

# Knowledge Organiser

Year 9 Spring 1 2024

*Create Your Future*

*This half term's front cover quote was suggested by Ruby Watson in 8SRS*

## Be resilient:

"Knowledge will not be acquired without pains and application. It is troublesome and deep, digging for pure waters; but when once you come to the spring, they rise up and meet you."

**Tom Felton**

*English Actor, best known for playing Draco Malfoy in the film adaptations of Harry Potter*

Name:

Tutor Group:

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Science, PE 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.

## In Class Expectations



## Out of Class Expectations



# Words of the Fortnight

## Superfluous

### SYNONYMS

Excess  
Surplus  
Unnecessary  
Expendable

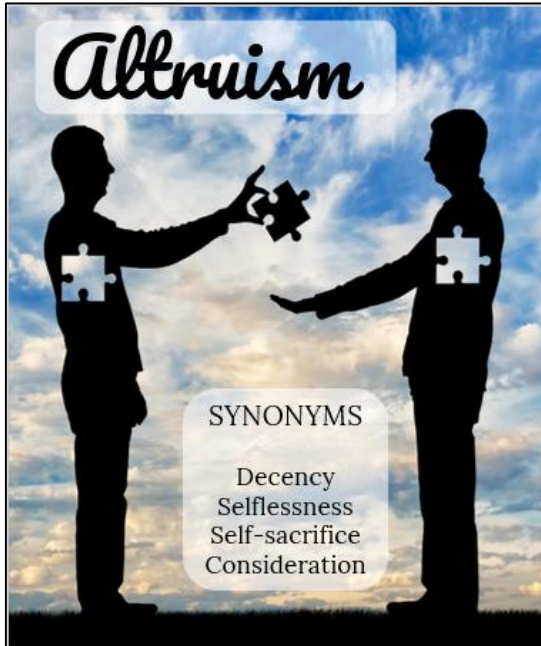


**ADJECTIVE:** unnecessary, especially through being more than enough.

## Altruism

### SYNONYMS

Decency  
Selflessness  
Self-sacrifice  
Consideration

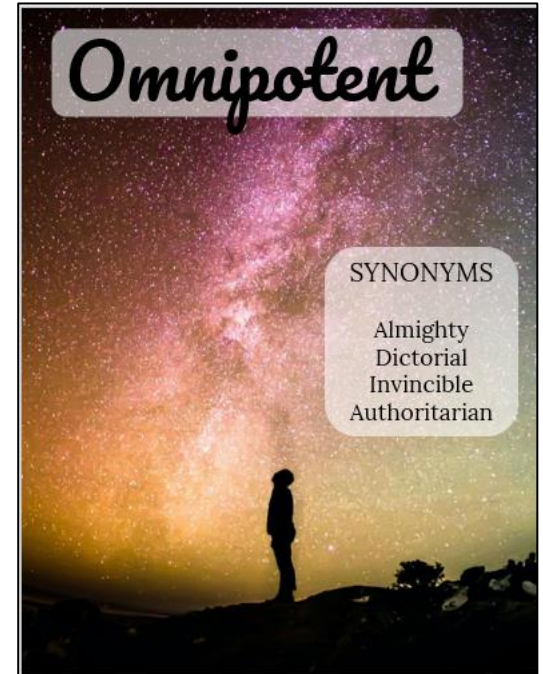


**NOUN:** promote someone else's welfare, even at a risk or cost to ourselves.

## Omnipotent

### SYNONYMS

Almighty  
Dictatorial  
Invincible  
Authoritarian



**ADJECTIVE:** having great power and influence.

Word	Where have you used this in your work over the fortnight?	Examples of use in a sentence from a subject	Merits received?

# Guided Reading Tracker






Date	Title and author	Summary of reading (+interesting or new vocabulary learned)	Signed:	

As part of your library lessons, you are expected to complete **at least 20 minutes** of reading once a fortnight.

To track your reading, you need to complete a row of the table before each library lesson to show details of the book you have read.

Your table also needs to be signed by someone who has witnessed you reading. This will most likely be a parent/guardian but it can alternatively be signed by your tutor, classroom teacher, buddy reader, TA or Sarah in the library.



Section 1: Key Vocabulary		Section 2: Key Skills/Strategies	Section 3: Context and Further Reads
Tier 3 vocabulary	Definition	<p>Persuasive writing/speech techniques</p> <p><b>Direct address:</b>  <b>When the text addresses the reader directly.</b>  <i>"That is my message to you, comrades: Rebellion!"</i></p> <p><b>Rhetorical questions:</b>  <b>A question asked in order to create a dramatic effect or to make a point rather than to get an answer.</b>  <i>"Is it not crystal clear, then, comrades, that all the evils of this life of ours spring from the tyranny of human beings?"</i></p> <p><b>Hyperbole:</b>  <b>Exaggerated language used for effect.</b>  <i>"The life of an animal is misery and slavery"</i></p> <p><b>Emotive language:</b>  <b>Vocabulary to make the audience/reader feel a particular emotion.</b>  <i>"We are born, we are given just so much food as will keep the breath in our bodies, and those of us who are capable of it are forced to work to the last atom of our strength; and the very instant that our usefulness has come to an end we are slaughtered with hideous cruelty."</i></p> <p><b>Imperative command:</b>  <b>Instructional language.</b>  <i>"And above all, pass on this message of mine to those who come after you, so that future generations shall carry on the struggle until it is victorious. "</i></p> <p><b>Repetition</b>  <b>The use of a word or phrase numerous times.</b>  <i>"No animal in England knows the meaning of happiness or leisure after he is a year old. No animal in England is free."</i></p> <p><b>Triplets/tricolon</b>  <b>Three points to support an argument.</b>  <i>"The soil of England is fertile, its climate is good, it is capable of affording food in abundance to an enormously greater number of animals than now inhabit it."</i></p>	<p><b>Context: the author</b></p> <ul style="list-style-type: none"> <li>George Orwell was born in India in 1903 when India was still part of the British Empire.</li> <li>He worked in Burma as a police officer before he became a writer.</li> <li>Orwell was a socialist. A socialist believes that all people in any society are of equal worth and value because we are all human beings. Everyone should be given equal opportunity and society have a duty and responsibility to make sure that all its members have reasonable standards of care and help.</li> </ul>  <p><b>Context: the novel</b></p> <ul style="list-style-type: none"> <li>Animal Farm was published in 1945.</li> <li>The majority of the characters and events in Animal Farm are linked to what happened before, during, and after the Russian Revolutions.</li> <li>As a communist turned socialist, and as a journalist too, Orwell wanted to attack and highlight the history, rhetoric and excesses of Soviet Communism whose leaders abused their power using this political ideal.</li> <li>The Russian Revolution took place in 1917, during the final phase of World War I. It removed Russia from the war and brought about the transformation of the Russian Empire into the Union of Soviet Socialist Republics (USSR), replacing Russia's traditional monarchy with the world's first ever Communist state.</li> </ul> <div>   </div> <p> Flag of Animal Farm      Flag of the Soviet Union </p> <p><b>Key themes in the novel</b>  Leadership, Control, Lies and Propaganda, Violence, Pride and Belonging, Dreams and Hopes</p> <p><b>If you enjoyed animal farm then read these next:</b>  1984 – George Orwell  Fahrenheit 451- Ray Bradbury  Lord of the Flies – William Golding  Never Let Me Go – Kazuo Ishiguro</p>
Dystopian Fiction	An imagined world or society in which people lead wretched, dehumanised, fearful lives		
Propaganda	Information, especially of a biased or misleading nature, used to promote a political cause or point of view		
Oppression	Prolonged cruel or unjust treatment by an authority		
Corruption	Dishonest or fraudulent conduct by those in power		
Totalitarianism	A system of government that is dictatorial and requires complete subservience from its people		
Dictatorship	A government which has one leader who is very authoritative and is usually obtained by force		
Manifesto	A written statement declaring publicly the intentions, motives, or views of its issuer		
Tier 2 vocabulary	Definition		
Infer	To work something out based on evidence from the text.		
Reiterates	Reinforcing an idea within a text.		
Connotation	What a word or phrase makes you think of.		
Satire	The use of humour, irony, exaggeration or ridicule to expose and criticise people's stupidity or vices		
Allegory	A story that can be interpreted to reveal a hidden meaning, typically a moral or political one		

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

Section 2: New Key Skills/Strategies						
<p><b>CPEAT writing skills</b></p> <p><b>What are Beatrice's attitudes towards Benedict at the start of the play?</b></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 <b>connotations</b> of him being worthless and <b>infers</b> 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><b>Key Themes</b></p> <p><b>Appearance and reality</b> Shakespeare uses this play to show how appearance and reality are not always the same thing.</p> <p><b>Love</b> 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><b>Nothing and 'noting'</b> 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><b>Context.</b></p> <p><b>Gender</b> 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><b>Comedy</b> 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><b>Marriage</b> 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
Anaphora	repetition of a phrase at the start of a line or sentence
Assonance	words that share the same vowel sound
Caesura	a pause in a line of poetry
Enjambment	where a line has no punctuation at the end and goes onto a new line, but carries on an idea
Motif	a repeated idea or theme throughout the poem
Sibilance	Making a 's' or 'sh' sounds
Plosive	Making a 'p' or 'b' sound

**Tier 2 vocabulary**

Tier 2 vocabulary	Definition
Stanza	a section of a poem sometimes referred to as a verse.
Rhyme scheme	what type of pattern the rhyme follows e.g abbbca
Rhythm	the beat or pace of the words. It can be regular or irregular, slow or fast
Poetic persona	when the poet takes on a voice in the poem.
Repetition	repeating the same word or phrase

**Section 2: Comparing poems**

**Compare the poet's use of language and structure in *Hurricane Hits England* and *Blessing*.**

**Comparing poetic techniques**

Hurricane	Blessing
Simile to depict the weather e.g. 'trees falling heavy as whales'	Simile to depict the weather e.g. 'skin cracks like a pod'
Semantic field of nature	Semantic field of poverty
No structured rhyme scheme	No structured rhyme scheme

**Comparative connectives to use in your writing**

Similarities	Differences
Likewise	However
Similarly	On the other hand
Equally	In contrast

**Section 3: Information about some of the poets**

Grace Nichols is a poet whose work has been central to our understanding of the important cultural Caribbean-British connection for nearly 3 decades. Nichols was born in Guyana in 1950, and moved to live in the UK in 1977. Her work is influenced by the history and culture of her homeland, in particular the oral story-telling tradition with its fantastic folk tales, the landscape and its rural tasks and the history of enslavement.




Kamu Brathwaite was born in Barbados, an island in the Caribbean. Brathwaite's ambition was to create a distinctively Caribbean form of poetry, which would celebrate Caribbean voices and language, as well as African and Caribbean rhythms evoking Ghanaian talking drums, calypso, reggae, jazz and blues.



Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
<b>Patriarchy</b>	A system of society or government in which men hold the power and women are largely excluded from it
<b>Symbolism</b>	The idea that words, phrases and images can represent other things
<b>Authority</b>	The power or right to give orders, make decisions, and enforce obedience
<b>Maternal</b>	Having the stereotypical characteristics of a mother
<b>Determinism</b>	The theory that everything in life is pre-decided and pre-planned.
<b>Unrequited Love</b>	Unrequited love or one-sided love is love that is not openly reciprocated or understood as such by the beloved
<b>Elizabethan Era</b>	The time in the Tudor period of the history of England during the reign of Queen Elizabeth I

Tier 2 vocabulary	Definition
<b>Foreshadowing</b>	To hint at something that will happen later in the play
<b>Stage Directions</b>	An instruction in the text of a play indicating the movement, position, or tone of an actor
<b>Sonnet</b>	A poem of 14 lines, in English typically having ten syllables per line
<b>Prologue</b>	An opening speech that introduces key themes within the play
<b>Soliloquy</b>	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.		
<b>C</b>	<b>CONNECTIVE</b>	Firstly, moreover, furthermore, in conclusion.
<b>P</b>	<b>POINT</b>	Use the wording of the question and identify what your paragraph will explore.
<b>E</b>	<b>EVIDENCE</b>	Find a relevant quotation and identify a language or structural device in it...
<b>A</b>	<b>ANALYSIS</b>	... and then explore the deeper meaning of this quote/technique and how it links to the question.
<b>T</b>	<b>THINK INTENTION AND IMPACT</b>	Explore the intentions of the author and the effect/impact of this on the reader.
<p><b>FEATURES OF A TRAGEDY</b></p> <p><b>Tragedy:</b> A play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character/s.</p> <p><b>The Tragic Hero:</b> <i>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.</i></p> <p><b>The Fatal Flaw: Hamartia</b> <i>The tragic hero's flaw, that leaves them vulnerable and causes their disastrous end.</i></p> <p><b>Tragic Waste:</b> <i>Often the inevitable deaths of pivotal characters in the play.</i></p> <p><b>Catharsis:</b> <i>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.</i></p>		

Section 3: Context and Themes
<p><b>Verona</b> R&amp;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.</p> <p><b>Women &amp; gender roles</b> 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.</p> <p><b>Queen Elizabeth I</b> 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.</p> <p><b>Nurses</b> Nurses were employed by wealthy families to feed and care for their children.</p> <p><b>Fate</b> 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.</p>
 <p><b>KEY THEMES IN THE PLAY</b> Conflict, Power, Fate, Loyalty, Family, Religion, Love, Hatred, Violence, Death</p> <p><b>IF YOU ENJOYED ROMEO &amp; JULIET THEN READ THESE</b> <b>NEXT:</b> Noughts and Crosses – Malorie Blackman Twelfth Night – William Shakespeare Daz 4 Zoe – Robert Swindells Wuthering Heights – Emily Bronte</p>

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

Section 2: Key Skills/Strategies		
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<b>T</b>	<b>THINK INTENTION AND IMPACT</b>	Explore the intentions of the author and the effect/impact of this on the reader.
Features of Thriller Novels		
<b>Suspense, Surprise and Anxiety</b>  The two seemingly distinct narratives in <i>Stone Cold</i> draw closer together, making the reader feel anxiety for poor Link!	<b>Climax</b>  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.	<b>Plot Twists and Cliff-hangers</b>  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
<p><b>Robert Swindells</b></p> <p>Robert Swindells is an English writer who was born in Bradford on March 20<sup>th</sup> 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 <i>Stone Cold</i>.</p>
<p><b>Homelessness</b></p> <p>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.</p>
<p><b>The Armed Forces</b></p> <p>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.</p>
<p><b>Key themes in the novel</b></p> <p>Threat – Homelessness – Injustice – Hopelessness - Exploitation, Vulnerability- Prejudice</p>

**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.

<b>P</b>	Purpose	Is the writer trying to inform, entertain, explain, persuade or argue?
<b>A</b>	Audience	Who is the target audience? Who would this text appeal to?
<b>F</b>	Format	What are the key conventions of the text?
<b>T</b>	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:

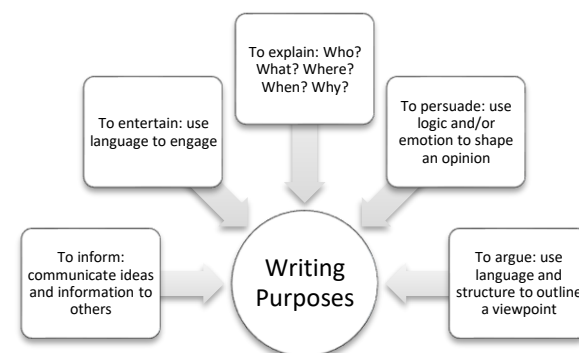
Text A	Text B

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?

**Opening**: EXCLUSIVE STORY: The dog of the moment, named 'It's a Dog's Life', has been spotted leaving out of the window of the house of the famous actor. Barry had been waiting for the actor and the owner were excited for the actress to be thought that the golden retriever had made the house and get stuck when the door closed behind him!

**Article**: Barry went missing on the day you heard he was gone. Barry had been spotted leaving out of the window of the house of the famous actor. Barry had been waiting for the actress and the owner were excited for the actress to be thought that the golden retriever had made the house and get stuck when the door closed behind him!

**Sub-heading**: Barry Facts: Barry has been spotted leaving out of the window of the house of the famous actor. Barry had been waiting for the actress and the owner were excited for the actress to be thought that the golden retriever had made the house and get stuck when the door closed behind him!

**Picture**: A photograph of a golden retriever dog.

**Caption**: Barry the dog was spotted leaving out of the window of the house of the famous actor.

**Advert**: WORKED ABOUT LOADING YOUR PETTY: Put a Black Petrol in your car and back home when you want to be a pet.

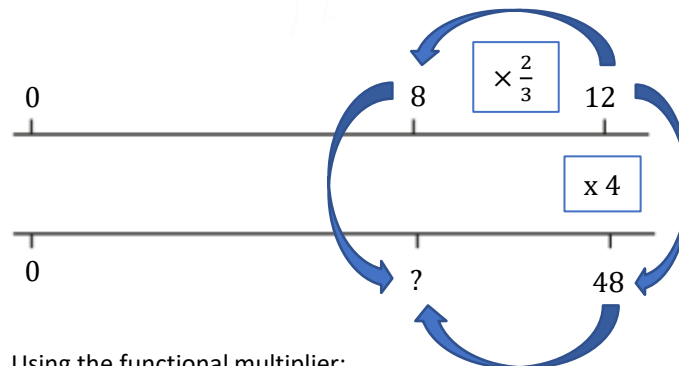
**Extra Information**: Barry is now the most popular dog in the world with an income of £100 million. The dog has been spotted leaving out of the window of the house of the famous actor.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
<b>Multiplicative relationship</b>	A relationship between two quantities whereby the values are linked by a constant multiplier, of the general form $y = ax$
<b>Additive relationship</b>	A relationship between two quantities whereby the values are related by the addition of a constant, of the general form $y = x + a$
<b>Functional multiplier</b>	Is the multiplier that links two quantities, it is the 'a' in the general form $y = ax$
<b>Scalar multiplier</b>	Is a number that moves <i>along</i> lines in a double number line, that is, stays within the same variable.

Tier 2 vocabulary	Definition
<b>Rate</b>	The ratio between two related quantities <i>in different units</i> .
<b>Scaling</b>	Enlarging or reducing a value by multiplying by the scalar multiplier.
<b>Ratio</b>	A way of comparing values between two (or more) quantities.
<b>Proportion</b>	A statement that expresses two ratios as equal.

### Section 2: Representations

A **double number line** shows how two variables are related. The functional multiplier moves from one line to the other, and can be used to convert between the variables. The scalar multiplier moves along each line by the same proportion. Both can be used to find missing values:



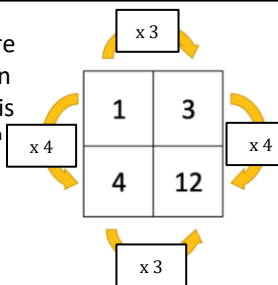
Using the functional multiplier:

Since  $48 = 4 \times 12$ , we see that the functional multiplier is 4.  
So,  $? = 4 \times 8 = 32$ .

Using the scalar multiplier:

Since  $8 = \frac{2}{3} \times 12$ , we see that the scalar multiplier is  $\frac{2}{3}$ .  
So,  $? = 48 \times \frac{2}{3} = 32$ .

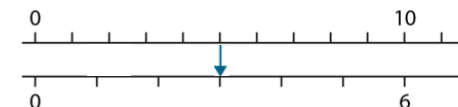
A **ratio table** can be used to structure a multiplicative relationship between two variables. Usually, information is given to fill 3 of the cells, and the 4<sup>th</sup> can be found using multiplicative relationships between the rows (functional) or the columns (scalar).



### Section 3: Examples

Both the bar model and double number line representations can be helpful when working with proportional problems:

*On this double number line, the 10 and 6 align perfectly.*

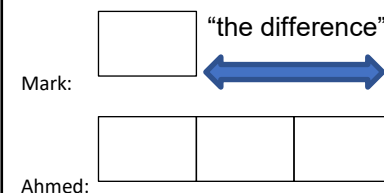


*What other pairs of numbers will also line up in the same way?*

Since 10 and 6 align, we can express the proportionality of the two variables as  $10 : 6$ . Scaling this ratio by factor  $\frac{1}{2}$  gives  $5 : 3$  as the simplest form. Any multiples of this ratio give other integer pairs:  $15 : 6$ ,  $20 : 12$ ,  $25 : 15$  etc.

*Mark and Ahmed share some sweets in the ratio 1:3. Ahmed has eight more sweets than Mark.*

*How many does Mark have?*



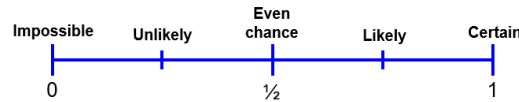
The ratio 1 : 3 is shown as 1 bar and 3 bars in the model. The difference of 8 is represented by the two extra bars that Ahmed has. 2 bars are worth 8, so 1 bar is worth 4. Mark has one bar, so Mark has 4.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Sample Space	The collection of all possible outcomes
Conditional Probability	The probability of something happening based on the occurrence of another event
Dependent events	Those which depend on what happened in a previous event
Independent events	Those which do not depend on an event which has happened before
Mutually Exclusive Events	Events which cannot happen at the same time for example getting a Head and a Tail at the same time

Tier 2 vocabulary	Definition
Probability	The chance of something happening
Fair	Outcomes have an equal chance of happening
Combined events	Two or more events that are considered to happen together either at the same time or in succession
Desired outcome	The result that is wanted
Listing	Writing down all the options/information.

## Section 2: Representations and procedures

The probability scale:



Probability of a single event:

$$\text{Probability} = \frac{\text{Number of desired outcomes}}{\text{Number of possible outcomes}}$$

the probability of rolling an even number on a fair dice

Desired outcomes are even numbers 2, 4 and 6 (**three** of them)

Possible outcomes are the numbers 1 to 6 (**six** of them)

$$\text{so Probability} = \frac{3}{6}, \text{ which simplifies to } \frac{1}{2}$$

Listing strategies

**Systematic listing strategies** are ways of writing outcomes from an event in an organised way with none of the possibilities missed out or repeated.

To do this we need to use a method which makes listing items easier. A good method to use is to fix certain values, making only small changes between each item in the list.

A meal deal consists of a drink and a bag of crisps.

Drinks – *O* and *A*

The drinks available are orange juice or apple juice.

The crisp flavours are bacon, cheese or plain.

Crisps – *B*, *C* and *P*

Start by fixing the choice of drink to *O* and then change the crisp flavour.

Now change the drink flavour and repeat the crisp flavours in the same order as before.

<i>O</i> , <i>B</i>	<i>A</i> , <i>B</i>
<i>O</i> , <i>C</i>	<i>A</i> , <i>C</i>
<i>O</i> , <i>P</i>	<i>A</i> , <i>P</i>

This gives us 6 combinations in total.

Probability of two or more events:

To determine the probability of two independent events, we have to **multiply** the probability of the first event by the probability of the second event.

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

Sample space diagrams

Sample space diagrams are useful for listing all possible outcomes of two events.

This sample space diagram shows the possible outcomes when 2 dice are rolled and are added together.

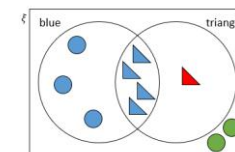
Space Diagram		1 <sup>st</sup> Die					
		1	2	3	4	5	6
2 <sup>nd</sup> Die	1	1	2	3	4	5	6
	2	2	4	6	8	10	12
	3	3	6	9	12	15	18
	4	4	8	12	16	20	24
	5	5	10	15	20	25	30
	6	6	12	18	24	30	36

$$P(4) = \frac{3}{36}$$

There are 36 possible outcomes, three of the outcomes are 4

Venn diagrams

Venn diagrams help us to organise information that overlaps.



A shape is selected at random.  
What is the probability that the shape is blue?

$$P(\text{blue}) = \frac{7}{10}$$

There are 10 shapes, 7 of them are blue.

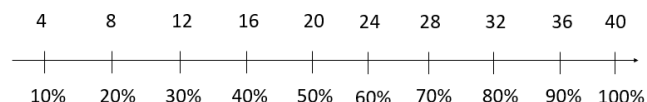
Probability of blue



Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
<b>Direct proportion</b>	When one value increases so does the other. One of the values is a multiple of the other value
<b>Inverse proportion</b>	When one value increases and the other decreases
<b>Scalar multiplier/ Scale factor</b>	Is a number that moves <i>along</i> lines in a double number line, that is, stays within the same variable
<b>Functional multiplier</b>	Is the multiplier that links the two quantities
Tier 2 vocabulary	Definition
<b>Percent</b>	A proportion that shows a number as parts per hundred. The symbol % means 'per cent'
<b>Percentage Increase</b>	Adding a given percentage of a value to the original value
<b>Percentage Decrease</b>	Subtracting a given percentage of a value from the original value
<b>Proportion</b>	Two or more quantities that increase or decrease at the same rate

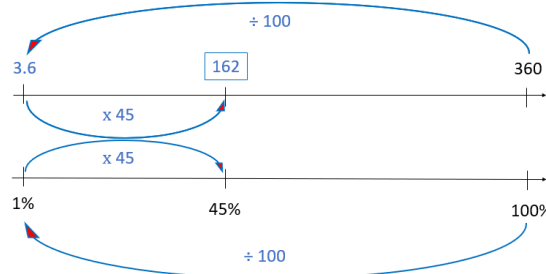
## Section 2: Representations

We can utilise a double number line to work with percentages. By making the original value equal to 100%, we can partition the number line to find other percentage:



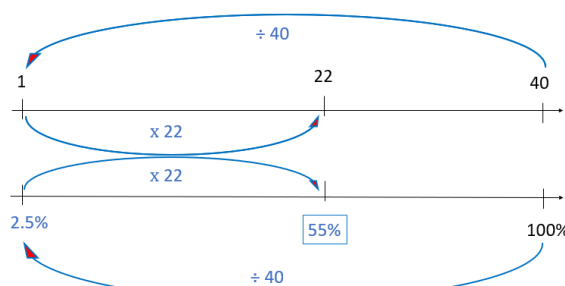
We can use all of our existing skills in **scaling** numbers in when working with percentages.

**Example question - What is 45% of 360?**



Likewise, we can use scaling to express one amount as a percentage of another.

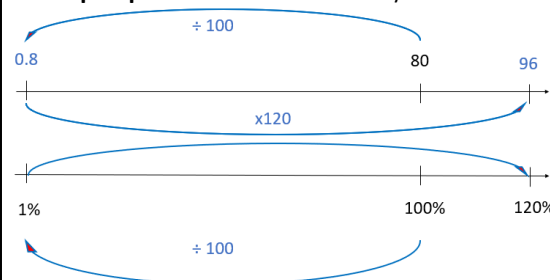
**Example question – What is 22 out of 40 as a %?**



## Section 3: Procedures

To increase a value by a given percentage, we can start by thinking about scaling from the original value (100%), down to find 1% and then scale up to a percentage larger than 100.

**Example questions – Increase £80 by 20%**

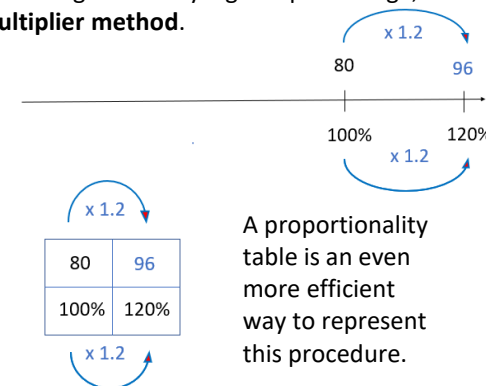


Numerically, our procedure is:  $80 \div 100 \times 120$

Which is the same as:

$$80 \times 120 \div 100 \quad \text{or} \quad 80 \times \frac{120}{100} \quad \text{or} \quad 80 \times 1.2$$

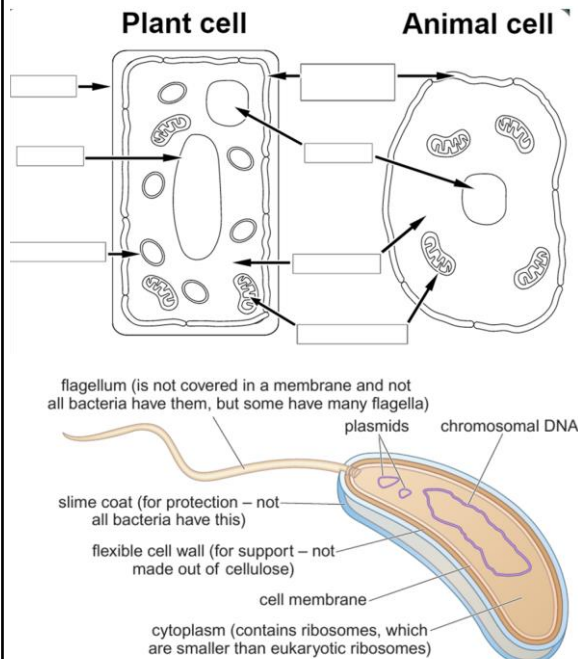
Here we arrive at the most efficient method for increasing a value by a given percentage, the **multiplier method**.



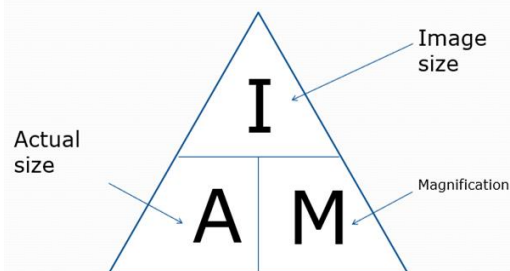
A proportionality table is an even more efficient way to represent this procedure.

Tier 3 vocabulary	Definition
<b>Eukaryotic</b>	A cell with a nucleus is eukaryotic.
<b>Chromosome</b>	A structure found in the nuclei of cells. Each chromosome contains one enormously long DNA molecule.
<b>Cell membrane</b>	The membrane that controls what goes into and out of a cell.
<b>Cell wall</b>	A tough layer of material around some cells, which is used for protection and support.
<b>Nucleus</b>	The 'control centre' of a eukaryotic cell. Contains DNA.
<b>Mitochondria</b>	Subcellular structure (organelle) where aerobic respiration occurs.
<b>Cytoplasm</b>	Jelly like substance where chemical reactions take place.
<b>Chloroplasts</b>	Green disks containing chlorophyll. Site of photosynthesis.
<b>Ribosomes</b>	Tiny structures where new proteins are made.
<b>Vacuole</b>	A storage space in the cell for cell sap. Helps keep the cell rigid.
<b>Chloroplasts</b>	A green disk containing chlorophyll. Site of photosynthesis.
<b>Chlorophyll</b>	The green substance inside chloroplasts. It traps energy transferred by light.
<b>Diploid</b>	Describes a cell that has two sets of chromosomes (2n)
<b>Haploid</b>	Describes a cell that has one set of chromosomes
<b>Acrosome</b>	A small section in the tip of a sperm which contains enzymes.
<b>Flagellum</b>	A tail-like structure that rotates allowing a unicellular organism to move.
<b>Prokaryotic</b>	A cell with no nucleus
<b>Plasmid</b>	A ring of DNA
<b>Objective lens</b>	One of the parts of the microscope that magnifies the specimen
<b>Eyepiece lens</b>	The part of the microscope that one looks down. It also magnifies the specimen
<b>Magnification</b>	How much bigger something appears compared with its actual size
<b>Resolution</b>	The smallest distance between two points where they are seen as two points.

## Section 2: New Knowledge/Skills



$$\text{Magnification} = \frac{\text{Image size}}{\text{Actual size}}$$

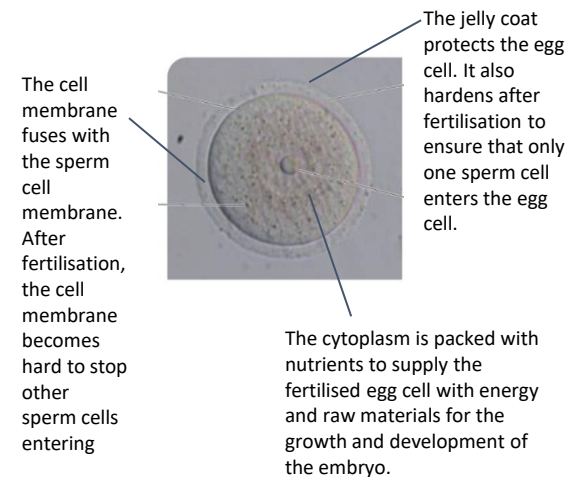
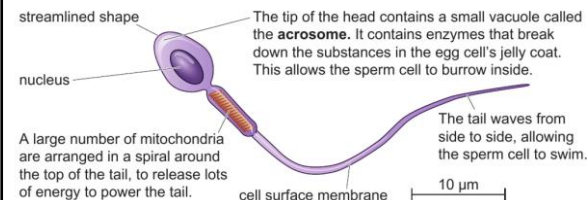


## Section 3

1. A scientist observed a cell using an electron microscope. The size of the image was 25 mm. The magnification was  $\times 100\,000$ .

Calculate the real size of the cell in micrometres.

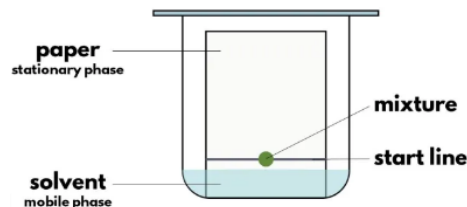
2. The average diameter of a real red blood cell is 0.008 millimetres. On a photograph, the diameter of the red blood cell is 100 millimetres. Calculate the magnification.



## Section 1: Key Vocabulary

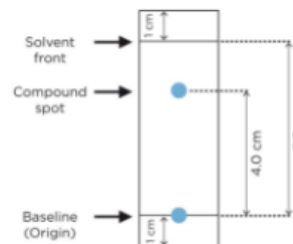
Tier 3 vocabulary	Definition
<b>Chromatography</b>	Carried out by spotting drops of the samples onto paper, and then allowing a solvent to move up the paper. Different components in the samples travel up the paper in the solvent at different rates.
<b>Chromatogram</b>	The piece of paper showing the results of carrying out chromatography on substances.
<b>Stationary phase</b>	The surface through which the solvent and dissolved substances move in chromatography.
<b>Mobile phase</b>	In paper chromatography, the solvent that moves along the paper carrying the dissolved samples with it.
<b>R<sub>f</sub> value</b>	The ratio of the distance travelled by the solute on a chromatogram (measured from the centre of the spot) to the distance travelled by the solvent under the same conditions.
<b>Potable water</b>	Drinking water
<b>Chlorination</b>	The process of adding chlorine to a substance, often to water.
<b>Sedimentation</b>	The process in which rock grains and insoluble substances sink to the bottom of a liquid.
<b>Distillation</b>	The process of separating a liquid from a mixture by evaporating the liquid and then condensing it.
<b>Distillate</b>	Something formed by distillation
<b>Condenser</b>	Apparatus for condensing vapour
<b>Filtrate</b>	Liquid that has passed through a filter
<b>Crystallisation</b>	Separating the solute from a solution by evaporating the solvent

## Section 2: New Knowledge/Skills

Creating a chromatogram and calculate R<sub>f</sub> values


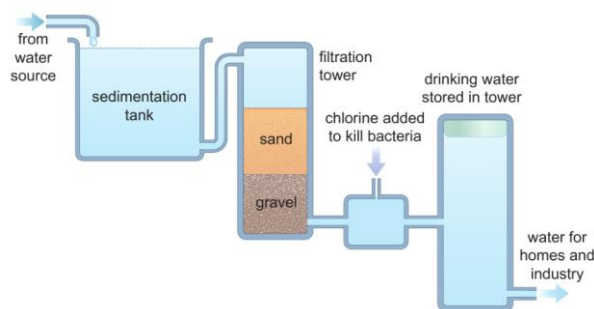
R<sub>f</sub> values can be used to identify unknown chemicals. The R<sub>f</sub> value is always the same for a particular substance.

The R<sub>f</sub> value = distance moved by spot / distance moved by solvent



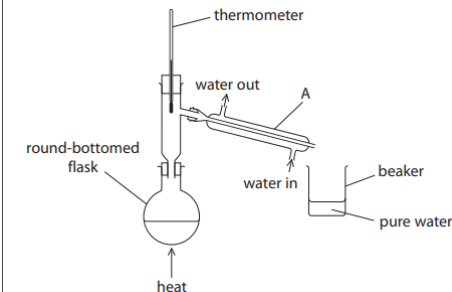
In the above example R<sub>f</sub> value = 4.0/5.5 = 0.73

## Making potable water

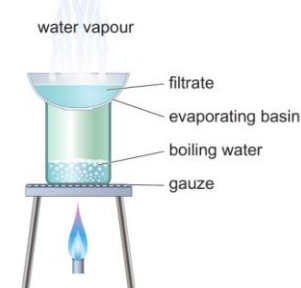


## Section 3: Other subject specific things

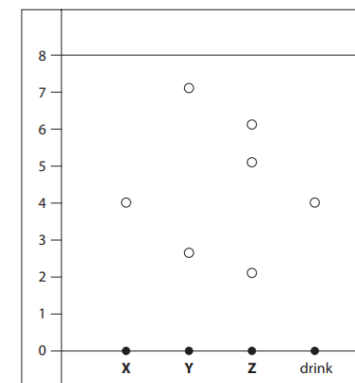
## Apparatus for distillation



## Apparatus for crystallisation



## Chromatogram homework task:



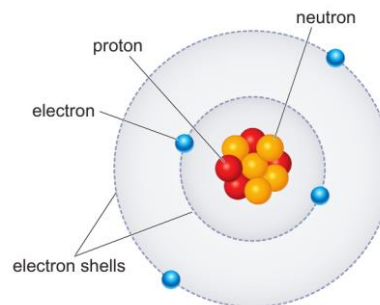
### Section 1: Key Vocabulary

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

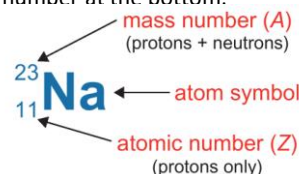


The masses of subatomic particles are very tiny. Instead of writing their actual masses in kilograms, we often use their relative masses. The mass of electrons is very small compared with protons and neutrons. Since a nucleus contains protons and neutrons, most of the mass of an atom is concentrated 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 <b>Ca</b> calcium 20	24 <b>Mg</b> magnesium 12	40 <b>Ar</b> argon 18
19 <b>F</b> fluorine 9	27 <b>Al</b> aluminium 13	31 <b>P</b> phosphorus 15

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
<b>Scalar quantity</b>	A quantity that has a magnitude (size) but not a direction
<b>Vector quantity</b>	A quantity that has both a size and a direction
<b>Velocity</b>	The speed of an object in a particular direction.
<b>Speed</b>	A measure of the distance an object travels in a given time.
<b>Displacement</b>	The distance travelled in a particular direction.
<b>Acceleration</b>	A measure of how quickly the velocity of something is changing.
<b>Momentum</b>	A measure of motion, mass multiplied by velocity. Momentum is a vector quantity.

Tier 2 vocabulary	Definition
<b>Magnitude</b>	The size of something, such as the size of a force or the measurement of a distance
<b>gradient</b>	A way of describing the steepness of a line on a graph in numbers

### Section 2: New Knowledge/Skills

All measurements are either scalar or vector quantities

Measurement	Scalar	Vector
Distance	Y	
Speed	Y	
Velocity		Y
Acceleration		Y
Weight		Y
All forces		Y
Energy	Y	

Calculating speed and acceleration

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

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

When objects fall they accelerate due to the gravitational field on Earth. The values for these quantities are

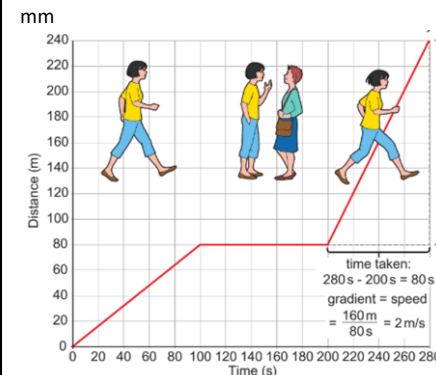
Acceleration due to gravity is  $10 \text{ m/s}^2$

Gravitational field strength is  $10 \text{ N/kg}$

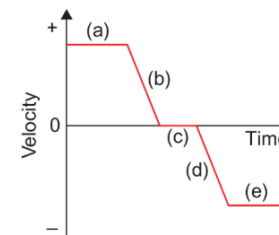
### Section 3: Skills

Using a Distance / time graph

Alice is walking in the park. Alice stops to chat. Alice is now late. She travels 80m in 100s to a friend for 100s so she has to jog



Reading a Velocity / Time graph



The graph shows a lift moving up at a constant speed (a), slowing to a stop (b) and waiting at a floor (c) then accelerating downwards (d) and then travelling downwards at a constant speed (e)

#### Distance travelled

The distance travelled can be worked out from a velocity-time graph by calculating the area under the graph for the period you are measuring.



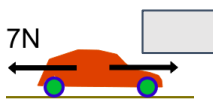
Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
<b>centripetal force</b>	A force that causes objects to follow a circular path. The force acts towards the centre of the circle.
<b>inertial mass</b>	The mass of an object found from the ratio of force divided by acceleration.
<b>action-reaction forces</b>	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.
<b>equilibrium</b>	When a situation is not changing because all the things affecting it balance out.
<b>mass</b>	A measure of the amount of matter that there is in an object. a scalar quantity.
<b>weight</b>	The force pulling an object downwards, it depends upon the mass of the object and the gravitational field strength.
<b>Gravitational field strength</b>	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).
<b>Free body diagram</b>	A diagram with one simple object shown (circle or box) and all the objects acting on that object.
<b>Resultant force</b>	One force ( value and direction ) that represents all the forces on an object.
<b>Balanced forces</b>	The resultant force equals zero.
Tier 2 vocabulary	Definition
<b>Velocity</b>	The speed of an object in a particular direction.
<b>acceleration</b>	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 thrust the car is producing?



**2nd Law**  
The amount an object accelerates is affected by the action on and the object's mass.

These are shown in the equation;

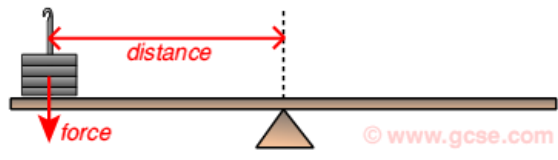
Force = mass x acceleration



mass = 1 kg  
10 N  
 $a = \frac{10 \text{ N}}{1 \text{ kg}} = 10 \text{ m/s}^2$

**Moments**  
The turned force on an object

Moment = force x perpendicular distance from pivot

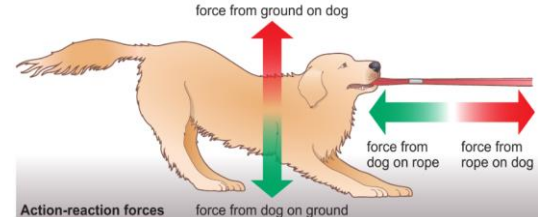


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### Section 3: Other subject specific things

**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;


- Measured in N
- 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/m<sup>3</sup>) =  $\frac{\text{Mass (Kg)}}{\text{Volume (m}^3\text{)}}$



Volume of irregular shapes  
Be measured using a Eureka beaker

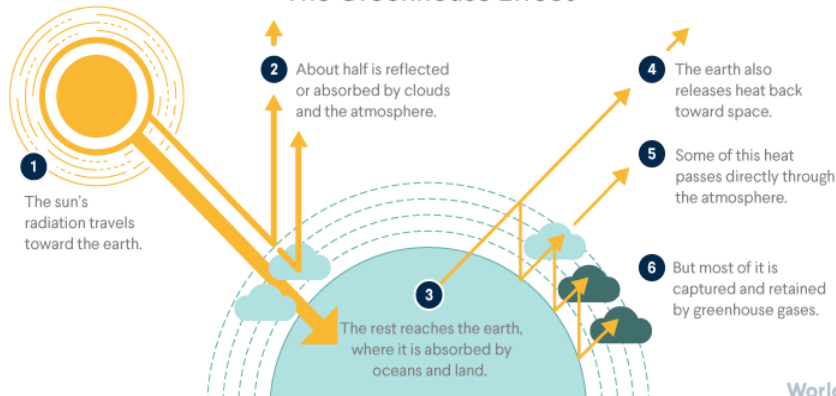
$V_{\text{box}} = \text{length} \times \text{width} \times \text{height}$   
 $V_{\text{box}} = l \times w \times h$

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

Tier 2 vocabulary	Definition
<b>Sustainability</b>	The practice of using natural resources responsibly, so they can support both present and future generations.
<b>Social</b>	Things affecting people and their community.
<b>Economic</b>	Things relating to money.
<b>Environmental</b>	Things relating to our surroundings.

## Section 2: New Knowledge

### The Greenhouse Effect



World101

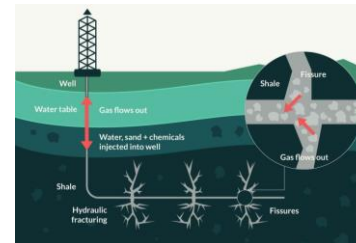
**Palm oil**  
+ Makes lots of money, creates jobs and provides money for governments and businesses.

- 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.



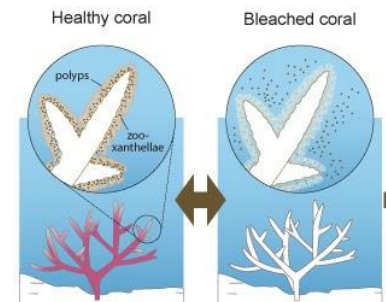
### Renewable energy in Germany

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



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

Tier 2 vocabulary	Definition
<b>Prejudice</b>	An unfair opinion or judgement or feelings towards someone
<b>Palestine</b>	Country belonging to Palestinian Arabs in the Holy Land
<b>Israel</b>	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?

What did the Holocaust mean in different places and at different times?

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

Section 2: Key Questions
<p><b>Facts, beliefs and opinions</b></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><b>The Kalam Argument</b></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><b>Buddhist views on God</b></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><b>Buddhist views on Suffering</b></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><b>Assessment Essay Question:</b></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"> <li>What's the difference between facts, beliefs and opinions?</li> <li>Why do Muslims believe in God? Do they believe God can be proven to exist?</li> <li>Why did the Buddha think belief in God was unimportant?</li> <li>In Buddhist thinking, what can save us from pain and suffering?</li> </ul> <p><b>Skills checklist –</b> As you write your essay check that you have included...</p> <p><b>Knowledge –</b> facts and religious or non-religious beliefs,</p> <p><b>Impact of belief –</b> how it affects what people think and do,</p> <p><b>Specialist terms,</b></p> <p><b>Sources of authority –</b> where people get their ideas/beliefs from – quotations,</p> <p><b>Judgement –</b> how strong, valid or sound the argument is,</p> <p><b>Opinion –</b> at least 2 different points of view</p>

Section 1: Key Vocabulary/Questions	
Tier 2 vocabulary	Definition
Interrogatives	Question words used to seek more information.
Simple future tense	Used to talk about 'will' happen
Conjugation	How a verb changes to show a different subject pronoun and tense
Regular verbs	Follow a pattern (-er, -ir, -re)
Irregular verbs	Follow their own pattern
Time frames	Reference to past, present or future
Questions	Translation
1. Où vas-tu normalement le weekend ?	Where do you normally go at the weekend?
2. Qu'est-ce que tu fais ?	What do you do?
3. C'est comment?	What is it like?
4. Où es-tu allé(e) le weekend dernier ?	Where did you go last weekend?
5. Qu'est-ce que tu as fait ?	What did you do?
6. C'était comment ?	What was it like?
7. Où iras-tu à l'avenir ?	Where will you go in the future?
8. Qu'est-ce que tu feras à l'avenir ?	What will you do in the future?
9. Ce sera comment ?	What will it be like?
10. À l'avenir le monde sera comment ?	In the future what will the world be like?

Section 2: Grammar			
<b>Modal Verbs</b> Modal Verbs are followed by the infinitive			
	<b>pouvoir</b> to be able to	<b>vouloir</b> to want	<b>devoir</b> to have to
je	peux (I can)	veux (I want)	dois (I must)
tu	peux	veux	dois
il/elle/on	peut	veut	doit
nous	pouvons	voulons	devons
vous	pouvez	voulez	devez
ils/elles	peuvent	veulent	doivent
☆ Je veux aider à la maison. (I want to help at home) ☆ Elle peut gagner de l'argent (She can earn some money) ☆ Ils doivent aller à l'école (They must go to school.) ☆ The noun 'les devoirs' means 'homework' - something you must do!			
<b>The simple future tense</b> This tense is used to talk about what <b>will</b> happen.			
<b>Formation</b> Future stem + future tense ending			
	<b>er verbs</b>	<b>ir verbs</b>	<b>re verbs</b>
je/j'	jouerai	finirai	attendrai
tu	joueras	finiras	attendras
il/elle/on	jouera	finira	attendra
nous	jouerons	finirons	attendrons
vous	jouerez	finirez	attendrez
ils/elles	joueront	finiront	attendront
☆ For regular -er and -ir verbs, the future stem is the same as the infinitive. ☆ The future stem for verbs ending in -re is the infinitive without the final -e. ☆ Irregular verbs have their own <b>future stem</b> (verb table) e.g. avoir- j' <b>aurai</b> /être- je <b>serai</b> /faire- je <b>ferai</b> /aller- j' <b>irai</b>			

Section 3: WAGOLL	
<p>Pour gagner de l'argent, on peut travailler dans le jardin ou faire du babysitting. Moi, je dois aider à la maison, ce que je trouve barbant, pourtant je gagne de l'argent donc le weekend dernier j'ai acheté des billets de cinéma. Ma mère est ingénieure chez Rolls Royce mais je ne veux pas être ingénieure car c'est vraiment fatigant. Le weekend elle est venue au ciné avec moi car elle a trop travaillé !</p> <p>À l'âge de seize ans, je veux faire un apprentissage ou travailler avec des personnes âgées car je veux aider les autres. À l'avenir j'habiterai à l'étranger où je travaillerai avec des enfants. À mon avis, ce sera satisfaisant. Cependant, mon ami ira en Amérique du Sud où il fera du travail bénévole. Il sera heureux car il a toujours voulu voyager. Selon moi, le monde sera très différent à l'avenir. Je pense qu'on portera les vêtements intelligents et il y aura un robot dans chaque maison. Incroyable!</p> <p>Récemment, j'ai lu un article au sujet d'une jeune inventrice. Elle a inventé des lunettes intelligentes pour traduire en anglais. Elle a même gagné un prix au concours. Ce que j'ai trouvé surtout impressionnant, c'est qu'elle a travaillé seule. Bravo!</p> <p><b>À savoir:</b>            D'ici dix ans Ten years from now            Dans deux ans In two years time            Il y a There is/are            Il y aura There will be            Il y avait There was/were            C'est It is            Ce sera It will be            C'était It was</p> <p>😊 <b>Quand les poules auront des dents...</b>            'When hens will have teeth'            What is the English idiom/expression for this?</p> <p><b>Pronunciation of the future simple tense.</b>            🗣️ Remember to pronounce the <b>er</b> as <b>err</b> in the simple future</p> <p>Je mangerai → Je mang-<b>er</b>-ai            Nous regarderons → Nous regard-<b>er</b>-ons            Vous travaillerez → Vous travaill-<b>er</b>-ez</p>	
 	



FRENCH Y9 Word list Autumn 2.A/ Spring 1.A		
	l'argent	money
	pouvoir	to be able to
	devoir	to have to
	aider	to help/helping
	nourrir	to feed/feeding
	l'argent de poche	pocket money
	le maquillage	makeup
	gagner	to earn/win
	pour + infinitive	in order to + infinitive
	une mauvaise idée	a bad idea

FRENCH Y9 Word list Autumn 2.B/ Spring 1.B		
	continuer	to continue/continuing
	varié	varied
	dangereux	dangerous
	le lycée	secondary school
	un petit boulot	a part-time job
	utile	useful
	passionnant	exciting
	le travail bénévole	voluntary work
	il est infirmier	he is a nurse
	elle est infirmière	he is a nurse

FRENCH Y9 Word list Autumn 2.C/ Spring 1.C		
	à l'avenir	in the future
	J'habiterai	I will live
	Je travaillerai	I will work
	J'achèterai	I will buy
	J'aurai	I will have
	À l'étranger	abroad
	Je serai	I will be
	J'irai	I will go
	Je ferai	I will do/make
	d'ici dix ans	In 10 years time

FRENCH Y9 Word list Autumn 2.D/ Spring 1.D		
	effrayant	frightening
	en ligne	on line
	sans	without
	avec	with
	une perte de temps	a waste of time
	en plus	in addition
	agréable	pleasant
	carrément	downright
	ranger	to tidy/tidying
	il y aura	there will be

FRENCH Y9 Word list Autumn 2.E/ Spring 1.E		
	devenir	to become/becoming
	Je veux devenir	I want to become
	scientifique	scientist
	infirmier/ ière	nurse
	mécanicien/ienne	mechanic
	architecte	architect
	vétérinaire	vet
	musicien/ienne	musician
	instituteur/rice	primary school teacher
	policier/ière	police officer

FRENCH Y9 Word list Autumn 2.F/ Spring 1.F		
	recevoir	to receive
	reçu	Received
	des vêtements	Clothes
	des cadeaux	Presents
	des trucs à manger	things to eat
	le prix Nobel	the Nobel Prize
	(pour) une organisation bénévole	(for) a voluntary organisation
	continuer	to continue/continuing
	les études	Studies
	J'espère + infinitive	I hope to +infinitive

Phonics: on/om	
bon	compliqué
donner	comme

Phonics: in/un	
intéressant	un
dessin	brun

Phonics: au/eau/o/ô	
chaud	bateau
poster	hôtel

Phonics: en/an	
ennuyeux	relaxant
entendre	amusant

Phonics: ail/aïlle	
travail	paille
ail	maillot

Phonics: ill/ille	
gentil	filles
lentil	juillet

Phonics: liaison with 's' and a vowel	
plus_ennuyeux	moins_intéressant
très_important	je vais_aller

## REVISION:

Scan this QR code which links to the French Y9 Quizlet word list folder.



**Section 1: Key Vocabulary/Questions**

Tier 2 vocabulary	Definition
<b>Conditional</b>	<i>e.g. ich würde</i> This is used to say what you <i>would</i> or <i>would not</i> do.
<b>Word Order 3 (WO3)</b>	used in German with a subordinating conjunction. The first verb in the clause is moved to the end of that clause
<b>WO2 Inversion</b>	<i>e.g. Später möchte ich....</i> Where a sentence starts with an adverb, the subject pronoun and verb are swapped
<b>Clause</b>	A group of words containing a subject and a verb
<b>Subordinate clause</b>	a clause connected to a main clause that doesn't make sense by itself
Question	Translation
1. Hast du einen Teilzeitjob?	Do you have a part time job?
2. Warum arbeitest du (nicht)?	Why do(don't) you work?
3. Wirst du in der Zukunft einen Teilzeitjob bekommen?	Will you get a part time job in the future?
4. Hast du ein Arbeitspraktikum gemacht?	Did you do work experience?
5. Was wirst du nach deinen GCSEs machen?	What will you do after your GCSEs?
6. Wirst du studieren?	Will you study?
7. Was möchtest du in 10 Jahren machen?	What would you like to do in 10 years?
8. Was möchtest du auf jeden Fall/auf keinen Fall machen?	What would you definitely (not) like to do?

**Section 2: Grammar**

**Conditional**

ich würde  
du würdest  
er/sie/es/man würde  
wir würden  
ihr würdet  
sie/Sie würden

**+infinitive**  
**...studieren**  
**...wohnen**  
**...arbeiten**

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.

**Modal Verbs**

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*  
- man: kann, soll, mag, muss, darf, 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.*

**Main clauses and subordinating clauses**

*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**

Ich arbeite zweimal pro Woche in einem Café als Kellner, um Geld zu verdienen. Ich mag die Arbeit, obwohl sie manchmal anstrengend ist. In zwei Jahren werde ich als Babysitter arbeiten, um Erfahrung zu bekommen.

Letztes Jahr habe ich ein Arbeitspraktikum in einem Büro gemacht. Ich musste Briefe zur Post bringen und ich musste Kaffee kochen, aber ich durfte nicht mit den Kunden sprechen. Meiner Meinung nach war das sehr langweilig.

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!

**Gut zu wissen!**

Click on the QR code to see information on which jobs 14 year olds can do in Germany. Can you understand the questions on the right hand side?  
Can you see which types of jobs you're allowed to do?



**GERMAN Y9 Word list Autumn 2.A/ Spring 1.A**

Lehrer*in	teacher
Bademeister*in	lifeguard
Kellner*in	waiter
Küchenhelfer*in	kitchen hand
Zeitungsaussträger*in	paper boy/girl
arbeiten	to work
gearbeitet	worked
verdienen	to earn
verdient	earnt
ich arbeite als	I work as a

**GERMAN Y9 Word list Autumn 2.B/ Spring 1.B**

um...zu...	in order to...
das Geld	money
die Erfahrung	experience
bekommen	to get/receive/got/received
Spaß haben	to have fun
die Leute	people
neu	new
viel	lots (of)
viele	lots (of)/many
mehr	more

**GERMAN Y9 Word list Autumn 2.C/ Spring 1.C**

das Büro	office
die Fabrik	factory
die Baustelle	building site
in einem	in a (m/n)
in einer	in a (f)
auf einem	on a (m/n)
auf einer	on a (f)
im Freien	in the open air
draußen	outside
die Schichtarbeit	shift work

**GERMAN Y9 Word list Autumn 2.D/ 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 Autumn 2.E/ Spring 1.E**

ich musste	I had to
er/sie musste	he/she had to
musste nicht	didn't have to (sing)
mussten nicht	didn't have to (pl)
ich durfte	I was allowed
er/sie durfte	he/she was allowed
durfte nicht	wasn't allowed (sing)
durften nicht	weren't allowed (pl)
ich wollte	I wanted
ich sollte	I was supposed to

**GERMAN Y9 Word list Autumn 2.F/ Spring 1.F**

schicken	to send
der Brief	letter
die Briefmarken	stamps
die Post	post office
Kollegen	colleagues
der Chef/die Chefin	the boss
Kunden	customers
bedienen	to serve
abwaschen	to wash up
aufräumen	to tidy up

REVISION: Scan the QR code above to access the word lists on Quizlet!  
This QR code links to all [the German Year 9 QUIZLET sets.](#)

**Phonics: ch (soft)**

nicht	Milch
abwaschen	Teich
Chef	modisch
ich	schlecht

**Phonics: ch (hard)**

noch	acht
jedoch	Chor
auch	Buch
sechs	gedacht

## Section 1: Key Vocabulary

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

## Tier 2 vocabulary

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

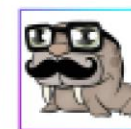
Useful keyboard shortcuts for the project tasks:

 <b>Open</b> <b>CTRL + O</b>	 <b>Save</b> <b>CTRL + S</b>	 <b>Print</b> <b>CTRL + P</b>
 <b>Cut</b> <b>CTRL + X</b>	 <b>Copy</b> <b>CTRL + C</b>	 <b>Paste</b> <b>CTRL + V</b>

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
<b>Holding Space</b>	Using your body to protect a space you want to move into.
<b>Interception</b>	Deflecting or catching the ball whilst it is on route to another player.
<b>Repossession</b>	Catching, dropping and then re-catching the ball.
<b>Rebounding</b>	Trying to reclaim the ball after an attempted shot at goal.
<b>Driving onto the ball</b>	Sprinting towards the ball when receiving a pass.
<b>Throw-up</b>	Method used to restart the game after two players simultaneously commit a foul.
<b>Double Lead</b>	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
<b>Penalty corner</b>	An attacking set piece with the attackers lined up outside the circle and the defenders on the goal line.
<b>Injection</b>	Passing the ball into play from the penalty corner.
<b>25m hit</b>	Hockey's version of football's corner when a defender hits the ball behind their own goal line.
<b>Jab tackle</b>	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
<b>Set</b>	Passing the ball from in front of the forehead using the fingers and thumbs of both hands.
<b>Dig</b>	Passing the ball with the forearms - between the wrists and the elbows.
<b>Spike</b>	Volleyball's version of the smash - hitting the ball firmly over the net making it difficult for the opponents to return.
<b>Block</b>	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.
<b>Serve/service</b>	The start of the rally can be done underarm or overarm. It must be taken by the player at the back right side corner.
<b>Sideout</b>	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
<b>Touch judge</b>	An important officiating role which you may need to take on in lessons.
<b>Gain line</b>	An imaginary line across the pitch where the breakdown occurs.
<b>Conversion</b>	Kicking over the bar for after a try is scored.
<b>Drop kick</b>	A half-volley kick to start the game.
<b>Drop goal</b>	A drop kick over the posts.
<b>Kick for touch</b>	Kicking the ball off the side of the pitch when your team is under pressure.
<b>Props</b>	Two forwards that support the hooker in a scrum.
<b>Hooker</b>	The forward who goes in the front middle of the scrum and tries to hook the ball with their feet.
<b>Fly-half</b>	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
<b>Back spin</b>	Hitting down the back of the ball to make it travel more slowly over the net - a defensive tactic.
<b>Top spin</b>	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.
<b>Variation</b>	Doing different things to keep your opponent guessing - playing different shots to different parts of the table for example.
<b>Attack</b>	One playing is usually on the offensive, trying to hit the winning point.
<b>Defence</b>	If your opponent is on the offensive, you made need to adjust your position and your shot selection to effectively defend their shots.
<b>Shot selection</b>	The skill of knowing what shot to use at any point in the game.
<b>Block</b>	A defensive tactic of just putting your bat out to bounce the ball back over the net.
<b>Loop</b>	Playing the ball back high over the net when defending to give yourself time to get ready to defend the next shot.
<b>Backhand flick</b>	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
<b>Partners/Pairs</b>	Performing with 1 other student.
<b>Trios/Groups</b>	Performing in a group of 3 or more.
<b>Cannon/ Mirror/ Unison</b>	Performing 1 after the other/performing in time in opposition/performing in time.
<b>Counter balance</b>	Leaning inward or towards a partner or group to support or maintain a balance.
<b>Counter tension</b>	Leaning outward or away from a partner or group to support or maintain a balance.
<b>Weight bearing</b>	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
<b>Rebound</b>	Catching the ball after a missed shot.
<b>Offensive rebound</b>	Taking a rebound when your team is in attack giving your team another chance to score.
<b>Defensive rebound</b>	Taking a rebound when you are in defence, preventing the other team from having another shot.
<b>Assist</b>	Setting a teammate up to score a basket.
<b>Outlet pass</b>	Making a quick pass out from under your own basket to set up an attack after you have taken a rebound.
<b>Breakout dribble</b>	Making a quick dribble out from under your basket (2 or 3 bounces) to set up an attack for your team.
<b>Officiating crew</b>	The team of officials needed to run a basketball game including a referee, an umpire, a scorer and a timekeeper.
<b>Half court defence</b>	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
<b>Components of fitness</b>	Our fitness can be broken down into 11 components of fitness which we all possess. Examples include speed, strength, agility.
<b>Effects of exercise</b>	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.
<b>Fitness testing</b>	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.
<b>Circuit training</b>	A method of training which involves exercising at a station then having a rest before moving to the next station.
<b>Weight training</b>	Using a resistance such as a dumbbell to exercise a specific muscle.
<b>Heart rate</b>	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:          How many of the major muscles can you name?          Can you link 5 components of fitness with their fitness test?          Can you list 10 exercises you can do with a pair of dumbbells?          Can you list 10 exercises you can do without any equipment?          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 <b>personal best</b> time. You will set your own targets based on previous times and set yourself <b>interim targets</b> (lap times and split times) to help you reach your goal.</p> <p>We will continue to develop our <b>mental approach</b> to running by looking at some basic <b>tactics</b> (strategies) - when to run faster or when to conserve energy.</p> <p>To improve our performance we will look at two <b>training methods</b> which can be used to improve running: <b>fartlek</b> and <b>interval</b>.</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 <b>components of fitness</b> 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
<b>Igbo</b>	tribe from Nigeria
<b>Rebellion</b>	uprising against other people
<b>Voyage</b>	journey
<b>Captive</b>	kept as a prisoner
<b>Shackled</b>	chained together
<b>Enslaved</b>	sold and owned by another person
<b>Propaganda</b>	biased information used to spread a message

**Tier 2 vocabulary**

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

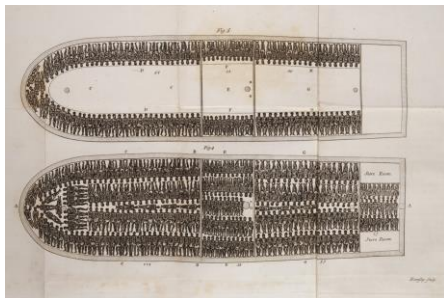


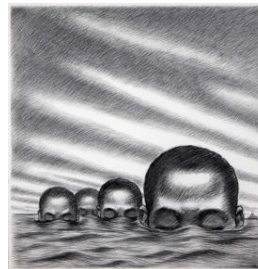
Diagram of slave ship 1801

**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](http://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.

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## Tier 2 vocabulary

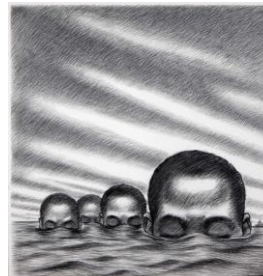
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## Section 2: New Knowledge/Skills

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

### Tier 2 vocabulary

### Definition

<b>Socio-Political Issues</b>	Issues and political decisions that effect the peoples lives and the world.
<b>3rd Person Narration</b>	Commenting upon a character as an actor is a clear way of reminding the audience of theatricality.
<b>Direct address</b>	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?**

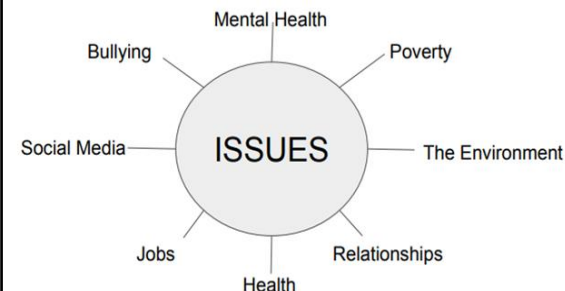
This short video explains the ideas of Epic Theatre.

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

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

## Tier 2 vocabulary

## Definition

<b>Cues</b>	A point in the music where something significant will occur.
<b>Sound effect</b>	An artificial sound used in many films/games...eg a door opening
<b>Dynamics</b>	Loud or soft
<b>Tempo</b>	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
<b>Macronutrients</b>	The nutrients needed in larger quantities within the diet. Carbohydrates, proteins and fats.
<b>Micronutrients</b>	The nutrients needed in smaller quantities within the diet. Vitamins and minerals.
<b>Deficiency disease</b>	A health issue related to a lack of one or more nutrients in the diet. E.g. Kwashiorkor, Rickets and Anaemia.
<b>Dietician</b>	An individual who promotes good dietary health and treats nutritional problems by providing practical advice about food choices, based on scientific research.
<b>Complex Carbohydrates</b>	Also known as starchy carbohydrates. These should make up the majority of a person's carbohydrate intake. Providing slow-release energy.
<b>Simple Carbohydrates</b>	Also known as sugary carbohydrates. These should be consumed as a smaller proportion of the carbohydrate intake. Providing fast-release energy.
<b>Proteins</b>	A nutrient provided by meat, fish, dairy, nuts. Peas, beans and lentils. Protein is required for growth and repair.
<b>Saturated Fat</b>	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.
<b>Unsaturated Fat</b>	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.
<b>Marinade</b>	A mixture of oils and spices / herbs in which meat, fish or other ingredients are soaked to absorb flavours and soften proteins before cooking.
<b>En papillote</b>	A cooking method where ingredients are cooked and served in a paper or foil wrap.

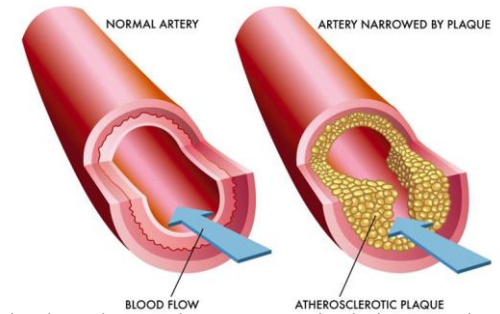
Tier 2 vocabulary	Definition
<b>Obesity</b>	The state of being grossly overweight.
<b>Diabetes</b>	A disease in which the body's ability to produce or respond to the hormone insulin is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood.
<b>Ethical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

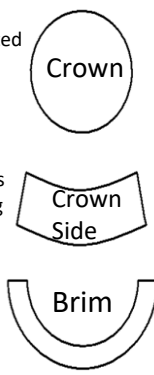
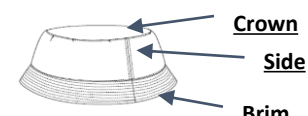



**Homework 1:** The Google Classroom H&S homework on safety set by your teacher (you can ask your teacher for a paper copy of this quiz if needed).

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

Section 2: Skills
<p><b>Sewing Patterns</b></p> <p>A sewing pattern is a set of shapes that have been <b>drafted</b> 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 <b>garment</b> you want to make!</p> <p>Sewing patterns are <b>graded</b>, 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 <b>small, medium</b> etc</p> <p>The size of the hat you chose to make will be based on the circumference of your head.</p> 
<p><b>Manufacturing Process for the Hat</b></p> <ol style="list-style-type: none"> <li>1. Sew the BRIM to the CROWN SIDE, repeat 4 times</li> <li>2. Match the outside hat sides together, right sides together</li> <li>3. Repeat for the lining pieces.</li> <li>4. Sew each together down the sides.</li> <li>5. Stay stitch around the top of both hats.</li> <li>6. Snip into the top of the hat at 1cm intervals. Make sure not to cut through the stay stitching. Repeat for both hats.</li> <li>7. Pin the outside CROWN onto the top of the outside hat. Repeat for the lining of the hat.</li> <li>8. Machine around the top of the hat for both the lining and outside.</li> <li>9. Put the hats together RIGHT SIDES TOGETHER. Match up the edges and pin in place.</li> <li>10. Sew around the brim, leaving a gap big enough for your hand to get in!</li> <li>11. Turn the hat right sides out through the gap you left.</li> <li>12. Top stitch around the edge of the brim, also sewing up the gap.</li> </ol> 

Section 3: Knowledge
<p><b>Textiles and the Environment</b></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"> <li>*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.</li> <li>*10% of all greenhouse gases are produced by textile production.</li> <li>*0.5million tonnes of MICROFIBRES are released into the oceans each year as a result of washing SYNTHETIC textiles.</li> </ul>
<p><b>The 6 R's</b></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>  <p>This is the MOBIUS loop It is the recognised symbol of recycling.</p>

### Section 1: - Key Vocabulary

#### Tier 3 Vocabulary

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

#### Tier 2 Vocabulary

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

### Section 2: Skills

#### Soldering

Being able to solder 'of board' components to 'fly wires'  
 Being able to solder 'on board' components to a PCB  
 Be able to solder an integrated circuit to a PCB  
 Soldered joints should be neat, use the correct amount of solder, they should be shiny to avoid 'dry joints'

#### Follow chart programming

Use electronic CAD software to design a flowchart program which be controlled, and control multiple inputs and outputs  
 Use electronic CAD software to design a flowchart program which be controlled, and control inputs and outputs

#### 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

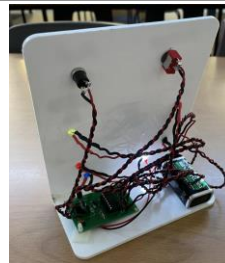
#### Product Assembly

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






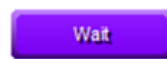

### Section 3:- New Knowledge

#### Specification Writing

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




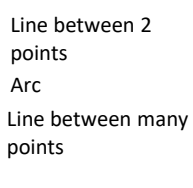


#### Flowchart Programming

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
<b>Financial Independence</b>	A state where an individual or household has accumulated sufficient financial resources to cover its living expenses without having to depend on active employment or work to earn money in order to maintain its current lifestyle
<b>Entrepreneur</b>	A person who sets up a business or businesses, taking on financial risks in the hope of profit
<b>Financial Personality</b>	Reflects traits and attitudes, such as whether you pay your bills on time, or how you feel about the future.
<b>Inflation</b>	A general increase in prices and fall in the purchasing value of money
<b>Budgeting</b>	Allow or provide a particular amount of money in a budget
<b>Vocational</b>	Education or training directed at a particular occupation and its skills
Tier 2 vocabulary	Definition
<b>Debt</b>	A sum of money that is owed or due
<b>Poverty</b>	The state of being extremely poor
<b>Income</b>	Money received, especially on a regular basis, for work or through investments
<b>Career</b>	An occupation undertaken for a significant period of a person's life and with opportunities for progress
<b>Aspirations</b>	A hope or ambition of achieving something

BE INVOLVED

## Section 2: New Knowledge/Skills

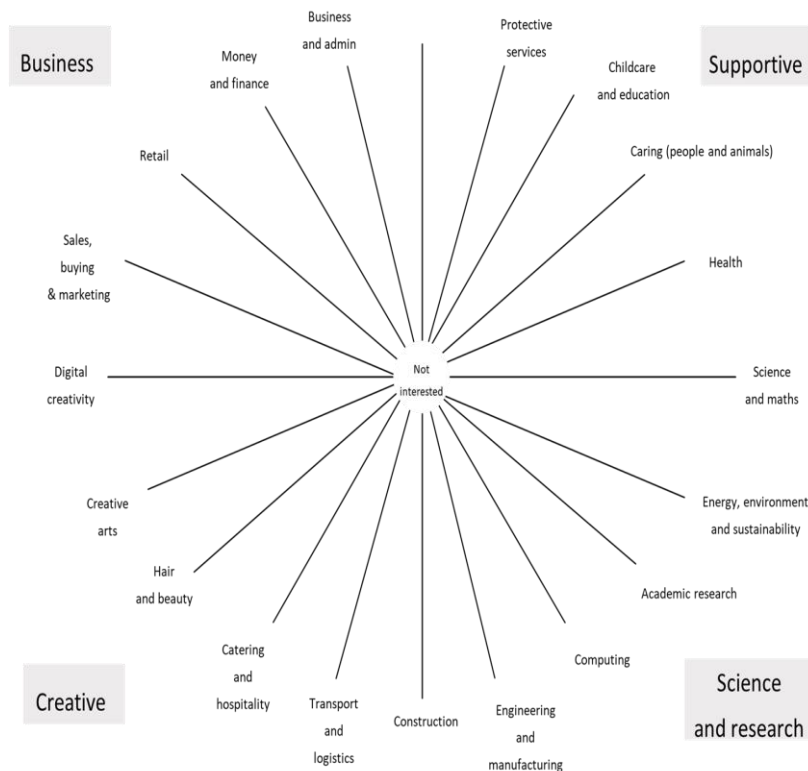
Happiness increases as income rises but only to a certain point. According to research carried out by Harvard university when earnings rise beyond around £60,000 per year there is not much increase in happiness.

Other researchers have found that being generous by giving money away e.g. to charity results in better feelings of wellbeing and happiness as it triggers the endorphins that make us happy - "helpers high".

The bottom line is that we need enough money to meet our basic needs but beyond that, how we use it can have more of an impact on our happiness.

## Careers Wheel

The career wheel exercise is one mechanism to provide students with realistic and valid expectations about the job and career they are pursuing



## Section 3: Other subject specific things

## Help with money worries:

The Citizens advice bureau is a national organisation that offers help and advice on all kinds of things including financial problems. There are offices in most towns and also a website. Advice is free.

High street banks all have support for customers who are worried about money. During the coronavirus pandemic many contacted customers offering help and advice if required.

Mental health charities such as Mind UK, The Samaritans and Young Minds all have helplines and online advice to support anyone who has any mental health problem, including worries about money. Gamblers anonymous is a charity that supports individuals and families struggling with the effects of gambling.

## Tasks:

Give examples of two pieces of advice you would give someone if they were worried about money.

Suggest three things that make you happy but don't cost anything.

Research different careers that interest you using these websites.

What qualifications are needed?

What can you do now to help you get these jobs?

<https://www.youthemployment.org.uk/careers-hub/> (UK wide)

<https://www.gov.uk/browse/education/find-course> (England)

<https://www.bbc.co.uk/bitesize/articles/zdqnxytc> (UK wide)

## Be an entrepreneur

What would you invent to make life easier, more interesting or more fun for young people your age?

Thought shower some ideas and then decide on one that you would like to develop further.

- How would fund your idea?
- How will you find out if it is something that young people will buy?



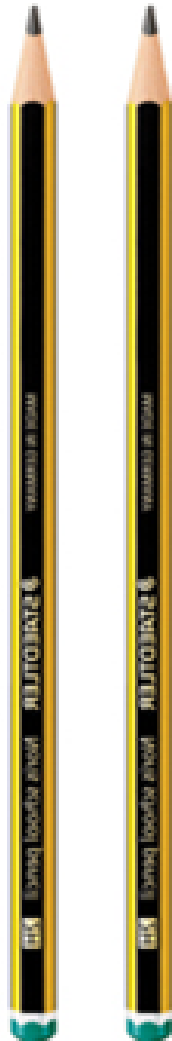
## Year 9 Spring 1 Extra – Curricular Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Lunchtime</b>		<b>Anti-Bullying Ambassadors</b> With John L2 12.30 – 1.00 Ambassadors only  <b>Girls' Basketball</b> With Leanne Sports Hall 12.15 – 1.00	<b>Scalextric/Hornby Railway Club</b> With Phill T2 12.15 – 1.00  <b>Belper Band</b> With Anna Mu1 12.15 – 1.00  <b>Knit and Crochet Club</b> With Emma T5 12.15 – 1.00	<b>Anti-Bullying Ambassadors event planning</b> With Phil MU2 Week 2 12.15 – 1.00  <b>Lunch Club (by invitation)</b> With Jenny and Carolyn Library 12.15 – 1.00	<b>Chess</b> With Carlos M2 12.15 – 1.00
<b>After School</b>	<b>Recycling/Litter Picking</b> With Marc P2 3.00 – 4.00  <b>District Sports Leadership Events</b> With Matt Sports Hall 3.00 – 4.00 (Various dates, invited leaders)	<b>LGBTQ+/Pride</b> With Karen, Emma and Sally T5 3.00 – 4.00  <b>Music Producers Club</b> With Phil Music Block 3.00 – 5.00  <b>Badminton</b> With Tom Music Block 3.00 – 5.00	<b>Textiles Club</b> With Sarah T1 3.00 – 4.00  <b>Recycling/Litter Picking</b> With Marc P2 3.00 – 4.00  <b>Your Time Sports Leadership</b> With Matt V1 With Rebecca Sports Hall 3.00 – 4.00 (Week 2 only)	<b>Tabletop RPG</b> With Mike H9 3.00 – 5.00  <b>Girls' Netball</b> With Rebecca Sports Hall 3.00 – 4.00  <b>Girls' Football Fixtures</b> With Leanne Various 3.00 – 4.00  <b>Belper Choir</b> With Anna Mu1 3.00 – 4.00  <b>Gardening Club</b> With Marc and Tony Rosie's Garden 3.00 – 4.00  <b>Scalextric/Hornby Railway Club</b> With Phill T2 12.15 – 1.00	<b>Computing Club</b> With Adam, Carol, Jamie. L7 3.14 – 4.00

2 Black/Blue Pens  
and 1 Coloured Pen



2 Pencils



Eraser



Pencil Sharpener



Planner

Ruler



Scientific Calculator

