poor water quality.		

Food	Energy	Water	Inequality	Scan QR Code for Further Learning
				

Geography – (KS3) Resource Management (Energy) – (2 of 2)

Summary - Position in the Curriculum

Energy is the second part of the Resource Management topic of Year 9 Geography. This topic begins with the definitions of Energy Sec urity and how there is global inequality. The topic also covers the significance of energy for development around the world.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Energy Security	Uninterrupted availability of energy sources at an affordable price.	*Learn the main aspects of this topic.*	*Revision and self-study questions are below.*
Energy Insecurity	A situation where a country has to rely on others to supply most of its energy. This dependence makes a country politically vulnerable.	*Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.*	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Energy Mix	The range of energy sources of a region or country, both renewable and non-renewable.	Some countries have fossil fuels whilst other do not. However, HIC countries often consume more energy than others	1. *Describe the global distribution of energy consumptions and supply.*
Energy Consumption	The amount of energy that is used during a given period, normally one year. Most often, it is calculated as the average amount of energy consumed per head of population of a country, region or city, Per capita energy consumption is often taken as a measure of development.	Reasons include economic development as countries become more developed. Rising population and use of technology.	2. *What are the reasons for growing energy consumption?*
Fossil Fuel	A natural fuel such as coal, crude oil or gas, formed in the geological past from the remains of dead organisms.	Exploration is difficult, high costs, food production, conflicts, and wars. Demand for energy can exceed supply.	3. *Provide a range of reasons for energy insecurity.*
Energy Conservation	Reducing energy consumptions through using less energy and becoming more efficient in using existing energy sources.	Wind, solar, hydro, biomass, tidal, wave etc. have little or no carbon emissions.	4. *What are the benefits of renewable energy?*
Energy Gap	The difference between a country's rising demand for energy and its ability to produce that energy from its own resources.	People in HIC's require more energy due to the higher quality of life.	5. *Why do HIC's have a higher usage of energy than developing countries?*

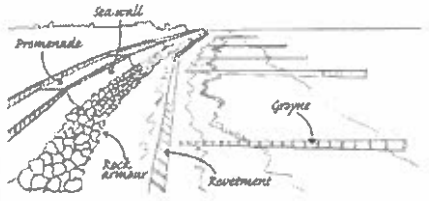
Crude Oil	Electric Car Charging	Home Energy Conservation	Scan QR Code for Further Learning	Scan QR Code for Further Learning
				

Geography – (KS3) Sustainability & Fieldwork – Year 9

Summary - Position in the Curriculum

Sustainability and Fieldwork is the 5th topic of Year 9 Geography. This topic begins with the definitions of sustainability and the importance of being sustainable. The topic also provides an opportunity to conduct geography fieldwork. During the fieldwork, you will work outside of the classroom to obtain primary data yourself. You will then record the data and once back in the classroom, you will present the data in the form of graphs and charts which you will need to analyse and make conclusions upon. Finally, you will evaluate your whole fieldwork enquiry.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Sustainability	Action that meets the needs of the present without reducing the ability of future generations to meet their needs. It consists of 3 main components: Social, Economic and Environmental.	*Learn the main aspects of this topic.*	*Revision and self-study questions are below.*
Geographical Enquiry	Geographical enquiries can involve researching the human and physical environments. They are a way of investigating questions about the world we live in and learn how processes work. There are at least 6 or more steps – see figure below.	*Use the following statements to help you learn core knowledge for the questions on the right-hand side ↘.*	*Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.*
Planning	The first thing to do is to decide what to study. Enquiries can be about both the physical and the human environments. Then choose a question to ask about what you have chosen to study. Or think of a hypothesis - a prediction that can be tested to see whether it is true or not.	Sustain means to maintain something. E.g. To look after something and keep it going for the future.	1. *Explain the term 'sustainable'.*
Methodology	It is important to consider how to collect the data. A risk assessment also needs to be carried out before you collect your data.	Planning, data collection, data presentation, data analysis, conclusion, evaluation.	2. *What are the 6 main parts of a typical geography fieldwork enquiry?*
Data Collection	Data is the information collected for the enquiry. The data must answer the question that you have asked. Data should be **reliable**. This means that the data gathered must be **accurate.**	Primary – data collected first hand. Secondary – data collected by another person organisation.	3. *Describe the difference between primary and secondary data.*
Data Presentation	Once data has been collected it needs to be sorted and organised into data tables. This data can then be presented neatly in different types of graphs to display the results clearly.	Pie charts: Easy to see visually what percentage each category is. Bar chars: Easy to compare multiple categories of data.	4. *Describe the benefits of some data presentation techniques. E.g. pie charts and bar graphs.*
Data Analysis	Analysis involves describing the results. For example, you can identify the **trend** shown in a graph.	What are the strengths and weaknesses? Would you ask the same enquiry question?	5. *What questions can we ask to improve our fieldwork enquiry?*
Conclusion	The conclusion is a summary of your findings. To write a conclusion look back to your hypothesis or to your question and sub-questions. Include an answer to your **hypothesis** in your overall conclusion. Can you prove or disprove your hypothesis? You may give reasons and evidence to support your conc lusions.		
Evaluation	When you consider how the project could be made even more effective if it was done again, these are the kind of questions you could ask.		
Primary Data	Data you collect yourself. First-hand information that come from you and the people you are working with.		
Secondary Data	Data that is collected by someone else. This could be data collected by other people or published online or in a book.		

Geographical Enquiry	Data Collection	Field Sketch	Scan QR Code for Further Learning (1)	Scan QR Code for Further Learning (2)
				


MFL

French-Year 9 Knowledge Organiser | **Module 1: Mon monde à moi** | **Half Term: 1**

Summary- Position in the Curriculum: Module 1, pupils continue to talk about their lives and their likes/dislikes using a wider variety of language. Pupils revise adjectives and intensifiers to describe their friends.

Key Vocabulary

Elle a les cheveux …He/She has … hair.
blonds / bruns. blond / brown
noirs / roux. black / red
courts / longs longs.short
bouclés raides.
curly straight
Il/Elle porte des lunettes.He/She wears glasses.
Je m'entends bien avec …I get on well with …
Je me dispute avec …I argue with …
parce qu'il/elle est because he/she is …
arrogant(e). arrogant.
impatient(e). impatient.
drôle. funny.
égoïste. selfish.
sympa. nice.
timide. shy.
Anniversaire. birthday
une soirée pyjama a sleepover.

Key Phrases

Je chante dans la chorale. .
Je joue au badminton.
I play badminton.
Je joue du violon dans
I play violin in the ….
Je fais du théâtre. I do drama.
Je fais de la gymnastique.
I do gymnastics.
Je vais au club de danse.
I go to the dance club.
Je vais au club d'informatique.
I go to the computer club.
Je ne fais rien.
Je fais ça … I do that …
avec mon copain/ami
with my friend.
avec mes ami(e)s. with my friends.
avec mon équipe. with my team.
Mon/Ma Meilleur(e) ami est …
My best friend is …

Key Verbs

Gender and adjectival agreement

When you learn a **noun**, try to learn the article too.
This will remind you of its gender (masculine or feminine), e.g.
le cinéma / **la** musique
un tee-shirt / **une** chemise
When you learn an **adjective**, try to learn both the masculine **and** feminine forms, e.g.
Il est **grand.** / Elle est **grande.**
un tee-shirt **blanc** / une chemise **blanche**

Le passé composé:
Subject + avoir/être + past participle
Récemment.....
J'ai regardé mes messages.
J'ai mangé du gâteau d'anniversaire.
J'ai joué au laser tag.
J'ai dansé.
J'ai ouvert mes cadeaux.
Je suis allé(e) au cinéma
Je vais aider mes amis
Je voudrais faire de la voile
J'aimerais retrouver ma copine.
*remember MOST verbs use AVOIR however, 13 verbs use ETRE.

Key Questions for self-study

1. Quels sont tes points forts?
2. Qu'est-ce que tu fais comme activités extrascolaires?
3. Comment sont tes copains/copines?
4. Comment as-tu fêté ton anniversaire?
5. Qu'est-ce que tu as fait, le weekend dernier?

Photo description (PALMs)
People-Location-Activities

Décris la photo

Follow-on questions :
Q1. Est-ce que tu aimes aller à la piscine ?
Q2. Quel est ton avis sur l'internet ?

Writing:
Write an article about your after school and weekend activities.

High Frequency words:
et(and) , mais (but) ,aussi(also) ,cependant(however) parce que(because) ,alors / donc(so, therefore) d'abord (first of all),ensuite / puis(then), après (afterwards) finalement (last of all) , toujours (always), souvent (often) d'habitude – usually en général – in general hier - yesterday
le weekend dernier – last weekend, la semaine dernière – last week,l'année dernière – last year il y a un an – one year ago

Expressing opinions and reasons:
Je pense que Je dirais Je crois que
C'était … It was …
amusant / génial fun / great. **hyper-cool**/really cool.
marrant / sympa funny / nice. **agréable** – *pleasant* **chouette / génial** - *great*
drôle – *fun / funny* **fantastique** – *fantastic* **généreux (euse)** – *generous*

Tricky Pronunciation and Phonics
silent final consonant (s, x) (entends, longs, yeux, cheveux
s-liaison (revision): les yeux
ch : orchestre, chorale

French-Year 9 Knowledge Organiser | **Module 2: Projets d'avenir** | **Half Term: 2**

Summary- Position in the Curriculum: Module 2 (Y9) builds on module 4 from Y8 where pupils learnt to talk about what they do to help at home. In this module pupils learn to talk about their career choices for the future, which coincides with Options Evenings at the time of year. Emphasis is put on the importance of languages for future careers which will be covered more in depth in KS4 (future aspirations, study, and work). An introduction to the simple future and conditional is provided for the more able pupils.

Key Vocabulary

aider à la maison (help at home)
aider les voisins (help the neighbours)
trouver un petit boulot (find a part-time job)
faire du baby-sitting
scientifique scientist.
Pilote pilot.
ingénieur/ingénieure engineer.
danseur/danseuse dancer.
acteur/actrice actor/actress.
dessinateur/dessinatrice.designer.
infirmier/infirmière nurse.
policier/policière. police officer.
bénévole Voluntary work.
à New York to New York.
en Chine. to China.
célèbre. famous.
cinq enfants. five children.
heureux/heureuse happy.
à l'étranger abroad.
Je gagne 8 euros par
une grande maison a big house.
une Ferrari rouge a red Ferrari.
travail work

Key Phrases

Pour gagner de l'argent, je……
Je veux être …
Je veux … I want …
travailler seul(e) to work on my own.
travailler en équipe to work in a team.
travailler avec des to work with children
enfants
aider les autres. to help others
Je vais faire du travail I am going to do
Qu'est-ce que tu achèteras?
J'achèterai une belle maison / …
Où est-ce que tu travailleras?
Je travaillerai chez Google / …
Où est-ce que tu iras?
J'irai à New York / en Chine.
Qu'est-ce que tu feras?
Je ferai du travail bénévole / …
Qu'est-ce que tu auras?
J'aurai cinq enfants / …
Je serai heureux(–euse) / célèbre / …
Qu'est-ce que tu feras d'ici (dix) ans?
D'ici (dix) ans, je serai …
Je gagnerai beaucoup d'argent.
J'aiderai les autres.
dans vingt-cinq ans(in 25 years)

High Frequency words:

- Hier(yesterday), d'abord (first of all), ensuite(then), après(afterwards)
- l'après-midi (in the afternoon), cependant (however)
- à l'avenir(in the future), dans dix ans (in 10 years)
- dans l'avenir – in the future

Key Verbs

travailler gagner aider avoir être devenir

Adjectives:

Lots of job titles end in **–eur** in the masculine form, e.g.
ingénieur – engineer, dessinateur – designer

Th simple future tense:

The infinitive + future tense endings

Infinitive of the verb + ending according to subject.

Je	**infinitive**	**+ ai**
Tu	**inf**	**+ as**
Il / elle/on	**inf**	**+ a**
Nous	**inf**	**+ ons**
Vous	**inf**	**+ ez**
Ils / Elles	**inf**	**+ ont.**

Je travaillerai I will work

Verbes irréguliers!

Etre (to be)	Je serai
Avoir (to have)	J'aurai
Aller (to go)	J'irai
Faire (to do)	Je ferai
Pouvoir (to be able to)	Je pourrai
Vouloir (to want)	Je voudrai
Devoir (to have to)	Je devrai

Near future tense:

Je vais habiter …I am going to live …
Je vais acheter …I am going to buy …
Je vais être … I am going to be …
Je vais avoir … I am going to have …
Je vais aller … I am going to go

Expressing opinions and reasons: **Ce sera …It will**

créatif-creative. dangereux- dangerous. Ennuyeux- boring.
Fatigant-. Passionnant -exciting. Pratique-practical. Varié-varied. bien payé- well paid.

Key Questions for self-study

1. Tu es comment?
2. Qu'est-ce que tu fais pour gagner de l'argent?
3. Qu'est-ce que tu veux faire comme métier?pourquoi ?
4. Qu'est-ce que tu vas faire à l'avenir?
5. Comment est-ce que tu seras?

Photo description (PALMs)

- Sur la photo, je peux voir……
- Ils sont entrain de ……
- Elles sont dans……
- Je pense qu'ils aiment,……

Décris la photo.

Tricky Pronunciation and Phonics:

eu : *veux* **-ien** *: musicien*
i: *pilote* **r** : *j'irai*
ai : *je ferai* **-aill-**: *trava…*

Writing :

Write a paragraph about your future plans.

French-Year 9 Knowledge Organiser | **Module 3: Mode de vie** | **Half Term: 3**

Summary- Position in the Curriculum: In module 5 pupils build on their knowledge of food vocabulary and modal verbs to discuss their healthy/unhealthy lifestyle. They begin to use negative expressions to talk about what they do/ don't do to stay healthy.

Key Vocabulary

le corps (m) body.
La natation(f) Swimming
Le basket (m) basketball
La cantine (m) canteen
Le déjeuner (m) lunch
Repas (m) meal
Les pâtes (fpl) pasta
La viande (f) meat
Les boissons gazeuses (f) Fizzy drinks
Les sucreries (fpl) Sweet things
Les frites chips
Verre (m) glass
La glace(f) ice cream
Les legumes vegetables
(des) bonbons = sweets
(des) fruits = fruit
beaucoup de = lots of

Key Phrases

Garder la forme to keep fit
Je fais de la natation
Je marche au collège tous les jours.
Je mange des céréales
Je bois de l'eau pendant le jour.
Je mange toujours le petit déjeuner car je sais qu'il est important.
Je me couche assez tôt
Pour vivre en bonne santé
Éviter les graisses et les sucreries
Prendre soin de to take care of
Il faut manger cinq fruits ou cinq légumes par jour.
Il ne faut pas manger trop de chips ou de bonbons.
Il faut boire plus d'eau
Il ne faut pas boire de boissons sucrées.

High Frequency words: Tous les jours Every day
Souvent Often Une fois par jour Once a day
Deux fois par jour Twice a day Par semaine Per week
Rarement Rarely Le mati (In) the morning
Trop de Too much Assez de Enough of Comme As, like

Expressing opinions and reasons:
Je pense que ... A mon avis ... Je crois que ... ...
c'est riche en c'est faible en
c'est bon pour la santé c'est mauvais pour la santé
c'est sain c'est malsain c'est trop bon

Key Verbs

faire de manger boire
perdre du eviter améliorer

Boire/ je bois To drink/ I drink
Je prends I take – here it means I have/I eat
Je me couche I go to bed
Je dors I sleep, I am sleeping
Bouger / je bouge To move/ I move
Risquer To risk
Essayer de/d' j'essaie de To try, I try

Infinitive structures:
How do you say YOU MUST do something?

I faut + infinitive
Il faut manger des fruits You must eat fruits
Il faut boire de l'eau You must drink water

Il ne faut pas + infinitive
Il ne faut pas fumer
Use negative forms :
Ne……plus = not any more.
Ne……jamais = never
Ne……rien = nothing
Ne……que = only

Je ne fume jamais I never smoke.
Je ne mange pas de fromage.

Tricky Pronunciation and Phonics
an/en sounds like **on** (if you say it holding your nose!)
ui sounds like **wii** **er/é** sounds like **ay**
au/eau sounds like **oh** **eu** sounds like **er**
oi sounds like **wa**

Key Questions for Self-study

1. Que fais-tu pour garder la forme ?
2. Quel repas préfères-tu?
3. Qu'est-ce que tu as mangé hier ? C'était sain ?
4. Que feras-tu ce week-end comme exercice physique ?
5. Tu es plus sain maintenant ou quand tu étais à l'école primaire ? Pourquoi ?

Photo description (PALMs)

- Sur la photo, je peux voir……..
- Il/Elle est entrain de ……
- Il/Elle est dans……..
- Á mon avis, il/elle ……

Décris la photo

Writing: Describe what you're **going to do** in the **future** to be healthy.

Practice online

French-Year 9 Knowledge Organiser | **Module 4: Le Meilleur des mondes** | **Half Term: 4**

Summary- Position in the Curriculum: In module 4, pupils build on knowledge of using three tenses together to talk about helping the environment, They write an interview from their own point of view, using the present and perfect tenses, as well as time and frequency expressions.

Key Vocabulary

le changement climatique.	climate change.
la pollution.	pollution.
la planète.	the planet.
dans la forêt.	in the forest.
dans l'eau.	in the water.
ramasser les déchets.	pick up litter.
recycler le papier	recycle paper
recycler les bouteilles.	recycle bottles
aller au collège à pied/ à vélo	go to school on foot/by bike.
manger trop de viande.	eat too much meat.
utiliser trop d'énergie.	use too much energy.
utiliser moins de plastique.	to use less plastic.
laisser de sacs en plastique sur la plage.	leave plastic bags on the beach.
une campagne anti-plastique.	anti-plastic campaign.
il n'y a pas d'espaces verts	there are no green spaces
les gens ne recyclent pas	people don't recycle

Key Phrases

Il ne faut pas manger trop de viande.
Il faut protéger la planète.
Il faut combattre le changement climatique.
Il faut aider les autres.
J'ai ramassé des déchets.
J'ai recyclé du papier
J'ai acheté des produits bio.
Je suis allé(e) au collège à pied.
On a utilisé moins d'énergie.
On a organisé une campagne anti-plastique.
Je voudrais …
organiser une campagne anti-déchets.
faire du travail bénévole.
être membre d'un groupe écolo.
recycler le plastique et le verre
Le problème le plus grave est (que) – the most serious problem is (that)

Key Verbs

protéger to protect **aider** to help
sauver to save **recycler** to recycle
utiliser to use

Perfect Tense with avoir:
HOW DO I FORM IT?

1. Take your subject and the correct part of 'avoir'

I	J'ai
You (singular)	Tu as
He/she	Il/elle a
We	Nous avons
You (plural)	Vous avez
They	Ils/elles ont

2. Choose your regular verb
3. then add the correct ending depending on whether it is an ER, IR or RE verb:

Take off…	Add…
-ER	é
-IR	i
-RE	u

Irregular Verbs :
faire → fait (done) mettre → mis (put)
vouloir → voulu (wanted)

je ramasse j'ai ramassé

je fais j'ai fait

La semaine dernière, j'ai organisé …

Quand j'étais petit(e), j'utilisais …

Key Questions for self-study

1. Qu'est-ce qui est important pour toi dans la vie ?
2. Il y a beaucoup de circulation á Dagenham, que penses-tu ?
3. Qu'est-ce qu'on a fait récemment pour aider l'environnement?
4. Qu'est ce que tu vas faire dans le futur pour a sauver la planète?
5. Qu'est-ce que tu voudrais faire pour changer le monde?

Photo description (PALMs)

People-Location-Activities

Décris la photo

Follow up questions:
Q1: Il y a beaucoup de pollution á Dagenham, que penses-tu?
Q2. Q'u'est-ce que tu fais pour réduire le plastique?

Writing:
Write an e-mail to your friend Hakim in Lille. Write about what you have done recently to protect the environment.

High Frequency words: Time phrases

hier yesterday le weekend dernier last weekend
quand j'étais petite – when I was young
la semaine dernière last week l'année dernière last year
l'année prochaine – next year dans l'avenir – in the future

Expressing opinions and reasons: Je suis pour / contre ….I am for / against …

À mon avis, …	In my opinion, …	Pour moi,…	For me, …
Je pense que …	I think that …	Tu es d'accord?	Do you agree?
Je suis d'accord.	I agree.	Je ne suis pas d'accord.	I disagree.

Tricky Pronunciation and Phonics:
-eille : bouteille **-tion** : pollution
y: recycler **e, é**: j'ai recyclé

Practice online

French-Year 9 Knowledge Organiser | **Module 5: Le monde Francophone-Part 1** | **Half Term: 5**

Summary- Position in the Curriculum: Pupils develop their knowledge of holiday's destinations in the Francophone world. They use comparatives and conditional to talk about different French-speaking countries.

Key Vocabulary

la Belgique.	Belgium.
le Canada.	Canada.
le Gabon.	Gabon.
le Sénégal.	Senegal.
l'Algerie	Algeria
la Martinique.	Martinique.
la Tunisie.	Tunisia.
la Suisse.	Switzerland.
les Seychelles.	the Seychelles.
une mosquée.	a mosque.
des plages.	beaches.
des éléphants.	elephants.
au lac de Genève.	to Lake Geneva.
au parc national.	to the national park.
à la plage.	to the beach..
du poulet fumé.	(some) smoked chicken.
du chocolat.	(some) chocolate.
de la soupe.	(some) soup.
des fruits de mer.	(some) seafood.
des moules-frites.	mussels and chips.
le surf.	surfing.
l'histoire.	history.
les animaux.	animals.
Le marché	market
la fête	

Key Phrases

Je voudrais visiter la Belgique.
Je voudrais visiter le Sénégal un jour.
Je vais aller en Belgique l'année prochaine.
J'aimerais aller au Laos pour voir des éléphants.
J'ai visité la France avec mon oncle.
Je voudrais aller au lac de Genève.
Je voudrais manger du poulet fume.
Les glaces suisses sont vraiment délicieuses.
Ma mère aime aller à la plage alors elle veut visiter l'île Maurice.
La culture et la religion m'intéressent beaucoup
En Tunisie, il y a une mosquée énorme
Il faut visiter le beau palais de Versailles, près de Paris.
Le Mont-Saint-Michel, c'est un site romantique, magique et mystérieux
délicieux
J'adore les poissons exotiques
Il y a des marchés
Il y a des carnavals
il y a une fête de la musique.

Key verbs

voyager-visiter-essayer-decouvrir

The comparative is used to compare two people or things.
La France est plus grande que l'Angleterre.
France is larger than England.
In English, you sometimes add -er to the adjective or put the word 'more' before the adjective. In French, you always use plus … que or moins … que.
Use plus … que (more … than), moins … que (less … than) or aussi … que (as … as.) In this context **que** means **'than'.**

le Gabon est **plus** intéressant **que** Monaco.

Key Questions for self-study

1. Quel genre de vacances préfères-tu ?
2. Comment voyages-tu d'habitude ? Pourquoi ?
3. Quel pays francophone voudrais-tu visiter?
4. Qu'est-ce que tu feras?
5. Comment seraient tes vacances idéales ?

Photo description (PALMs)

1. Décris la photo.
2. **Follow-on questions:**

Q1. Qu'est-ce que tu aimes faire pendant tes vacances ?
Q2. Comment seraient tes vacances idéales ?

Writing:
Write an article to French magazine about your summer holidays.

Practice online

High frequency words:
d'abord après puis/ensuite souvent de temps en temps rarement
plus...que – more....than moins...que – less...than aussi....que – as....a
toujours – always souvent – often avec – with sans – without si - if

Expressing opinions and reasons: il/elle est ...
impressionnant / impressionnante intéressant / intéressante fabuleux / fabuleuse
mystérieux / mystérieuse **ça va être….**intéressant / impressionnant / différent /
extraordinaire / magnifique / unique / important / célèbre / ennuyeux / nul /magique / moderne / romantique.

Tricky Pronunciation and Phonics
er (revision): manger
au (revision): au, aux
eu (revision): mystérieux.

French-Year 9 Knowledge Organiser **Module 5: Le monde Francophone- Part 2** **Half Term:6**

Summary- Position in the Curriculum: In this unit pupils will use mixed tenses: present tense, perfect tense, imperfect tense, near future tense, future tense to talk about interesting people from the Francophone world and their future plans.

Key Vocabulary

les jeunes sportifs du monde Francophone
les jeunes creatifs
la jeunesse youth
le monde the world
tout le monde everyone
partout all over
l'étranger abroad
une formation a course
une équipe a team
chateur (euse) singer
actreur(rice) actor
créateur (rice) creator
célèbre famous
jeux games
compétition competition
des médailles. some medals.
des compétitions. some competitions.
un trophée. a trophy.
à progresser. to progress.
la chanson a song
travail work
vidéo video
succès success
organisation caritative.
charitable organisation.

Key Phrases

Rencontrer des jeunes francophones:
Mon artiste francophone s'appelle …
Il/Elle est né(e) (à Montréal).
Il/Elle est de nationalité (belge).
Il/Elle est chanteur chanteuse.
Il/Elle allait à une école dejazz.
Il/Elle jouait dans un groupe /un film.
Son premier succès a été (le single).
Son album a gagné un prix.
Il/Elle va continuer sa tournée en France.
sortir son prochain album.
jouer dans un nouveau film.
Il/Elle aidera les autres.
Il/Elle travaillera avec des
Il/Elle fera le tour du monde.
Il/Elle postera des images sur Instagram.
Dans le futur.....
je continuerai à jouer
je travaillerai dur.
je gagnerai … I will win …
je jouerai pour l'équipe nationale.
je participerai aux Jeux Olympiques.
je participerai à un tournoi mondial
je ferai une formation.
j'irai à l'étranger. I will go abroad
j'aurai beaucoup d'amis

Key verbs

Jouer gagner travailler participer

Simple future tense:
It is relatively easy to produce the French equivalent of I **will/I shall**. All you do is:
INFINITIVE + add the following **ENDINGS**:

je +AI nous +ONS
tu +AS vous +EZ
il/elle/on +A ils/elles+ONT

You've probably noticed that the endings are basically **AVOIR** in the **present** tense!

***RE verbs drop the final E** and then just add the endings as normal

SOME EXCEPTIONS
The endings stay the same but the **STEM** of the verb **changes:**

j'**ir+ai** I'll go
j'**aur+ai** I'll have
je **ser+ai** I'll be
je **fer+ai** I'll do, make, go (+ activities)
je **pourr+ai** I'll be able to
je **devr+ai** I'll have to
je **viendr+ai** I'll come
j'**achèter+ai** I'll buy
il pleuvra it'll rain
il y aura there will be
ça sera it'll be

Key Questions for self-study

1. Quel est ton artiste/ Francophone préféré ? pourquoi)
2. Qu'est-ce que tu fais pendant ton temps libre?
3. Qu'est -ce que tu feras á l'avenir ?
4. Que penses-tu des films français ?
5. Si tu étais riche, où habiterais-tu ?

Photo description (PALMs)

Sur la photo, je peux voir……..
Elles sont dans……..
Á mon avis, ils ont l'air……

1. Décris la photo.
2. Follow-on questions:

Q1. Qu'est-ce que tu aimes regarder au cinéma?
Q2. Tu as un/une actor(rice) préféré ?
Write an email about your future plans.

High Frequency words:
normalement – normally d'habitude – usually en général – in general
depuis – since au début – at first maintenant – now

de temps en temps – from time to time la première fois – the first time

un jour l'année prochaine Dans deux ans d'ici 10 ans La saison prochaine, …Next season, …
L'année prochaine, … Next year, … plus tard, … Later, … À l'avenir, … In future, …

Expressing opinions and reasons:
Ce sera … vraiment intéressant absolument fabuleux très difficile
agréable – pleasant chouette / génial – great amusant, drôle – fun / funny fantastique - fantastic
sympa – nice / kind généreux (euse) – generous favori / préféré – favourite passionant – exciting

Tricky Pronunciation and Phonics
ez : portez em : temps
qu (: tranquille) qui

Practice online

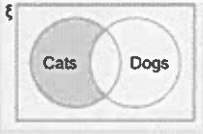
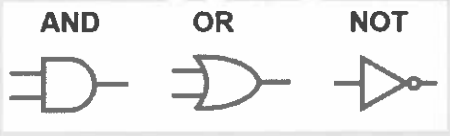
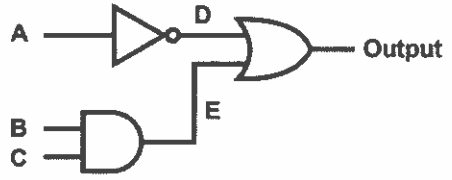
Computing/IT

Computer Science	Term 1	9.1 - Computational Thinking

Summary- Position in the Curriculum

Computational thinking is a broad term that includes a number of ways that Computer Scientists think about problems. This unit covers the areas of logical thinking, algorithmic thinking, decomposition and abstraction.

National Curriculum link/strand: Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems. Understand simple Boolean logic and some of its uses in circuits and programming.

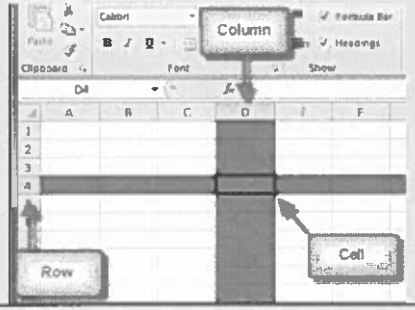
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Computational Thinking	- Thinking about a problem computationally to create a solution a computer can execute.	**Computational Thinking:** The day to day life of a computer is to analyse and carry out millions and billions of instructions. In order to do so, it has to plan, sequence and carry out these instructions in a logical manner.	1. Draw the common logic gate symbols explain what they do.
Algorithm	- A sequence of logical instructions for carrying out a task.	**An algorithm** is a set of instructions to be followed in order to complete a task. For example, when cooking, we follow a set of instructions (the recipe) in a logical order in order to create the final dish.	2. Draw a Venn diagram to show users who like Tea & Coffee.
Venn Diagrams	- An illustration that uses circles to show the commonalities and differences between things.	**Example of a Venn diagram:** 	3. What is an algorithm? Explain using an example.
Logic Gates	- The building blocks of digital circuits.	**Learn these logic gate diagrams:** 	4. Copy and complete this truth table 
Compression	- A way of reducing the size of a file. It is often used with photos, music & video.		
Lossy compression	- A compression method which reduces the file size by removing certain data.	**Compression** is used to reduce the size of data, enabling faster transmission and efficient storage. It minimises bandwidth usage, speeds up data transfer, and decreases storage costs. In lossy compression, the original file cannot be restored from the compressed version. In lossless compression, the original file can be restored from the compressed version.	
Lossless compression	- A compression method which reduces the file size without losing any data.	**Carrying out abstraction** is to remove unnecessary information in order to solve a problem. This helps to simplify the problem. The most common example to explain abstraction is the map of the London Underground as it has removed unnecessary data like as names of roads and distance.	
Abstraction	- The process of removing irrelevant or unnecessary information from the problem in order to better understand the basic parts of it.	**Decomposition** is used when Computer Scientists have large problems they break them down into smaller ones that are easier to manage. This is known as decomposition. In programming, problems are often decomposed into parts which are small enough to be programmed as functions or procedures. One of the benefits of decomposition is that you may identify a task that can be repeated in order to complete other parts of the problem.	5. Explain how Netflix uses compression to stream movies and the benefits this brings to the users.
Decomposition	- The process of breaking a problem down into smaller parts to make it easier to solve.		

Computer Science	Term 2	9.2 – Spreadsheets

Summary- Position in the Curriculum

This is a practical, skills-based unit covering the principles of creating and formatting basic spreadsheets to produce and use simple computer models. The unit is centred around creating a financial model for a TV show.

National Curriculum link/strand: Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems. Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users.

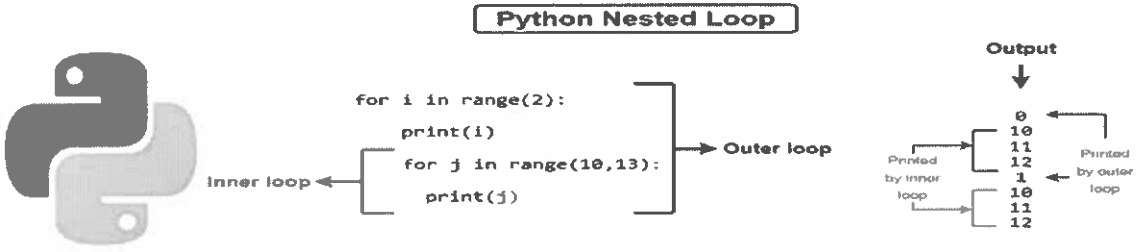
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Spreadsheet - A piece of software used to manipulate data, often used in modelling.		**Rows, cells and columns**  	Describe what would happen if you used the formula =SUM(A2:A11)
Cell - An individual spreadsheet box where you enter data.			Explain what COUNT and MIN functions do?
Cell reference - Names of individual cells (A5 for example).			
Formula - Makes automatic calculations that update when the data does.			Write the formula that you would use to automatically indicate whether a person had passed a test when the minimum pass mark is 50.
Functions - Makes more complex calculations. Examples include: SUM,COUNT, MAX & MIN		**All formulae begin with an equal sign.** E.g. =A1+A2	
Formatting – Makes your spreadsheet look more professional and makes it easier to read and understand.		**FUNCTIONS** **SUM:** Adds all the values of the cells in the argument. **AVERAGE:** Calculates the sum of the cells and then divides that value by the number of cells in the argument. **COUNT:** Counts the number of cells with numerical data in the argument. **MAX:** Determines the highest cell value included in the argument. **MIN:** Determines the lowest cell value included in the argument.	Explain why graphs and charts are used to display data.
Data validation - Allows you to set the rules for what is valid and create an error message if a user attempts to enter incorrect data.			Create a spreadsheet to calculate the profit and loss for a newsagent for the sale of merchandise. 
Relative cell refence – By default, a cell reference is a relative reference, which means that the reference is relative to the location of the cell.		**Conditional formatting** Allows you to set the rules for the appearance of cells that meet a condition, such as being filled red if it contains a negative number.	
Absolute cell reference - The reference remains the same, even if copied or moved. You add $ to the cell reference to make it absolute. E.g. E24		**IF function format:** `=IF(E7=E24,"Yes","No")` *Condition* *Value if true* *Value if false*	

Computer Science	Term 3	9.3 Python

Summary- Position in the Curriculum

This unit builds on prior Python knowledge, starting with tasks to refresh basic skills. Students will explore For loops and compare them with While loops, then learn about arrays (lists) and use them with For loops. The unit also covers procedures and functions with parameters to introduce modular programming. It prepares students for a GCSE in Computing and offers valuable programming experience to help decide if they want to pursue Computing at GCSE level.

National Curriculum link/strand: Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem.
Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Variable: A storage spot in a program that holds a value which can change.		Data Types: Integer: A whole number without a decimal point, such as 5 or -3. Float: A number that includes a decimal point, such as 3.14 or -0.5. String: A sequence of characters enclosed in quotes, such as "Hello" or "123".	1. Describe how you would select the most suitable type of loop (for or while) for a given problem
String: A sequence of characters, like words or sentences, enclosed in quotes.		Loops in Python, including `for` loops for iterating over sequences and `while` loops for repeating code while a condition is true, automate repetitive tasks and simplify code management.	2. In Python show how you use counters correctly in conjunction with for loops
Data Type: The kind of value a variable can hold, such as integer, float, or string.		Programs that use lists (or arrays) in Python manage collections of items, allowing you to store, access, and manipulate multiple values using a single variable; lists support indexing to retrieve specific elements, and operations like iteration, modification, and slicing to efficiently handle and process groups of data.	3. In Python use loops to populate, interrogate and print lists, using a counter as an index to an array element
Casting: Changing a variable from one data type to another.		Creating and using functions in Python, with or without parameters, involves defining a reusable block of code using the def keyword. Functions without parameters perform a task without needing any input values, while functions with parameters take input values to customise their behaviour. You call a function to execute its code and potentially return a result.	4. Create your own functions to create a modular program
Loop: A programming structure that repeats a block of code multiple times.		Errors can be found by review the error message provided by the interpreter, which usually indicates the line number and nature of the problem, then check for common issues such as missing colons, mismatched parentheses, or incorrect indentation. Correcting these mistakes and re-running the program will help resolve syntax errors and ensure the code executes properly.	5. Create a program that is easy to use, caters for user input errors,has explicit error messages telling the user what the correct form of entry is and produces output with suitable headings or explanation
Syntax Error: A mistake in the code that prevents it from running because it doesn't follow the language rules.			
Debug: The process of finding and fixing errors in a program.			
Function: A block of code that performs a specific task and can be used multiple times within a program.			

Computer Science	Term 4	9.4 - Database

Summary- Position in the Curriculum

This unit covers essential **theory of databases** in order to prepare pupils for Computer Science GCSE or IT qualifications. Supporting the basic theory, this unit has a practical focus, covering the creation and use of a database with one or two tables using MS Access.
Pupils will create a database of their own. They will create a table using suitable field data types and adding appropriate validation. Pupils will gain more experience of creating queries and create and customise an input form and report and a menu system.

National Curriculum link/strand: **Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems**

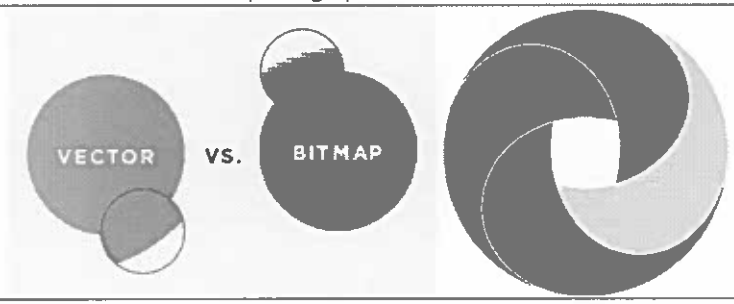
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Database - A collection of information stored in a computer.		1. A database is an organised collection of structured information stored electronically. For example, Apple will hold a database of consumer information such as contact details and previous purchases.	1. Demonstrate how to design, create, and edit a database table structure to hold data about a single entity.
Table - A way to organize information into rows and columns.		2. In databases, tables organise data into rows and columns, where each row represents a single entry (record) like a customer, and fields define specific attributes within each record.	2. Demonstrate how to add at least 5 records to the table in datasheet view.
Record - A single entry or row in a table that contains related information.		3. Data entry forms in databases offer user-friendly interfaces for accurate input, featuring validation and fields corresponding to database structures.	3. Demonstrate how to create queries and sort the query data on one field.
Field - A category or type of information within a record, like a name or a number.		4. Queries in databases allow precise data retrieval by filtering based on specific conditions, enabling users to extract subsets of data with multiple criteria.	
Form - A tool for entering or viewing data in a structured way.		5. Sorting data organises records based on field values, facilitating structured data analysis and retrieval.	4. Demonstrate that you can create a basic input form from a single table or query.
Query - A question you ask the database to find specific information.		6. Web forms provide dynamic validation and responsive design for accurate input across devices.	
Validation - Checking if the data entered is correct or acceptable.		7. User-friendly forms prioritise simplicity and accuracy, with clear labels and validation checks enhancing user experience.	5. Demonstrate how to create a basic report from a single table or query. Following that, I will review and adjust it as necessary.
Sorting - Arranging data in a particular order, like alphabetically or numerically.		8. Reports present structured information derived from queries, including tables, charts, and graphs for visualisation.	
Ascending - Putting data in order from smallest to largest or A to Z.		9. Advanced query techniques enable precise data extraction through logical operators and nested conditions, enhancing analysis capabilities.	
Descending - Putting data in order from largest to smallest or Z to A.		10. Customised layouts allow adjustment of design elements for effective data communication.	
Reports - Summaries or presentations of data in a structured format.		11. Complex queries combine conditions using logical operators to retrieve specific data subsets, supporting advanced analysis.	
Layout - How information is arranged or presented on a page or screen.		12. Parameters and calculated fields enhance query flexibility and functionality by allowing dynamic input and computation within results.	

Computer Science	Term 5	Media - Vector graphics

Summary- Position in the Curriculum

This unit teaches learners to design graphics using vector graphic editing software. By the end, they will have created an illustration, logo, or icons using vector graphics. The lessons focus on Inkscape (inkscape.org), an open-source, cross-platform tool, but can be adapted to any vector graphics editor. Learners will understand the processes involved in creating graphics and gain the knowledge and tools to create their own designs.

National Curriculum link/strand: Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users
Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability

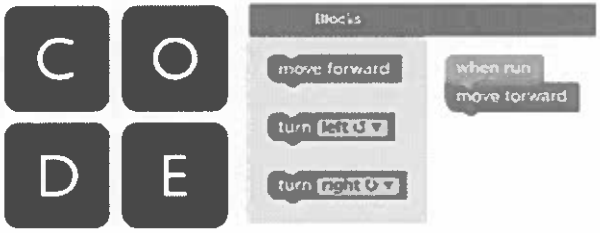
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Vector Graphics: Digital images created using mathematical formulas to draw shapes, lines, and colors, allowing for infinite scaling without loss of quality.		Z-order controls the stacking order of objects in a graphic. Objects with a higher z-order appear in front of those with a lower z-order, making the higher z-order objects more visible when they overlap.	1. Describe how to use tools to draw and modify shapes and change the position and rotation shapes
Shapes: Basic geometric forms like circles, rectangles, and polygons used as building blocks in vector graphics.		Grouping allows users to combine multiple objects into a single unit, so you can move, resize, rotate, or apply changes to all the grouped objects simultaneously. This simplifies editing and ensures that the relative positions and properties of the objects within the group are maintained.	2. Describe how to use tools to align and distribute objects to create uniformity and combine two shapes using union, intersection, and difference
Z-Order (Layers): The stacking order of objects in a graphic, determining which objects appear in front or behind others.		Vector graphics are made up of paths, which are lines defined by a series of points called nodes. These paths can form shapes, curves, and lines, and are created using mathematical formulas. This allows vector graphics to be scaled infinitely without losing quality.	3. Describe how to create and modify straight and curved paths and change shapes to paths and edit them.
Align: To arrange objects in a straight line or in relation to each other within the workspace.		Markup defines what a vector graphic looks like by using code to describe the positions, shapes, colours, and other properties of the graphic's elements.	4. Describe how to use the combine tools and techniques to create a vector image.
Distribute: To evenly space objects relative to each other within the workspace.		Vector images use mathematical paths to create shapes, making them scalable without losing quality. Bitmap images consist of pixels, which can lose clarity and become pixelated when resized.	5. Change an object by modifying its markup
Group: To combine multiple objects into a single unit that can be moved or edited together.		Vector graphics are ideal for logos and illustrations, while bitmap images are better for detailed photographs.	
Paths: Lines or shapes defined by a series of points (nodes) that vector graphics are made of, which can be edited individually.			
Nodes: Key points on a path that define its shape; they can be adjusted to alter the path.			
SVG (Scalable Vector Graphics): A markup language for describing vector graphics, used to store vector images that can be edited or viewed on various platforms.			

Computer Science	Term 6	Code.org - Accelerated Intro to CS Course

Summary- Position in the Curriculum

The "Accelerated Intro to CS Course" on Code.org offers a fast-paced introduction to computer science for high school and early college students. It covers essential programming concepts, problem-solving, and algorithm design through interactive projects. The course uses both block-based and text-based programming tools and introduces advanced topics like data structures and complex algorithms. Designed to build a strong foundation in computer science, it prepares students for further study or entry-level programming roles.

National Curriculum link/strand: Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem.
Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Control Structures: Constructs that control the flow of execution in a program, including conditionals (`if`, `else`) and loops (`for`, `while`).		**Variables** can be used to store and manipulate various types of data, enabling flexible and dynamic programming.	1. How do variables enhance flexibility in programming? Provide an example of how variables are used to solve a specific problem.
Functions: Reusable blocks of code that perform specific tasks.		**Data types** such as integers, strings, and booleans have specific characteristics and uses, which determine how data is processed in a programme.	2. Explain the role of control structures in programming. How do conditionals and loops affect programme flow? Give an example using both.
Objects: Data structures that bundle together data and functions related to that data.		**Control structures**, including conditionals (if, else) and loops (for, while), are essential for directing the flow of a programme based on certain conditions and for repeating actions.	3. What is the purpose of functions in programming? Describe a situation where a function improved your code and its impact.
Iteration: The repeated execution of a block of code, often used with loops.		**Functions** are blocks of code that can be defined and called to perform specific tasks, allowing for organised and reusable code.	4. How does algorithm design help solve problems? Outline a problem you solved with an algorithm, including the steps and any challenges faced.
Conditionals: Statements that perform different actions based on whether a condition is true or false.		**Algorithms** involve creating step-by-step procedures to solve problems systematically and efficiently.	5. Compare the uses of lists and objects in data management. Provide examples of when you would use each and their impact on your project.
Syntax: The set of rules that defines the combinations of symbols that are considered to be correctly structured programs.		**Debugging skills** are crucial for identifying and fixing errors in code, ensuring that programmes run correctly and effectively.	
Abstraction: The concept of hiding complex implementation details and showing only the essential features of a program.		**Event handling** enables programmes to respond to user actions or other events by executing particular functions or code blocks.	
Event Handlers: Functions that respond to events or user actions in a program.		**Lists and arrays** are data structures used to store and manage collections of values, facilitating easier manipulation and organisation of data.	
Objects: Data structures that bundle together data and functions related to that data.		**Objects** are used to group related data and functions together, encapsulating both data and behaviour within a single entity.	
Iteration: The repeated execution of a block of code, often used with loops.		**Iteration techniques**, such as loops, allow for the repeated execution of code blocks, which is useful for performing repetitive tasks.	

Visual Arts

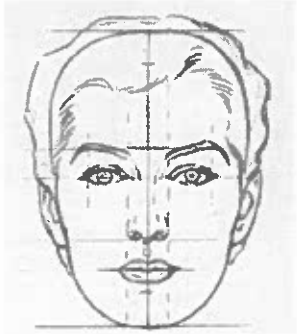
KS3 Art & Design - Year 9 Half Term 1

Summary - Position in the Curriculum

This project will enable you to understand how EXPRESSIVE PORTRAITURE artists create MEANING withing their artwork through the use of SHAPE, TEXTURE, MARK-MAKING and COLOUR. CONCEPTUAL understanding paired with core portraiture SKILLS such as COLOUR MIXING, MAPPING the face, and DRAWING facial features: enabling you to create an EXPRESSIVE SELF- PORTRAIT inspired by artists such as MC Escher, Francis Bacon, Alison Lambert, and contemporary artist Conor Harrington.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
SELF-PORTRAIT	A PORTRAIT is a REPRESENTATION of a particular PERSON. A SELF-PORTRAIT is a portrait of the artist by the artist.	PORTRAITURE is a very old art form going back at least to ancient Egypt, where it flourished from about 5,000 years ago. Before the invention of photography, a painted, sculpted, or drawn portrait was the only way to record the appearance of someone.	Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.
EXPRESSIONISM	EXPRESSIONIST ART refers to the expression of subjective EMOTIONS, inner EXPERIENCES, and SPIRITUAL THEMES, as opposed to REALISTIC DEPICTIONS of people or nature.	EXPRESSIONISM is a modernist movement, initially in POETRY and PAINTING, originating in Northern Europe around the beginning of the 20th century. Artists portrayed EMOTIONS and inner EXPERIENCES within their paintings using COLOUR, MARK MAKING and TEXTURE. For example, if they used lots of BLUE this could signify SADNESS.	1.RESEARCH one of the following expressionist artists: Wassily Kandinsky; Henri Matisse Consider the following: What do you see within their artwork? e.g. *Colour, shapes, space, texture and mark-making;* How do you think they artist has made this artwork?; Why do you think they have made it?
TEXTURE	Used by artists to show how something might FEEL, what it is MADE OF.	TEXTURE is created using MARK-MAKING, which is often connected to the element of LINE. This is also called IMPLIED TEXTURE. TEXTURES can be made using every art MEDIUM.	2.RESEARCH more about the Expressionism art movement. *For example, who started the movement? what art movements came before and after Expressionism? was expressionism just used by artists?*
MARK-MAKING	MARK-MAKING describes the different LINES, DOTS, MARKS, PATTERNS, and TEXTURES artists create in an artwork.	MARK-MAKING can be CREATIVE and EXPERIMENTAL - it can be done with any materials and tools. It can be loose and GESTURAL or CONTROLLED and neat.	3.COMPLETE 3 10-minute drawings of people from observation. IF you want to improve your drawing skills you should do at least 1 drawing a day.
GRIDDED DRAWING	The GRID method is a TECHNIQUE used in art that involves DIVIDING an image into a series of smaller, more manageable SECTIONS using a GRID.	A GRID is typically drawn over the REFERENCE IMAGE, and then artists use the grid to draw the image on their own piece of paper, carefully REPLICATING each SECTION of the grid in PROPORTION. A grid can be used to ENLARGE an image ACCURATELY.	4.WATCH a YouTube video on 'How to draw facial features. This will help you improve drawing in proportion and accurately.
PROPORTION	PROPORTION refers to the DIMENSIONS of a COMPOSITION and RELATIONSHIPS between HEIGHT, WIDTH, and DEPTH.	How PROPORTION is used will affect how REALISTIC or ABSTRACTED something seems. PROPORTION also describes how the SIZES of different PARTS of a piece of art or design RELATE to each other.	5.PRACTICE creating tone with your pencil. How many different tones can you make with one pencil? Everyone should be able to make at least 6.
TONE	In Art and Design, tone refers to how LIGHT or DARK something is.	Artists use to TONAL VALUE to create DEPTH within their artwork. Without CONTRASTED tonal values a drawing will look FLAT and less REALISTIC.	



KS3 Art & Design - Year 9 Half Term 2

Summary - Position in the Curriculum

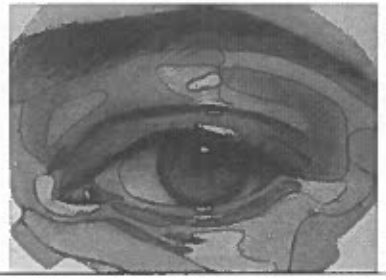
This project will enable you to understand how expressive portraiture artists create meaning withing their artwork through the use of shape, texture, mark-making and colour. Conceptual understanding paired with paired with core portraiture SKILLS such as COLOUR MIXING, MAPPING the face, and DRAWING facial features: enabling you to create an EXPRESSIVE SELF- PORTRAIT inspired by artists such as MC Escher, Francis Bacon, Alison Lambert, and contemporary artist Conor Harrington.

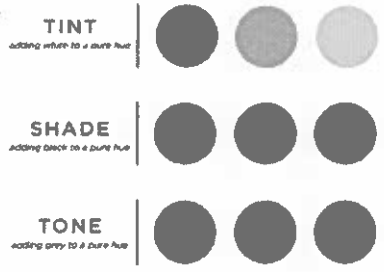
Terminology	Definitions	Core Knowledge
MAPPING	MAPPING is identifying the LIGHT, MID and DARK TONES of a photograph, drawing or painting.	Artists BREAK DOWN photographs, drawings, or paintings into smaller SHAPES of COLOUR and TONE. This helps them create an artwork that has more DEPTH. It also makes a drawing or painting feel more MANAGEABLE as it is BROKEN DOWN into smaller SECTIONS.
MOTHER COLOUR	The MOTHER COLOUR is a method of adding one PARTICULAR COLOUR to each of the COLOURS you MIX on your PALETTE.	In PORTRAITURE, artists will MIX the primary colours together to create the MOTHER COLOUR. The MOTHER COLOUR will go into every SKIN TONE to create HARMONY amongst the colours. This helps to create a more REALISTIC PAINTING where the colours sit well together.
HUE	HUE is another word for COLOUR.	A HUE is essentially the three PRIMARY colours (RED, BLUE, and YELLOW) as well as the three SECONDARY colours (ORANGE, GREEN, and PURPLE). These colours are PURE, meaning that white or black have not been mixed in with them.
SHADE	ADDING BLACK to a pure HUE.	In painting, artists add black to a colour to make it DARKER.
TINT	ADDING WHITE to a pure HUE.	In painting, artists add white to a colour to make it LIGHTER.
PRIMARY COLOURS	A GROUP of COLOURS from which all other colours can be obtained by MIXING.	The PRIMARY colours are *RED, BLUE* and *YELLOW*. Yellow + Red = Orange Red + Blue = Purple Blue + Yellow = Green
SECONDARY COLOURS	A COLOUR RESULTING from the MIXING of TWO PRIMARY COLOURS.	The SECONDARY colours are, *ORANGE, VIOLET* and *GREEN*.

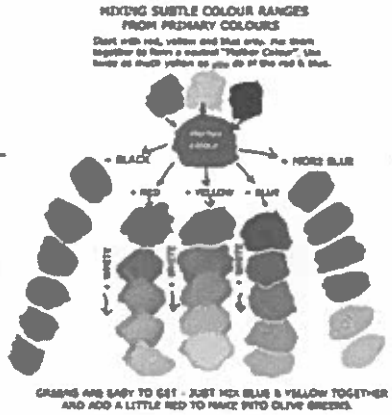
Preparing for Assessment

Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.

1. RESEARCH one of the following artists:
   Francis Bacon; Conor Harrington
   Consider the following:
   - What do you see within their artwork? E.g., *Colour, shapes, space, texture and mark-making*
   - How do you think they artist has made this artwork?
   - Why do you think they have made it? And when was it made?
2. PRACTISE mapping the tones of a face using a portrait photo from a magazine or newspaper.
3. RESEARCH the following colour theories:
   Harmonious colours
   Complementary colours
   Monochromatic colours
4. Continue to PRACTICE drawing from observation. 3 x 5-minute observational drawings in continuous line.
5. COMPLETE one sustained DRAWING of a person's face, this can be from a photograph or real life. I should take 1 hour; you can use colouring pencils for skin tones, or you can use a pencil and add tone.





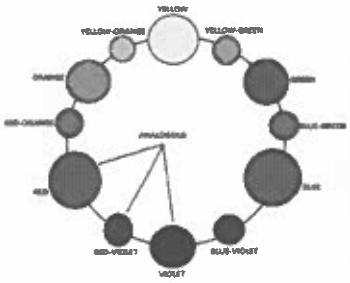


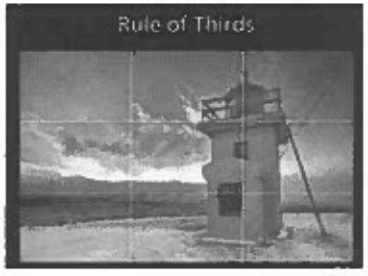
KS3 Art & Design - Year 9 Half Term 3

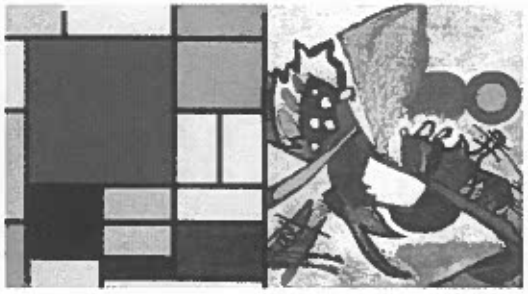
Summary - Position in the Curriculum

This project you will learn how artists use NATURAL FORMS and ABSTRACTION within their artwork. You will develop your COLOUR THEORY knowledge by INVESTIGATING the work of Georgia O'Keefe / Carrie Moyer and develop a concrete understanding of the elements of COMPOSITION to create your own ABSTRACT artwork.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
ABSTRACT	ABSTRACT art is art that DOES NOT attempt to REPRESENT an accurate depiction of a VISUAL REALITY but instead uses SHAPES, COLOURS, FORMS and GESTURAL MARKS to achieve its EFFECT.	The origin of ABSTRACT art has been a subject of debate. Wassily Kandinsky is generally credited as the pioneer of ABSTRACT art. However, a lesser-known Swedish painter, Hilma af Klimt, is thought to have preceded Kandinsky, producing her first ABSTRACT painting in Stockholm in 1906 – five years earlier. Following its origin in the early 1900s, ABSTRACT art evolved as different artists EXPERIMENTED with the STYLE.	Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.
COMPOSITION	COMPOSITION is the way in which different ELEMENTS of an ARTWORK are COMBINED or ARRANGED.	The artist has complete freedom when choosing the COMPOSITION of their artwork. ELEMENTS may all be clustered towards the centre of the canvas or photograph or spread out in the corners of the piece. However, artist should consider whether their COMPOSITION is evenly BALANCED on the page.	1. LOOK for examples of HARMONIOUS colours and SPILT-COMPLEMENTARY colours in shops, at home and at school. These could be in product packaging, artwork, posters, or magazines etc.
NATURAL FORM	A NATURAL FORM is an object found in nature that has not been changed or altered.	Examples: Leaves, flowers, pinecones, seaweed, shells, bones, insects, stones, fossils, crystals, feathers, birds, fish, animals – in fact anything you can find in nature – complete or part of it. NATURAL FORM shapes are organic.	2. RESEARCH other colour theory combinations, how many are there e.g., Monotone colours.
HARMONIOUS COLOURS	HARMONIOUS colours sit beside each other on the colour wheel.	These colours work well together and create an image which is pleasing to the eye. HARMONIOUS colours may also be referred to as ANALOGOUS colours. A HARMONIOUS colour scheme uses three to five colours that are beside each other on the colour wheel.	3. RESEARCH abstract art and decide which artist's work you like the most... and why?
SPLIT COMPLEMENTARY COLOURS	SPLIT-COMPLEMENTARY colour scheme uses two colours across the colour wheel, with those two colours lying on either side of the COMPLEMENTARY colour. For example, violet's COMPLEMENTARY colour is yellow, but its SPLIT-COMPLEMENTARY colours are yellow-green and yellow-orange.	Like COMPLEMENTARY colour palettes, SPLIT-COMPLEMENTARY colour schemes are still visually striking due to the STRONG CONTRAST in colours but, SPLIT COMPLEMENTS are slightly closer to the BASE COLOUR on the wheel. And they have less visual TENSION and more INTEREST and VARIETY.	4. PRACTICE your drawing skills, spend 30 minutes drawing and shading a natural form object, such as a leaf, flower or shell.
			5. RESEARCH one of the following artists: Georgia O'Keefe ; Carrie Moyer Consider the following: - What do you see within their artwork? E.g. Colour, shapes, space, texture and mark-making - How do you think they artist has made this artwork? - Why do you think they have made it?







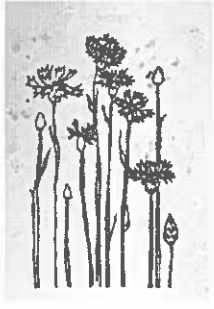
KS3 Art & Design - Year 9 Half Term 4

Summary - Position in the Curriculum

This project you will learn how artists use NATURAL FORMS and ABSTRACTION within their artwork. You will develop your COLOUR THEORY knowledge by INVESTIGATING the work of Georgia O'Keefe / Carrie Moyer and develop a concrete understanding of the elements of COMPOSITION to create your own ABSTRACT artwork.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
MIXED MEDIA	MIXED MEDIA is a term used to describe artworks composed from a COMBINATION of different MEDIA or MATERIALS.	MIXED MEDIA art involves mixing two or more artistic MEDIUMS into one piece. For example, you can add OBJECTS to your PAINTING or COMBINE ink drawing with watercolours. There are no rules. You can use whatever you want, however you want.	Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.
MONO PRINTING	A unique PRINT, typically PAINTERLY in effect, made by applying paint or printing ink to a FLAT SHEET of metal, glass, or plastic. The painted image is TRANSFERRED to paper either by manually rubbing or using a PRESS.	Known as the most PAINTERLY METHOD among the printmaking techniques, a MONOTYPE is essentially a hand-printed painting. The appeal of the MONOTYPE lies in its unique TRANSLUCENCY that creates a QUALITY of LIGHT very different from a painting.	1. RESEARCH the MONO PRINTING process in preparation for your practical lesson.
LINO PRINT	LINO PRINTING is a form of block printing that involves CARVING a PATTERN or DESIGN into a linoleum, rubber or vinyl surface that can then be PRINTED from.	Essentially, learning how to LINO PRINT, you simply DRAW your image on the LINO and then CARVE areas away. When your carving is finished, you roll INK over the remaining portions before pressing onto paper. You can repeat the LINO PRINTING PROCESS as many times as you like to create your desired SHAPES and PATTERNS.	2. MAKE a MIXED MEDIA COLLAGE using old magazines and packaging that you can find around your home.
SCREEN PRINTING	SCREEN PRINTING is a PROCESS where INK is forced through a MESH SCREEN onto a SURFACE.	SCREEN PRINTING is the PROCESS of TRANSFERRING a STENCILLED DESIGN onto a FLAT SURFACE using a mesh screen, ink and a squeegee. Fabric and paper are the most screen-printed surfaces, but with specialised inks it's also possible to print onto wood, metal, plastic, and even glass.	3. RESEARCH one of the following artists: Natalie Ratcliffe; Jackson Pollock. CONSIDER the following: a. What do you see within their artwork? E.g. Colour, shapes, space, texture and mark-making b. How do you think they artist has made this artwork? c. Why do you think they have made it?
DIRECT PRINTING	DIRECT PRINTING is making a direct imprint of an image or object.	For example, leaves print well using the DIRECT PRINTING method. Because they are flat and textured, they leave interesting IMPRINTS onto PAPER. Simply apply ink to the underside of the leaf, turn it over and put pressure on the entire leaf. Remove the leaf and the pattern of the leaf will print onto the paper.	4. COMPLETE 3 x 10-minute drawings of natural form objects. Can you make an interesting composition by overlapping your drawings?
			5. COLOUR in your natural form drawing composition using colouring pencils. Where shapes overlap change the colours to make it more interesting. Consider your colour choices, think back to colour theory!



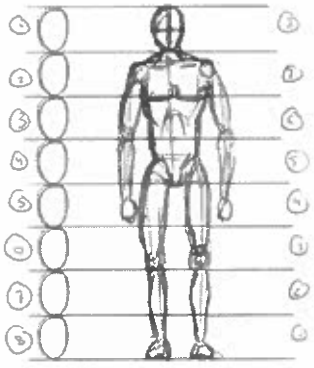



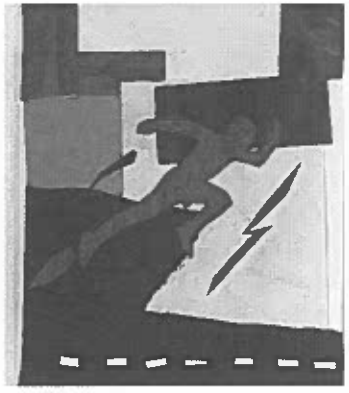

KS3 Art & Design - Year 9 Half Term 5

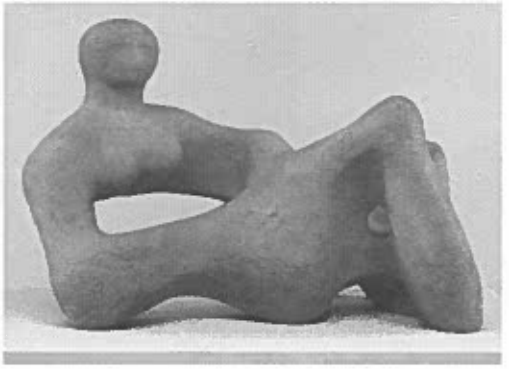
Summary - Position in the Curriculum

This project explores how artists have portrayed the HUMAN FIGURE through DRAWING, ABSTRACTION, and SCULPTURE. You will draw upon your drawing skills from year 7 and 8 to understand PROPORTIONS of the human figure. Understand how artists such as Henri Matisse, Henry Moore and Antony Gormley use pose to portray MEANING and create your own meaningful 3D SCULPTURE in CLAY using the ELEMENTS of SCULPTURE.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
HUMAN FORM	HUMAN FORM may refer to: Human figure, the artistic study of human body shape. Figure drawing, a drawing of the human form.	As well as using the HUMAN figure as a way of EXPLORING the human form or human PSYCHOLOGY, the human figure is often used by artists to tell a story or to make a point - exploring POLITICAL or SOCIAL IDEAS, or MEMORIES.	Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.
PROPORTION	PROPORTION refers to the DIMENSIONS of a COMPOSITION and RELATIONSHIPS between height, width, and depth.	How PROPORTION is used will affect how realistic or STYLISED. something seems. PROPORTION also describes how the SIZES of different parts of a piece of art or design RELATE to each other.	1. RESEARCH one of the following sculpture artists: Henri Moore; Antony Gormley Consider the following: - What do you see within their artwork? E.g. *Colour, shapes, space, texture and mark-making* - How do you think they artist has made this artwork? - Why do you think they have made it?
ABSTRACTING HUMAN FORM	ABSTRACT art is art that DOES NOT attempt to REPRESENT an accurate depiction of a VISUAL REALITY but instead uses SHAPES, COLOURS, FORMS and GESTURAL MARKS to achieve its EFFECT.	Artists often EXPERIMENT with abstracting the human figure: either SIMPLIFYING it or DEPICTING it in a way that isn't necessarily straightforward, often DISTORTING ELEMENTS of the body.	2. RESEARCH Henri Matisse Paper collages, why did he start making art out of paper and scissors?
SCULPTURE	The art of making THREE-DIMENSIONAL representative or abstract FORMS, especially by CARVING stone or wood or by CASTING metal or plaster.	Types of SCULPTURE: Ephemeral, carved, modelling, cast, assemblage, installation.	3. RESEARCH how to draw the human figure on YouTube, practising drawing by following the tutorial.
FORMAL ELEMENTS OF SCULPTURE	The ELEMENTS you need to consider when DESIGN and MAKING a SCULPTURE.	SURFACE, SCALE, SPACE, FORM, TEXTURE, MOVEMENT, STRUCTURE, MATERIAL & PROPORTION.	4. RESEARCH the types of sculpture, which type is your favourite?
			5. ENSURE everything in your sketchbook is finished and up to date before the end of year assessment.







KS3 Art & Design - Year 9 Half Term 6

Summary - Position in the Curriculum

This project explores how artists have portrayed the HUMAN FIGURE through DRAWING, ABSTRACTION, and SCULPTURE. You will draw upon your drawing skills from year 7 and 8 to understand PROPORTIONS of the human figure. Understand how artists such as Henri Matisse, Henry Moore and Antony Gormley use pose to portray MEANING and create your own meaningful 3D SCULPTURE in CLAY using the ELEMENTS of SCULPTURE.

Terminology	Definitions
EPHEMERAL SCULPTURE	SCULPTURES that only last a short amount of TIME and are NOT PERMANENT.
CARVING SCULPTURE	Using TOOLS to SHAPE a FORM by CUTTING or SCRAPING away from a SOLID MATERIAL such as stone, wood, ivory or bone.
MODELLING SCULPTURE	Adding a SOFT MATERIAL to create the DESIRED FORM. TRADITIONAL materials: clay and plaster. MODELLED SCULPTURES are usually CAST to become PERMANENT.
CASTING SCULPTURE	FORM CREATED by POURING a liquid into an empty MOULD. Once cooled the material becomes solid, the mould can be reused so multiple casts can be made. Materials: fibreglass, metals, and plaster.
ASSEMBLAGE SCULPTURE	ASSEMBLING disparate ELEMENTS – often everyday objects – scavenged by the artist or bought specially.
INSTALLATION SCULPTURE	Large-scale, MIXED-MEDIA CONSTRUCTIONS, often designed for a specific PLACE or for a TEMPORARY PERIOD. The VIEWER is INSIDE the work.

Preparing for Assessment

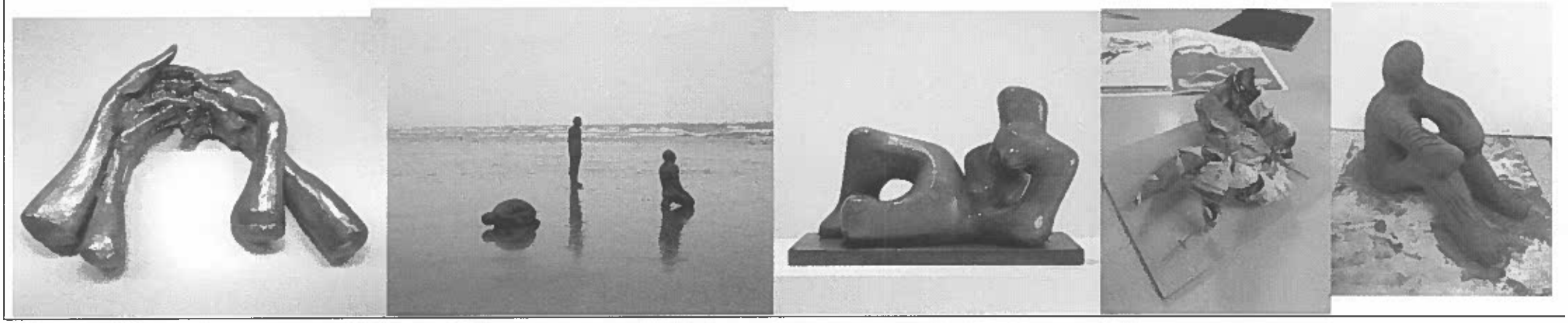
Revision and self-study activities are below. Choose 1 per week to practice techniques and improve your skill levels.

1. RESEARCH how casted sculptures are made and when were they invented?
2. RESEARCH installation artist Olafur Eliasson.

Consider the following:

- What do you see within their artwork? E.g., *Colour, shapes, space, texture, and mark-making*
- How do you think they artist has made this artwork?
- Why do you think they have made it?

3. MAKE a human form assemblage sculpture using objects around your home, document it with a photograph.
4. COMPLETE three sculpture designs to help you make your final clay sculpture.
5. RESEARCH 3 of your own sculpture artist, use the Tate website to help you. Why do you like these artists? Could they inspire your human figure sculpture?



Performing Arts

Drama - Half Term 1 -TOPIC Naturalistic Theatre

Summary- Position in the Curriculum

To use a range of stimuli to develop performance skills both physical and vocal as well as drama techniques and strategies to explore create and develop through the knowledge and application an interpretation of a range of drama texts to demonstrate the key features of the three styles of theatre, Naturalism abstract theatre and epic theatre. HT1 explores Naturalism and the theories and practices of that style through applying and exploring Stanislavski's system through using different drama text to understand the way in which and actor works in this style. In HT1 the main focus is towards an introduction to Stanislavski, given circumstances, non-verbal communication, relaxation and concentration through workshop sessions.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Naturalism	A representation of real life based on the accurate description of detail	Naturalism is a slice of real life created by the detailed characters which are believable and real. The set and props are realistic to the setting as well as the story being told. The audience become the fourth wall and are emotionally involved in the lives of the characters and the situations that are affecting them.	1. *What are 'Given Circumstances and how are they used practically?*
Given Circumstances	The 5 W's (Who, What, Where, When and Why)	The information given to an actor which is written within the script and also the directors vision for the character as well as what others say about them and the who, what, when, where and why the characters are there	2. Where are the given circumstances found on a script?
Non – Verbal Communication	Communicating using facial expressions, body language and gestures without speaking.	Speaking to each other without the use of words or spoken language, communicating through ways that include facial expressions, body language and gestures	3. *Why do we apply non-verbal communication at the start of a scene before characters speak?*
Relaxation	To relieve stress, tension from the body using exercises to relax the body for practical work.	The act of relaxing, a process that lessens the stress that affects the body and the mind.	4. *Why does an actor relax before they rehearse or perform?*
Concentration	To focus and not be distracted by inside and outside influences	The action of focussing all of one's attention on the activity you are doing. Singleness of mind to concentrate and not be distracted by others or influences that take your mind off what you are doing.	5. *Why it is important that when an actor rehearses and performs, they concentrate on the role they are playing?*

Naturalism

Given Circumstances

Non-Verbal Communication

Relaxation

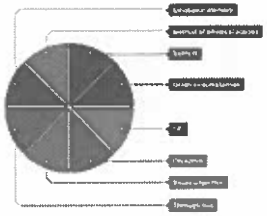
Concentration

Drama - Half Term 2 -TOPIC Naturalistic Theatre / Different Stimuli

Summary- Position in the Curriculum

To use a range of stimuli to develop performance skills both physical and vocal as well as drama techniques and strategies to explore create and develop through the knowledge and application an interpretation of a range of drama texts to demonstrate the key features of the three styles of theatre, Naturalism abstract theatre and epic theatre. HT1 explores Naturalism and the theories and practices of that style through applying and exploring Stanislavski's system through using different drama text to understand the way in which and actor works in this style. In HT1 the focus was an introduction to Stanislavski, given circumstances, non-verbal communication, relaxation and concentration through workshop sessions. In HT2 the main focus subject, objective /super objective and the introduction to DNA where the Stanislavski system will be used in their practical application and exploration of the script.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Stanislavski System	The method that is used in an actors training, made up of various different techniques so that the actor creates believable characters.	Stanislavski system stems from a practice that is used by actors today which allows each part of the system to help the actor create believable characters and help put themselves in the place of that character.	1. *Write down all of the ingredients in the Stanislavski system?*
Given Circumstances	The 5 W's (Who, What, Where, When and Why)	The information given to an actor which is written within the script and also the directors vision for the character as well as what others say about them and the who, what, when, where and why the characters are there	2. Explain the given circumstances of the beginning the play for DNA?
Subtext	The hidden meaning behind what is being spoken	The characters hidden thoughts of what they really think which is shown through the body language and facial expression as well as the way the dialogue is spoken. Example – Sarcasm in what a character says means the opposite or something different	3. *The character you are playing from the 4th year are animals, write the subtext for your characters?*
Objective / Super Objective	What does the character want from the scene? What does the character want to achieve at the end of the play?	The characters' objective is what they want to achieve at the end of the scene while the super objective is what the character wants to achieve by the end of the play.	4. *What d you think is your character's objective and super objective within the play of DNA?*
DNA	A play which shows a group of teenagers who could be described as a gang and how this group of people react to the consequences of their actions.	DNA is a play spoken through the characters, the themes of the play are bullying, social responsibility, morality and leadership. The characters remain in the interview style sequences which comment on the events that has taken place and the viewpoints of a character.	5. *Why was DNA made by the playwright Dennis Kelly?*

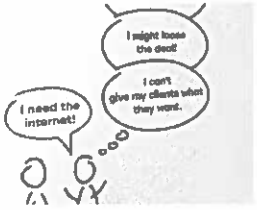
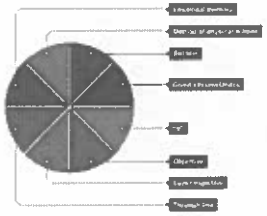
Stanslasvki	Given Circumstances	Subtext	Objective /Super Objective	DNA
				

Drama - Half Term 3 -TOPIC Naturalistic Theatre / DNA

Summary- Position in the Curriculum

To use a range of stimuli to develop performance skills both physical and vocal as well as drama techniques and strategies to explore create and develop through the knowledge and application an interpretation of a range of drama texts to demonstrate the key features of the three styles of theatre, Naturalism abstract theatre and epic theatre. HT1 explores Naturalism and the theories and practices of that style through applying and exploring Stanislavski's system through using different drama text to understand the way in which and actor works in this style. In HT1 the focus was an introduction to Stanislavski, given circumstances, non-verbal communication, relaxation and concentration through workshop sessions. In HT2 the main focus was subject, objective /super objective and the introduction to DNA where the Stanislavski system will be used in their practical application and exploration of the script. In HT3 exploring the play DNA, the characters through understanding the motivation of each character and their relationship with each other through practical application as well as understanding the writers' intentions.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Stanislavski System	The method that is used in an actors training, made up of various different techniques so that the actor creates believable characters.	Stanislavski system stems from a practice that is used by actors today which allows each part of the system to help the actor create believable characters and help put themselves in the place of that character.	1. *From the first reading of DNA what are your first initial thoughts of the play?*
Given Circumstances	The 5 W's (Who, What, Where, When and Why)	The information given to an actor which is written within the script and also the directors vision for the character as well as what others say about them and the who, what, when, where and why the characters are there	2. *Explain what your character is like and what the other characters say about them?*
Subtext	The hidden meaning behind what is being spoken	The characters hidden thoughts of what they really think which is shown through the body language and facial expression as well as the way the dialogue is spoken. Example – Sarcasm in what a character says means the opposite or something different	3. In act 1 how does your character deal with the implications of Adam being dead?
Objective / Super Objective	What does the character want from the scene? What does the character want to achieve at the end of the play?	The characters' objective is what they want to achieve at the end of the scene while the super objective is what the character wants to achieve by the end of the play.	4. *In act 1 how does the relationships change knowing that there is consequences to your actions?*
DNA	A play which shows a group of teenagers who could be described as a gang and how this group of people react to the consequences of their actions.	DNA is a play spoken through the characters, the themes of the play are bullying, social responsibility, morality and leadership. The characters remain in the interview style sequences which comment on the events that has taken place and the viewpoints of ah character.	5. *Based on your final performance what would you suggest your strengths and areas to develop are?*

Stanslasvki	Given Circumstances	Subtext	Objective /Super Objective	DNA
				

Drama - Half Term 4 -TOPIC Epic Theatre

Summary- Position in the Curriculum

The theories and practices of Bertolt Brecht exploring the style of Epic Theatre, Bertolt Brecht a German practitioner born 10/02/1898 – 14/08/1956. Applying each of the drama techniques related to the style and understanding each technique used and how the theories influence the audience where they are to think about what they see rather than feeling for the characters. The theory behind Epic Theatre was to encourage playwrights to address issues related to a contemporary, or current, life. Brecht didn't want his audience to forget that they were watching a performance or to feel any sort of emotion for the character. They were therefore "alienated" from the performance. The playwrights write about the issues bothering them in life. These could be political or otherwise exploring a variety of text Dulcet Decorum Est, A picture and a play in which they will use all of Brecht's techniques. Students are introduced to Epic theatre early in year 8 curriculum to challenge their understanding of different styles of theatre and performances to prepare them for later studies of different styles of theatre, a key component, component 1 of their KS4 curriculum. Having studied the theories and practices of Stanislavski system and the style of naturalism HT1, students understand the world of how naturalistic theatre is created and used in performances and how Stanislavski's system is used to prepare for a character that is detailed, believable and real and how each practitioner has built their theories on the performances we see today. It also ensures a breadth of curriculum; students have to study each style and apply the different drama techniques, performance, interpretive and technical skills to each style using a wide range of text.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Breaking the Fourth wall	An actor might break the fourth wall by addressing the audience directly	Epic theatre (Brechtian theatre) breaks the fourth wall, the imaginary wall between the actors and audience which keeps them as observers.	1.What is meant by breaking the fourth wall and what is the difference between Epic theatre and Dramatic theatre (Naturalism) ?
Multi-rolling	Multi-rolling is when an actor plays more than one character onstage.	Multi-rolling is when an actor plays more than one character onstage. The differences in character are marked by changing voice, movement, gesture and body language	*2. What does the term multi-rolling mean and what is the idea of verfremdungseffekt?*
Placards	A poster or a board with information on to highlight an issue of some kind	A placard is a sign or additional piece of written information presented onstage. Using placards might be as simple as holding up a card or banner.	*3. What is the main purpose of Epic theatre for the audience and in which century did Brecht work?*
Gestus	Gestus is an acting technique developed by the German theatre practitioner Bertolt Brecht	Gestus, another Brechtian technique, is a clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion.	*4. What drama technique is not used in an Epic performance?*
Montage	A series of self-contained scenes that work effectively through juxtaposition with each other	A montage is a series of short self-contained scenes grouped immediately after each other whose juxtaposition or contrast highlights the important issues with absolute clarity.	*5. What is montage in Brechtian theatre?*

Bertolt Brecht

Multi-Role

Placard

Gestus

Montage

Drama - Half Term 5 -TOPIC Epic Theatre – Piture and Jack & the Beanstalk

Summary- Position in the Curriculum

The theories and practices of Bertolt Brecht exploring the style of Epic Theatre, Bertolt Brecht a German practitioner born 10/02/1898 – 14/08/1956. Applying each of the drama techniques related to the style and understanding each technique used and how the theories influence the audience where they are to think about what they see rather than feeling for the characters. The theory behind Epic Theatre was to encourage playwrights to address issues related to a contemporary, or current, life. Brecht didn't want his audience to forget that they were watching a performance or to feel any sort of emotion for the character. They were therefore "alienated" from the performance. The playwrights write about the issues bothering them in life. These could be political. In HT4 explored the text Dulcet Decorum Est, Now in HT5 exploring Brecht's techniques based on a picture and then on a scripted play 'Jack and the Beantsalk' in which they will use all of Brecht's techniques. Students are introduced to Epic theatre early in year 8 curriculum to challenge their understanding of different styles of theatre and performances to prepare them for later studies of different styles of theatre, a key component, component 1 of their KS4 curriculum. Having studied in HT1, HT2, HT3 the theories and practices of Stanislavski system and the style of naturalism HT1, students understand the world of how naturalistic theatre is created and used in performances and how Stanislavski's system is used to prepare for a character that is detailed, believable and real and how each practitioner has built their theories on the performances we see today.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Breaking the Fourth wall	An actor might break the fourth wall by addressing the audience directly	Epic theatre (Brechtian theatre) breaks the fourth wall, the imaginary wall between the actors and audience which keeps them as observers.	1. *Using the picture create a narrative of what is happening, thinking about before, during and after the picture was taken?*
Multi-rolling	Multi-roling is when an actor plays more than one character onstage.	Multi-rolling is when an actor plays more than one character onstage. The differences in character are marked by changing voice, movement, gesture and body language	2. You are to draw 3 images and create 3 titles that accompany your narrative that has been written.
Placards	A poster or a board with information on to highlight an issue of some kind	A placard is a sign or additional piece of written information presented onstage. Using placards might be as simple as holding up a card or banner.	3. *What impact does the nursery rhyme have within your performance?*
Gestus	Gestus is an acting technique developed by the German theatre practitioner Bertolt Brecht	Gestus, another Brechtian technique, is a clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion.	4. *How does the use of chorus at the end of the performance impact the audience?*
Jack and the Beanstalk	A fairy-tale with a moral	Fairy tales are used to help appreciate the values and important aspects of life and how to tell the meaning behind a story which creates to a moral or a message which highlights Brecht's theory of making his audience think, not feel	5. *As a group how did you use narration and multi-rolling in your performance?*

Bertolt Brecht

Chorus

Multirole

Gestus

Jack and the Beanstalk

Drama - Half Term 6 -TOPIC Introduction to Blood Brothers

Summary- Position in the Curriculum

In HT1, HT2 and HT3 the exploration of the style of naturalism and the theories of Stanislavski were taught and in HT4 and HT5 exploring the style of Epic and Bertolt Brecht was undertaken which is also taught in year 8 which builds on this work. In HT6 exploring the play 'Blood Brothers' and how this play can be used as a naturalistic or epic performance depending on the director's interpretation for his vision for the play which was originally created by the playwright for schools. This exploration builds into what they will research and apply at Key Stage 4. Watching and analysing the key features of the performances` such as the storyline, themes, techniques used, the reason why they think it was made, the writers, and the directors interpretation considering the hysterical, social and political context of the play. To analyse the characters and how each style is different based on the role of the actor. For example, one character playing throughout the play as apposed to each character multi-rolling.

Terminology	Definitions	Core Knowledge	Preparing for Assessment Revision through to do question
Breaking the Fourth wall	An actor might break the fourth wall by addressing the audience directly	Epic theatre (Brechtian theatre) breaks the fourth wall, the imaginary wall between the actors and audience which keeps them as observers.	1. *What are your thoughts towards the agreement that Mrs Johnstone and Mrs Lions made?*
Multi-rolling	Multi-rolling is when an actor plays more than one character onstage.	Multi-rolling is when an actor plays more than one character onstage. The differences in character are marked by changing voice, movement, gesture and body language	2. How can we change the narrator into a character so it becomes a naturalistic piece?
Narration	A character delivering an overview of the key events of the story, characters and setting.	Narration is telling a story as a third person, rather than the first person in a naturalistic play. The narrator comments on the action as apposed to seeing the action by the character with no comment.	3. *What was happening in the time that Blood Brothers was set? Social, Historical and Political.*
Gestus	Gestus is an acting technique developed by the German theatre practitioner Bertolt Brecht	Gestus, another Brechtian technique, is a clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion.	4. *What do you think the message is behind Blood Brothers?*
Blood Brothers	A story of two twins separated at birth one kept one give away and the consequences of this pact that two mothers made with each other which ended in death of both boys.	Blood Brothers can be used as a musical which is using the theories of Brecht or as a play using the theories of Stanislavski.	5. *What do you think were the director creative intentions for Blood Brothers?*

Breaking the 4th Wall

Multi-Rolling

Narration

Gestus

Blood Brothers

Music - Half Term 1-Classical, Renaissance and Baroque World Music

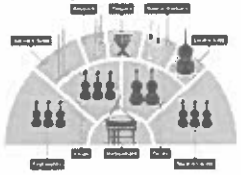
Summary- Position in the Curriculum

Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. In HT! students study classical, renaissance and baroque as well as how ground base is used in both the classical period and now in modern music HT1, students understand the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Renaissance 1400-1600	Renaissance is a French word meaning "rebirth Music in the Medieval period was predominantly monophonic, or music that had only a single melody.	The Renaissance era of classical music saw the growth of polyphonic music, the rise of new instruments, and a burst of new ideas regarding harmony, rhythm, and music notation. During the Renaissance period, music became polyphonic in that it involved multiple independent parts playing simultaneously.	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* *1 What are the differences between medieval music and Renaissance?*
Baroque 1600-1750	The term Baroque, derived from the Portuguese 'barocco' meaning 'irregular pearl or stone'.	Baroque emphasizes dramatic, exaggerated motion and clear, easily interpreted, detail and it refers to a cultural and art movement that characterized Europe from the early seventeenth to mid-eighteenth century.	*2.What Composers were in the Classical era of music?*
Classical 1750-1820	Though the term "classical music" includes all Western art music from the Medieval era to the early 2010s.	The Classical Era was the period of Western art music from the 1750s to the early 1820s—the era of Wolfgang Amadeus Mozart, Joseph Haydn, and Ludwig van Beethoven.	3. *What are the key features of the Romantic period?*
Romantic 1820-1910	Musical Romanticism was marked by emphasis on originality and individuality, personal emotional expression, and freedom and experimentation of form.	Key features of the Romantic period were the music had emotion and passion, the critique of progress. a return to the past, an awe of nature. the idealization of women, the purity of childhood, the search for subjective truth and the celebration of the individual.	4. How does the romantic music period differ from the Baroque period when thinking about the instruments used?
Ground Bass	A short theme, usually in the bass, which is constantly repeated as the other parts of the music vary	Ground bass, or basso ostinato, is a musical technique in which the bass line is repeated throughout the music Though first used in vocal music during the 13th century, the technique came into its own during the Renaissance and Baroque periods.	5. *What is Ground bass and how is it used today?*

Renaissance

Baroque

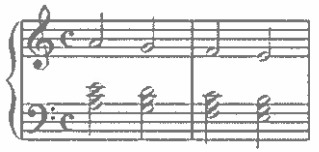


Classical

Seating plan for a standard Classical period symphony orchestra

Romantic

Ground bass



Music - Half Term 2- Classical, Renaissance and Baroque World Music

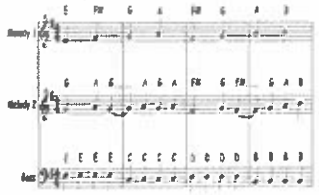
Summary- Position in the Curriculum

Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. Having studied classical, renaissance and baroque as well as how ground base is used in both the classical period and now in modern music HT1, students understand the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1 and HT2. In HT2 they will explore how ground bass techniques is used today such as the well-known "Time Lapse" by Michael Nyman, Pachelbel Cannon and using the theory of the circle of fifths to help work out key signatures.

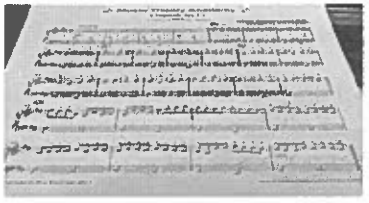
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Michael Nyman	Michael Laurence Nyman, CBE (born 23 March 1944) is an English composer, pianist, librettist, musicologist, and filmmaker. He is known for numerous film .	Time lapse is composed using a ground bass and a repeating chord sequence. A ground bass is a sequence of bass notes that repeats throughout an entire piece of music. It is used by 3 this composer from the baroque period (1600-1750). You will hear the ground bass after an 8-bar introduction.	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* 1. *Who I Michael Nyman?*
Time Lapse	Time Lapse by Michael Nyman was composed for the film A Z and Two Noughts and uses a ground bass, which is a repeating bass line. It was unusual for the director to have Nyman compose the music	Time lapse uses ground bass within the piece of music which is the foundation of the music. The composer used a repeated bassline and chord patterns throughout and builds layers on top.	2 How many times is each note of the ground bass played in the piece time lapse?
Pachelbel Cannon	Pachelbel cannon composed by– Johann Pachelbel (Baroque Era) Canon in D	Pachelbel's Canon, musical work for three violins and ground bass (basso continuo) by German composer Johann Pachelbel, admired for its serene yet joyful character. it was written as a gift for the wedding of Johann Sebastian Bach's older brother, who studied with Pachelbel.	*3 Why was the music of Pachelbel Cannon created and what instruments were used in the piece?*
Circle of Fifths	The circle of fifths is a way of organizing pitches as a sequence of perfect fifths. Starting on a C, and using the standard system of tuning for Western music.	The circle of fifths organizes pitches in a sequence of perfect fifths, shown as a circle with the pitches (and their corresponding keys) in clockwise order. It can be viewed in a counter clockwise direction as a circle of fourths.	*4.How is the Circle of fifths used to work out the key signature?*
Transposing up or down an octave- Treble to bass	In music, transposition refers to the process or operation of moving a collection of notes (pitches or pitch classes) up or down in pitch by a constant interval	When transposing, you move the note up or down 8 notes, starting with the given note as 1, and not forgetting to account for the key signature, and any accidentals that may apply.	*5.How do you transpose up an octave?*

Michael Nyman

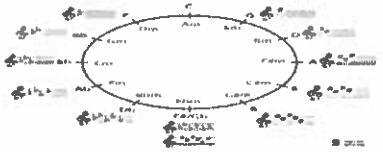
Time Lapse



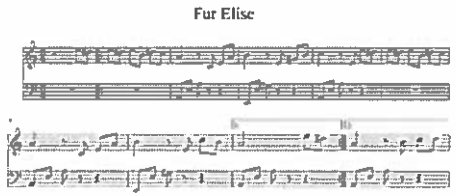
Pachelbel Cannon



Circle of Fifths



Performance Fur Elise



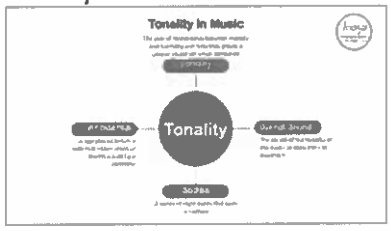
Music - Half Term 3-Musicals, Elements of Music and Muisc Theory

Summary- Position in the Curriculum

Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. Having studied in HT1 and HT2 classical, renaissance and baroque as well as how ground base is used in both the classical period and now in modern music HT1 and HT2, students understand the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1 and HT2, and a variety of musical songs New York New York and you'll never walk alone from the work of Leonard Bernstein HT3.

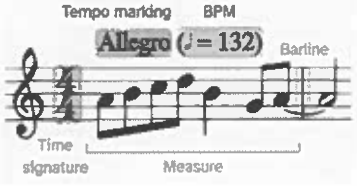
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Tonality	Major, minor, modal or atonal, the character of a piece of music as determined by the key in which it is played or the relations between the notes of a scale or key.	Tonality is the key or pitch centre of a piece of music, and its overall sonic character. The word tonic refers to the pitch which is the tonal centre of a piece of music.	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* *1 What is tonality in music?*
Texture/ Instrumentation	Instruments of the orchestra Typical band/ensemble set-up Traditional instruments	The texture of the music might be thick or thin, or it may have many or few layers. It might be made up of rhythm only, or of a melody line with chordal accompaniment, or many interweaving melodies.	*2 What is instrumentation in a piece of music and how does it relate to the texture of the piece?*
Metre/Rhythm/ Tempo	Beats in a bar Duration of notes Use of syncopation Speed	Tempo is the underlying beat of the music. Metre is the organisation of rhythms into certain regular patterns. Rhythm is the organisation of particular sounds by their length.	*3 What is the difference to rhythm and tempo in a piece of music?*
Pitch	High/Low of the music	How the music is played.	*4 What is pitch in a piece of music?*
Harmony Dynamics	Primary chords Consonant, dissonant and extended harmony. The sound of two or more notes heard simultaneously Volume, articulated using English or Italian words	1) diatonic harmony: which ultimately creates the notes and chords of a harmony and can be referenced back to a single major or minor scale; 2) non-diatonic harmony: which is similar to diatonic harmony, when it come to the central scale of a song, but brings other notes from.	*5 What is harmony in a piece of music.*

Tonality

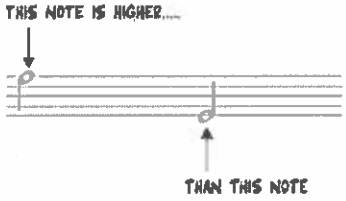


Texture and Instrumentation

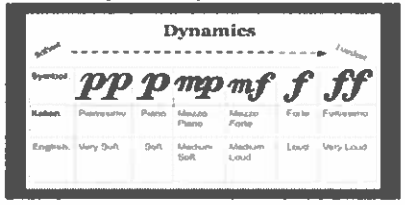
Metre/Rhythm/ Tempo



Pitch



Harmony and Dynamics



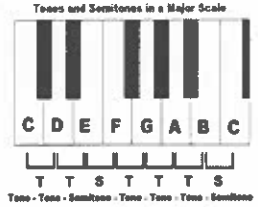
Music - Half Term 4-Musicals, Theory and Composing

Summary- Position in the Curriculum

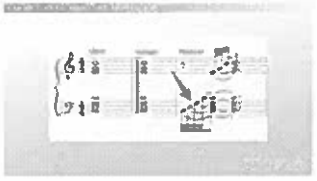
Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. Having studied in HT1 and HT2 classical, renaissance and baroque as well as how ground bass is used in both the classical period and now in modern music HT1 and HT2, students have an understanding of the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1 and HT2, and a variety of musical songs New York New York and You'll Never Walk Alone from the work of Leonard Bernstein as well as the work of Rogers and Hammerstein in HT3. In HT4 student, listen, appraise the works of other musical composers and then create their own compositions.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
George Gershwin Rapsody in Blue	George GERSHWIN (1898–1937) American composer and pianist A hugely famous songwriter from the age of 19 and, with his brother Ira, wrote some of the most famous songs of the 20th century	Rapsody in Blue features a very famous clarinet solo at the beginning which was improvised during rehearsals and a huge solo piano part originally played by Gershwin himself – most of this was improvised during the first performance Many of the ideas came to Gershwin during a train journey. His aim was to describe the spirit of 1920s America	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* *1. Where did George Gershwin get his idea for Rapsody in Blue?*
Tones and Semi-Tones	A major scale is formed with the formula W-W-H-W-W-W-H. This stands for whole step, whole step, half step, whole step, whole step, whole step half step	A tone is the interval between two white keys separated by a black key. A semitone corresponds to the interval between two white keys without being separated by a black key.	*2 What is a tone and what is a Semi - tone?*
Arpeggios and Chords	An arpeggio (Italian: [ar'pedd͡ʒo]) is a type of broken chord in which the notes that compose a chord are individually sounded in a progressive rising or descending order. A Chord is three notes played at the same time CEG as an example.	An example of an arpeggios is the C major chord which contains the pitches C, E, and G in that order. An arpeggiated C major chord would have the pattern C, E, G, C, G, E, C. whereas a chord is defined as a group of notes that are sounded together at the same time, an arpeggio, are "broken chords," indicates a chord in which the notes are sounded individually.	*3.What is the difference between a chord and an Arpeggio?*
Structure and form when creating Music	Structure, or Form, in music refers to the arrangement and order of the parts or sections of the music. The structure of a piece of music is a predetermined order of each section, and how many times it is, or is not repeated.	Musical form refers to the structure of the musical piece. It can be described by using letters: A, B, C, etc. Binary Form (AB): A musical form that has two contrasting sections often repeated. Ternary Form (ABA): A musical form made up of three sections.	*4. What is a normal structure of a pop song?*
Writing lyrics	Lyric writing, is about storytelling. We Start by choosing a topic or theme that you want to write about. It could be a personal experience, a feeling, or a message you want to pass on to the listener.	A rhyming scheme is the order in which the lyricist orders the lines. Rhyming words help the piece become more memorable. If all the lines have the same number of syllables (more or less!) then the lyrics will be more successful.	*5. Choose a topic or theme to write about and create some lyrics for either a chorus or a verse.*

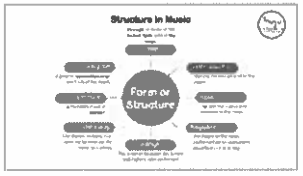
George Gershwin



Arpeggios and Chords



Structure in music



Lyrics

Many a new face will please my eye
Many a new love will find me
Never have I once looked back to sigh
Over the romance behind me
Many a new day will dawn before I do

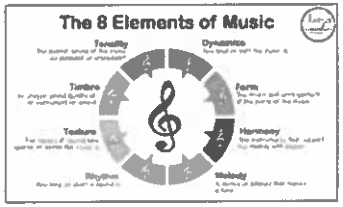
Music - Half Term 5- Styles and Genres of Music

Summary- Position in the Curriculum

Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. Having studied in HT1 and HT2 classical, renaissance and baroque as well as how ground bass is used in both the classical period and now in modern music HT1 and HT2, students have an understanding of the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1 and HT2, and a variety of musical songs New York New York and You'll Never Walk Alone from the work of Leonard Bernstein as well as the work of Rogers and Hammerstein in HT3. In HT4 student, listened, appraised the works of other musical composers and then created their own compositions. In HT5 students will listen using critical thinking skills and appraise the styles of Reggae, Jazz, leitmotif film music and how elements and features are used in each as well as exploring each style by performing

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Elements of music	The elements of music are the different things that you can hear when you listen to music. They are what differentiates a piece of music from other sounds.	Elements of music include, timbre, texture, rhythm, melody, beat, harmony, structure, tempo, pitch and dynamics. The elements of music are the building bricks of music. When you compose a piece of music, you use the elements of music to build it,	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* 1. *What are the elements of music?*
Reggae	Reggae is a unique form of rock music which originated in Jamaica. It has its roots in a number of other musical styles.	The main characteristics of reggae feature a heavy bass line, percussive rhythm guitar with an offbeat and normally with tight vocal harmony. The most famous Reggae artist is Bob Marley	*2 What has influenced Reggae music and who is the most famous reggae performer?*
Jazz (modal Jazz)	Modal Jazz is a style of Jazz that uses modes rather than scales the most famous Modal Jazz artist and musician is Miles Davis,	A mode is a type of scale, as in 'doh re mi fa so la ti doh'. Alter just one of those notes and you can call your scale a 'mode'.	*3.What is a mode?*
Leitmotif	Leitmotif- an associated melodic phrase that accompanies the reappearance of an idea, person, or situation	Film scores use these two compositional devices called Motif and Leitmotif. Both the motif and leitmotif have very similar purpose but have different focus in the films. A Motif can be repeated throughout a film. A motif can represent anything — a character, an object, a place or even a relationship.	4. *What is a Leitmotif and a motif ?*
Diegetic Music and Non Diegetic Music	The difference between diegetic or non-diegetic sound is what we are viewing and listening to. Sounds that come from the story world, while others are represented as coming from outside the space of the story	Diegetic Music is music that the characters and the audience can hear. Diegetic Sounds: These are sounds that both the character and audience can hear, these are created by the sound designers. Non-diegetic Music is music that only the audience can hear, this enhances the dramatic effect of the film.	5. *What is* Diegetic *Music and Non Diegetic Music and what are the differences give examples of both?*

Elements of Music

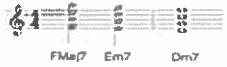


Reggae

Modal Jazz

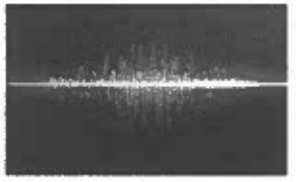
Tonal

Modal



Leitmotif

Diegetic Music and Non Diegetic Music



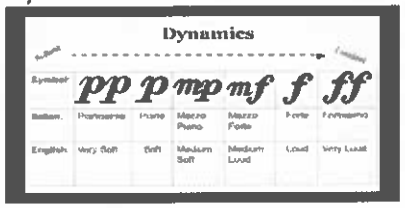
Music - Half Term 6- Styles, Genres of Music and Composition

Summary- Position in the Curriculum

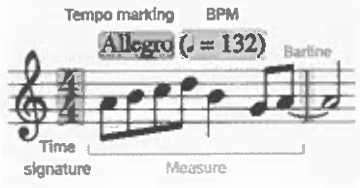
Analysing songs from a variety of musicals and composers exploring Intervals and sequences, lyrics, time signature changes, rhythm, counterpoint, further Major and minor keys, circle of fifths, analysing the elements of how the music is constructed as well as understanding how the social and historical context relates to the music. Students are introduced to different styles of world music early in our curriculum to challenge their musical appreciation and understand all aspects of music from theory, listening and appraising, singing, performing and composing to prepare them for later studies of Music practice, with key components explored in the KS4 curriculum. In HT1 and HT2, students have an understanding of the world of classical music and the classical periods and the historical and social context of music and how music has developed. It also ensures a breadth of curriculum; students have to play a Beethoven piece Fur Elise HT1 and HT2, and a variety of musical songs New York New York and You'll Never Walk Alone from the work of Leonard Bernstein as well as the work of Rogers and Hammerstein in HT3. In HT4 student, listened, appraised the works of other musical composers and then created their own compositions. In HT5 student explored the 3 styles by listening and using critical thinking skills and the elements of music to appraise and understand the key features and characteristics of Reggae, Jazz, leitmotif film music and using this information to show how these elements and features are used in each through performing and in HT6 Composing a piece of film music to a set stimulus.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Dynamics	The Volume in music e.g. Loud (Forte) & Quiet (Piano).	The dynamics of the music is how loud or quiet the music is as well as the Duration which is the length of notes, how many beats they last for. Can link this to the time signature and how many beats in the bar.	Revision and self-study questions are below. *Answer 1 per week for Self-Study,* 1. *What is dynamics and how is it used in a piece of Music?*
Rhythm and Tempo	**Tempo** is how fast or slow a piece of music is performed, while rhythm is the placement of sounds in time, in a regular and repeated pattern.	The effect created by combining a variety of notes with different durations. The speed of the music for example, fast (Allegro), Moderate (Andante), & slow (Lento / Largo). Tempo generally is measured as the number of beats per minute, where the beat is the basic measure of time in music.	2 *What is tempo and rhythm and what is the difference between the two?*
Structure and Instrumentation	**Structure** is the overall plan of a piece of music **Instrumentation** is what instruments are used	The structure of a song or piece of music for example, Ternary ABA and Rondo ABACAD, verse/chorus. Instrumentation the instruments that are to be used which can be a combination of instruments that are used, consider articulation and timbre. Example staccato, legato, pizzicato.	3.*What is instrumentation and how can it be used in a piece of music you have listened to?*
Melody and Harmony	**Melody** is the effect created by combining a variety of notes of different pitches. **Harmony is** how notes are combined to build up chords. Consider concords and discords.	Melody is the consideration of the movement example the steps, skips, leaps of the music Metre – The number of beats in a bar example 3/4, 6/8 consider regular and irregular time signatures example 4/4, 5/	4. *What is a melody in a piece of music and how is harmony used?*
Texture, Timbre and Tonality	**Texture** is the different layers in a piece of Music how thick, thin the sound is. **Timbre** is the tone quality of the music. **Tonality** is the key of a piece of music	Texture – The different layers in a piece of Music example polyphonic, having two or more parts each having a melody and monophonic having a single melody line. Timbre the tone quality of the music, the different sounds made by the instruments used.	5. *What is the difference between polyphonic and monophonic?*

Dynamics

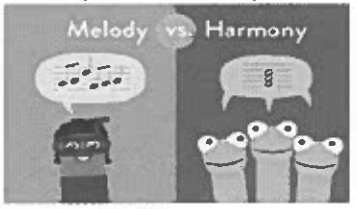


Rhythm and Tempo

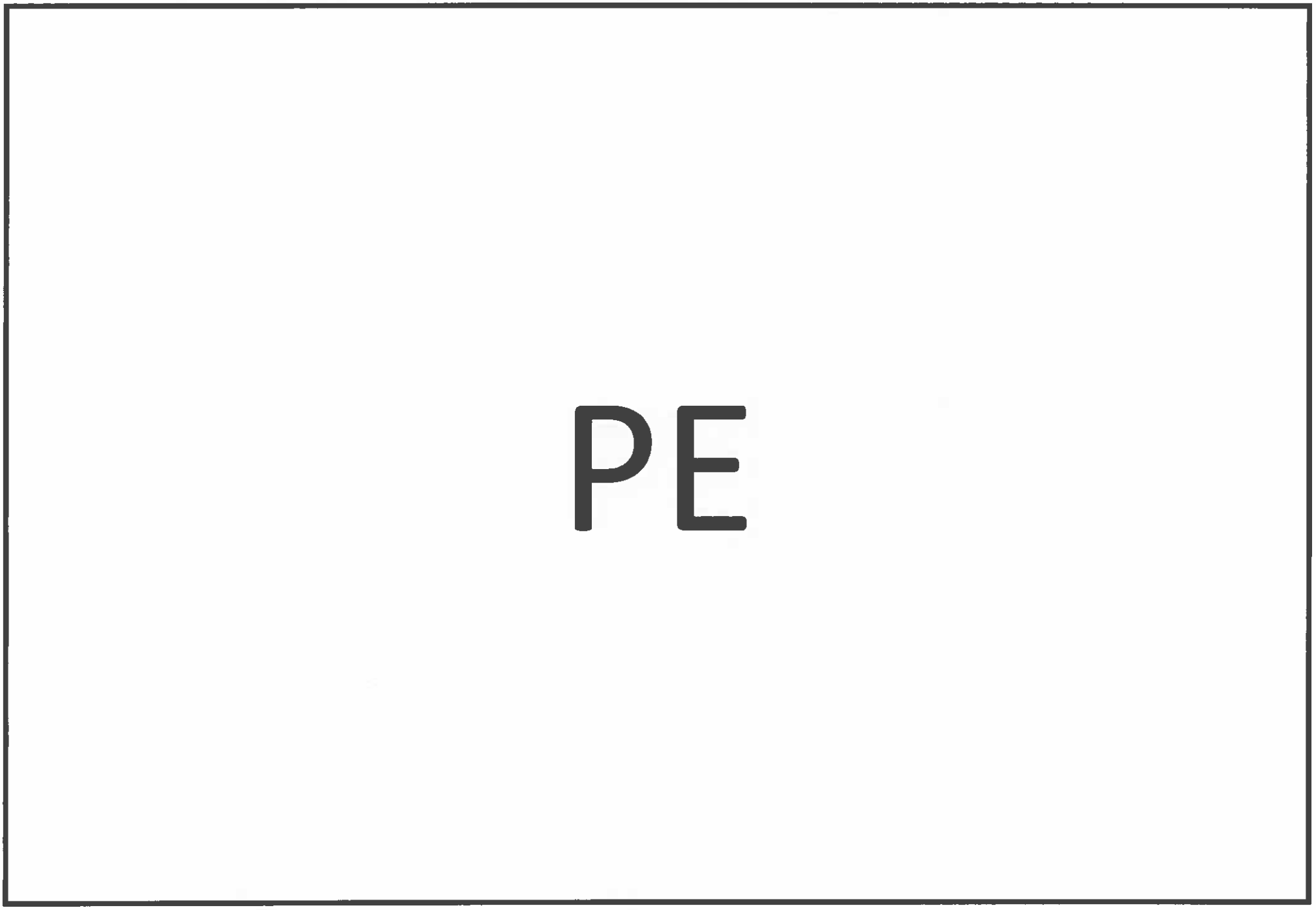


Structure and Instrumentation

Melody and Harmony



Texture, Timbre and Tonality


PE

PE - Half Term 1a – Football

Summary- Position in the Curriculum – Year 9 Football

We deliver Football at this stage in the curriculum to build a solid foundation of physical, social, and cognitive skills that students can apply to a wide range of other sports and physical activities as they progress through the curriculum.

Be equipped to build on the fundamental skills required during KS2 to perform at maximum levels in competitive games. Students will use a range of tactics and strategies to overcome opponents in direct competition through team and individual games for example, badminton, basketball, football, handball, netball, rounders, rugby and tennis. Students will develop their technique and improve their performance in other competitive sports for example, athletics and sports performance training. Students will perform dances using advanced dance techniques within a range of dance styles and forms, take part in outdoor and adventurous activities, which present intellectual and physical challenges, and be encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group. Students will analyse their performances compared to previous ones and demonstrate improvement to achieve their personal best.

Terminology	Core Knowledge and definition	Preparing for Assessment
Poke Tackling	To be able to perform the Poke tackle. To understand and know when a Poke tackle is used in a game of Football e.g. When a player is chasing an opponent. To understand and know how to perform the Poke tackle.	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Passing & controlling – lifting	To be able to perform the lifted pass and receive them. To understand where this pass is used in football e.g. Over the top of an opponent / defence. To develop their understanding and knowledge of how to correctly receive the ball,	1. *Explain the different COF required for an effective football player.*
Volleying	To be able to perform the different types of volleying in football. To know and understand how to perform these skills. To know and understand why volleying is used in Football	2. *Explain how injuries in football can be reduced.*
Goalkeeping & Shooting	To be able to perform the different types of goalkeeping saves e.g. Diving saves, catching, parrying, and punching. To know and understand how to perform these skills correctly and safely in the right situation. To incorporate goalkeeping and its skills into small sided games.	3. *What movement occurs at the knee when shooting?*
Throw - ins	To be able to perform the throw ins accurately. To clearly understand and know how to perform the throw – ins; why throw – ins occur in Football and where. To clearly understand and know the rules governing throw – ins in Football. To understand and know the tactics used when performing a throw – in	4. *What class lever is heading the football?*
Crossing	To incorporate corner kicks, goalkeeping, defending and attacking strategies in small games. To accurately perform the crosses, varying their height, speed and delivery. To know and understand how a corner kick is awarded and why. To use imagination and creativity to develop new strategies from corner kicks in attack and defence.	5. *What is the name of the antagonistic muscles pain when striking the ball?*





PE - Half Term 2a – Sports Performance Training

Summary- Position in the Curriculum – Year 9 Sports performance training

We deliver Sports performance Training at this stage in the curriculum to build a solid foundation of physical, social, and cognitive skills that students can apply to a wide range of other sports and physical activities as they progress through the curriculum.

Be equipped to build on the fundamental skills required during KS2 to perform at maximum levels in competitive games. Students will use a range of tactics and strategies to overcome opponents in direct competition through team and individual games for example, badminton, basketball, football, handball, netball, rounders, rugby and tennis. Students will develop their technique and improve their performance in other competitive sports for example, athletics and sports performance training. Students will perform dances using advanced dance techniques within a range of dance styles and forms, take part in outdoor and adventurous activities, which present intellectual and physical challenges, and be encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group. Students will analyse their performances compared to previous ones and demonstrate improvement to achieve their personal best.

Terminology	Core Knowledge and definition	Preparing for Assessment
Interval Training	To understand and know how to perform, and set up an interval training practice. To clearly understand and know the different types of training methods that can be performed to develop Speed. To understand & know what happens to the body under intense exercise.	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Continuous Training	To understand how the Cooper's run / cross country run can be used to develop stamina and the running techniques. To understand how continuous training works. To know how continuous training can improve a person's stamina and help lose weight.	1. *How does improving cardiovascular endurance improve a sports person performance of your choice?*
Plyometric	To understand and know what strength and power is, and how they can train and develop it. To develop student's knowledge and understanding of the different types of strength used in different sporting areas, and the tests that are used to measure these strengths. To develop the students' knowledge and understanding of Plyometric exercises.	2. *What are the strengths and weakness of plyometric training?*
Weight training	To know, understand and be able to perform the correct and safe exercises on each apparatus. To be able to participate in a resistance training session, using the equipment safely. To know the fitness and health benefits associated with regular resistance training.	3. *What are the strengths and weakness of Weight training?*
Principles of training	To develop their physical strength, stamina, speed and flexibility to cope with the demands of different activities. To know and understand the principles of training and how these principles can be improved. To know and understand what the FITT Principles and Principles of training are. To be able to set up their own weight training programmes incorporating both principles.	4. *Identify SPOR and FITT*
Effects on Body	To understand that exercise has both short term and long-term effects on the body. To know and be able to describe in their own words, the effects that exercise has on the body. To be able to see and feel the effects that exercise has on the body.	5. *Identify short term and long terms effects of exercise.*





PE - Half Term 2a – Volleyball

Summary- Position in the Curriculum – Year 9 Volleyball

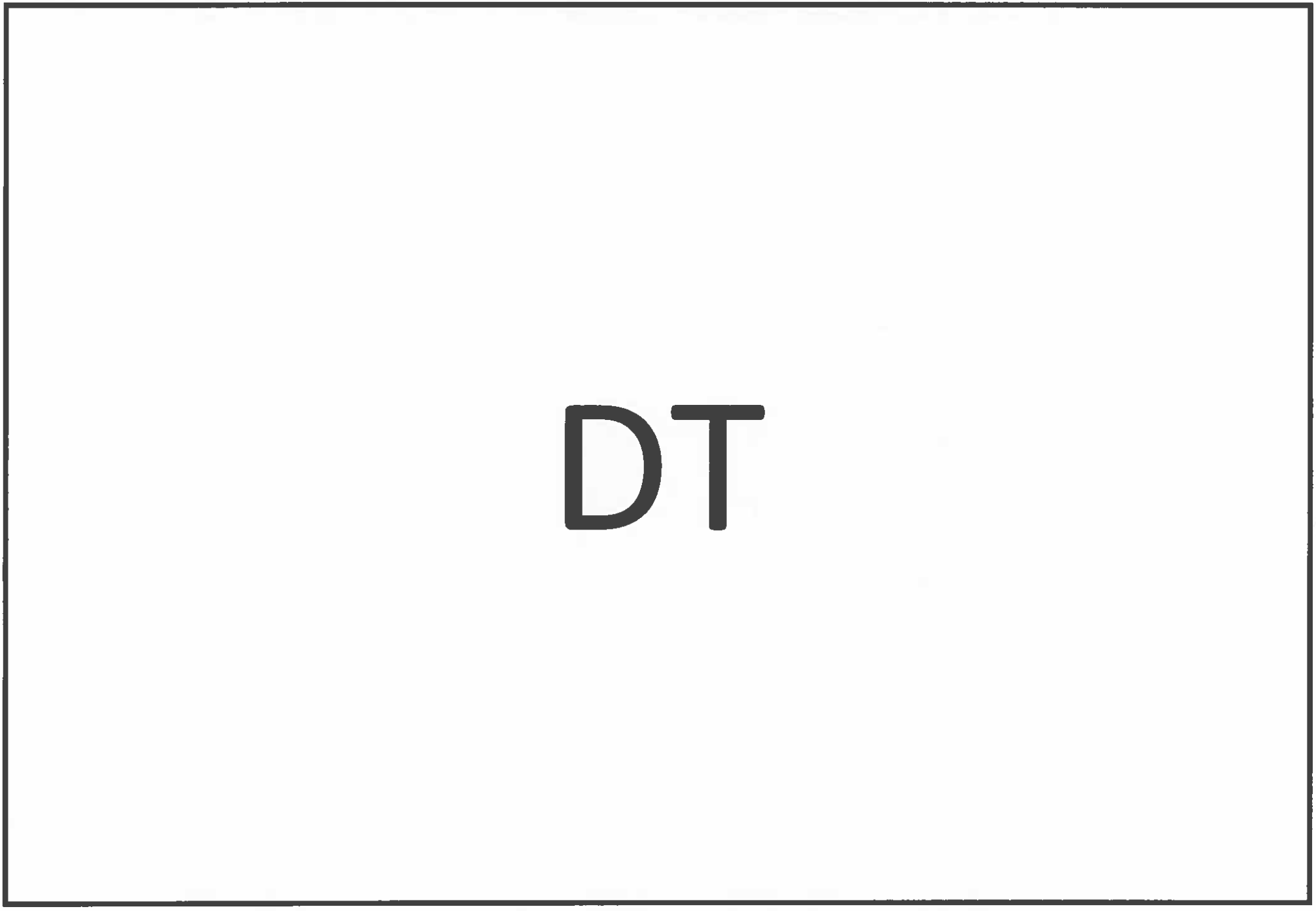
We deliver Volleyball at this stage in the curriculum to build a solid foundation of physical, social, and cognitive skills that students can apply to a wide range of other sports and physical activities as they progress through the curriculum.

Be equipped to build on the fundamental skills required during KS2 to perform at maximum levels in competitive games. Students will use a range of tactics and strategies to overcome opponents in direct competition through team and individual games for example, badminton, basketball, football, handball, netball, rounders, rugby and tennis. Students will develop their technique and improve their performance in other competitive sports for example, athletics and sports performance training. Students will perform dances using advanced dance techniques within a range of dance styles and forms, take part in outdoor and adventurous activities, which present intellectual and physical challenges, and be encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group. Students will analyse their performances compared to previous ones and demonstrate improvement to achieve their personal best.

Terminology	Core Knowledge and definition	Preparing for Assessment
Spike	To know and understand how to perform the correct footwork, take off, contact and landing for spiking. To know and understand the laws that govern the spike in Volleyball. To be able to apply the spike in small-sided games as the most effective method of returning the ball to the opponents court.	Revision and self-study questions are below. Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Single Block	To understand the rules regarding contact at the net. To be able to assume the correct body position close to the net ready to block a return from the opponent. To be able to perform a technically correct single blocking action.	1. *What type of training would a volleyball player benefit from and why?*
The Roll	To be able to perform a technically correct 'roll'. To be able to prevent a powerful return from an opponent hitting the floor. To try to incorporate the roll within a game situation.	2. *What are the coaching points of a single block?*
Reverse Volley / Set	To be able to perform a technically correct reverse volley. To be aware of and be able to anticipate the movements of teammates. To be able to use the reverse volley to reduce the predictability of a teams play.	3. *What are the coaching points of the roll?*
Spike (Advanced)	To be able to perform a more powerful and increasingly accurate spike from a front or reverse set. To be able to spike the ball into 'weak' areas of the opponents court, and past a block. To understand the importance of moving around the court and playing as a unit.	4. *What are the coaching points of a reverse volley?*
Spike (Advanced)	To be able to perform a more powerful and increasingly accurate spike from a front or reverse set. To be able to spike the ball into 'weak' areas of the opponents court, and past a block. To understand the importance of moving around the court and playing as a unit.	5. *How do you plan to use the spike to outwit your opponents?*






DT

DT-Half Term 1 Coaster Project

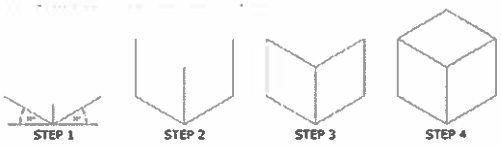
Summary- Position in the Curriculum

You will further develop your drawing skills by learning how to draw in isometric and perspective, building on the skill gained in the previous years. You will then be introduced to computer aided design and will design a set of coasters. You will learn how computer aided manufacture speeds up the making process and will produce your coasters using it. The skills and knowledge gained will enable you to design more efficiently at GCSE level.

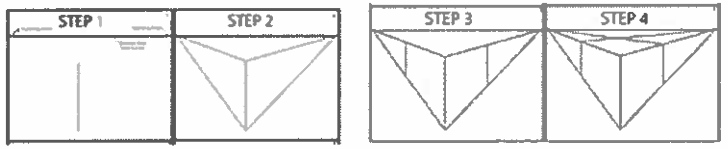
Terminology	Definitions
Freehand sketching	Sketches that do not follow any formal drawing rules.
Formal drawing	Drawing which must follow certain rules.
Crating	Drawing a box as the basis of drawing other items.
Perspective drawing	A drawing method that shows objects getting smaller as they get further away. You start of by drawing a horizon line and the vanishing points.
Isometric projection	A 3D method of drawing where each side is drawn at a 30-degree angle
Horizon line	A line drawn when doing perspective drawing which represents eye level.
Vanishing point	A point were parallel lines drawn in perspective meet.
Computer aided design (CAD)	Designing products on a computer.

Core Knowledge and skills

Stages of drawing an isometric cube.



If using isometric paper make sure it is the right way down with vertical lines running down the paper.



Steps in drawing a two-point perspective box

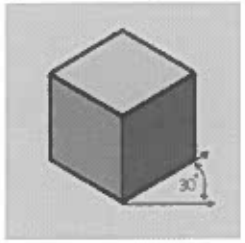
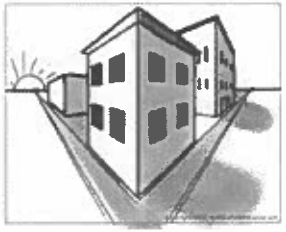
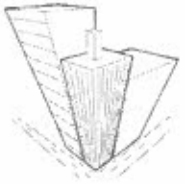
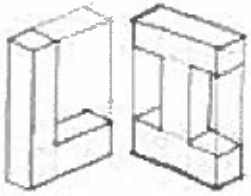
Advantages of CAD include:
You can produce drawings more quickly than by hand.
It is easier to produce highly accurate design ideas.
You can easily change designs (for example change its colour)
You can easily send designs to other designers
Disadvantages of CAD include:
It can be expensive to set up (CAD packages are expensive)
You need highly skilled designers
Software improves constantly and it can be expensive to keep upgrading machines and software.

Preparing for Assessment

Revision and self-study questions are below.

Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *Explain the difference between a freehand sketch and a formal drawing.*
2. *Draw and shade an isometric cube, with the light source coming from the top left corner.*
3. *Explain the difference between one-point and two-point perspective.*
4. *Draw a two-point perspective building.*
5. *Explain why most design is done using CAD these days.*

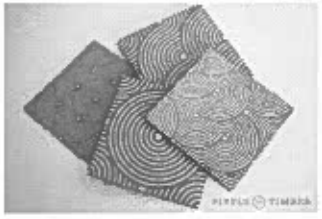
Isometric projection	One-point perspective	Two-point perspective	Three-point perspective	Crating
	 Has one vanishing point.	 Has two vanishing points	 Has 3 vanishing points	

DT-Half Term 2 Coaster Project

Summary- Position in the Curriculum

You will use the CAD drawings produced in the last half term to machine 4 coasters. You will also make a holder to store the coasters. You will ex[perience the benfits of manufacturing items using computer aided manufacturing. You will understand the benefits and limitations of manufacturing using a laser cutter.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
			Revision and self-study questions are below.
Computer aided manufacture	Making items using machines that use computer software to control them.	*Advantages of CAM include:* Machines can run continually without getting tired Machines can make items faster than humans It is easier to make accurate parts.	Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
CNC machine	Computer numerically controlled, for example a CNC router. (Can cut out and engrave coaters).	*Disadvantages of CAM include:* It can be expensive to set up (CAM machines can be very expensive). You need highly skilled engineers to run the machines. Unemployment as machines replace many people in the manufacturing process.	1. *Describe some benefits of making products using CAM.*
Virtual model	A model produced using CAD software.	A laser cutter is essentially a powerful laser beam that is produced inside a machine. As the laser beam strikes the material it cuts it by using an intense heat which vaporises the material, leaving a polished face. The power setting can also be reduced so that the laser beam doesn't cut completely through the material, enabling engraving.	2. *A laser cutter does two operations to make items. What are they.*
Machine tool	A machine that bios mechanically or electrically powered.	Laser cutting is suitable for cutting plastics, woods, paper, card, cork, foam board, fabric and many other materials.	3. *Describe some drawbacks of CAM.*
Hand tool	A tool that is powered by the human hand only.	You have to make sure that any parts of the coaster that are going to be engraved are thick lines and any parts that are going to be cut are thin lines.	4. *What is the difference between a hand tool and a machine tool?*
		A CNC router can also be used to cut out and engrave coasters but would take longer to set up.	5. *Name a machine that could be used to engrave a coaster other than a laser cutter.*

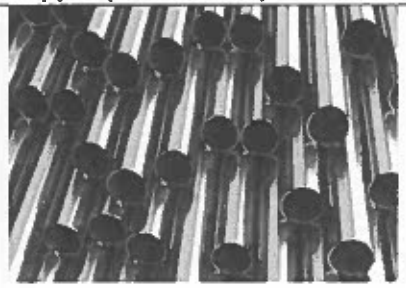
Laser cutter	2D Design Cad software	Laser cut coasters	Laser engraved coasters	CNC router
				

DT-Half Term 1 Phone holder

Summary- Position in the Curriculum

You will learn about metals to improve your understanding of materials used in manufacturing. You will also revisit work done in year 7 on polymers. You will also learn about different scales of production so that you understand how decisions are made in industry on the type of production to use.

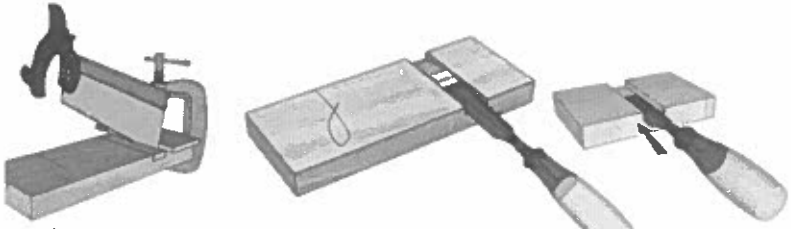
Terminology	Definitions	Core Knowledge	Preparing for Assessment
Ferrous metal	Metals that contain iron	Metals are extracted from ores.	Revision and self-study questions are below.
Non-ferrous metal	Metals that do not contain iron.	Ferrous metals are usually magnetic because they contain iron. Non-ferrous metals are never magnetic. There are many types of steel and they are all alloys because they contain iron and other substances.	Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Alloy	This is a mixture of metals or a mixture of metals and another substance.	Alloys are made so that the property of the metal can be improved. For example, stainless steel is corrosion resistant whilst iron is not.	1. *Explain the difference between a ferrous and non-ferrous metal.*
Ore	A type of rock containing metal.	Choosing the right scale of production is very important when manufacturing a product. One off production is the most expensive production method and the items made are unique. The cheapest form of production is continuous production. One off production is the most flexible and continuous is the least flexible as it would be very difficult to change what you are making.	2. *What is the meaning of the term alloy and why are alloys made?*
Thermoforming polymer	A polymer that melts when it is reheated.		3. *List three non-ferrous metals. For each give an example of a typical application.*
One off production	Making one item.	Bespoke (made for a particular customer) jewellery is an example of an item made using one off production	4. *Describe the four scales of production.*
Batch production	Making a group of items. Several copies of the same product made at the same time.	Design and technology work benches are an example of items made in batches.	
Mass production	Making large volumes of identical items.	Pencils are an example of products made using mass production.	5. *Which scale of production produces the most expensive items and why?*
Continuous production	Continuous production takes place 24 hours a day, 7 days a week.	Chemicals are often made using continuous production.	

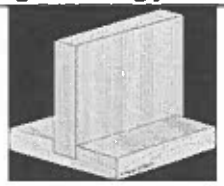
Aluminium (non-ferrous)	Copper (non-ferrous)	Brass (non-ferrous alloy)	Stainless steel	Cast iron
				

DT-Half Term 2 Phone holder

Summary- Position in the Curriculum

You will analyse existing products to gain an understanding of how and why the products where made that way. You will have some standard parts for your product but wil have freedom to add to these to produce some creative designs. You will learn how to cut a through housing joint which builds on joints you have learnt in year 7 and 8.

Terminology	Definitions	Core Knowledge and skills	Preparing for Assessment
Product analysis	Looking at a product in detail to understand more about it.	Product analysis helps designers see why products have been designed the way that it has and learn from this. This information can be used to help designers when they are designing their own products.	Revision and self-study questions are below.
Aesthetics	How well a product appeals to the five senses.	You should consider factors such as what does a product feel like and what colour is it?	Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Function	What a product does and how it works.	 Cutting out a through housing joint.	1. *Give two reasons why a designer would carry out a product analysis.*
Line bending	A manufacturing process used to create bends within a sheet of polymer.		2. *Other than aesthetics state three other designs characteristics that should be considered in an analysis of an existing product.*
Wire bending jig	A tool that helps you bend wire accurately.	Thermoforming polymers are used when line bending. Formers or bending jigs should be used if you wish to get an accurate fold in the polymer.	3. *Explain why it is advisable to use a jig when bending wire.*
Former	A device that helps you bend polymers into the correct shape when line bending.	Make sure work is clamped securely when using a chisel and mallet. Always make sure your hands are behind the blae. The blade must be sharp or else it could slip when you are using it. Carry it with the blade pointing downwards at your side.	4. *Name a tool that can be used to cut mild steel. What type of vice wood you put it in an why?*
G-cramp	A tool used to hold wood in place when cutting a through housing joint.		
Carpenters' mallet	This tool is used to strike a chisel.	Never put metal into a carpenters vice as the it will dent the wooden jaws.	5. *Describe how you would make a through housing joint.*
Engineers vice	This vice has metal jaws so is used to hold metals.		

Strip heater	Wire bending jig	Through housing joint	Bevel edged chisel	Junior hack saw
				

DT-Half Term 1 Year 9 Food & Nutrition

Summary- Position in the Curriculum

You will build upon the work done in previous years on the Eatwell guide by taking a more detailed look at how the different dietary needs of specific groups need to be taken into account when producing meals. You will modify food for a people with specific dietary requirements. You will learn new practical skills to build on those from years 7 and 8.

Terminology	Definitions
Vegan	A person who does not eat any food derived from animals and who typically does not use other animal products.
Modifying a diet	Changing the diet
Vegetarian	Vegetarians do not eat meat.
Allergic reaction	This is where the body reacts suddenly and often seriously to certain foods.
Free sugar (added sugar)	Sugars added top food (e.g. granulated sugar, syrup and honey).
Fruit sugar	Natural sugars contained in cell walls of plant foods.
Food intolerance	The body cannot properly digest the food or the food may irritate the digestive system.

Core Knowledge

Dietary requirements change through life as shown in the table below.

Target group	Dietary energy needs	Nutrients they need more of
Babies	Breast milk up to 5 months. High energy needs due to growth. No added salt. No free sugar.	All nutrients are vital. Foods rich in iron and vitamin C are especially needed from 6 moths.
Children (1-12)	Need regular, smaller meals, snacks and drinks High-energy due to growth and activity. Reduced salt and sugar Introduce Eatwell guide between 2 and 5	Protein Calcium and vitamin D Iron and vitamin C B group vitamins

Most foods are available all year but some food are seasonal , such as soft fruit e.eg. strawberries. This can affect food choices.

Arborio rice is used for making risotto because it is capable of absorbing large amounts of liquid. Long grain rice does not have enough starch in it to make it creamy.

Raw meat is a source of bacteria. Colour coding chopping boards helps prevent cross contamination as it keeps different foods apart.

Preparing for Assessment

Revision and self-study questions are below.

Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.

1. *What is the difference between a food intolerance and an allergy to a food?*
2. *Discuss the differences between a baby's dietary needs and a child.*
3. *What type of rice is used to make risotto and why?*
4. *How would you modify a cottage pie for a vegan?*
5. *Explain why we use different coloured chopping boards for different ingredients.*

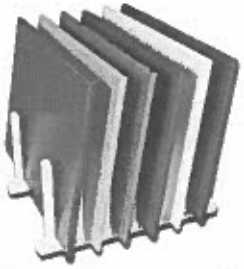
Mashing potatoes

Cottage pie

Different types of rice

Mushroom risotto

Coloured chopping boards



DT-Half Term 2 Year 9 Food & Nutrition

Summary- Position in the Curriculum

You will learn how food can be traced and how you can select sustainable ingredients. This will help you to understand how to cook more responsibly and select ingredients in an informed manner. You will also learn more about the science of cookery and how ingredients change when they are cooked.

Terminology	Definitions	Core Knowledge	Preparing for Assessment
Food provenance	Knowing where food is grown, reared and caught and how it is produced and transported.	Sea food can be caught using the following methods: Trawling – boats pull long nets across the seabed to catch fish. Line caught – fish are caught individually with a fishing rod, fishing line and some bait. Pots – these are placed at the bottom of the sea and used catch lobsters or crabs	Revision and self-study questions are below.
Intensive farming	A method of farming aimed at increasing the amount of food produced.		Answer 1 per week for Self-Study, you can draw on your notes, this organiser, your memory and your own research.
Free range farming	A method of farming where animals have access to outdoor space.	Food that is reared for food in the UK include cows, sheep, pigs and chicken.	1. *Explain what food provenance is and why it is important?*
Sustainable	Meeting the needs of the present, without making it difficult for future generations to meet their own needs.	**Primary processing** means preparing raw food for sale or cooking – for example milling wheat into flour. **Secondary processing** involves turning the primary processed ingredients into a food product – for example, turning flour into bread.	2. *Explain what is meant by sustainable food production.*
Food miles	The distance food travels from farm to fork.		3. *Describe how lobsters are caught.*
Genetically modified food	GM refers to any living thing that's had its DNA altered using genetic engineering. This could be a plant or animals.	Adding fat to biscuits and pastries gives them a good crumbly texture; this is called **shortening.** The best fats for shortening are lard, butter, white vegetable fat and baking margarine.	4. *Explain the difference between primary processing and secondary processing.*
Organic farming	Farmers produce food following strict guidelines, such as no artificial pesticides or fertilisers on crops.	**Coagulation** happens when the protein in food sets during the cooking process. We cook protein foods to make them nicer to eat. Think about whether you would rather eat a raw or boiled egg.	5. *Explain why some people choose to buy organic food.*

Soil Association logo	Red tractor	RSPCA Assured	Marine Stewardship Council	Creaming
The food is organic.	Food has been born, grown prepared and packed in the UK.	The animal has been reared in line with a range of welfare standards.	Fish is from a sustainable source and can be traced back to the fishery.	Beating fat and sugar together, trapping tiny bubbles of air in the mixture.

Notes

	Monday	Tuesday	Wednesday	Thursday	Friday
Form					
P1					
P2					
P3					
P4					
P5					