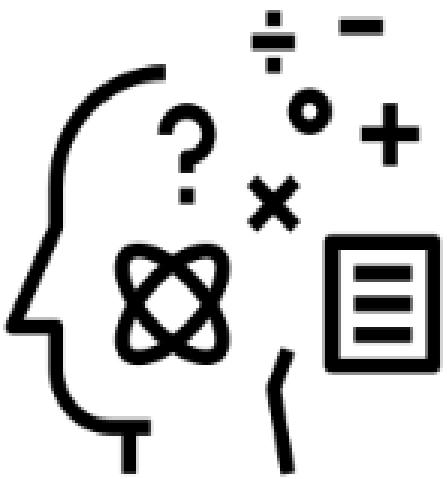
St Anne's
Church of England Academy

The best for everyone
The best from everyone
We have faith in our future

Year 10 Knowledge Organisers
Term 1



Name:……..

Form:……..

Hard Work Aspiration Integrity Respect

Cranmer Education Trust

Contents Page

Knowledge Organisers at St. Anne's Academy

What is a Knowledge Organiser?

- A Knowledge Organiser is a tool which sets out exactly what knowledge is vital in the curriculum.
- It clarifies for everyone – pupil, parent and teacher– exactly what is being taught.
- It is not expected to cover the entirety of everything you may possibly cover in a topic – just what is vital.
- A Knowledge Organiser is a distillation of knowledge, not a textbook or step by step revision guide.

Benefits of Knowledge Organisers:

- For pupils they are a revision of ALL the key information the teacher has decided is necessary for the topic.
- Parents know what their children are learning and are able to get involved in supporting their revision through quizzing and testing at home.

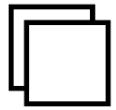
The purpose of knowledge organiser at St. Anne's is very clear. They will:

- Support pupils to retain the key knowledge learned in lessons;
- Enable parents to support their children in their learning;
- Promote independence in learning;
- Promote a work ethic which will support success in further education;
- Support wider reading and study to support curriculum learning;
- Encourage practice of examined tasks and questions.

A Guide for Students and Parents

For each topic being taught in each subject a Knowledge Organiser has been produced outlining the key important knowledge required to fully understand a topic.

- Students should set aside time each day/evening dedicated to each subject they study.
- Students should use the knowledge organisers for independent study using the following method.

Look 	Read the specific important knowledge you need to learn for each subject.
Say 	Read aloud the specific important knowledge you need to learn.
Cover 	Cover your knowledge organiser.
Write 	Write out everything you can remember from the specific part of the important knowledge you have been reading on a blank sheet of A4 paper.
Check 	Check that you have all the content needed and it is correct. Any content that is missing or incorrect use another colour pen to illustrate the gaps in your knowledge that you have corrected.
Repeat 	Fold your A4 sheet so that what you have just written is no longer visible. Repeat the steps above until you are 100% correct.

Year 10 – Maths – Term 1

Algebra

- Expanding – multiplying terms outside the bracket with every term inside the bracket.
- Factorising – using common factors place an expression back into brackets
- Quadratics – an expression which contains four terms, with one term being a variable (letter) squared and the other being a number by itself.
- Algebraic Proof – using algebraic processes to prove a statement of fact.
- Coefficient – the number which is Infront of a variable
- Index laws – a set of laws which are applied when there is the same base number and powers
    - Multiplication you add the powers
    - Division you subtract the powers
    - Brackets you multiply the powers
- Any number to the power of zero is 1

Integers, Decimals, Rounding and Estimation

- Rounding to decimal places – rounding a number to a given number of decimal places (if a number is 5 or above it rounds up, 4 or below it rounds down.
- Rounding to significant figures - rounding a number to a given number of places (if a number is 5 or above it rounds up, 4 or below it rounds down.
- Estimation – calculating an answer when all numbers have been rounded to 1 significant figures
- Bounds – the maximum and minimum value that a number could be prior to being rounded
- Error Intervals – Using inequality notation to express the maximum and minimum value a number could be prior to being rounded

Equations and Inequalities

- Changing the subject – the use of inverse operations which results in a formula equalling a different variable to the variable you started with
- Simultaneous Equations – a set of equations which have a common value for 2 different variables (these can also be solved on a graph)
- Regions – an area of a graph which satisfies 1 or more inequalities.
- Forming an equation – using statements of facts or Geometry facts to form an equation, allowing a missing value to then be calculated.
- Substitution – replacing variable with a given number/s and using this to calculate the value of an expression

Angles

- Angles on a straight line sum to 180°
- Angles around a point sum to 360°
- Vertically opposite angles are equal
- Parallel lines remain an equal distance apart, so therefore they never meet
- A line which crosses parallel lines is known as a transversal
- When a transversal crosses parallel lines, then the following rules apply:
    - Corresponding angles are equal
    - Alternate angles are equal
    - Co-Interior angles sum to 180°
- The sum of exterior angles is 360°
- The sum of interior angles is:
    - (number of sides – 2) x 180

Command Words / Keywords

Simplify	The process of “collecting like Terms” in an expression
Solve	The process by which inverse operations are used to balance an equation to work out the value of a variable (letter)
Formula	A written instruction which allows for answers to be calculated
Subject of a Formula	The letter that a formula equals

St Anne's Church of England Academy
The best for everyone
The best from everyone
We have faith in our future

KS4 English Literature – *An Inspector Calls* Knowledge Organiser

Language for Learning

Stage Directions
Social Class
Community
Conscience
Hypocritical
Superior
Inferior
Agency
Subservient
Hierarchy
Penitent
Dramatic Irony
Prejudice
Microcosm
Patriarchy

Language to describe the characters

Mr Birling: pompous, stubborn, shallow
Mrs Birling: supercilious, prejudiced, heartless, portentous
Sheila: naïve, compassionate, materialistic
Eric: irresponsible, reckless, repentant
Gerald: unchanged, self-assured, secretive, hedonistic
Eva Smith: moralistic, relatable, desperate
Inspector G.: systematic, mysterious, omniscient, altruistic
Edna: Voiceless, the underdog

Plot

Act one: The Birling's are celebrating the upcoming marriage of Sheila Birling to Gerald Croft. An Inspector arrives claiming that a young woman called Eva Smith has just committed suicide. Eva was employed by Mr Birling and was fired unfairly. She was then taken on by a shop, Millwards, where Sheila used her influence and got Eva fired too.
Act two: Gerald admits that he used Eva as a mistress and leaves upset. Mrs Birling was also involved by refusing to give Eva (now pregnant), any money when she came to beg for charity. Mrs Birling is adamant that the father of the child take responsibility. This turns out to be her son, Eric and she is seen as a hypocrite.
Act three: Eric admits that he is the father of Eva's child. He feels terrible for what he has done. The Inspector leaves and they are all shocked. Gerald returns and informs the Birling's that there is no Inspector Goole working at the local police station. A phone call confirms this. However, the final lines in the play state that a girl has just died and they are all to be interviewed by an inspector.

Characters

Mr Birling: head of the Birling family and Birling & Co. A devoted capitalist.
Mrs Birling: Mr Birling's wife. Described as 'cold'. Runs a women's committee but, like her husband, looks down on the lower classes.
Sheila: the Birlings' daughter. Naïve and selfish at the beginning but the Inspector quickly provokes her to realise the errors of her ways.
Eric: the Birlings' son. Irresponsible & an alcoholic at the beginning but also learns from the Inspector's visit.
Gerald: the Crofts' son (owners of Crofts Ltd). A member of the aristocracy and Sheila's fiancé.
Inspector Goole: a police inspector or possibly something supernatural who questions the Birlings and Gerald about Eva's suicide.
Eva Smith/Daisy Renton: a young lower-class girl who has been unkindly treated by the Birlings and Gerald. Pregnant and homeless, she kills herself.

Key context

Capitalism	An economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state (represented by Conservative party; in power in 1912)
Socialism	A political and economic system where the means of production, distribution, and exchange should be owned or regulated by the community (represented by the Labour party; in power in 1945)
1912 (set) & 1945 (written & performed)	1912: The Titanic sinks & coal miners strike for minimum wages 1914-18: WW1 1918: votes for women over 30 (1928: women over 21) 1939-1945: WW2 1945: Labour wins the UK election 1948: the NHS is born.
Themes	Class Gender Social Responsibility Age Power Public Vs Private Guilt Morality
Gender Stereotypes	
Social Class System	

KS4 English Literature – *An Inspector Calls* Knowledge Organiser

Preparing you for GCSE Style Exam

Example exam question

Section A: Modern prose or drama

Answer **one** question from this section on your chosen text.

JB Priestley: *An Inspector Calls*

EITHER

0 1 How far does Priestley present Mrs Birling as an unlikeable character?

Write about:

- what Mrs Birling says and does in the play
- how Priestley presents her by the ways he writes.

[30 marks]
AO4 [4 marks]

OR

0 2 How does Priestley use the character of the Inspector to suggest ways that society could be improved?

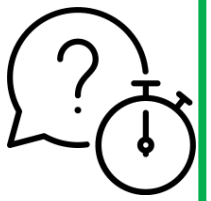
Write about:

- what society is shown to be like in the play and how it might be improved
- how Priestley presents society through what the Inspector says and does.

[30 marks]
AO4 [4 marks]

You will be given two questions to choose from. You will only answer **one** of these questions.

Read the question and highlight the keywords.
The two bullet points outline what you could discuss.



Assessment objectives you are assessed on:

AO1- Your understanding of the text. This can be shown in your point/ topic sentence and the quotations you choose to support your point.
AO2- Language and structural analysis of key quotations.
AO3 – context (Edwardian Era)
AO4- Spelling, punctuation and grammar.

Example response:

Priestley uses the Inspector as a mouthpiece of his socialist views and uses him as a vehicle to provide criticism of the capitalist system that Mr Birling is symbolic of. In the Inspector's final judgement in Act 3, he says that if people do not change there will be consequences: they will be 'taught it in fire and blood and anguish.' Priestley creates imagery of hell, suggesting that if the Birlings do not improve their sense of social responsibility, they will encounter pain and suffering in the afterlife as a punishment. Furthermore, Priestly uses a triple to emphasise how the punishment will last a long time, if they do not accept and take responsibility for society. Priestley fought in WW1 and wrote this play in 1945, meaning that he lived through both world wars, and he saw the destruction humans can bring to each other. Priestley may have used his firsthand experiences as inspiration to warn society that we need to adopt socialist values for a better world, as the character of the Inspector carries a clear political message, and he seems to present the socialist views of Priestley himself.

Other example questions:

Character Questions:

How important is the character of Eric in demonstrating Priestley's ideas?
How does Priestley use Gerald Croft's status to show his ideas about society?
Why did Priestley create the Birling family as the central characters in An Inspector Calls?
How does Priestley use Mr Birling to present his ideas about employers' responsibility?
Why does Priestley present Eva Smith without the audience ever getting to see her or hear her in An Inspector Calls?
How does Priestley use Sheila's change throughout the play to present his ideas?

Theme Questions:

How successfully is the idea of collective responsibility explored in this play, through the use of the Inspector?
How successfully does Priestley present the different attitudes between the older and younger generations in An Inspector Calls?
How does Priestley explore guilt in An Inspector Calls?
How does Priestley present his ideas about social class in An Inspector Calls?
How does Priestley show his ideas about gender inequality in An Inspector Calls??
What is important about the period of time in which Priestley set An Inspector Calls, and why did he do this?

STAVE ONE

- 'Marley was dead: to begin with.'
- 'Marley was as dead as a doornail.'
- 'He was a tight-fisted hand at the grindstone, Scrooge!'
- 'Hard and sharp as flint.'
- 'Solitary as an oyster.'

- 'External heat and cold had little influence on Scrooge.'
- 'It was cold, bleak, biting weather.'
- 'The fog came pouring in at every chink and keyhole.'
- 'His clerk, who in a dismal little cell beyond…was copying letters…'
- 'He was all in a glow; his face was ruddy and handsome; his eyes sparkled.' (Fred)
- 'At the ominous word liberality', Scrooge frowned.'
- '"Are there no prisons?" asked Scrooge.'
- "'I don't make merry myself at Christmas, and I can't afford to make idle people merry.'"

- '"If they would rather die… they had better do it, and decrease the surplus population.'"
- 'Meanwhile the fog and darkness thickened.'
- 'Piercing, searching, biting cold.'
- 'There was nothing at all particular about the knocker on the door.'
- 'To say that he was not startled, or that his blood was not conscious of a terrible sensation to which it had been a stranger from infancy, would be untrue.' (Scrooge after seeing Marley's face)
- 'The same face: the very same.' (Marley's ghost)

  - '"How now!" said Scrooge, caustic and cold as ever.'
  - '"I wear the chain I forged in life."'
  - '"Or would know," pursued the Ghost, "the weight and length of the strong coil you bear yourself? It was full as heavy and as long as this, seven Christmas Eves ago. You have laboured on it, since. It is a ponderous chain!"'
- '"No rest, no peace. Incessant torture of remorse.'"
- '"Mankind was my business."'
- 'The misery with them all was, clearly, that they sought to interfere, for good, in human matters, and had lost the power for ever.'
- 'He tried to say, 'Humbug!' but stopped at the first syllable.'

STAVE TWO

- 'Was it a dream or not?'
- 'Scrooge… found himself face to face with the unearthly visitor…'
- 'It was a strange figure – like a child: yet not so like a child as like an old man.'
- 'It wore a tunic of the purest white.'

- 'From the crown of its head there sprung a bright clear jet of light.'
- '"Are you the spirit, sir, whose coming was foretold to me?" asked Scrooge.'
- 'The voice was soft and gentle.'
- '"Would you so soon put out, with worldly hands, the light I give?"'
- '"I am a mortal," Scrooge remonstrated, "and liable to fall."'
- 'He was conscious of a thousand odours floating in the air, each one connected with a thousand thoughts, and hopes, and joys, and cares long, long forgotten!'
- '"Your lip is trembling," said the Ghost. "And what is that upon your cheek?"'
- '"The school is not quite deserted… A solitary child, neglected by his friends, is left there still."'
- 'A lonely boy was reading near a feeble fire.'
- 'Scrooge… wept to see his poor forgotten self as he used to be.'
- '"There was a boy singing a Christmas carol at my door last night. I should like to have given him something: that's all."'

  - 'A little girl, much younger than the boy, came darting in, and putting her arms about his neck, and often kissing him, addressed him as her 'dear, dear brother.''
- '"Father is so much kinder than he used to be, that home's like Heaven!'
- 'He called out in a comfortable, oily, rich, fat, jovial voice.' (Fezziwig)
- '"He has the power to render us happy or unhappy; to make out service light or burdensome; a pleasure or a toil."' (Scrooge talking about Fezziwig)
- '"Another idol has displaced me."' (Belle)
- '"You fear the world too much."'
- '"Our contract is an old one."'
- 'He seized the extinguisher-cap, and by sudden action pressed it down upon its head.'
- 'He could not hide the light: which streamed from under it, in an unbroken flood upon the ground.'

STAVE THREE

- 'A strange voice called him by his name, and bade him enter.'
- 'Such a mighty blaze went roaring up the chimney.'
- 'Heaped up on the floor, to form a kind of throne, were turkeys, geese, game, poultry…'

- 'In easy state upon this couch, there sat a jolly Giant, glorious to see; who bore a glowing torch… and held it up, high up, to shed its light on Scrooge.'
- '"Come in! and know me better, man!"'
- 'Its dark brown curls were long and free: free as its genial face, its sparkling eye, its open hand.'
- 'Girded round its middle was an antique scabbard; but no sword was in it, and the ancient sheath was eaten up with rust.'
- '"There are some upon this earth of yours… who lay claim to know us, and who do their deeds of passion, pride, ill-will, hatred, envy, bigotry, and selfishness in our name…"'
- 'Then up rose Mrs Cratchit, Cratchit's wife… brave in ribbons.'
- '"He hoped the people saw him in the church, because he was a cripple, and it might be pleasant to them to remember upon Christmas Day, who made lame beggars walk and blind men see."'
- 'It was a sufficient dinner for the whole family.'
- "'If these shadows remain unaltered by the Future, the child will die.'"
- '"What then? If he be like to die, he had better do it, and decrease the surplus population."'
- '"Mr Scrooge!" said Bob; "I'll give you Mr Scrooge, the Founder of the Feast!"'
- 'There was nothing of high mark in this. They were not a handsome family; they were not well dressed; their shoes were far from being water-proof; their clothes were scanty.'
- '"A place where Miners live, who labour in the bowels of the earth," returned the Spirit. "But, they know me. See!"'
- '"I am sorry for him; I couldn't be angry with him if I tried."' (Fred talking about Scrooge)
- 'They were a boy and girl. Yellow, meagre, ragged, scowling, wolfish: but prostrate, too, in their humility.'
- '"They are Man's," said the Spirit, looking down upon them. "And they cling to me, appealing from their fathers. This boy is Ignorance. This girl is Want. Beware them both, and all of their degree, but most of all beware this boy, for on his brow I see that written which is Doom."'

STAVE FOUR

- 'The Phantom slowly, gravely, silently, approached.'
- 'It seemed to scatter gloom and mystery.'
  - 'It was shrouded in a deep black garment, which concealed its head, its face, its form and left nothing visible.'
  - 'It was tall and stately.'
  - 'Scrooge feared the silent shape so much that his legs trembled beneath him.'
  - 'There were ghostly eyes intently fixed upon him.'
- '"I hope to live to be another man from what I was, I am prepared to bear you company, and do it with a thankful heart."'
- '"It's likely to be a very cheap funeral."'
- 'They were men of business: very wealthy, and of great importance. He had made a point of always standing well in their esteem: in a business point of view that is; strictly in a business point of view.'
- "'Every person has a right to take care of themselves. *He* always did."' (Mrs Dilber talking about Scrooge)
- 'Scrooge listened to this dialogue in horror.'
- '"Spirit!" said Scrooge, shuddering from head to foot. "I see, I see. The case of this unhappy man might be my own."'
- 'Oh cold, cold, rigid, dreadful Death, set up thine altar here.'
- '"Before that time we shall be ready with the money; and even though we were not, it would be bad fortune indeed to find so merciless a creditor in his successor."'
- '"Let me see some tenderness connected with a death."'
- 'Ah, poor Tiny Tim!'
- '"Don't mind it, father. Don't be grieved!"'
- '"My little, little child!" cried Bob. "My little child!"'
- 'The Spirit was immovable as ever.'
- '"Hear me! I am not the man I was. I will not be the man I must have been but for this intercourse. Why show me this, if I am past all hope?"'

- "'I will honour Christmas in my heart, and try to keep it all the year. I will live in the Past, Present, and the Future. The Spirits of all Three shall strive within me. I will not shut out the lessons that they teach. Oh, tell me I may sponge away the writing on this stone."'

STAVE FIVE

- 'He was so fluttered and so glowing with his good intentions, that his broken voice would scarcely answer to his call.'
- 'He had been sobbing violently in his conflict with the Spirit, and his face was wet with tears.'
- 'His hands were busy with his garments all this time: turning them inside out, putting them on upside down, tearing them, mislaying them, making them parties to every kind of extravagance.'
- '"I am as light as a feather, I am as happy as an angel, I am as merry as a school-boy."'
- 'For a man who had been out of practice for so many years, it was a splendid laugh, a most illustrious laugh.'
- 'No fog, not mist; clear, bright, jovial, stirring, cold.'
- 'Oh, glorious. Glorious!'
- '"The Spirits have done it all in one night. They can do anything they like. Of course they can."'
- '"An intelligent boy!" said Scrooge. "A remarkable boy!"'
- '"Allow me to ask for your pardon."'
- 'Everything could yield him pleasure.'
- 'Let him in! It is a mercy he didn't shake his arm off. He was at home in five minutes. Nothing could be heartier.' (Scrooge welcomed by Fred)
- "'I'll raise your salary, and endeavour to assist your struggling family, and we will discuss your affairs this very afternoon."'
- 'Scrooge was better than his word. He did it all and infinitely more.'
- 'His own heart laughed: and that was quite enough for him.'
- 'He knew how to keep Christmas well.'
- 'And so, as Tiny Tim observed, God bless Us, Every One!'

Learn some quotations!

Colour code THEME or IMAGERY.

Choose five quotations from each act and memorise them.

Colour code quotations by character.

Draw pictures to help you remember key images.

Look for LANGUAGE TECHNIQUES (eg. metaphors, similes, symbols)

KS4 English Literature– Paper 1, Section A: Macbeth Knowledge Organiser

Language for Learning:

Ambition
Loyalty
Fate
Supernatural
Masculinity
Femininity
Tragedy
Stage directions
Soliloquy
Hamartia
Hubris
Prophecy
Paradox
Tragic hero

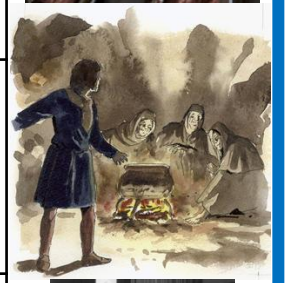
Language to describe the characters:

Macbeth: *ambitious, courageous, deceitful, impulsive, ruthless, treasonous, tyrannical*
Lady Macbeth: *cunning, dominant, emasculating, malevolent, mutinous, powerful, scheming, vulnerable*
Banquo: *devoted, intuitive, loyal, trustworthy, virtuous*
Duncan: *benevolent, faithful, honest, naïve, sincere*
Macduff: *devout, fervent, heroic, merciless, patriotic, unwavering*
Witches: *corrupt, ignoble, manipulative, sinister, subversive, prophetic.*

Act 1	1. The witches meet on the heath and plan to meet Macbeth. 2. Macbeth and Banquo have fought and won a battle. 3. The witches meet Macbeth and Banquo. They tell Macbeth he will become Thane of Cawdor and King. Macbeth becomes Thane of Cawdor and begins believing in what the witches told him. 4. Macbeth sends Lady Macbeth a letter informing her of the witches' prophecy. Lady Macbeth convinces Macbeth to kill King Duncan. 5. Duncan arrives at Macbeth's castle 6. Macbeth's soliloquy. Macbeth tells Lady Macbeth he will not murder Duncan. She convinces him to go ahead with the murder.	
Act 2	1. Banquo and Macbeth talk briefly about the witches. Macbeth hallucinates a dagger in front of him. 2. Macbeth murders King Duncan. Macbeth's guilt is apparent. Lady Macbeth feels no guilt. 3. Duncan's dead body is discovered. 4. Macbeth becomes king.	
Act 3	1. Macbeth questions Banquo. He plans his murder. 2. Macbeth and Lady Macbeth's relationship begins changing. 3. Banquo is murdered but his son Fleance escapes. 4. Macbeth celebrates becoming King with a banquet. He begins to hallucinate Banquo's ghost in front of all the guests. 5. We meet Hecate (in charge of the witches) 6. Lennox shares his suspicions about Macbeth.	
Act 4	1. Macbeth returns to visit the witches as he becomes increasingly paranoid. 2. The witches share three prophecies as well as sharing a vision of Banquo. 3. Macbeth has Macduff's wife and children murdered. 4. Malcolm puts Macduff to the test.	
Act 5	1. Lady Macbeth begins to feel guilty and starts sleepwalking. 2. Macbeth is fearless due to the prophecy of the witches. 3. Great Birnam wood rises 4. Lady Macbeth commits suicide	1. Malcolm prepares for battle 2. Macduff kills Macbeth and beheads him. 3. Malcolm (the son of Duncan) is crowned king.








Key context

The Great Chain of Being	1. God is at the top of the Great Chain of Being 2. Kings were chosen by 'divine right.' God chose the king. 3. Males were above females. 4. People were expected to respect their position in the chain and, if they did so, would be rewarded in heaven.
King James I	1. King of Scotland from 1567 - 1625 2. King James was fascinated by the supernatural and wrote a book entitled 'Demonology' in 1597 3. King James's ancestor, Banquo, is made a hero in the play. 4. King James had survived an assassination attempt.
Witches and the supernatural	1. Christians believed witches to be the agents of Satan. 2. In 1604, it was a capital offence to be a witch. Association with a witch led to hanging, burning or drowning. 3. It was believed, witches could see into the future, change the weather and could call up the dead.
Role of women	1. Patriarchal society in which women were seen as inferior and had to be obedient to men. Lady Macbeth subverts this expectation.

KS4 English Literature– Paper 1, Section A: Macbeth Knowledge Organiser

Preparing you for GCSE Style Exam

Example exam question

Read this extract from Act 1:5 and then answer the question below
The following extract comes after Lady Macbeth has read Macbeth's letter about the witches prophecies

Lady Macbeth
The raven himself is hoarse
That croaks the fatal entrance of Duncan
Under my battlements. Come, you spirits
That tend on mortal thoughts, unsex me here,
And fill me from the crown to the toe top-full
Of direst cruelty. Make thick my blood.
Stop up the access and passage to remorse,
That no compunctious visitings of nature
Shake my fell purpose, nor keep peace between
The effect and it! Come to my woman's breasts,
And take my milk for gall, you murd'ring ministers,
Wherever in your sightless substances
You wait on nature's mischief. Come, thick night,
And pall thee in the dunnest smoke of hell,
That my keen knife see not the wound it makes,
Nor heaven peep through the blanket of the dark
To cry "Hold, hold!"

Starting with this speech, explore how Shakespeare presents ambition.

Write about
-How Shakespeare present ambition in the extract
-How Shakespeare presents ambition in the play as a whole

30 Marks
4 marks(A04)

You will always be given some information on where in the play the extract is from. Read this carefully.

Your question will be based on a key extract from the play. Use at least two quotations from here.

Read the question and highlight the keywords. You must refer to the rest of the play too.

Example response:

Through Macbeth, Shakespeare shows that being too ambitious can lead people to become morally corrupt. Shakespeare presents Lady Macbeth as being more ambitious than her husband and she is the one actually feeding Macbeth's ambition. Shakespeare shows how Lady Macbeth's desire for ambition leads her to become a evil manipulator. She commands the spirits to 'take [her] milk for gall.' Shakespeare uses the metaphor to highlight the extent of Lady Macbeth's ambition, as she is willing to get rid of her purity and femininity in exchange for poison. The noun 'milk' has connotations of innocence and femininity, which Lady Macbeth does not want to possess. Furthermore, the use of 'gall' emphasises her cruel and ruthless character. Through this portrayal of Lady Macbeth's ambitious character, Shakespeare shows that she subverts the expectation of a kind, nurturing and inferior Jacobean female.

Assessment objectives you are assessed on:

AO1- Your understanding of the text. This can be shown in your point/ topic sentence and the quotations you choose to support your point.
AO2- Language and structural analysis of key quotations.
AO3 – context (Jacobean era)
AO4- Spelling, punctuation and grammar.

Other example questions:

Starting with this speech, how does Shakespeare present violence?

Starting with this speech, how does Shakespeare present power?

Starting with this speech, how does Shakespeare present Macbeth as a hero?

Starting with this speech, how does Shakespeare present Lady Macbeth as powerful?

Starting with this speech, how does Shakespeare present evil?

You could be asked about the following key themes:

- Ambition
- Violence
- Power
- Good and Evil
- Masculinity and femininity
- Kingship
- Guilt
- Appearance and reality
- Supernatural

Or the following key characters:

Macbeth- Thane of Glamis, then Cawdor then King of Scotland.
Lady Macbeth – wife of Macbeth. Ambitious and manipulative.
Banquo- Macbeth's friend. Loyal and noble. Murdered by Macbeth
Macduff – Thane of Fife. Loyal to the king. Kills Macbeth.
King Duncan – King at the start of the play. Murdered by Macbeth
Witches – Tell Macbeth that he will be king. Tell Banquo his sons will be kings. Tell Macbeth to be aware of Macduff.

KS4 English Language– **Paper 1, Section A-** Knowledge Organiser

Vocabulary for section A

suggests
illustrates
demonstrates
foreshadows
indicates
exemplifies

This makes the reader…
- question
- understand
- imagine
- Feel

Band 4
Detailed, perceptive

Band 3
Clear, relevant

Band 2
Some, attempts

Band 1
Simple Limited

Question 1 (4 marks , 5 minutes)

Question

List four things…

Top Tips
- ✓ Only use the **lines indicated**
- ✓ Stick to the **question**
- ✓ Write in **full sentences**
- ✓ Include **quotations** where appropriate
- ✓ **Don't repeat**

Question 2 (8 marks, 10 minutes)

How does the writer use language to…

Technical terminology

Adjectives
Alliteration
Hyperbole
Metaphor
Nouns
Oxymoron
Pronouns
Simile
Terms of address
Verbs
Adverbs
Emotive language
Imagery
Noun phrases
Onomatopoeia
Personification
Sensory language
Subordinate/main clause
Triplets

Top Tips
- ✓ Only use the **section indicated**
- ✓ Stick to the **question** – highlight important words
- ✓ Select references (probably quotations) judiciously
- ✓ Remember ***WHAT?*** language is being used ***WHERE?*** is there evidence of it ***WHY?*** has it been used?
- ✓ Use technical terminology but always consider the **effect**
- ✓ Aim for three points / paragraphs

Question 3 (8 marks, 10 minutes)

How does the writer use structure to…

Technical terminology

Contrast
Cyclical
Dialogue
Flashback /forward
Lists
Opening
Paragraphs
Repetition
Chronological
Development
End
Focus shifts
Narrative
Order
Patterns
Tense

Top Tips
- ✓ Use the **whole extract**
- ✓ Select references judiciously
- ✓ Remember ***WHAT?*** structure is being used ***WHERE?*** is there evidence of it ***WHY?*** has it been used?
- ✓ Use technical terminology but always consider the **effect**
- ✓ Aim for three points / paragraphs

Question 4 (20 marks, 25 minutes)

To what extent do you agree…(statement given)

Top Tips
- ✓ Use the **section indicated** and stick to the **question** – highlight important words from the quote and the question
- ✓ Start with an **evaluative comment**: do you agree, partially agree or disagree with the given statement?
- ✓ Select references for **language and structure** points judiciously
- ✓ Remember ***WHAT?*** language and structure methods are being used ***WHERE?*** is there evidence of them ***WHY?*** have they been used?
- ✓ Use **technical terminology** (see above for language and structure terminology you could use) but always consider the **effect.**

I agree with the statement because…, The writer states…which creates the impression…. This reinforces the idea…., The reader feels…, I get the impression…, This seems to indicate…

KS4 English Language– **Paper 2, Section A** - Knowledge Organiser

Vocabulary for section A

To emphasise:
Above all
In particular
Especially
Significantly
Notably

To further explain an idea:
Although
However
Yet

Similarity:
Equally
Likewise
Similarly
In the same way

To contrast:
whereas
Alternatively
Otherwise
Contrastingly
On the other hand

Assessment Objectives

AO 1: What (do you understand what the text is saying?)

AO2: How (do you understand how the text is communicating its message?)

AO3: Why (why is the text as it is? Why did the writer choose for it to be that way?)

Question 1 (4 marks, 5 minutes)

Question

Select four correct statement

Top Tips
- ✓ Only use the **lines indicated**
- ✓ Stick to the **question**
- ✓ Go through **every statement**
- ✓ Highlight on your extract the statements as you go along

Question 2 (8 marks, 10 minutes) 2/3 points

Examiner is looking for:
- Understanding of the text- including inferred meaning
- Use of detailed evidence from the text
- Comparison of the content of the texts

Top Tips
- ✓ Highlight the theme that the question is asking you to focus on.
- ✓ Write a single sentence summary of the difference of the treatment of this theme between the two texts

The difference between the treatment of {theme] in these two sources is..
- ✓ Choose a quotation from source A and imagine it is the caption beneath an image showing the representation of the theme in that text.
- ✓ Describe what it shows
- ✓ Use the quotation as evidence
- ✓ Include what you can infer about the theme from the image *"from this we can infer".*
- ✓ Repeat steps 3-6 for source B- using comparative connectives to indicate your understanding of the comparison

"In contrast source B…"
- ✓ Write a conclusion summing up the differences between the two texts.

"So in conclusion whilst we can see that source A….source B on the other hand…""
- ✓ NOTE: Do not say that the differences are due to different time periods

Question 3 (12 Marks, 15 minutes) 3/4 points

Examiner is looking for:
- Explanation of the effect on the reader
- Use of detailed evidence from the text
- Use of appropriate terminology

Top Tips
- ✓ Highlight the theme
- ✓ Mark the section of the text you have been asked to refer to
- ✓ Open with a comment on the effect of the use of language on the reader.

"The author of source …presents [theme] in a way that makes the reader feel…"
- ✓ Now choose one language feature that contributes to that feeling. Explain how that linguistic feature relates to the feeling is creates.
- ✓ Now explain in detail the impact of this feature on the reader.

"The impact of this on the reader is….furthermore…so it could be said that…."
- ✓ *Repeat this process for 3 different language features.*

Question 4 (16 marks, 20minutes)

Examiner is looking for :
- Understanding of the author's attitudes
- Description of the author's methods
- Sophisticated comparison

Top Tips
- ✓ Highlight the theme in the Question
- ✓ Answer the question in a couple of sentences:

"Whilst both sources write about ……the attitudes of the authors are evidently different in that the author of source A would seem to……whilst the author of Source B, in contrast, seems to feel…"
- ✓ Choose one source and state what you think the author's view point is on the theme.
- ✓ Now explain how you know this using evidence from the text (quotations). Explain how each of your pieces of evidence relates to your understanding of the author's intentions

"From the use of [what have you observed? Use terminology if helpful] we can see that the author's attitude is…"
- ✓ Now repeat step 3-4 for the other source- use comparative connectives to show how you think it relates to the first source
- ✓ Now write a conclusion in which you sum up your understanding of the differences in the authors' attitudes and view points on the them.

I think if the authors of these two sources were to discuss [theme] the author of source A would feel that the author i of source B was….because… The author of source B would think that the author of source B was ….because…
- ✓ NOTE: Do not say that the differences are due to different time periods

KS4 English Language– Paper 2, Section B: Viewpoint writing Knowledge Organiser

Preparing you for GCSE Style Exam

Example exam question

"Schools should be doing far more to challenge unhealthy lifestyles of its pupils. Eating five fruit and vegetables a day should be made a compulsory requirement for pupils when in school."

Write an article for a broadsheet newspaper in which you explain your point of view on this statement.

40 marks

(*24 marks for content + 16 for technical accuracy)*

Time: 45 minutes

- 5 minutes plan
- 35 minutes to write
- 5 minutes to check

Vocabulary for section B

Supporting tone that accepts and believes in the statement:

Ingenious
Improve
Benefit
Ultimately happier
Flourish
Blossom

Critical, opposing tone that rejects the statement:

Fundamentally impossible
Mindless
Ridiculous
Illogical
Toxic

Example response:

Sprouts anyone?

Force feeding vegetables and fruit in schools is a step too far.

Recent proposals to make it compulsory for schools to force pupils to eat five fruit and vegetables a day is fundamentally impossible to monitor and also fails to give pupils autonomy; they become mindless, programmed robots who are told what, when and how to eat. Do we really want to let such a ridiculous, illogical proposal take root in our schools and spread the seeds of a toxic approach to healthy eating?

Consider what the future would look like if this was the case. Take the example of Jake, who is a London school boy, and no different from the norm. If eating five fruit and vegetables were made compulsory, Jake would be supervised and watched by eagle -eyed vegetable police in schools, who would tick off each healthy items he eats as he does so. Jake would begin to feel guilty for even desiring that custard cream! Rather than actually understanding and being educated about the food choices he makes, he simply eats because he is frightened about the consequences if he does not finish all of his peas. Eventually, Jake can take no more and, instead, he will binge in secret on chocolate and cakes when no one is around, as he is fearful of being caught. Is this really the world you want your child growing up in?

Whilst many supporters of the proposal would argue that it is a great injustice that we are not doing more for pupils by providing them with more healthy alternatives in schools, it is simply ridiculous to believe that by making in compulsory attitudes towards healthy eating will be changed. We should be working on providing cooking lessons to enhance pupils' culinary skills. We should be educating pupils about the effects of overeating foods with high sugar content. Although many would argue that both these ideas require large amounts of money, they are the most appropriate next steps to take if we are to avoid the impeding wave of ill-healthy that will drown our NHS services as a result of our unhealthy eating in the UK.

Expert Dr. H. Grange, from the University College of London, surveyed 1,000 pupils from London schools and found that 83% of pupils felt strongly that they want more education on what to eat, rather than being forced to eat specific items by schools. Dr Grange commented that "it would be disastrous move to try to enforce this on our pupils because it would be taking away their independent critical thinking skills." Moreover, there is growing scientific evidence that small amounts of chocolate, especially dark chocolate, can actually have beneficial effects on the human body. Consequently, it would be a short-sighted move if produce like this was eliminated from school canteens entirely. It's about a balanced diet; not a purely green one.

Whilst the desire to tackle the ever expanding monster of heart and weight conditions is commendable, it is clear there are other alternatives than the suggested proposal. As this monster limbers up to capture more of our population, we will slay this problem through educating pupils about diet, not by using draconian methods of food control.

At this concluding stage, there is but one question on everyone's lips: what's for dessert?

Persuasive devices:

- personal pronouns (we/you/I), emotive language, direct address, rule of 3, rhetorical question, repetition. These should be used sparingly and are not a substitute for the quality and detail of your arguments.
- More sophisticated persuasive features/approaches you should use include:

➢ **Cyclical structure-** so your conclusion refers back to the scenario in your argument
➢ **Humour/sarcasm/irony-** this helps give you a lively, engaging voice.
➢ **Comparisons (metaphors and similes) and contrasts.**
Hyperbolic (over-exaggerated) language-often to ridicule an idea e.g.*: It is ridiculous/outrageous that today's students…., This glaring inconsistency highlights the need for… If this is considered 'civilised behaviour' then…The*
➢ *current state of affairs is ludicrous…*
➢ **Discussion of 'big ideas'**- morality, political issues, gender, class
➢ **Integrated discourse markers** i.e. connectives/phrases which develop your argument e.g.: *Let me ask you a question…, What is often forgotten…, Of course…, You could be forgiven for thinking…, You may wonder how/why… In my experience…It is undeniable that…Whilst I agree that… it is nevertheless… It is generally agreed that… You only have to look at…Take for example…*

Assessment objectives you are assessed on:

A05: Content and ideas. Writing needs to be suited to purpose, audience and form

A06: Spelling, punctuation and grammar

Power and Conflict Knowledge Organiser

Poem	Key quotations
Ozymandias	'Two vast and trunkless legs of stone/ Stand in the desert' 'Half sunk, a shattered visage lies' 'wrinkled lip, and sneer of cold command' 'My name is Ozymandias, king of kings: Look on my works, ye Mighty, and despair!' 'Nothing beside remains' 'colossal wreck'
Storm on the Island	'The wizened earth had never troubled us' 'build our houses squat, Sink walls in rock and roof them' 'Exploding comfortably' 'salvo'/'strafe'/ 'bombarded' 'The very windows, spits like a tame cat Turned savage' 'Strange, it is a huge nothing that we fear'
Remains	'probably armed, possibly not' 'I see every round as it rips through his life' 'sort of inside out, pain itself, the image of agony' 'tosses his guts' 'End of story, except not really.' 'blood-shadow stays on the street' 'but near to the knuckle, here and now, his bloody life in my bloody hands'
Bayonet Charge	'running- raw In raw-seamed hot khaki' 'dazzled with rifle fire' 'Bullets smacking the belly out of the air' 'In what cold clockwork of the stars and the nations Was he the hand pointing that second?' 'The patriotic tear that had brimmed in his eye Sweating like molten iron from the centre of his chest' 'shot-slashed furrows Threw up a yellow hare that rolled like a flame' 'King, honour, human dignity, etcetera Dropped like luxuries'
Charge of the Light Brigade	'Half a league, half a league' 'valley of Death' 'Theirs not to make reply, Theirs not to reason why, Theirs but to do and die.' 'Stormed at with shot and shell' 'Cannon to right of them, Cannon to left of them' 'Flashed' 'honour' 'Came through the jaws of Death, Back from the mouth of hell' 'When can their glory fade? O the wild charge'
War Photographer	'spools of suffering set out in ordered row' 'as though this were a church' 'which did not tremble then though seem to now' 'Rural England. Home again to ordinary pain' 'a half-formed ghost' 'The reader's eyeballs prick with tears between the bath and pre-lunch beers'
London	'chartered' 'Marks of weakness, marks of woe' 'In every cry' 'The mind-forged manacles' 'black'ning Church' 'blights with plagues the Marriage hearse'
The Prelude	'A little boat tied to a willow tree' 'It was an act of stealth And troubled pleasure' 'Small circles glittering idly in the moon' 'She was an elfin pinnace; lustily I dipped my oars into the silent lake' 'a huge peak, black and huge' 'grim shape Towered up between me…like a living thing, Strode after me' 'huge and mighty forms, that do not live Like living men, moved slowly through the mind'
Kamikazee	'a shaven head full of powerful incantations' 'little fishing boats strung out like bunting on a green-blue translucent sea' 'dark shoals of fishes flashing silver' 'arcing in swathes like a huge flag waved first one way then the other in a figure of eight,' 'they treated him as though he no longer existed' 'only we children still chattered and laughed till gradually we too learned to be silent'
Poppies	'poppies' 'steeled the softening of my face' 'All my words flattened, rolled, turned into felt, slowly melting' 'the world overflowing like a treasure chest' 'released a song bird from its cage' 'leaned against it like a wishbone' 'The dove pulled freely against the sky, an ornamental stitch'
Exposure	'merciless iced east winds that knife us' 'But nothing happens' 'snow-dazed' 'sun-dozed' 'Shutters and doors all closed: on us the doors are closed' 'For God's invincible spring our love is made afraid' 'Pause over half-known faces. All their eyes are ice' 'We only know war lasts, rain soaks, and clouds sag stormy'
My Last Duchess	'Looking as if she were alive' 'The depth and passion of its earnest glance' 'spot of joy' 'A heart—how shall I say?— too soon made glad' 'My gift of a nine-hundred-years-old name' 'stooping'/'stoop' 'I gave commands; Then all smiles stopped together' 'Notice Neptune, though, Taming a sea-horse'
The Émigrée	'There once was a country… I left it as a child but my memory of it is sunlight-clear' 'the bright, filled paperweight' 'it may be sick with tyrants, but I am branded by an impression of sunlight' 'That child's vocabulary I carried here like a hollow doll, opens and spills a grammar' 'white plane' 'white streets' 'I comb its hair and love its shining eyes. My city takes me dancing through the city of walls'
Tissue	'Paper that lets the light shine through, this is what could alter things' 'If buildings were paper, I might feel their drift, see how easily they fall away on a sigh' 'The sun shines through their borderlines' 'what was paid by credit card might fly our lives like paper kites' 'let the daylight break through capitals and monoliths, through the shapes that pride can make' 'of paper smoothed and stroked and thinned to be transparent, turned into your skin'
Checking Out Me History	'Dem tell me Wha dem want to tell me' 'Bandage up me eye with me own history Blind me to me own identity' 'hopeful stream to freedom river' 'but what happen to de Caribs and de Arawaks too' 'a healing star among the wounded a yellow sunrise to the dying' 'But now I checking out me own history I carving out me identity'

Key themes and ideas	Comparative words and phrases
War, Conflict, Identity, Individual Experiences, Death, Power, Culture, Helplessness, Change, Honour, Shame, Pride, Arrogance, Social Responsibility, Patriotism,	• Similarly, Likewise, In the same way, This is similar to, Equally, Also • On the other hand, Although, Whereas, However, In stark contrast, Contrastingly

	Context and Subject Matter
Ozymandias	Shelley was a Romantic poet who was well known as a 'radical' during his lifetime. He was expelled from university for writing about atheism which led to him to fall out with his father who disinherited him. Some people think Ozymandias reflects this side of his character. Although it is about the remains of a statue of Ozymandias (another name for the Egyptian pharaoh Rameses II) it can be read as a criticism of people or systems that become huge and believe themselves to be invincible.
Storm on the Island	Heaney was born in Northern Ireland to a farming family- much of his poetry is centred on the countryside and farm life that he knew as a child. In the late 60s, right up until the 90s, there was conflict in Northern Ireland between the Unionists (a group who wanted to remain in UK) and the Nationalists (a group who wanted to keep Ireland separate). This poem considers the power of nature.
Remains	Armitage made a film for Channel 4 in 2007 called *The Not Dead* and wrote a collection of poems of the same name. In preparation for this work, he interviewed veteran soldiers of different wars. The reference to 'desert sand' in this poem suggests that it is written about the Gulf War. The poem presents a dark and disturbing image of a soldier suffering post-traumatic stress disorder after conflict.
Bayonet Charge	Bayonet Charge is perhaps unusual for a Ted Hughes poem in that it focuses on a nameless soldier in the First World War (1914-18). It describes the experience of 'going over-the-top'. This was when soldiers hiding in trenches were ordered to 'fix bayonets' and climb out of the trenches to charge an enemy position. The aim was to capture the enemy trench. The poem describes how this process transforms a solider from a living thinking person into a dangerous weapon of war.
Charge of the Light Brigade	Alfred Tennyson was one of 11 children born to an upper-middle class country vicar. In 1850, he became poet laureate, meaning he had to write important poems about events that affected the British nation. This poem celebrates the heroism and bravery of soldiers in the Crimean War which was fought between Britain and Imperial Russia from 1853-1856. In the Battle of Balaclava, an order given to the British army's cavalry (the Light Brigade) was misunderstood and 600 cavalrymen ended charging down a valley straight into the fire of Russian cannons. Over 150 British soldiers were killed, and more than 120 were wounded.
War Photographer	Duffy was inspired to write this poem by her friendship with a war photographer. She was especially intrigued by the challenge faced by these people whose job requires them to record horrific events without being able to help. Duffy asks us to consider our own response when confronted with the photographs that we regularly see in our newspapers, and why so many of us have become desensitised to these images.
London	Blake rejected established religion for various reasons. One of the main ones was the failure of the Church to help children in London who were forced to work. Blake lived and worked in the capital, so was arguably well placed to write clearly about the conditions people who lived there faced. This poem comes from his collection 'Songs of Experience' where he deals with various dangerous industrial conditions, child labour, prostitution and poverty. Blake alludes to the 1789 French Revolution in this poem where the French people revolted against the monarchy and aristocracy.
The Prelude	Wordsworth grew up in the Lake District- his childhood experiences there, and the death of his mother, had a huge influence on his writing. Wordsworth is considered a Romantic poet as his poems deal with Nature. The poem shows the spiritual growth of the poet, how he comes to terms with who he is, and his place in nature and the world.
Kamikaze	During the Second World War, the term 'kamikaze' was used for Japanese fighter pilots who were sent on suicide missions. They were expected to crash their warplanes into enemy warships. The word 'kamikaze' literally translates as 'divine wind'. Pilots were revered for their heroism and remembered as martyrs. This poem perhaps prompts us to think about the consequences of suicide missions for families in the modern world as well as in past conflicts.
Poppies	Weir grew up in Italy and Northern England, with an English mother and an Italian father. She has continued to absorb different cultural experiences throughout her life, also living in Northern Ireland during the troubled 1980s. The poem is concerned with Armistice Sunday, which began as a way of marking the end of WW1 in 1918. It was set up so people could remember the ordinary men who had been killed. When Poppies was written, British soldiers were still dying in wars in Iraq and Afghanistan. As a way of trying to understand the suffering that deaths caused, Carol Ann Duffy asked a number of writers to compose poems.
Exposure	Owen used his writing to inform people about the horrors of life on the front line. It contradicted the glory portrayed in the British media. Owen joined the army in 1915 but was hospitalised in May 1917 suffering from 'shell shock' (Post-Traumatic Stress Disorder). He returned to the war but was tragically killed days before it ended; he was just 26. This poem deals with the winter of 1917 which was particularly cold- soldiers suffered from hypothermia or frostbite, and many died in the freezing conditions.
My Last Duchess	Browning was heavily influenced as a youngster by his father's extensive collection of books and art. This poem reflects Browning's love of history and European culture as the story is based on real historical figures. The narrator is Duke Alfonso II who ruled in Ferrara between 1559 and 1597. The Duchess of whom he speaks was his first wife, Lucrezia de' Medici, who died aged 17 in suspicious circumstances and might have been poisoned.
The Émigrée	The poem deals with the dilemma of the emigree, forced by war or conflict to leave their home, and longing to return. The complex emotions and pain of exile are explored as well as the way that the media presents conflict abroad and the way that society understands it.
Tissue	Dharker was born in Pakistan and grew up in Scotland. She has written numerous poems that deal with themes of identity, the role of women in society and the search for meaning. She draws on her multi-cultural experience in her work. The poet addresses some of the larger issues in society; greed, pride etc. and how we have built our world around them, at odds with our own existence.
Checking Out Me History	John Agard was born in Guyana in the Caribbean, in 1949. He moved to the UK in the late 1970s. At school, he had to follow a curriculum biased towards whites, especially British whites, instead of learning about significant black figures. He uses non-standard phonetic spelling to represent his own accent, and writes about what it is like being black to challenge racist attitudes.

Language	Structure	Form
Alliteration- repetition of the same letter at the start of two or more words **Allusion**- reference to another literary work **Assonance**- repetition or pattern of the same vowel sounds **Connotation**- associated meaning of word **Consonance**- the partial or total identity of consonants in words whose main vowels differ **Diction**- usually used to describe the level of formality that a speaker uses **Extended metaphor- a** central metaphor that acts like an "umbrella" to connect other metaphors within it **Hyperbole**- exaggerated statement **Imagery**- visually descriptive language **Metaphor**- saying one thing is another **Onomatopoeia**- a figure of speech where words are used to imitate sounds **Oxymoron**- two terms appear next to each other that contradict each other **Pathetic fallacy**- weather to create mood **Personification**- make object human **Pun**- a a play on words **Satire**- the use of humour or irony to mock, ridicule or criticise **Semantic field-** words related in meaning **Simile**- comparing using 'like' or 'as' **Sibilance**- the repetition of an's' sound in two or more words **Synecdoche**- a figure of speech in which a part is substituted for the whole **Tone**- the implied attitude of a writer toward the subject and characters of a work **Theme**- the central idea of a literary work	**Anapest-** two unaccented syllables followed by an accented one **Anaphora-** the repetition of the same word or phrase at the beginning of a line **Caesura**- a piece of punctuation in the middle of a line creating a pause in rhythm **Dactyl**- a stressed syllable followed by two unstressed ones **Elision**- the omission of an unstressed vowel or syllable to preserve the meter of a line of poetry **End-stopped line**- a line ending in a full pause **Enjambment**- a sentence which continues, with no punctuation, into the line below **Foot**- a metrical unit composed of stressed and unstressed syllables **Half rhyme**- an imperfect rhyme where the ending consonant sound of a word is the same as another **Juxtaposition**- two or more contrasted ideas placed side by side **Meter**- the measured pattern of rhythmic accents in poems **Parallelism**- the similarity of structure in a pair or series of related words, phrases, or clauses **Quatrain**- a four-line stanza in a poem **Refrain**- a phrase, line or group of lines which is repeated throughout a poem **Repetition**- a repeated word or phrase usually used to emphasise importance. **Rhyming Couplet**- two lines of poetry that rhyme and have the same meter **Rhyme**- words that sound the same at the end **Sestet**- a six-line unit of verse constituting a stanza or section of a poem **Stanza**- two or more lines of poetry that form the divisions of the poem (paragraphs)	**Allegory-** a symbolic narrative which often takes the form of a story where the characters represent moral qualities **Ballad**- a narrative poem written in four-line stanzas, characterized by swift action and narrated in a direct style **Blank verse –** non rhyming lines written in iambic pentameter **Dramatic monologue**- a type of poem in which a speaker addresses an internal listener or the reader **Elegy:** An elegy is a poem about a dead person or thing **Epic-** a long narrative poem that records the adventures of a hero **Free verse**- poetry without a regular pattern of meter or rhyme **Lyric**- a poem that expresses personal and emotional feelings. **Ode-** a poem written in praise or celebration of a person, thing, or event **Pastoral-** a poem about nature or simple, country life **Shakespearean sonnet**- usually 14 lines which are formed by three quatrains with a rhyming couplet for the last two lines **Sonnet-** a fourteen-line poem in iambic pentameter and regular rhyme scheme **Speaker**: the voice behind the poem – the person we imagine to be speaking. The speaker is <u>not</u> the poet. Even if the poem is autobiographical, you should treat the speaker as a fictional creation, because the writer is choosing what to say about himself.

The Periodic Table of the Elements

1	2											3	4	5	6	7	0
							1 H hydrogen 1										4 He helium 2
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl chlorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[98] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	139 La* lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	[227] Ac* actinium 89	[261] Rf rutherfordium 104	[262] Db dubnium 105	[266] Sg seaborgium 106	[264] Bh bohrium 107	[277] Hs hassium 108	[268] Mt meitnerium 109	[271] Ds darmstadtium 110	[272] Rg roentgenium 111	Elements with atomic numbers 112-116 have been reported but not fully authenticated						

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

**** The lanthanoids (atomic numbers 58-71) and the actinoids (atomic numbers 90-103) have been omitted.***

The relative atomic masses of copper and chlorine have not been rounded to the nearest whole number.

KS4 Biology, Paper 1, Topic 1 Key Concepts in Biology Knowledge Organiser

H = Higher content

Language for Learning:

Magnification - How much bigger something appears compared with its actual size.
Objective lens - The part of the microscope that is closest to the specimen.
Stain - A dye used to colour parts of a cell to make them easier to see.
Eukaryotic - A cell with a nucleus is eukaryotic. Organisms that have cells like this are also said to be eukaryotic.
Prokaryotic - A cell with no nucleus is prokaryotic. Organisms such as bacteria, which have cells like this, are also said to be prokaryotic.
Nucleus - The 'control centre' of a eukaryotic cell that contains DNA.
Cell membrane - The membrane that controls what goes into and out of a cell. It is often called the cell surface membrane because eukaryotic cells contain other structures with membranes.
Cytoplasm - The watery jelly inside a cell where the cell's activities take place.
Ribosome - Tiny sub-cellular structure (cannot be seen with a light microscope) that makes proteins.
Mitochondrion - A sub-cellular structure (organelle) in the cytoplasm of eukaryotic cells, where aerobic respiration occurs. Plural is mitochondria.
Chloroplasts - A green disc containing chlorophyll, found in plant cells. Where the plant makes glucose, using photosynthesis.
Vacuole - A storage space in cells. Plant cells have a large, permanent vacuole that helps to keep them rigid.
Cell wall - A tough layer of material around some cells, which is used for protection and support. It is stiff and made of cellulose in plant cells. Bacteria have a flexible cell wall.
Chromosomal DNA - DNA found in chromosomes but the term is often used to describe the large loop of DNA found in bacteria.
Plasmid - A small loop of DNA found in the cytoplasm of bacteria.
Catalyst - A substance that speeds up the rate of a reaction, without itself being used up.
Active site - The space in an enzyme where the substrate fits during an enzyme-catalysed reaction.
Denatured - A denatured enzyme is one where the shape of the active site has changed so much that its substrate no longer fits and the reaction can no longer happen.

Magnification

Image size = Magnification x Actual size

Converting units

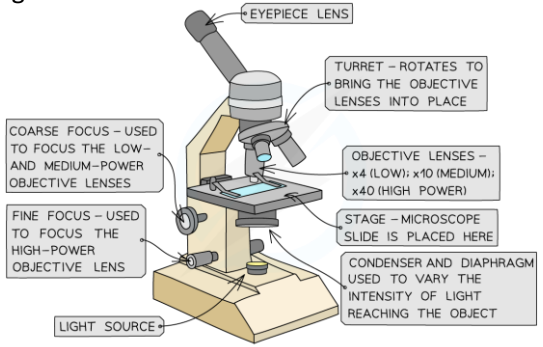
Metre (m)
Millimetre (mm)
Micrometre (µm)
Nanometre (nm)
Picometre (pm)

÷1000 (up) x 1000 (down)

Microscopes

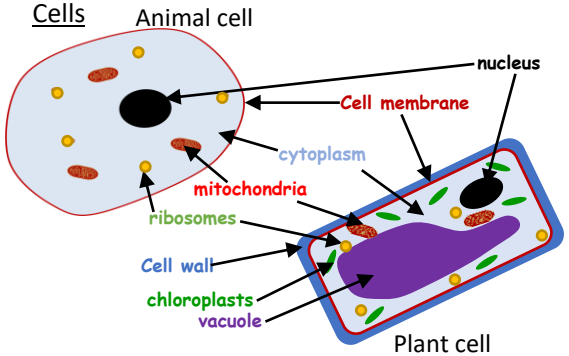
There are two types of microscopes:
-Light microscopes use light and are relatively cheap. They allow us to see some sub-cellular structures and we can see living cells.

-Electron microscopes use electrons and are expensive. They allow us to see cells in greater detail as they have a high magnification and a high resolution.

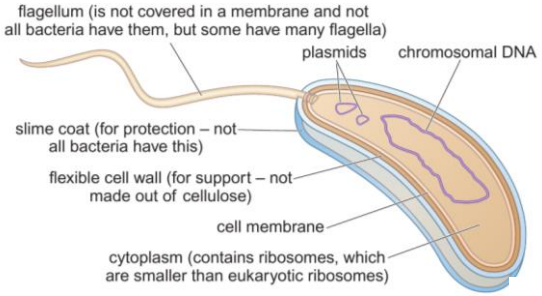


When preparing a microscope slide you must slowly lower the coverslip to reduce the number of air bubbles as they make the cells difficult to observe. When observing a slide, the lowest objective lens is used to prevent damaging the high powered objective lenses.

Cells

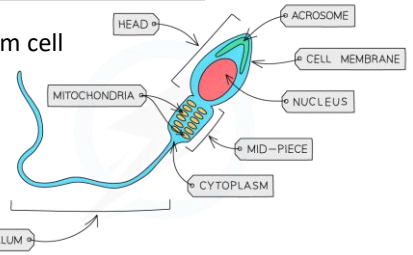


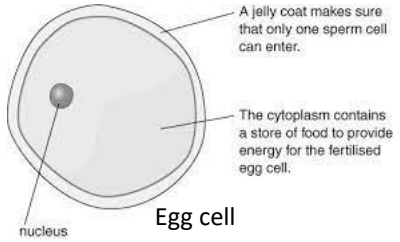
Bacteria cell



Specialised Animal Cells

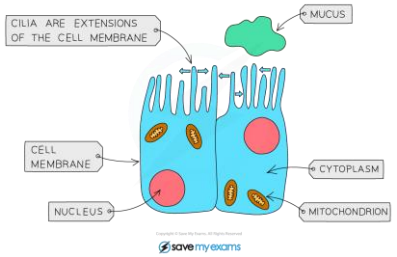
Sperm cell





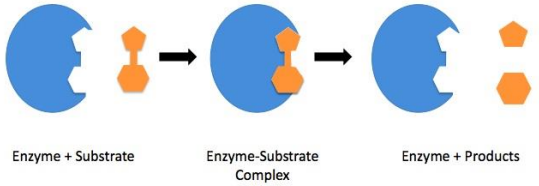
Egg cell

Ciliated epithelial cell

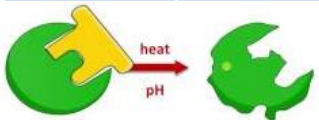


Enzyme Activity

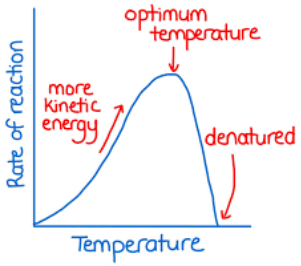
We define enzymes as biological catalysts. They can break up substances (digestion) or create substances (synthesis).

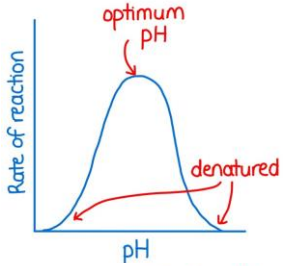


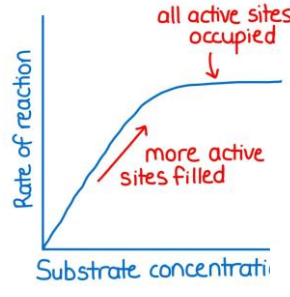
Substrate	Enzyme	Product
Protein	Protease	Amino acids
Carbohydrates (starch)	Carbohydrase (amylase)	Glucose
Lipids	Lipase	Fatty acids and glycerol



denatured







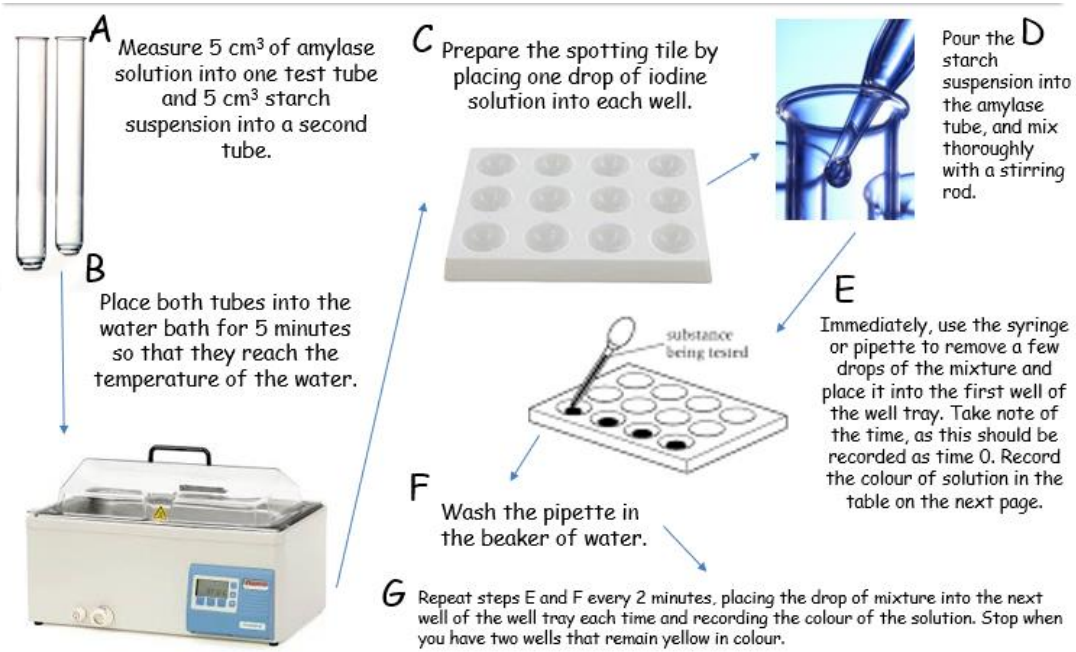
KS4 Biology, Paper 1, Topic 1 Key Concepts in Biology Knowledge Organiser

H = Higher content

Language for Learning:

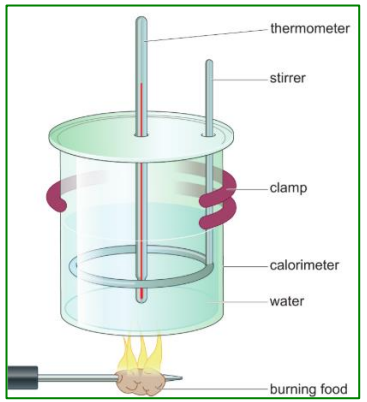
Active transport - The movement of particles across a cell membrane from a region of lower concentration to a region of higher concentration (*against* the concentration gradient). The process requires energy.
Diffusion - When particles spread and mix with each other without anything moving them. Diffusion into and out of cells occurs for particles that are small enough to pass through the cell surface membrane.
Concentration - The amount of a solute dissolved in a certain volume of solvent. Measured in units such as g/cm^3.
Concentration gradient - The difference between two concentrations. There will be an overall movement of particles *down* a concentration gradient, from higher concentration to lower concentration.
Osmosis - The overall movement of solvent molecules in a solution across a partially permeable membrane, from a dilute solution to a more concentrated one.
Passive - A process that does not require energy is passive. A passive process is the opposite of an active process (which requires energy).
Semi-permeable - Describes something that will allow certain particles to pass through it but not others. Another term for 'partially permeable'.
Solute - The solid that has dissolved in a liquid to make a solution.
Solvent - The liquid in which a substance dissolves to make a solution.

pH and Enzymes Practical



TRIPLE – Food Tests and Calorimetry

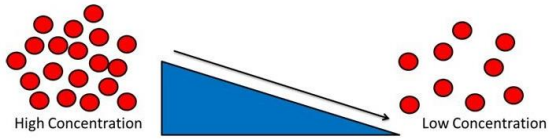
Iodine is used to identify **starch** in foods.
Iodine turns from **yellow-orange** to **blue-black** in the presence of starch.
Benedict's is used to identify **sugars**.
Benedict's turns from **blue** to **green**/**orange**/**red** in the presence of sugar.
Ethanol is used to identify **fats and oils** in foods. A **cloudy** suspension forms when fat/oils are present.
Biuret is used to identify **protein** in foods. Biuret turns from **blue** to **lilac** if protein is present.



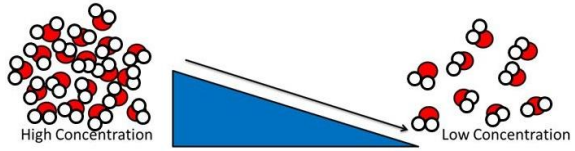
Calorimetry is used to measure the energy released from a food. As the food burns, energy is transferred by heating to the water. The change in temperature of the water is a measure of the amount of energy released from the food.

Transporting Substances

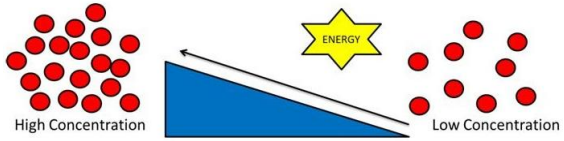
Diffusion – movement of particles



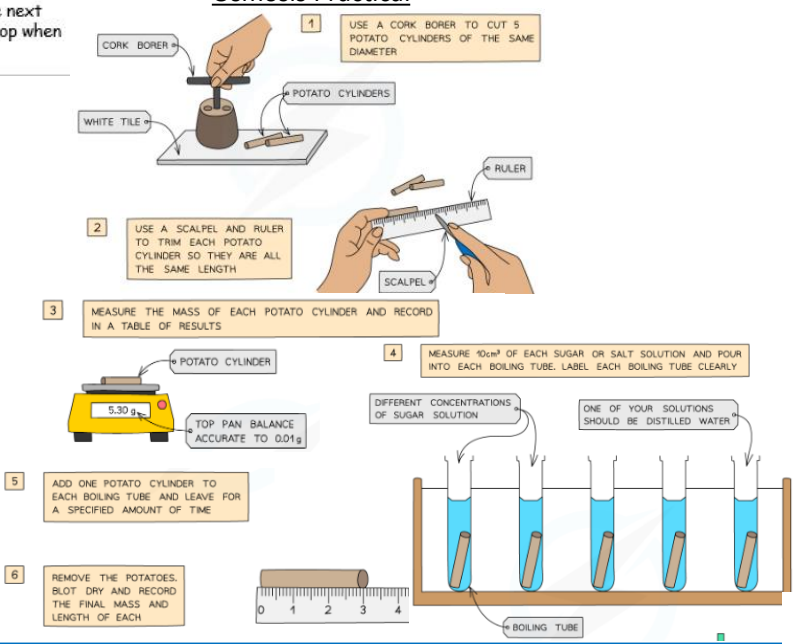
Osmosis – movement of water across a membrane



Active Transport – movement of particles



Osmosis Practical



KS4 Biology, Paper 1, Topic 2 Cells and Control Knowledge Organiser

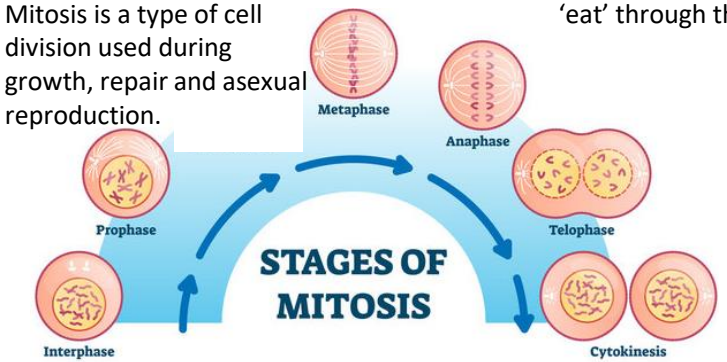
H = Higher content

Language for Learning:

Mitosis - The process of cells dividing to produce two daughter cells that are genetically identical to the parent.
Interphase - The stage when the cell prepares itself for the process of cell division, and DNA replication takes place. The cell also makes more of its sub-cellular structures.
Prophase - The stage of mitosis in which the nucleus starts to break down and spindle fibres appear.
Metaphase – The stage of mitosis when the chromosomes line up across the middle of the cell.
Anaphase – The stage of mitosis in which the separated chromosomes move away from each other.
Telophase – The stage of mitosis in which the chromosomes arrive at opposite ends of the cell and the nucleus membrane reforms.
Cytokinesis – When the cytoplasm of the cell is separated as the cell membrane is pinched to divide the cell into two daughter cells.
Asexual reproduction – Producing new organisms from one parent only. These organisms are genetically identical to the parent.
Differentiation – When a group of similar things, such as cells, become different in form from each other.
Meristem – A small area of undifferentiated cells in a plant, such as near the shoot tips and root tips, where cells are dividing rapidly by mitosis.
Stem cells – Unspecialised cell that continues to divide by mitosis to produce more stem cells and other cells that differentiate into specialised cells.
Embryonic stem cells – Stem cell from an early embryo that can produce specialised cells of many different types.
Axon – The long extension of a neurone that carries an impulse away from the dendron or dendrites towards other neurones.
Myelin sheath - Fatty covering around the axons of many neurones. It speeds up the transmission of impulses along their length and helps to insulate them from one another.
Receptor cell – Cell that receives a stimulus and converts it into an electrical impulse to be sent to the brain and/or spinal cord.
Sensory neurone – Neurone that carries impulses from receptor cells, towards the central nervous system.
Neurotransmitter – Substance that diffuses across the gap between two neurones at a synapse, and triggers an impulse to be generated in the neurone on the other side of the synapse.
Reflex – Response to a stimulus that does not require processing by the brain. The response is automatic. Also called a reflex action.
Synapse – The point at which two neurones meet. There is a tiny gap between neurones at a synapse, which cannot transmit an electrical impulse.

Mitosis

Mitosis is a type of cell division used during growth, repair and asexual reproduction.



Interphase – DNA and sub-cellular structures are copied.
Prophase – The nucleus starts to break down and spindle fibres appear.
Metaphase – Chromosomes are lined up in the **middle** of the cell.
Anaphase – The chromosomes are pulled **apart** to either end of the cell by spindle fibres.
Telophase – A membrane forms around each set of chromosomes to form nuclei.
Cytokinesis – The cell membranes separate (cell walls form in plant cells).

Growth in animals

Human growth can be tracked on percentile growth charts. A baby that is growing normally should stay around its percentile.

Cells undergo *differentiation* to become specialised for their function.
Red blood cells have no nucleus so they can carry more haemoglobin (the pigment that oxygen binds to), and a large surface area so that oxygen can diffuse in and out more quickly.
Sperm cells have a tail to swim, lots of mitochondria to release energy to swim, and an acrosome full of digestive enzymes that help to 'eat' through the egg's jelly coat.

Growth in plants

Plants grow at their roots and shoots, a group of cells called meristems divide rapidly by mitosis. The meristem cells divide, elongate and then differentiate.

Percentage change in mass:

$$\frac{\text{final value} - \text{starting value}}{\text{starting value}} \times 100\%$$

Stem cells

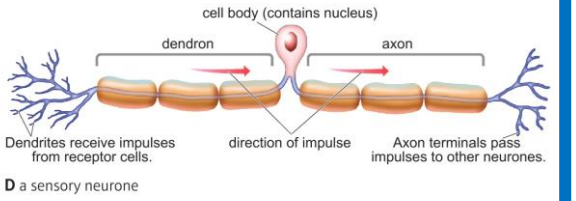
Stem cells can divide repeatedly over a long period of time to produce cells that can differentiate into different cells (called meristems in plants).
Embryonic stem cells can produce **any** type of specialised cell.
Adult stem cells can only produce a number of specialised cells, this is usually to grow and replace damaged cells.

The nervous system

The central nervous system is made up of the brain and spinal cord, nerves make up the rest of your nervous system.
Sense organs contain receptor cells that detect stimuli. Receptor cells create impulses that travel to the brain via a sensory neurone. Motor neurones travel from the CNS to an effector (muscle or gland) to bring about a response.

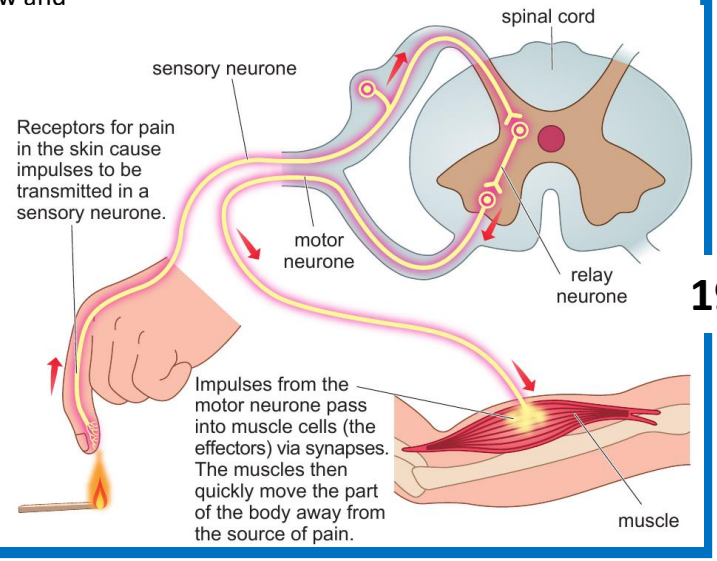
Neurotransmission speeds

The gap between two neurones is called a *synapse.* Neurotransmitters diffuse across the synapse to pass on the electrical impulse to the next neurone. Neurones have a fatty layer surrounding their axons, this is called a *myelin sheath* and insulates the neurone to speed up neurotransmission.



The Reflex Arc

Reflex actions are automatic responses that protect the body. They use neurone pathways called reflex arcs, which bypass the parts of the brain involved in processing and so are quicker than normal responses.



KS4 Biology, Paper 1, Topic 3 Genetics Knowledge Organiser

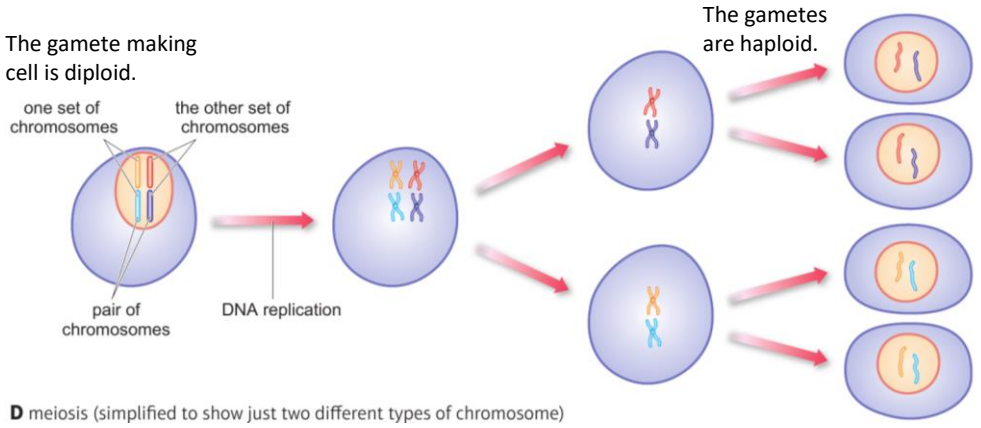
H = Higher content

Language for Learning:

DNA – Deoxyribonucleic acid. A polymer made of sugar and phosphate groups joined to bases. One molecule of DNA is found in each chromosome.
Gametes – A haploid cell used for sexual reproduction (sperm and egg cell in humans).
Genome – All the DNA in an organism. Each body cell contains a copy of the genome.
Gene – Section of the long strand of DNA found in a chromosome, which often contains instructions for a protein.
Haploid – A cell or nucleus that has one set of chromosomes. Gametes are haploid.
Diploid – A cell or nucleus that has two sets of chromosomes. In humans, almost all cells except the sperm and egg cells are diploid.
Meiosis – A form of cell division in which one parent cell produces four haploid daughter cells.
Zygote – Another term for 'fertilised egg cell'.
Base – Four substances that help make up DNA, often shown by the letters A, C, G and T. Pairs of bases form 'links' between two 'spines' formed of phosphate groups and a type of sugar.
Complimentary base pair – Two DNA bases that fit into each other and link by hydrogen bonds. There are two types of complementary base pair: A linking with T, and C linking with G.
Double helix – Two helices joined together.
Hydrogen bond – Weak force of attraction caused by differences in the electrical charge on different parts of different molecules.
Allele – Most genes come in different versions called alleles. So a gene for eye colour may have one version (allele) that can cause dark eyes, and another allele that can cause pale eyes.
Mutation – A change to a gene caused by a mistake in copying the DNA base pairs during cell division, or by the effects of radiation or of certain chemicals.
Variation – Also called inherited variation. Differences between organisms passed on to offspring by their parents in reproduction.
Dominant – Allele that will always affect the phenotype (as opposed to a recessive allele, whose effect will not be seen if a dominant allele is present).
Recessive – Allele that will only affect the phenotype if the other allele is also recessive. It has no effect if the other allele is dominant.
Punnett square – Diagram used to predict the different characteristics in the offspring of two organisms with known combinations of alleles. You can use the square to work out the probability (how likely it is) that offspring will inherit a certain feature.
Probability – The likelihood of an event happening. Can be shown as a fraction from 0 to 1, a decimal from 0 to 1 or as a percentage from 0% to 100%.
Human Genome Project - The project that mapped the base pairs in one human genome.

Meiosis

Meiosis is a type of cell division that produces gametes. The 4 haploid daughter cells are genetically different.



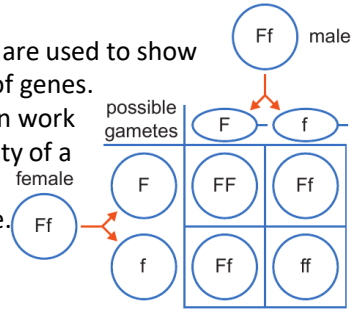
D meiosis (simplified to show just two different types of chromosome)

Keywords:

Homozygous, heterozygous, dominant, recessive, phenotype, genotype, allele, genome

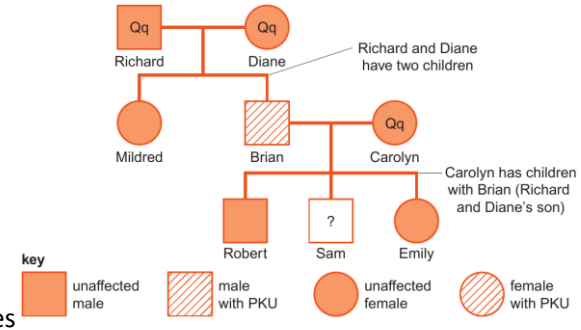
Inheritance

Punnett squares are used to show the inheritance of genes. From this, we can work out the probability of a child inheriting a genetic disease.



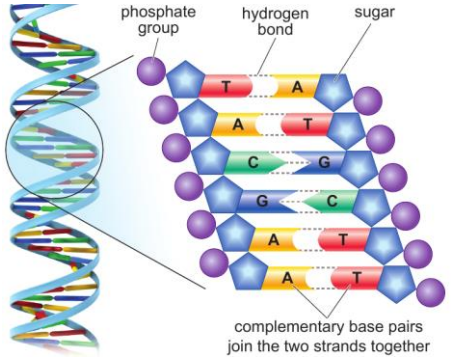
C Punnett square for parents that are heterozygous for the CF gene

A family pedigree chart shows how genotypes and their resulting phenotypes re inherited in families.



DNA

DNA contains two strands which form a shape called a helix, the two strands are joined by bases to form a double helix.
The bases are Adenine, Thymine, Guanine and Cytosine. A always pairs with T and C always pairs with G as they are complimentary base pairs.
DNA is a polymer as it is made of repeating units called nucleotides.



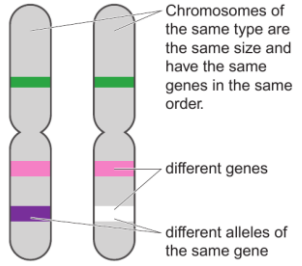
DNA Extraction

We can extract DNA from fruit by adding salt and washing up liquid to crushed fruit.

- salt (to clump together the DNA)
- washing up liquid (to break down the membranes surrounding the DNA)
- Filter the mixture to remove insoluble pieces
- Add ethanol to the filtrate to precipitate the DNA

White strands of DNA appear in the test tube.

Alleles



B Each gene can exist in a number of different forms called alleles.

Task: Research the Human Genome Project

Gene mutation

A change in a gene that creates a new allele is called a mutation, this often occurs during cell division. Sometimes mutations produce an allele that cause a big change, however most mutations have no effect on the phenotype.

Variation

Genetic variation is caused by the inheritance of different alleles or due to mutations. Environmental variation can also affect characteristics.
Variation can be grouped into two types:

- Discontinuous variation is where data can only take a limited set of values.
- Continuous variation is where data can be any value in a range.

KS4 Chemistry, Paper 3, Topic 1 part 2 Key Concepts Knowledge Organiser

Language for Learning:

Anion: Negatively charged ion
Cation: Positively charged ion
Compound: Atoms of more than one element chemically joined.
Covalent bond: The bond formed when a pair of electrons is shared between two atoms.
Delocalised electron: An electron that is free to move and carry an electrical current
Dot and cross diagram: Diagram, to explain what happens when a bond is formed, which uses dots and crosses to represent the electrons of different atoms.
Electrostatic force: Force of attraction between oppositely charged particles, and force of repulsion between particles with the same charge.
Intermolecular force: A weak force of attraction between molecules.
Ion: Atom or group of atoms with an electrical charge. Atoms become positively charged ions if they lose electrons and negatively charged if they gain electrons.
Ionic bond: Strong electrostatic force of attraction between oppositely charged ions.
Lattice structure: Regular grid-like repeating arrangement of particles such as atoms, molecules or ions.
Metallic bonding: The type of bonding found in metals. We can think of it as positively charged ions in a 'sea' of negatively charged electrons.
Molecule: Two or more atoms joined by covalent bonds.
Monomer: Small, simple molecule that can be joined in a chain to form a polymer.
Polymer: Long-chain molecule made by joining many smaller molecules (monomers) together.
Valency: The number of covalent bonds formed by an atom (or the charge number of the ion formed by an atom).

Ions

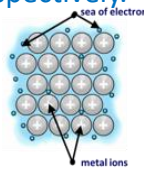
Atoms are more stable with a full outer shell of electrons and they will lose or gain electrons to achieve this.

- Metals will lose electrons and have a positive charge. They are called cations.
- Non-metals will gain electrons and have a negative charge. They are called anions.
- An ion is an atom with a charge.

You can work out charges on ions from the position of atoms in the Periodic Table:

- Group 1, 2 and 3 will form +1, +2 and +3 charges, respectively.
- Group 5, 6 and 7 will form –3, -2 and –1 charges, respectively.

Metallic bonding



Metallic bonds form between metal atoms and metals from giant metallic structures.

The structure of a metal consists of a regular arrangement of metal ions surrounded by a sea of delocalised electrons.

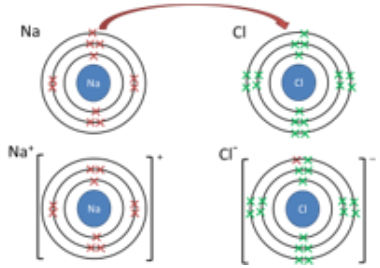
Properties:

- High melting and boiling points
- Good conductors of heat and electricity
- Strong, but insoluble in water.

Ionic bonds

Ionic bonds form between metals and non-metals.

In an ionic bond the metal 'gives' its electrons to the non-metals to form positive and negative ions.



An ionic bond is the electrostatic attraction between a positive and negative ion.

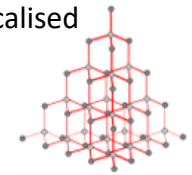
Giant covalent structures

In giant covalent structures every atom is joined to other atoms with a strong covalent bond.

Allotropes of carbon such as diamond and graphite are examples of giant covalent structures.

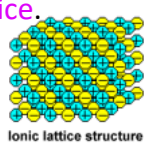
Properties:

- Solids with very high melting points
- Strong, rigid structure
- Insoluble in water
- Does not conduct electricity (graphite is an exception as it has delocalised electrons)



Ionic compounds

Ionic compounds consist of regular arrangements of positive and negative ions called an ionic lattice.



Positive and negative ions combine in fixed ratios to give neutral compounds. The formulas of some polyatomic anions you must learn!

Sulphate	SO_4^{2-}
Carbonate	CO_3^{2-}
Nitrate	NO_3^-
Hydroxide	OH^-

Properties:

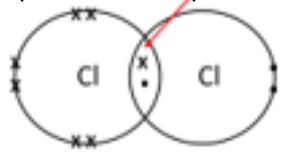
- Form crystals with high melting points
- Dissolve in water to give solutions
- Conduct electricity when dissolved in solution or molten but not when solid

Covalent bonds

Covalent bonds form between two non-metals. Non-metals have spaces for electrons, and they can **share** electrons, so it is 'as if' both atoms have a full outer shell.

A covalent bond is a pair of electrons shared between the two atoms. A double covalent bond (double bond) consists of 4 shared electrons.

O=O



Simple molecular compounds have strong covalent bonds holding the atoms together in a molecule. Between the molecules there are weak intermolecular forces which are much more easily broken.

Properties

- Gases and liquids with low melting and boiling points
- Do not conduct electricity.

KS4 Chemistry, Paper 3, Topic 1 part 3 Key Concepts Knowledge Organiser

Language for Learning:
Avogadro constant: This is the number of particles in one mole of a substance (6.02 ×1023 mol−1).
Closed system: When substances cannot enter or leave an observed environment, e.g. a stoppered test tube.
Concentration: The amount of a solute dissolved in a certain volume of solvent.
Conservation of mass: The idea that mass is never lost or gained during a chemical reaction or physical change.
Empirical formula: The formula showing the simplest whole number ratio of atoms of each element in a compound.
Limiting reactant: The reactant that determines the amount of product formed in a chemical reaction. Any other reactants will be present in excess.
Mole: The mass of a mole of a substance is the relative formula mass expressed in grams.
Molecular formula: The formula showing the actual number of atoms of each element in a molecule of a compound.
Non-enclosed system: When substances can enter or leave an observed environment e.g. stoppered test tube
Precipitate: An insoluble substance that is formed when two soluble substances react together in solution.
Relative formula mass: The sum of the relative atomic masses of all the atoms in a formula.
Solute: A substance that dissolves in a liquid to make a solution.
Solvent: Describes the liquid in which a substance dissolves to make a solution.
Stoichiometry: The molar ratio of the reactants and products in a chemical reaction.

Bold text = higher content

Concentration

The concentration of a solution is the amount of solute (in g) dissolved in 1 dm^3 of solvent

Where 1 dm^3 = 1000 cm^3 = 1 L

To convert cm^3 to dm^3 DIVIDE by 1000

Concentration = amount of substance (g) / volume (dm^3)

e.g. what is the concentration in g/dm^3 of a solution of 5 g of salt in 100cm^3 of water

Concentration= 5/(100/1000) = 50 g/dm^3

Relative formula mass and formulas

The relative formula mass (M_r) of a compound is the mass of all of the atoms in the formula. You can calculate this by multiplying the number of atoms of each element by the Relative atomic mass (A_r) and adding the totals.

Molecular formula = The normal formula showing the ratio of elements in a compound.

Empirical formula = The simplest whole number ratio of elements in a compound

The molecular formula is always a multiple of the empirical formula

e.g. Hydrogen peroxide

molecular formula = H_2O_2

empirical formula = HO

Calculating empirical formula

e.g. 20g of calcium react with 80g of bromine. What is the empirical formula of calcium bromide?

	Ca	Br
mass	20g	80g
M_r	40	80
Moles (mass/M_r)	0.5	1
Simplest ratio	1	2

Empirical formula of calcium bromide = $CaBr_2$

If you know the empirical formula and the RFM then you can find the molecular formula:

- Find the mass of the empirical formula.
- Divide the M_r by this
- Multiply the empirical formula by the answer

Stoichiometry and limiting reactants

The balancing numbers in an equation show the ratio of moles of substances. These numbers are referred to as the Stoichiometry of the equation.

If you know the mass ratios in an equation, you can calculate the Stoichiometry by dividing by the A_r/M_r of each substance.

$$2Mg + O_2 \rightarrow 2MgO$$

e.g. 2 moles of magnesium react with 1 mole of oxygen to give 2 moles of magnesium oxide

Often in chemical reactions we do not use exact mole ratios but use one of the reactants in excess. This reactant is not fully used up in the reaction and the amount of product is determined by the other reactant – the limiting reactant.

Calculating reacting masses

In a chemical reaction particles are not created or destroyed. The mass of the particles at the start of the reaction is equal to the mass of all of particles at the end of a reaction .

Reacting mass calculations involved calculating a mass of something (either a product or reactant) given the mass of other things:

- Write a balanced equation
- Cross out the chemicals not involved in the question
- Use the information given to you to calculate the moles of chemical 1 using: moles = mass/M_r
- Find the moles of chemical 2 using the balanced equation
- Find the mass of chemical 2 using the equation

mass = moles x M_r

Moles

A mole is the amount of substance that contains the Avogadro number (6.02 x 10^{24}) of particles

One mole of a substance weighs its A_r in grams if it is an element and the M_r in grams if it is a compound.

moles = mass / RAM or RFM

Find the number of particles by multiplying by the Avogadro number.

Particles = moles x Avogadro number

KS4 Physics, Paper 5, Topic 2 Forces and Motion Knowledge Organiser

Bold text = higher content
Highlighted text = Triple Physics content

Language for Learning:

Centripetal force – A force that causes objects to follow a circular path. The force acts towards the centre of the circle.
Balanced forces – When the forces in opposite directions on an object are the same size so that there is a zero resultant force.
Braking distance – The distance travelled by a vehicle while the brakes are working to bring it to a halt.
Crumple zone – A vehicle safety device in which part of the vehicle is designed to crumple in a crash, reducing the force of the impact.
Equilibrium – When a situation is not changing because all the things affecting it balance out.
Force – A push, pull or twist. Forces acting on an object cause it to change speed, shape or direction. Force is a vector quantity.
Gravitational field strength – A measure of how strong the force of gravity is somewhere. It is the force on a 1 kilogram mass, so he units are newtons per kilogram (N/kg).
Inertial mass – An object's inertial mass measures how difficult it is to change the velocity of that object.
Kinetic energy – A name used to describe energy when it is stored in moving things. The amount of energy stored depends on the mass of the object and its velocity squared.
Mass – A measure of the amount of material there is in an object. The units are kilograms (kg).
Momentum – The mass of an object multiplied by its velocity. Momentum is a vector quantity, with units kilogram meters per second (kgm/s).
Reaction time – The time taken to respond to a stimulus.
Resultant force – The total force that results from two or more forces acting upon a single object. It is found by adding together the forces, taking into account their direction.
Stopping distance – The distance in which a car stops, which is the sum of the thinking and braking distance.
Thinking distance – The distance travelled by the vehicle while the driver reacts to a stimulus.
Unbalanced forces – When the forces in opposite directions on an object do not cancel out, so there is a non-zero resultant force.
Weight – The force pulling an object downwards. It depends upon the mass of the object and the gravitational field strength. The units are Newtons (N).
Work done – The energy transferred when a force acts through a distance to move an object or change its speed.

Resultant Forces

Find the difference between the forces acting in opposite directions. The direction with the larger force is the direction of the resultant force.
Example;

80 N – 10 N = 70 N to the right

Newton's First Law

Zero resultant force = Object remains stationary or constant velocity

Resultant force = Object will accelerate, decelerate or change direction

Newton's Second Law

F = m x a
(N) (kg) (m/s^2)

Newton's second law can also be represented by the rate of change of momentum.

Newton's Third Law

Whenever two objects interact, they exert equal but opposite forces on one another.

Q:Can you name some Newton third law pairs happening around you?

Weight

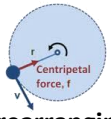
W = m x g
(N) (kg) (N/kg)

Core Practical

The greater the force applied on an object, the greater the acceleration of that object.
Q: What measurements need to be taken to find this result for a toy car? Remember to include the equipment needed.

Circular motion

When an object is in circular motion, that object's velocity is always changing due to the constant change in direction.



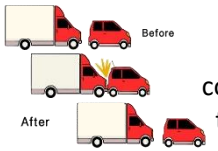
Inertial Mass

Can be found by rearranging Newton's second law;

(kg) → **m = F / a** ← (N), (m/s^2)

Momentum

(kgm/s) → **p = m x v** ← (kg), (m/s)

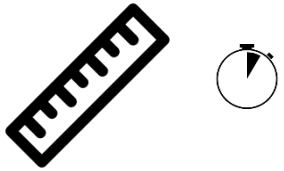


Q:How would you find the momentum before and after this collision Include some typical values for the mass and velocity of the vehicles.

Q:How would you find the momentum before and after this collision? Use typical values for mass and velocity of the two vehicles.

Reaction Time

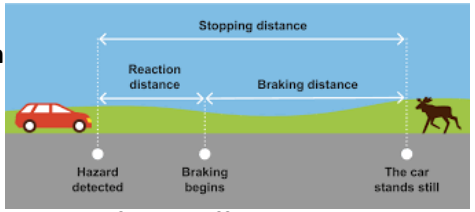
Typical human reaction time = 0.2–0.9 s



Q: How could you use the apparatus above to test a person's reaction time?

Stopping Distance

Stopping distance = thinking distance + braking distance



Q: What factors affect thinking distance and braking distance?

Work done

The work done to bring a vehicle to a stop is equal to the kinetic energy of that vehicle before the brakes were applied.

(m) → F x d = ½ x m x v^2 ← (kg), (N) ← (m/s)

Work done = Kinetic energy

KS4 Physics, Paper 5, Topic 3 Conservation of Energy Knowledge Organiser

Bold text = higher content
Highlighted text = Triple Physics content

Language for Learning:

Chemical energy – A name used to describe energy when it is stored in chemical substances. Food, duel and batteries all store chemical energy.
Conduction – The way energy is transferred through solids by heating. Vibrations are passed on from particle to particle.
Convection – The movement of particles in a fluid (gas or liquid) depending on their temperature. Hotter, less dense regions rise, and cooler, denser regions sink.
Dissipated – Spread out.
Efficiency – A way of saying how much energy something wastes. A more efficient machine wastes less energy.
Elastic potential energy – A name used to describe energy when it is stored in stretched, squashed or twisted things that can change back to their original shapes.
Fossil fuels – A fuel formed from the dead remains of organisms over millions of years (e.g. coal, oil or natural gas).
Gravitational potential energy – A name used to describe energy when it is stored in objects in high places that can fall down.
Hydroelectricity – Electricity generated by moving water (usually falling from a reservoir) turning turbines and generators.
Infrared radiation – Another name for energy that travels by radiation. It can travel through transparent things and a vacuum or empty space.
Insulation – A material that does not allow something, e.g. heat or electricity, to pass through it.
Kinetic energy – A name used to describe energy when it is stored in moving things.
Lubrication – To reduce friction by putting substances (usually a liquid) between two surfaces.
Non-renewable – Any energy resource that will run out because we cannot renew our supplies of it (e.g. oil).
Nuclear energy – A name used to describe energy when it is stored inside atoms. Another name for 'atomic energy'.
Nuclear fuel – A radioactive metal such as uranium. Nuclear fuels are used in nuclear power stations to generate electricity.
Renewable – An energy resource that will never run out (e.g. solar power).
Sankey diagram – A diagram showing energy transfers, where the width of each arrow is proportional to the amount of energy it represents.
Thermal conductivity – A measure of how quickly an object transfers energy by heating through conduction.
Thermal energy – A name used to describe energy when it is stored in hot objects. The hotter something is, the more thermal energy it has.

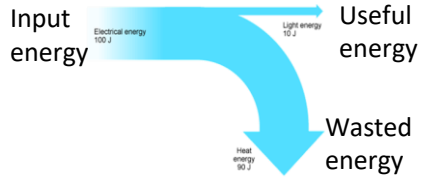
Gravitational Potential Energy

GPE = m x g x h
(J) (kg) (N/kg) (m)

Kinetic energy

KE = ½ x m x v²
(J) (kg) (m/s)

Sankey Diagrams show the transfer of energy in a system.



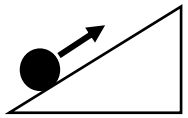
(the size of the arrows are to scale)

Conservation of Energy

Energy cannot be created or destroyed, only transferred.
In a closed system (a system that does not allow transfer in or out), there is no net change in total energy.

Energy Transfer

The 4 ways energy can be transferred;
- Mechanically (by a force)
- Electrically
- By heating
- By radiation (by waves)



A ball being pushed up a hill
Energy is transferred mechanically from the kinetic energy store to the gravitational potential energy store.

A vehicle slowing down
Energy is transferred mechanically from the kinetic energy store to the thermal energy store as the brakes are applied.

Q: Describe the energy transfers of a moving object hitting an obstacle, an object accelerated by a constant force and water being brought to the boil with an electric kettle.

Wasted Energy

In a mechanical system, energy is often wasted when transferred to the thermal energy store due to friction. This can be reduced by lubrication.

For example, oiling a squeaky bike chain.

Energy can be wasted in houses due to heat loss.
This can be reduced by using thick walls with low thermal conductivity.

Efficiency

$$\text{Efficiency} = \frac{\text{Useful energy}}{\text{Total energy}} \ (\text{x } 100)$$

No units
To make the efficiency a percentage

Q:How can we increase the efficiency of a device?

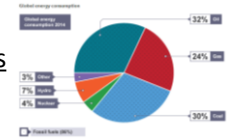
Energy Sources

Non-Renewable Energy Resources
- Fossil fuels (coal, oil, natural gas)
- Nuclear energy

Renewable Energy Resources
- Solar power
- Wind power
- Hydroelectricity
- Tidal power
- Bio-fuel

Q: What are the advantages and disadvantages of both renewable and non-renewable energy resources?

Trends in Energy Resources



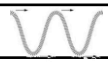
Q:Describe the trends shown in energy resources shown above. When did fossil fuels become a prominent energy resource? Is our energy use going to need to change in the future? why?

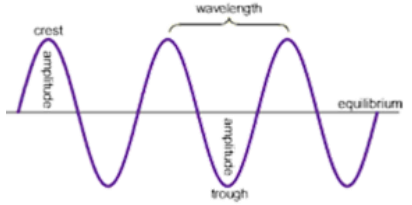
KS4 Physics, Paper 5, Topic 4 Waves Knowledge Organiser

Bold text = higher content
Highlighted text = Triple Physics content

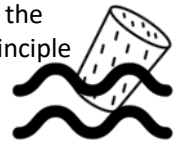
Language for Learning:

Absorb – When a wave disappears as the energy it is carrying transfers to the medium through which it is travelling.
Amplify – To make it bigger.
Amplitude – The size of vibrations or the maximum distance a particle moves away from its resting position when a wave passes.
Auditory nerve – The nerve that carries impulses from an ear to the brain.
Cochlea – The part of the ear that changes vibrations into electrical impulses.
Ear canal – The tube in the head that leads to the eardrum.
Eardrum – A thin membrane inside the ear thar vibrates when sound reaches it.
Electromagnetic waves – A group of waves that all travel at the same speed in a vacuum, and are all transverse.
Frequency – The number of vibrations (or the number of waves) per second.
Hertz (Hz) – The unit of frequency. One hertz is one wave per second.
Impulse – An electrical signal that travels in the nervous system.
Infrasound – Sound waves with a frequency below 20 Hz, which is too low for the human ear to detect.
Longitudinal wave – A wave where the particles vibrate in the same direction as the wave is travelling.
Medium – Any substance through which something travels.
Neurone – A cell that transmits electrical impulses in the nervous system.
Period – The time taken for one complete wave to pass a point. It is measured in seconds.
Seismic waves – Vibrations in the rocks of the earth caused by earthquakes or explosions. There are transverse and longitudinal seismic waves.
Sonar – A way of finding the distance to an underwater object by timing how long it takes for a pulse of ultrasound to be reflected.
Sound waves – Vibrations in the particles of a solid, liquid or gas, which are detected by our ears and 'heard' as sounds. Sound waves are longitudinal waves.
Transmit – When a wave passes through a material and is not absorbed or reflected.
Transverse waves – A wave where the vibrations are at right angles to the direction the wave is travelling.
Ultrasound – Sound waves with a frequency above 20000 Hz, which is too high for a human ear to detect.
Velocity – The speed of an object in a particular direction. Usually measured in metres per second (m/s).
Wave – A way of transferring energy or information. Many waves travel when particles pass on vibrations.
Wavelength – The distance between a point on one wave to the same point on the next wave.

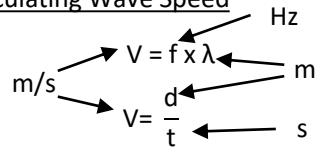
Transverse	Longitudinal
	
Electromagnetic waves, seismic s waves	Sound waves, seismic p waves



If a cork is placed on the surface of water, the cork stays in the same position. It is the wave itself that moves and not the water. The same principle is true for sound waves.



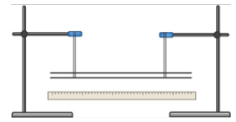
Calculating Wave Speed



Measuring the velocity of sound

- Measure the length of the rod (this is equal to half a wavelength
- Use a frequency app to measure the frequency of the sound produced when the rod is hit

Q: Which of the equations above would you need to use?

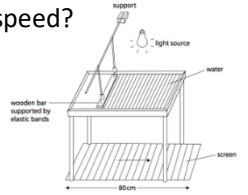


Apparatus used to measure the speed of sound.

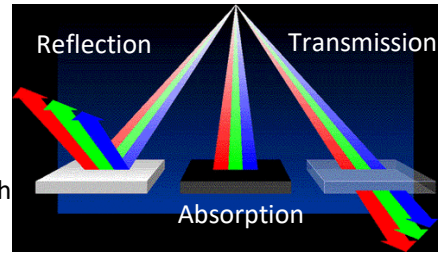
Measuring the velocity of water waves

- Measure the length of 10 waves and divide by 10 to find one wavelength
- Count the number of waves passing a point in 10 seconds and divide by 10 to find the frequency

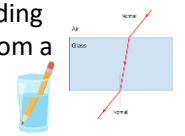
Q:Which of the equations above would you need to use to find the wave speed?



Wave Behaviour at Boundaries



Refraction is the bending of light as it moves from a less to a more dense medium.

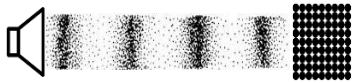


Sound

Sound waves generally travel faster in solids than liquids and liquids than gases.

Q: Using the equation for wave speed, if the frequency of a sound wave stays the same when it speeds up in a denser medium, what will happen to the wavelength?

Hearing



The paper diaphragm in a loudspeaker vibrates and causes compressions and rarefactions in the air.
Sound waves of a certain frequency can reach your eardrum and cause it to vibrate. These vibrations are passed on to tiny bones in your ear called ossicles, through the semicircular canals and to the cochlea. The cochlea turns these vibrations into electrical signals which get sent to your brain and allow you to hear the sound.

Infrasound Uses

To explore the Earth's core

Ultrasound Uses

Foetal scanning
Sonar

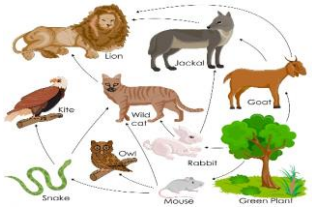
GEOGRAPHY
Unit 1b
The Living World

What is an Ecosystem?

An ecosystem is a system in which organisms interact with each other and with their environment.

Ecosystem's Components

Abiotic	These are **non-living**, such as air, water, heat and rock.	
Biotic	These are **living**, such as plants, insects, and animals.	
↳	**Flora**	**Plant life** occurring in a particular region or time.
↳	**Fauna**	**Animal life** of any particular region or time.



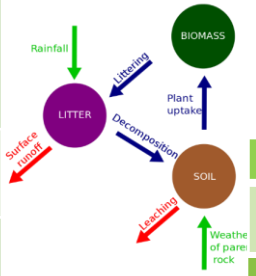
Food Web and Chains

Simple **food chains** are useful in explaining the basic principles behind ecosystems. They show only one species at a particular trophic level. **Food webs** however consists of a network of many food chains interconnected together.

Nutrient cycle

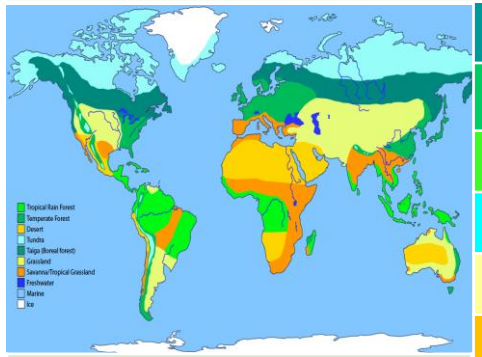
Plants take in **nutrients** to build into new organic matter. Nutrients are taken up when animals eat plants and then returned to the soil when animals die and the body is broken down by **decomposers**.

Litter	This is the **surface layer** of vegetation, which over time breaks down to become **humus**.
Biomass	The total **mass of living organisms** per unit area.



Biomes

A biome is a **large geographical area of distinctive plant and animal groups**, which are adapted to that particular environment. The climate and geography of a region determines what type of biome can exist in that region.



- Coniferous forest
- Deciduous forest
- Tropical rainforests
- Tundra
- Temperate grasslands
- Tropical grasslands
- Hot deserts.

The **most productive biomes** – which have the greatest biomass- grow in climates that are **hot and wet**.

Biome's climate and plants

Biome	Location	Temperature	Rainfall	Flora	Fauna
Tropical rainforest	Centred along the Equator.	Hot all year (25-30°C)	Very high (over 200mm/year)	Tall trees forming a canopy; wide variety of species.	Greatest range of different animal species. Most live in canopy layer
Tropical grasslands	Between latitudes 5°- 30° north & south of Equator.	Warm all year (20-30°C)	Wet + dry season (500-1500mm/year)	Grasslands with widely spaced trees.	Large hoofed herbivores and carnivores dominate.
Hot desert	Found along the tropics of Cancer and Capricorn.	Hot by day (over 30°C) Cold by night	Very low (below 300mm/year)	Lack of plants and few species; adapted to drought.	Many animals are small and nocturnal: except for the camel.
Temperate forest	Between latitudes 40°-60° north of Equator.	Warm summers + mild winters (5-20°C)	Variable rainfall (500-1500m /year)	Mainly deciduous trees; a variety of species.	Animals adapt to colder and warmer climates. Some migrate.
Tundra	Far Latitudes of 65° north and south of Equator	Cold winter + cool summers (below 10°C)	Low rainfall (below 500mm/ year)	Small plants grow close to the ground and only in summer.	Low number of species. Most animals found along coast.
Coral Reefs	Found within 30° north – south of Equator in tropical waters.	Warm water all year round with temperatures of 18°C	Wet + dry seasons. Rainfall varies greatly due to location.	Small range of plant life which includes algae and sea grasses that shelters reef animals.	Dominated by polyps and a diverse range of fish species.

Tropical Rainforest Biome

Tropical rainforest cover about **2 per cent** of the Earth's surface yet they are home to **over half of the world's plant and animals**.

Interdependence in the rainforest

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

Distribution of Tropical Rainforests

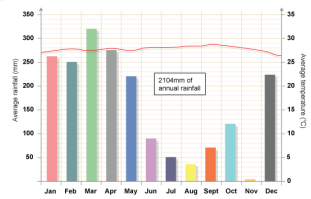
Tropical rainforests are **centred along the Equator** between the Tropic of Cancer and Capricorn. Rainforests can be found in South America, central Africa and South-East Asia. **The Amazon** is the world's largest rainforest and takes up the majority of northern South America, encompassing countries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

Rainforest nutrient cycle

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

Climate of Tropical Rainforests

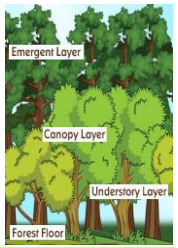
- Evening temperatures rarely fall below **22°C.**
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.



CASE STUDY: UK Ecosystem: Epping Forest, Essex

This is a typical English lowland deciduous woodland. **70% of the area** is designated as a **Site of Special Scientific Interest (SSI)** for its biological interest, with **66 %** designated as a **Special Area of Conservation (SAC).**

Components & Interrelationships		Management
Spring	**Flowering plants** (producers) such as bluebells store nutrients to be eaten by consumers later.	- Epping has been managed for centuries. - Currently now used for **recreation** and **conservation**. - Visitors **pick fruit** and berries, helping to **disperse seeds**. - Trees cut down to encourage **new growth for timber.**
Summer	Broad tree leaves grow quickly to **maximise photosynthesis**.	
Autumn	Trees shed leaves to **conserve energy** due to sunlight hours decreasing.	
Winter	Bacteria **decompose** the leaf litter, releasing the nutrients into the soil.	



Layers of the Rainforest

Emergent	Highest layer with trees reaching **50 metres.**
Canopy	80% of life is found here as It receives **most of the sunlight and rainfall.**
U-Canopy	Consists of trees that reach **20 metres high.**
Shrub Layer	Lowest layer with **small trees** that have adapted to living in the **shade.**

Tropical Rainforests: Case Study The Amazon Rainforest

The Amazon rainforest is located in South America, most of which is in Brazil a NEE. It contains the largest area of TRF ; 60% of the country is forest, however it lost over 30 million ha due to deforestation between 200-12

Adaptations to the rainforest

Butress roots	To support trees growing tall for sunlight.
Drip Tips	heavy rain to **run off leaves easily**. (Convection)
Lianas & Vines	**Climbs** trees to reach sunlight at canopy.

Rainforest inhabitants

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

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

Issues related to biodiversity

Why are there high rates of biodiversity?

- **Warm (28C) and wet (2000mm) climate** encourages a wide range of vegetation to grow. -biodiversity
- There is **rapid recycling of nutrients** to speed plant growth.
- Most of the rainforest is **untouched.**

Main issues with biodiversity decline

- est. over 10 species are being lost every day due to TRF destruction
- They act as a global carbon sink and a climate regulator, reduce local risks of erosion and flooding. Provide a wide range of local foods and industrial products, e.g. fibres, rubber, dyes
- indigenous tribes who depend on the rainforest for their survival.

Impacts of deforestation

Economic development

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

Soil erosion

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

Climate Change

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

What are the causes of deforestation?

Logging

- Cutting down trees for sale as timber of pulp.
- **Selective logging** means loggers choose only word that is expensive, e.g. mahogany, and preserve the rest.
- Clear-cutting is more destructive.

Agriculture

- Local people slash and burn trees, plant crops for **subsistence**, and move on to a new location when the land is spent.
- **Commercial farming** for profit has seen an area ½ the size of France cleared for grain/cattle.

Mineral Extraction

- **Precious metals** are found in the rainforest.e.g. gold
- Areas **mined** can experience **soil and water contamination**.
- The **Carajas Mine** is the world's largest iron-ore mine, producing 7.2bn metric tonnes each year.
- **Illegal mining** is common, with over 2,000 sides identified.

Population and settlement

- The overall Amazon population grew by 23% between 2000-2010.
- Settlements like **Paraupebas**, an iron-ore mining town, have grown rapidly by 70,000 people in just two years.
- Many people are migrating to the forest to look for jobs.

Energy Development

- The **high rainfall** creates ideal conditions for **hydro-electric power (HEP).**
- The **Tucurui Dam** is a large-scale HEP project in the Amazon. The dam brought power to 13 million people.

Road Building

- **Roads** are needed to bring supplies and **provide access** to new mining areas, settlements and energy projects.
- In Brazil, the **Trans-Amazon Highway** is helped to open up remote areas of the forest.

Sustainability for the Rainforest

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

Possible strategies include:

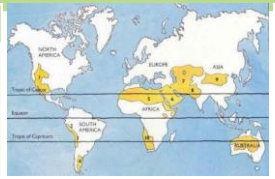
- **Agro-forestry** - Growing trees and crops at the same time. It prevents soil erosion and the crops benefit from the nutrients.
- **Selective logging** - Trees are only felled when they reach a particular height.
- **Education** - Ensuring those people understand the consequences of deforestation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

Hot Desert: Case Study Western Desert- USA

The Western desert region is made up of three different hot deserts; the Mojave, part of the Sonoran Desert and the Chihuahaun Desert. This region is located ion the South West of the USA. The Colorado River and the Grand Canyon is found in this area

Distribution of the world's hot deserts

Most of the world's hot deserts are found in the **subtropics** between **20 degrees and 30 degrees north & south** of the Equator. The **Tropics of Cancer and Capricorn** run through most of the worlds major deserts.



Major characteristics of hot deserts

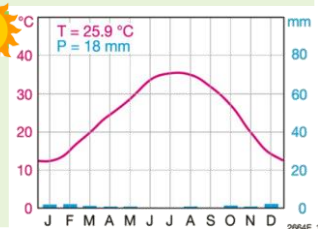
- **Aridity** – hot deserts are extremely dry, with annual rainfall below **250 mm**.
- **Heat** – hot deserts rise over **40 degrees.**
- **Landscapes** – Some places have dunes, but most are **rocky** with **thorny bushes.**

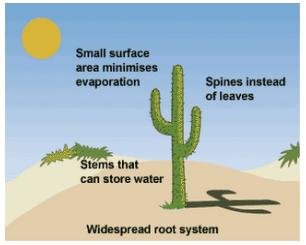
Hot Deserts inhabitants

People often live in white washed small roomed homes, gardens are **desert scaped** to cope with arid conditions **Wide brimmed cowboy hats** are worn by men to provide **protection from the Sun.**

Climate of Hot Deserts

- **Very little rainfall** with less than **250 mm per year.**
- It might only **rain once every two to three years.**
- Temperate are **hot in the day** (45 °C) but are **cold at night** due to little cloud cover (5 °C).
- In winter, deserts can sometimes receive occasional frost and snow.





Adaptations to the desert

Cactus	• **Large roots** to absorb water soon after rainfall. • **Needles** instead of leaves to reduce surface area and therefore **transpiration**.
Camels	• Hump for storing **fat (NOT water).** • **Wide feet** for walking on sand. • **Long eyelashes** to protect from sand.

Desert Interdependence

Different parts of the hot desert ecosystem **are closely linked together and depend on each other**, especially in a such a harsh environment.

Opportunities and challenges in the Hot desert

Opportunities

- **There are valuable minerals for industries and construction. – Copper mining Ajo**
- **Energy resources HEP from the Hoover Dam, supplies much of Las Vegas with energy. Sonoran Solar Project in Arizona -1000 homes 360 jobs building**
- **Farming e.g. Coachella desert – plants are irrigated from canals (from Colorado) or aquifers- grapes(wine),**
- **Tourism- Las Vegas attracts 37 million visitors per year**

Challenges

- **The extreme heat (50C) makes it difficult to work outside for very long.**
- **Western desert water crisis creating problems for the increasing number of people moving into area.**
- **Water shortages affecting farming**
- **Access through the desert is tricky as roads are difficult to build and maintain. 2015 tourist died in the Mojave desert as he became lost attempting to go off road**

Causes of Desertification

Desertification means the turning of semi-arid areas (or drylands) into deserts.

Climate Change
Reduce rainfall and rising temperatures have meant less water for plants.

Fuel Wood
People rely on wood for fuel. This removal of trees causes the soil to be exposed.

Overgrazing
Too many animals mean plants are eaten faster than they can grow back. Causing soil erosion.

Over-Cultivation
If crops are grown in the same areas too often, nutrients in the soil will be used up causing soil erosion.

Population Growth
A growing population puts pressure on the land leading to more deforestation, overgrazing and over-cultivation.

Strategies to reduce Desertification

- **Water management -** growing crops that don't need much water.
- **Tree Planting -** trees can act as windbreakers to protect the soil from wind and soil erosion.
- **Soil Management -** leaving areas of land to rest and recover lost nutrients.
- **Technology** – using less expensive, sustainable materials for people to maintain. i.e. sand fences, terraces to stabilise soil and solar cookers to reduce deforestation.

GEOGRAPHY Unit 2b

The Changing Economic World

What is development?

Development is an improvement in living standards through better use of resources.

Economic	This is progress in economic growth through levels of industrialisation and use of technology.
Social	This is an improvement in people's standard of living. For example, clean water and electricity.
Environmental	This involves advances in the management and protection of the environment.

Measuring development

These are used to compare and understand a country's level of development.

Economic indictors examples

Employment type	The proportion of the population working in primary, secondary, tertiary and quaternary industries.
Gross Domestic Product per capita	This is the total value of goods and services produced in a country per person, per year.
Gross National Income per capita	An average of gross national income per person, per year in US dollars.

Social indicators examples

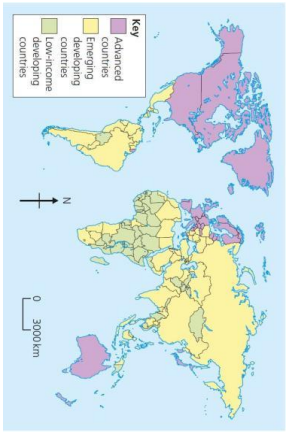
Infant mortality	The number of children who die before reaching 1 per 1000 babies born.
Literacy rate	The percentage of population over the age of 15 who can read and write.
Life expectancy	The average lifespan of someone born in that country.

Mixed indicators

Human Development Index (HDI)	A number that uses life expectancy, education level and income per person.

Variations in the level of development

LICs	Poorest countries in the world. GNI per capita is low and most citizens have a low standard of living.
NEEs	These countries are getting richer as their economy is progressing from the primary industry to the secondary industry. Greater exports leads to better wages.
HICs	These countries are wealthy with a high GNI per capita and standards of living. These countries can spend money on services.



Causes of uneven development

Development is globally uneven with most HICs located in Europe, North America and Oceania. Most NEEs are in Asia and South America, whilst most LICs are in Africa. Remember, development can also vary within countries too.

Physical factors affecting uneven development

Natural Resources

- **Fuel sources** such as oil.
- Minerals and metals for fuel.
- **Availability for timber**.
- Access to **safe water**.

Natural Hazards

- Risk of tectonic hazards.
- Benefits from **volcanic material** and **floodwater.**
- Frequent hazards **undermines redevelopment**.

Climate

- **Reliability** of rainfall to benefit farming.
- **Extreme climates** limit industry and affects health.
- Climate can **attract tourists.**

Location/Terrain

- **Landlocked countries** may find trade difficulties.
- Mountainous terrain makes farming difficult.
- **Scenery attracts tourists**.

Human factors affecting uneven development

Aid

- Aid can help some countries develop **key projects** for infrastructure faster.
- **Aid** can improve services such as schools, hospitals and roads.
- Too much **reliance on aid** might stop other trade links becoming established.

Trade

- Countries that export more than they import have a **trade surplus**. This can improve the national economy.
- Having **good trade relationships**.
- **Trading goods** and services is more profitable than raw materials.

Education

- Education creates a **skilled workforce** meaning more goods and services are produced.
- **Educated people earn more money**, meaning they also pay more taxes. This money can help develop the country in the future.

Health

- **Lack of clean water** and poor healthcare means a large number of people suffer from **diseases**.
- People who are ill cannot work so there is little contribution to the economy.
- More money on healthcare means less spent on development.

Politics

- **Corruption** in local and national governments.
- The **stability of the government** can effect the country's ability to trade.
- Ability of the country to **invest into services and infrastructure**.

History

- **Colonialism** has helped Europe develop, but slowed down development in many other countries.
- Countries that went through industrialisation a while ago, have now develop further.

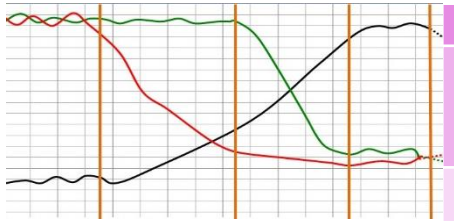
Consequences of Uneven Development

Levels of development are different in different countries. This uneven development has consequences for countries, especially in wealth, health and migration.

Wealth	People in more developed countries have higher incomes than less developed countries.
Health	Better healthcare means that people in more developed countries live longer than those in less developed countries.
Migration	If nearby countries have higher levels of development or are secure, people will move to seek better opportunities and standard of living.

The Demographic Transition Model

The demographic transition model (DTM) shows population change over time. It studies how birth rate and death rate affect the total population of a country.



STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
High DR *High BR* *Steady*	*BR Low* *Declining DR* *Very High*	*Rapidly falling DR* *Low BR* *High*	*Low DR* *Low BR* *Zero*	*Slowly Falling DR* *Low BR* *Negative*
e.g. Tribes	e.g. Kenya	e.g. India	e.g. UK	e.g. Japan

Reducing the Global Development Gap

Microfinance Loans
This involves people in LICs receiving smalls loans from traditional banks.
+ Loans enable people to begin their own businesses
- Its not clear they can reduce poverty at a large scale.

Foreign-direct investment
This is when one country buys property or infrastructure in another country.
+ Leads to better access to finance, technology & expertise.
- Investment can come with strings attached that country's will need to comply with.

Aid
This is given by one country to another as money or resources.
+ Improve literacy rates, building dams, improving agriculture.
- Can be wasted by corrupt governments or they can become too reliant on aid.

Debt Relief
This is when a country's debt is cancelled or interest rates are lowered.
+ Means more money can be spent on development.
- Locals might not always get a say. Some aid can be tied under condition from donor country.

Fair trade
This is a movement where farmers get a fair price for the goods produced.
+ Paid fairly so they can develop schools & health centres.
-Only a tiny proportion of the extra money reaches producers.

Technology
Includes tools, machines and affordable equipment that improve quality of life.
+ Renewable energy is less expensive and polluting.
- Requires initial investment and skills in operating technology

CS: Reducing the Development Gap In Jamaica

Location and Background

Jamaica is a LIC island nation part of the Caribbean. Location makes Jamaica an attractive place for visitors to explore the tropical blue seas, skies and palm filled sandy beaches

Tourist economy

-In 2015, **2.12 million** visited.
-Tourism **contributes 27% of GDP** and will increase to **38% by 2025**.
-**130,000 jobs** rely on tourism.
-**Global recession** 2008 caused a **decline in tourism**. Now tourism is beginning to recover.

Multiplier effect

-**Jobs from tourism** have meant **more money** has been spent in shops and other businesses.
-Government has invested in **infrastructure** to support tourism.
-**New sewage treatment** plants have reduced pollution.

Development Problems

- Tourists do not always **spend much money** outside their resorts.
- Infrastructure improvements **have not spread** to the whole island.
- Many people in Jamaica still live in **poor quality housing** and **lack basic services** such as healthcare.

Case Study: Economic Development in Nigeria

Location & Importance

Nigeria is a NEE in West Africa. Nigeria is just north of the Equator and experiences a range of environments. Nigeria is the most populous and economically powerful country in Africa. Economic growth has been base on oil exports.

Influences upon Nigeria's development

Political

Suffered **instability** with a **civil war** between 1967-1970.
From 1999, the country became **stable** with **free and fair elections**.
Stability has **encouraged global investment** from China and USA.

Social

Nigeria is a **multi-cultural, multi-faith society**.
Although mostly a strength, diversity has caused **regional conflicts** from groups such as the Boko Haram terrorists.

Cultural

Nigeria's **diversity** has created rich and varied **artistic culture**.
The country has **a rich music, literacy and film industry** (i.e. Nollywood).
A successful national football side.

Industrial Structures

Once mainly based on agriculture, **50% of its economy is now manufacturing and services**.
A thriving manufacturing industry is **increasing foreign investment** and **employment opportunities**.

The role of TNCs

TNCs such as **Shell** have played an important role in its economy.
+ Investment has **increased employment and income**.
- **Profits move to HICs**.
- Many **oil spills** have **damaged fragile environments**.

Changing Relationships

Nigeria plays a leading role with the **African Union** and **UN**.
Growing links with **China** with huge **investment in infrastructure**.
Main import includes petrol from the EU, cars from Brazil and phones from China.

Environmental Impacts

The 2008/09 **oil spills devastated swamps** and its **ecosystems.**
Industry has caused **toxic chemicals** to be discharged in open sewers - **risking human health**.
80% of forest have been **cut down**.
This also increases **CO^2 emissions**.

Aid & Debt relief

+ Receives **$5billion** per year in aid.
+ **Aid groups** (ActionAid) have improved health centres, provided anti-mosquito nets and helped to protect people against AIDS/HIV.
- Some aid fails to reach the people who need it due to **corruption**.

Effects of Economic Development

Life expectancy has increased from 46 to 53 years. 64% have access to safe water. Typical schooling years has increased from 7 to 9.

Case Study: Economic Change in the UK

UK in the Wider World

The UK has one of the largest economies in the world.
The UK has huge political, economic and cultural influences.
The UK is highly regarded for its fairness and tolerance.
The UK has global transport links i.e. Heathrow and the Eurostar.

Causes of Economic Change

De-industrialisation and the **decline** of the UK's industrial base.
Globalisation has meant many industries have moved overseas, where labour costs are lower.
Government investing in supporting vital businesses.

Towards Post-Industrial

The **quaternary industry** has **increased**, whilst **secondary** has **decreased**.
Numbers in **primary** and **tertiary industry** has **stayed the steady**.
Big increase in **professional** and **technical jobs**.

Developments of Science Parks

Science Parks are groups of scientific and technical knowledge based businesses on a single site.
- Access to **transport routes**.
- **Highly educated workers**.
- Staff benefit from **attractive working conditions**.
- Attracts **clusters** of related **high-tech businesses**.

CS: UK Car Industry

Every year the UK makes 1.5 million cars. These factories are owned by large TNCs. i.e. Nissan.
- 7% of energy used there factories is from **wind energy**.
- New cars are more energy **efficient and lighter**.
- Nissan produces **electric and hybrid cars**.

Change to a Rural Landscape

Social

Rising house prices have caused tensions in villages.
Villages are **unpopulated** during the day causing **loss of identity**.
Resentment towards **poor migrant communities**.

Economic

Lack of affordable housing for local first time buyers.
Sales of farmland **has increased rural unemployment**.
Influx of poor migrants puts **pressures** on local services.

Improvements to Transport

A **£15 billion 'Road Improvement Strategy'**. This will involve 10 new roads and 1,600 extra lanes.
£50 billion HS2 railway to improve connections between key UK cities.
£18 billion on Heathrow's controversial **third runway**.
UK has many **large ports** for importing and exporting goods.

UK North/South Divide

- Wages are **lower** in the North.
- Health is **better** in the South.
- Education is **worse** in the North.
+ The government is aiming to support a **Northern Powerhouse** project to resolve regional differences.
+ More **devolving of powers** to disadvantaged regions.

GCSE Knowledge Organiser

Paper 2: Henry and his Ministers, 1509-1547

Henry's Early Reign: 1509-1530

Topic Overview

In 1509, **Henry VIII** was crowned King of England following the death of his father, Henry VII. Henry's **accession** was welcomed in England, the new king's major ambition being to conquer England's traditional enemy, France. However, this ambition went unfulfilled, the king's energies, and those of his main advisors, being caught up in the '**King's Great Matter**': Henry's desire for a male **heir**. This topic focuses on the actions of the key individuals of Henry's inner circle: principally the foreign and domestic policies of Henry's chief ministers, **Thomas Wolsey** (d. 1530) and **Thomas Cromwell** (d. 1540), the failure of which ultimately led to their respective falls from power. Most significantly, the topic examines the relationship between the Crown and the Catholic Church, and how Henry's desire for a male heir led, ultimately, to the '**Break with Rome**' and **English Reformation**. At the heart of this matter was Henry's marriages: the failure of his first two marriages – to **Catherine of Aragon** and **Anne Boleyn** – to produce a son, the successful, but short-lived match with **Jane Seymour**, and the even briefer marriage with **Anne of Cleves**. Did one man's desperation for a son and heir change society and religion in England forever? We'll find out!

King Henry VIII: King of England, 1509-1547

Key Terms	
Accession	**The process to which a new monarch comes to power**
Alter Rex	**A term used by the nobles to describe Wolsey meaning "Another King"**
Amicable Grant	**A tax requested by Wolsey for the "love" of the King**
Annulment	**The legal ending of an agreement (divorce)**
Chief Minister	**The top position in royal government**
Dissolution of the Monasteries	**The closure of the local religious institutions in England**
Eltham Ordinances	**Wolsey's reform of the Kings household**
Faction	**A group of nobles who pursued their interests against other households**
Heir	**The person next in line to the throne (ideally a son)**
Heresy	**Following a different religion to the Catholic Church (King)**
Monastery	**A local religious institute in England**
Papacy	**The office or institute of the Pope**
Star Chamber	**A court used by Wolsey to judge the nobility**
Subsidy	**A form of taxation based on actual wealth, introduced by Wolsey**
Treaty	**An agreement signed by two or more countries**

1509	1513	1515	1518	1520	1521	1525	1526	1529
Henry VIII was crowned the King of England Henry marries Catherine of Aragon	England defeat France at the battle of Spurs	Thomas Wolsey becomes the Chancellor of England	Treaty of London (treaty of universal peace amongst the leading European nations)	Field of Cloth of Gold: Meeting between Henry VIII and Francis I of France	Henry is given the title the Defender of the Faith by the Pope	The battle of Pavia Amicable Grant – Amicable Grant Rising	Eltham Ordinances: the reform of the king's household	The Annulment Negotiations: Henry's need for a divorce from C of A The Fall of Thomas Wolsey

GCSE Knowledge Organiser

Paper 2: Henry and his Ministers, 1509-1547

The King's Great Matter: Henry VIII and the English Reformation

1532	1533	1533	1534	1536	1536	1536	1537	1540
Parliament creates a new English Church with Henry as the Head – the 'Break from Rome'	Henry's marriage to Catherine of Aragon is annulled by Thomas Cranmer	Henry marries Anne Boleyn Birth of princess Elizabeth (later to become Elizabeth I)	Act of Supremacy Act of Succession Treason Act	Execution of Anne Boleyn Marriage to Jane Seymour	Dissolution of the Monasteries: The closing down of the smaller monasteries in England	Pilgrimage of Grace: Rebellion in the North of England against the closure of the abbeys	Birth of Edward, Henry's son and heir Death of Jane Seymour	Henry marries and divorces Anne of Cleves Thomas Cromwell is Executed

Thomas Wolsey: Henry VIII's Chief Minister 1515- 1529

Thomas Cromwell: Henry VIII's Chief Minister 1529-1540

Thomas Howard, Duke of Norfolk: Leading Nobleman

Thomas Cranmer: The first Protestant Archbishop of Canterbury

Contemporary painting of Henry as the Head of the Church: Henry assumed these powers after the Act of Succession (1534)

Scholarship:

Peter Marshall: ***1517, Martin Luther and the invention of the Reformation***

Henry VIII had been a devout Catholic in his younger years. He had defended the Pope against the protestant ideas published by Martin Luther, A German Priest. In 1534, Henry declared himself as the Supreme Head of the Church of England. This sparked the Reformation in England.

Paper 2 Question Types

Describe two features of XXXX (4 marks)

Explain why… (12 marks)

'Statement'. How far do you agree? (16 marks)

KS4 Spanish Y10 – Term 1 – La familia y los amigos *[Family and friends]*

SENTENCE BUILDER: Relaciones con mi familia y amigos *[Relationships with my family and friends]*

Creo que *[I think that]* **En mi opinión** *[In my opinion]* **Diría qué** *[I would say that]* **Desde mi punto de vista** *[From my point of view]* **Lo bueno es que** *[The good thing is that]* **Lo malo es que** *[The bad thing is that]* **Lo mejor es que** *[The best thing is that]* **Lo peor es que** *[The worst thing is that]*	**me ayuda** *[he/she/it helps me]* **me ayudan** *[they help me]*	**cuando tengo un problema** *[when I have a problem]* **cuando necesito hablar/dinero** *[when I need to talk/money]*	**sufro acoso** *[I am bullied]* **discuto con <u>mis amigos</u>** *[I argue with <u>my friends</u>]* **con mis estudios** *[with my studies]* **en el colegio** *[at school]*
	me llevo bien *[I get on well with]* **no me llevo bien** *[I don't get on well]* **me llevo genial** *[I get on great]* **me llevo fatal** *[I get on terribly]* **discuto** *[I argue]* **con** *[with]*	**por la ropa que llevo/porque <u>no</u> me dan mucho dinero** *[because of the clothes I wear/because they don't give me much money]* **por culpa de las redes sociales** *[because of the social media]* **porque <u>no</u> me entienden cuando tengo un problema** *[because they don't understand me when I have a problem]* **porque <u>no</u> me dan buenos consejos** *[because they don't give me good advice]* **porque <u>no</u> me dejan salir/quiero más libertad** *[because they don't let me go out/I want more freedom]*	
		porque *[because]* **ya que** *[because]*	**siempre** *[always]* **nunca** *[never]* **casi siempre** *[almost always]* **casi nunca** *[hardly ever]*

está de buen/mal humor *[he/she is in a good/bad mood]*
me pone de los nervios *[he/she gets on my nerves]*
me deja tranquila *[he/she leaves me alone]*
me escucha *[he/she listens to me]*
me critica/elogia *[he/she criticises me/praises me]*
me pega *[he/she hits me]*
me chilla *[he/she shouts at me]*
me quita las cosas *[he/she takes my things]*
me comprende *[he/she understands me]*
me da privacidad *[he/she gives me privacy]*
entra en mi habitación *[he/she comes in my room]*
se queja *[he/she moans/complains]*
se burla de mí *[he/she makes fun of me]*
lo hace todo bien/mal *[he/she does everything well/wrong]*
tiene paciencia *[he/she does have patience]*
dice la verdad *[he/she tells the truth]*

QUANTIFIERS & INTENSIFIERS

muy *[very]*
demasiado *[too]*
Bastante *[quite]*
un poco *[a bit]*
sumamente *[extremely]*
increíblemente *[incredibly]*
mucho *[a lot]*

POSITIVE ADJECTIVES

activo/a	*[active]*	**alegre**	*[happy]*
comprensivo/a	*[understanding]*	**sincero/a**	*[sincere]*
entretenido/a	*[entertaining]*	**generoso/a**	*[generous]*
educado/a	*[polite]*	**solidario/a**	*[thoughtful/supportive]*
humilde	*[humble]*	**guapo/a**	*[handsome/pretty]*
modesto/a	*[modest]*	**inteligente**	*[intelligent]*
simpático/a	*[nice]*	**razonable**	*[reasonable]*
tolerante	*[tolerant]*	**agradable**	*[friendly/pleasant]*
amable	*[kind]*	**cariñoso/a**	*[affectionate]*
honesto/a	*[honest]*	**hablador/a**	*[talkative]*

NEGATIVE ADJECTIVES

aburrido/a	*[boring]*	**antipático/a**	*[mean]*
creído/a	*[big-headed]*	**despistado/a**	*[absent-minded,dopy]*
estúpido/a	*[stupid]*	**feo/a**	*[ugly]*
malhumorado/a	*[bad-tempered]*	**mentiroso/a**	*[liar]*
mimado/a	*[spoilt]*	**perezoso/a**	*[lazy]*
tacaño/a	*[stingy]*	**triste**	*[sad]*
testarudo/a	*[stubborn]*	**arrogante**	*[arrogant]*
maleducado/a	*[rude]*	**egoísta/a**	*[selfish]*
intolerante	*[intolerant]*	**travieso/a**	*[naughty]*
tímido/a	*[shy]*	**pesado/a – molesto/a**	*[annoying]*

KS4 Spanish -- UNIVERSALS

GIVING OPINIONS

Me gusta//No me gusta	I like//I don't like
Me gusta mucho	I really like
Me gusta bastante	I quite like
Me **gustaría/encantaría**	I would **like/love**
No me gusta nada	I don't like it at all
Me encanta/Me chifla	I love
Detesto	I detest
Odio	I hate
No aguanto	I can't stand
Prefiero	I prefer
Personalmente	Personally
Pienso que/ creo que	I think that
En mi opinión	In my opinión
Diría que	I would say that
Le diría que	I would tell him/her
Desde mi punto de vista	From my point of view
Me parece que	It seems to me that
Me interesa	I am interested in
Lo bueno **fue/es/será** que	The good thing **was/is/will be** that
Lo malo **fue/es/será** que	The bad **thing was/is/will be** that
Lo mejor **fue/es/será** que	The best **thing was/is/will be** that
Lo peor **fue/es/será** que	The worst **thing was/is/will be** that
Lo más divertido **es** que	The funniest thing **is** that
Lo que más me apasiona	What I am most passionate about
Lo que me preocupa es que	What worries me is that
Me preocupa que	It worries me that
Me molesta que	It bothers me that
Me fastidia/irrita que	It annoys me that
Una ventaja es que	One advantage is that
Otra ventaja es que	Another advantage is that
Una desventaja es que	One disadvantage is that
Otra desventaja es que	Another disadvantage is that
Encuentro que	I find that
Tengo la impression de que	I have the impression that
¡Qué disparate!	What a nonsense!
¡Qué tontería!	What a silly thing to say!
¡Qué guay!	How cool!

JUSTIFYING YOUR OPINIONS

Lo paso bien	I have a good time
Me hace sentir bien	He/she/it makes me feel good
Me hace reír	He/she/it makes me laugh
Me divierto	I have fun
Vale la pena	It is worth it
Me vuelve loco/a	I am crazy about he/she/it
Me chifla/mola	I love it
Se me da/dan bien	I am good at
Lo paso mal	I have a bad time
Me hace sentir bien	He/she/it makes me feel bad
Estoy harto/a	I am fed up with
Me aburro	I get bored
Me pone triste	He/she/it makes me sad
Me molesta/fastidia	He/she/it annoys me
Me vuelve loco/a	He/she/it drives/make me crazy
Me pone de los nervios	He/she/it gets on my nerves

ALREADY MADE TOP VERBS/STRUCTURES

Me ayuda a	He/she/it helps me
Te ayuda a	He/she/it helps you
Trato de + (infinitivo)	I try to + (infinitive)
Tengo que + (infinitive)	I have to + (infinitive)
En vez/lugar de + (infinitive)	Instead of + (infinitive)
Sería mejor	I would be better
Es esencial	It is essential to
Es inaceptable	It is unacceptable to

SUBJUNCTIVES (use with the sense of future)

Cuando tenga dinero…	When I have money…
Cuando sea mayor…	When I am older…
Cuando vaya…	When I go to…
Cuando pueda…	When I can…
Si tuviera…	If I had…

RELATIVE CLAUSES

Que se llama(n)…	That/who is(are) called…
Que está en…	That it is in…
Lo cual es bueno/malo…	Which is good/bad…

TIME MARKERS - PRESENT

Normalmente	Normally/Usually
Siempre	Always
Nunca	Never
A veces	Sometimes
Cada día/semana/mes/año	Every day/week/month/ year
Ahora	Now
Hoy	Today
Por lo general	Generally/In general
Todo el tiempo/rato	All time
Hoy en día	Nowadays
De vez en cuando	From time to time
Por el momento	At the moment
Por la mañana	In the morning
Por la tarde	In the afternoon/evening
Por la noche	At night
Esta noche	Tonight

TIME MARKERS – PAST

En el pasado	In the past
Ayer	Yesterday
El lunes pasado	Last Monday
La semana pasada	Last week
El fin de semana pasado	Last weekend
El mes/año pasado	Last month/year
El verano pasado	Last summer
Anoche	Last night
Durante 2 años	For 2 years
Desde hace 2 meses	For 2 months (perfect tense)
Hace una semana	A week ago
Hace unos días	A few days ago

TIME MARKERS - FUTURE

En el futuro	In the future
Mañana	Tomorrow
El próximo lunes	Next Monday
La próxima semana	Next week
El próximo fin de semana	Next weekend
El próximo mes/año	Next month/year
Dentro de 2 meses	In 2 months' time

Connectives

Y	And
Porque	Because
Pero	But
Sin embargo	However
Aunque	Although
Además	Moreover/Besides
No obstante	Nevertheless
Así que	So
Dado que	Given that
Es decir	In other words
Por lo tanto	Therefore
Por un lado	On the one hand
Por otro lado	On the other hand
Por una parte	On the one hand
Por otra parte	On the other hand

SEQUENCERS

Primero	First
Luego	Then/Next
Después	Afterwards
Más tarde	Later on
Finalmente	Finally

UNIVERSALS

KEY VERBS (YOU MUST KNOW)

Fue/era, es, será	He/she/ it was, is, will be	Estuvo/estaba, está, estará	He/she/ it was, is, will be
Pude/podía, puedo, podré	I could, I can, I will be able to	Hice/hacía, hago, haré	I did/made, I do/make, I will do/make
Fui/iba, voy, iré	I went, I go, I will go	Quise/quería, quiero, querré	I wanted, I want, I will want
Tuve/tenía, tengo, tendré	I had, I have, I will have to	Podría, debería, quisiera	I could, I should, I would like
Solía	I used to	Se puede, puedes	One can, you can
Suelo	I tend to/ I usually	Se debe	One must
Hay que	One must/it is necessary to		
Hubo/había, hay, habrá	There was/were, there is/are, there will be		

ADJECTIVES

Alucinante	Mindblowing	Útil	Useful	Impresionante	Impressive
Asombroso	Astonishing	Genial	Great	Estimulante	Stimulating
Reconfortante	Reassuring	Fácil	Easy	Sorprendente	Surprising
Fascinante	Fascinating	Guay	Cool	Inolvidable	Unforgettable
Increíble	Incredible	Atractivo	Attractive	Maravilloso	Marvellous
Emocionante	Exciting	Relajante	Relaxing		
Embarazoso	Embarrassing	Inútil	Useless	Repugnante	Repugnant
Una pesadilla	A nightmare	Feo	Ugly	Horrible	Awful
Bochornoso	Mortifying	Difícil	Difficult	Inquietante	Worrying
Molesto	Annoying	Raro	Strange	Estresante	Stressful
Lamentable	Unfortunate	Agotador	Tiring	Asqueroso	Disgusting
Aterrador	Terrifying	Irritante	Irritating		

Your class notes

People

En la foto...

hay ___ personas
no hay gente
no hay nadie

Puedo ver…

unas personas
una familia
un grupo de amigos

unos animales
un edificio
la naturaleza
el paisaje
el mar
la montaña

Action

Él/ella está
Ellos/ellas están:

jugando
comiendo
haciendo
mirando
yendo
paseando
bebiendo
tomando
viajando
descubriendo
riendo

porque – pero – sin embargo – no solo…sino también

Location

Está..

adentro
en el colegio
en casa
en el trabajo
en el centro comercial

afuera
en la playa
en el parque
en la montaña
en el campo

Mood

Él/ella está:
Ellos/ellas están:

contento/a(s)
triste(s)
cansado/a(s)
enfocado/a (s)

Él/ella tiene:
Ellos/as tienen:

hambre
sed
frío
calor

Weather

Hace...

buen tiempo
mal tiempo
frío
calor
sol
viento

Hay…

niebla
sol
granizo

Está…

nublado
oscuro
Lluvioso

Llueve/
está lloviendo
Nieva

pienso que - en mi opinión - creo que - parece que - se puede ver que – obviamente - evidentemente

KS4 Computer Science – Year 10 – 1.1 Systems Architecture

Language for Learning:

Systems Architecture Key Terms:

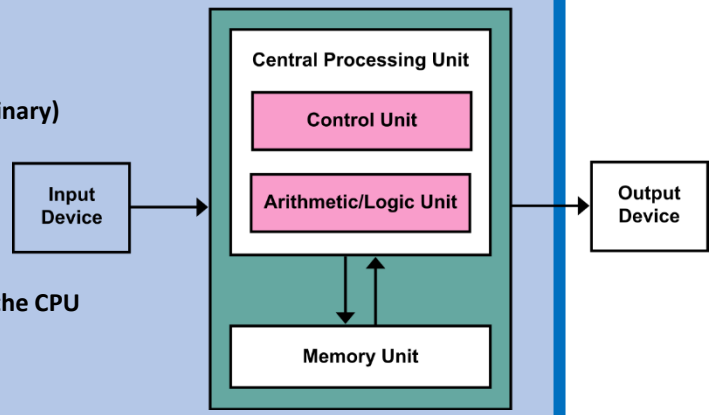
Systems Architecture
CPU
FDE
VON Neumann architecture
Hz
Clock Speed
Core
Cache
Fetch
Decode
Execute
ALU
CU
Register
Memory Address Register
Memory Data Register
Program Counter
Accumulator
Embedded system

Key Definitions for Algorithms:

Computer Architecture - This is the internal, logical structure and organization of the computer hardware. It is how all the different pieces of the computer fit together and work together efficiently

The Von Neumann Architecture - explains how all devices follow a general rule when processing information. All data and programs are stored in the computers memory, and are stored as binary digits (0s and 1s).

Input – Data is inputted into the device via an input device (e.g. keyboard, mouse, microphone etc.)
CPU – Data is processed by the CPU, via the Control Unit and ALU
Memory Unit – Data is transferred between the CPU and the computers memory
Output – Finally, once processed, the data is outputted to the user via an output device (e.g. monitor, speakers, printer etc.)
CPU - This is the brain of the computer. It processes all instructions given to it by the user, using the fetch, decode, execute cycle
Hz- Hertz -This is what we measure the speed of a CPU in. 1Hz = 1 instruction that can be executed per second. Common speeds of CPU's are now measured in Megahertz (MHz) or Gigahertz (Ghz)
Clock Speed - This is the speed of a CPU, which tells us how many instructions can be carried out each second. For example, a 2GHz CPU would be able to carry out 2,000,000,000 (2 billion) instructions per second
Core - This is the number of processors within a CPU, that can carry out instructions. Processors can be multi-core (e.g. Dual Core, Quad Core etc.) Each core executes instructions independent to the other cores
Cache - The is memory located on the processor chip. It acts as a very small amount of memory located in between the processor and Main Memory (RAM). We store frequently used instructions here to make accessing them quicker and easier.
This is the cycle the CPU goes through in order to process an instruction:
Fetch – An instruction is fetched from memory (RAM)
Decode – The instruction is broken down into small instructions, and converted into a language the CPU understands (binary)
Execute – The instruction is executed, and the user receives what they requested e.g. a program opening up
ALU – Arithmetic Logic Unit - This performs all arithmetic (addition and subtraction) and logical (greater than, less than, equal to) operations within the CPU
CU Control Unit - This works with the CPU to control the flow of data within the system and to decode instructions
Register - This is a memory location within the CPU. There are a variety of registers, all of which do different jobs
Memory Address Register (MAR) – This stores the address of the data or instruction that is currently being accessed by the CPU
Memory Data Register (MDR) - The instruction being fetched is stored here



How many input devices can you name?
How many output devices can you name?
Research and find the latest CPU – How many instruction's per second can it process?

KS4 Computer Science – Year 10 – 1.1 Systems Architecture

Language for Learning:

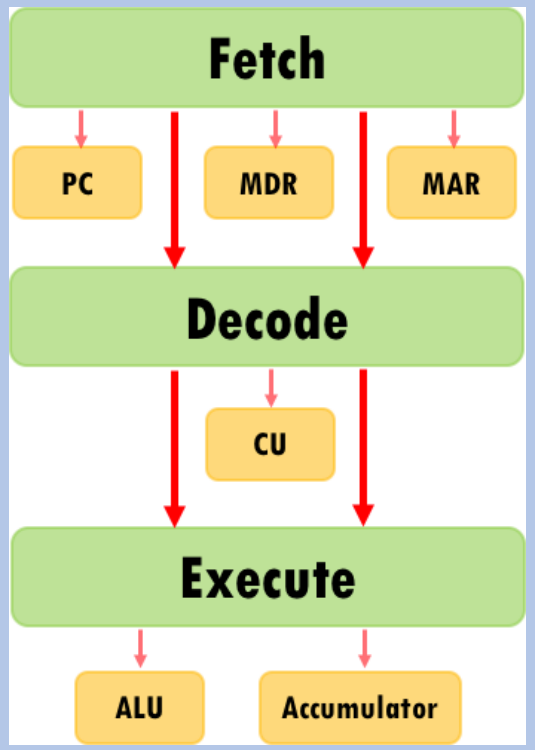
Systems Architecture Key Terms:

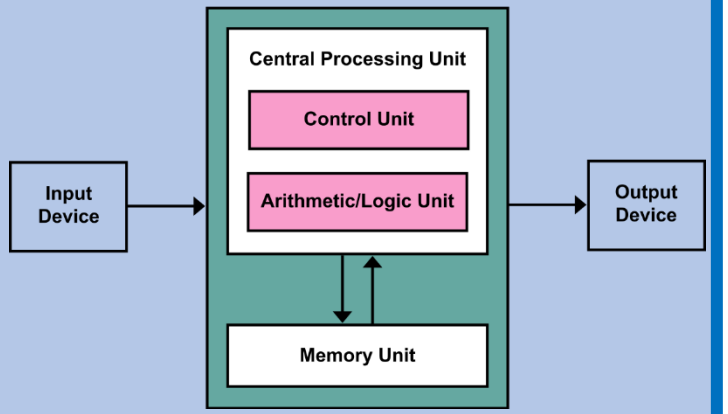
Systems
Architecture
CPU
FDE
VON Neumann architecture
Hz
Clock Speed
Core
Cache
Fetch
Decode
Execute
ALU
CU
Register
Memory Address Register
Memory Data Register
Program Counter
Accumulator
Embedded system

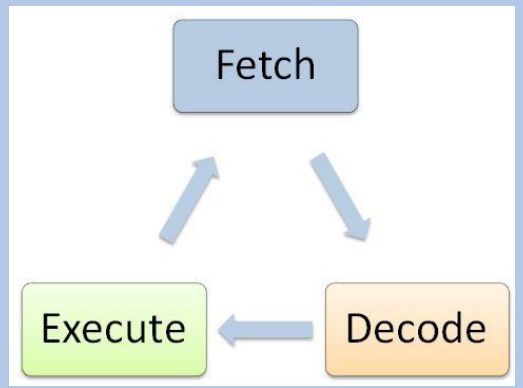
Key Definitions for Algorithms:

Program Counter- This records the address of the next instruction to fetch, which then goes onto the MAR
Accumulator - This temporarily stores data whilst calculations are being processed by the ALU, increasing by one each time an instruction is carried out
Embedded System - Performs a single task within a larger piece of equipment. It is a small processor that is inside a large piece of equipment, dedicated to a single task

For example – Washing Machine, Dishwasher, DVD Player, Microwave, Games Console, Mobile Phone etc.







Questions to consider……

Describe	Describe the role of the Control Unit in processing instructions [2]
Describe	Describe four stages in the Fetch-Decode-Execute Cycle
State	What CPU stands for

Homework Task: (When asked) Research how registers MDR and MAR and the program counter works

Explain why Cache is needed

State the difference between the CU and ALU

Knowledge Organiser
BTEC Level 1/2 Tech Award in Health and Social Care
Component 1: Human Lifespan Development

Learning Aim A1: Development through the life stages

Life stage/*Typical development*	**Infancy (0-2 years)**	**Early childhood (3-8 years)**	**Adolescence (9-18 years)**	**Early adulthood (19-45 years)**	**Middle adulthood (46-65 years)**	**Later adulthood (65 years +)**
Physical development 	Gross motor skills: - Lift head, roll over, sit up, crawl, cruise, walk, climb, kick, throw, jump Fine motor skills: - hold objects, grasp, build, feed, draw	Gross motor skills: - run, balance, catch, ride a bicycle, control, coordination, balance Fine motor skills: - draw, write, build, thread, dress, feed	Puberty: - males - females Sexual characteristics: - primary - secondary	Physical peak Physical fitness Full height Most fertile Gradual decline in strength/ energy: - weight/hair	Less stamina Less muscle tone Hair Loss of elasticity Decrease in sperm production Menopause	Decline in: - physical appearance - physical health - gross and fine motor skills - reaction times Higher risk of range of illnesses/ conditions
Intellectual development 	Use senses to learn about the world Connections in brain increase rapidly Learn routines Memory Language	Inquisitive/curious Ask questions Simple maths problems Talk about past and future Learn though experience Simple abstract problems Language/vocabulary	Abstract thought Exams Memory/revision Logical thinking Complex problem solving Start to understand different viewpoints	May go to university Continue to learn new skills Career/job may provide learning opportunities Problem solving in personal life	Continue to learn new skills Career/job may provide learning opportunities Problem solving in personal life	Continue to learn new skills for example hobbies Can retain intelligence but speed of thinking may decline Memory may decline Dementia
Emotional development 	Emotional security comes from food, warmth, shelter and routine Attachment/bond Security Contentment Independence	Security Contentment Independence Control of emotions Confidence	Security Contentment Independence Self image, self concept and self esteem Learn to regulate emotions Experience of stress	Security Contentment Independence Self image, self concept and self esteem Stress from family/career	Security Contentment Independence Self image, self concept and self esteem	Security Contentment Independence Self image, self concept and self esteem Stress from health/grief
Social development 	Social skills Relationships with family/carers Development of play	Widen social circle Form relationships with other children and adults Formal/informal relationships Development of play	Formal/informal Friendships and intimate Development of independence Influence of peers	Independence Social activity centred around friends/family Social skills at work	Maintain family and friend relationships May expand social time if children have left home	Retirement – more social time Health - more/less social time May experience death of family/friends Social withdrawal or isolation

Preparation for the BTEC Course Work Internal Assessment
BTEC Level 1/2 Tech Award in Health and Social Care
Component 1: Human Lifespan Development

Learning Aim A1: Development through the life stages

From the assignment brief: This task is about the process of development through three different life stages. Please use one famous individual of your choice to base your work on.

Section 1: The process of growth and development through three, different life stages showing how growth and development changes over time.

1. Research the life history across three life stages for a celebrity.
2. For each life stage, you should describe the physical, intellectual, emotional and social development that your chosen individual has experienced. This will include typical development expected and any other development unique to your celebrity.
3. Your report should show how the development in one area, for example physical, can lead to development in another, for example, intellectual.

Section 2/3: 2.The factors that had an effect on each of the three, different life stages/how the impact of the different factors has changed across the different life stages for your chosen individual.

1. The second part of your report should focus on the different factors which had an effect on your chosen individual throughout the three different life stages.
2. You must select at least two relevant factors for each area of development and explain how they have affected the individual at each life stage.
3. For the third part of your report, you must assess how the impact of the factors you have selected has changed over the different life stages.
4. You will need to give examples and compare the effects of the factors on the individual at the different life stages

Literacy signposts

- During early childhood, Jesy's physical development was typical and expected. For example, by the age of 5 she could…
- My research suggests that Eminem developed intellectually in ways similar to most people. However, he moved schools a lot during early childhood and this would have affected him because he could have fallen behind…
- When Ariana was fifteen, she joined the church choir and this improved her self-confidence and affected her emotional development in a positive way…
- By the age of twenty, Niall had met a lot of new people through his singing career and his fortune would mean that he got to have a lot of cultural experiences. He enjoyed skiing…

Literacy signposts

- During Oprah's early childhood the factor that had the biggest effect on her was…
- This is because it affected her by…
- The factor that had the biggest impact during the first life stage of early childhood was…
- The reasons for this are as follows…
- The factor that had the second greatest effect was…
- This did not affect her as much as… but still had more of an effect than… because…
- The factor that had the next greatest effect was…
- Compared to… it was not as important but compared to… it still had a larger impact…
- The factor that had the smallest effect on Oprah during her childhood was…
- It had little impact because…

Mark scheme

For Level 2 Distinction: Assess the changing impact of different factors in the growth and development across three life stages of a selected individual. Learners must carefully consider relevant factors and how their impact changes over time, including which factors are most important at each of the three chosen life stages. For example, learners may explain how and why a particular social factor was important in one life stage but much less so in another. Factors from each of the three categories must be included, with at least two each from the physical and social/cultural.

For Level 2 Merit: Compare the different factors that have affected growth and development across three life stages for a selected individual. Learners must compare the relevant factors that may have affected the growth and development of an individual across the three life stages, examining the benefits or otherwise of each factor presented in terms of what had the greatest to the least effect. Factors from each of the three categories must be included, with at least two each from physical and social/cultural.

For Level 2 Pass: Describe growth and development across three life stages and explain how different factors have affected growth and development of a selected individual. Learners must describe the growth and development of an individual across the three life stages in each of the PIES categories. Learners must explain how relevant factors may have affected the growth and development of an individual. Factors from each of the three categories must be included, with at least two each from physical and social/cultural. Unlike Level 2 Merit, these factors will be considered separately rather than compared against one another.

Knowledge Organiser
BTEC Level 1/2 Tech Award in Health and Social Care
Component 1: Learning Aim B – How individuals deal with life events

Language for learning

Life events
- Expected
- Unexpected

Physical events
- Ill health
- Accident and injury

Relationship changes
- New relationships
- Marriage
- Parenthood
- Divorce
- Bereavement

Life circumstances
- Moving house
- Moving school
- Exclusion from education
- Redundancy
- Imprisonment
- Retirement

Dealing with life events
- Reacting to events
- Adapting to change

Sources of support
- Formal/professional support
- Informal support
- Voluntary support

Types of support
- Emotional support
- Practical support
- Information and advice

Life events

Expected:
Predicted, knew it was going to happen

Unexpected:
Not predicted, didn't know it was going to happen

Physical events

- **Ill health** – PIES
- **Accident/injury** – PIES

Relationship changes

- **New relationships** – PIES
- **Marriage** – PIES
- **Parenthood** – PIES
- **Divorce** – PIES
- **Bereavement** – PIES

Life circumstances

- **Moving house** – PIES
- **Starting /leaving school** – PIES
- **Exclusion** – PIES
- **New job** – PIES
- **Unemploy-ment** – PIES
- **Redundancy** – PIES
- **Imprisonment** – PIES
- **Retirement** – PIES

Language for tasks – Learners will assess how two individuals have coped with the same type of life event

For Level 2 Distinction
Assess the impact the event had on each individual, classifying impacts clearly in relation to PIES. They must comment on how well the two individuals adapted to the life event. As part of this, they will compare and assess (form a judgement) of both the role and value of any support received.

For Level 2 Merit
Compare the impact the event had on each individual, classifying impacts clearly in relation to PIES. They must comment on how well the two individuals adapted to the life event. As part of this, they will compare both the role and value of any support received.

For Level 2 Pass
Explain the impact that the same life event had on each individual. Impacts will be described in relation to PIES. They must explain the ways in which each individual adapted to the life event and how they used support.

Sources of support?	Types of support?	How this helped to cope and adapt?
Formal support - Trained professionals with skills and experience e.g. NHS/private staff, health specialists, social workers, carers, physiotherapists, occupational therapists, counsellors.	Emotional Support - Somebody to talk to, listening to the person, encouragement. Information and advice - Explain how to find treatment/help, give information about choices available, help to make appropriate choices, offer advice. Practical help - Financial support, help with transport, support everyday tasks, make adaptations.	This helped the individual to cope/adapt/adjust/deal with the life event by: - Support to adapt to change/circumstances - Help towards acceptance/come to terms with the situation - Help the person to be more resilient/improve positivity - Help to deal with loss of control/provide a sense of security - Provide reassurance/support to cope emotionally - Improve self-esteem and confidence - Reduce anxiety, depression or stress - Support with physical recovery/psychological recovery
Informal support - Unpaid support e.g. family, friends or neighbours.		
Voluntary support - Local or national groups, charities, community groups or faith-based organisations.		

Name:

Knowledge Organiser
AQA GCSE Psychology: Research Methods - Experiments

Aims and hypotheses

Aim: General purpose of the study/investigation.
IV: The variable that changes /varies in an experiment. There are different levels /conditions of the IV.
DV: The variable that changes as a result of the IV.
Operationalisation: Clearly defining the variables so they can be measured.
Alternative hypothesis: Relationship + DV + two levels of the IV.
Null hypothesis: No relationship + DV + two levels of the IV.

Extraneous variables: Extra variables that may interfere with the relationship between the IV/DV

Situational variables: Lighting, noise, env etc.
Participant variables: Age, IQ, eyesight etc.
Investigator effects: Bias towards one group.
Order effects: Practice, boredom.
Demand characteristics: Guess aim and change behaviour accordingly.
Social desirability bias: Socially favourable beh.

Overcoming extraneous variables:

Standardised instructions: Instructions should be written out/ read aloud to pps.
Standardised procedures: All pps receive the same information throughout. Only IV should vary, or EVs occur.
Randomisation: Use of chance to reduce bias.

Types of experiment

Type	Laboratory	Field	Natural
Setting	Controlled environment.	Natural setting.	Natural setting.
IV	Manipulated/changed by researcher.	Manipulated/changed by researcher.	Varies naturally, is not changed by researcher. (E.g. gender)
Strengths	EVs easier to control for. Easy to replicate and check for validity.	More realistic than lab experiments. Behaviour more natural, increasing validity.	High validity involving real life changes in a natural setting.
Weaknesses	May not represent everyday life, decreasing validity. Demand characteristics more likely.	Less control over EVs, decreasing validity. Ethical issues regarding consent.	Less control over EVs, decreasing validity. Less opportunities for this kind of research.

Experimental design: Refers to which conditions the participants will take part in

Type	Independent groups	Repeated measures	Matched pairs
Describe: Conditions A/B	A B 	A B 	A B 
Strengths	No EV of order effects.	No EV pf pp variables.	Deals with some of the problems of IG and RM.
Weaknesses	EV of pp variables can reduce validity.	EV of order effects may affect performance.	Matching pps is never exact. Time and effort to match up.
Deal with weaknesses	Use randomisation to allocate to conditions.	Counterbalancing: ABBA - Half pps do A then B - Half pps do B then A	Match pps on a variable that is actually important for the experiment.

Sampling:

Target population: The group of people about whom we wish to make a statement
Generalisation: The sample must represent the target population so that we can generalise the results to the target population
Bias: Some sampling methods are more biased than others.

Random	Opportunity	Systematic	Stratified
How: All pps have equal chance of being selected from hat/app.	How: Select people who are near there at the time.	How: Numerical formula, selecting every nth name.	How: PPs selected from subgroups that represent the TP.
Strengths: No bias, sample should be representative of TP.	Strengths: Easy, quicker and cheaper to do.	Strengths: No bias, more representative of TP.	Strengths: Most representative of TP.
Weaknesses: Takes time and effort, pps may still not consent.	Weaknesses: Not representative of TP.	Weaknesses: No guarantee to be RofTP.	Weaknesses: Time and effort, pps may still not consent.

Name:

Knowledge Organiser
AQA GCSE Psychology: Research Methods

Ethics: Conflicts between the participants' rights and the needs of the researcher
BPS Guidelines: Must be followed by all UK psychologists and are referred to by the ethics committee

Issue	Informed consent	Deception	Protection from harm	Privacy	Confidentiality
Describe	PPs should be given info about purpose of study and their role in it.	PPs shouldn't be lied to/mislead about a study or they can't consent.	PPs should not be placed at risk of physical or psychological harm.	PPs should be able to control information about themselves.	PPs identity and personal details should be protected.
Overcome	Sign a consent form before the study. Retrospective consent after study.	Debrief: true purpose, right to withhold information, reassured.	Debrief: reassure pps that behaviour was normal, offer counselling if req.	All PPs should be anonymous. Refer to PPs as PP1, PP2, PP3 etc. PPs should be told that their data will remain protected and confidential.	

Interviews

Type	Structured	Semi-structured	Unstructured
Describe	Pre-prepared Qs.	Pre-prepared Qs and follow up Qs.	Develop Qs based on answers given.
Strengths	Can produce extensive information. Can provide detailed insights and rich quality data.		
Weaknesses	Can be difficult to analyse. Drawing conclusions can be complex. Researcher bias. Some PPs may feel uncomfortable.		

Questionnaires

Open v closed questions: No fixed range of answers v fixed response

Strengths: Can gather lots of info quickly. Easier to analyse.

Weaknesses: Social desirability bias reduced validity.

Observations: Watch what people actually do, target behaviour split into categories

Type	Naturalistic/Controlled	Covert/Overt	Participant/Non-pp
Describe	Naturally takes place/Some aspects controlled.	PPs not aware of behaviour being observed/PPs aware	Researcher becomes part of group/Researcher remains separate to group
Strengths	May provide better indication of behaviour than interviews/questionnaires. Looks at real life behaviour, increasing validity of findings.		
Weaknesses	Ethical issues around privacy. Observer bias can influence what is seen or heard. Overcome by establishing inter-observer reliability.		

Case studies: In-depth investigation (technique)

Describe:
Individual, group, event or institution that are unique/unusual or unexpected are studied. Use a combination of research methods to investigate to produce qual/quant data. Can be longitudinal.

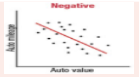
Strengths: Unusual behaviours are rare and case studies provide unique opportunities to study this behaviour. Can also tell us about 'normal' behaviour.

Weaknesses: Difficult to generalise beyond the individual, can be subjective. Researcher bias can reduce validity. Can cause ethical issues.

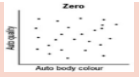
Correlations: Associations between two co-variables, plotted on a scatter-diagram

Positive correlation:
As one covariable increases, so does the other.

Negative correlation:
As one covariable increases, the other decreases.



Zero correlation:
There is no relationship between the two variables.



Strengths: Good starting point for other research. Can be used to investigate where it would be unethical to manipulate variables.

Weaknesses: Correlation is not causation. Does not tell us how the variables are related. There may be a third variable intervening instead.

Types of data:

Type	Quantitative	Qualitative	Primary	Secondary
Describe	Information that can be counted (numerical).	Information that is non-numerical.	Collected first hand for the purpose of the research.	Collected by somebody else prior to the research.
Strengths	Easy to analyse and compare.	Has more depth and detail.	Suits the aims of the research.	Easy access, less time and effort.
Weaknesses	Lacks depth and detail.	Difficult to analyse and compare.	Takes time and effort.	May not quite fit the research.

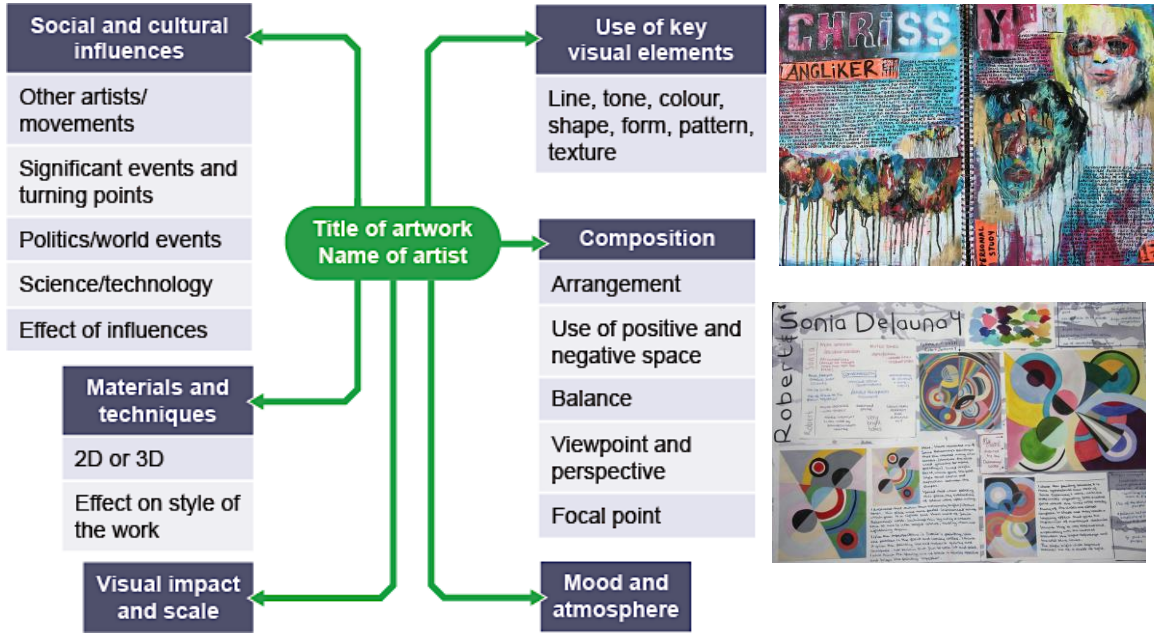
Reliability

Consistency: If study is repeated you should get the same findings. Studies that are easy to replicate can be checked for reliability.

Validity

Truthfulness: If a study has validity it will reflect what is true/ real in the real world and measures what it intends to measure.

Assessment Objective 1



Must Include:
Content – What is the subject of work? Title, what is happening and theme - landscape, portrait etc.?
Form - What formal elements are used? Colour, shape, form, pattern, texture and scale.
Process – How has the work been created? Materials and tools.
Mood – How does the work convey moods or feelings? Your interpretation, colour theory (colour linked to emotions) how does it make you feel and why?

Artist Analysis Questions	
Basic *Who, When, Where, What, How..*	1. What is the artist's name? 2. Titles and dates of their artwork? 3. What time period did they produce artwork? 4. What is their nationality? 5. What type of art do they make? 6. What is the idea behind their artwork? 7. How do they create their artwork? 8. What materials do they use? 9. How do they link to your project? 10. Do you like their artwork? Why/Why not?
Advanced *Descriptions, analysis, opinions, responding*	1. What art movement does the artwork belong to? (e.g. impressionism, abstract expressionism) 2. Can you name similar artists that are linked to this movement? 3. Describe a typical piece of their artwork 4. Is it observed, remembered or imagine? How can you tell? 5. Does their culture influence their artwork? 6. How does the artist portray the concept of their artwork? 7. Describe the techniques that the artist uses 8. Why did they create it?
Expert *In depth analysis, comparisons, informed opinions, originality*	1. Describe how the artist conveys the concept through typical themes and approaches? 2. Describe in detail the techniques that the artist used? 3. How could the artists approach their concept differently? 4. To what extent is their artwork typical of the time it was being created? 5. Why is their work seen as important and what can we learn from it? 6. How has the artist been influenced by the world and others around them? 7. How is the artist/artwork unique in comparison to similar artists?

Assessment Objective 3

Record observations, insights relevant to intentions as work progresses.

Annotations can be used for your own reference, e.g. to make a note of how you achieved a technique, or to record an idea you might like to try later. They can also be used to communicate information to the examiner that will help explain your thoughts and decision-making processes.

Different Approaches to Annotating You Own Work

Commentary	Evaluation
I completed several different studies using different materials such as coloured pencil, oil pastel and acrylic paint.	I completed several different studies using different materials such as coloured pencil, oil pastel and acrylic paint. This helped me to decide on which materials worked best. The acrylic paint was the most effective for creating the Scottish Colourist style, as it has most visual impact and I could create the bold brushstrokes typical of their work.

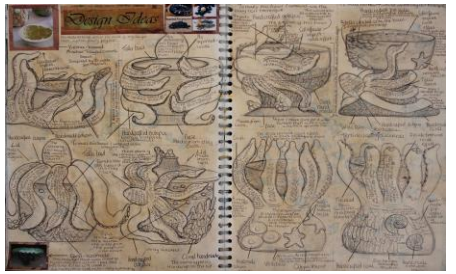
Describe What is the image of? What have you done here? What was this stage of your project for?

Explain Why was this work made? How did you produce this particular effect? How did you decide on this composition?

Analyse Why did you use these specific methods? Why do some parts work better than others? What evidence do you have that shows you got it wrong?

Plan How you will get this correct next time? Why might you do things differently next time? What method, technique or tool can you use instead?

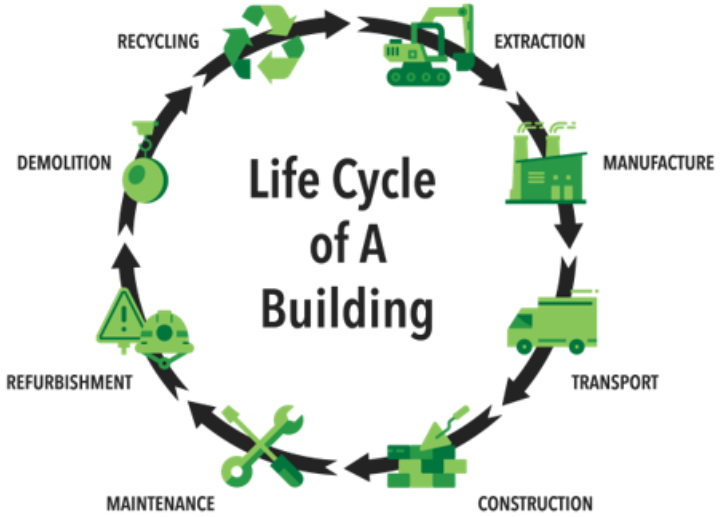
Labelling



✓	**Do** add labels which help explain your creative process.
✓	**Do** add details on techniques you might forget later.
✓	**Do** record your thoughts on the success of the work – what worked and what didn't.
✓	**Do** reflect on the work of artists and designers you are influenced by and how this helped inform your ideas.
✓	**Do** write down ideas about what you would like to try next, or if there is anything you could change to improve an idea.
✗	**Don't** write very lengthy comments.
✗	**Don't** annotate in a way that distracts attention from the work, e.g. by writing over an area of a drawing.
✗	**Don't** use annotations to label obvious things, e.g. 'oil pastel drawing of a bottle.'

What can happen during construction?

- **Alteration/conversion or renovation** of existing buildings/structures
- An **infrastructure** project (paths, roads, bridges, transport, sewerage)
- Laying of **foundations** and **drainage** systems
- Installation of **mechanical, electrical, gas and communication** services
- A totally **new building** or structure



Advantages to raw material extraction

- Money into local economies e.g. The Amazon Rainforest
- Increased employment
- Improvements to well being of people in local area from health services, schools, transport networks.

Infrastructure

Bridges
Roads
Tunnels
Railways
Airports
Electricity
Sewerage
Telecommunications
Water

Jobs in construction

Designer/architect
Civil/structural engineer
Site manager
Surveyor
Quantity surveyor
Bricklayer
Stonemason
Plasterer
Carpentry and joinery
Electrician
Plummer
Painting and decorating
Tiling and flooring

Disadvantages to raw material extraction

- Air and water pollution
- Damage to landscape
- Loss of habitat
- Noise
- Hazards from waste and subsidence

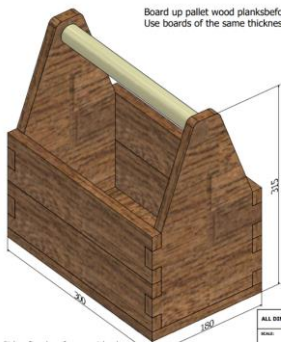
Operation involves……

•**Controlling and monitoring** of heating, cooling and lighting systems
•**Provision** of security, cleaning and other ancillary services including testing and evacuation procedures

Maintenance can be……

•**Planned and preventative maintenance**: carried out on a regular basis, in order to keep something working or extend its life
•**Cyclical maintenance**; replacing over a cycle of work as an investment in stakeholders comfort levels
•**Emergency or reactive maintenance** due to safety reasons

Types of crushed rock	Use
Gravel	Small pieces of rock used in concrete and road construction
Aggregate	Mixture of sand, gravel and crushed stone used to strengthen concrete and provide drainage (think side of motorway)
Hardcore	Mass of solid materials used to raise levels, fill holes and create a firm and level working base which heavy concrete can be laid.



How can the construction industry be more sustainable?

•Reprocess materials e.g. steel beams can be melted to make new steel components
•Re use e.g. roof tiles can be cleaned and reused
•Timber can be chipped into MDF boards
•Aluminium and copper can be reprocessed
•Bricks can be crushed for foundations
•Use soil and aggregate as banking near build sites and not send it to landfill
•Use sustainable materials e.g. timber

A pre demolition plan:-

•Removal of hazardous materials such as asbestos
•Disconnect utilities e.g. water, gas, electricity, sewage
•Identify the location of structures and load bearing walls
•Identify conditions and constraints
•Identify condition of existing building structure
•Identify factors that may cause problems to people e.g. how close to roads and houses
•Decide whether to use explosives or manual or machine demolition

Procedures of demolition ….

•Security of site; fences, controlled entry points, signage.
•Live utilities are disconnected
•Removal of hazardous materials
•Soft strip – removal of cladding, flooring etc
•Demolition of building structure (walls and roof)
•Removal of foundations

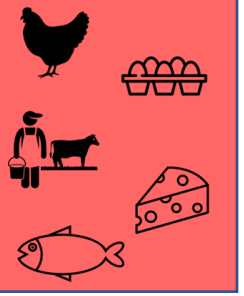
How can construction protect the natural environment?

•Cannot build where bats nest
•Cannot build where birds nest
•Disposal of chemicals correctly – not in local water
•Minimise noise pollution
•Minimise land disturbance
•Use mesh screens and water sprays to dampen the site
•Covering stores of cement, sand and other powders and ensuring they won't be washed away
•Using non toxic paints and solvents
•Collecting wastewater in tanks and disposing correctly
•No burning of materials on site

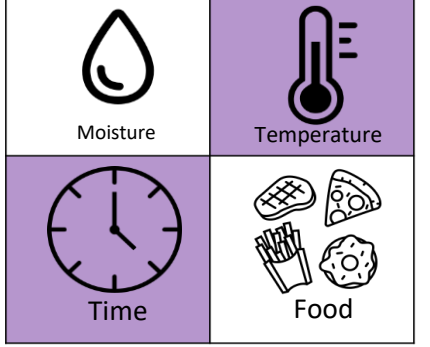
Hospitality and Catering Knowledge Organiser y10 Term 1

Key Word	Definition
Personal Hygiene	Refers to the cleanliness of the food handler (Chef/Cook)
Kitchen Hygiene	Refers to the cleanliness of equipment used whilst preparing and cooking food
Food Hygiene	Refers to the safe practises to preserve the safety of the food
Enzymic Browning	Where food spoils by turning brown due to reacting with oxygen when it is cut, bruised or peeled
Food Poisoning	An illness brought about by poor food, personal or kitchen hygiene
Symptoms	The physical result of an illness
Cross Contamination	Where raw meat is mixed together with fresh food that won't be cooked.

High risk foods are ready to eat moist foods, usually high in protein.

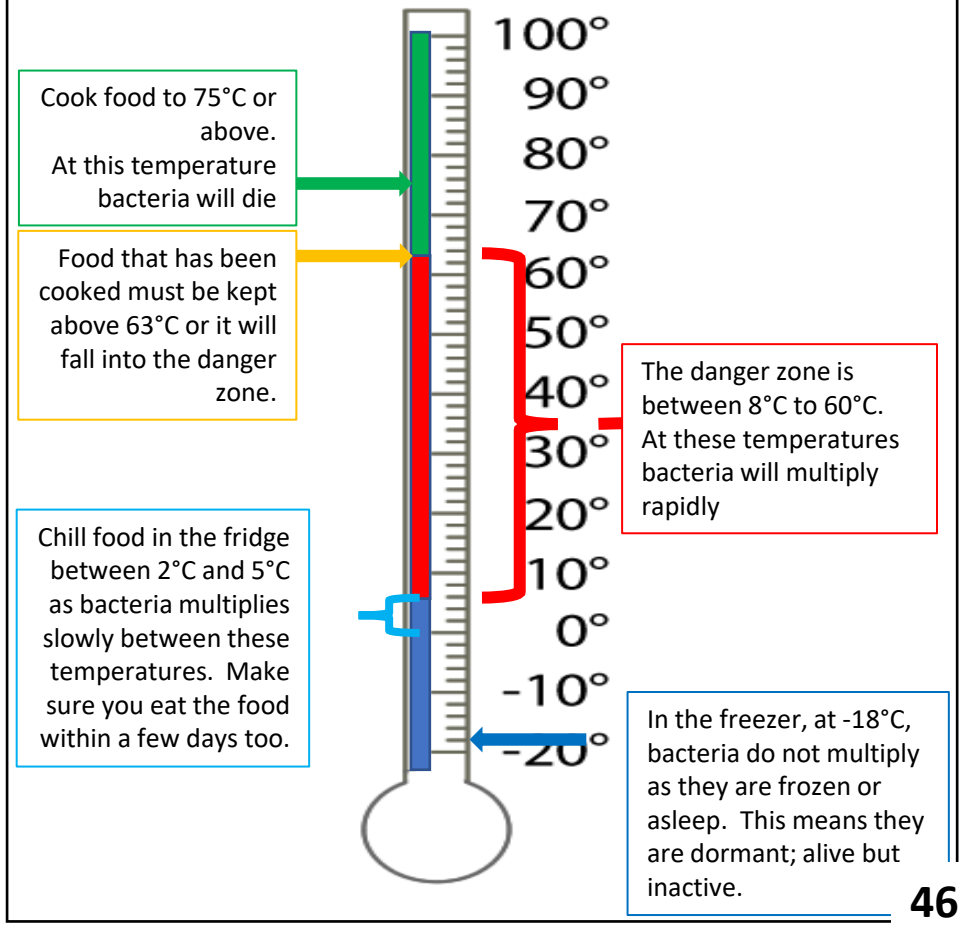


What do bacteria need to multiply?



Name of Food Poisoning	Sources	Incubation time	Symptoms
Campylobacter	Raw poultry, Milk, Untreated (dirty water)	48 – 120 hours	Stomach cramps/abdominal pains, Fever, Diarrhoea and Nausea
Salmonella	Raw or undercooked meat and poultry, Raw milk (unpasteurised), raw or undercooked eggs	8 – 72 hours	Stomach cramps/abdominal pains, Fever, Diarrhoea and Vomiting
E. Coli 0157	Beef (mince meat), Raw unpasteurised milk	72 – 96 hours	Stomach cramps/abdominal pains, Fever, Diarrhoea and Vomiting
Staphylococcus aureus	Nasal passages, Dirty food handlers	1 – 6 hours	Stomach cramps/abdominal pains, Vomiting, Diarrhoea and Low Body Temperature
Listeria	Cheese (made from unpasteurised milk), Soft cheeses, Salad vegetables and Pate	120 – 336 hours	Muscle aches, Fever, Diarrhoea, Nausea and vomiting

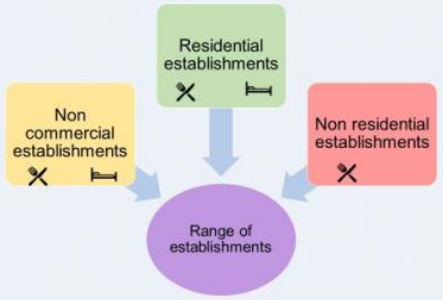
Keeping food in the right temperature zone will prevent food poisoning



The word '*hospitality*'

- Encompasses all aspects of the hotel and catering (or foodservice) industry.
- Relatively modern word, meaning the **friendly** and **generous** treatment of **guests** and **strangers**.
- 'Catering' refers to offering facilities to people, especially the **provision** of **food and beverages.**
- The internationally understood term **'foodservice'**

- The **Hospitality and Catering** sector includes: pubs, bars and nightclubs; restaurants; self-catering accommodation, holiday centres travel and tourist services; visitor attractions and hotels. Hospitals, prisons, schools armed forces and social care .
- It has grown over the last 20 years and, despite recession, is predicted to continue to grow .The sector as a whole currently employs almost 2 million people.



Likelihood \ Impact	Negligible	Minor	Moderate	Significant	Severe
Very Likely	Low	Moderate	High	High	High
Likely	Low	Moderate	Moderate	High	High
Possible	Low	Low	Moderate	Moderate	High
Unlikely	Low	Low	Moderate	Moderate	Moderate
Very Unlikely	Low	Low	Low	Moderate	Moderate

Residential establishments

Hotels
Guest houses
Bed and breakfasts
Farmhouses
Motels
Holiday parks
Some public houses

Services and food provided varies by price charged

Non residential establishments

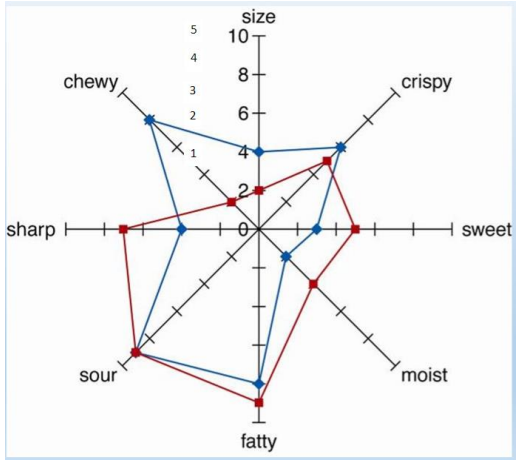
Restaurants
Fast food outlets
Public houses
Bars
Delicatessens
Take away outlets
School meals
Burger vans

Services and food provided varies by the situation and price charged

Non commercial establishments

Hospitals
Prisons
Meals on wheels
Residential care homes
Armed services

Services and food provided varies by the situation and the needs of the clients. Not required to make a profit



Residential accommodations include.

Hotels, guest houses, holiday parks, farmhouses and pubs that offer accommodation, B and B's.

Non residential establishments only provide food. These include.

Restaurants, cafes, fast food outlets, pubs, wine bars, delicatessens and salad bars, take away outlets, school meal, transport catering, burger vans.

Non commercial residential establishments include.

Hospitals, residential homes, prisons, armed services.

Residential establishments

Hotels
Guest houses
Bed and breakfasts
Farmhouses
Motels
Holiday parks
Some public houses

Services and food provided varies by price charged

Hotels

The style of food provided will depend on the standard of the hotel
Hotel may provide

- No food provision
- Room service
- Hotel owned restaurants
- Franchise restaurants
- Breakfast provision only

Bed & breakfasts, Guesthouses, Farmhouses

Often showcase local themes or produce.
May be breakfast, Half board or full board, family run

Motels & Holiday parks

Lower standard than hotels, food is usually buffet style breakfast. Corporate or independent

Risk	Description	Who is at risk	Control measures in place	Level of risk	Who needs to carry out the action
Trips	Loose carpet, loose shoes, poor storage, wires	Employee, customer, supplier	Contact carpet fitter/maintenance, ensure employers are wearing correct PPE footwear, store in designated areas, tape down wires	low	Front of house manager Head chef Maintenance manager
Slips	Wet floor, spillage, loose shoes	Employee, customer, supplier	Wet floor signs, mop up spillage, ensure employers are wearing correct PPE footwear	low	

COMPONENT 1 BTEC TECH PERFORMING ARTS (ACTING)

LEARNING AIM A

A write up consisting of the following criteria for **EACH** of the plays:

- Key characteristics
- Creative intentions and purpose (purpose of the play, target audience, themes, how themes are communicated in the play, context of play (political, social, historical)
- Synopsis of play
- Initial reactions after watching the play Production elements
- Link opinions and theories together with justifications as to why the director/writer/actor may have made particular choices

Roles and responsibilities of an actor/director/various designers **THEN** specific roles and responsibilities of an actor/director/designer that are tailor made for **EACH** of the plays

LEARNING AIM B

1) The processes, techniques and approaches used by practitioners

1 –Participate in workshop rehearsals in the style of each company
2 – Recreate short snippets from the play using these techniques
3 - Reflect on the roles and responsibilities of an actor and director from these workshops
4- Research the rehearsal timeline of each play (**from page to stage**)

2) The interrelationships between constituent features

Interrelationships – the way in which two or more things are linked together
Constituent features - e.g. the script, performers involved, techniques used in performance and design (e.g. lighting, sound set) relationship between performer and audience etc

Play: Things I know to be true
Company: Frantic Assembly
Genre: Physical theatre
Rehearsal techniques:
Speech - exercises building trust between company
Hymns hands – placing hands on yourself and partner to create a sequence/story
Round/by/through – using your body to go round your partner, through a part of them or stand/lean by them
Chair duet – bring 2 techniques together to create a story
Flying – lifting technique

Play: One Man, Two Guvnors
Company: National Theatre
Genre: Commedia dell'arte
Voice and Speech - Often very fast dialogue
Exaggeration – Exaggerated gestures, arm and leg movements.
Timing – Fast-paced action and Exemplary comic timing
Whole body engagement – using every part of the body to tell the story
Diversity – Many individual characters have specific acting techniques unique to their character
Slap Stick – Slapstick an essential ingredient, particularly for servant characters.

Play: Wonderland
Company: National Theatre
Genre: Musical Theatre
Rehearsal techniques:
Movement – story itself contained in short episodes of movement
Singing –Acting the song ATS is to convey appropriate emotion through singing
Multi-role play – playing more than one character
Action songs -which move the plot forward
Voice – A range of different vocal techniques used to warm up the voice.

COMPONENT 2 BTEC TECH PERFORMING ARTS (ACTING)

Learning Aim A - To develop skills and techniques for performance

Skills workshops that will teach techniques needed to explore and create short extracts of a play.

Learning Aim B - To apply skills and techniques in rehearsal and performance

Learn 5-15 minutes of script from Shakers or Bouncers and perform to an audience.

Learning Aim C – To review own development and performance

Provide a logbook which evidences your progress from first workshops through to performance of script. This will include strengths, targets and reviews.

Evidence needed: teacher observations, recordings of workshops, peer observations, target setting, logbooks.

Monologues

1. **If you get to select your monologue, choose one you really like.**

Pick a monologue that you really like. You'll be more eager to work on the monologue and practice it if you love the piece you're performing

2. Break down the monologue.

Monologues can be intimidating because they are a huge chunk of text on a page. Breaking them down into smaller chunks can help you memorize the lines and really understand what the character says or feels.

3. Get memorization out of the way early.

Memorizing lines is just the tip of the iceberg. It is even better to get your lines memorized (accurately!) as quickly as possible. This will help alleviate stress when you go to perform. You'll be able to focus on your character and movements instead of struggling to remember the next word. you can improve on. Then, try again!

Skills workshops to include:

Vocal warm up, Physical warm up, Tableaux, Freeze frames, Thought tracking/tunnel, Hot seating, Multi-role playing, Rhythm-Pace-Tempo, Choral work, Movement and Gesture

Key vocabulary

Naturalism – a style of performance where actors and designers try to create the illusion that what is happening on stage is 'reality'
Epic Theatre – Political theatre created by Brecht
Levels - the height you perform a movement – low, medium or high.
Proxemics - distance between characters to show a relationship
Improvisation – performing in an unrehearsed and spontaneous way
Characterisation - creating a character through your movement and dynamic choices
Stereotype-
Use of voice – adapting your voice to suit a character requirement. Volume, tone, pitch pace, intonation
Tableaux - a silent and motionless depiction of a scene created by actors (plural)
Hot seating – an in-depth questioning of a character
Though tracking – internal thoughts of a character spoken aloud
Thought tunnel – inner thoughts of a character considering moral decisions
Stage fighting – rehearsed and realistically represented fight sequence
Multi-role playing – an actor plays multiple characters
Rehearsal – a practice of the play
Blocking – deciding where an actor should stand during a scene
Colloquial language – words used in everyday language that are time specific (e.g. "current")

COMPONENT 3 BTEC TECH PERFORMING ARTS (ACTING)

Devise a performance in response to a stimulus provided by the exam board. Both parts of the task (written and performance) will be completed under supervision. There is a 12 week window for all parts to be completed. The component is marked out of 60.

Assessment objectives

AO1 - Understand how to respond to a brief. Discuss and practically **EXPLORE** the stimulus considering: target audience, performance space, planning and managing resources, running time and style of work.
Develop ideas considering: structure of work, style and genre used, skills required, creative intentions.
Work effectively as a member of the group making an individual contribution and responding to the contribution of others.

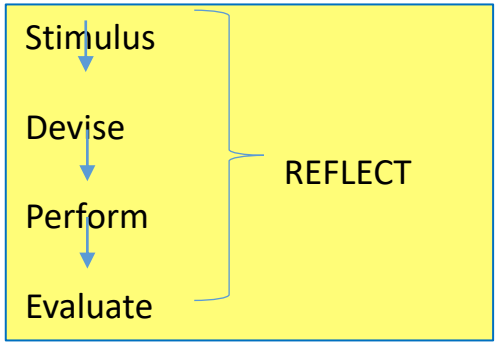
AO2 – Select and develop skills and techniques in response to a brief. Demonstrate **HOW** to select and develop skills and techniques that are needed for the performer and whole group and take part in the rehearsal process.

AO3 – Apply skills and techniques in a workshop performance in response to a brief
Contribute to a workshop performance using: vocal, physical and interpretative skills. (18 marks)
This performance will last

AO4 – **Evaluate the development process and outcome in response to a brief**
Evaluate the process and performance. Consider: the brief, stimulus and contribution from other group members. Reflect on: selection of skills used, individual strengths/areas for improvement, overall and individual contribution to the group, impact of the groups work.

Key vocabulary

Target audience – who you will perform to and why
Performance space – choosing where the performance will take place if not on the stage and why
Running time – length of the performance
Style of work – genre or practitioner who will influence your work
Vocal skills – ability to adapt voice to suit a character
Physical skills – movement, gestures, body language, facial expressions
Interpretative skills – presenting yourself to the audience and creating emotion
Commitment –how much effort you put in individually and as a group
Rehearsal – practicing the performance
Blocking – deciding where an actor should stand
Performance – Showing of the piece of work to the target audience
Evaluate – identify strengths and areas for improvement of both the rehearsal and performance
Characterisation - creating a character through your movement and dynamic choices



Component 2 - Taking part and improving other participants sporting performance

LAA – understand how different components of fitness are used in different physical activities

Definitions:	
Components of Physical Fitness	
Aerobic Endurance	the ability of the cardiorespiratory system to supply oxygen and nutrients to the muscles to sustain low to medium intensity work to delay fatigue
Muscular Endurance	the ability of the muscular system to continue to contract at a light to moderate intensity
Muscular Strength	maximum force that can be generated by a muscle or muscle group to improve forceful movements within an activity
Speed	distance / time to reduce time taken to move the body for an body part in an event or game
Flexibility	the range of motion possible at a join to allow improvements in technique the
Body Composition	the relative ratio of fat mass to fat-free mass in the body allowing variation in body composition dependent on the sport
Components of Skill Related Fitness	
Power	the product of speed and strength to allow for explosive movements in sport
Agility	the ability to change direction quickly to allow performers to out-manoeuvre an opponent
Reaction time	the time taken between a stimulus and the start of a response useful in fast-paced sports to make quick decisions about what to do
Balance	the ability to maintain centre of mass over a base of support, useful to maintain positions in performance sports (static balance) or when ton the move in any other sporting situation (dynamic balance)
Coordination	the ability to move two or more body arts at the same time smoothly and efficiently, to allow effective application of technique

Examples in Sport:	
Components of Physical Fitness	
Aerobic Endurance	To continue to work hard and last the whole duration of the game.
Muscular Endurance	To last the whole duration of the match. Players use the same muscles in their legs and arms which they need for running and throwing/dribbling.
Muscular Strength	To hold their position on the ball and to have powerful shots on goal.
Speed	To have speed to move up and down the court quickly to support the team when attacking and defending
Flexibility	Need to be flexible when trying to stretch to get into position.
Body Composition	Players need to have a low percent body fat to allow them to be agile around the court. They need to be strong to hold off the opposition and keep their position on the ball.
Components of Skill Related Fitness	
Power	To throw powerful shots on goal. The more powerful the shot the harder it would be to save.
Agility	To dodge around players quickly when trying to move into space
Reaction time	To react to shots on goal. Players need good reaction time to intercept the ball to regain possession
Balance	When changing directions quickly. To quickly move forwards or backwards to either help attack or defend.
Coordination	When dribbling with the ball to keep it under control when under pressure

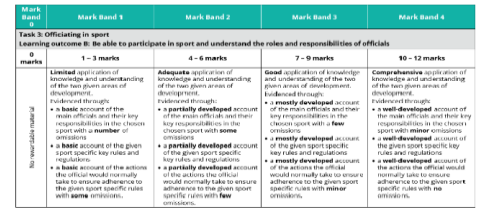
LAB– be able to participate in sport and understand the roles and responsibilities of officials

Learners will be able to demonstrate a range of skills and strategies for a selected sport, in both isolated practices and competitive situations

	Examples:
Skills	Passing, dribbling, shooting
Strategies	Tactics, decision making
Isolated practices	Practices focusing on one skill at a time
Competitive situation	Game play

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 3: Officiating in sport Learning outcome B: Be able to participate in sport and understand the roles and responsibilities of officials				
0 marks	1 – 3 marks	4 – 6 marks	7 – 9 marks	10 – 12 marks
No rewardable material	**Limited** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **basic** account of the main officials and their key responsibilities in the chosen sport with a **number** of omissions • a **basic** account of the given sport specific key rules and regulations • a **basic** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **some** omissions.	**Adequate** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **partially developed** account of the main officials and their key responsibilities in the chosen sport with **some** omissions • a **partially developed** account of the given sport specific key rules and regulations • a **partially developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **few** omissions.	**Good** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **mostly developed** account of the main officials and their key responsibilities in the chosen sport with a **few** omissions • a **mostly developed** account of the given sport specific key rules and regulations • a **mostly developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **minor** omissions.	**Comprehensive** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **well-developed** account of the main officials and their key responsibilities in the chosen sport with **minor** omissions • a **well-developed** account of the given sport specific key rules and regulations • a **well-developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **no** omissions.

Roles:	Responsibilities:	Rules and Regulations:
- Referee/umpire - Assistant referee/line umpire - Timekeepers - Scorers - Video review officials	- Fitness Requirements - Control the players - Appearance - Health and Safety - Equipment - Effective communication	- Number of players - Length of play time - Scoring systems - Playing area - Equipment - Starting and restarting play - Non-adherence to rules - Application of rules and regulations



Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 3: Officiating in sport Learning outcome B: Be able to participate in sport and understand the roles and responsibilities of officials				
0 marks	1 – 3 marks	4 – 6 marks	7 – 9 marks	10 – 12 marks
No rewardable material	**Limited** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **basic** account of the main officials and their key responsibilities in the chosen sport with a **number** of omissions • a **basic** account of the given sport specific key rules and regulations • a **basic** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **some** omissions.	**Adequate** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **partially developed** account of the main officials and their key responsibilities in the chosen sport with **some** omissions • a **partially developed** account of the given sport specific key rules and regulations • a **partially developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **few** omissions.	**Good** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **mostly developed** account of the main officials and their key responsibilities in the chosen sport with a **few** omissions • a **mostly developed** account of the given sport specific key rules and regulations • a **mostly developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **minor** omissions.	**Comprehensive** application of knowledge and understanding of the two given areas of development. Evidenced through: • a **well-developed** account of the main officials and their key responsibilities in the chosen sport with **minor** omissions • a **well-developed** account of the given sport specific key rules and regulations • a **well-developed** account of the actions the official would normally take to ensure adherence to the given sport specific rules with **no** omissions.

LAC – demonstrate ways to improve participants sporting techniques

Planning Drills and Conditioned Practices

Organisation and demonstration of drills and conditioned practices to participants:	Supporting participants taking part in practical drills and conditioned practices:
-Space -Equipment -Organisation of the group -Demonstrations -Positioning	-Observing participants -Providing instructions -Providing teaching points -Providing feedback to participants

Teaching points

Technique

Drills & Conditioned Practices

Support Participants

Improve sporting skills

Provide demonstrations

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 4: Improving participants' sporting skill (video) Learning outcome C: Demonstrate ways to improve participants sporting techniques				
0 marks	1 – 3 marks	4 – 6 marks	7 – 9 marks	10 – 12 marks
No rewardable material	**Limited** practical ability and demonstration of appropriate drills and support given to improve participants' sports skills. Evidenced through: • **basic** demonstrations with **minimal** use of appropriate teaching points to support participants to perform correct techniques for chosen sports skill • a **basic** range of appropriate drills and conditioned practices to develop participants' technique for selected sports skill • **rarely** provides appropriate support to participants when taking part in sports drills and conditioned practices to improve their techniques for a chosen sports skill.	**Adequate** practical ability and demonstration of appropriate drills and support given to improve participants' sports skills. Evidenced through: • **sufficient** demonstrations with **some** use of appropriate teaching points to support participants to perform correct techniques for chosen sports skill • a **sufficient** range of appropriate drills and conditioned practices to develop participants' technique for selected sports skill • **sometimes** provides appropriate support to participants when taking part in sports drills and conditioned practices to improve their techniques for a chosen sports skill.	**Good** practical ability and demonstration of appropriate drills and support given to improve participants' sports skills. Evidenced through: • **competent** demonstrations with a **range** of appropriate teaching points to support participants to perform correct techniques for chosen sports skill • a **competent** range of appropriate drills and conditioned practices to develop participants' technique for selected sports skill • **frequently** provides appropriate support to participants when taking part in sports drills and conditioned practices to improve their techniques for a chosen sports skill.	**Confident** practical ability and demonstration of appropriate drills and support given to improve participants' sports skills. Evidenced through: • **effective** demonstrations with use of a **wide range** of appropriate teaching points to support participants to perform correct techniques for chosen sports skill • a **wide** range of appropriate drills and conditioned practices to develop participants' technique for chosen sports skill • **consistently** provides appropriate support to participants when taking part in sports drills and conditioned practices to improve their techniques for a chosen sports skill.

Marking grid – Component 2

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 1: Components of fitness Learning outcome A: Understand how different components of fitness are used in different physical activities				
0 marks	1 – 3 marks	4 – 6 marks	7 – 9 marks	10 – 12 marks
No rewardable material	**Limited** application of knowledge and understanding of physical fitness and skill-related components of fitness and their impact on performance in a specific physical activity. Evidenced through: • a **basic** account of the use of the components of fitness in the given physical activity with **some omissions** • a **basic** account of the impacts of the components of fitness on performance in the given physical activity.	**Adequate** application of knowledge and understanding of physical fitness and skill-related components of fitness and their impact on performance in a specific physical activity. Evidenced through: • a **partially developed** account of the use of the components of fitness in the given physical activity with **few omissions** • a **partially developed** account of the impacts of the components of fitness on performance in the given physical activity.	**Good** application of knowledge and understanding of physical fitness and skill-related components of fitness and their impact on performance in a specific physical activity. Evidenced through: • a **mostly developed** account of the use of the components of fitness in the given physical activity with **minor omissions** • a **mostly developed** account of the impacts of the components of fitness on performance in the given physical activity.	**Comprehensive** application of knowledge and understanding of physical fitness and skill-related components of fitness and their impact on performance in a specific physical activity. Evidenced through: • a **well-developed** account of the use of the components of fitness in the given physical activity with **no omissions** • a **well-developed** account of the impacts of the components of fitness on performance in the given physical activity.

Mark Band 0	Mark Band 1	Mark Band 2	Mark Band 3	Mark Band 4
Task 4: Improving participants' sporting skill (written) Learning outcome C: Demonstrate ways to improve participants sporting techniques				
0 marks	1 – 3 marks	4 – 6 marks	7 – 9 marks	10 – 12 marks
No rewardable material	**Limited** application of knowledge and understanding of planning a drills and conditioned practices for a chosen sport skill. Evidenced through: • **basic** plan with **little** relevance to the chosen sport skill • **basic** account to justify the choices of activities included in drills and conditioned practices with **little** relevance to the techniques required for the chosen sport skill.	**Adequate** application of knowledge and understanding of planning a drills and conditioned practices for a chosen sport skill. Evidenced through: • **partially detailed** plan with **some** relevance to the chosen sport skill • **partially developed** account to justify the choices of activities included in drills and conditioned practices with **some** relevance to the techniques required for the chosen sport skill.	**Good** application of knowledge and understanding of planning a drills and conditioned practices for a chosen sport skill. Evidenced through: • **mostly detailed** plan which is **mostly** relevant to the chosen sport skill • **mostly developed** account to justify the choices of activities included in drills and conditioned practices which is **mostly** relevant to the techniques required for the chosen sport skill.	**Comprehensive** application of knowledge and understanding of planning a drills and conditioned practices for a chosen sport skill. Evidenced through: • **fully detailed** plan with **specific** relevance to the chosen sport skill • **fully developed** account to justify the choices of activities included in drills and conditioned practices with **specific** relevance to the techniques required for the chosen sport skill.

BTEC Sport Component 3 Key content Breakdown Learning Aim A,B and C

Physical Fitness
1. Body Composition
2. Aerobic Endurance
3. Speed (A/P/E)
4. Strength
5. Flexibility
6. Muscular Endurance

Skill - related Fitness
1. Co-ordination
2. Reaction time
3. Agility
4. Balance
5. Power

Basic Principles of Training

Frequency – How often do you train? (How many times a week)

Intensity – How hard do you train? (Heart rate/pyramid, BPM, BORG scale RPE)

Time – How long you train for? (min. 30mins)

Type – What type of training method (e.g. weight, circuit, interval…?)

Additional Principles of Training

Specificity – Training specific to the individual needs of athlete (Sport, Position, Component of fitness, Age, Gender)

Progressive Overload – Make training gradually harder so body gradually improves and adapts (increase *FREQUENCY/INTENSITY/TIME)*

Adaptation – Body adapts in response to training (gets stronger because of strength training etc.)

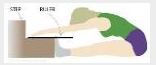
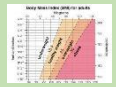
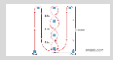
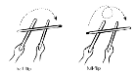
Rest and Recovery – Allows adaptation to take place and to avoid injuries due to fatigue/tiredness (have rest days)

Reversibility – Body will reverse back if training is stopped for a prolonged time (illness, injury, and motivation)

Variation – Training must be varied to avoid boredom (use different *TYPEs* of training methods)

Individual Differences / Needs – Programme's must be designed to meet the need of the individual

Fitness Tests

Aerobic Endurance	Multi Stage Fitness Test (Ml/Kg/Min)	Yo –Yo test (Ml/Kg/Min)	Harvard Step Test (Fitness Index Score)	12 minute Cooper Run or swim (Metres travelled)
Muscular Endurance	One - minute Press Up test (Reps /Min)	One - minute Sit up test (Reps /Min)	Timed plank test (Seconds)	
Flexibility	Sit and Reach Test (Cm)	Calf muscle Flexibility Test (Cm)	Shoulder flexibility Test (Cm)	
Speed	30 metre Sprint Test (Seconds)	30 metre flying sprint (Seconds)		
Muscular Strength	Grip Dynamometer (Kg)	1 Rep Max (Kg)		
Body Composition	BMI (Body Max Index) (Kg/M2)	BIA (Bioelectrical Impedance Analysis) (Ohms)	Waist to Hip ratio (W/H)	
Agility	Illinois Agility Run Test (Seconds)	Agility T Test (Seconds)		
Balance	Stork Stand Test (Seconds)	Y Balance Test (Cm)		
Coordination	Alternate-Hand Wall-Toss test (Reps)	Stick flip coordination test (Points)		
Power	Vertical jump test (Cm)	Standing long/broad jump (Cm)	Margaria-Kalamen power test (Kg/M/S)	
Reaction time	Ruler drop test (Cm)	Online reaction time test (reaction test timer) (Milliseconds)		

Effects of training key words – Adaptations, Hypertrophy, Heart Rate, Respiration, Ligaments, Tendons, Muscular System, Skeletal System, Lactic Acid, Capillarisation, Alveoli Range of Movement,

Provision Types Key words – Public, Private, Voluntary – **Advantages and Disadvantages**

Warm Ups and Warm Downs – How? Why? What? **Linked to relevant Component of Fitness**

Importance of Testing to performers and Coaches

Baseline data for performance monitoring, Information to aid programme design and structure, Results used for SMARTER goal setting

Requirements for administration of each fitness test

Pre-test procedures

(consent/calibration of equipment)

Confirmation of test requirements, Accurate measurement, Normative comparative data to interpret results, All safety requirements are taken, Reliability / Validity / Practicality

Interpretation of test results

Comparison / Analysis / Evaluation / Conclusion / Justification / Action

Exercise Intensity and how it can be determined

Max H/R = 220 - Age

BORG Scale – Rating of Perceived Exertion (RPE)

RPE x 10 = HR (BPM)
I.E. Level 13 x 10 =130bpm
'Somewhat hard'

7	very, very light
8	
9	very light
10	
11	fairly light
12	
13	somewhat hard
14	
15	hard
16	
17	very hard
18	
19	very, very hard
20	

Used to measure performance when precise equipment is not available.

Training Zones

Aerobic – 60-85%
This is the recommended training zone for cardiovascular health and fitness.
When working above this level your body will produce energy anaerobically without the presence of Oxygen for short periods of time.

Types of Training

Aerobic Endurance

Continuous
Fartlek
Interval
Circuit

Flexibility

Static Active
Static Passive
Proprioceptive
Neuromuscular
Facilitation (PNF)

Muscular Endurance

Free Weights and fixed resistance machines
High Rep / Low Loads
Circuit Training

Muscular Strength Training

Free Weights and fixed resistance machines
High Loads / Low Reps

Speed

Acceleration Sprints
Interval Training
Resistance Drills

Agility
SAQ Training

Power
Plyometrics

Balance
Reduced base of support

Coordination
Linking training exercises

Reaction Time
External stimulus

COMPONENT 1 PREPARATION AND STRUCTURE

Assessment Key Words

Band 1
Limited
Basic
Little
Relevance
Adequate

Band 2
Partially Detailed
Partially Developed
Some Relevance

Band 3
Good
Mostly Detailed
Mostly Developed
Justified
Knowledge
Understanding
Evidence

Band 4
Comprehensive
Fully Evidenced
Fully Detailed
Specific
Chosen
Well Developed
Fully Justified

St Anne's Church of England Academy

Types of sport and physical activity:
Sports
Definition – Competitive activities that involve physical exertion, have rules and regulations and a National Governing Body.
Team sports
Individual sports.

Other Types of sport and physical activity

Outdoor activities
Physical fitness activities

Provision for Sport and Physical activity

Public – Local Authority and School
Private - Profit
Voluntary – Common interest

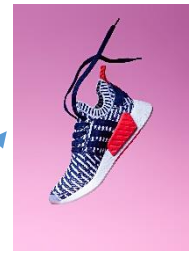
Assessment

Task 1 – LO A – 2 Parts
Increasing participation in regular sport or physical activity for different types of participant.
Task 2 LO B – 2 Parts
Equipment and technology required for participants to use when taking part in sport and physical activity
Task 3 LO C – 2 Parts
Preparing Participants to take part in physical activity
Each task graded 0 -12
Bands 1, 2, 3 and 4




Types of Participant



Clothing and Equipment



Barriers to participation

Cost of participation:
Access to sport or physical activity
Time
Personal Barriers
Cultural Barriers

Removing Barriers

Cost
Access
Time
Personal Barriers
Cultural Barriers

Technology

Clothing
Footwear
Sport Specific Equipment
Protection
Safety Equipment
Disability Assistive
Technology
Facilities
Officiating
Performance Analysis

Limitations of Technology

Time
Access
Cost
Accuracy
Usability

Preparing participants for Physical Activity – Warm Up

Planning
Physiological Response
Mobilisation Activities
Cardiorespiratory Response
Musculoskeletal Response
Types of Activities – Muscle Groupings
Physiological Response
Adaptation
Specificity

KS4 Religious Studies – Component 1: Issues of Human Rights

Language for Learning:

Censorship: Suppressing and limiting access to materials deemed unsuitable or a threat to security.

Discrimination: Treating people differently based on a prejudice.

Extremism: Supporting ideas that are far from what the majority deem reasonable.

Human rights: The basic entitlements of all human beings.

Personal conviction: Something a person feels strongly or believes in.

Prejudice: Judging people to be superior/inferior without cause.

Relative poverty: Standard of poverty measured in relation to the standards of society.

Absolute Poverty: An acute state of deprivation – not accessing basic needs.

Social justice: Challenging injustice to create fairness.

Human Rights and social justice.

In 1948 the **United Nations** issued the **Universal Declaration of Human rights**. This contained a set of 30 articles which set out the basic entitlements all humans should be granted. They are all based on the first one: **'All human beings are born free and equal in dignity and rights.**

Many countries have formally agreed to the declaration and when any of the articles are broken, governments and international agencies such as **Amnesty International** step in to try and persuade the country to restore human rights.

Many people actively support human rights in an attempt to create **social justice** – a fair and just relationship between the individual and society. This often involves governments and agencies working together but can also include individuals fighting for a **personal conviction;** people like **Malala Yousafzau, Martin Luther King** and **Oscar Romero** campaigned tirelessly for social justice, even putting their own lives at risk.

Censorship, freedom of expression and extremism.

In the UK and Europe, people are free to express their views about any religion unless the content is likely to incite violence or discrimination. However, some people think that people should not be able to express views that cause offence; this would be **censorship. (CASE STUDY: CHARLIE HEBDO MAGAZINE).**

Freedom of religious expression can be shown in many ways e.g. through clothes, telling others about your faith, inviting friends to religious activities. Sometimes one person's need to express their faith can lead to another person complaining.

For some believers, their faith is so important to them that they feel justified in acting in certain extreme ways to uphold their belief. This could cause harm to themselves or others and is known as **extremism.**

Prejudice and Discrimination.

Prejudice is about what we think but **discrimination** involves pre-judgements being put into action. Individuals and governments can all be guilty of discrimination; throughout history governments have discriminated against groups of people by preventing them from: being able to take certain jobs, marry who they want, live in certain areas, vote etc.

Religious discrimination is the unequal treatment of an individual/group based on their beliefs. E.g. – name-calling and ridicule, attacks on places of worship, burning of sacred texts, not being able to wear symbols in public. **Islamophobia** is the most prevalent religious discrimination which is often based on stereotyped views of Muslims.

Racism is discrimination based on race or country of origin. Campaigns have successfully changed practices in many countries making racism illegal but there are still stories of racism occurring.

Issues of Wealth and poverty

Wealth in the UK is not evenly distributed – the wealthiest 5% of the population have 40% of the wealth; the poorest 20% have 8% of the wealth. People could acquire their wealth through many ways: high salaried jobs, starting their own business, inheritance, activities such as gambling or sometimes through criminal means such as fraud.

Poverty is used to describe someone living in extremely poor circumstances – this can be **relative poverty** or **absolute poverty**. Whilst the UK is generally a wealthy country, the charity Barnados suggests that there are 3.7 million children living in poverty. Children living in poverty are more likely to develop chronic illnesses and less likely to do well in education.

Fairtrade is a way that companies can be socially responsible and ensure that they do not exploit people. The products have been produced by small scale operations that meet fairtrade social, economic and environmental standards.

KS4 Religious Studies – Component 1: Issues of Human Rights

Muslim Beliefs: What should we do about these issues?

Muslims are obliged to oppose injustice and oppression no matter who the victim is. The worth and dignity of each human is a natural and absolute right; it is given by God and cannot be taken away by individuals or the state.

The **UMMAH** refers to the unity or brotherhood of Muslims all over the world; as all people are created by God then they are all equal and should be treated with dignity. Within the Ummah all Muslims are equal – rich or poor; the ummah promotes the welfare of all through supporting human rights.

Muslims support each other through giving **ZAKAH** (a duty charity payment) and **SADAQAH** (voluntary giving out of compassion); they encourage people to live a good life and oppose inequalities through joining organisations such as **Islamic Human Rights Commission** or **Islamic Relief**. Muslims believe that wealth is a gift from God and they will be judged by how they both acquire it and use it.

What does the Qur'an say?

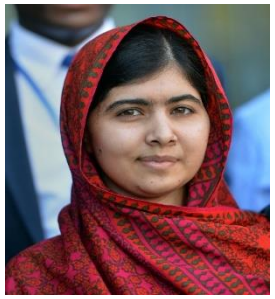
'…We decreed…that whoever kills a soul…it is as if he has slain mankind entirely. And whoever saves one – it is as if he had saved mankind entirely.'

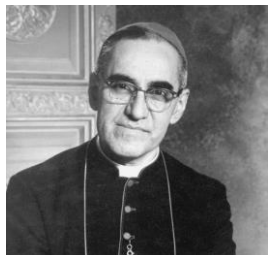
'We have created you from male and female and made you peoples and tribes that you may know one another.'

O you who have believed be persistently standing firm for God, witnesses in justice, and do not let the hatred of a people prevent you from being just.'

'And of His signs is the creation of the heavens and the earth and the diversity of your languages and your colours.'

'…righteousness is one who believes in God…and who gives wealth, in spite of love for it to relatives, orphans, the needy…





Christian beliefs: What should we do about these issues.

Christians believe in the Dignity of Human life, the concept that each life is of worth and value and should be treated as such. They believe that we are all children of God and we have been created in God's image so human life should not be mistreated or destroyed (**SANCTITY OF LIFE**.)

It is expected that all people are treated with unconditional love or **AGAPE**. This follows the example of Jesus and is a selfless love, that voluntarily suffers inconvenience, discomfort and even death for the benefit of another.

Many Christians believe they have a duty to take a stand against injustice. The concept of **Liberation Theology** is the idea that God has the power to change unjust situations; some Christians believe that this means it is right to stand up against governments that oppress people and challenge abuses of power. Some examples of people/organisations who follow these ideals are **Martin Luther King, Oscar Romero** and **Christian Aid.**

What does the Bible say?

'So God created mankind in his own image, male and female He created them.

'There is neither Jew nor Gentile, slave nor free, male nor female, for you are all one in Christ Jesus.

'When a foreigner resides among you in your land, do not mistreat them. The foreigner residing among you must be treated as your native born.'

'A woman should learn in quietness and full submission.'

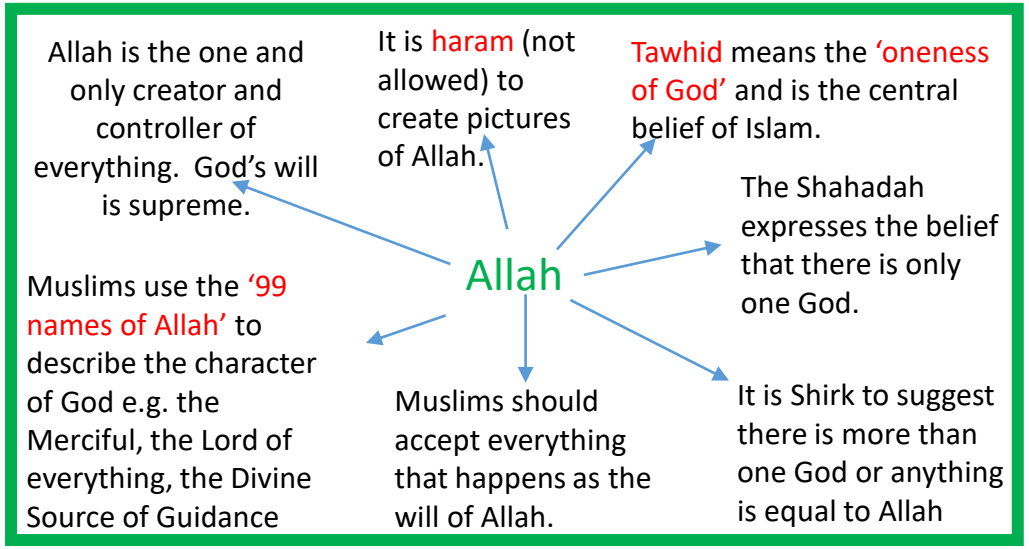
'No one can serve two masters…You cannot serve both God and money.'

Parables of the Sheep and the Goats and Lazarus and the Rich man.

Eduqas Religious Studies: Islamic beliefs and teachings.

Language for Learning:

- Sunni
- Shi'a
- Tawhid
- Shirk
- Al'Qadr
- Malaikah
- Akhirah
- Kutub
- Nubuwwah
- Usul ad-din
- Adalat
- Imamate
- Al Ma'ad
- Risalah
- The Qur'an
- The hadith
- The Sunnah
- Jannah
- Jahannam
- Barzakh
- Yawm ad-Din
- Laylat al-Qadr



The Five Roots of Usul ad-Din (Shia – approx. 15% of Muslims.

1. Tawhid: absolute faith in the oneness of Allah.
2. Adalat: Divine justice; Allah is always fair and just and will decide who goes to Jannah/Jahannam on the Day of Judgement.
3. Nubuwwah: The belief in Prophets.
4. Imamate: the belief that there were 12 Imams who were chosen by Allah to lead Islam after Muhammad (pbuh)
5. Al Ma'ad: All Muslims will be resurrected and judged by Allah at the end of time.

The 6 Articles of Faith (Sunni – approx. 85% of Muslims)

1. Tawhid: Absolute faith in the Oneness of Allah
2. Malaikah: belief in angels who are immortal beings made of light. Allah sends angels to pass on messages to his Prophets, they record our good/bad deeds, they care for us and welcome Muslims to Jannah or supervise them in Jahannam.
3. Kutub: Believe in the Holy books – the Qur'an is the direct word of Allah but there is also the Hadith, the Tawrat and the Sunnah.
4. Nubbuwah: believe in the Prophets who should be respected but not worshipped. Prophethood is called Risalah which means 'message'. There are 25 named prophets in the Qur'an, ending with the Prophet Muhammad (pbuh) who received the Qur'an from the Angel Jibril on the Night of Power.
5. Akhirah: the belief in the afterlife. When they die, Muslims will wait in Barzakh until a trumpet sounds to signal the Day of Judgement. At this time, the Angel of Death (Azra'il) will collect all souls and bring them in front of Allah, where 2 angels will question the soul to help Allah decide whether it will go to Jannah (Heaven) or Jahannam (Hell).
6. Al-Qadr: The belief in pre-destination; all that happens in part of Allah's plan for creation. This means that Allah has decided everything that will happen in the world and our lives are already set out. Suni Muslims believe that Allah has made it impossible for them to choose anything other than what he has chosen.

Eduqas GCSE: Component 3: Islamic practices.

Language for Learning:

Five Pillars of Islam
Shahadah
Salat
Zakat
Sawm
Hajj
Khums
Jihad – greater and lesser
Mecca
Amr-bil-Maroof
Shari'ah Law
Nahil Anril Munkar
Tawalia
Tabarra
Tawhid
Wudu
Ummah
Rak'ahs
Du'a
Eid-ul-Adha
Eid-u;-Fitr
Jummah

Worship

Muslims worship both at home and in the Mosque. Whilst praying Muslims will always face the Ka'ba in Mecca; they will use a qiblah to show them the correct direction to pray in.

In a Mosque	At home
Muslims will use a prayer mat and face Mecca. They will perform a series of rak'ahs when praying. Men and women pray separately Men are obliged to go to Friday prayers (Jummah)	Muslims will complete most of the set prayers (salat) at home. Some may have a set room for this. Many Muslims will complete additional, personal prayers called Du'a.

Festivals

1. Eid-ul-Adha: commemoration of sacrifice and marks the end of Hajj. It reminds Muslims of the trials of Ibrahim when he was asked to sacrifice his son Ismail. Muslims may attend prayers at the Mosque and traditionally would slaughter a lamb.
2. Eid-ul-Fitr: marks the end of Ramadan and is a day of thanksgiving to Allah. A special zakah is collected and Muslims will gather to eat and give gifts.
3. Ashura (Shi'a): commemorates the lives of their Imams and the Martyrdom of Husayn, the grandson of Muhammad.
4. Eid-ul Ghadeer (Shia): celebrates the appointment of Ali ibn Abi Talib as Muhammad's successor. Shi'a Muslims will give gifts and take part in ritual baths and celebratory meals.

The Five Pillars of Islam (Sunni)

1. Shahadah: Declaration of faith 'There is no God but Allah and Muhammad is his prophet.'
2. Salat: 5 daily prayers said by Muslims after a ritual washing known as wudu.
3. Zakah: obligatory charity of 2.5% of a Muslim's annual wealth.
4. Sawm: religious action of fasting during daylight hours during the month of Ramadan.
5. Hajj: pilgrimage to Mecca – all Muslims will try to complete this once in their lives.

Shi'a Muslims will also complete the 10 Obligatory acts:

1: Salat,
2: Sawm
3: Zakat
4. Hajj
5.Jihad
6. Khums: 20% annual tax on profits given to Islamic Educational charities.
7. Amr-bil.Marrof: encouraging people to follow Shari'ah law.
8. Nahil Anril Munkar: Discouraging people from doing wrong.
9. Tawalia: showing love to Allah and those who follow him
10. Tabarra: Disassociating with the enemies of Allah.

Jihad = Struggle

Greater Jihad	Lesser Jihad
The personal, inner struggle to be a good Muslim and follow the rules of Islam. This is seen as a constant duty and an act of worship. Muslims are individually responsible for their own actions.	Defending Islam from threats. 'Permission to fight has been given to those who are being fought, because they were wronged.' It has a very strict set of rules.

KS4 Photography–Year 10: Preparing you for GCSE Style Exam

There are 4 assessment objectives in GCSE Photography:

All 4 Assessment Objectives must all be covered in depth to achieve your potential.

To summarise:
AO1: Artist research and inspiration.
AO2: develop and refining both photoshoots and editing.
AO3: Recording observations-taking lots of photographs and making notes
AO4 Making final outcome/s or response.

Sentence starter for annotation:

- I am interested in the work of ……due to their use of……
- I am intrigued by the artist ……their use of ……creates an aesthetically pleasing outcome.
- The artist ……links well to my subject matter due to the way they……I intend to develop this characteristic in my own work by experimenting with ……
- I aim to use the characteristics of……within my work, to do this I am going to develop……

Photoshop Tools


Move tool


Rectangular Marquee tool


Polygonal Lasso tool


Quick selection tool- sees Shape


Magic Wand- sees colour


Crop


Eye dropper- selects colour


Spot healing brush


Healing brush

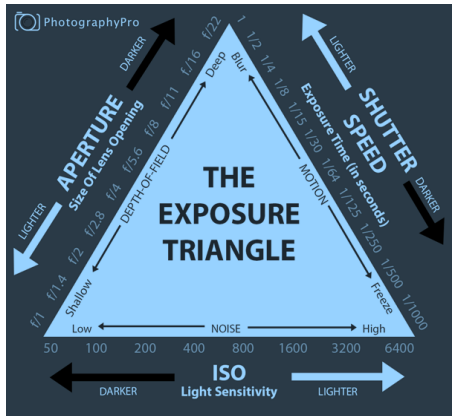

Brush tool


Gradient tool

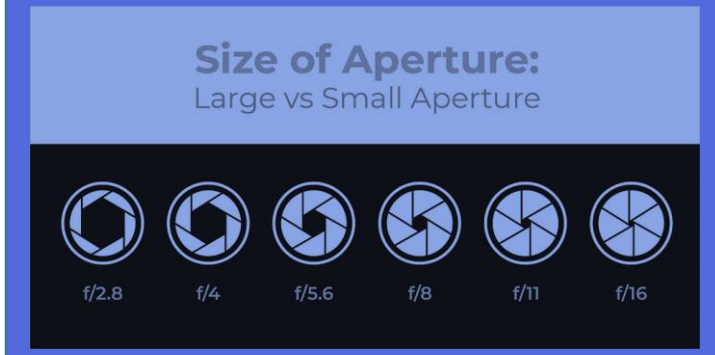

Eraser tool


Pencil tool

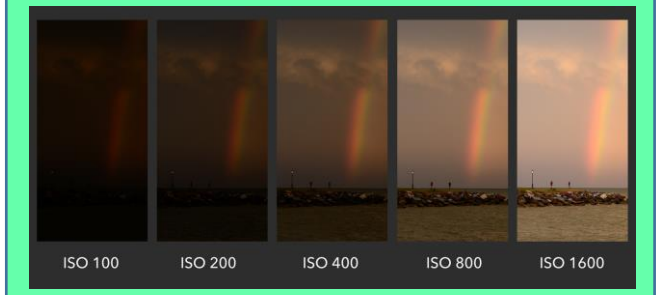
- ISO
- Aperture
- Shutter speed



Aperture can be defined as the opening in a lens through which light passes to enter the **camera**. It is expressed in f-numbers like f/1.4, f/2, f/2.8 and so on to express the size of the lens opening.

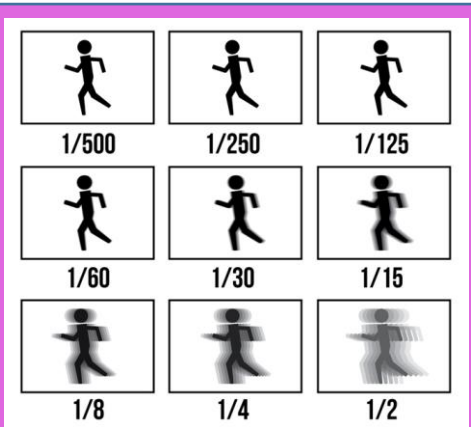


Camera settings



ISO is simply a camera setting that will brighten or darken a photo.

The higher the ISO setting, the less amount of light needed to achieve the correct exposure.
The lower the ISO setting, more light is needed to achieve correct exposure.



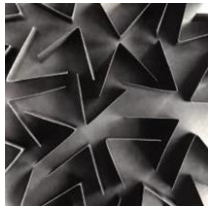
The **shutter speed**, is just how long that barrier stays open to let light into the image.

Shutter speed is how long an image is exposed to light — it can be milliseconds, or even minutes.

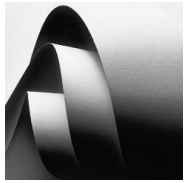
KS4 Photography GCSE –Year 10 Paper. Knowledge Organiser

Language for Learning:
Aesthetics
Accentuate
Angles
Aldo Tolino
Aesthetically
Camera
Characteristics
Composition
Contrasting
Darkroom
Develop
Digital
Ephemeral
Focus
Folding
Forms
Fresnel Lighting
Imagery
Inspiration
Inspired
Ion Zupcu
Jerry Reed
Jaromir Funke
Lighting
Montage
Paper structures
Shadows
Similarities
Subject Matter
Two Dimensional
Three Dimensional
Weaving

Previous exam question: Paper



Inspiration from artists



Ion Zupcu

Jerry Reed

Aim: To experiment with light, angles and composition.

Paper construction sculptures.

Gradient grip edits

Studio based photoshoot lighting, angles, and composition.

Questions to consider……

Why	Are we making paper constructions?
Explain why	It is important to experiment with paper construction. Lighting and angles for this exam question.
Why	Does lighting affect your outcomes of your shoot?
What	Do you need to think about in terms of composition, angles and light source during photoshoot?
Explain why	You may want to use levels and curves together with gradient map within your editing..
Why	Would you want to accentuate light and shadow?
How important Judgment:	Which images are best to take to editing process and why?

Which factors link to today's learning?
Light, composition, angles, construction

How does this learning link to the big picture?

Who are the key artist influence?

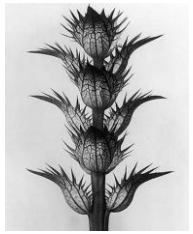
KS4 Photography GCSE –Year 10 Natural form. Knowledge Organiser

Language for Learning:
Aesthetics
Accentuate
Analogue
Airbrush
Angles
Andy Small
Aesthetically
Beatriz Milhazes
Camera
Characteristics
Composition
Contrasting
Develop
Digital
Focus
Forms
Gradient
Imagery
Imogen Cunningham
Inspiration
Inspired
Isolate
Karl Blossfeldt
Lighting
Macro
Shadows
Similarities
Subject Matter
Subtle

Natural Form

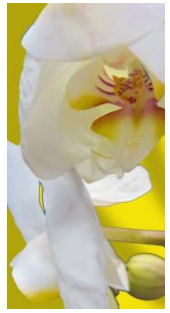
Imogen Cunningham

Inspiration from artists

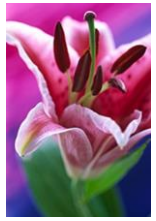


Karl Blossfeldt

Extension: Beatriz Milhazes



Aim: To experiment with light, angles and composition.



Andy Small

Compare and contrast

Studio based photoshoot lighting, angles, and composition.

- Gradient grip edits.
- Colour, airbrush and image isolation edits

Questions to consider……

Why	Are we looking at modern and traditional photographers?
Explain why	Karl wanted to build his own camera.
Why	Does lighting affect your outcomes of your shoot?
What	Do you need to think about in terms of composition, angles and light source during photoshoot?
Explain why	You may want to use levels and curves together with gradient map within your editing..
Why	Would you want to accentuate light and shadow?
How important Judgment:	Which images are best to take to editing process and why?

Which factors link to today's learning?
Light, composition, angles, templating, airbrushing.

Who are the key artists influences?

How does this learning link to the big picture?

Year 10 PSHE Term 1 – Health and Wellbeing and Living in the wider world

Language for Learning
Mental health
Emotional wellbeing
reframing negative thinking
Mental ill health
Support
Media stereotypes
Stigma
Misinformation
Budget
Budgeting
Income
Expenditure
Risk
Debt
Fraud
Cybercrime
Credit
Targeting advertising
gambling
Gamblers fallacy

Anti bullying week - November
Bullying behaviour is defined as repeated, negative behaviour that is intended to make others feel upset, uncomfortable or unsafe.

Income	**Money you earn.**
Expenditure	**Money you spend.**
Budget	**An amount of money.**
Budgeting	**Process of balancing income and expenditure.**
Saving	**the act of putting away money for future use.**
Savings	**The amount or value of the money that is being put to one side .**

DID YOU KNOW?

Debt is essentially borrowing against your future income. You are choosing to have money now that you will then repay out of your future income, but you will also pay an extra cost because you're borrowing it.

Definitions

Credit history – A record of loans you have taken out or credit card payments made or missed. This information is stored by credit reference agencies, who supply details of your credit history to financial institutions when you take out further loans.

Credit reference agency – An agency that holds information on adults, including public records (e.g. electoral register entries) and credit history information. They make this information available to lenders when you apply for credit, who then use the information to decide whether or not to offer you credit.

Credit report – A detailed report of an individual's credit history, current credit arrangements, address history and details of anyone you are financially linked with. When you apply for credit, the process usually involves you giving your permission to the credit provider (e.g. banks, credit card providers, mobile phone companies) to check your credit report.

Credit score – Lenders will use your credit history to calculate a credit score which reflects the level of risk in lending to you and the likelihood of you paying credit back. Each lender scores you differently, and secretly, so if one lender has rejected you, it doesn't automatically mean others will. After a rejection it's always important to check your credit report for any errors before applying for credit again.

Borrowing money

Borrowing is receiving money from someone else with the agreement that you will pay it back at a later date. You might borrow informally from friends and family or take out a formal loan with a written agreement from a bank or building society. If interest charges are added to money that is borrowed, you will pay more back than the initial amount borrowed.

Name:……

Developing Reading Strategies

St Anne's Church of England Academy

Chapter: ……

Complete these boxes to help you to understand a text better:

Activate Prior Knowledge
What I already know about the topic/story…
……
……
……
……
……
……

Predicting:
From the title of the chapter, I predict…
……
……
……
……
……
……

Summarising:
Use your images to write a summary of what happens in this chapter. You must use some quotes from the text.

……
……
……
……
……
……
……
……
……
……
……
……

Clarifying:
Draw 3 main events from this chapter and label them.

Questioning:
What questions would you ask the author about this chapter or what questions would you ask the characters?
……
……
……
……
……
……
……

Inferring:
What can we infer about the characters or the plot?
Example: "The text says that the boy *squelched into school after being caught in the rain*. From this, I can infer that he might have been frustrated in having to sit in wet clothes all morning."
……
……
……
……
……
……

Name:.....

Class:.....

1) **Activating Prior Knowledge**
2) **Predicting**
3) **Questioning**
4) **Clarifying**
5) **Summarising**
6) **Inferencing**

St Anne's Church of England Academy

1 What do you already know about the topic?

2 From the title, what do you think the text could be about?

3A *Answer the question that your teacher will have set you about the text here:*

TITLE OF ARTICLE

ARTICLE

6 Write the meaning of the highlighted lines in the text. How do you respond to this personally or how might it make someone feel?

3 B *Answer the question that your teacher will have set you about the text here:*

3 C *Answer the question that your teacher will have set you about the text here:*

5 Summarise what happens in the text.

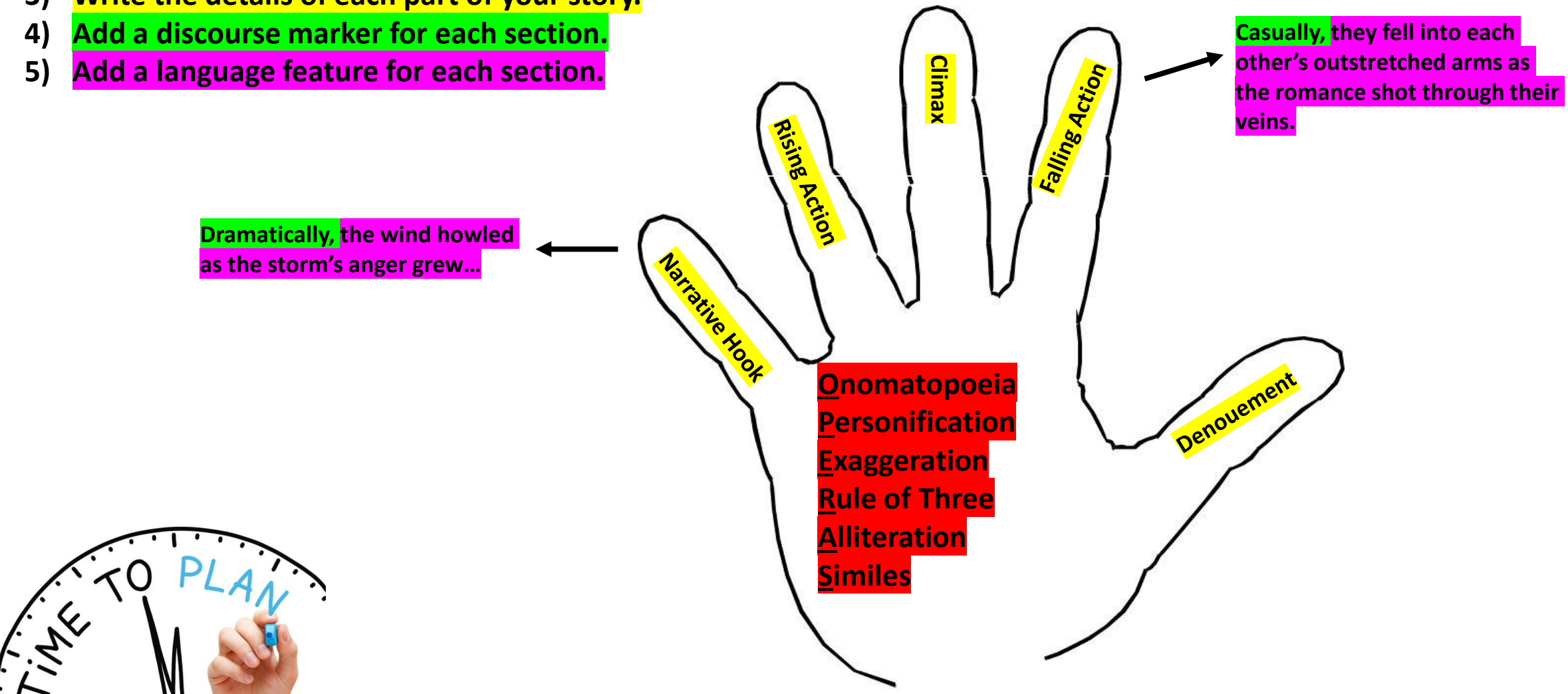
4 Choose 3 complex words and explain what they mean:

Planning for Narrative Writing in English:

Example of task: Write a story about an event that cannot be explained.

5-Part Plan:

1) **Draw around you hand.**
2) **List the language features you will need to use for this task.**
3) **Write the details of each part of your story.**
4) **Add a discourse marker for each section.**
5) **Add a language feature for each section.**



Planning for Persuasive Writing in English:

Example of task: **A music magazine is publishing an article about the best genre of music. Write an article that encourages people to select your favourite music genre.**

5 part plan (High 5):

1) Draw around your hand.
2) Write the correct language features for the task.
3) Structure your paragraphs.
4) Write the topic detail for each paragraph.
5) Add a discourse marker and write an example of the language feature that you will use.

Rock music is nostalgic (gives us good memories).

↓

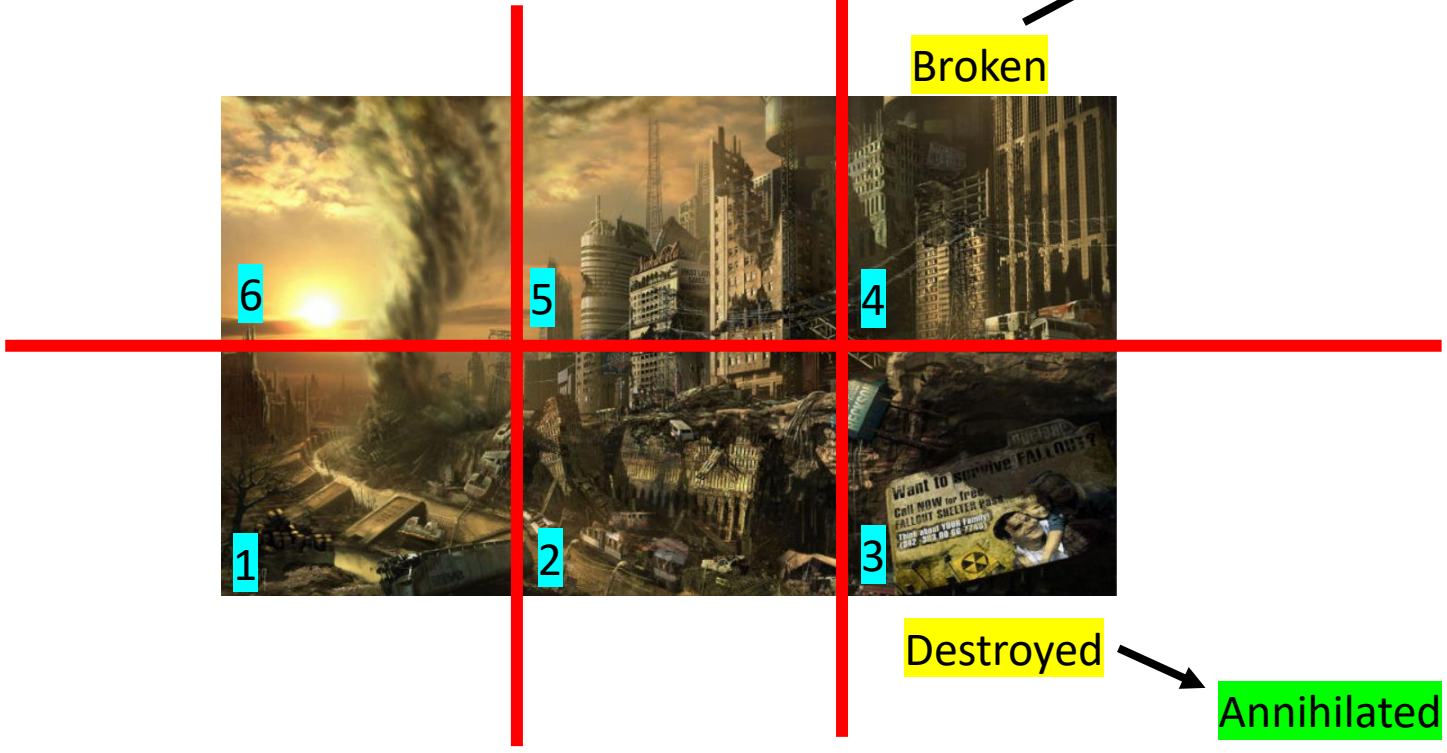
Additionally, 80% of people believe that…

Planning for Descriptive Writing

Example of task: Write a description of a devastated place, as suggested by this image:

5-Part Plan:

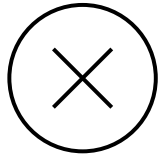
1) **Divide the image into 6.**
2) **Write 3 basic words for what you experience in each box.**
3) **Improve each word with Tier 2 vocabulary.**
4) **Add a language feature to each improve word.**
5) **Order your language features.**



Broken → Fragmented → Fragmented buildings moan and groan.

Destroyed → Annihilated → Humanity is annihilated, bleak and unrecognisable.

Increase your word power by replacing the phrases in the first column with the phrases in the second column:



Instead of this…		Use this…
The writer uses…		The writer **employs**…
Lots of different…		A **variety** of…
This shows me that…		This **suggests** to the **reader** that…
This means that…		This **reveals** that…
The people watching the play feel…		The **audience** feel…
Like when…		For **example**…
Also, the writer uses…		**Additionally,** the writer uses…
The play is about love…		The play **explores** the **theme** of love…
The book…		The **text/novel**…
The text is about…		**Throughout** the text… **Ultimately,** by the end of the text… **Perhaps** the writer is trying to communicate that…

Increase your Word Power by replacing simple Tier 1 colours with these interesting Tier 2 colours:

grey	shadow	graphite	iron	pewter	brown	mocha	coffee	peanut	carob	orange	tangerine	marigold	cider	rust	red	cherry	rose	jam	merlot
cloud	silver	smoke	slate	anchor	hickory	wood	pecan	walnut	caramel	ginger	tiger	fire	bronze	melon	garnet	crimson	ruby	scarlet	wine
ash	porpoise	dove	fog	flint	gingerbread	syrup	chocolate	tortilla	amber	apricot	clay	honey	carrot	squash	brick	apple	mahogany	blood	sangria
charcoal	pebble	lead	coin	fossil	tawny	brunette	cinnamon	penny	cedar	spice	marmalade	amber	sandstone	ochre	berry	currant	blush	candy	lipstick
green	leaves	juniper	sage	lime	blue	cyan	sky	navy	indigo	purple	mauve	violet	boysenberry	lavender	pink	rose	fuchsia	punch	blush
fern	olive	emerald	pear	moss	cobalt	teal	ocean	peacock	azure	plum	burgundy	lilac	grape	periwinkle	watermelon	flamingo	rouge	salmon	coral
shamrock	seafoam	pine	parakeet	mint	cerulean	lapis	spruce	stone	denim	blackcurrant	aubergine	jam	iris	heather	peach	strawberry	rosewood	lemonade	marshmallow
seaweed	gherkin	pistachio	basil	crocodile	berry	butterfly	admiral	sapphire	arctic	amethyst	raisin	orchid	mulberry	wine	bubble-gum	blossom	crepe	magenta	hot pink
yellow	canary	gold	daffodil	flaxen	tan	beige	camel	hazel wood	granola	white	pearl	alabaster	snow	ivory	black	ebony	crow	charcoal	midnight
butter	lemon	mustard	corn	medallion	oat	taupe	fawn	magnolia	sand	cream	eggshell	cotton	chiffon	salt	ink	raven	oil	grease	onyx
dandelion	fire	bumblebee	banana	butterscotch	sepia	latte	oyster	biscotti	parmesan	lace	coconut	linen	bone	daisy	pitch	soot	sable	jet	coal
goldenrod	honey	blonde	pineapple	sunrise	hazelnut	sandcastle	buttermilk	sand dollar	shortbread	powder	frost	porcelain	parchment	rice	leather	obsidian	spider	blackberry	bat

VALUES

ASPIRATION I believe that having high aspirations can motivate me to work hard and achieve my goals without excuses. I have high expectations in everything I do. Aspiration is valuable because it allows me to look beyond my current experiences and to understand, interpret and change the world for the better. *"For I know the plans I have for you, declares the Lord, plans to prosper and not to harm you, to give you hope and a future" Jeremiah 29:11*

INTEGRITY I believe that living my life by high moral standards and values is important. I understand how values are grounded in faith and biblical teaching. I commit to doing the right thing in all circumstances, even if this makes things more difficult for me and when no one is watching. I take responsibility for myself and my community to help it improve for everyone. *"Whoever walks in integrity walks securely" Proverbs 10:9a*

RESPECT I believe that mutual respect is the most important element in a kind and cohesive community. Respect, and self-respect, means that I take things seriously. I care about myself and others and aim to do good as I go. Respect is valuable because it allows me to understand the differences in our community and to know how to behave in the best interests of that community.
"Love your neighbour as you love yourself" Matthew 22:39

HARD WORK I believe that through hard work I can overcome challenges as I meet them. I am resilient and want to complete every task to the best of my ability. Hard work is valuable because it enables me to be the best I can be and the best I am meant to be. It builds the foundation of experience and learning for my future. *"With God all things are possible" Matthew 19:26*