

Knowledge Organiser

Year 9 Spring 1 2023

Name:

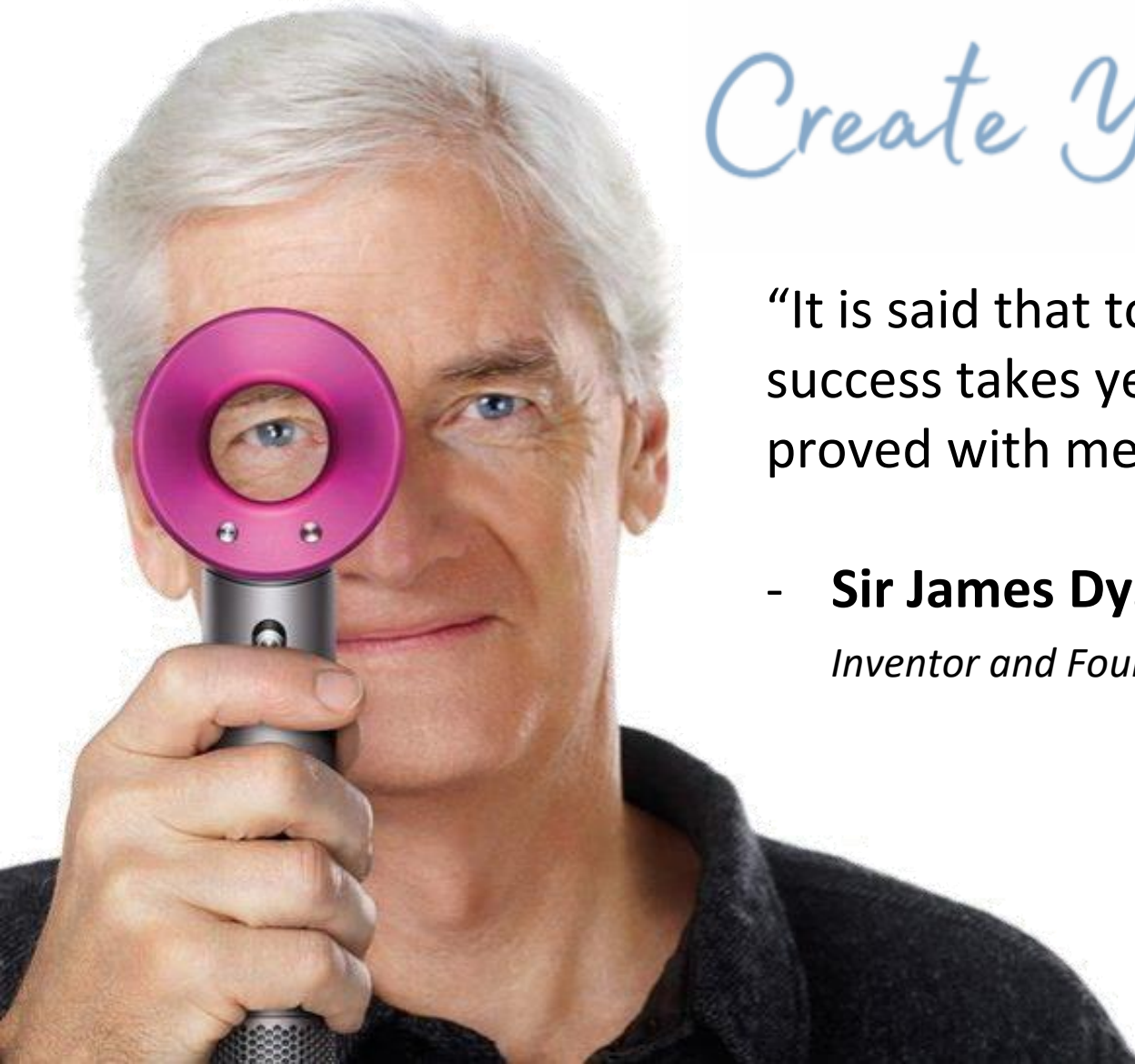
Tutor Group:

Create Your Future

“It is said that to be an overnight success takes years of effort. So it has proved with me.”

- **Sir James Dyson**

Inventor and Founder of The Dyson Company



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Science, PE, Art and Technology are on a rotation so have multiple pages in this booklet.
Your teacher will direct you to the appropriate pages when setting work.

Classroom Expectations

Everyone Involved. Everyone Engaged

WORK HARD

I am well-prepared for lessons, work hard at every task and take pride in my work



RESPECT FOR ALL, BY ALL



I behave in a way that supports my own and others' learning. I contribute to the positive learning atmosphere in the classroom

SHOW RESILIENCE

I keep trying, even when I find the work difficult.



MAKE A CONTRIBUTION



I offer valid and well considered contributions to lessons.

STRIVE FOR IMPROVEMENT

I have high expectations of myself. I follow advice on how to improve my work.



Beautiful Books

Write in **blue** or **black** pen

Date and title written and **underlined** with a ruler

Absolutely no graffiti or doodling in your book

Correct and annotate your work in a **different coloured pen**

All worksheets or loose paper to be stuck down

Diagrams and tables drawn with a pencil and ruler

Monday 5th September 2022

Title

Subtitle

1. All work should be neat, tidy and clearly set out.
2. Your book is a record of your work and should be brought to every lesson.
3. There should be no graffiti or doodling either on the cover or inside your book.
4. Mark your work in a different colour. Correct mistakes ✓ write corrections or annotate.
5. Diagrams or tables should be drawn in pencil, with a ruler.

Victoria organises a concert.
Each adult ticket costs £9
Each pensioner ticket costs £6
Children tickets are free.

Some adults and pensioners have vouchers that give them a 25% off.

40 of the 200 tickets were for children.
14 of the adults had a voucher
Only 3 of the 25 pensioners had a voucher

Work out how much money Victoria raises through ticket sales.

Adult: Voucher, No voucher
Pensioner: Voucher, No voucher
Children: No voucher

3 BELPER SCHOOL

SYNONYMS

Flexibility
Elasticity
Strength
Durability
Toughness

Resilience

NOUN The capacity to recover quickly from difficulties or toughness. The ability of a substance or object to spring back into shape.



Words of the Week

SYNONYMS

Model
Example
Standard
Ideal
Prototype
Pattern

Paradigm

NOUN A typical example or pattern of something.



Innovate

SYNONYMS

Create
Evolve
Develop
Discover
Introduce
Invent

VERB To introduce something new or to make changes in something established, especially by introducing new methods, ideas or products.



How have you used the words this half term?

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Subordinate	To treat someone as less important than someone else.
Patriarchy	A system of society or government in which men hold the power.
Satire	The use of humour, irony, exaggeration or ridicule to expose and criticise people.
Inferior	Lower in rank, status or quality
Antagonistic	Showing or feeling active opposition or hostility towards someone or something.
Tier 2 vocabulary	Definition
Comedy	fiction that is light, funny and generally has a happy ending.
Tragedy	Based on human suffering, and the terrible or sorrowful events that befall a main character. Usually, the protagonist is brought down by his/her own flaws.
Conflict	A struggle between two opposing forces – two characters, a character and nature or even an internal struggle.
Dramatic Irony	A situation in which the audience or reader has a better understanding of events than the characters do.
Antagonist	The principle opponent or foil of the main character.
Dynamic Character	A character who undergoes some important change in the course of the story.

Section 2: New Key Skills/Strategies						
<p>CPEAT writing skills</p> <p><u>What are Beatrice's attitudes towards Benedict at the start of the play?</u></p> <p>Initially, Beatrice shows a dislike towards Benedick in her statement: "he is no less than a stuffed man" The noun 'stuffed man' has negative connotations of him being worthless and infers that he is of no importance. Beatrice's attitude defies gender expectations of the time; women were expected to be submissive to men, yet here she is shown to stand up to him in a very assertive way.</p>						
<table border="1"> <tr> <th>Key analysis words</th></tr> <tr> <td>Infer</td></tr> <tr> <td>Connotations</td></tr> <tr> <td>Impact</td></tr> <tr> <td>Reiterate</td></tr> <tr> <td>Embellishes</td></tr> </table>	Key analysis words	Infer	Connotations	Impact	Reiterate	Embellishes
Key analysis words						
Infer						
Connotations						
Impact						
Reiterate						
Embellishes						

Section 3: Shakespeare's Life and Times
<p>Key Themes</p> <p>Appearance and reality Shakespeare uses this play to show how appearance and reality are not always the same thing.</p> <p>Love Love is the main idea in this play and is shown through the partnerships between Claudio and Hero, Benedick and Beatrice and also through the paternal love that Leonato shows for his daughter and niece.</p> <p>Nothing and 'noting' The title of the play refers to one of its main themes. 'Nothing' implies that the concerns of the play are trivial. The word 'nothing' in Shakespearean times was pronounced 'noting' and so the title itself is a pun.</p> <p>Context.</p> <p>Gender Women had little power in Elizabethan society. They lived in a patriarchal society and life was controlled by men. Women had a strict expectation to follow and were expected to remain 'pure' and virgins until marriage.</p> <p>Comedy The play is considered one of Shakespeare's best comedies. In a comedy, there's normally a problem at the beginning of the play that is solved by the end of it – the audience are confident that everything will end well. The play contains a lot of features commonly used in his comedies, including: A happy ending, disguises, music and dancing, young lovers, marriage and puns and wordplay.</p> <p>Marriage Marriages were rarely about love and were often arranged to bring financial or social benefit to both families. People were expected to get married, the characters are very concerned with finding partners for themselves and others.</p>

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Patriarchy	A system of society or government in which men hold the power and women are largely excluded from it
Symbolism	The idea that words, phrases and images can represent other things
Authority	The power or right to give orders, make decisions, and enforce obedience
Maternal	Having the stereotypical characteristics of a mother
Determinism	The theory that everything in life is pre-decided and pre-planned.
Unrequited Love	Unrequited love or one-sided love is love that is not openly reciprocated or understood as such by the beloved
Elizabethan Era	The time in the Tudor period of the history of England during the reign of Queen Elizabeth I

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Foreshadowing	To hint at something that will happen later in the play
Stage Directions	An instruction in the text of a play indicating the movement, position, or tone of an actor
Sonnet	A poem of 14 lines, in English typically having ten syllables per line
Prologue	An opening speech that introduces key themes within the play
Soliloquy	A speech delivered by a character that the other characters do not hear

Section 2: Key Skills/Strategies

Use the CPEAT format to write analytically about Shakespeare's play.

C	CONNECTIVE	Firstly, moreover, furthermore, in conclusion.
P	POINT	Use the wording of the question and identify what your paragraph will explore.
E	EVIDENCE	Find a relevant quotation and identify a language or structural device in it...
A	ANALYSIS	... and then explore the deeper meaning of this quote/technique and how it links to the question.
T	THINK INTENTION AND IMPACT	Explore the intentions of the author and the effect/impact of this on the reader.

FEATURES OF A TRAGEDY

Tragedy: A play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character/s.

The Tragic Hero:

The tragic hero describes a virtuous character who must face adversity, either caused by their flawed persona or sealed by fate. Ultimately, they pay the price with their lives, but after recognising their mistake.

The Fatal Flaw: *Hamartia*

The tragic hero's flaw, that leaves them vulnerable and causes their disastrous end.

Tragic Waste:

Often the inevitable deaths of pivotal characters in the play.

Catharsis:

The audience's immersion in the play leads to an emotional roller coaster, with mixed feelings for the hero and their antagonists. The ending of the play leads to a release of often very conflicting emotions for the audience.

Section 3: Context and Themes

Verona

R&J is set in Verona, Italy in the fourteenth century. Verona was a rich, lively, cultured city but it had been affected by violence for centuries. Political and religious leaders clashed over power, wealth and status and often the citizens had to take sides.

Women and Gender Roles

Society was patriarchal: men were dominant and women were seen as inferior and expected to marry as young as twelve years old. Noblewomen like Juliet would have received some education but there was little freedom of choice in life for most women.

Queen Elizabeth I

The Queen while Shakespeare was writing. Elizabeth I made Protestantism the official religion of England, which angered many Catholics, and led to much conflict. Shakespeare may be referencing this in 'Romeo and Juliet', with the two warring families.

Nurses

Nurses were employed by wealthy families to feed and care for their children.

Fate

The belief that your life is mapped out for you, or 'written in the stars'. Many Elizabethans believed God decided your fate, and that astrology could help you identify your course in life.

**Key Themes in the Play**


Conflict, Power, Fate, Loyalty, Family, Religion, Love, Hatred, Violence, Death

If you enjoyed Romeo & Juliet then read these next:

Noughts and Crosses – Malorie Blackman
 Twelfth Night – William Shakespeare
 Daz 4 Zoe – Robert Swindells
 Wuthering Heights – Emily Bronte

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Prejudice	A liking or a dislike for someone or something, usually without good reason
Injustice	A lack of fairness
Exploitation	The action of treating someone unfairly in order to benefit from them
Vulnerability	Being exposed to the possibility of being attacked or harmed, either physically or emotionally
Thriller	Thriller is a genre of fiction which is characterised by giving readers heightened feelings of suspense, excitement, surprise, anticipation and anxiety.
Morality	The belief that some behaviour is right and acceptable and that other behaviour is wrong.
Trauma	A deeply distressing or disturbing experience
Tier 2 vocabulary	
Tier 2 vocabulary	Definition
Dual Narrative	A story that is told from two different perspectives.
Colloquialisms	Colloquial language is casual, informal and conversational.
Morality Tale	A story or narrative from which one can derive a moral/lesson about right and wrong.
Protagonist	The leading character in a novel.
Antagonist	The opponent of the protagonist in a novel.

Section 2: Key Skills/Strategies		
Use the CPEAT format to write analytically about Shakespeare's play.		
C	CONNECTIVE	Firstly, moreover, furthermore, in conclusion.
P	POINT	Use the wording of the question and identify what your paragraph will explore.
E	EVIDENCE	Find a relevant quotation and identify a language or structural device in it...
A	ANALYSIS	... and then explore the deeper meaning of this quote/technique and how it links to the question.
T	THINK INTENTION AND IMPACT	Explore the intentions of the author and the effect/impact of this on the reader.
Features of Thriller Novels		
Suspense, Surprise and Anxiety The two seemingly distinct narratives in Stone Cold draw closer together, making the reader feel anxiety for poor Link!	Climax Thrillers generally build towards a key moment, in which all of the suspense built over the narrative are released in one scene. This is the case when Shelter attempts to murder Link.	Plot Twists and Cliff-hangers A plot twist is when the narrative changes from what the reader would (e.g. Ginger's murder). Cliff-hangers are also used to keep the reader interested.

Section 3: Context and Themes
Robert Swindells Robert Swindells is an English writer who was born in Bradford on March 20 th 1939. He served in the Royal Air Force, before becoming a primary school teacher. It was at this time that he began writing novels, which he later took up full time. Swindells has stated that he feels 'constantly aware of the presence of injustice in the world', and that he tries to 'point out various manifestations of injustice... which exist in our society.' He draws upon these ideas in Stone Cold.
Homelessness The latest data shows that on any given night, there were an average of 2440 people sleeping rough in the UK. Remember this is on any given night, so the number who slept rough over the course of a year is likely to be many times more. A study by the Evening Standard showed that more than 7,500 people slept rough in London at some point in 2015. This included 880 under 25s.
The Armed Forces The British Armed Forces are the military services responsible for the defence of the United Kingdom. They include the British Army, the Royal Navy, the Royal Marines, and the Royal Air Force. Service members can be discharged from service for a variety of reasons. A dishonourable discharge (DD – language more often used in the US military) is handed down for an offence that the military considers to be exceptionally poor conduct. Some members are also discharged on physical/ mental health grounds.

Key themes in the novel Threat – Homelessness – Injustice – Hopelessness – Exploitation, Vulnerability-Prejudice
If you enjoyed Stone Cold then read these next: The Silence of Bones – June Hur One of Us is Lying – Karen M. McManus The Magpie Society – Zoe Sugg & Amy McCulloch A Good Girl's Guide to Murder – Holly Jackson

Section 1: Key Vocabulary

Tier 3 vocabulary

Definition

Autobiography	A self-written account of one's life
Bias	A disproportionate weight in favour of or against an idea or thing
Emotive language	Word choices that are intended to get an emotional reaction
Exposure	The state of having no protection from something harmful
Graphology	The visual appearance of a text
Survival	the state of continuing to live or to exist, especially after a dangerous event
Tabloid	A newspaper which uses informal language and many pictures

Tier 2 vocabulary

Definition

Alliteration	Using the same letter at the start of closely connected words
Hyperbole	Language used to exaggerate information
Metaphor	A comparison where something is described to be something it is not
Secondary story	A less important story featured on the front cover of a newspaper
Sensationalism	The presentation of stories in a way that is intended to provoke the reader

Section 2: New Key Skills/Strategies

This will help you understand and explore key questions.

P	Purpose	Is the writer trying to inform, entertain, explain, persuade or argue?
A	Audience	Who is the target audience? Who would this text appeal to?
F	Format	What are the key conventions of the text?
T	Tone	What is the general attitude or mood of the writing?

When comparing the similarities and differences of non-fiction texts, you will need to use comparative phrases to structure your response:

Similarities	Differences
Similarly In addition to Furthermore Moreover This is mirrored in Likewise A common feature is	Alternatively However Nevertheless In contrast to Conversely On the contrary On the other hand

TOP TIP: Use a table format to plan your comparison of two non-fiction texts and consider the following features:

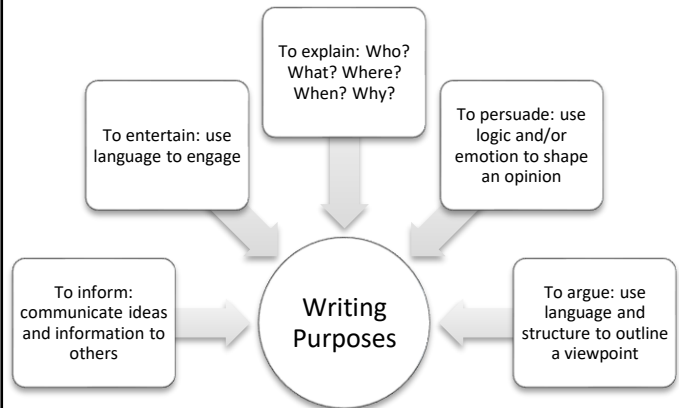
Text A	Text B

Language
Audience
Graphology
Tone
Structure
Purpose

Section 3: Reading and Analysing Non-Fiction Texts

Writing Purposes

When reading and analysing non-fiction texts, you will need to consider the purpose in which they are written.



Newspaper Report Layout

Newspaper Reports

Newspapers may include some or all of these features.

Name of Newspaper → THE NEWS TODAY

Headline → HOW MUCH IS THAT DOGGY IN THE WINDOW?

Reporter's Name → INSIDE: Our Opinion Your Letters Sports Shocker? HAVE You Grown Up?

Opening → EXCLUSIVE STORY by Andy Platt

Article → The dog of our momentary minds, it's a dog's life and here's how it's spent... Barry had been missing for two weeks and the owners were worried for his welfare. It is thought that the golden retriever had made a mistake and got stuck when the door closed behind him.

Sub-heading → Barry went missing on the day you heard he was gone. Barry finally returned home, looking exactly as you would expect a dog to look after being missing for two weeks. Barry's family were relieved to see him and he was given a warm welcome.

Picture → A photo of a golden retriever dog.

Caption → Barry the dog was missing for two weeks and has now returned home.

Advert → WORKED ABOUT LOADING OUR PETTY. Put a Black Petrol in your car and save money when you shop at the supermarket.

Extra Information → Barry is now the oldest dog in the world and is believed to be 100 million years old. He was a private life in Spain.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Indices	..powers - the plural form of index
Exponent	..another word for power
'..to the power of..'	..how many times a base is multiplied by itself
Place value	..the value of the column in which a digit is found
Significant figures	..the digits in a number with the largest place values
Fractional index	..a power that is a fraction, resulting in a root
Negative index	..a power that is negative, resulting in a reciprocal
Standard form	..a way of writing numbers using significant figures and powers of 10, used extensively in Maths, Science and Engineering, aka scientific notation
Surd	..the exact form of a number written as the square root of another number
Tier 2 vocabulary	Definition
Power	..the number of times a number is multiplied by itself
Order	..another word for power
Index	..another word for power
Base	..the number being raised to a power
Rounded/rounding	..making an approximation to a number's value by replacing some of the digits by zeros or by shortening a decimal
Significant	..important, specifically largest

Section 2: Prior Knowledge
At Primary School and in Year 7 (Spring 1 - Number 2) and Year 8 (Spring 2 - Number 1) you met: <ul style="list-style-type: none"> ➤ rounding to the nearest integer, ten, hundred, etc ➤ Rounding to a given number of decimal places ➤ Rounding to a given number of significant figures In Year 7 (Summer 2 - Number Sets) you met: <ul style="list-style-type: none"> ➤ Writing numbers using powers and index form
Section 3: New Knowledge/Skills
In this topic you will learn how to use the laws of indices; how to write numbers in standard form and how to interpret numbers written in standard form; how to calculate with numbers written in standard form; how to use your calculator with standard form.
1. Multiplying Common Bases $y^a \times y^b = y^{(a+b)}$ e.g. $3^4 \times 3^5 = 3^9$
2. Dividing Common Bases $y^a \div y^b = y^{(a-b)}$ e.g. $3^8 \div 3^3 = 3^5$
3. Powers of Powers $(y^a)^b = y^{a \times b}$ e.g. $(3^2)^4 = 3^8$
4. Power of 1 $y^1 = y$ e.g. $3^1 = 3$
5. Power of 0 $y^0 = 1$ e.g. $3^0 = 1$
6. Negative Powers $y^{-1} = \frac{1}{y}$ e.g. $3^{-1} = \frac{1}{3}$
7. Fractional Powers $y^{\frac{1}{2}} = \sqrt{y}$ e.g. $3^{\frac{1}{2}} = \sqrt{3}$
8. Standard Form Notation e.g. $320000 = 3.2 \times 10^5$ $0.00032 = 3.2 \times 10^{-4}$
9. Calculations With Standard Form e.g. $(3.2 \times 10^5) \times (4 \times 10^3) = 1.28 \times 10^9$ $(3.2 \times 10^6) \div (1.6 \times 10^4) = 2 \times 10^2$ $(3.2 \times 10^5) + (4 \times 10^4) = 3.6 \times 10^5$ $(3.8 \times 10^5) - (4 \times 10^4) = 3.4 \times 10^5$

Section 4: Questions

1. Simplify $3^4 \times 3^4$

Circle the answer

3^8 9^8 3^{16} 9^{16}

2. Work out $5^{12} \div 5^3 \times 5^2$

Circle the answer

5^6 5^8 5^9 5^{11}

3. Work out the value of $8^1 + 8^0$

4. Eva writes $4^2 \times 4^2 \times 4^2 = 4^{2 \times 2 \times 2} = 4^8$

What has Eva done wrong?

5. The table shows the populations of some countries.

Country	Population
Denmark	5.59×10^6
France	6.35×10^7
Greece	1.14×10^7
Malta	4.19×10^5
Netherlands	1.68×10^7
Russia	1.43×10^8
Spain	4.68×10^7

(a) Which of these countries has the lowest population?

(b) Which of these countries has a population approximately three times that of Denmark?

6. Simplify fully $5x^3y^2 \times 3x^4y^3$

9

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Equation	Two things are equal and can be solved to find an unknown.
Inequality	Used to compare two numbers.
Formula	A rule used to find a value.
Coefficients	A number used to multiply a variable.
Inverse	The opposite of an operation.
Integer	A whole number.
Linear equation	An equation that can be draw as a straight line.
Changing the subject	To rearrange a formula so that it is equal to a different term.
Simplify	To write in a simpler form by collecting common variables.
Tier 2 vocabulary	Definition
Term	A single number or variable
Expression	As sentence with a minimum of two numbers and at least one operation.
Subject	The unknown number we need to find the value of.
Rearrange	Change the order.
Greater than	When a value is bigger than another value.
Less than	When a value is smaller than another value.
Balance	When one side of an equation is the same as the other.
Equal	Represented by the '=' symbol. Means the same.
Solve	Numerical value that satisfies the equation.

Section 2: Knowledge/Skills

$$2x - 1 = 11$$

$$+1 \quad +1$$

$$2x = 12$$

$$\div 2 \quad \div 2$$

$$x = 6$$

$$3(2x + 6) = 2(x + 13)$$

$$6x + 18 = 2x + 26$$

$$-2x \quad -2x$$

$$4x + 18 = 26$$

$$-18 \quad -18$$

$$4x = 8$$

$$\div 4 \quad \div 4$$

$$x = 2$$

Make x the subject:

$$a = \frac{bx}{c}$$

$$\times c \quad \times c$$

$$ac = bx$$

$$\div b \quad \div b$$

$$\frac{ac}{b} = x$$

$$3x - 4 \geq 2(x + 1)$$

$$3x - 4 \geq 2x + 2$$

$$-2x \quad -2x$$

$$x - 4 \geq 2$$

$$+4 \quad +4$$

$$x \geq 6$$

$x \geq 6$ as integer values are: 6, 7, 8, 9, 10...

$$\text{Prove that } 3(x + 2) + 4(2x + 5) \equiv 11x + 26$$

$$3(x + 2) + 4(2x + 5)$$

$$\text{Expand the brackets} \quad 3x + 6 + 8x + 20$$

$$\text{Collect like terms} \quad 11x + 26$$

$$\text{Therefore } 3(x + 2) + 4(2x + 5) \equiv 11x + 26$$

Section 3: Problem solving questions

Spot the mistake in the working out:

$$3x + 5 \leq 4(x + 1)$$

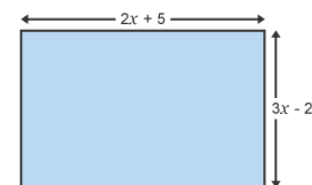
$$3x + 5 \leq 4x + 4$$

$$3x + 9 \leq 4x$$

$$9 \leq x$$



The diagram shows a rectangle.

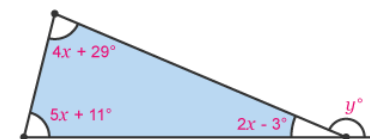


The **length** of the rectangle is $2x + 5$.

The **width** of the rectangle is $3x - 2$.

The **perimeter** of the rectangle is 46 cm.

Find the length and width of the rectangle.



Find the **size** of angle y .

Section 1: Key Vocabulary

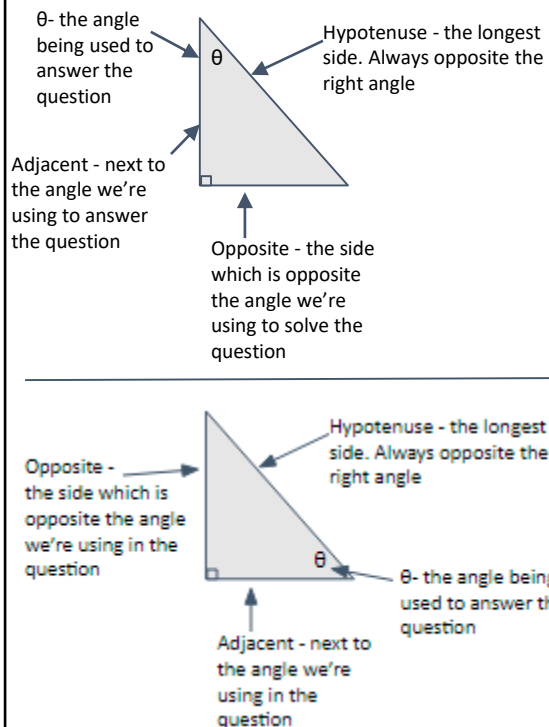
Tier 3 vocabulary	Definition
Sine (sin)	The ratio of the side opposite a given acute angle to the hypotenuse
Cosine (cos)	The ratio of the side adjacent to a given acute angle to the hypotenuse
Tangent (tan)	The ratio of the side opposite to a given acute angle to the side adjacent to the same angle
Hypotenuse	The longest side in a right angle triangle.
θ ('theta')	The eighth letter in the Greek alphabet ('theta') often used to denote angles
Acute	An angle less than 90°
Right angle	An angle of 90°

Tier 2 vocabulary Definition

Opposite	The side opposite to the acute angle marked
Adjacent	The side which is next to the acute angle marked
Angle	A measure of turn

Section 2: Labelling the triangle and choosing a ratio

Labelling the triangle



Trigonometry ratios

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

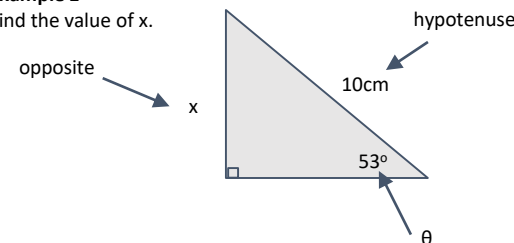
$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

SOH
CAH
TOA

Section 3: Example Questions

Example 1

Find the value of x .


~~SOH CAH TOA~~

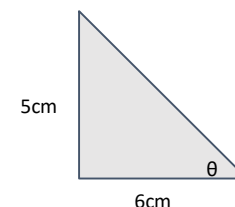
Select sine because we have no information about the adjacent

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\sin 53 = \frac{x}{10}$$

$$10 \times \sin 53 = 8.0 \text{ cm (to 1 dp)}$$

Example 2

Find θ


$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

$$\tan \theta = \frac{5}{6}$$

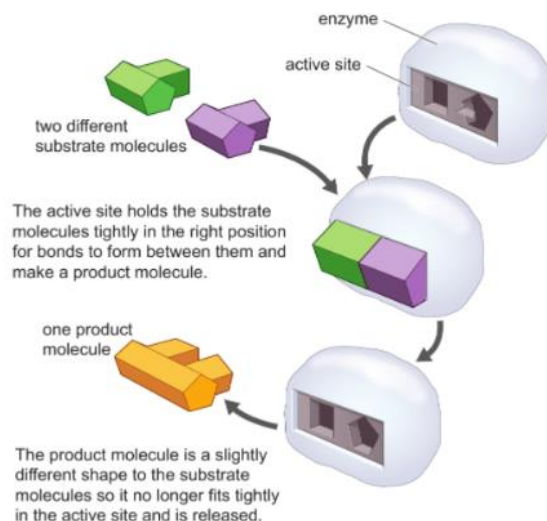
$$\theta = \tan^{-1}\left(\frac{5}{6}\right)$$

$$\theta = 39.8^\circ (1\text{dp})$$

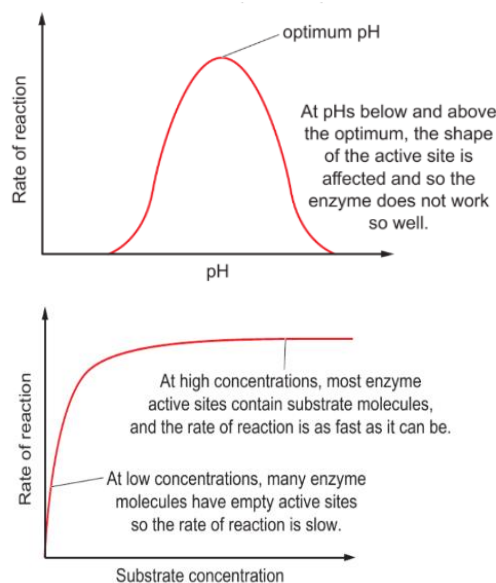
Tier 3 vocabulary	Definition
Catalyst	A substance that speeds up the rate of a reaction without being used up itself
Enzyme	A protein produced by living things that speeds up reactions without being used up itself (catalyst)
Substrate	A substance that is changed during a reaction
Active site	The space in an enzyme where the substrate fits during an enzyme controlled reaction
Product	A substance formed in a reaction
Monomer	A small molecule that can join with other molecules like itself to form a polymer
Polymer	A long-chain molecule made by joining molecules (monomers) together
Denatured	A denatured enzyme is one where the shape of the active site has changed so much that its substrate no longer fits and the reaction can no longer happen
Lock and key model	A model that describes the way an enzyme catalysis a reaction when the substrate fits within the active site of the enzyme
Optimum	the best conditions at which an enzyme's rate of reaction happens at the highest rate
Limiting factor	When the rate of reaction can not get any faster despite increasing one variable, because another variable is now holding it back

Section 2: New Knowledge/Skills

Lock and key mechanism



Factors affecting enzyme activity



Section 3 - core practical

Aim To investigate the effect of pH on the rate of digestion of starch by amylase.

Amylase is an enzyme made in the salivary glands in your mouth and in the pancreas. It catalyses the breakdown of starch into smaller sugar molecules. The iodine test identifies the presence of starch, but does not react with sugar.

A Drop one drop of iodine solution into each depression of the dimple tile.

B Measure 2cm³ of amylase solution into a test tube using a syringe.

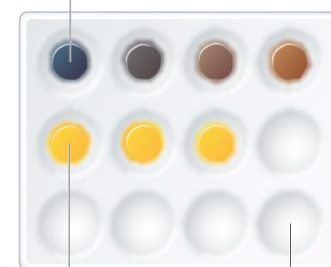
C Add 1cm³ of your pH solution to the test tube using a second syringe. Record the pH.

D Using a third syringe, add 2cm³ starch solution to the mixture and start the stop clock. Use the pipette to stir the mixture.

E After 20 seconds, take a small amount of the mixture in the pipette and place one drop of it on the first iodine drop on the tile.

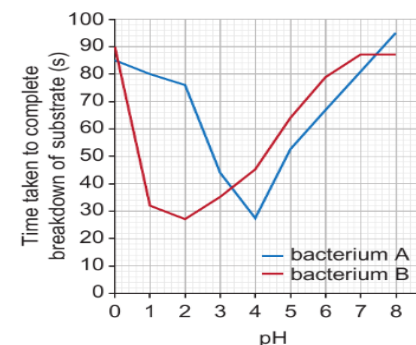
F If the iodine solution turns black, then there is still starch in the mixture and you should repeat step E (after 10 seconds). If it remains yellow, then all the starch is digested and you should record the time taken for this to happen

A blue/black colour indicates the presence of starch.



A yellow/orange colour that no longer changes indicates that the reaction is complete.

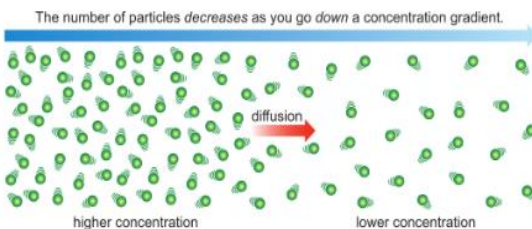
B iodine solution is used to indicate the presence of starch



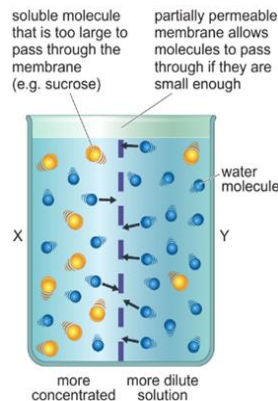
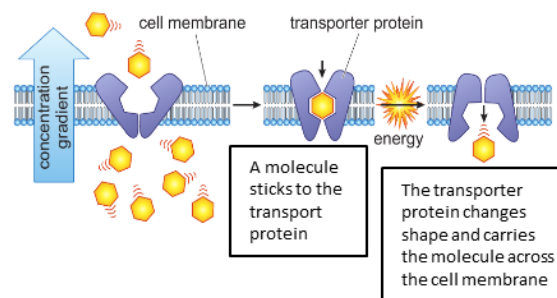
Tier 3 vocabulary	Definition
Diffusion	The movement of free moving particles from an area of a high concentration to an area of a low concentration
Osmosis	The movement of water molecules from an area of high water concentration to an area of low water concentration across a partially permeable membrane
Concentration gradient	The difference between two concentrations
Solute	A substance that dissolves in a liquid to make a solution
Solvent	A liquid in which a substance dissolves to make a solution
Partially permeable	A membrane that will allow certain particles to pass through it but not others. Another term for semi-permeable.
Active transport	The use of energy to transport substances against a concentration gradient (from a low concentration to a high concentration).
Passive transport	The transport of substances without the use for energy

$$\text{percentage change in mass} = \frac{(\text{final mass} - \text{initial mass})}{\text{initial mass}} \times 100$$

Section 2: New Knowledge/Skills

Diffusion**Osmosis**

The diffusion of small molecules of a solvent (water) across a semi-permeable membrane

**Active transport**

A willow tree grows from 2.27kg to 76.74kg. Calculate the percentage change in mass.

Section 3: Core practical

Aim To investigate how solution concentration affects percentage change in mass of potato strips due to osmosis. (*note other vegetables may be used*)

A Using the waterproof pen, label each tube with the name of one of the solutions. Place the boiling tubes in the rack.

B Dry a potato strip carefully by blotting it with a paper towel. Measure its mass on the balance.

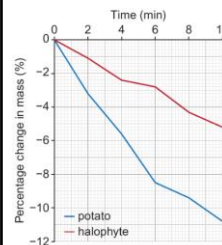
C Place the potato strip into one of the tubes. Record the label on the tube and the mass of the strip in your results table (see next page).

D Repeat steps B and C until all strips have been measured and placed in tubes.

E Carefully fill each tube with the appropriate solution, so that the potato is fully covered. Leave the tubes for at least 15 minutes.

F For each potato strip, use the forceps to remove it from its tube, blot dry on a paper towel and measure its mass again. Record all the masses in the results table.

Write a conclusion for the results in the table and the graph



Tube	A	B	C	D
Sucrose concentration (%)	0	10	30	50
Mass of potato at start (g)	4.81	5.22	4.94	4.86
Mass of potato at end (g)	4.90	4.96	4.39	3.69

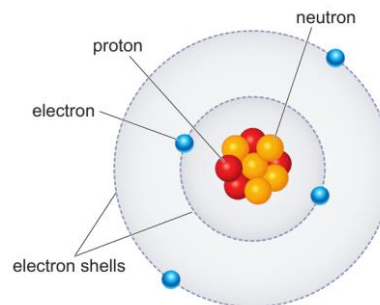
Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Abundance	Amount
Atomic number	The number of protons in the nucleus of an atom (symbol Z)
Mass number	The total number of protons and neutrons in the nucleus of an atom (symbol A).
Isotopes	Atoms of an element with the same number of protons (atomic number) but different mass numbers due to different numbers of neutrons.
Relative atomic mass (RAM)	The mean mass of an atom relative to the mass of an atom of carbon-12, which is assigned a mass of 12. The RAM of an element is the mean relative mass of the isotopes in the element.
Electron	Tiny particle with a negative charge that is found in shells around the nucleus of an atom
Electron shell	Area around a nucleus that can be occupied by electrons, usually drawn as a circle
Neutron	Electrically neutral subatomic particle found in the nucleus of most atoms.
Proton	A positively charged subatomic particle in the nucleus of all atoms.
Subatomic particles	The smaller particles that make up atoms – protons, neutrons and electrons.
Electron configuration	The arrangement of electrons in shells around the nucleus of an atom.

Section 2: New Knowledge/Skills

Atomic Structure

The nuclei of atoms contain subatomic particles called protons and most also contain neutrons.

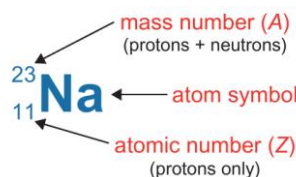


The masses of subatomic particles are very tiny. Instead of writing their actual masses in kilograms, we often use their relative masses. The mass of electrons is very small compared with protons and neutrons. Since a nucleus contains protons and neutrons, most of the mass of an atom is concentrated in its nucleus.

Subatomic particles	Relative mass	Relative charge	Position in atom
Proton	1	+1	Nucleus
Neutron	1	0	Nucleus
Electron	1/1835	-1	Shells

Calculating numbers of subatomic particles

The symbol for an atom can be written to show its mass number at the top and its atomic number at the bottom.



To calculate the numbers of subatomic particles in an atom use its atomic number and mass number

Number of protons = atomic number

Number of electrons = atomic number

Number of neutrons = mass number - atomic number

Section 3

Calculate Relative Atomic Mass

Chlorine naturally exists as two isotopes, chlorine-35 and chlorine-37. The abundance of chlorine-35 is 75% and the abundance of chlorine-37 is 25%.

To calculate the relative atomic mass of chlorine:

$$\text{RAM} = \frac{\text{total mass of the atoms}}{\text{the number of atoms}}$$

$$= \frac{(75 \times 35) + (25 \times 37)}{100} = 35.5$$

The answer is closer to 35 than to 37. This is because the chlorine-35 isotope is much more abundant than the chlorine-37 isotope.

Electron configuration

Electrons occupy shells starting with the innermost one

Electron shell	Max number of electrons
First	2
Second	8
Third	8

The electron configuration of sodium, Na is 2.8.1. This shows that it is in period 3 because it has 3 shells. It is in group 1 because it has 1 electron in the outer shell.

Homework task

40 Ca calcium 20	24 Mg magnesium 12	40 Ar argon 18
19 F fluorine 9	27 Al aluminium 13	31 P phosphorus 15

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
centripetal force	A force that causes objects to follow a circular path. The force acts towards the centre of the circle.
inertial mass	The mass of an object found from the ratio of force divided by acceleration.
action–reaction forces	Pairs of forces on interacting objects. Action–reaction forces are always the same size, in opposite directions, and acting on different objects. They are not the same as balanced forces.
equilibrium	When a situation is not changing because all the things affecting it balance out.
mass	A measure of the amount of matter that there is in an object. a scalar quantity.
weight	The force pulling an object downwards, it depends upon the mass of the object and the gravitational field strength.
Gravitational field strength	A measure of how strong the force of gravity is somewhere. It is the force on a 1 kilogram mass, so the units are newtons per kilogram (N/kg).
Free body diagram	A diagram with one simple object shown (circle or box) and all the objects acting on that object.
Resultant force	One force (value and direction) that represents all the forces on an object.
Balanced forces	The resultant force equals zero.

Tier 2 vocabulary	Definition
Velocity	The speed of an object in a particular direction.
acceleration	A measure of how quickly the velocity of something is changing.

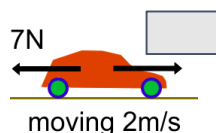
Section 2: New Knowledge/Skills

Newton's laws of motion

1st Law

If the resultant force on an object is zero (balanced forces), then it will;

- Be stationary
- Or moving at a constant velocity



What is the missing force of Thrust the car is producing?

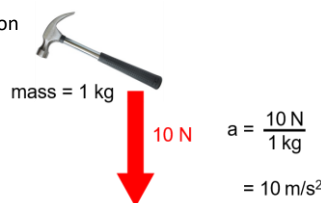


2nd Law

The amount an object accelerates is affected by the size of the force acting on and the object's mass.

These are shown in the equation;

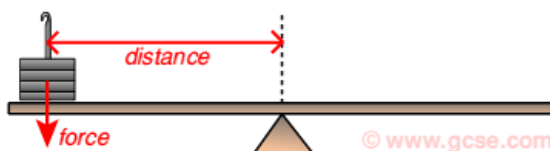
Force = mass x acceleration



Moments

The turned force on an object

Moment = force x perpendicular distance from pivot

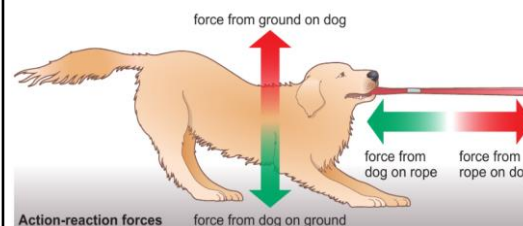


Section 3: Other subject specific things

3rd Law

Forces come in pairs. The action force and reaction force. These are;

- Equal in size
- Opposite in direction



Mass and weight

The mass of an object is a measure of how much matter it has. The units are kg.

Weight is a measure of the pull of gravity on an object and depends on;

- The mass of the object
- The strength of gravity

Weight = mass x gravitational field strength

If your mass is say 50kg and you were to travel to the Moon you would still have the same mass but your weight would be less because there is a lower gravitational field strength there.

Density

Density is the amount of mass in a certain volume and can be calculated by;

Density (kg/m³) = $\frac{\text{Mass (Kg)}}{\text{Volume (m³)}}$



$V_{\text{box}} = \text{length} \times \text{width} \times \text{height}$

$V_{\text{box}} = l \times w \times h$

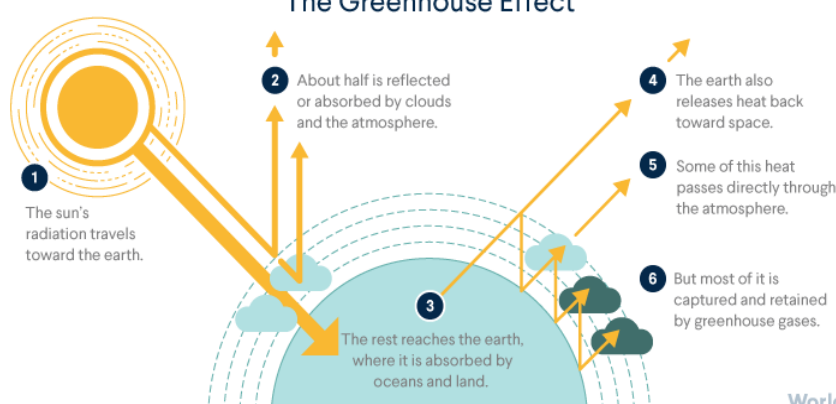
Volume of irregular shapes can be measured using a Eureka beaker

Tier 3 vocabulary	Definition
Climate change	How the long term average atmospheric conditions change over time.
Conservation	Managing nature to protect it from harm or putting it back how it was (restoration).
Ecosystem	The living and non-living parts of an environment and how they are connected.
Endangered	When a species is threatened and at risk of becoming extinct.
Enhanced greenhouse effect	How people's activities add gases to the atmosphere and this causes the climate to change.
Global warming	The gradual increase in the temperature of the Earth's atmosphere
Greenhouse effect	The process whereby gases trap heat in the Earth's atmosphere, causing temperatures to increase.
Habitat	The place where an animal lives.
Non-renewable energy	Power sources that will run out eg. fossil fuels such as coal.
Recycling	Reprocessing a product or some of its parts to make something else.
Renewable energy	Alternatives to fossil fuels eg. solar, wind. These won't run out.

Tier 2 vocabulary	Definition
Sustainability	Meeting the needs of the present without compromising future generations to meet their own needs
Social	Things affecting people and their community.
Economic	Things relating to money.
Environmental	Things relating to our surroundings.

Section 2: New Knowledge

The Greenhouse Effect



1 The sun's radiation travels toward the earth.

2 About half is reflected or absorbed by clouds and the atmosphere.

3 The rest reaches the earth, where it is absorbed by oceans and land.

4 The earth also releases heat back toward space.

5 Some of this heat passes directly through the atmosphere.

6 But most of it is captured and retained by greenhouse gases.

World101

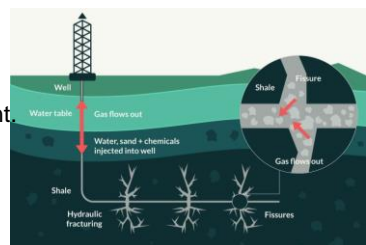
Palm oil

- + Makes lots of money, creates jobs and provides money for governments and businesses.
- Destroys the natural rainforest and the habitats of animals eg. orangutans. Takes away the biodiversity and replaces it with monoculture (one type of plant)

Fracking

For –Gas supply
Relatively cheap
Creates jobs
Make places more independent

Against - Water pollution
Earthquake risk
Destroys habitats
Locals may not benefit.



Renewable energy in Germany

Solar power in Freiburg eg. panels on football stadium and houses.

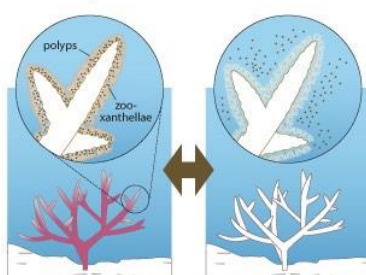
Wind power in Feldheim eg. 55 turbines.

Endangered animals

Loss due to hunting, for medicines, deforestation, climate change.

Coral reefs

Healthy coral Bleached coral



Eg. Great barrier Reef, Australia

At risk due to :
Fishing, shipping, climate change, tourism and crown of thorns starfish.

Section 3: Geographical Skills

A geographical investigation has seven stages:

1. Decide on the hypothesis.
2. Plan the data collection.
3. Collect the data.
4. Present the results.
4. Analyse the results.
6. Conclusion.
7. Evaluation.

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Aryan	People who settled in northern Europe thousands of years ago. Nazis believed they were the 'master race'
Anti-Semitic	Being hostile or prejudice to Jews
Holocaust	Usually used to describe the murder of millions of Jews by the Nazis
Concentration Camps	Places where large numbers of people were kept as prisoners under armed guard.
Death camp	Killing centres established by the Nazis
Ghetto	Areas in towns or cities where Jews were separated by force.
Einsatzgruppen	Special units that conducted mass shootings of Jews
Terrorism	The use of violence to achieve political aims
Holy Land	Land on the eastern edge of the Mediterranean around Jerusalem

Tier 2 vocabulary	Definition
Prejudice	An unfair opinion or judgement or feelings towards someone
Palestine	Country belonging to Palestinian Arabs in the Holy Land
Israel	Jewish state in the Holy Land

Section 2: New Knowledge**Events of World War Two**

September 1939- Germany invades Poland. Britain declares war on Germany.

May 1940- The British evacuate their army from Dunkirk.

August 1940- The Battle of Britain begins.

June 1941- Germany invades the USSR.

December 1941- The Japanese attack Pearl Harbor. The USA declares war on Japan and Germany.

August 1942- Battle of Stalingrad- USSR begins to push the Germans back.

June 1944- D-Day- The allies invade France.

May 1945- Germany surrenders.

August 1945- Atomic bombs are dropped on Hiroshima and Nagasaki. Japan surrenders.

The Persecution of the Jews

April 1933 - Official one day boycott of Jewish shops, lawyers and doctors all over Germany.

1934- Anti-Jewish propaganda increased.

September 1935- The Nuremberg Laws- marriage and sex between Jews and Aryans is banned. Jews no longer citizens.

1936- Anti-Jewish signs are taken down during the Berlin Olympics.

1938- Jewish doctors, dentists and lawyers can't treat Aryans. Jews have to have a red letter J on their passport.

November 1938- Kristallnacht- Nazis destroyed synagogues, Jewish homes and shops.

1939- All Jews had to add the name Sarah or Israel.

September 1939- Germany invades Poland and begin to create ghettos.

June 1941- Einsatzgruppen began the mass murder of Jews, Roma and Sinti using bullets.

1941- The mass murder of Jews and other groups in death camps.

1941- The Wannsee conference where leading Nazis discuss the final solution.

1945- The liberation of death camps.

Section 3: Enquiry Questions

What event or events would be considered turning points of WW2?

How did anti-Semitism turn into mass murder?

Why was there violence in the Holy Land?

Section 4: Source Analysis

When analysing sources consider the following:

Content- What is happening in the picture, who are the key people, what message is it giving?

Context- What else is happening at the time?

Purpose- Why was this photograph taken?

Provenance- Who took the photo? Who is it the audience?



Picture from 1943

Section 5: Interpretations

How and why historians and others have interpreted the same events and developments in different ways.

For example:

Some historians think Hitler and the leading Nazis were responsible for the Holocaust. It was their idea and they ordered it to be carried out.

Other historians think the Holocaust only happened because of the actions of hundreds of thousands of people from across Europe. Some killed, other just stood and it happened.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Evidence	A thing or set of things helpful in forming a conclusion or judgment
Proof	Any evidence that establishes or helps to establish the truth of something.
Interpretation	The meaning assigned to another's creative work, action, behaviour, etc.
Argument	A course of reasoning aimed at demonstrating truth or falsehood
Theology	The study of the nature of God and religious truth.
Allah	The Arabic word for God in Abrahamic religions.
Premise	Statement from which another is inferred or follows.
Conclusion	The proposition established from one or more premises.
Valid/invalid	Containing premises from which the conclusion may logically be derived or not: <i>a valid/invalid argument</i> .
Suffering	Pain or distress caused by injury, illness or loss. Suffering can be physical, emotional/psychological or spiritual.
Enlightenment	Knowledge, wisdom, or awakened intellect, of a Buddha. A sudden insight into a transcendental truth or reality.
Karma	The totality of a person's actions and conduct during successive incarnations, that influence their rebirth.
Natural Suffering	Pain or distress caused by natural events such as earthquakes, flood, disease, etc.
Moral suffering	Pain or distress caused by the actions of humans such as killing, theft, etc.

Section 2: Key Questions
<p>Facts, beliefs and opinions</p> <p>Describe the difference between facts, beliefs and opinions. Find out more about the place of interpretation and viewpoints in our views of the world. Consider questions such as: what do we mean by evidence, proof or likeliness in relation to religious questions? Apply words like 'evidence', 'proof' 'interpretation' and 'argument' accurately in discussions about God.</p>
<p>The Kalam Argument</p> <p>Describe the Islamic argument that God must exist because the universe had a beginning, and must have had a divine cause (the Kalam Cosmological argument). Find out more about Muslim beliefs in God / Allah. Consider questions about the Muslim experience of prayer, nature and theology which lead Muslims to be sure God / Allah is real. Think of reasons why some people think it is rational and logical to believe in God.</p>
<p>Buddhist views on God</p> <p>Describe Buddhist understandings of the importance of reducing suffering, and the unimportance of dogma about God. Find out more about the Buddhist view of life. Consider questions such as: what matters most to Buddhists? Why did the Buddha refuse to answer 'God-questions'? Think of reasons why some people don't care about God at all.</p>
<p>Buddhist views on Suffering</p> <p>Think about the story of the enlightenment of the Buddha and the effect this had on his life. Think about the idea of being 'enlightened' in life for yourselves. Consider questions about the causes of suffering and how to reduce suffering. Think of reasons why Buddhists seek to live without relying on God, but relying on their own effort, mindfulness and practice.</p>

Section 3: Assessment Essay Question:
<p>Assessment Essay Question:</p> <h2>Do we need to prove God's existence?</h2> <p>In answering the question - you should consider:</p> <ul style="list-style-type: none"> What's the difference between facts, beliefs and opinions? Why do Muslims believe in God? Do they believe God can be proven to exist? Why did the Buddha think belief in God was unimportant? In Buddhist thinking, what can save us from pain and suffering? <p>Skills checklist – As you write your essay check that you have included...</p> <p>Knowledge – facts and religious or non-religious beliefs,</p> <p>Impact of belief – how it affects what people think and do,</p> <p>Specialist terms,</p> <p>Sources of authority – where people get their ideas/beliefs from – quotations,</p> <p>Judgement – how strong, valid or sound the argument is,</p> <p>Opinion – at least 2 different points of view</p>

Section 1: Key Vocabulary

Throughout your homeworks/classwork - find the definition of the following words.

Tier 3 vocabulary**Definition**

Life

Purpose

Death

Humanist

Hedonist

Creed

Euthanasia

Abortion

Sanctity of Life

Hell

Saviour Siblings

Funerals

Heaven

Section 2: Sources of Authority

John 5:24-25

John 5:28-29

John 14:1-7

Corinthians 15:51-576

Revelations 21:1-4

Nicene Creed

Section 2: New Knowledge/Skills**Key Questions:**

What do people believe about life?

What do people believe about the afterlife?

What is the sanctity of life?

What is abortion?

What is euthanasia?

Has medicine gone too far?

Why do we have funerals?

What do Buddhists believe about life and death?

Does death matter to Humanists?

Is this life hell?

Abortion:**UK Law**

Legal up to 24 weeks (in some circumstances) with the agreement of two doctors.

Christianity

Some argue we should be compassionate and permit abortion if the mothers life is in danger. Other Christians say it is a moral evil because every life is a gift from God.

Euthanasia:**UK Law**

Illegal and considered either murder or manslaughter and carries a life in prison penalty.
Hospices and palliative care offer pain relief and comfort as end of life care.

Christianity

Christians are generally against Euthanasia - "Do not commit murder" but some argue "the most loving action"

Section 3: Assessment Essay Question:**Assessment Essay Question:****Is Death the End?**

In answering the question - you should consider:

- A range of beliefs regarding the possibility of life after death.
- Consider where these beliefs come from?
- the importance of this life compared to the hope of an afterlife. (Remembering to consider different views).
- The impact of differing views of life after death on how individuals view earthly life.
- Similarities and differences between Humanists and Christian funeral services.
- Similarities and differences between Buddhist, Christian and Humanists on the purposes of life.

Skills checklist –

As you write your essay check that you have included...

Knowledge – facts and religious or non-religious beliefs,

Impact of belief – how it affects what people think and do,

Specialist terms,

Sources of authority – where people get their ideas/beliefs from – quotations,

Judgement – how strong, valid or sound the argument is,

Opinion – at least 2 different points of view

Section 1: Key Vocabulary/Questions

Tier 2 vocabulary	Definition
Imperfect tense	used to say 'used to' do something or to describe something in the past, 'was, were'.
Comparative	used to compare two or more things
Adjectival agreement	Adjectives 'agree' with the subject in gender and number
Intensifiers	An adverb or adverbial phrase that strengthen the meaning of an adjective
Cognate	a word that is similar in spelling, pronunciation and meaning

Questions	Translation
1. Où vas-tu normalement le weekend? Qu'est-ce que tu fais? C'est comment et pourquoi?	Where do you usually go at the weekend What do you do? What is it like?
2. Où es-tu allée le weekend dernier? Qu'est-ce que tu as fait? C'était comment?	Where did you go last weekend? What did you do? What was it like?
3. Où vas-tu aller le weekend prochain? Qu'est-ce que tu vas faire? Ça va être comment et pourquoi?	Where will you go next weekend? What will you do? What will it be like?
4. Qu'est-ce que tu faisais quand tu étais petit(e)?	What did you used to do when you were young?
5. C'était comment?	What was it like?
6. Qu'est-ce que tu aimais regarder/manger.....?	What did you used to like to watch/eat.....?
7. Tu étais comment?	What were you like?

Section 2: Grammar

The imperfect tense

Use:

It is used to say 'used to' do something
e.g. Je **jouais** avec mes amis = I **used to** play with my friends
or to **describe** something in the past
e.g. Mon prof **était** gentil = My teacher **was** kind

Formation:

Take the -ons of the nous form in the present tense and add these endings:

Nous portons	portons → port-
je portais	I used to wear
tu portais	you used to wear
il/elle/on portait	he/she/we used to wear
nous portions	we used to wear
vous portiez	you used to wear
ils/elles portaient	they used to wear

Comparative

Use the comparative to compare two or more things:

plus + adjective (+que...)	more... (than...)
moins + adjective (+que...)	less... (than...)

The adjective must agree with the first noun mentioned

☆ **Ma prof** de science est **plus** sérieuse que mon instituteur

m. singular	f. singular	m. plural	f. plural
amusant	amusante	amusants	amusantes
ennuyeux	ennuyeuse	ennuyeux	ennuyeuses
facile	facile	faciles	faciles

Plus or **moins** can also be used without que:

☆ Les cours de collège sont **plus** stimulants

☆ meilleur/meilleure/meilleurs/meilleures means better

☆ **Remember, adjectives must agree with the noun.**

Section 3: WAGOLL

Quand j'étais petit j'avais les cheveux courts et blonds et d'habitude j'étais sage et mignon. Pourtant mon amie était rebelle et elle était plus méchante que moi! Je portais souvent une **casquette** verte et j'adorais mes baskets blanches. Quand j'étais triste je restais dans ma chambre où je lisais beaucoup **tandis que** mon frère préférait jouer de la guitare car il voulait être musicien. Maintenant il veut être acteur parce qu'il adore faire du théâtre.
Mon école primaire était assez petite mais le bâtiment était super moderne. J'adorais les cours, ils étaient plus intéressants que les cours au collège et les instituteurs étaient moins sérieux que mes profs. Au collège la **journée** scolaire est trop longue mais les repas de la cantine sont meilleurs que les repas de la cantine de l'école primaire.



Ma camarade au collège s'appelle Naima et elle est née en Syrie. Il y a trois ans, elle a quitté son pays à cause de la guerre. Elle habitait dans un petit village mais c'était vraiment dangereux donc elle était malheureuse. Maintenant elle apprend le français et elle écoute de la musique tout le temps. En fait, elle veut être musicienne, à l'avenir elle sera une chanteuse magnifique! Elle est plus heureuse qu'avant. Quelle chance!

☆ The words in **bold** are new to you. Can you work out what they mean through the context?

À savoir:

Il y a means **there is/are** but when you add a time period it means **ago**.

e.g.

il y a trois cents élèves (there are 300 pupils)

il y a trois ans, j'aimais la musique pop. (**three years ago**, I used to like pop music.)

☺ Lots of fairy tales use the imperfect tense to describe what was happening once upon a time.....**il était une fois**
Click on the code and see if you can follow the story.



FRENCH Y9 Word list Spring 1.A		
inf	porter	to wear/wearing
nf	une chemise	a shirt
nf	une robe	a dress
nf	une jupe	a skirt
nm	un pull	a jumper
nf	une veste	a jacket
nm	un pantalon	trousers
nfpl	des chaussettes	socks
nfpl	des chaussures	socks
nfpl	des baskets	trainers

FRENCH Y9 Word list Spring 1.B		
conj	quand	when
vb	j'avais	I used to have
vb	j'étais	I was/used to be
vb	je n'étais pas	I wasn't
vb	je portais	I used to wear
vb	j'allais	I used to go
vb	je jouais	I used to play
vb	je faisais	I used to do/make
vb	j'aimais	I used to like
vb	je n'aimais pas	I didn't used to like

FRENCH Y9 Word list Spring 1.C		
adj	mignon(ne)	cute
adj	moche	ugly
vb	je préférais	I used to prefer
adj	préféré(e)	favourite /preferred
adj	démodé(e)	old-fashioned
adj	original(e)	original
adj	originaux	original (plural)
	de taille moyenne	average size
vb	il y avait	there was/were
vb	il n'y avait pas de/d'	there wasn't/weren't

FRENCH Y9 Word list Spring 1.D		
	plus + adjective que	more...than
	moins + adjective que	less...than
	aussi + adjective que	as... as
vb	il était...	he/it was
vb	elle était...	She/it was
nm	le bâtiment	building
imp	j'étudiais	I used to study
imp	j'adorais	I used to love
imp	je détestais	I used to hate
adj	patient/impatient	patient/impatient

FRENCH Y9 Word list Spring 1.E		
adv	autrefois	in the old days
adv	maintenant	now
vb	il y a (cinq ans)	(5 years) ago
vb	on achète	we buy
vb	on achetait	we used to buy
vb	on écoute	we listen
vb	on écoutais	we used to listen
vb	on utilise	we use
vb	on utilisait	we used to use
adv	jeune	young

FRENCH Y9 Word list Spring 1.F		
nmpl	les jeunes	young people
prep	à cause de	due to
prep	grâce à	thanks to
inf	quitter	to leave/leaving
vb	on a quitté	we left
nf	la guerre	war
nf	la pauvreté	poverty
nf	la famine	famine
nf	la persécution	persecution
vb	j'habitais	I used to live

REVISION:

Scan the QR code below to access the word lists on Quizlet!

This QR code links to all [the French Y9 Quizlet sets.](#)



Phonics: en/an	
bâtiment	en France
maintenant	dépenser
rencontrer	attendre

Phonics: ain	
train	pain
prochain	Saint

Phonics: é/er/ai/ez	
joué	jouais
J'allais	vous jouez
voyagé	voyager

Phonics: oi	
moins	trois
autrefois	loisirs
Je bois	fois

Phonics: au/eau	
aussi	chaussures
originaux	à cause de

Phonics: eu/ e	
jeune	yeux
je	cheveux

Phonics: qu	
question	que
quel	qui

Phonics: i/ y	
il y a	chemise
aussi	il ira

Phonics: u	
plus	truc
pull	jupe

Section 1: Key Vocabulary/Questions

Tier 2 vocabulary	Definition
Conditional	<i>e.g. ich würde</i> This is used to say what you <i>would</i> or <i>would not</i> do.
Word Order 3 (WO3)	used in German with a subordinating conjunction. The first verb in the clause is moved to the end of that clause
WO2 Inversion	<i>e.g. Später möchte ich....</i> Where a sentence starts with an adverb, the subject pronoun and verb are swapped
clause	A group of words containing a subject and a verb
subordinate clause	a clause connected to a main clause that doesn't make sense by itself
Question	Translation
1. Was wirst du nach deinen GCSEs machen?	What will you do after your GCSEs?
2. Wirst du studieren?	Will you study?
3. Was möchtest du in 10 Jahren machen?	What would you like to do in 10 years?
4. Was möchtest du auf jeden Fall/auf keinen Fall machen?	What would you definitely (not) like to do?
5. Würdest du gern im Ausland wohnen?	Would you like to live abroad?
6. Welchen Job möchtest du, wenn du älter bist und warum?	Which job would you like when you're older and why?
7. Was für eine Person bist du?	What sort of person are you?
8. Hast du schon freiwillige Arbeit gemacht?	Have you ever done voluntary work?

Section 2: Grammar

Conditional

ich würde	+infinitive
du würdest	...studieren
er/sie/es/man würde	...wohnen
wir würden	...arbeiten
ihr würdet	
sie/Sie würden	

The conditional is used with an infinitive at the end of the sentence.

Ich würde im Freien arbeiten, aber ich würde nie in London wohnen..
I would work outside but I would never live in London.

WO2: Inversion

After an adverb, remember to put the verb second.

e.g.
1 2 3
Ich möchte auf jeden Fall im Ausland wohnen.
1 2 3
Auf jeden Fall möchte ich im Ausland wohnen.

WO2: Inversion

After a subordinating conjunction, remember to put the following verb at the end of the clause.

e.g.
Ich möchte auf jeden Fall im Ausland wohnen, wenn ich älter bin.

Wenn ich älter **bin**, *möchte ich* auf jeden Fall im Ausland wohnen.

Section 3: WAGOLL

Nach meinen GCSEs werde ich bestimmt in die Oberstufe gehen, um mein Abitur zu machen. Dann würde ich gern eine Lehre machen. Ich werde mich wahrscheinlich nicht um einen Studienplatz bewerben, weil ich Geld verdienen möchte.

In zehn Jahren möchte ich vielleicht als Bauarbeiterin berufstätig sein, weil ich sehr praktisch bin. Ich möchte auf jeden Fall nicht nur reich, sondern auch erfolgreich sein. Ich werde auf keinen Fall im Büro arbeiten, denn das ist sowohl langweilig als auch ruhig!

Hoffentlich werde ich in Cornwall wohnen. Ich glaube, die Landschaft dort ist erstaunlich, aber die Mieten sind sehr hoch. Dann würde ich gern nach London umziehen, um die Hauptstadt zu erfahren.

Letztes Jahr habe ich bei einer Wohltätigkeitsveranstaltung geholfen. Das habe ich freiwillig gemacht. Viele Leute haben viel Geld gespendet. Das war wirklich cool!

Gut zu wissen!

There are actually 6 modal verbs. Here is an *Eselsbrücke* for you to remember them!
Knowing Six Magic Modals Does Wonders
können, sollen, mögen, müssen, dürfen, wollen

e.g.
man kann, man soll, man möchte, man muss, man darf, man will

Um Geld zu verdienen, muss man arbeiten.
In order to earn money, you have to work.

Man kann im Ausland arbeiten, um den Lebenslauf zu verbessern.
You can work abroad, in order to improve your CV.

Ich will einen Job finden, um neue Leute kennenzulernen.
I want to find a job, in order to meet new people.

GERMAN Y9 Word list Spring 1.A		
	das Abitur	A-level
	die Ausbildung	training, education
		work experience
	das Arbeitspraktikum	placement
	sich um...bewerben	to apply for...
	der Führerschein	driving license
	der Lebenslauf	CV
	die Lehre	apprenticeship
	der Nebenjob	part time job
		sixth form
	die Oberstufe	(equivalent)
	der Studienplatz	university place

GERMAN Y9 Word list Spring 1.B		
	der/die Angestellte	employee
	Apotheker*in	pharmacist
	Bauarbeiter*in	builder
	Bauer/Bäuerin	farmer
	Beamte	civil servant
	berufstätig sein	to be employed
	beschäftigt sein	to be busy
	besitzen	to own
	Klempner*in	plumber
	LKW-Fahrer*in	lorry driver

GERMAN Y9 Word list Spring 1.C		
	das Büro	office
	im Freien	in the open air
	draußen	outside
	die Schichtarbeit	shift work
	das Vorstellungsgespräch	job interview
	der Wunsch	wish
	die Fremdsprache(n)	foreign language(s)
	das Gehalt	salary
	der Lohn	wage
	arbeitslos	unemployed

GERMAN Y9 Word list Spring 1.D		
	bestimmt	definitely
	auf jeden Fall	definitely
	hoffentlich	hopefully
	wahrscheinlich	probably
	vielleicht	maybe, perhaps
	auf keinen Fall	no way
	niemals	never ever
	ich glaube	I think, I believe
	ich würde	I would
	ich würde gern	I would like

GERMAN Y9 Word list Spring 1.E		
	Einwohner	inhabitants
	die Gegend	area
	die Hauptstadt	capital city
	die Insel	island
	die Landschaft	countryside
	die Miete	rent
	der Stadtrand	outskirts of town
	die Umgebung	surroundings
	umziehen	to move (house)
	der Wald	forest

GERMAN Y9 Word list Spring 1.F		
	freiwillig	voluntary, voluntarily
	Freiwillige	volunteer
	spenden	to donate
	gespendet	donated
	helfen (+ dat)	to help
	geholffen	helped
	sorgen für	to care for
	gesorgt	cared
	die Wohltätigkeit	charity
	die Veranstaltung	event

REVISION: Scan the QR code to access the word lists on Quizlet!

This QR code links to all [the German Year 9 QUIZLET sets.](#)



Phonics: st, sp	
Studienplatz	spenden
Stadtrand	spielen
Oberstufe	Fremdsprache
aufstehen	Spion

Phonics: s (followed by vowel)	
sein	sich
Insel	sondern
sieben	seit
besitzen	aussehen

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Audience	The person/people who the document is aimed at.
Fitness for Purpose	The design and production of a document which meets the needs of the person who needs it.
Content	The pieces of information within a document. These could be text, image, diagram, maps, sound.
House Style	The layout, fonts, colour and images chosen by a particular business or organisation to represent its identity.
Alignment	The position of text, images and content within a document.
Proofreading	The task of checking through a document for any errors before submitting it to print/handing in.
Orientation	The direction the document is displayed in. Landscape (Sideways) Portrait (Lengthways)
Line Spacing	The amount of white space between typed text on a document.
Publication	The type of document that has to be produced

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Check	To identify any issues and errors with work.
Compose	To produce a document piece of work.
Obtain	To gather and use information.
Repeat	To copy a similar action from before.
Research	To gather knowledge about a subject.

Section 2: New Knowledge**Word Processing**

Word Processing - This is the name given to a document which is created on a computer, usually using a piece of software such as Microsoft Word or Google Docs. Word processed documents contain primarily text based characters.

Fonts - Fonts are the name for characters word processed onto a document. Arial and Times New Roman are types of font.

Font Sizes - Word processed documents are written in fonts no bigger than size 12.

Formatting Tools - Word processed documents can be enhanced using formatting tools. These included *Italics*, **Bold** and underlining.

Spell Checking - all word processed documents should be checked for any spelling errors before submitting to final publication.

Margins - Margins are areas of blank space at the horizontal and vertical edges of word processed documents. These make the document easier to read.

Print Preview - This tool is used to check what a document looks like before it is sent off to print at a printer.

Presentation

Slides - A slide is the name of the blank space which information goes onto in a presentation.

Layout - Slides can be set into different design choices dependent on the content. This is called the layout.

Animations - This is the name given to content, typically images that move on a slide.

Transitions - Transitions are effects put onto slides to make content move automatically based on different timings. Transitions keep the viewer's attention.

Graphics

Pixels - Graphic images are produced using tiny dots of colour which are called pixels.

Transparency - Graphic images can be set up on canvas setups with no background colour. These are known as transparencies.

File Format - this is the name of the type of graphic file and what it is saved as. JPEG, PNG and BMP are typical graphical file formats.







Desktop Publishing (DTP)

WYSIWYG - **What You See Is What You Get**, is a term in Desktop Publishing (DTP) for showing what is on screen is what it will look like when it is printed or exported.

Publishing Formats - DTP files can be saved as images or exported as a PDF ready for printing or viewing online.

Section 3: Useful Subject Information

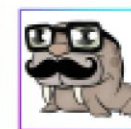
Useful keyboard shortcuts for the project tasks:

		
Open CTRL + O	Save CTRL + S	Print CTRL + P
		
Cut CTRL + X	Copy CTRL + C	Paste CTRL + V

In Desktop Publishing (DTP), Word processing and Graphics we work with images. The quality of images depends on the resolution of the image used. High resolution images are often better quality as they contain more detail, but they create larger file sizes through increased memory usage. Lower quality images take up less memory on the computer but they lack the detail.



low resolution



high resolution

Key Timelines in the History of Word Processing, Desktop Publishing (DTP) and Graphics:

Word Processing Software

1978 - first commercial word processing package formally released called WordStar.

1990 - Microsoft Office suite released on sale.

2006 - Google Docs suite released online.

Graphics Software

1985 - Microsoft Paint first formally released as part of Windows 1.0.

1990 - Photoshop 1.0 first formally released on sale.

Desktop Publishing Software

1991 - Microsoft Publisher desktop publishing package goes on sale.

PE: Netball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Holding Space	Using your body to protect a space you want to move into.
Interception	Deflecting or catching the ball whilst it is on route to another player.
Repossession	Catching, dropping and then re-catching the ball.
Rebounding	Trying to reclaim the ball after an attempted shot at goal.
Driving onto the ball	Sprinting towards the ball when receiving a pass.
Throw-up	Method used to restart the game after two players simultaneously commit a foul.
Double Lead	Two players running out at an angle in different directions to give two passing options to a player in possession of the ball.

Section 2: New Knowledge/Skills

Within the netball module you will learn about :

Tactics used at the centre pass – both in terms of attacking and defending the centre pass in order to try and maintain/win possession of the ball. Think about why it is important to keep possession of the ball during your own team's centre pass.

The correct technique for defending a shot at goal. Know where to move to in order to rebound a shot and then try to regain possession of the ball. Why is this important?

Holding space – you will be able to demonstrate the correct technique and know when to throw the ball to a player who is holding space. Can you identify when this technique would be effectively used?

Intercepting the ball - focusing on the correct technique and being able to intercept a pass without causing contact. Can you identify key points of how to carry out this technique?

Driving effectively onto the ball by running out at an angle, using a change of speed and direction and looking at double leads to help maintain possession of the ball.

PE: Hockey

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Penalty corner	An attacking set piece with the attackers lined up outside the circle and the defenders on the goal line.
Injection	Passing the ball into play from the penalty corner.
25m hit	Hockey's version of football's corner when a defender hits the ball behind their own goal line.
Jab tackle	A one-handed effort to reach in and knock the ball away from a dribbling player.

Section 2: New Knowledge/Skills

In Year 9 Hockey, you will be working towards playing the full **11 v 11** version of the game with some of the more advanced rules such as **penalty corners** and **25m restarts**.

You will develop your range of skills by considering different ways to **score** when you get in and around the **shooting circle**.

Part of your development in hockey will include leadership and you may be asked to set up a practice for your teammates, captain a team or umpire a game.

As you go through the lessons, you should be able to answer some of these questions:

- Explain the difference between the jab tackle and the block tackle?
- Why is a penalty corner awarded and how do the players line up for it to be taken?
- Where (exactly) is a 25m hit take from?
- What are your options if you find yourself dribbling towards the keeper and how would you choose which one to use?
- Name 5 rules you would be looking out for if you were umpiring a hockey game.
- Describe a playing formation you might use to set your team up if you were captain.

PE: Volleyball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Set	Passing the ball from in front of the forehead using the fingers and thumbs of both hands.
Dig	Passing the ball with the forearms - between the wrists and the elbows.
Spike	Volleyball's version of the smash - hitting the ball firmly over the net making it difficult for the opponents to return.
Block	The best defence against the spike is to jump up with both hands at the net to try to stop the ball coming over to your side.
Serve/service	The start of the rally can be done underarm or overarm. It must be taken by the player at the back right side corner.
Sideout	This is when the service transfers to the other team and the players move to a new position by rotating in a clockwise direction.

Section 2: New Knowledge/Skills

The Year 9 Volleyball module will provide an introduction to a sport which is hugely popular among Key Stage 4 students. You will learn the key rules and skills to enable you to take part in a 4v4 game.

You should be able to answer these questions as you go through your volleyball module:

Give 3 points of technique for performing a set.

Why should a player try to set the ball rather than dig it?

Give 3 points of technique for the dig?

How many shots is a team allowed to get the ball over the net?

How many players are there in a volleyball team?

Who takes the next serve in a game of volleyball?

Suggest 5 ways a volleyball rally comes to an end.

PE: Rugby

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Touch judge	An important officiating role which you may need to take on in lessons.
Gain line	An imaginary line across the pitch where the breakdown occurs.
Conversion	Kicking over the bar for after a try is scored.
Drop kick	A half-volley kick to start the game.
Drop goal	A drop kick over the posts.
Kick for touch	Kicking the ball off the side of the pitch when your team is under pressure.
Props	Two forwards that support the hooker in a scrum.
Hooker	The forward who goes in the front middle of the scrum and tries to hook the ball with their feet.
Fly-half	A back who receives the ball from the scrum-half and decides how the backs will attack.

Section 2: New Knowledge/Skills

In Year 9 rugby we are working towards playing the full 15-a-side version of the games with everyone able to contribute as a back or a forward in a specific position.

Try the following questions to check your knowledge of 15-a-side rugby:

Can you explain the full scoring system in rugby?

How many of the 15 positions on the field can you name?

What is the importance of the 'gain-line'?

How many players make up a full scrum?

Which players do most of the kicking in a game of rugby?

When might a team try for a drop goal?

Where is a conversion taken from?

PE: Table Tennis

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Back spin	Hitting down the back of the ball to make it travel more slowly over the net - a defensive tactic.
Top spin	Hitting over the top of the ball to give it topspin will cause it to dip as it goes over the net - an attacking tactic.
Variation	Doing different things to keep your opponent guessing - playing different shots to different parts of the table for example.
Attack	One playing is usually on the offensive, trying to hit the winning point.
Defence	If your opponent is on the offensive, you made need to adjust your position and your shot selection to effectively defend their shots.
Shot selection	The skill of knowing what shot to use at any point in the game.
Block	A defensive tactic of just putting your bat out to bounce the ball back over the net.
Loop	Playing the ball back high over the net when defending to give yourself time to get ready to defend the next shot.
Backhand flick	An attacking version of the backhand push. Just flick the wrist to add power.

Section 2: New Knowledge/Skills

Year 9 table tennis will provide plenty of opportunity for you to compete with your classmates. As you compete more, you will develop tactical 'answers' to what is happening in the game.

You should be able to recognise when you are in attack and when you are in defence and start to change your shot selection and your positioning.

You will be expected to umpire and keep score for your classmates, being confident in stopping rallies when faults occur.

PE: Gymnastics

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Partners/Pairs	Performing with 1 other student.
Trios/Groups	Performing in a group of 3 or more.
Cannon/ Mirror/ Unison	Performing 1 after the other/performing in time in opposition/performing in time.
Counter balance	Leaning inward or towards a partner or group to support or maintain a balance.
Counter tension	Leaning outward or away from a partner or group to support or maintain a balance.
Weight bearing	Acting wholly or partially as the base of support in a pair or group balance.

Section 2: New Knowledge/Skills

In Year 9 gymnastics, you will be challenged to develop more complex sequences with more people involved and more complex moves. This will not only develop your gymnastic skills, you will need to use good leadership and communication skills to get your group to work as a unit to create and perform the sequence.

Try these questions to check your understanding of Year 9 gymnastics:

Describe a weight-bearing balance as a trio?

Describe a counter-tension position for a group?

Explain how a group of 4 people could perform a counter-balance position?

What qualities does a leader need in order to organise a group into an effective sequence?

PE: Basketball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Rebound	Catching the ball after a missed shot.
Offensive rebound	Taking a rebound when your team is in attack giving your team another chance to score.
Defensive rebound	Taking a rebound when you are in defence, preventing the other team from having another shot.
Assist	Setting a teammate up to score a basket.
Outlet pass	Making a quick pass out from under your own basket to set up an attack after you have taken a rebound.
Breakout dribble	Making a quick dribble out from under your basket (2 or 3 bounces) to set up an attack for your team.
Officiating crew	The team of officials needed to run a basketball game including a referee, an umpire, a scorer and a timekeeper.
Half court defence	Running back after your team lose possession to defend close to your own hoop.
Section 2: New Knowledge/Skills	
<p>In basketball this year, you will be working towards playing the full court version of the game, with some of the more advanced rules and tactics. Hopefully, after your lessons, you will be able to answer some of the following questions:</p> <p>What is the backcourt rule?</p> <p>What are some of the time limits that players have to be aware of in a game of basketball?</p> <p>Why is half-court defence played most of the time?</p> <p>When might a team use full-court defence?</p> <p>What makes a good rebounder and why are they so important to a team's success?</p>	

PE: Health and Fitness

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Components of fitness	Our fitness can be broken down into 11 components of fitness which we all possess. Examples include speed, strength, agility.
Effects of exercise	The short term effects of exercise are changes in the body which occur as a result of physical activity. We should know why they occur.
Fitness testing	Each component of fitness can be measured by a test. Using fitness tests can help performers to see if their training is having a positive effect on their fitness.
Circuit training	A method of training which involves exercising at a station then having a rest before moving to the next station.
Weight training	Using a resistance such as a dumbbell to exercise a specific muscle.
Heart rate	How fast our heart beats can be a good measure of how hard we are working and a good measure of how fit we are.
Section 2: New Knowledge/Skills	
<p>The Health and Fitness module will give students a good foundation for taking responsibility for their own fitness.</p> <p>You will look at a variety of ways to measure your own fitness and a variety of ways to improve your own fitness.</p> <p>Many of the exercises and activities we do can be repeated at home with little or no equipment - you take responsibility!</p> <p>The unit also provides a taste of some of the content students will experience should they opt for exam PE in KS4.</p> <p>Try these questions as you complete this module:</p> <p>How many of the major muscles can you name?</p> <p>Can you link 5 components of fitness with their fitness test?</p> <p>Can you list 10 exercises you can do with a pair of dumbbells?</p> <p>Can you list 10 exercises you can do without any equipment?</p> <p>Which heart rate is an important measure of your health?</p>	

PE: Running

New Knowledge/Skills
<p>You will use the same running route (3 laps/2200m) to work on endurance and work towards a personal best time. You will set your own targets based on previous times and set yourself interim targets (lap times and split times) to help you reach your goal.</p> <p>We will continue to develop our mental approach to running by looking at some basic tactics (strategies) - when to run faster or when to conserve energy.</p> <p>To improve our performance we will look at two training methods which can be used to improve running: fartlek and interval.</p> <p>Fartlek training means running at different speeds for varying distances whereas interval training involves running a set distance or for a set time and then having a period of rest.</p>

PE: Health and Fitness

New Knowledge/Skills
<p>Our focus on health and fitness across the sports will be on the components of fitness and how they are required in different activities.</p> <p>Question: Can you list the 11 components of fitness?</p> <p>Hopefully, you will be able to identify the main components of fitness used in any sport you do.</p>

PE: Leadership

New Knowledge/Skills
<p>You will be challenged at times to take on the role of captain and help influence your team's performance.</p> <p>You may be asked to lead a warm up in front of the class to help develop your confidence to stand in front of and speak to a large group of people.</p> <p>You will also be given time in some activities to create your own practices for a group of classmates.</p>

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Igbo	tribe from Nigeria
Rebellion	uprising against other people
Voyage	journey
Captive	kept as a prisoner
Shackled	chained together
Enslaved	sold and owned by another person
Propaganda	biased information used to spread a message

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Charcoal	drawing media- black , crumbly stick made from burnt wood
Blend	merge tone/colour from one to another
Tone	light and shade
Proportion	comparative measurements

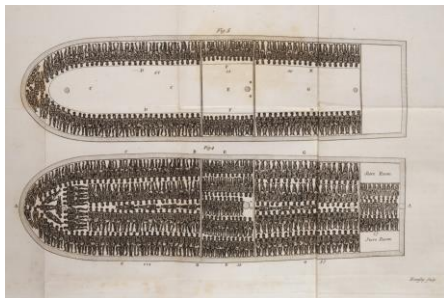


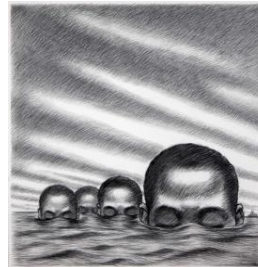
Diagram of slave ship 1801

Section 2: New Knowledge/Skills

We are looking at artists related to Black History. Donavon Nelson made a series of drawings about the Igbo slaves to show the horror of slavery.

Donovan Nelson is a Jamaican artist whose art tells the story of the Igbo Landing. The Igbo Landing is a historic site of one of the largest tragedies involving enslaved people in history. Historians say Igbo captives from modern day Nigeria were purchased for an average of \$100 each by slave merchants John Couper and Thomas Spalding. The slaves arrived in Savannah, Georgia on the slave ship the Wanderer in 1803. The chained slaves were then reloaded and packed under the deck of a coastal vessel, The York, which would take them to St Simons where they were to be resold. During the voyage, approximately seventy five Igbo slaves rose in rebellion, drowning their captors. By their chief's direction, they then walked into the marshy waters of Dunbar Creek, and to their deaths. Local people claimed that the landing and surrounding marshes in Dunbar Creek were subsequently haunted by the souls of the perished Igbo. Blackpast.org

Igbo Landing
 2009
 Charcoal on paper



Section 3: Slave trade: context.

www.slavevoyages.org – View this website to explore information about the transatlantic slave



This diagram of the 'Brookes' slave ship (bottom right), which transported enslaved Africans to the Caribbean, is probably the most widely copied and powerful image used by those who campaigned to end the trans-Atlantic slave trade. Traders knew that many of the Africans would die on the voyage and would therefore pack as many people as possible on to their ships - in total there were 609 enslaved men, women and children on board this ship. The conditions would have been appalling. Each person occupied a tiny space in the hold. In this case they had to lie in spaces just 10 inches high and were often chained or shackled together in pairs, making movement even more difficult. The cramped conditions meant that there were high incidences of disease. Because of the long distances involved, food and water was rationed and always in short supply or ran out completely.

By April 1787, the diagram was widely known across the UK, appearing in newspapers, pamphlets, books and even posters in coffee houses and pubs. An image had rarely been used as a propaganda tool in this way before and it proved to be very effective in raising awareness about the evils of the slave trade.

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Igbo	tribe from Nigeria
Rebellion	uprising against other people
Voyage	journey
Captive	kept as a prisoner
Shackled	chained together
Enslaved	sold and owned by another person
Propaganda	biased information to spread a message

Tier 2 vocabulary

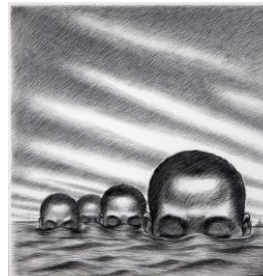
Tier 2 vocabulary	Definition
Charcoal	drawing media- black , crumbly stick made from burnt wood
Blend	merge tone/colour from one to another
Tone	light and shade
Proportion	comparative measurements

Section 2: New Knowledge/Skills

We are looking at artists related to Black History. Donavon Nelson made a series of drawings about the Igbo slaves to show the horror of slavery.

Donovan Nelson is a Jamaican artist whose art tells the story of the Igbo Landing. The Igbo Landing is a historic site of one of the largest tragedies involving enslaved people in history. Historians say Igbo captives from modern day Nigeria were purchased for an average of \$100 each by slave merchants John Couper and Thomas Spalding. The slaves arrived in Savannah, Georgia on the slave ship the Wanderer in 1803. The chained slaves were then reloaded and packed under the deck of a coastal vessel, The York, which would take them to St Simons where they were to be resold. During the voyage, approximately seventy five Igbo slaves rose in rebellion, drowning their captors. By their chief's direction, they then walked into the marshy waters of Dunbar Creek, and to their deaths. Local people claimed that the landing and surrounding marshes in Dunbar Creek were subsequently haunted by the souls of the dead Igbo slaves. Blackpast.org

Igbo Landing
 2009
 Charcoal on paper



Section 3: Adding meaning to the portrait

The next stage after finishing your tonal portrait is to research and draw/paint a background that reflects aspects of the life of your person. Donovan Nelson did this quite simply by showing the story of the Igbo slaves. Another artist that has done this is Frida Kahlo, who used her work like an autobiography to illustrate traumas in her life.




“Kahlo completed this piece in 1940, one year after her divorce from Mexican muralist Diego Rivera. Given the timing of its creation, Self-Portrait with Thorn Necklace and Hummingbird is widely believed to be a reflection of her emotional state following the couple's split. In the painting, Kahlo is positioned in front of foliage and between a stalking panther and a monkey. Around her neck, she wears a necklace made out of thorns and adorned with a seemingly lifeless hummingbird. Though the peculiar accessory draws blood from her neck, her expression remains stoic. This calm approach to pain is typical of Kahlo, who—even when devastated over her divorce—poignantly stated that “at the end of the day, we can endure much more than we think we can.” mymodernmet.com

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Realism	The quality of representing a person or a thing in a way that is accurate and true to life.
Composition	The way in which different elements of an artwork are combined or arranged.
Focus	Clear visual definition.
Naturalistic	Closely imitating real life or nature.
Coarse	Rough or harsh in texture.
Intense	Extreme strength
Stippling	A painting technique using small dots of colour.
Symmetry	The quality of being made up of exactly similar parts facing each other.

Tier 2 vocabulary	Definition
Texture	The feel, appearance or consistency of a surface.
Highlight	Areas of an image that have been captured by strong lighting or lighter areas of colour.
Layers	A gradual build up of applications to require the desired effect.
Crop	A zoomed in section of an original image.
Strokes	How paint is applied to a surface, often to create a smooth effect..
Detail	The parts you notice when you look closely.
Blend	Mixing together so the colours/textures combine and disappear into one another.

Section 2: New Knowledge/Skills
<p>Photorealism</p> <p>A style of Art and Sculpture characterised by the highly detailed depiction of ordinary life with the impersonality of a photograph.</p> <p>Wildlife Artists</p> <p>Alan M Hunt Carl Brenders Martin Dowse David Shepherd</p> <p>Context</p> <p>Many wildlife artists' main motivations are to conserve the world's wildlife for future generations. Alan M Hunt states it as his mission to impart some of the love, experience and concern for these animals and to protect the environment and the wildlife we share this planet with, through his Art.</p> <p>'As a wildlife artist and conservationist, I have grave concerns for the environment and believe it needs as much support as I can possibly give, whether financially or as a spokesman. Rather than become a famous painter, I would like to be remembered as someone who tried to make people aware of the need to protect the environment, wildlife and the planet.'</p> <p>Artist tips to help you paint animal fur</p> <p>'Start by painting the eye, when the eye looks correct, the animal starts to come alive'.</p> <p>'It is important to understand the way fur, hair and feathers grow to believably paint them.'</p> <p>'See which direction the fur is growing, make sure your brushstrokes follow this direction.'</p> <p>'Painting fur is a lot like layering tiles on a roof, you start layering them from the bottom up.'</p> <p>'Remember to work from dark to light with fur, the lightest colour is last.'</p>

Section 3: Other subject specific things
<p>http://justforthis.com/video/lastselfie.mp4</p>  <p>WWF</p> <p>The World Wide Fund for Nature is an international governmental organisation founded in 1961 that works in the field or wilderness preservation and the reduction of human impact on the environment.</p> <p>#LastSelfie</p> <p>Launched in April 9th 2014</p> <p>The idea behind the campaign is simple - the animals are conveying a message to their viewers which says 'Don't let this be my last selfie.' The timed message functionality on Snapchat was used to highlight that time is running out got the endangered species. After one week 400,000 tweets hit 1120 million twitter timelines meaning 50% of all active twitter users were exposed to it. With headlines in more that 6 languages #LastSelfie raised global awareness and in just three days WWF reached their donation target for the entire month.</p>

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Epic Theatre	A range of theatrical devices used to make the audience think.
Didactic Theatre	Theatre that educates and send a message to the audience.
Bertolt Brecht	A German Theatre Practitioner and playwright.
Gestus	A clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion.
Alienation	Familiar contents are presented in an unfamiliar way so that the audience does not empathise with the story of a drama.
Episodic Structure	Scenes are episodic , which means they stand alone and are constructed in small chunks, rather than creating a lengthy and slow build of tension.
Multi-Role	Actors play multiple characters within the same piece of theatre.

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Socio-Political Issues	Issues and political decisions that effect the peoples lives and the world.
3rd Person Narration	Commenting upon a character as an actor is a clear way of reminding the audience of theatricality.
Direct address	The actors speak directly to the audience, sometimes in the form of questions, this reminds the audience that what they are seeing isn't real and forces them to think about what they are watching. This is called 'breaking the fourth wall'.

Section 2: Who is Brecht?

Bertolt Brecht (1898-1956) was a famous German playwright and poet.



"Art is not a mirror with which to reflect reality but a hammer with which to shape it."
 Bertolt Brecht

What is the Alienation effect?

The idea of Alienation or the *Verfremdungseffekt* was to constantly remind the audience they were in a theatre, watching a play.

These techniques break the illusion of drama. We do not get lost in the story or the characters.

Instead we are constantly reminded that these are actors communicating ideas and situations to us.



How did Brecht make the audience step back and view the message rather than the spectacle?

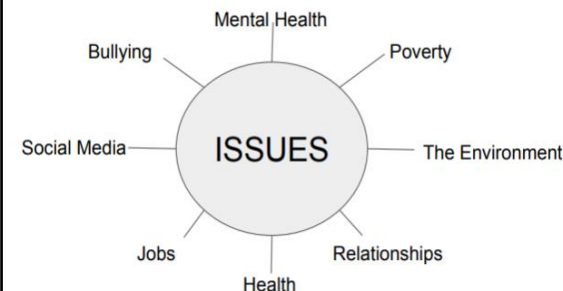
This short video explains the ideas of Epic Theatre.

Epic Theatre provokes the audience to think. It often uses a parable, a story with a wider meaning as a vehicle to address social issues or viewpoints and opinions.

Epic Theatre plays with short 'stand alone' scenes, the structure often ignores the usual constraints of linear timelines. These short contrasting scenes create humour, provoke thought and make the audience reflect.

Section 3: Exploring Social Issues

An Example of a socio-political Issues Mind Map



Pendulums Emporium is a production by local theatre company Maison Foo.

The production explores a wide range of social issues.

Section 3: Links to Prior Learning

In year 7 you studied Greek Theatre and were taught about the role of the narrator. In year 8 you studied Bullying and in year 9, Gangs. You were taught how to explore these issues through different drama techniques. In year 8 you were taught about abstract theatre when devising pieces of theatre about cyber bullying.

Section 1: Key Vocabulary

Tier 3 vocabulary

Definition

Synthesizer	An instrument that can be manipulated to sound like many other instruments or everyday sounds
Staccato	Music performed with each note sharply detached or separated from the others
Motif	The music that is associated with a certain character or place
Syncopation	Playing the music off the beat
Sampling	Digitally recording music and then reusing it again in another piece
Soundtracks	The finished piece of music that accompanies the film or game
Music Technology	Includes MIDI, sound recording, and manipulating software effects
Chromatic movement	Notes that move up or down a chromatic scale
Disjunct Movement	When the notes in the melody ascend and descend quickly, with large spaces between the notes

Tier 2 vocabulary

Definition

Cues	A point in the music where something significant will occur.
Sound effect	An artificial sound used in many films/games...eg a door opening
Dynamics	Loud or soft
Tempo	The speed of a piece of music

Section 2: New Knowledge/Skills

Character theme motifs.... All characters real or made up will need an on-screen Motif. The Jaws theme portrays a dark and frightening world with the fish as top predator and totally feared by all things. Driving deep bass sounds reinforce the power and strength of the character.

Identity.... Look at identity of the character. The music should relate to its surrounding and the dark or light of the environment it lives in but this is focused on the character itself. What can the motif tell you through your ears as well as your eyes.

Using music to create character... The music should be able to get the personality of the character across to the viewer/player. It can be both dark or light. Using rhythm to reinforce the mood needed.

Scenario... Look at the Game title and what you have to do. Is it a chase game or a planning game where the music will reflect what's happening on the screen and what you as a player will be doing during periods of the game.

Links to Prior Learning

Soundtracks – Creating music to media and composing on a theme

Keyboard Skills – Using and understanding basic notation and building chords

Form and Structure – How to build a song

Section 3: Other subject specific things

EARLY VIDEO GAMES INCLUDED ...SUPER MARIO 1985

Lesson handout - Treasure HunterLesson handout - Expedition XLesson handout - Kid Quick

Tier 3 vocabulary	Definition
Macronutrients	The nutrients needed in larger quantities within the diet. Carbohydrates, proteins and fats.
Micronutrients	The nutrients needed in smaller quantities within the diet. Vitamins and minerals.
Deficiency disease	A health issue related to a lack of one or more nutrients in the diet. E.g. Kwashiorkor, Rickets and Anaemia.
Dietician	An individual who promotes good dietary health and treats nutritional problems by providing practical advice about food choices, based on scientific research.
Complex Carbohydrates	Also known as starchy carbohydrates. These should make up the majority of a person's carbohydrate intake. Providing slow-release energy.
Simple Carbohydrates	Also known as sugary carbohydrates. These should be consumed as a smaller proportion of the carbohydrate intake. Providing fast-release energy.
Proteins	A nutrient provided by meat, fish, dairy, nuts. Peas, beans and lentils. Protein is required for growth and repair.
Saturated Fat	A healthier type of fat which can be linked to higher risk of obesity, CHD and type II diabetes if consumed in larger quantities. Predominantly from animal sources.
Unsaturated Fat	A type of fat containing a high proportion of fatty acid molecules with at least one double bond, considered to be healthier in the diet than saturated fat. Predominantly from plant sources.
Marinade	A mixture of oils and spices / herbs in which meat, fish or other ingredients are soaked to absorb flavours and soften proteins before cooking.
En papillote	A cooking method where ingredients are cooked and served in a paper or foil wrap.

Tier 2 vocabulary	Definition
Obesity	The state of being grossly overweight.
Diabetes	A disease in which the body's ability to produce or respond to the hormone insulin is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood.
Ethical Awareness	The ability to recognise moral and ethical issues. (In food these are related to the production, preparation and consumption of food products)
Dietary recommendations	The daily nutritional requirements of individuals that vary depending on a number of factors including age, physical activity level, sex & body size.
Recipe Modification	Changing a recipe to suit different dietary needs or preferences.
Nutrients	a substance that provides nourishment essential for the maintenance of life and for growth.
Creaming method	Combining a fat and sugar as the first stage of a recipe to aerate the mixture.
Melting Method	A cake making method where one or more ingredients are melted prior to the addition of dry ingredients.
Dietary Fibre	A form of carbohydrate which can be soluble (e.g. in oats) and helps to lower risk of heart disease, or insoluble in wholemeal products which helps to remove waste from the body, reducing the risk of constipation, diverticular disease & colon / bowel cancer

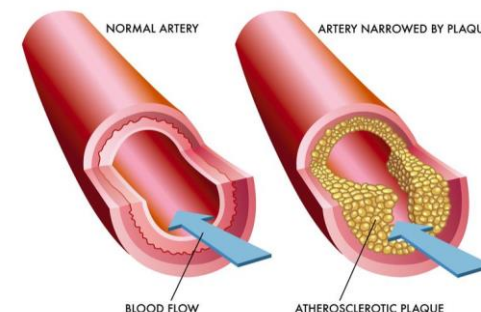
Section 2: New Knowledge/Skills

The melting method - a cake making method which involves melting margarine / butter before adding it to dry ingredients.

List 3 other cake making methods -

- 1.
- 2.
- 3.

Section 2: New Knowledge/Skills



The above diagram shows a picture the thickening and hardening of the artery walls. This build up of plaque is called _____

Section 3

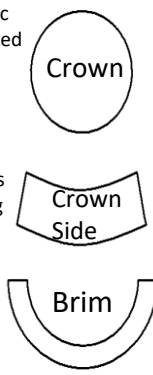
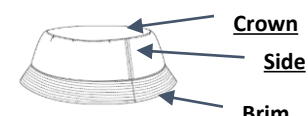


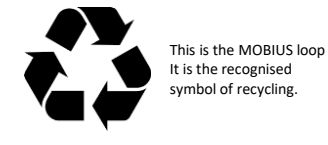
Homework 1: The Google Classroom H&S homework on safety set by your teacher (you can ask your teacher for a paper copy of this quiz if needed).

Homework 2: Read the nutritional information on this knowledge organiser then complete the quiz about Fibre on Google Classroom (ask for a paper copy if you need it.)

Homework 3: Design a poster showing additional research into ONE of the ethical issues discussed in class.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Top Stitching	A line of stitching that is decorative on the outside of a garment.
Stay Stitching	A row of stitching that helps to keep fabric in the correct shape. Stops it distorting or ripping.
Lining	A layer of different material covering the inside surface of something.
Interfacing	An extra layer of material that is applied to the facing of a garment to add support.
Crown	The top of a hat. Usually circular.
Brim	The part of the hat that sticks out at the bottom to provide shade whilst it is being worn.
Tier 2 vocabulary	Definition
Recycle	To convert waste into a useable material
Reuse	To use something more than once
Reduce	To make a smaller amount of waste
Refuse	Turning down the use of materials and processes that can harm the environment
Repair	Can the product be mended so that it have a longer life?
Rethink	Looking for alternatives to products that are less damaging to the environment

Section 2: Skills
<p>Sewing Patterns</p> <p>A sewing pattern is a set of shapes that have been DRAFTED to use as templates to cut fabric out. These shapes have been planned and tested to ensure that when you sew them together they will form the GARMENT you want to make!</p> <p>Sewing patterns are GRADED, this means that the templates are adjusted to fit different sizes of people. For example the hat you are making comes in a range of sizes SMALL, MEDIUM etc</p> <p>The size of the hat you chose to make will be based on the circumference of your head.</p> 
<p>Manufacturing Process for the Hat</p> <ol style="list-style-type: none"> 1. Sew the BRIM to the CROWN SIDE, repeat 4 times 2. Match the outside hat sides together, right sides together 3. Repeat for the lining pieces. 4. Sew each together down the sides. 5. Stay stitch around the top of both hats. 6. Snip into the top of the hat at 1cm intervals. Make sure not to cut through the stay stitching. Repeat for both hats. 7. Pin the outside CROWN onto the top of the outside hat. Repeat for the lining of the hat. 8. Machine around the top of the hat for both the lining and outside. 9. Put the hats together RIGHT SIDES TOGETHER. Match up the edges and pin in place. 10. Sew around the brim, leaving a gap big enough for your hand to get in! 11. Turn the hat right sides out through the gap you left. 12. Top stitch around the edge of the brim, also sewing up the gap. 

Section 3: Knowledge
<p>Textiles and the Environment</p> <p>Of all industries textiles is the second most pollutant. As designers and consumers we have a responsibility to be aware of the impact it has.</p> <p>As designers we should consider the environment when picking the materials we will use to make our designs. For example considering using recycled materials, or sustainably produced fabrics.</p> <p>FAST FASHION has led to a huge increase in the amount of textiles that end up in landfill. There is also the impact of the MANUFACTURE and CARE of the garments during their life. As consumers we have a responsibility to consider the impact our purchases have on the environment.</p> <p>Some facts to consider:</p> <ul style="list-style-type: none"> *2,700l of water is needed to produce 1 t-shirt. This is equivalent to enough drinking water for one person for 2.5 years. *10% of all greenhouse gases are produced by textile production. *0.5million tonnes of MICROFIBRES are released into the oceans each year as a result of washing SYNTHETIC textiles.
<p>The 6 R's</p> <p>Whilst we are all quite familiar with the idea of recycling materials there actually 6 different 'R' words that we can use to consider our impact on the environment. This is a list of 6 different guidelines that people can use to help them reduce their impact on the environment. These words can be applied by the designer when they are creating new products or the consider who is looking to decide what to do with a ripped t-shirt!</p> <p>REDUCE RECYCLE REFUSE RETHINK REUSE REPAIR</p> 

Section 1: - Key Vocabulary

Tier 3 Vocabulary

Resistor	Electronic component designed to resist the flow of electricity by converting it into heat energy
Capacitor	Electronic component used to store and discharge a small amount of electricity
Integrated Circuit	Collection of electronic components combined together into a predesigned 'chip', often with a fix program
Microcontroller	An integrated circuit which can be 'programmed to react to input and output variables
Voltage Regulator	Collection of transistors designed to create a 'stable' voltage supply
Flowchart	A changeable program which can be stored on a microcontroller

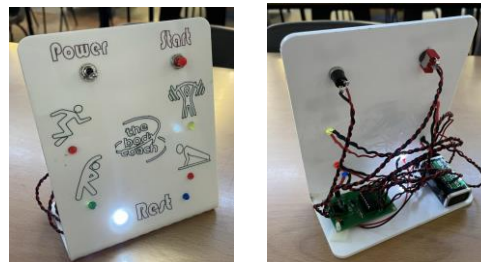
Tier 2 Vocabulary

Soldering	The process of using a metal with a low melting point to fix two other metal wires permanently together
LED	Electronic component designed to emit light when electricity is passed through it in the correct direction
Wire Strippers	Hand held tool used to remove the protective plastic cover of the end of wire
Side Cutters	Handheld tool used to cut metal wire to length
CAD	Computer Aided Design – Software used to design a product
Laser Cutter	Machine which is controlled by a computer and using high energy light to cut and engrave wood and plastic

Section 2: Skills

Soldering	<p>Being able to solder 'of board' components to 'fly wires'</p> <p>Being able to solder 'on board' components to a PCB</p> <p>Be able to solder an integrated circuit to a PCB</p> <p>Soldered joints should be neat, use the correct amount of solder, they should be shiny to avoid 'dry joints'</p>
Follow chart programming	<p>Use electronic CAD software to design a flowchart program which be controlled, and control multiple inputs and outputs</p> <p>Use electronic CAD software to design a flowchart program which be controlled, and control inputs and outputs</p>
2D design software	Use CAD software create a themed design, considering suitable and secure location of the PCB, power, and the inputs & outputs
Application of laser cutting	Understand the set up requirement needed to laser cut and engrave materials, including the use of colour to define cut type, and power/speed setting requirements for different materials
Product Assembly	Create a high quality, fully functioning, electronic product from a collection of parts. Including the use of glues and fixing techniques
Health and Safety	Consistently use a wide range of tools and equipment safety, always using the correct PPE

Section 4:- WAGOLL





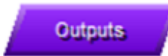


Section 3:- New Knowledge

Specification Writing

- Understand the need for a product specification.
- Apply the use of ACCESSFM to write a multipoint, justified product specification







Flowchart Programming

Be able to use flowchart programming (coding) to control the inputs and outputs of a simulated and real circuit, using the following common flowchart commands

	Start – Beginning the flowchart program
	Decision - Detect a digital input (on/off) signal to make a YES/NO decision
	Output – Turn on or off one or more outputs when commanded to
	Wait – Make the program wait for a fixed time until moving onto the next command
	Stop – End the flowchart program

CAD

- Use CAD to create and modify an outline shape
- Use CAD to Contour bitmaps in to line drawings which can be laser engraved
- Apply the use of the following CAD software functions

Select		Line between 2 points
Circle		Arc
Shape		Line between many points
		Zoom in/out
		Contour
		Undo/Redo

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Employment	the state of having paid work.
Career	an occupation undertaken for a significant period of a person's life and with opportunities for progress.
Self Discipline	the ability to control one's feelings and overcome one's <u>weaknesses</u> .
Enterprise	a project or undertaking, especially a bold or complex one.

Tier 2 vocabulary	Definition
Option	a thing that is or may be chosen.
Research	the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.
Choice	an act of choosing between two or more possibilities.

Section 2: New Knowledge/Skills
<p>How to make informed choices for your options</p> <p>The choices you make this term are important ones for your future career opportunities. Ensuring you have a good range of options now will help when you make decisions on A level courses, University courses or apprenticeships in the future.</p> <p>Choose subjects that you like, are going to help you in future aspirations. Choose subjects after you have done your research into the courses by speaking to your teachers, researching careers on line and speaking to students who are already doing the courses</p> <p>Don't choose courses because you like a particular teacher, they may not be teaching you next year. Don't choose courses because your friends are doing them</p> <p>All students must study GCSE courses in...</p> <p>English Language AND English Literature Mathematics Science (either Combined worth 2 GCSEs, or Separate worth 3 GCSEs) History OR Geography (one option choice – you are allowed to choose both)</p> <p>Plus additional core teaching in... P.E. R.E. Citizenship (PSHE)</p>

Section 3: Other subject specific content
<p>Mon 6 Feb 9am-9.35am <u>Options assembly</u> for Y9 students/tutors from MAK in the hall</p> <p>Mon 6 Feb Options Booklet available online on school website</p> <p>Thu 9 Feb 5.30pm-7.30pm <u>Options at 14+ Evening</u></p> <p>Mon 13 Feb Students can access their Cloud School account/password via a link in their school Gmail</p> <p>Mon 27 Feb 9am – Options form available online for students in Cloud School</p> <p>Mon 27 Feb until Mon 6 Mar Students can view and submit your options form online</p> <p>Thu 2 Mar 3.45pm-6.45pm <u>Y9 Parents' Consultation Evening</u></p> <p>Mon 6 Mar 10pm – deadline for students to submit their options form online in Cloud School</p>

Notes & questions

Notes & questions

Extra – Curricular Timetable

Year 9	Monday	Tuesday	Wednesday	Thursday	Friday
Lunchtime	Spelling/Translation Bee With Sarah In Languages Belper Band With Anna Mu1	Girls' Basketball (Wk2) With Leanne Sports Hall Anti-Bullying Ambassadors With John MR3	Board Games With Sarah-Jayne In T7 Tech Club With Sarah-Jayne In T6 Cartoon Club (Wk2) With Robert A3 Belper School Christian Union With Stephen H3 Belper Band With Anna Mu1	Boys' Basketball With Steve Sports Hall Reading Group With Sophie Library Cartoon Club (Wk1) With Robert A3	Chess Club With Carlos M1
After School	Homework Club All welcome In Learning Support	Computing Club With Adam L7 (Wk1) H10 (Wk2) LGBTQ+ Pride Club With Karen, Emma, Sally T5 Belper School Choir With Phil In Mu1 Homework Club All welcome In Learning Support	Music Producers Club With Phil In Mu1 D&D (Invitation only) With Mike In H9 Textiles Club With Sarah In T1 Recycling and Litter-Picking With Marc School site Broadway at Belper With Sarah Hall Homework Club All welcome In Learning Support	LARP With Mike In H9 Gardening With Marc ACCESS garden Girls' Football With Leanne PE Netball With Rebecca Courts/Sports Hall Drama Club With Jenny Hall Scalextric Club With Phill, John T2 Homework Club All welcome In Learning Support Music Club Band Rehearsal With Anna Mu1	

2 Black/Blue Pens
and 1 Coloured Pen



2 Pencils



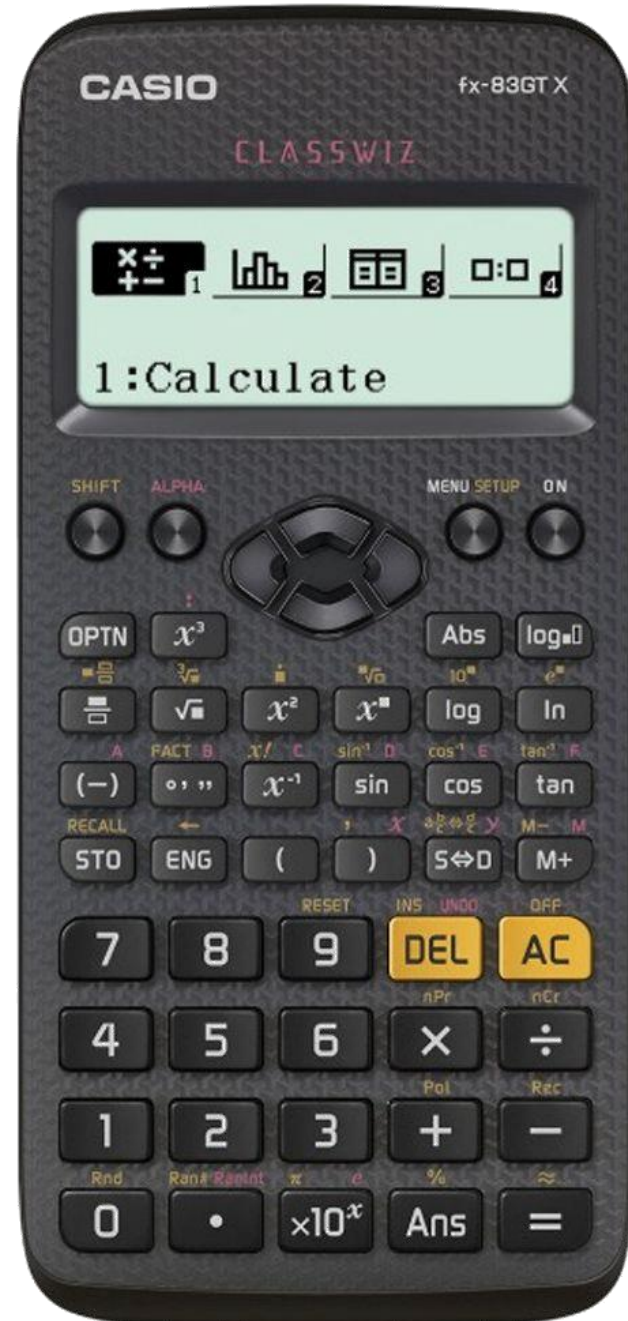
Eraser



Pencil Sharpener



Scientific Calculator



Planner



Ruler

