“Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family”
Kofi Annan
(research who he is)

Knowledge Organiser
Year 8 Term One

Name: ____________________________________________

Tutor Group: ______________________________________
Knowledge Organisers at Redmoor Academy

Why do we have knowledge organisers?
Your knowledge organisers help you to be successful in many ways. Firstly, they make clear the key elements needed in a topic to have an excellent understanding of it. If you know these elements, your teacher will help you to understand them.

What are my teachers’ expectations of me?
In year 7 and 8 your teachers will give you homework that means you will be spending 20 minutes a week learning information from your knowledge organiser for each subject. In year 9 this will 30-40 minutes. Teachers will test you once a week to make sure that you are completing the homework and remembering your knowledge. Your knowledge organiser exercise book is where you will complete your practising. Each time you revise and practise, you should put the subject as the title and the date. Rule off when you have completed your revising for that subject. Teachers and form tutors will be regularly checking that you are revising.

How will my teachers use them?
Each subject will set homework once a week that will help you to learn your knowledge organiser. They will also test you once a week on certain parts to see how well you have remembered it. Research tells us that this practising is a really good way of helping you make sure that the knowledge stays in your memory. Over time you will build on this knowledge to make sure that you know everything you need to for your subject. Sometimes you may have high stakes quizzes, where teachers will set a certain score that you have to reach to be successful.

How will they help me revise?
When it comes to GCSEs, you have lots of information to remember. Your knowledge organisers will gradually build up this knowledge over 5 years to help support you in year 11 so that when you revise, you are just recalling knowledge that you have already stored. Also, you will have practised lots of revision techniques whilst revising your knowledge organisers over the past 5 years, which will help prepare you for the final exams.
Top tips for learning and revising the information in your knowledge organiser

Look, Say, Cover, Write, Check

Flash Cards

Take some card and write the key word or question on one side and the definition on the other. Bring these to your lessons.

Then go through your cards, looking at one side, can you remember the information on the other? You could ask your parents, carer, friends or teachers to help you.

Take these to the next level: colour code your cards for each lesson or topic so you can keep them organised!

Mnemonics

Big Elephants Can’t Always Use Small Exits

Mind Maps

1. Start at the centre of a blank, landscape page, ideally with a colourful image to represent your subject.
2. Use words and pictures throughout your map. Wherever possible use single KEY words, printed along a line. Each word or picture sits on its own line.
3. The lines make the associations between ideas as clear as possible. Make them flowing and organic, each line the same length as the word or image. Always ensure that lines connect to the end of the line at the previous level. Typically lines will be thicker at the centre and thinner further out.
4. Experiment with different ways of linking and emphasising different aspects. Use highlighters, codes and arrows as necessary.
5. The structure that should develop will be a ‘radiant hierarchy’, with ideas radiating out from your central theme and main branches.

Check the website for more subject specific revision information
## Contents Page and Equipment

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<th>Subject</th>
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**KEY CONTEXT**

### Crime
John Dickens, the father of Charles Dickens, was imprisoned in the Marshalsea Debtors' Prison for unpaid debt in 1824 when Charles was just 12 years old. A person in a prison of this kind would have had to stay until they had worked off their debt through labour, or secured enough money from outside funds in order to pay off the balance. So crime and punishment is a subject that the writer had strong opinions on. Dickens felt that treating convicted criminals badly might only lead them into even more criminal activity and that given a chance in life, a person’s natural goodness would often win through.

### Victorian Social Classes
In Victorian times, society was strictly layered - not only into rich and poor, or even upper, middle and lower class, but hundreds of 'grades'. People were expected to 'know their place', and the Church taught them to be content in their 'station'. Dickens did not like the effects of social class.

### Bildungroman - meaning 'instruction novel'
Great Expectations is a book about growing up. The reader meets Pip when he is seven, and follows his life until he meets Estella again at the age of 35. The reader lives Pip's life with him.

### THE NOVEL'S MESSAGES
Affection, loyalty, and conscience are more important than social advancement, wealth, and class.

Love and loyalty underlie happiness (when things go well) and misery (when things go wrong).

England’s system of justice was wholly unjust. Some criminals were good men trapped by an unfair system.

### Symbols
- **Satis House**: Dickens creates a magnificent Gothic setting whose various elements symbolise Pip's romantic perception of the upper class.
- **Mists on the Marshes**: The misty marshes near Pip's childhood home in Kent are used several times to symbolize danger and uncertainty.
- **The Wedding dress and the Wedding feast**: These symbolize Miss Havisham’s past.
- **The Stopped Clocks**: These symbolize time and her determined attempt to freeze time by refusing to change anything from the way it was when she was jilted on her wedding day.

### KEY QUOTATIONS

**Vol 1**

|Ch 1-19| On Christmas Eve, Pip meets the convict Abel Magwitch who asks him to steal a file and food. Joe and Mrs. Joe are introduced. Soldiers recapture Magwitch. Pip visits Estella and Miss Havisham at Satis House. Pip falls in love with Estella but she mocks him for his low status. Mrs Joe is attacked. Pip becomes an apprentice to Joe until he inherits a large sum of money from a mysterious benefactor and leaves for London. |

- Pip is educated as a gentleman in London. He visits Joe and it is awkward as Pip is now embarrassed at how uneducated he is. Pip meets Estella again. She humilates him. Pip discovers his benefactor is Magwitch - he is devastated but agrees to help Magwitch escape so he isn’t hanged. |

**Vol 2**

|Ch 20 - 39| Pip confronts Miss Havisham about how Estella's father is Magwitch. She sets herself on fire and Pip saves her but she eventually dies from her injuries. Magwitch is imprisoned and dies. Pip become ill and is nursed back to health by Joe who also pays off his debts. Pip gets better and goes to work in Cairo. Pip returns 11 years later and marries Estella whose first husband has died. |

- A man who had been soaked in water, and smothered in mud, and lamed by stones, and cut by flints, and stung by nettles, and torn by briars; who limped, shivered, and glared and growled; and whose teeth chattered in his head as he seized me by the chin. (Magwitch) |

- "Pip, dear old chap, life is made of ever so many partings welded together, and as I may say, one man's a blacksmith, one's a whitesmith, and one's a goldsmith, and one's a coppersmith. Divisionions among such must come, and generally that I was in a low-lived bad way. (Pip) |

**Vol 3**

|Ch 40 - 59| Pip confronts Miss Havisham about how Estella's father is Magwitch. She sets herself on fire and Pip saves her but she eventually dies from her injuries. Magwitch is imprisoned and dies. Pip become ill and is nursed back to health by Joe who also pays off his debts. Pip gets better and goes to work in Cairo. Pip returns 11 years later and marries Estella whose first husband has died. |

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**Subject Terminology**

Pathetic Fallacy: the attribution of human feelings and responses to inanimate things or animals, especially in art and literature

Symbolism: the use of symbols to represent ideas or qualities.

Protagonist: the leading character or one of the major characters in a play, film or novel.

Imagery: the use of literary devices which encourage us to form a mental picture in our mind about the way something or someone looks, sounds, behaves, etc. The language used often relates to one or more of our five senses.

Semantic field: a group of words belonging to a common theme or motif.

Connotation: an idea or feeling which a word invokes or suggests.

Chronological order: a story told in time order.

**Words to Avoid and Sophisticated Alternatives**

‘This shows’ – use ‘which suggests / implies / indicates / illuminates / elucidates’ etc.

Or ‘suggesting’, ‘implying’

‘Quote’ / ‘quotation’ – use adjective, noun, adverb, verb, image, phrase, use of imagery etc.

‘I think’ – avoid using the first person in essays. Use ‘It could be argued that… / The reader might infer that…’

‘You get the impression’ – the reader / audience is positioned to feel

‘This puts a picture in your head’ – use ‘this creates an image of xxx which is effective because xxx’

**Sophisticated Analytical Sentence Structures**

1. Reader positioning
   - e.g. The reader is positioned against / in favour / to think…

2. Analysing the alternative interpretation
   - e.g. This image could also be interpreted as representing…

3. Analysing the combined effect of several techniques
   - e.g. The writer uses _____ coupled with ___ to reflect…

4. Tracing how key ideas are developed through a text
   - e.g. This idea / further sense of ____ is further developed by…

5. Peeling away the layers of characterisation
   - e.g. On the exterior ______, yet on the interior we can infer _____

6. Deepening analysis
   - e.g. At first glance _____, however, on closer inspection _______.
   - You should try to use two verbs, like these, in your analysis:
     - e.g. … suggesting __________ and implying __________.

**Building and Contrasting Connectives**

Use building and contrasting connectives to make connections between paragraphs and to improve the fluency of your writing.

Building connectives: ‘In addition’, ‘Moreover’, ‘Furthermore’, ‘Similarly’

Contrasting connectives: ‘In contrast’, ‘However’, ‘Conversely’

**Authorial Adverbs**

Charles Dickens ____ skilfully, subtly, provocatively, disturbingly, pivotally, effectively, strikingly, challengingly, crucially, significantly, clearly…

**Structuring your work using what, how and why**

Effective essay paragraphs are structured so that they answer three key questions:

**W**

WHAT: What is the writer presenting / portraying / depicting?

This is sometimes called a ‘topic sentence’ because it should establish the topic of the paragraph using the question’s key words.

E.g. Exam Question: How does Dickens present Miss Havisham?

Dickens presents Miss Havisham as a traumatised woman who cannot move on from her past.

**H**

HOW: How are these ideas demonstrated and developed?

Step 1: Introduce and embed a quotation so that you provide evidence for the point you have made in your first sentence. Try to use subject terminology where possible.

Step 2: Explain what the line means on a literal level and what is suggests in relation to the question.

Step 3: Zoom in on the most important words in the quotation and analyse their connotations (the deeper ideas, feelings and associations which they produce).

Miss Havisham’s first appearance sees her in Satis house waiting for Pip to arrive. She is dressed in her bridal gown which ‘had lost its lustre and was faded and yellow’. This suggests she has not changed or recovered from the trauma of her wedding day as the material is aged and ruined. Dickens’ use of the phrase ‘lost its lustre’ suggests that like her white dress, her innocence and happiness has faded. The noun ‘lustre’ is a glow or shine suggesting that she is no longer hopeful and happy but is miserable.

**Y**

WHY: Why is this portrayal important? Why might it create shock / suspense / humour / sympathy for a reader? Why is Dickens presenting this way? Why does it relate to context and what are the messages?

Dickens skilfully puts the reader into a position of intrigue and suspicion towards Miss Havisham by showing her to be eccentric and unpredictable. The shocking image of a rich and privileged woman who was also psychologically damaged would have shown the Victorian readers that being rich does not ensure moral values or happiness.
<table>
<thead>
<tr>
<th><strong>The Soldier</strong> by Rupert Brooke</th>
<th><strong>Who’s for the Game?</strong> by Jessie Pope</th>
<th><strong>In Flanders Fields</strong> by John McCrae</th>
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<tbody>
<tr>
<td><strong>Context:</strong> - Rupert Brooke was an English poet - He received a private education at Rugby School - He is known for his idealist sonnets which write about the beauty of England and the bravery of heroism of British soldiers - Brooke enlisted at the outbreak of war in 1914 and died of an infection in 1915</td>
<td><strong>Context:</strong> - Jessie Pope is an English poet who is best known for her motivational poems published during WW1 - The poem was published in The Daily Mail and was written to encourage men to sign up for war - Poets like Owen and Sassoon found her work distasteful - Owen even originally dedicated ‘Dulce et Decorum Est’ to her!</td>
<td><strong>Context:</strong> - John McCrae was a Canadian soldier poet and a soldier during WWI - He wrote the poem after the funeral of a close friend who was killed in a battle - Poppies have become a symbol of remembrance for the fallen - The poem was written near to the start of war before the romanticism of war turned to bitterness</td>
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<tr>
<td><strong>Meaning:</strong> The poem is told from the perspective of a soldier leaving England to go to war. The speaker informs the audience about what to think of him should he die. The soldier, who has been raised and nurtured by England, will go an English heaven once he dies. The poem conveys the patriotic feelings of England in 1914.</td>
<td><strong>Meaning:</strong> The poem is highly jingoistic and is aimed at getting men to enlist for war. It uses a series of comparisons and questions to persuade (even pressure) men to fight. The speaker aims at getting men to think about their roles in war, making them feel cowardly if they decide not to fight.</td>
<td><strong>Meaning:</strong> The poem is written from the point of view of the dead and tells of their sacrifices. It demands that we remember those who have died and that we honour them. The speaker calls for the living to ‘take the baton’ and to continue to fight against the enemy. If the living do not do this, the dead will not be able to rest in their graves.</td>
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<td><strong>Language:</strong> - <strong>Personification:</strong> England is personified and becomes a mother to the poet in this poem. It also gives him ‘flowers’ and ‘washed’ and ‘blest’ him. - <strong>Repetition:</strong> ‘England’ is repeated 14 times in the poem, showing how strongly he felt about his homeland. - <strong>Natural imagery:</strong> the poem is all about nature and the speaker’s relationship with it is close. - <strong>Religious imagery:</strong> the river is personified and ‘washed’ and ‘blest’ the poet. As these images are linked to water they are connected to baptism and show how England made him a child of God and kept him pure.</td>
<td><strong>Language:</strong> - <strong>Rhetorical questions:</strong> Pope asks a series of questions to encourage men to consider what their role in war will be. The repetition of them helps to build pressure on the reader - <strong>Comparisons:</strong> throughout the poem the comparison of weak to strong helps to persuade the audience to fight. - <strong>Personification:</strong> the poet makes England a female to encourage the readers’ masculine instincts – they are meant to want to protect her - <strong>Euphemisms:</strong> Pope uses euphemisms (like ‘game’ and ‘show’) to help her to glorify war.</td>
<td><strong>Language:</strong> - <strong>Symbolism:</strong> the birds, ‘the larks’, are symbols of freedom and beauty and they contrast strongly with the world below. The poem has romantic images of the fields. - <strong>Imperatives:</strong> the dead order the living to continue the fight, stating ‘take up our quarrel with the foe’ - <strong>Imagery:</strong> the image of throwing the torch suggests that the dead want to light the way forward for others. It must be ‘held high’ which shows how proud the soldiers were of fighting for their country.</td>
</tr>
<tr>
<td><strong>Structure and Form:</strong> - The poem is written as a sonnet containing 14 lines - The poem’s lines can be divided into 2 groups: the sestet (first 8 lines giving a problem) and the octave (last 6 lines giving a solution) - The first 8 lines discuss the possibility of the soldier dying and reflect on the role England has played in his development - The last 6 lines think about an after-life in heaven - The poem contains a Volta, or turning point, where the speaker imagines heaven</td>
<td><strong>Structure and Form:</strong> - The poem has a simple structure and a regular beat which make war sound upbeat and jolly - The rhyme, like ‘played’ and ‘unafraid’ is used to create an upbeat tone, it is almost like a nursery rhyme - The final stanza of the poem shifts from questioning to directly talking to the reader, ‘you’, in order to put pressure on the men reading the poem</td>
<td><strong>Structure and Form:</strong> - The poem begins by referencing sky and fields, giving an impression of an idyllic setting for the dead to rest - However, the birds can hardly be heard among the guns below. The poet shows how the peaceful scenes of nature and the sounds of war are close together which shows how quickly life can be turned to death. - There is a shift in mood in the second stanza when the poet turns to first person, ‘we are the dead’. It shocks the reader and gives the dead a voice.</td>
</tr>
<tr>
<td><strong>Key Quotations:</strong> ‘There’s some corner of a foreign field / That is forever England’ ‘A richer dust concealed’ ‘A dust whom England bore’ ‘Blest by suns of home’</td>
<td><strong>Key Quotations:</strong> - ‘The biggest that’s played’ - ‘Who want a turn to himself in the show...?’ - ‘Your country is up to her neck in a fight’ - ‘she’s looking and calling for you’</td>
<td><strong>Key Quotations:</strong> ‘cresses, row on row’ ‘larks, still bravely singing’ ‘We are the dead’ ‘we throw the torch’</td>
</tr>
</tbody>
</table>
### Dreamers' by Siegfried Sassoon

**Context:**
- Siegfried Sassoon was a British war poet and soldier, and one of the major poets of WWI.
- He was decorated for his bravery during the war but decided that he could not support the war after a period of leave.
- He spent time for shell-shock at Craiglockhart Military Hospital and he experienced the horrors of war first hand.

**Meaning:**
- The poem is about soldiers who are at war. The speaker tells how soldiers are placed in terrible and dangerous conditions where any moment could be their last, and all they can do is dream of being back home. The poem deals with the horror of war and shows how soldiers long to escape from the gunfire but can only do so in their dreams.

**Language:**
- *Metaphor:* soldiers live in ‘death’s grey land’ presents them as men who are living under the shadow of death constantly. They never know whether the day could be their last.
- *Listing:* the poet lists all of the things men miss about home and uses the conjunction ‘and’ to add to the list. This suggests that they miss so much about home.
- *Contrast:* the poet contrasts the soldiers’ dreams of life back home, the ‘fire lit homes’ and ‘clean beds’, with the horrors they experience like the threat of death, the gunfire, and the rats which gnaw. This emphasises the terror of war.

**Structure and Form:**
- *Simile:* the ‘like old beggars’ simile makes young, fit men sound prematurely old and destitute. They’ve lost everything – even their dreams.
- *Imagery:* the imagery of the green sea of gas and the drowning man suggests that the poet is attacking those who tell young men that it’s right to die for their country.
- *Irony:* the title of the poem, meaning ‘it is sweet and honourable’ is used ironically. This means that the poet doesn’t think this but believes the opposite, in fact!

**Key Quotations:**
- ‘Citizens of death’s grey land’
- ‘Soldiers are dreamers’
- ‘gnawed by rats’
- ‘mocked by hopeless longing’

### Dulce et Decorum Est’ by Wilfred Owen

**Context:**
- The poet was a WWI soldier who experienced the horror of war directly.
- He directed the poem towards Jessie Pope and those who told lies to soldiers.
- He spent time in Craiglockhart Military Hospital and felt the mental effects of war.
- He was tragically killed in the final week of the war in 1918.

**Meaning:**
- The poem describes exhausted and wounded soldiers returning from the front line to rest. They get caught in a gas attack and one soldier tells us his memories of watching a man die in front of his helpless eyes and of the dreams which haunt him afterwards. His experiences cause him to attack those who tell young men that it’s right to die for their country.

**Language:**
- *Repetition:* the poet repeats ‘and’ to emphasise the amount of suffering the soldiers endure – ‘crumps and lice and lack of rum’
- *Tone:* the poet uses a blunt tale of a young soldier who commits suicide because of war. The poem shows the psychological effects of war (the effect on men’s minds). The ‘simple soldier boy’ could be any number of real soldiers. Through the poem, Sassoon attacks people back home who blindly support war without knowing its effects on the men who fight.

### Suicide in the Trenches’ by Siegfried Sassoon

**Context:**
- Siegfried Sassoon was a British war poet and soldier, and one of the major poets of WWI.
- He was decorated for his acts of bravery during the war but decided that he could not support the war after a period of leave.
- He spent time for shell-shock at Craiglockhart Military Hospital and he experienced the horrors of war first hand.

**Meaning:**
- The poem is an angry and blunt tale of a young soldier who commits suicide because of war. The poem shows the psychological effects of war (the effect on men’s minds). The ‘simple soldier boy’ could be any number of real soldiers. Through the poem, Sassoon attacks people back home who blindly support war without knowing its effects on the men who fight.

**Language:**
- *Repetition:* the poet repeats ‘and’ to emphasise the amount of suffering the soldiers endure – ‘crumps and lice and lack of rum’
- *Tone:* the poet uses a blunt and matter of fact tone which makes the reader think that the poem will be positive.
- *Caesura:* the use of this technique at the start (punctuation within the lines of poetry) makes the pace slower and emphasises how tired and exhausted the soldiers are.
- *Enjambment:* the poet uses this technique (of spilling over a line onto the next in the second stanza) when the gas hits. It reflects the panic of the soldiers and the chaos of war.

**Structure and Form:**
- *Caesura:* the use of this technique at the start (punctuation within the lines of poetry) makes the pace slower and emphasises how tired and exhausted the soldiers are.
- *Enjambment:* the poet uses this technique (of spilling over a line onto the next in the second stanza) when the gas hits. It reflects the panic of the soldiers and the chaos of war.
- *Adjectives:* the language used in the final stanza, like ‘smug faced’, suggests that the poet is angry at how ignorant the public are.

**Key Quotations:**
- ‘I knew a simple soldier boy’
- ‘crumps and lice and lack of rum’
- ‘Smug faced crowds’
- ‘Sneak home…hell where youth and laughter go’
Subject Terminology

Caesura: a break within a line of poetry where there is punctuation to create a pause.

Enjambment: spilling over a line of poetry onto the next by using no punctuation at the end.

Sonnet: a 14 line poem, traditionally about love, with two clear sections. The sestet introduces the problem and the octave (next 8 lines) gives the solution. Sonnets contain a Volta, or turning point.

Metaphor: a figure of speech describing an object in a way which isn’t true but helps to make a comparison.

Imagery: descriptive language which creates clear images.

Personification: giving human qualities to something not alive.

Simile: a figure of speech comparing one thing to another using as or like.

Rhyme scheme: the pattern of rhyme within a poem.

Tone: this is the poem’s feelings or emotions.

Comparing poems and structuring your work using WHAT, HOW and WHY

Effective essay paragraphs are structured so that they answer three key questions:

W
WHAT: What are the poets presenting?
This is sometimes called a ‘topic sentence’ because it should establish the topic of the paragraph using the question’s key words.

E.g. Exam Question: How does Jessie Pope present war in ‘Who’s for the Game’? Compare to one other poem.

Both poets present war differently. Whereas Jessie Pope sees war as a game to be won, Wilfred Owen shows how horrifying and traumatic the experience of being a soldier was.

H
HOW: How are these ideas demonstrated and developed?

Step 1: Introduce and embed a quotation so that you provide evidence for the point you have made in your first sentence. Try to use subject terminology where possible.

Step 2: Explain what the line means on a literal level and what suggests in relation to the question.

Step 3: Zoom in on the most important words in the quotation and analyse their connotations (the deeper ideas, feelings and associations which they produce).

In ‘Who’s for the Game?’ Pope uses the euphemism of war being a ‘red crashing game’ in order to make war sound less dangerous and even fun. The adjective ‘red’ could hint at bloodshed but she never actually says this. On the other hand, Owen shows how the experience of war is far from energetic and exciting. At the start of the poem the men are ‘like old beggars’ and this simile shows how they are so exhausted they are barely able to function. The adjective ‘old’ shows how war has stripped away their young lives and made them age.

Y
WHY: Why is this portrayal important? Why might it create shock / suspense / humour / sympathy for a reader? Why does it relate to context and what are the messages?

As Pope was writing for an audience of The Daily Mail and trying to encourage men to sign up to fight she is deliberately misleading her audience and almost tricking them into fighting. In contrast, Owen is writing from direct experience and wants his readers to know how war has stripped away the life and laughter from the soldiers. He is almost writing directly addressing Jessie Pope and proving that her ideas are incorrect.
Year 8 Maths: Number Sense
Block One

Calculating with Negative Numbers

Adding and subtracting negative numbers:

- 10 + -3 = 7
- 10 - -9 = 19
- -9 + -3 = -12
- -7 - -3 = -4

Multiplying and dividing negative numbers:

- 7  x  -4 = -28
- -6  x  -4 = 24
- -35  ÷  5 = -7
- -40  ÷  -8 = 5

Ordering Decimals

1) Set up a table with a decimal point in the same place for each number
2) Put in the numbers
3) Fill in the numbers with zeroes
4) Compare using first column on left
5) If the digits are equal, move to the next column (you are comparing the place value)

e.g. put 1.506, 1.56 and 0.8 in ascending order

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<thead>
<tr>
<th>Units</th>
<th>Decimal Point</th>
<th>Tenths</th>
<th>Hundredths</th>
<th>Thousandths</th>
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<tbody>
<tr>
<td>1.506</td>
<td>0</td>
<td>5</td>
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<td>1.56</td>
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</tr>
<tr>
<td>0.8</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

= 0.8, 1.506, 1.56

Roots:

√ 64 = 8 or -8
(8x8 = 64 -8x-8 = 64)

Prime Factor Tree

Highest Common Factor

To find the highest common factor of two numbers, list the factors of both numbers. Find the highest number in both lists.

12: 2, 3, 4, 6, 12
18: 2, 3, 6, 9, 18
2 and 4 are common factors, but not the highest common factor

HCF = 6

Lowest Common Multiple

To find the lowest common multiple of two numbers, write out the first five multiples of each and find the lowest number that appears in both. If there is none, do another five multiples of each.

e.g. LCM of 12 and 18
12: 12, 24, 48, 60
18: 18, 36, 54, 72, 90
LCM = 36

Squared Numbers

A square number is the number you get when you multiply a whole number by itself e.g. 4 x 4 = 16, so 16 is a square number. The sequence of square numbers is therefore:

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144 etc.

This is because

1 x 1 = 1
2 x 2 = 4
3 x 3 = 9 etc.

Prime Numbers

For example, 7 is a prime number because it has only two factors itself and 1.

Powers and Roots

Powers:
3^2 = 3 x 3 = 9
(8x8 = 64 -8x-8 = 64)

Roots:
√ 64 = 8 or -8

Cube Numbers

A cube number is the number you get when you multiply a number by itself and then by itself again.
e.g. 3 x 3 x 3 = 27 therefore 27 is a cube number.

Rounding

Rounding to nearest 10 etc.
1) Identify the tens digit.
326
2) Work out the next ten up.
326 is between 320 and 330
3) Decide if it stays or rounds up.
326 ——> 330

Rounding to decimal places:
1st dp
3.2
2 stays down - stay at 3.2.
### Year 8 Maths - Ratio & Proportion
#### Block 2

#### Ratio
Ratio compares the size of one part to another part. Written using the : symbol.
- Hamburgers to Pizzas: 7:5

#### Unitary Method
- 3 cakes require 450g of sugar to make. Find how much sugar is needed to make 5 cakes.
  - 3 cakes = 450g
  - So 1 cake = 150g (÷ by 3)
  - So 5 cakes = 750 g (x by 5)

#### Direct Proportion Graph
- A graph in direct proportion will always be a straight line passing through (0,0).

#### Direct Proportion
- Two quantities are in direct proportion when they increase or decrease in the same ratio. For example, you could increase something by doubling it, or decrease it by halving.
- 12 pencils = 60p
- 24 pencils = £1.20
- 6 pencils = 30p
- 1 pencil = 5p the cost of a pencil is constant

#### Simplifying a Ratio
- Divide all parts of the ratio by a common factor:
  - Red : Blue
  - \[ \frac{9}{3} = 3 : 1 \]
  - \[ \frac{3}{3} \]
- For every three red counters there is one blue counter.

#### Proportional Reasoning
- Compare two things by using a multiplier to find missing quantities.
  - 20 minutes : 60 pages
  - 50 minutes : 150 pages

#### Symbol for Direct Proportion
- \( \propto \)
addiction  A need to keep taking a drug in order to feel normal.

alveolus  Small air sacs found at the end of each bronchiole where gas exchange takes place with the blood.

anus  Muscular ring through which faeces pass out of the body.

asthma  A lung disorder in which inflammation (swelling) causes the bronchi to swell and narrow the airways, creating breathing difficulties.

balanced diet  Eating food containing the right nutrients in the correct amounts.

bile  Substance that breaks fat into droplets.

breathing  The movement of air in and out of the lungs.

bronchiole  Small tube in the lung.

bronchus  One of two tubes which carry air into the lungs.

carbohydrase  Enzyme that breaks down carbohydrates into sugar molecules.

carbohydrate  Nutrient that supplies the body’s main source of energy. There are two types: simple (sugars) and complex (starch).

catalyst  Substances that speed up chemical reactions but are unchanged at the end.

deficiency  A lack of minerals that causes poor growth.

depressant  A drug that slows down the body’s reactions by slowing down the nervous system.

dietary fibre  Parts of plants that cannot be digested. It helps the body to eliminate waste by providing bulk to keep food moving through the digestive system.

digestion  Process in which large molecules are broken down into smaller molecules.

drug  Chemical substance that affects the way your body works.

enzyme  Substances that speed up the chemical reactions of digestion resulting in large molecules being broken into small molecules.

ethanol  The drug found in alcoholic drinks.

gas exchange  The transfer of gases between an organism and its environment.

Gut bacteria  Microorganisms that naturally live in the intestine and help food break down.

large intestine  Lower part of the intestine from which water is absorbed and where faeces (solid waste of undigested food) are formed.

lipase  Enzyme that breaks down lipids into fatty acids and glycerol.

lipid  Nutrient that provides a store of energy and insulates the body. Found in butter, milk, eggs, nuts.

lung volume  Measure of the amount of air breathed in or out.

Malnourishment  Eating the wrong amount or wrong types of food.

medicinal drug  Drug that has a medical benefit to your health.

mineral  Nutrient needed in small amounts to keep you healthy.

Nutrient  Essential substance that your body needs to survive, provided by food.

Protease  Enzyme that breaks down proteins into amino acids.

protein  Nutrient your body uses to build new tissue for growth and repair. Sources are meat, fish, eggs, dairy products, beans, nuts, and seeds.

recreational drug  Drug that is taken for enjoyment.

Respiration  The process that transfers energy in plants and animals. In respiration, glucose reacts with oxygen to make carbon dioxide from water.

respiratory system  Organ system which replaces oxygen and removes carbon dioxide from the blood.

Stimulant  A drug that speeds up the body’s reactions by speeding up the nervous system.

trachea  Tube which carries air from the mouth and nose to the lungs.

villi  Tiny projections in the small intestine wall that increase the area for absorption.

vitamin  Essential nutrients needed in small amounts to keep you healthy.

withdrawal symptoms  Unpleasant symptoms a person with a drug addiction suffers from when they stop taking the drug.

Context:
What do we eat to stay healthy?

What damage can be caused through smoking, drinking alcohol and taking drugs?

How does our body break down and use the food we eat?

Maths: Calculating percentage change
Percentage change (%) = (difference/original amount) x 100

Worked example:
“Concentration of oxygen in exhaled air decreases to 30 units from 150 units in inhaled air. Calculate the percentage decrease in the concentration of oxygen in the air we exhale.”

Percentage decrease = (actual decrease ÷ original value) x 100
Actual decrease: 150 - 30 = 120
Percentage decrease: (120 ÷ 150) x 100 = 80%
### Year 8 Science Ecosystems: Photosynthesis

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algae</td>
<td>Aquatic plants that contain chlorophyll but lack true stems, leaves, roots, and vascular tissue</td>
</tr>
<tr>
<td>Chlorophyll</td>
<td>Green pigment in plants and algae which absorb light energy</td>
</tr>
<tr>
<td>Chloroplasts</td>
<td>Site of photosynthesis in a plant, contains chlorophyll</td>
</tr>
<tr>
<td>Deficiency</td>
<td>A lack of minerals that causes poor growth</td>
</tr>
<tr>
<td>Fertilisers</td>
<td>Chemicals containing minerals that plants need to build new tissues</td>
</tr>
<tr>
<td>Iodine</td>
<td>Indicator used to test for the presence of starch</td>
</tr>
<tr>
<td>Photosynthesis</td>
<td>The process plants and algae use to make their own food, glucose.</td>
</tr>
<tr>
<td>Producers</td>
<td>Organisms that make their own food using photosynthesis</td>
</tr>
<tr>
<td>Stomata</td>
<td>Pores in the bottom of a leaf which open and close to let gases in and out</td>
</tr>
</tbody>
</table>

**Photosynthesis equation**

\[
6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2
\]

**Iodine test** - a few drops of iodine solution are added to a leaf. If starch is present, the iodine will turn from yellow-brown to blue-black.

### Factors affecting the rate of photosynthesis

- **Nitrates** (contain nitrogen) - for healthy growth
- **Phosphates** (contain phosphorous) - for healthy roots
- **Potassium** - for healthy leaves
- **Magnesium** - for making chlorophyll

When crops are harvested, minerals are removed from the ground. These would normally be replaced when the plant dies, or when leaves are shed. To prevent future crops suffering from a mineral deficiency, farmers add chemicals to the soil to replace missing minerals—these are called **fertilisers**.
<table>
<thead>
<tr>
<th>Keyword</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerobic</td>
<td>Occurring only in the presence of oxygen</td>
</tr>
<tr>
<td>Anaerobic</td>
<td>Occurring in the absence of oxygen</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>The use of biological processes or organisms to create useful products</td>
</tr>
<tr>
<td>Fermentation</td>
<td>A type of anaerobic respiration in which glucose is converted into ethanol, carbon dioxide, and energy</td>
</tr>
<tr>
<td>Haemoglobin</td>
<td>The substance in blood that carries oxygen around the body</td>
</tr>
<tr>
<td>Oxygen debt</td>
<td>Extra oxygen required after anaerobic respiration to break down lactic acid</td>
</tr>
<tr>
<td>Plasma</td>
<td>Liquid that transports blood cells and other materials around the body</td>
</tr>
<tr>
<td>Respiration</td>
<td>The chemical reaction the transfers energy to your cells</td>
</tr>
</tbody>
</table>

**Respiration equations**

**Aerobic respiration**

Glucose + oxygen → carbon dioxide + water (+energy)

\[ C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O \]

**Anaerobic respiration**

Glucose → lactic acid (+energy)

\[ C_6H_{12}O_6 \rightarrow 2C_3H_6O_3 \]

**Fermentation**

Glucose → ethanol + carbon dioxide (+energy)

\[ C_6H_{12}O_6 \rightarrow 2C_2H_5OH + 2CO_2 \]

Glucose from digestion is carried around your body in your blood. It dissolves in the liquid part of your blood called plasma. The oxygen you breath in diffuses into your bloodstream through the alveoli in the lungs. Oxygen joins to the haemoglobin in the red blood cells and is carried around the body.

**Yeast** is a microorganism. It is used in the production of bread and alcohol through the process of fermentation. Fermentation is a type of anaerobic respiration. Enzymes present in the yeast speed up the fermentation, making the reaction occur faster.

Respiration occurs in the mitochondria. All cells contain mitochondria but different cells contain different amounts. Muscle cells carry out lots of respiration, so they contain large amounts of mitochondria.
Year 8 French

**Phonics**
1. è [eh]
2. é [ay]
3. ç [ss]
4. an [on]
5. th [tuh]
6. in [an]
7. ui [we]
8. ail [eye]
9. qu [kuh]
10. tion [see-on]

**Present tense**
1. Find the infinitive
2. Remove the ending (er, ir, re)
3. Add the correct ending for the personal pronoun

<table>
<thead>
<tr>
<th>ER</th>
<th>IR</th>
<th>RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>je</td>
<td>+e</td>
<td>+s</td>
</tr>
<tr>
<td>tu</td>
<td>+es</td>
<td>+s</td>
</tr>
<tr>
<td>il</td>
<td>+e</td>
<td>+t</td>
</tr>
<tr>
<td>elle</td>
<td>+e</td>
<td>+t</td>
</tr>
<tr>
<td>nous</td>
<td>+ons</td>
<td>+ons</td>
</tr>
<tr>
<td>vous</td>
<td>+ez</td>
<td>+sez</td>
</tr>
<tr>
<td>ils</td>
<td>+ent</td>
<td>+ent</td>
</tr>
<tr>
<td>elles</td>
<td>+ent</td>
<td>+ent</td>
</tr>
</tbody>
</table>

**Reasons**
1. cool - cool
2. important - important
3. inutile - useless
4. utile - useful
5. difficile - difficult
6. facile - easy
7. barbant - boring
8. fatigant - tiring
9. ennuyeux - boring
10. casse-pieds - annoying
11. intéressant - interesting
12. stupide - stupid
13. génial - great

**Grammar Focus**
1) ne verb que - only
2) ne verb pas - not
3) ne verb plus - no longer
4) ne verb jamais - never
5) ne verb rien - nothing
6) ne verb personne - nobody
7) ne verb que - only

**School Subjects**
1) j’aime le prof - I like the teacher
2) je n’aime pas le prof - I don’t like the teacher
3) je suis fort(e) - I am strong
4) je suis bon(ne) - I am good
5) je suis nul(le) - I am rubbish
6) je suis faible - I am weak
7) je ne suis pas - I am not
8) une perte de temps - a waste of time
9) une perte d’énergie - a waste of energy
10) il y a trop de devoirs - there is too much homework
11) le prof explique bien - the teacher explains things well.

**Reasons 2**
1) pendant la pause-déjeuner - during lunch
2) je traîne avec mes amis - I hang out with friends
3) J’écoute de la musique - I listen to music
4) Je joue sur mon portable - I play on my mobile
5) Je joue au foot - I play football
6) Je vais à la cantine - I go to the canteen
7) Je vais au club de ......... - I go to the ... club
8) J’achète le déjeuner - I buy lunch
9) Je mange un sandwich - I eat a sandwich
10) Je retrouve mes amis - I meet up with my friends
Year 8 History
Thematic Study: Economic History
1500-modern day

**Key Events**

1492: Columbus lands in the Caribbean
1619: Slave trade begins with first ship full of Africans docking in Virginia colony (now USA)
1600s - 1700s Enclosure Acts
1712: Newcomen develops steam powered pump
1761: Bridgewater Canal opens
1765: James Watt's steam engine
1771: Arkwright builds Cromford Mill textile factory
1772: Somerset case - court ruling that no slave could be forcibly removed from Britain
1779: publication of Olaudah Equiano’s autobiography
1790s: Canal Mania - huge investment and construction begins
1807: The slave trade is abolished by Great Britain
1833: Slavery is abolished in all British colonies
1839: Amistad slave ship rebellion
1840's: Railway Mania - huge investment and construction begins
1833: 1st Factory Act - no children under 9 allowed to work, 9-13s limited to 9 hours work with 2 hours school, 14-18 yr olds limited to 12 hours
1844: 2nd Factory Act - textile factories 8-13yr olds limited to 6.5 hrs and 3 hrs school, women limited to 12 hrs
1926: The General Strike
1936: Jarrow Crusade - unemployed workers march to London
1948: Empire Windrush arrives
1959: Austin Mini car begins production

**Key Terms & People**

Economic: relating to money/wealth/poverty
Exploration: travelling to find new parts of the world
Trade Triangle: the slave trade system Europe/Africa?america
Abolition: to oppose or end something
Overseer: a person who supervised slaves or factory workers
Olaudah Equiano: an ex-slave who wrote about his life
Thomas Clarkson: campaigned for abolition of slavery
Granville Sharp: used legal means to try to abolish slavery
William Wilberforce: MP who campaigned to abolish slavery
Steam power: using pressure from heating water to power machines
Iron: main metal used in manufacturing, steel is an alloy of this
Canal: method of transporting heavy good by water
Turnpike Trust: Private toll roads
Domestic System: manufacturing items in the home
Factory System: manufacturing in a specially constructed building
Population: the people in a country
Industrial Revolution: change from an agrarian economy to manufacturing
James Watt: developed the first effective steam engine
Thomas Telford: architect and civil engineer, designed transport solutions
Richard Arkwright: pioneered the factory system
George Stephenson: engineer and railway pioneer
Rural: countryside areas/settlements
Urban: town or city areas/settlements
Poverty: the state of not having enough resources for a minimum standard of living
Textiles: Cloth or clothing production by spinning and weaving
Apprentice: an child (sometimes orphans) who worked in factories in return for food and lodging
Workhouse: a place where poor people could get food and shelter in return for work
Depression: severe downturn in the economy, causes mass unemployment
Colony: a area controlled by a foreign power as part of an empire
General Strike: when several sectors go on strike at the same time

**Historical Concepts**

Assessment Objective 2: Explaining
Assessment Objective 3: Sources & Interpretations

Causation: why events happened.  
Consequence: what happened as a result of an event 
Change: what was different 
Continuity: what stayed the same 
Importance/significance: explaining why something mattered 
Analytical Narrative: explaining how a series of events were connected 
Evaluate: to come to a reasoned judgement 
Inference: making judgements from sources 
Message: what a source says 
Purpose: why a source was created 
Nature: the type of source 
Origin: who created a source 
Reliability: trustworthy 
Bias/biased: one-sided 
Utility: what a source is useful for 
Interpretation: a view or opinion on the past
### Key Term Definition

<table>
<thead>
<tr>
<th>Key Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism</td>
<td>Is travel for recreation, leisure or business purposes.</td>
</tr>
<tr>
<td>Domestic Destinations</td>
<td>Are located in the tourist’s own country. So, for British people, they are destinations in the UK.</td>
</tr>
<tr>
<td>Short-haul destinations</td>
<td>Can be reached by air flight of less than 3 hours. For tourists from the UK, they are places in Europe and around the Mediterranean Sea.</td>
</tr>
<tr>
<td>Long-haul destinations</td>
<td>Are further away and include tropical destinations in countries such as Jamaica, Kenya and Thailand.</td>
</tr>
<tr>
<td>HIC</td>
<td>High Income Country. A country with GNI per capita higher than $12,746.</td>
</tr>
<tr>
<td>LIC</td>
<td>Low Income Country. A country with GNI per capita lower than $1,045.</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income. The total domestic and foreign output by residents of a country.</td>
</tr>
<tr>
<td>Tourist</td>
<td>A person who is travelling or visiting a place for pleasure.</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product. The total value of goods and services produced by a country in one year.</td>
</tr>
<tr>
<td>Tertiary Sector</td>
<td>This refers to the commercial services that support the production and distribution process, e.g. insurance, transport, advertising, warehousing and other services such as healthcare and teaching.</td>
</tr>
<tr>
<td>Mass Tourism</td>
<td>When large numbers of tourists visit the same destination.</td>
</tr>
<tr>
<td>Charter Flights</td>
<td>Special flights arranged to transport tourists to a destination.</td>
</tr>
<tr>
<td>Package Holidays</td>
<td>Holidays that include flights, airport transfers and accommodation.</td>
</tr>
<tr>
<td>Honeypot</td>
<td>Places where people find it difficult to live. They’re wild and inhospitable, places like mountains, deserts and rainforests.</td>
</tr>
<tr>
<td>Extreme Environment</td>
<td>More active holidays with more risk. Off the beaten track and in more unusual environments.</td>
</tr>
<tr>
<td>Ecotourism</td>
<td>When people visit a place because of its natural environment and cause as little harm to it as possible.</td>
</tr>
<tr>
<td>Sustainable</td>
<td>Development which meets the needs of people now and in the future, but limits harm to the environment.</td>
</tr>
</tbody>
</table>

### Flow Line Maps

**Advantages**
- Immediate impression - visual
- Shows movement easily
- Gives clear sense of direction

**Disadvantages**
- Hard to draw
- Flows can be in the same direction/overlap
- Might be difficult to show meeting points without overwhelming the map

### Pie Charts

**Advantages**
- A good way of showing how a total is divided up
- Visually effective
- Can be used on a map for extra information

**Disadvantages**
- Hard to assess % accurately
- Comparing one pie chart to another is difficult
- Small segments are difficult to draw

### Bar graphs & Line graphs

**Advantages**
- Easily understood & visual
- Comparisons can be made
- Bar charts show cumulative data/discrete data
- Line graphs show continuous data

**Disadvantages**
- Can be tedious and time-consuming to construct
- Can be difficult to read accurately
- Often requires additional information to be useful
- Scale needs to be carefully considered

### Simple Bar Chart

- **Number of UK residents holidaying in the UK and abroad, 1960–95**
- **Number of UK residents holidaying in the UK and abroad, 1960–95**
- **Number of UK residents holidaying in the UK and abroad, 1960–95**
- **Number of UK residents holidaying in the UK and abroad, 1960–95**

### Case Study Locations

- **Bimini Bahamas**
- **Jamaica**
- **Amazon**
- **Antarctica**
- **Kenya**
<table>
<thead>
<tr>
<th>Key Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Python</strong></td>
<td>A text based programming language that is very close to written English</td>
</tr>
<tr>
<td><strong>Algorithm</strong></td>
<td>A set of steps or instructions to complete a task.</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>A place to store a single piece of data</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>When data is entered into a computer by a user</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>When data is displayed on a device such as a monitor or printer</td>
</tr>
<tr>
<td><strong>Assignment</strong></td>
<td>When one variable is set equal to another e.g. x = y</td>
</tr>
<tr>
<td><strong>Sequence</strong></td>
<td>When code is run in a specific order, usually from top to bottom.</td>
</tr>
<tr>
<td><strong>Selection</strong></td>
<td>Also called a decision, when a program takes a course of action based on an answer.</td>
</tr>
<tr>
<td>IF</td>
<td></td>
</tr>
<tr>
<td>ELIF</td>
<td></td>
</tr>
<tr>
<td>ELSE</td>
<td></td>
</tr>
<tr>
<td><strong>Loops</strong></td>
<td>When one or more lines of code are repeated.</td>
</tr>
<tr>
<td><strong>While</strong></td>
<td></td>
</tr>
<tr>
<td><strong>For</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Data Types**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>String</td>
<td>Any combination of letters, numbers or symbols e.g. “Hello”</td>
</tr>
<tr>
<td>Integer</td>
<td>A whole number e.g. 1, 64, 255</td>
</tr>
<tr>
<td>Float/Real</td>
<td>A number with a decimal (e.g. 3.14)</td>
</tr>
<tr>
<td>Boolean</td>
<td>Either true or false</td>
</tr>
<tr>
<td>Character</td>
<td>A single alphanumeric character (e.g. A, 2)</td>
</tr>
</tbody>
</table>

**Arithmetic Operators**

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Addition</td>
</tr>
<tr>
<td>-</td>
<td>Subtraction</td>
</tr>
<tr>
<td>*</td>
<td>Multiplication</td>
</tr>
<tr>
<td>/</td>
<td>Division</td>
</tr>
<tr>
<td>**</td>
<td>Performs exponential (power) calculation on operators e.g. a**b means a to the power of b</td>
</tr>
</tbody>
</table>

**Comparison Operators**

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>==</td>
<td>Equal to</td>
</tr>
<tr>
<td>!=</td>
<td>Not equal to</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or equal to</td>
</tr>
</tbody>
</table>

**Example Code**

```python
if answer == 0:
    print("Even")
else:
    print("Odd")
```

```python
for i in range(11):
    print ("The count is: " + str(i))
```
### 10 Key Words and Definitions

<table>
<thead>
<tr>
<th>Key word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graffiti</td>
<td>Writing or drawings scribbled, scratched, or sprayed illicitly on a wall or other surface in a public place.</td>
</tr>
<tr>
<td>Culture</td>
<td>Culture is a pattern of behavior shared by a society or group of people. Many different things make up a society’s culture. These things include food, language, clothing, tools, music, arts, customs, beliefs, and religion.</td>
</tr>
<tr>
<td>Mural</td>
<td>A painting or other work of art executed directly on a wall.</td>
</tr>
<tr>
<td>Perspective</td>
<td>Rules by which the illusion of 3D is created on a flat surface.</td>
</tr>
<tr>
<td>Vanishing point</td>
<td>In the rules of perspective, the point (or points) where parallel lines appear to meet on the horizon.</td>
</tr>
<tr>
<td>Composition</td>
<td>Composition is the arrangement of elements within a work of art - line, colour, tone, pattern, texture, shape and space.</td>
</tr>
<tr>
<td>Illustrator</td>
<td>A person who draws or creates pictures for magazines, books, advertising, etc.</td>
</tr>
<tr>
<td>Style</td>
<td>Art styles describe the way the artwork looks. Style is determined by the characteristics that describe the artwork, such as the way the artist uses the visual elements. It also includes how the artist uses the media, taking into account the method or technique that the artist uses.</td>
</tr>
<tr>
<td>Font</td>
<td>A set of letters and numbers in a particular style or typeface.</td>
</tr>
<tr>
<td>Proportion</td>
<td>Relating to the different parts of something to each other. When drawing people, for example, it is important to make sure that arms and legs are in ‘in proportion’ to the body or torso.</td>
</tr>
</tbody>
</table>

### Skills and Techniques

- Composition
- Layout techniques
- Developing ideas
- Researching and recording
- Connecting with artists
- Technical drawing

### Basic Knowledge

**Serif**
- The small decorative pieces on the ends of each character called serif.

**San Serif**

### Equipment

- Fine liners
- Sharpies
- Felt tips
- Knife
- Paint
- ICT/ipads/computers

### Artist Link

- Niark
- Alana Dee Haynes
- Ben Eine
- Alecks Cruz

### Pinterest Pages and YouTube Videos

- [Website](http://www.tate.org.uk/kids/games-quizzes/street-art)
- [Website](http://www.graffiticreator.net/)

- Mrs Brooks @redmoor
**Knowledge Organiser - Year 9 3D Design - Telling Stories**

### Keywords and Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble</td>
<td>Fit together the separate component parts of (a machine or other object).</td>
</tr>
<tr>
<td>Collage</td>
<td>A piece of art made by sticking various different materials such as photographs and pieces of paper or fabric on to a backing.</td>
</tr>
<tr>
<td>Dimension</td>
<td>A measurable extent of a particular kind, such as length, breadth, depth, or height.</td>
</tr>
<tr>
<td>Construct</td>
<td>Build or make using appropriate materials</td>
</tr>
<tr>
<td>Shape</td>
<td>The external form, contours, or outline of someone or something.</td>
</tr>
<tr>
<td>Composition</td>
<td>The action of putting things together; formation or construction.</td>
</tr>
<tr>
<td>Sculpture</td>
<td>The art of making two- or three-dimensional representative or abstract forms, especially by carving stone or wood or by casting metal or plaster.</td>
</tr>
<tr>
<td>Decorative</td>
<td>Serving to make something look more attractive; ornamental.</td>
</tr>
<tr>
<td>Materials</td>
<td>The matter from which a thing is or can be made.</td>
</tr>
<tr>
<td>Modelling</td>
<td>The activity of making three-dimensional models.</td>
</tr>
</tbody>
</table>

### Skills and Techniques

- Joining
- Assembling
- Cutting
- Creating silhouettes
- Collating
- Paper manipulation
- Moulding
- Folding
- Origami

### Pinterest Pages and YouTube Videos

- Redmoor Design
- The Tate Gallery
- Thinkspace Gallery

### Equipment

- Wire
- Paper
- Card
- Craft knife
- Cutting board
- Glue gun
- Paper mache

### Basic Knowledge

- Always use a mat and cut away from your hands.

### Cardboard Attachments

- Flange
- L-Brace
- Slot
- Tab
- Brass fasteners
- Half pan II wire

### Wire Modelling

### Tim Burton

### Zim and Zou

### Malema Valcarcel
Knowledge organiser - Year 8 Textiles - Colour patch

**Keywords and definitions**
- Visual elements: The visual or tactile parts that make up any art or design piece.
- Appliqué: A technique of layering fabrics.
- Abstract: Symbolic arrangement of ideas using shapes etc.
- Felting: Technique of bonding fabrics and yarns.
- Embellishment: Decoration using beads etc onto fabrics.
- Thread: Cotton yarn to sew fabrics with.
- Stitch: Thread sewn into fabrics to join or decorate.
- Embroidery: Decorative sewing.
- Pattern: Template for cutting fabric to size.
- Batik: Technique of applying wax to block dye on fabric.

**Skills and techniques**
- Screen printing
- Tie dye
- Weaving
- Batik
- Appliqué
- Embellishment
- Felting
- Silk painting

**Knowledge**

**Equipment**
- Inks
- Fabric dyes
- Silk paint
- Squeegee
- Craft knife
- Embroidery threads

**Artist links**
- Emily Blinco
- Pucci
- Sonia Delaunay
- Jill Smith

[Pinterest and Youtube links](http://www.bbc.co.uk/schools/gcsebitesize/design/textiles/)
### Key Terms

- **Hygiene**: Keeping the workplace and food workers clean which ensures food is safe to eat.
- **Hygiene procedure**: The steps you would go through to ensure that a product is produced in a safe and hygienic way.
- **Contamination**: Presence in food of harmful substances or bacteria. To spoil or dirty something.
- **Physical contamination**: The presence of a foreign body in a food product for example a plaster that has fallen off the food workers hand.
- **Chemical contamination**: The presence of unwanted or unsafe chemicals in food.
- **Biological contamination**: The presence of harmful microorganisms in food.
- **Danger zone**: A temperature of between 5°C and 63°C when bacteria will grow most rapidly.
- **Cross contamination**: Safe food being contaminated by unsafe food.
- **Food poisoning**: Chilled foods should be stored at between 1°C and 5°C to slow the growth of bacteria. Illness caused by food being contaminated by microorganisms. Food poisoning occurs if harmful microorganisms contaminate food and are then allowed to grow.
- **Symptoms**: The physical signs that are shown when someone is unwell.
### Drama Keywords

<table>
<thead>
<tr>
<th>Thought Tracking</th>
<th>Thoughts of a character are heard out loud, usually in a tableau. ‘Tracking their thoughts’ in the moment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialogue</td>
<td>The spoken text of a play - conversations between characters - is dialogue.</td>
</tr>
<tr>
<td>Monologue</td>
<td>Speech delivered by a single actor alone on stage.</td>
</tr>
<tr>
<td>Hot seating</td>
<td>‘Hot seated’ actor answers questions about their feelings, thoughts, actions as the character. Like an interview.</td>
</tr>
<tr>
<td>Projection</td>
<td>The strength of your voice to be used loudly and clearly.</td>
</tr>
<tr>
<td>Tone of voice</td>
<td>The emotion HEARD in your voice of this character.</td>
</tr>
<tr>
<td>Physicality</td>
<td>The physical mannerisms of a person, especially when overdeveloped or exaggerated.</td>
</tr>
<tr>
<td>Spotlight</td>
<td>A ‘Spot’/Circle of Light in a small area- to focus on less actors.</td>
</tr>
<tr>
<td>Backlight</td>
<td>Light coming from upstage, behind the scenery or actors, to sculpt and separate them from the background.</td>
</tr>
</tbody>
</table>

### Year 8 Drama: Unit 1 - Creating Character Knowledge Organiser (Term 1a- Sept-Oct)

#### Context:

**Creating Character:**
- You will be exploring how to create a character and to show this through new drama techniques.
- You will look at stock characters to role play and then create your own from scratch!
- You will be writing a monologue for your character: It will be performed to your partner and peer assessed.

#### Use of Practitioners, Performance Spaces:

**Performance Space:** *Proscenium Arch* - An arch/frame is created & the Audience have one view point.

**Practitioner:** Stanislavski - He wanted people to experiment to create a character. He believed that you should use everyday language to create a natural/realistic play, using real settings and ‘ordinary’ people.
Morals and Ethics - Pursuit of Happiness

Dhamma

The teachings of the Buddha and the Universal Law. Important to Buddhists because by following it they will reduce their own suffering and the suffering of others, which is the ultimate aim of Buddhism.

Three Marks of Existence

1. Anicca (impermanence): Everything changes and nothing lasts forever. Failure to recognise this leads to clinging and suffering, whereas awareness of it results in letting go of attachment and suffering.

2. Anatta (no fixed self): There is no ‘you’ that is permanent or eternal. Awareness of this can help you become less angry when someone harms ‘you’.

3. Dukkha (unsatisfactoriness of life, suffering): Suffering is an inevitable part of life and can only be overcome by becoming enlightened.

The human personality in the Theravada and Mahayana traditions

Theravada Buddhism teaches that the human personality is made up of five parts; the ‘Five Aggregates’ (skandhas) of form, sensation, perception, mental formations and consciousness.

Mahayana Buddhism teaches sunyata, the belief that nothing has independent existence. This is like anatta but applied to everything in the world. They also teach that everyone has a ‘buddha-nature’ meaning we are already enlightened but need to realise it.

The early life of the Buddha

Siddhartha Gautama was born an Indian prince around 2500 years ago. He grew up surrounded by luxury and never experienced hardship or suffering.

The Four Sights

Siddhartha came across a sick man, old man, dead man and holy man. These inspired him to give up his life of luxury and leave his wife and child.

The Buddha’s ascetic life

Siddhartha lived for six years as an ascetic (someone who denies themselves worldly pleasures). After this time he realised that this was not the answer and came up with the idea of the ‘Middle Way’ between luxury and asceticism.

The Buddha’s Enlightenment

Siddhartha meditated under a tree and was tempted by the demon Mara. Over three watches of the night he became enlightened and from then on known as the Buddha.

Nibbana

Literally means ‘blown out.’ Freedom from suffering and rebirth.

Four Noble Truths

1. The truth of suffering (dukkha): Life is full of suffering.

2. The truth of the causes of suffering: Suffering is caused by craving (tanha) and also by the Three Poisons of ignorance, greed and hatred.

3. The truth of the end of suffering: Suffering can be ended by ending craving and the three poisons. When a person ends suffering they become enlightened and achieve nibbana.

4. The truth of the path to end suffering: The path end suffering is the Middle Way and consists of eight practices (the Eightfold Path) that are sometimes grouped into three sections (the Threefold Way).

The Threefold Way and Eightfold Path

<table>
<thead>
<tr>
<th>Section of threefold way</th>
<th>Aspect of Eightfold Path</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethics (Sila)</td>
<td>Right Speech</td>
<td>Speak truthfully and kindly.</td>
</tr>
<tr>
<td></td>
<td>Right Action</td>
<td>Practice the five moral precepts.</td>
</tr>
<tr>
<td></td>
<td>Right Livelihood</td>
<td>Have a job that does not cause suffering.</td>
</tr>
<tr>
<td>Meditation (Samadhi)</td>
<td>Right effort</td>
<td>Work hard to become enlightened.</td>
</tr>
<tr>
<td></td>
<td>Right mindfulness</td>
<td>Become aware of yourself and the world</td>
</tr>
<tr>
<td></td>
<td>Right concentration</td>
<td>Develop focus and concentration.</td>
</tr>
<tr>
<td>Wisdom (panna)</td>
<td>Right understanding</td>
<td>Understand the dhamma.</td>
</tr>
<tr>
<td></td>
<td>Right intention</td>
<td>Follow the path with the right intention.</td>
</tr>
</tbody>
</table>

Key quote

“But if any one goes for refuge to the Buddha, the Dhamma and the Sangha he perceives with proper knowledge the four noble truths: suffering; the cause of suffering, the end of suffering and the noble eightfold path leading to the end of suffering.” The Buddha in the Dhammapada verses 190-191
<table>
<thead>
<tr>
<th>P</th>
<th>Point</th>
<th>'First and foremost... additionally...'</th>
<th>'What final judgements can we make? Do you agree with the questions? Why? Why not? Is there a definitive answer? Why? Why not?'</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Example / Evidence</td>
<td>'As is shown by Quote...'</td>
<td>'What are the causes/consequences? Are there positives/negatives? What are the criticism? What are the differences within Christianity / Islam? What are the differences between Christianity / Islam?'</td>
</tr>
<tr>
<td>E</td>
<td>Explanation</td>
<td>'This means...'</td>
<td>'Are there any similarities between the teachings / religions / your arguments? What are the main differences / contrasts?'</td>
</tr>
<tr>
<td>D</td>
<td>Development</td>
<td>'Furthermore... Quote... Which highlights / shows / exemplifies...'</td>
<td>'Link all paragraphs to the questions. How does your evidence answer the question?'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Must include</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify religious believers as Christians and / or other religions Religious beliefs and quotes/teachings in PEED Different viewpoints from within or between religions</td>
<td>Non religious beliefs in PEED Your general opinion on the question Include views that differ both within and between religions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Use key teachings and quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use keywords Use Key content</td>
</tr>
</tbody>
</table>
### Music

#### Key Words

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp #</td>
<td>Raises a note by 1 semitone e.g. C to C#</td>
</tr>
<tr>
<td>Flat ♭</td>
<td>Lowers a note by one semitone e.g. D♭ to C</td>
</tr>
<tr>
<td>Tone</td>
<td>A tone is a neighbouring note made up of 2 semitones e.g. C-D is a tone.</td>
</tr>
<tr>
<td>Semitone</td>
<td>The smallest difference between two different notes e.g. C - C#</td>
</tr>
<tr>
<td>Enharmonic</td>
<td>Notes that are of the same pitch but have different names e.g. F# and Gb</td>
</tr>
<tr>
<td>Key signature</td>
<td>An arrangement of sharps or flats, placed at the start of a piece of music to indicate which notes need to be played as black notes.</td>
</tr>
<tr>
<td>Ostinato</td>
<td>A continually repeated phrase or rhythm.</td>
</tr>
</tbody>
</table>

#### Scales

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major scale</strong></td>
<td>Has 8 notes. Semitones appear between the 3(^{rd}) and 4(^{th}) and the 7(^{th}) and 8(^{th}) notes. C major is the only major scale played completely on white notes.</td>
</tr>
<tr>
<td><strong>Minor scale</strong></td>
<td>Has 8 notes. The arrangement of tones and semitones make it sound Egyptian. It sounds sad.</td>
</tr>
<tr>
<td><strong>Chromatic scale</strong></td>
<td>Has 13 notes altogether. Every note has a semitone in-between. The player weaves between black and white notes. Chromatic means colourful.</td>
</tr>
<tr>
<td><strong>Pentatonic scale</strong></td>
<td>Has only 5 notes. Sounds Asian. Can be played on black notes only.</td>
</tr>
<tr>
<td><strong>Whole tone scale</strong></td>
<td>Has only 7 notes. There is a tone between each note. It begins and ends on the same letter name.</td>
</tr>
</tbody>
</table>
Year 8 PE - Netball

**KEY TERMS**

**Court** – The area netball is played on.

**Goal Third** – The 2 areas of the court including the shooting circle.

**Centre Third** – The area in the middle including the centre circle.

**Umpire** – The name of the person who officiates the match.

**Other areas of the court:** back line, side line, centre circle, shooting semi-circle.

**Intercept / Interception** – Gaining the ball by getting in between a pass from the opposing team.

**Possession** – Keeping the ball.

**SKILLS IN ISOLATION**

- **Passing** – chest, shoulder, bounce.
- **Handling** – Ball control.
- **Catching** – 1 and 2 handed.
- **Footwork** – landings, pivot.
- **Evasion** – holding space, dodging.
- **Shooting** – 1 or 2 handed.
- **Defending** – stage 1 man to man, stage 2 defend the pass.

**APPLICATION OF SKILLS**

- Set plays e.g. centre pass, back lines
- Decision making
- Demonstrate communication on court
- Adapt to the environment

**RULES AND REGULATIONS**

**FOOTWORK** – A player must not move their landing foot before passing the ball.

**OFFSIDE** – A player must stay in their playing area. See diagram above.

**HELD BALL** - The ball can only be held for 3 seconds by a player.

**REPLAYING** – A player must not bounce the ball to themselves when playing.

**RULES RESULTING IN A FREE PASS** (Involves 1 player):

- **FOOTWORK** – A player must not move their landing foot before passing the ball.
- **OFFSIDE** – A player must stay in their playing area. See diagram above.
- **HELD BALL** - The ball can only be held for 3 seconds by a player.
- **REPLAYING** – A player must not bounce the ball to themselves when playing.

**RULES RESULTING IN A PENALTY PASS** (Involves 2 players):

- **CONTACT** – A player must not touch another player whilst on court.
- **OBSTRUCTION** – Any player must stand 1 meter away from the player with the ball.
**KEY TERMS**

**Sequence**: A sequence is a series of movements which flow together. When composing a sequence it must have a clear start and end. Think of this at the Capital letter to start a sentence and a full stop to end it.

Any gymnastics routine should aim to be aesthetically pleasing and display the following:
- Extension
- Body tension
- Control
- Clarity of shape
- Resilience
- Flow

**SKILLS IN ISOLATION**

<table>
<thead>
<tr>
<th>Key Shapes</th>
<th>Key Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuck</td>
<td>Forward roll</td>
</tr>
<tr>
<td>Straddle</td>
<td>Backwards roll</td>
</tr>
<tr>
<td>Pike</td>
<td>Cartwheel</td>
</tr>
<tr>
<td>Dish</td>
<td>Summersault</td>
</tr>
<tr>
<td>Arch</td>
<td>Headstand</td>
</tr>
<tr>
<td>Puck</td>
<td>Handstand</td>
</tr>
<tr>
<td>Star</td>
<td>Round off</td>
</tr>
<tr>
<td>Straight</td>
<td>Walk over</td>
</tr>
</tbody>
</table>

**COMPONENTS OF FITNESS FOR GYMNASTICS**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance</td>
<td>Being able to keep your body stable when moving or still.</td>
</tr>
<tr>
<td>Strength</td>
<td>The amount of force generated by a muscle.</td>
</tr>
<tr>
<td>Body Composition</td>
<td>How much your body is made up of muscle and fat?</td>
</tr>
<tr>
<td>Flexibility</td>
<td>The range of movements you have around a joint.</td>
</tr>
<tr>
<td>Co-ordination</td>
<td>The ability to use 1,2 or more parts of your body at the same time.</td>
</tr>
<tr>
<td>Power</td>
<td>This combines strength and speed so muscles contract very quickly.</td>
</tr>
</tbody>
</table>

**RULES AND REGULATIONS**

A gymnast must create her own routines at an appropriate skill level for his/ her degree of difficulty.

No jewellery, body piercing or adornments of any kind are permitted.

A judge panel usually scores gymnastics competitions.

**Gymnasts** have two different **scores**, the **D score** (difficulty of the routine) and the **E score** (execution of the routine aka how neat and tidy it is!).

All **gymnasts** begin with a 10.0 execution **score** which then has points removed for faults such as bent legs, arms and falls.

**PERFORMANCE**

**Apparatus**
- Pommel horse, rings, high bar, parallel bars, vault, balance beam, asymmetric bars.

**Floor routine**
- Create a sequence combining and linking key shapes and skills.

**Rhythmic routine**
- Ball, Clubs, Rope, Ribbon, Hoop

**Year 8 PE - Gymnastics**

**Key Skills**
- Forward roll
- Backwards roll
- Cartwheel
- Summersault
- Headstand
- Handstand
- Round off
- Walk over

**Key Shapes**
- Tuck
- Straddle
- Pike
- Dish
- Arch
- Puck
- Star
- Straight

**Apparatus**
- Pommel horse, rings, high bar, parallel bars, vault, balance beam, asymmetric bars.

**Floor routine**
- Create a sequence combining and linking key shapes and skills.

**Rhythmic routine**
- Ball, Clubs, Rope, Ribbon, Hoop