



**Minsthorpe** Community College

# Knowledge Organiser Year 10 – Autumn Term 1

Name:

P&A group:

Knowledge Assessment: Thursday 18<sup>th</sup> December 2025 – Period 3

## Vision

**Minsthorpe Community College:** A place where everyone plays a part in strengthening our learning community through **motivation, commitment and care.**

Motivation ♦ Commitment ♦ Care



## Look

**Look at the information carefully.  
Read it three times.**  
It may help to **say** it as you read it.



## Cover

**Cover it with your hand or a piece of paper.**



## Write

**Write it out from memory.**



## Check

**Check what you have written matches the information exactly.  
Have you got it correct?  
If so, tick your work to show it is correct.**





## Correct

**If it doesn't match exactly, use a different coloured pen to correct it.  
Repeat.**  
When you get it 100% correct, move on to the **next** piece of information.





Subject: English	KPOW: Macbeth	Year 10: Autumn Term 1
<p><b>Week 2: Macbeth Act 1 Scene 2</b></p>	<p><b>Week 3: Macbeth Act 1 Scenes 3 and 4</b></p>	<p><b>Week 4: Macbeth Act 1 Scene 5</b></p>
<p><b>Macbeth the loyal patriot</b> King Duncan asks for a battle report from a wounded captain; he reports that although the rebel Macdonald had strong forces, Macbeth personally killed him. Facing a fresh assault by Norwegian troops, Macbeth and Banquo fought on undaunted. <b>Captain: "all's too weak for brave Macbeth, well he deserves that name."</b></p> <p><b>"his brandished steel smoked with bloody execution."</b></p> <p><b>"he unseamed him from the nave to th' chaps"</b></p>  <p><b>Duncan: "o valiant cousin, worthy gentleman"</b></p> <ul style="list-style-type: none"> <li>• Macbeth is depicted as a <b>heroic and loyal</b> warrior who is <b>devoted to his king and country</b>.</li> <li>• <b>Prolific</b> on the battlefield, harnessing his strength to protect nation from rebels.</li> <li>• <b>The verb "deserves"</b>- he has earned the praise he receives, which <b>elevates his status</b> and his reputation; he is the <b>epitome of loyalty</b> at the start. This <b>heightens the pity</b> we feel at his moral downfall later in the play.</li> <li>• It is <b>ironic that he is glorified and celebrated for fulfilling his national duty</b>, having executed the traitor- "merciless Macdonald" and <b>then becomes the traitor himself</b>.</li> <li>• Shakespeare shows how <b>any man can be corrupted</b> and yet treason will always be punished through the <b>cyclical structure</b>.</li> </ul>	<p><b>Macbeth's ambition is initially ignited</b> The witches appear to Macbeth and Banquo. They predict that Macbeth will be <b>"King hereafter"</b>. Macbeth is Initially curious: <b>"Stay you imperfect speakers, tell me more", "Speak, I charge you."</b></p> <ul style="list-style-type: none"> <li>• Imperatives convey <b>Macbeth's desire to be king</b>; he is intrigued and excited by the promise of power.</li> <li>• Witches are exploiting Macbeth's <b>flaw of impressionability</b>.</li> </ul> <p>Banquo is used as a <b>foil to highlight Macbeth's foolishness</b> because Banquo is cautious, rational and loyal to the king in his reaction to the prophecy that his sons will be king. He warns Macbeth that: <b>"the instruments of darkness tell us truths, win us with honest trifles, to betray's in deepest consequence."</b></p> <ul style="list-style-type: none"> <li>• Banquo <b>recognises the danger</b> of believing the witches and allowing them to manipulate him.</li> <li>• Banquo notices that Macbeth is <b>"rapt"</b> - consumed by the ideas they have suggested.</li> </ul> <p>Initially, in Act 1 Scene 3, Macbeth does say he will <b>allow destiny to decide his fate</b> - <b>"If chance will have me king, why, chance may crown me/ Without my stir."</b></p> <p>However, after Duncan declares Malcom as the next heir to the throne in A1S4, Macbeth admits he will take matters into his own hands - <b>"Stars, hide your fires;/ Let not light see my black and deep desires."</b></p> <ul style="list-style-type: none"> <li>• Wants the night sky to darken so that no light can be shed on his sinister thoughts, as he knows they are <b>"black"</b>, sinful and a <b>defiance of the natural order</b>.</li> </ul>	<p><b>Lady Macbeth invites supernatural forces and plans regicide</b> After receiving a letter from Macbeth, informing her of the witches' prophecies, Lady Macbeth says: <b>"Come you spirits that tend on mortal thoughts, unsex me here" "take my milk for gall"</b></p> <ul style="list-style-type: none"> <li>• Wants the spirits to <b>remove her typically feminine qualities and replace them with cruelty</b> so that she can achieve the ruthlessness necessary to kill the king because she perceives her femininity as an obstacle, as it is associated with weakness.</li> <li>• She wants to replace her <b>"milk", (a life-giving, nourishing source of life) with "gall" (deadly poison)</b> to allow her to commit regicide without hesitation or remorse.</li> </ul> <p>She plans to manipulate Macbeth to kill, with her words: <b>"That I may pour my spirits in thine ear"</b> and <b>"chastise with the valour of my tongue"</b>.</p> <ul style="list-style-type: none"> <li>• The verb <b>"pour"</b> shows how she will infect his mind with <b>her rhetoric (persuasive language)</b>.</li> <li>• She knows she can use her words as a tool to exploit <b>Macbeth's flaw of impressionability</b>.</li> </ul> <p>When Macbeth returns, LM tells him to <b>"Look like the innocent flower but be the serpent under't"</b>.</p> <ul style="list-style-type: none"> <li>• She commands him to appear harmless and welcoming to Duncan when he visits their castle, to disguise their evil intentions.</li> <li>• The imperative <b>"Look"</b> reveals she is the orchestrator of the plan- in control.</li> </ul> 

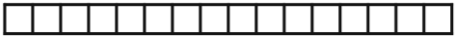
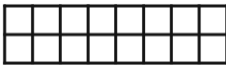
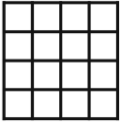

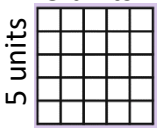





Subject: English	KPOW: Macbeth	Year 10: Autumn Term 1
<p><b>Week 5: Macbeth Act 1 Scene 7</b></p>	<p><b>Week 6: Macbeth Act 1 Scene 7 Continued</b></p>	<p><b>Week 7 and 8: Macbeth Act 2 Scene 2</b></p>
<p><b>Macbeth's doubts and loyalty</b> Macbeth lists reasons why he should NOT kill Duncan: He fears that regicide will <b>"return to plague the inventor"</b></p> <ul style="list-style-type: none"> <li>• He knows there will be <b>consequences for regicide</b></li> <li>• The verb "plague" means to cause <b>continual distress</b>, suggesting that he knows killing Duncan will cause his own anguish and infect his sanity, foreshadowing his mental torment in Act 3.</li> </ul> <p>He thinks the crown could be a <b>"poisoned chalice"</b></p> <ul style="list-style-type: none"> <li>• This implies that being king may look appealing, but the <b>promise of power might be deceptive</b>.</li> <li>• The adjective "poisoned" means that crown will bring pain to his now <b>virtuous soul and corrupt him morally, equating to a defiance of God's will</b>.</li> </ul> <p>Duncan has been <b>"so clear in his great office"</b></p> <ul style="list-style-type: none"> <li>• Macbeth knows that Duncan is the <b>rightful king</b>.</li> <li>• The adjective "great" shows his <b>deference and respect to Duncan</b>.</li> <li>• Macbeth is acutely aware that killing Duncan represents an <b>act against his duty as a loyal patriot</b>.</li> </ul> <p><b>"Deep damnation"</b></p> <ul style="list-style-type: none"> <li>• Knows he will go to <b>hell</b> as regicide is a sin that defies the Divine Right of Kings.</li> </ul> <p>At the end of this soliloquy, <b>Macbeth decides NOT</b> to kill Duncan and, when Lady Macbeth enters, declares <b>"We shall proceed no further in this business"</b>.</p>	<p><b>Lady Macbeth Persuades Macbeth</b> Enraged that Macbeth has changed his mind, Lady Macbeth attacks his masculinity and belittles him: <b>"Coward"</b> and <b>"When you durst do it then you were a man."</b></p> <ul style="list-style-type: none"> <li>• LM skilfully chooses her words to have the maximum impact on Macbeth. "Coward" insults Macbeth because <b>he is known for his courage and strength ("brave Macbeth")</b>.</li> <li>• He is <b>afraid of appearing weak</b>, so to protect his fragile, <b>misguided sense of masculinity</b>; he believes in the Jacobean, patriarchal idea that men should demonstrate <b>strength through physical violence</b>.</li> </ul> <p>She questions his love and loyalty to her: <b>"From this time such I account thy love"</b> and <b>"I would [...] Have plucked my nipple from his boneless gums/ And dashed the brains out had I so sworn/ as you have done to this."</b></p> <ul style="list-style-type: none"> <li>• LM suggests that killing Duncan will demonstrate Macbeth's love for her and <b>manipulates him by claiming that if he does not do it then he must not be loyal to her</b>.</li> <li>• The violence of her rhetoric when she claims she would have "dashed" the "brains" out of her own baby, rather than go against her word to Macbeth, is brutal and emphasises her desire for power over her own child.</li> </ul> <p>At the end of the scene, Macbeth, fatally, changes his mind and agrees to the murder: <b>"I am settled"</b>. <b>Ironically, in an attempt to prove his courage, he confirms his cowardice, as he is unable to maintain his own conviction in the face of her attack</b>.</p>	<p><b>Act 2 Scene 2: Macbeth has committed regicide</b> After committing regicide, Macbeth is instantly consumed by regret and guilt: <b>"Sleep no more, Macbeth does murder sleep."</b></p> <ul style="list-style-type: none"> <li>• He knows he has <b>corrupted his sanity and peace</b> as sleep is the <b>"chief nourisher in life's feast"</b>.</li> <li>• He knows he has denied himself the chance of redemption and <b>peace after death</b> in heaven.</li> </ul> <p><b>"Will all great Neptune's ocean wash this blood/ Clean from my hand?"</b></p> <ul style="list-style-type: none"> <li>• Instant <b>regret and desire to cleanse himself</b>.</li> <li>• Reference to the Roman god of the sea "Neptune"- reveals his inability to ask God for forgiveness now <b>he has gone against God and the Divine Right</b>.</li> <li>• He knows the <b>stain on his soul is permanent</b>.</li> </ul> <p>Lady Macbeth's reaction contrasts Macbeth's: <b>"a little water clears us of this deed."</b></p> <ul style="list-style-type: none"> <li>• "Little" shows how <b>she trivialises</b> the regicide and feels remorseless.</li> <li>• Ironic that later in Act 5, Lady Macbeth is haunted by the consequences, and she imagines the blood staining her hands – she is <b>misguided to believe she could wash away the guilt</b>.</li> </ul> <p><b>Change in Relationship:</b> Lady Macbeth: <b>"Why did you bring these daggers from the place? They must lie there. Go, carry them and smear the sleepy grooms with blood."</b> Macbeth: <b>"I'll go no more."</b></p> <p><b>Pivotal moment</b> in their relationship because Macbeth stands up for himself and admits he is afraid; he no longer attempts to prove his masculinity or protect his ego – <b>he has found his voice a little too late</b>.</p>

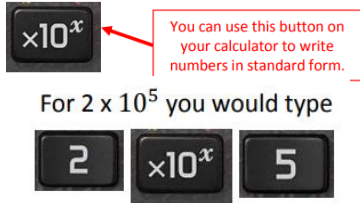




Subject: Maths	KPOW: Equations & Inequalities	Year 10: Autumn Term 1
<p><b>Week 2: F: Factors, Multiples and Primes.</b></p>	<p><b>Week 3: H &amp; F: Powers and Roots</b></p>	<p><b>Week 4: H: Surds and Irrational Numbers.</b></p>
<p><b>Factors</b> Factors are numbers we can multiply to get the target number:</p> <p style="text-align: center;"><math>16 \times 1 = 16</math></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p><math>2 \times 8 = 16</math></p>  </div> <div style="text-align: center;">  <p><math>4 \times 4 = 16</math></p> </div> </div> <p>There are 5 factors of 16: 1, 16, 2, 8 and 4.</p> <p><b>Common factors</b> The factors of 15 are: 1, 15, 3 and 5. The factors of 40 are: 1, 40, 2, 20, 4, 10, 5 and 8. The common factors of 15 and 40 are: 1 and 5. The <b>Highest Common Factor (HCF)</b> of 15 and 40 is 5.</p> <p><b>Prime numbers</b> Prime numbers have exactly 2 factors. The first ten prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29..</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>1 is not prime because it has only one factor.</p> </div> <p><b>Multiples</b> Multiples are lots of a number. The first five multiples of 3 are: 3, 6, 9, 12, 15, ....</p> <p><b>Common multiples</b> The first five multiples of 3 are: 3, 6, 9, <b>12</b>, 15, ... The first five multiples of 4 are: 4, 8, <b>12</b>, 16, 20, ... The common multiples will appear in both lists. The <b>Lowest Common Multiple (LCM)</b> of 3 and 4 is 12.</p>	<p><b>Index notation</b> We use index notation to describe repeated <b>products</b>. The index of a number is how many times to use the base number in the multiplication.</p> <div style="text-align: center;">  </div> <p><b>Square numbers</b> A square number is the result of multiplying a number by <b>itself</b>.</p> <div style="text-align: center;">  <p>5 units</p> <p><math>5^2 = 5 \times 5 = 25</math></p> </div> <p>The first 15 square numbers are: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 225.</p> <p><b>Cube Numbers</b> A cube number is the result when a number is multiplied by itself twice.</p> <div style="text-align: center;">  <p><math>3^3 = 3 \times 3 \times 3 = 27</math></p> </div> <p>The first 5 cube numbers are: 1, 8, 27, 64, 125.</p> <p><b>Roots</b> A square root of a number is a value that, when multiplied by itself, gives the number.</p> <p style="text-align: center;"><math>\sqrt{25} = 5 \text{ or } -5</math> <i>because</i> <math>5 \times 5 = 25</math> <i>and</i> <math>-5 \times -5 = 25</math></p> <p>A cube root is value that when multiplied by itself twice gives a given number.</p> <p style="text-align: center;"><math>\sqrt[3]{27} = 3, \quad \text{because } 3 \times 3 \times 3 = 27</math></p>	<p><b>Key Words</b> Rational Number: A number that can be made as a fraction of two integers e.g. 5, -7 or <math>\frac{3}{4}</math> Irrational Number: A real number that <b>cannot</b> be made by dividing two integers e.g. <math>\pi</math> Surd: A number inside a square root (or cube root etc) which cannot be further simplified. Recurring decimal: A decimal in which a figure or group of figures is repeated indefinitely e.g. 0.6666666....</p> <p><b>Surds.</b></p> <div style="text-align: center;"> <math display="block">\sqrt{a} \times \sqrt{b} = \sqrt{ab}</math> <math display="block">\sqrt{a} \div \sqrt{b} = \sqrt{\frac{a}{b}}</math> </div> <p>Any coefficients in front of the surds are dealt with separately. e.g. <math>3\sqrt{5} \times 4\sqrt{2} = 3 \times 4 \times \sqrt{5} \times \sqrt{2} = 12\sqrt{10}</math></p> <p>We can simplify surds by taking out a factor of the number with a square number. e.g. <math>\sqrt{50} = \sqrt{25} \times \sqrt{2} = 5\sqrt{2}</math></p> <p>Surds of the same value can be added and subtracted. e.g. <math>5\sqrt{2} + 4\sqrt{2} = 9\sqrt{2}</math></p> <p><b>Rationalising Surds</b> Rationalising a surd means to not have an irrational number on the denominator of the fraction. As most surds are irrational numbers we need to remove any surds from the denominator.</p>

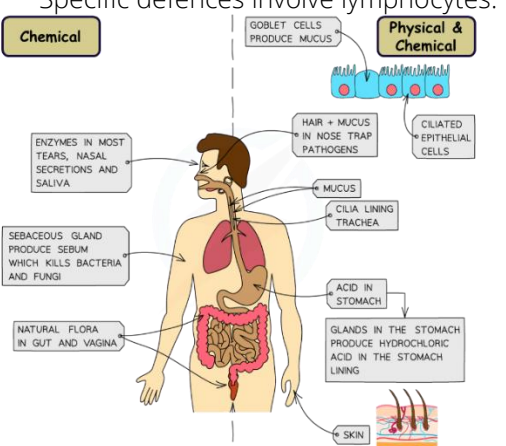




Subject: Maths	KPOW: Inequalities	Year 10: Autumn Term 1						
Week 5: H & F: Indices	Week 6: H & F: Standard Form	Week 7 & 8: H & F: Sequences						
<p><b>Law of Indices</b> Any number to the power of zero is 1. <math>a^0 = 1</math></p> <p>Any number to the power of 1 is itself. <math>a^1 = a</math></p> <p>When multiplying terms with the same base number, add the powers. <math>a^x \times a^y = a^{x+y}</math></p> <p>When dividing terms with the same base number, subtract the powers. <math>a^x \div a^y = a^{x-y}</math></p> <p>When a power is being raised to another power, multiply the powers together. <math>(a^x)^y = a^{xy}</math></p> <p><b>Negative Indices</b> A number raised to a negative power is the reciprocal of that number raised to the positive power. <math>a^{-x} = \frac{1}{a^x}</math></p> <p><b>Fractional Indices (Higher Only)</b> The numerator of a fractional power is an ordinary power. The denominator of a fractional power represents a root. <math>a^{\frac{x}{y}} = \sqrt[y]{a^x}</math></p>	<p>Standard Form is a system used to write very big and very small numbers: <math>a \times 10^x</math> Where <math>1 \leq a &lt; 10</math> and x is an integer.</p> <table border="1" data-bbox="813 376 1451 480"> <thead> <tr> <th>Examples</th> <th>Non-examples</th> </tr> </thead> <tbody> <tr> <td><math>3.2 \times 10^4</math></td> <td><math>0.8 \times 10^4</math></td> </tr> <tr> <td><math>1 \times 10^{-12}</math></td> <td><math>7.5 \times 10^{0.8}</math></td> </tr> </tbody> </table> <p>To convert an ordinary number into standard form, we need to use a power of 10. <math>12000 = 1.2 \times 10 \times 10 \times 10 \times 10 = 1.2 \times 10^5</math> <math>0.0054 = 5.4 \times 10^{-1} \times 10^{-1} \times 10^{-1} = 5.4 \times 10^{-3}</math></p> <p><b>Calculator Skills</b></p>  <p>For <math>2 \times 10^5</math> you would type</p> <p><b>Multiplying and Dividing in Standard Form</b> We can use laws of indices to multiply or divide two number written in standard form.</p> <p>E.g. <math>(8 \times 10^6) \div (2 \times 10^4)</math> <math>= (8 \div 2) \times (10^6 \div 10^4)</math> <math>= 4 \times 10^2</math></p>	Examples	Non-examples	$3.2 \times 10^4$	$0.8 \times 10^4$	$1 \times 10^{-12}$	$7.5 \times 10^{0.8}$	<p><b>Sequence:</b> A list of numbers that follow a rule. A term is a number in the sequence. The <b>term-to-term</b> rule is a description of how to calculate the next term.</p> <p><b>Types of sequences</b> In an <b>arithmetic sequence</b>, there is a common difference between the terms. For example: 4, 7, 10, 13, 16..... In a <b>geometric sequence</b>, there is a common ratio between the terms. For example: 2, 6, 18, 54, 162, 486....</p> <p><b>The nth term</b> The nth term is a formula for finding any term in the sequence. The nth term is the <b>position-to-term</b> rule. n represents the <b>position</b> of the number in the sequence. For an arithmetic sequence the <b>nth term</b> is:</p> <p style="text-align: center;"><b>nth term = common difference x n + 0<sup>th</sup> term</b></p> <p><b>Special Cases</b> <b>Triangular Numbers</b> 1, 3, 6, 10, 15, 21..... <b>Square Numbers</b> 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144.... <b>Cube Numbers</b> 1, 8, 27, 64, 125....</p> <p><b>Fibonacci Sequence:</b> Where each term is the sum of the two previous terms. 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89....</p>
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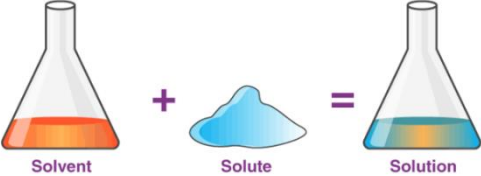




Subject: Biology	KPOW: Stem Cells	Year 10: Autumn Term 1
Week 2 & Week 3: Infection & Response	Week 4 & Week 5: Infection & Response	Week 6, Week 7 & Week 8: Infection & Response
<p><b>Communicable Disease &amp; Human Defences</b></p> <p><b>Vocabulary:</b> Vector - in this context, a vector is an organism that transmits a disease/parasite from one organism to another.</p> <p><b>Knowledge:</b> Communicable means that a microorganism can spread from one organism to another. Pathogens are microorganisms that cause disease. There are 4 groups of pathogens:</p> <ul style="list-style-type: none"> <li>• Bacteria</li> <li>• Virus</li> <li>• Protist</li> <li>• Fungi</li> </ul> <p>Pathogens have a simple life cycle where they infect a host, reproduce (replicate for viruses) then spread to a new host.</p> <p>Humans have non-specific and specific defences against pathogens:</p> <ul style="list-style-type: none"> <li>- Non-specific defences: Skin, Nose, Stomach, Trachea &amp; Bronchi and phagocytes.</li> <li>- Specific defences involve lymphocytes.</li> </ul> 	<p><b>Human Pathogens &amp; Vaccination</b></p> <p><b>Vocabulary:</b> Vaccination - gives a person immunity (protection) against a disease, without having to be infected and survive first.</p> <p><b>Knowledge:</b> If a pathogen gets past our defences, it can cause disease.</p> <p><b>Bacteria:</b> Prokaryotes that produce waste called toxins. These damage our cells and tissues.</p> <ul style="list-style-type: none"> <li>• Salmonella causes food poisoning with symptoms such as vomiting &amp; diarrhoea.</li> </ul> <p><b>Viruses:</b> Small particles (not cells) that enter the host's cells and uses it to produce 1000s of new virus particles. These then burst open the cell to infect more of the host's cells.</p> <ul style="list-style-type: none"> <li>• Measles is spread through breathing/coughing and causes a red skin rash &amp; fever.</li> </ul> <p><b>Protists:</b> Single-celled eukaryotes that act as parasites, living on, or in, a host. They produce waste that damage our cells and tissues.</p> <ul style="list-style-type: none"> <li>• Malaria is a protist that is transmitted by a vector (a female mosquito) that causes fever, vomiting &amp; diarrhoea.</li> </ul> <p><b>Vaccination:</b> gives immunity to a pathogen without having to be infected (get ill) by it.</p> <ol style="list-style-type: none"> <li>1. A small amount of dead/inactive pathogen is injected into the body.</li> <li>2. White blood cells (lymphocytes) respond by producing antibodies specific to the pathogen.</li> <li>3. Memory cells remain in the body.</li> <li>4. If reinfected by the same type of pathogen, white blood cells rapidly respond producing many antibodies to destroy it.</li> </ol>	<p><b>Drugs &amp; Developing Drugs</b></p> <p><b>Vocabulary:</b> Trials - in this context, clinical trials are where the effectiveness and safety of potential new medications are tested.</p> <p><b>Knowledge:</b> Before a new drug is available for people to use, it must first go through a vigorous testing process, usually lasting more than 10 years. There are 4 main stages in drug testing:</p> <ol style="list-style-type: none"> <li>1. <b>Preclinical Testing</b> <ul style="list-style-type: none"> <li>• A possible new drug is tested using computer models and human cells grown in a laboratory.</li> <li>• At this stage the drug is tested for <b>toxicity, efficacy</b> and <b>side effects</b> on a living cell.</li> </ul> </li> <li>2. <b>Animal Preclinical Testing</b> <ul style="list-style-type: none"> <li>• If a drug passes preclinical testing, it is next tested on two different living mammals.</li> <li>• At this stage the drug is tested for <b>toxicity &amp; side effects</b> on living tissues and organisms.</li> </ul> </li> <li>3. <b>Human Clinical Trials</b> <ul style="list-style-type: none"> <li>• If a drug passes animal testing, it is next tested on healthy human volunteers.</li> <li>• At this stage, the drug is tested for <b>efficacy, side effects</b> and <b>dosage</b>.</li> <li>• The next step is to carry out a <b>double-blind</b> trial: one group is given a <b>placebo</b> (identical substance, but has no active drug in it) and the other group has the drug being tested. The patients, doctors &amp; nurses do not know which group is which. This is to see if the drug works.</li> </ul> </li> <li>4. <b>Peer-Review</b> <ul style="list-style-type: none"> <li>• Independent scientists and researchers carry out the same research to see if they have the same results. This is to prevent false claims.</li> </ul> </li> </ol>

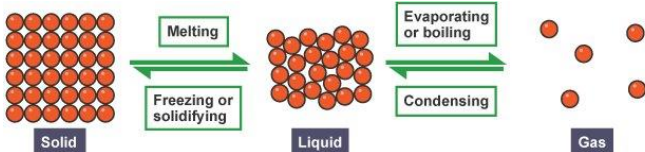
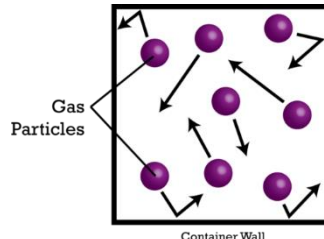




Subject: Chemistry	KPOW: Separating Mixtures	Year 10: Autumn Term 1
Week 2 & Week 3: Quantitative Chemistry	Week 4 & Week 5: Quantitative Chemistry	Week 6 & Week 7 & Week 8: Quantitative Chem
<p>Thermal decomposition of metal carbonates. <b>Vocabulary:</b> Thermal decomposition – the breaking down of a substance using heat. <b>Conservation of mass</b> – total mass of the reactants must equal the total mass of the products. <b>Knowledge:</b> A metal carbonate, when heated, will break down to produce a metal oxide and carbon dioxide gas. <b>General equation:</b> Metal carbonate → Metal oxide + Carbon dioxide <b>Word equation:</b> Copper carbonate → Copper oxide + Carbon dioxide <b>Symbol equation:</b> <math>\text{CuCO}_3(\text{s}) \rightarrow \text{CuO}(\text{s}) + \text{CO}_2(\text{g})</math> <b>Pin down:</b> Mass appears to be lost during reactions that produce gases. This is because mass is lost to the atmosphere and can't be weighed on a balance.</p> <p><b>Forming metal oxides.</b> <b>Vocabulary:</b> Oxidation – adding oxygen during a chemical reaction. <b>Knowledge:</b> If a substance like a metal reacts with oxygen, the mass of that substance will increase. <b>General equation:</b> Metal + Oxygen → Metal oxide <b>Word equation:</b> Copper + Oxygen → Copper oxide <b>Symbol equation:</b> <math>2\text{Cu}(\text{s}) + \text{O}_2(\text{g}) \rightarrow 2\text{CuO}(\text{s})</math> <b>Pin Down:</b> Mass appears to increase during reactions that have gases as reactants. This is because gases can not be weighed on a balance and are present all around us in the atmosphere. Gases do have mass so adding them to a metal will increase the metal's mass. <b>Mass is always conserved during chemical reactions as atoms are not created or destroyed.</b></p>	<p>Moles and using moles to balance equations. <b>Vocabulary:</b> Mole – A mole is the amount of any substance that contains Avogadro's number of particles (<math>6.02 \times 10^{23}</math>). <b>Knowledge:</b> Chemical amounts are measured in mass. The mass of 1 mole of any substance in grams is numerically equal to its relative formula mass. So, for <math>\text{H}_2\text{O}</math> (<math>M_r = 18</math>), 1 mole has a mass of 18g. 1 mole of a substance contains the same number of atoms as 1 mole of any other substance. The number of particles in a mole of a given substance is Avogadro's number. <b>Equation:</b> Moles (mol) = Mass (g) ÷ <math>M_r</math> (g/mol). <b>Example:</b> A student measures 76g of <math>\text{CaCO}_3</math>. Calculate the number of moles. <b>Answer:</b> Moles = <math>76 \text{ g} \div (40 + 12 + (3 \times 16))</math> <math>= 76 \text{ g} \div 100 = 0.76 \text{ mol}</math></p> <p><b>Reacting masses.</b> <b>Vocabulary:</b> Molar ratio - It's the ratio between the amounts in moles of any substances in a chemical reaction. <b>Knowledge:</b> Let's take the following reaction as an example: <math>1\text{Mg}_{(\text{s})} + 2\text{HCl}_{(\text{aq})} \rightarrow 1\text{MgCl}_{2(\text{s})} + 1\text{H}_{2(\text{g})}</math> The numbers in front of the elements or compounds represents the moles, so there is 1 mole of magnesium (Mg) and two moles of hydrochloric acid (HCl), we say this is a molar ratio of 1:2. <b>Example:</b> A student has 12g of magnesium (Mg), what mass of magnesium chloride (<math>\text{MgCl}_2</math>) will they produce? <b>Pin down:</b> Moles of HCl = mass ÷ <math>M_r</math>, <math>12 \text{ g} \div 24 \text{ g/mol} = 0.5 \text{ mol}</math>. The ratio from Mg:<math>\text{MgCl}_2</math> is 1:1 so you will also have 0.5 mol of <math>\text{MgCl}_2</math>. Mass of <math>\text{MgCl}_2</math> = <math>M_r \times \text{Moles} = 95 \text{ g/mol} \times 0.5 \text{ mol} = 47.5 \text{ g}</math>.</p>	<p>Concentration of solutions. <b>Vocabulary:</b> A solid substance that dissolves in a liquid is called a <b>solute</b>; the liquid is called a <b>solvent</b> and the two when mixed together form a <b>solution</b>.</p>  <p><b>Knowledge:</b> Concentration simply refers to the amount of solute there is in a specific volume of the solvent. The greater the amount of solute in a given volume, the greater the concentration. <b>Calculating concentration.</b> <b>Vocabulary:</b> Concentration can be defined by using the following expression: concentration (<math>\text{g/dm}^3</math>) = mass of solute (g) ÷ volume (<math>\text{dm}^3</math>). <b>Knowledge:</b> Volume in chemistry is measured in decimetres cubes or <math>\text{dm}^3</math>. You may be asked to convert <math>\text{cm}^3</math> to <math>\text{dm}^3</math> and to do this simply divide by 1000. <b>Example:</b> A student dissolved 10 g of sodium hydroxide, NaOH, in 2 <math>\text{dm}^3</math> of distilled water. Calculate the concentration of the solution. <b>Answer:</b> <b>Step 1:</b> Write the relevant information down: Mass = 10 g and Volume = 2 <math>\text{dm}^3</math> <b>Step 2:</b> Write down the relevant equation: concentration (<math>\text{g/dm}^3</math>) = mass of solute (g) ÷ volume (<math>\text{dm}^3</math>). <b>Step 3:</b> Substitute the values and calculate the concentration = <math>10 \text{ g} \div 2 \text{ dm}^3 = 5 \text{ g} / \text{dm}^3</math></p>

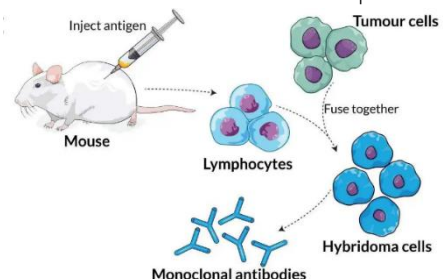
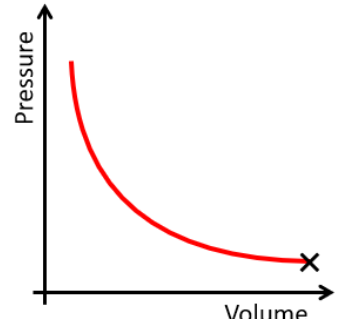
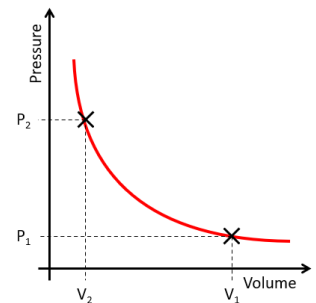




Subject: Physics	KPOW: Density	Year 10: Autumn Term 1
Week 2 & Week 3: Particle Model	Week 4 & Week 5: Density and investigation	Weeks 6, 7 & 8: Gases and Heating Up
<p><b>Particle Model</b>            Particles are arranged differently and move differently in each state of matter:</p> <ul style="list-style-type: none"> <li><b>Solid:</b> particles are all <b>touching</b> and arranged in a <b>uniform</b> pattern (neat). They can only <b>vibrate</b> in a fixed position due to the <b>strong</b> forces.</li> <li><b>Liquid:</b> the forces between particles are not as strong, so particles can <b>move around</b> each other a bit more. This leads to a <b>random</b> arrangement, with a few <b>gaps</b> between some particles.</li> <li><b>Gas:</b> the forces between the particles are so <b>weak</b> that particles can move individually of each other. This means that particles move around in <b>random</b> directions, at a range of <b>speeds</b>. Gases can be <b>compressed</b> (squashed) and will <b>fill the space</b> in the room due to their random motion.</li> </ul> <p><b>Changes of State</b></p>  <p>To go from solid to liquid to gas, particles need to be <b>given energy</b> (by <b>heating</b> them up), which is why they start <b>moving more</b> and more.</p> <p>When going from gas to liquid to solid, the particles <b>lose</b> energy (the substance <b>cools down</b>), which is why the particles <b>move less</b>, and start coming <b>closer</b> together.</p>	<p><b>Density</b>            The <b>density</b> of an object is a measure of how much <b>mass</b> is contained in a certain <b>volume</b>. A denser object would feel heavier in your hand because the mass is concentrated in a small volume.</p> <p style="text-align: center;"><b>Density = Mass ÷ Volume</b></p> <p>Density is calculated using the formula:            With the following units:</p> <ul style="list-style-type: none"> <li><b>Mass:</b> g or kg</li> <li><b>Volume:</b> m<sup>3</sup> or cm<sup>3</sup></li> <li><b>Density:</b> g/cm<sup>3</sup> or kg/m<sup>3</sup></li> </ul> <p><b>Converting units of mass</b>            Mass can be used in both <b>grams (g)</b> or <b>kilograms (kg)</b>, however you might need to go from one to the other.</p> <p style="text-align: center;"><b>1,000g = 1kg</b></p> <p>Which means that to go from grams to kilograms, you should <b>divide</b> the number by 1,000, and to go from kilograms to grams, you should <b>multiply</b> the number by 1,000.</p> <p><b>Calculating Density</b>            To calculate the density of an object, you must measure its <b>mass</b> (using a mass <b>balance</b>), then measure its <b>volume</b>:</p> <ul style="list-style-type: none"> <li><b>Regular shape:</b> measure the <b>dimensions</b> of the object with a ruler, then use a <b>formula</b> to find the volume.</li> <li><b>Irregular shape:</b> place the object in a <b>displacement can</b> filled with <b>water</b> and measure the volume of water <b>displaced</b> (same as the volume of the object).</li> </ul>	<p><b>Particle Motion in Gases</b>            Due to the random movement of particles in a gas, they <b>collide</b> with each other as well as with the walls of their container. Every time a particle hits the wall, it applies a small <b>force</b> on the wall. The amount of force applied on a certain surface of the wall is called <b>gas pressure</b>, and if it increases too much it can cause the container to explode. Anything which causes <b>more collisions</b> will increase gas pressure. This includes:</p> <ul style="list-style-type: none"> <li>Adding <b>more particles</b> to the container.</li> <li><b>Increasing the temperature</b> (because the particles will move faster).</li> <li>Making the container <b>smaller</b> (because the particles will have less space to move around).</li> </ul>  <p><b>Heating Up and Cooling Down</b>            When a substance is in the right conditions, it can undergo a <b>change of state</b>. Melting and boiling <b>absorb</b> energy from the surroundings (<b>endothermic</b>), whereas freezing and condensing <b>release</b> energy to the surroundings (<b>exothermic</b>). The amount of energy transferred can be calculated using:</p> <p style="text-align: center;"><b>Energy = Mass x Specific Latent Heat</b></p> <p>Where energy is measured in J or kJ, mass is measured in kg, and specific latent heat is measured in J/kg or kJ/kg.</p>





Subject: Separate Science	KPOW: Concentration	Year 10: Autumn 1
<p><b>Week 2 to 8: Biology - Monoclonal Antibodies</b></p>	<p><b>Week 2 to 8: Chemistry - Gas Volume</b></p>	<p><b>Week 2 to 8: Physics - Boyle's Law</b></p>
<p><b>Vocabulary:</b> Monoclonal antibodies are antibodies produced by a single clone of cells, consisting of identical antibody proteins.</p> <p><b>Knowledge:</b> Antibodies are Y-shaped proteins that have a region specific to an antigen on a cell/virus membrane. Monoclonal antibodies are identical to only one type of antigen.</p> <p><b>How monoclonal antibodies are made:</b></p> <ol style="list-style-type: none"> <li>1. The antigen you are wanting the specific antibodies to are injected into a mouse.</li> <li>2. The mouse's white blood cells (lymphocytes) respond by producing the antibodies.</li> <li>3. These lymphocytes are removed from the mouse and combined with a tumour cell to form a hybridoma.</li> <li>4. The hybridoma divides rapidly by mitosis, each identical cell produces the specific antibody.</li> <li>5. The antibodies are collected and purified for use.</li> </ol>  <p><b>Uses of monoclonal antibodies:</b></p> <ul style="list-style-type: none"> <li>• Pregnancy tests.</li> <li>• Lateral flow tests (e.g. COVID-19 tests).</li> <li>• Laboratory tests for hormones/drugs.</li> <li>• Identifying cells/molecules in the body.</li> <li>• Cancer treatment.</li> </ul>	<p><b>Vocabulary: Volume</b> – The amount of space a substance or space occupies.</p> <p><b>Knowledge:</b> At room temperature and pressure (RTP), which is approximately 20°C and 1 atmosphere pressure, 1 mole of any gas occupies 24 dm<sup>3</sup> (or 24,000 cm<sup>3</sup>).</p> <p><b>Equation:</b> Volume of gas (dm<sup>3</sup>) = moles of gas × 24</p> <p><b>Example:</b> What volume of hydrogen gas is produced when 0.5 moles of zinc reacts with hydrochloric acid?</p> $\text{Zn}_{(s)} + 2\text{HCl}_{(aq)} \rightarrow \text{ZnCl}_{2(aq)} + \text{H}_{2(g)}$ <p>From the equations 1 mole of Zn produces 1 mole of H<sub>2</sub>. So, 0.5 moles of Zn produces 0.5 moles of H<sub>2</sub>.</p> <p><b>Answer:</b> Volume = 0.5 × 24 = 12 dm<sup>3</sup>.</p> <p><b>Percentage yield and atom economy.</b></p> <p><b>Vocabulary: Percentage yield</b> tells you how much product you actually made compared to how much you could have made (theoretical yield), expressed as a percentage.</p> <p><b>Knowledge:</b> Percentage Yield = (Actual yield ÷ Theoretical yield) × 100. <b>Actual yield</b> = the amount of product you actually get from the reaction (in grams or moles). <b>Theoretical yield</b> = the maximum amount of product that could be formed from the reactants (calculated using balanced equations).</p> <p><b>Atom economy.</b></p> <p><b>Vocabulary: Atom economy</b> measures how much of the reactants end up as useful products. It's a measure of sustainability and efficiency.</p> <p><b>Knowledge:</b> Atom economy = (M<sub>r</sub> desired product ÷ Total M<sub>r</sub> of all products) × 100. High atom economy means less waste &amp; a more cost-effective process.</p>	<p>In a gas, the pressure is <b>inversely proportional</b> to the volume of the container. This means that as the volume decreases, the pressure increases.</p>  <p>Furthermore, it also means that the <b>ratio</b> between pressure and volume is always the <b>same</b> – for example, <b>doubling</b> the volume would <b>halve</b> the pressure.</p> <p>This relationship is described by the following equation:</p> <p><b>Pressure x Volume = constant</b></p> <p>Where pressure is measured in Pascals (Pa), volume is measured in metres cubed (m<sup>3</sup>), and the constant is measured by the product of both (Pam<sup>3</sup>).</p>  <p>This also means that if either the pressure or the volume changes, you can find the other <b>missing value</b> using calculations, as the constant is by definition always the same. This gives us a <b>second equation:</b></p> $P_1V_1 = P_2V_2$





Subject: French Higher	KPOW: Travel & Tourism Speaking	Year 10: Autumn Term 1
<b>Week 2: Adjectives</b>	<b>Week 3: Feminine Nouns</b>	<b>Week 4: Feminine &amp; Masculine Nouns</b>
<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>belge (Belgian)  chinois (Chinese)  étroit (narrow / tight)  francophone (French-speaking)  marocain (Moroccan)  mondial (worldwide / global)  occidental (western)  québécois (from Quebec)  suisse (Swiss)  vif (lively)  autour (around)</p>	<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>l'addition (bill)  l'Asie (Asia)  la circulation (traffic)  la direction (direction / management)  la durée (length / duration)  la foi (faith)  la frontière (border)  la météo (weather forecast)  la plainte (moan / complaint)  la pluie (rain)  la province (province)</p>	<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>la rivière (river)  la tournée (tour / round)  la vague (wave)  la valise (suitcase)  la vitesse (speed)  l'accueil (welcome / reception)  l'attentat (attack, assassination attempt)  l'est (east)  l'étage (floor)  le lac (lake)</p>
<b>Week 5 : Masculine Nouns</b>	<b>Week 6: Verbs</b>	<b>Week 7 &amp; Week 8: Verbs Continued</b>
<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>Londres (London)  le manteau (coat)  le métro (underground / metro)  le paysage (landscape, scenery, countryside)  le plat (dish)  le poulet (chicken)  le retard (delay)  le séjour (stay)  le sol (floor, ground)  le verre (glass)</p>	<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>acheter (to buy)  apprendre (to learn)  arriver à (to manage/succeed in something)  communiquer (to communicate)  coûter (to cost)  découvrir (to discover)  dormir (to sleep)  manger (to eat)  partir (to leave)  perdre (to lose)  quitter (to leave)  rechercher (to look for)  rester (to stay)  retourner (to return)</p>	<p><i>Learn this vocab in addition to the Foundation &amp; Higher vocab:</i></p> <p>revenir (to come back)  rêver (to dream)  se situer (to be situated / take place)  sortir (to go out),  traduire (to translate)  traverser (to cross)  voler (to fly / steal)  voyager (to travel)  commander (to order)  contribuer (to contribute)  mériter (to deserve)  nager (to swim)  pratiquer (to do / play &amp; activity)  profiter de (to make the most of)</p>





Subject: French Foundation	KPOW: Travel & Tourism Speaking	Year 10: Autumn Term 1
<b>Week 2: Adjectives</b>	<b>Week 3: Feminine Nouns</b>	<b>Week 4: Feminine Nouns</b>
allemand (German) anglais (English) beau / belle / bel / beaux (beautiful) britannique (British) chaud (hot, warm) cher (expensive) espagnol (Spanish) étranger (foreign) français (French) froid (cold) historique (historic) propre (clean, proper, own) rapide (fast, quick) dehors (outside) vite (quickly, fast)	l'Angleterre (England) l'arrivée (arrival) la Belgique (Belgium) la boisson (drink, beverage) la campagne (countryside) la carte (menu, map, card) la chambre (bedroom) la côte (coast) la course (race, shopping) la cuisine (cooking, kitchen) la découverte (discovery) l'église (church) l'entrée (entrance, starter) la fête (party, festival) la ferme (farm, firm) la gare (station, railway station)	la glace (ice cream, ice) l'île (island) la langue (language, tongue) la mer (sea) la montagne (mountain) la mosquée (mosque) la natation (swimming) la neige (snow) la nourriture (food) la piscine (swimming pool) la place (room, space, square, place) la plage (beach) la porte (door) la sortie (exit) la promenade (walk) l'urgence (emergency)
<b>Week 5: Feminine &amp; Masculine Nouns</b>	<b>Week 6: Masculine Nouns</b>	<b>Week 7 &amp; 8: Masculine Nouns</b>
la viande (meat) la ville (town) la voiture (car) la vue (view) les frites (chips) l'argent (money) l'avion (aeroplane) le bateau (boat, ship) le bâtiment (building) le billet (ticket) le bord (edge, side) le brouillard (fog, mist, haze) le château (castle, palace) le ciel (sky) le défilé (parade, procession) le déjeuner (lunch) le départ (departure)	l'échange (exchange) l'endroit (place, spot) l'été (summer) l'étranger (foreigner, stranger, abroad) le fromage (cheese) l'habitant (resident) l'hiver (winter) le jardin (garden) le légume (vegetable) le lieu (place) le logement (accommodation) le magasin (shop) le marché (market) le musée (museum) le nord (north) l'ouest (west) le pain (bread)	le pays (country) le petit-déjeuner (breakfast) le pont (bridge) le printemps (spring) le projet (plan) le quartier (district, quarter) le repas (meal) le retour (return) le rêve (dream) le serveur (waiter, server) le soleil (sun) le spectacle (sight, show) le sud (south) le temps (time, weather) le vélo (bike, bicycle) le vent (wind) le vol (flight, theft)





Subject: Geography

Week 2, 3 & 4: Natural Hazards & Earthquakes

A natural hazard is a naturally occurring event that has the potential to threaten people or cause damage, destruction, and death.

Factors that affect risk include distance from hazard, wealth of a country and population density.

Earthquakes and volcanoes are tectonic hazards and are caused by the movement of the Earth's tectonic plates. Plate margins include:

Destructive		Moving together
Constructive		Moving apart
Conservative		Moving side by side

Effects of earthquakes vary in severity between countries of contrasting wealth.

Haiti (LIC) 2010
<ul style="list-style-type: none"> <li>Primary effect - 220,000 deaths.</li> <li>Secondary effect - outbreaks of cholera in camps.</li> <li>Immediate response - over 1 million tarpaulin shelters provided (tents).</li> <li>Long-term response - temporary schools created.</li> </ul>

New Zealand (HIC) 2011
<ul style="list-style-type: none"> <li>Primary effect - 181 deaths.</li> <li>Secondary effect - Rugby World Cup matches cancelled.</li> <li>Immediate response - chemical toilets provided.</li> <li>Long-term response - Wide open spaces made when rebuilding Christchurch (areas of safety).</li> </ul>

Why live in a hazard zone?	Managing hazards requires:
<ul style="list-style-type: none"> <li>Geothermal energy.</li> <li>Tourism = jobs.</li> <li>Family &amp; friends.</li> <li>Don't understand risk.</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring.</li> <li>Prediction.</li> <li>Protection.</li> <li>Planning.</li> </ul>

KPOW: Natural Hazards

Week 5 & 6: UK Weather & Tropical Storms

Extreme weather is unusual weather that is significantly different to normal weather and causes damage to property and threat to life.

The UK is experiencing more extreme weather events, with more heatwaves in the summer and more rainfall in the winter, leading to floods.



Tropical storms are an extreme weather event and a natural hazard. They begin over warm oceans (over 27°C) near to the Equator. They bring strong winds, torrential rain and a storm surge. At the centre of the storm is an eye, here it is calm with clear skies.

Typhoon Haiyan was a category 5 storm, and one of the most powerful, with windspeeds of over 195mph and a 25ft storm surge. This led to over 6300 people dying and many being left homeless.

Typhoon Haiyan, Philippines (LIC) 2018
<ul style="list-style-type: none"> <li>Primary effect - 90% of Tacloban (city) destroyed.</li> <li>Secondary effect - disease (cholera &amp; typhoid).</li> <li>Immediate response - 1200 evacuation centres set up.</li> <li>Long-term response - Cash-for-work programmes (pay for helping clear up).</li> </ul>

To be able to manage tropical storms, the effects need to be mitigated (reduced). This can be done by using the '3Ps':

Prediction Satellites

Protection Homes on stilts

Planning Warning systems

Year 10: Autumn Term 1

Week 7 & 8: Climate Change

Climate change is the long-term changes in the average temperatures and rainfall patterns over a long period of time.

Evidence for climate change:

Historical	Recent
<ul style="list-style-type: none"> <li>Ice cores (CO<sub>2</sub> levels).</li> <li>Tree ring analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Temperature records.</li> <li>Rising sea levels.</li> </ul>

Causes of climate change:

Natural Causes	Human Causes
<ul style="list-style-type: none"> <li>Orbital changes (Milankovitch).</li> <li>Sunspot activity.</li> <li>Volcanic eruptions.</li> </ul>	<ul style="list-style-type: none"> <li>Burning fossil fuels.</li> <li>Deforestation.</li> <li>Agriculture.</li> </ul>

Key effects of climate change:

- Sea level rise causing coastal flooding.
- Droughts causing food shortages.
- Heatwaves causing wildfires & water shortages.
- Tropical diseases spreading further north & south.
- Acidification of oceans & decreased biodiversity.


Managing climate change:

This involves both mitigation (reducing causes) and adaptation (responding to change).

Mitigation Strategies	Adaptation Strategies
<ul style="list-style-type: none"> <li>Carbon capture &amp; storage.</li> <li>Alternative energy sources.</li> <li>Afforestation.</li> <li>International agreements.</li> </ul>	<ul style="list-style-type: none"> <li>Change in agriculture systems.</li> <li>Managing water supplies.</li> <li>Reducing the risk from sea level rise.</li> </ul>





Subject: History	KPOW:	Year 10: Autumn Term 1
<p><b>Weeks 2 &amp; 3: Mass Production/Consumerism</b></p>	<p><b>Weeks 4 &amp; 5: 1920s Society</b></p>	<p><b>Weeks 6 &amp; 7 &amp; 8: Wall Street Crash/1933 Election</b></p>
<p><b>Impact of World War One</b>  <b>America benefitted from WWI</b> by taking over the chemical industry from Germany and making new trade partners with Asia.            During WWI, the U.S produced between 40-70% of the worlds' cotton and corn.  <b>Republicans follow a policy of 'Laissez Faire'</b> meaning 'leave alone' (so business can have more control).</p> <p><b>Mass Production</b> = Introduced by <b>Henry Ford</b>  <b>The Model T</b> was the first mass produced car on the assembly line.  <b>Assembly Line</b> = the job comes to the worker.  <b>Division of labour</b> = factory workers only having one specific job.  <b>Standardisation</b> = making one version of a product.            Time taken to manufacture cars was reduced <b>from 12 hours to 1 hour 33 minutes</b> (impacts on cost too).            By 1925, 500,000 people worked in the car industry.            For every worker in the car industry, 10 more worked in related industries</p> <p><b>The Boom Cycle</b> = Cheap goods &gt; sales &gt; jobs.  <b>Consumerism</b> = the buying and selling of goods.  <b>Advertising</b> on radios, newspapers, magazines all encouraged people to buy.  <b>'Buy now, pay later'</b> was encouraged by the government who introduced a credit scheme called <b>Hire Purchase</b>.            As businesses became more profitable, their 'share values' also increased. <b>Ordinary people started to buy shares</b>.            Not everyone prospered – as demand from Europe fell, <b>farmers struggled</b>.</p>	<p><b>1920s Society = The Roaring Twenties</b>            It was the 'Golden Age' for sport – radio broadcasts, magazines and newspapers helped to bring sport to mass audiences. <b>Jazz music</b> became incredibly popular and <b>by 1930, 100 million people a week were going to the movies</b>.  <b>Women got the vote in 1920</b> and had more freedom.  <b>Flappers</b> were young women who cut their hair, wore shorter dresses, and went out without chaperones.</p> <p><b>Prohibition and Organised Crime</b>  <b>Introduced in 1920</b> banning the sale, manufacture and transportation of alcohol. This turned many citizens into criminals, making their own alcohol – <b>moonshine</b>. They visited illegal bars called <b>speakeasies</b> and drank <b>bootlegged</b> (smuggled) alcohol.            Prohibition led to the growth of organised crime and gangsters such as <b>Al Capone in Chicago</b>. They bribed police and judges to avoid arrest and conviction.</p> <p><b>Prejudice and Racial tension</b>  <b>Prejudice</b> = having a preconceived idea about someone from a different background, race, religion, gender or culture. In the 1920s, immigrants faced increasing discrimination. Two Italian immigrants, <b>Sacco and Vanzetti</b> were found guilty of murder and executed despite evidence they were innocent.</p> <p>The <b>Jim Crow Laws</b> were passed in the southern states which segregated facilities for black and white Americans.            The <b>Ku Klux Klan</b>, formed in 1865, was a white supremacist group which targeted black Americans.</p>	<p><b>The Red Scare</b>            After the Russian Revolution of 1917, there was a fear communism would spread to the United States and with it 'un-American' ideas.</p>  <p><b>The impact of the Wall Street Crash</b>            American factories were <b>overproducing</b> – making goods faster than they could sell them. Share prices began to plummet and In <b>October 1929</b>, the stock market collapsed leaving banks bankrupt and millions unemployed.</p> <ul style="list-style-type: none"> <li>• <b>13 million people unemployed</b> by 1932</li> <li>• Millions made homeless and lived in shantytowns nicknamed <b>Hoovervilles</b> after President Hoover.</li> <li>• <b>Farmers</b> could not get decent prices for their food or pay back their loans.</li> </ul> <p><b>1932 Election and the Hundred Days</b>  <b>Democrat Franklin D Roosevelt</b> defeated the Republican Herbet Hoover by 42 states to 6. In his first Hundred Days, Roosevelt passed an unprecedented amount of legislation to help the American People. He made radio broadcasts known as the <b>'Fireside Chats'</b> to restore public confidence.  <b>Emergency Banking Act</b> – all banks were closed, inspected and only allowed to reopen if they were financially stable.  <b>Alphabet Agencies</b> were introduced to help farmers, provide jobs and relief.  <b>CCC</b> = Employed young men between 18-25  <b>AAA</b> = Provided help to farmers by subsidising costs.</p>





Subject: Hospitality and Catering	KPOW: Theory	Year 10: Autumn Term 1
Week 2 & Week 3: Unit 1.1	Week 4 & Week 5: Unit 1.1	Week 6, 7 & 8: Unit 1.1
<p><b>Commercial provider:</b> an establishment which makes a profit.</p> <p><b>Non- commercial:</b> an establishment that doesn't make a profit.</p> <p><b>Residential:</b> somewhere that you can stay at.</p> <p><b>Non- residential:</b> somewhere you can't stay over.</p> <p><b>Contract catering:</b> where an establishment doesn't have catering facilities, so the company are paid to come in and provide menus, cook and clean up after.</p> <p><b>Types of food service</b></p> <p><b>Buffet:</b> where a customer pays a fixed price and selects their own food from the buffet table.</p> <p><b>Fast food:</b> where food is being cooked all the time, you order at a counter or screen, and food is given straight away.</p> <p><b>Silver service:</b> where food is served from large platters with a fork and spoon typically at weddings and proms.</p> <p><b>Gueridon:</b> where the chef finishes the cooking at the table for a show i.e. setting a steak on fire with alcohol.</p> <p><b>Tray or trolley service:</b> popular for long distance travel, and in hospitals; dishes are stacked up inside a trolley and served to customers.</p> <p><b>Vending machine:</b> machines found in places such as hospitals and leisure centres where you can get snacks at any time of day.</p> <p><b>Home delivery:</b> customers order via an app or by a phone call then a delivery person drops off food at a given time.</p>	<p><b>Structure of a kitchen brigade (team of chefs)</b></p> <p>Head chef  Sous chef  Chef de partie (section chefs)  Commis chef  Apprentice  Pot washer/kitchen porter</p> <p><b>BOH-</b> Back of house  <b>FOH-</b> Front of house</p> <p><b>Skills needed for BOH jobs</b></p> <ul style="list-style-type: none"> <li>• Organisation</li> <li>• Flexibility</li> <li>• Hardworking</li> <li>• Punctual</li> <li>• Team player</li> <li>• Focused</li> <li>• Dedicated</li> </ul> <p><b>Skills needed for FOH jobs</b></p> <ul style="list-style-type: none"> <li>• Personable</li> <li>• Approachable</li> <li>• Great communication</li> <li>• Well presented</li> <li>• Knowledgeable about the company and products</li> <li>• Team worker</li> <li>• Friendly</li> </ul>	<p><b>Roles and responsibilities of different chefs</b></p> <p><b>HEAD CHEF-</b> leads the kitchen team, plans menus, hires and fires staff. Qualification: degree in cookery.</p> <p><b>SOUS CHEF-</b> second in command.</p> <p><b>CHEF DE PARTIE-</b> section chefs responsible for a food group.</p> <p><b>COMMIS CHEF/APPRENTICE-</b> at college and learning on the job.</p> <p><b>PLONGEUR/POT WASHER-</b> cleans the kitchen, washes pots, and tidies up.</p> <p><b>Front of house staff</b></p> <p><b>HOTEL MANAGER-</b> manages the hotel and all staff under him in the hierarchy.</p> <p><b>ASSISTANT MANAGER-</b> supports the manager.</p> <p><b>WAITING STAFF-</b> delivers food and drinks to customers and cleans tables.</p> <p><b>BAR STAFF-</b> serves drinks and takes payments.</p> <p>Qualifications needed to work in the hospitality industry:</p> <p>NVQ, GCSE, Degree, A-Level in anything related to the subject- Food, Business management, Hospitality, First Aid certificate</p> <p><b>Contract:</b> a contract is a legally binding agreement between an employer and employee.</p>





Subject: Product Design

KPOW: Natural and Manufactured Timber

Year 10: Autumn Term 1

Week 2 & Week 3: Origin of Materials

Titles: The Source and Origin of Timber

The original source of timber and manmade boards is a tree. Trees are grown all over the world - some are for timber produce, and others could be for paper. They can be categorised as hardwood and softwood.

**Hardwood** – Timber that comes from a tree that drops its leaves in the autumn to prepare for winter.



**Softwood** – Timber that comes from a coniferous tree that does not drop leaves in autumn.



**Hardwood** is harvested from **deciduous trees**. These types of trees lose their leaves in autumn and take a long time to grow, around 60 years (sometimes up to 100). Hardwoods include **beech, oak, mahogany, balsa and jelutong**.

**Softwood** is harvested from **coniferous trees**. These trees remain **evergreen** all year and take around half the time to grow, **25 to 30 years**. Softwoods include **Scots pine, Western red cedar and paran pine**. As trees are **felled**, it is important to plant new ones so that the timber source is **sustainable**.

**Felled** – To cut down.

**Sustainable** – Can be replaced once used. As a tree is chopped down, many more can be planted to ensure the use of trees can be sustainable.

Week 4 & Week 5: Origin of Materials (Cont.)

Titles: Open Sourcing and Manufactured Boards

**Manufactured boards** are made from particles and fibres of natural timbers that are bonded together using resin to form sheets. Manufactured boards often make use of waste wood materials and include plywood, medium-density fibreboard (MDF), chipboard and hardboard.



Once a tree has been chopped down (**felled**), the branches are removed, so only the trunk of the tree remains. The full length of a tree might be too long to transport and work with, so the tree may be cut to a more manageable length. The tree trunks are transported to a sawmill, where the trees are cut to usable planks. This process is known as conversion.



Felling

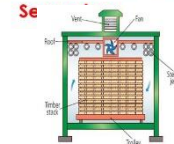


Conversion



Seasoning

At this point the timber can be sold. If the timber has been freshly cut, it is sold as 'green' timber due to the high-water content. If the timber has been dried out before being sold, then it has been 'seasoned'. Some seasoning can be done by leaving it to 'air season', and sometimes the timber is 'kiln seasoned'- Oven dried to remove moisture quicker than air drying. Like drying clothes in a tumble dryer rather than clothesline.



Week 6 & Week 7 & Week 8: Material Selection

Titles: Properties of Timber

Each type of timber has different **physical** and **working** properties that define their use. Some timbers are **hard** and **dense** whereas some are **light** and **soft** to cut and work with.

**Hardwoods**

**Ash:** Light, creamy brown, tough and flexible.

**Beech:** White, close-grained, hard, tough.

**Teak:** White, close-grained, hard, tough.

**Mahogany:** Pink to reddish-brown, strong, durable.

**Oak:** Light, Light brown, strong, hard, tough, corrodes steel screws and fittings.

**Softwoods**

**Scots Pine** Pale-yellow colour, straight-grained, Tough, lightweight, soft.

**Parana Pine:** Pale-yellow colour, straight grained, knot free, Hard, durable.

**Western Red Cedar:** Reddish-brown colour, straight-grained, Durable.

**Manufactured Boards**

**Plywood:** White or pale-yellow colour, layered, impact resistant.

**MDF (medium density Fibreboard):** Pale-brown colour, wood fibres, Dense.

**Chipboard:** Pale-yellow colour, straight grained, knot free, Hard, durable.





**Subject: DT - Textiles**

**Week 2 & Week 3: Fibres**

**Staple fibre:** is a short fibre (in length).

**Continuous fibre:** is a very long fibre. Man made fibres are manufactured as continuous. (Silk is the only natural continuous fibre).

**Microfibre:** less than one denier thick.

**Common microfibre products:**

sportswear/duster/towels/underwear.

**Microfibre properties:** very fine, high-water absorption, comfortable.

**Yarn:** lots of fibres twisted together.

**Chenille:** is a textured and soft fluffy yarn.

**Family tree of fibres (different categories of fibres)**

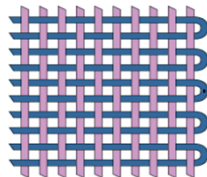
- Fibres are either natural or man-made
- Natural fibres come from plants or animals
- Man made fibres are either synthetic (100% chemical) or regenerated (fibres that start off natural, but are then changed by chemicals)

Natural		Man-made	
PLANT	ANIMAL	REGENERATED	SYNTHETIC
Flax (grown to make linen)	Wool (from a sheep)	Viscose	Acrylic
Jute (used to make canvas)	Angora (rabbit & goat)	Cellulose acetate	Nylon
Ramie (in the nettle family)	Horsehair	Rubber	Polyester
Cotton (from seed of cotton plant)	Silk (from a cocoon produced from silk worms)	Tencel (microfibre)	Lycra
Hemp (Tall plant with a long stalk)	Cashmere (goat)	Rayon	Tactel (microfiber)

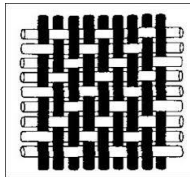
**KPOW**

**Week 4 & Week 5: How Fabric is Made**

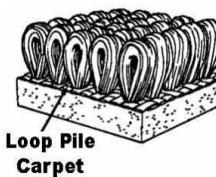
**Woven=** straight yarns that go under and over each other.



Plain weave



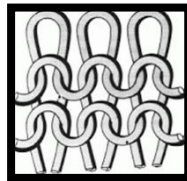
Twill weave



Loop Pile Carpet

Pile weave

**Knitted=**loops of yarn that interlock together.



**Properties of knitted materials**

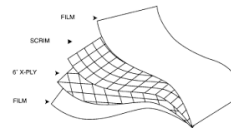
- Good elasticity
- Easily drops creases
- Comfortable/flexible

**Non-woven =** fibres bonded together with adhesive and heat.

**Non-woven uses=** Disposable face masks, children's felt toys

**Laminated=** multiple layers of material are compressed together to create one sheet.

**Laminated common products** Suitcases, outdoor raincoats, tablecloths, tents.



**Year 10: Autumn Term 1**

**Week 6, 7 & 8: Properties and Fibre Blends**

**Properties of fabrics & their meanings:**

- Elasticity- ability to stretch and return to its original position
- Insulating- Ability to stop heat escaping
- Drape -How a fabric falls/hangs/fold

**Blending and mixing fibres**

When two or more different kinds of fibres are mixed together to create a new fabric with improved properties.

**Common fibre blends**

Fibre mix	Common product	Benefit/why mix?
Polyester & cotton	Shirt	Strength and crease resistance from polyester, but cotton feels nicer and absorptive.
Acrylic & wool	Men's winter trousers	Less expensive than 100% wool; the wool content makes them warm and better quality.
Cotton & Lycra	Jeans	Increased comfort, stretchy and better fit.



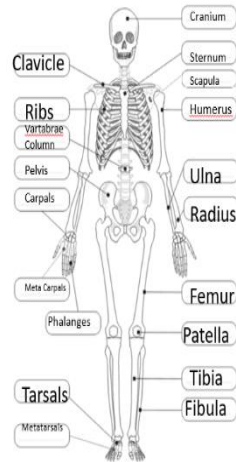


Subject: PE & Sport

Week 2: Skeletal System

Location of Bones

**Cranium:** I protect the brain.  
**Sternum:** I run between the ribs.  
**Humerus:** The bone in the upper arm.  
**Vertebrae column:** I protect the spinal cord.  
**Ulna:** I am in the lower arm; I do not lead to the thumb.  
**Ribs:** I protect the lungs and heart.  
**Scapula:** I'm sometimes called the shoulder blade.  
**Radius:** I am in the lower arm and lead to the thumb.  
**Metacarpals:** I am the small bones in the hand.  
**Femur:** I'm the longest bone in the body.  
**Phalanges:** I am your fingers.  
**Pelvis:** The top of this bone gives us our hips.  
**Carpals** I am in the wrist.  
**Patella:** I'm sometimes called the knee cap.  
**Tarsals:** I am commonly known as the ankle.  
**Tibia:** I'm sometimes called the shin bone.  
**Metatarsals:** I am in the foot.  
**Clavicle:** I'm sometimes called the collar bone.  
**Fibula:** Thinner bone in the leg.



KPOW: Key Topics

Week 3: Skeletal System

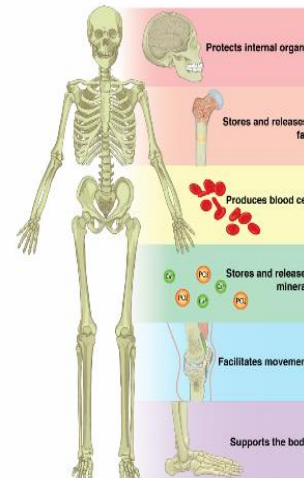
Types of Bones

<b>Long Bones</b>	<b>Longer than they are wide. Has a shaft and two ends. Responsible for major movements</b>
<b>Short Bones</b>	<b>Roughly same size in length, width and thickness Responsible for weight bearing.</b>
<b>Flat Bones</b>	<b>Either protect or provide a good surface for muscle attachment</b>
<b>Irregular Bones</b>	<b>Have odd / special shapes and are designed for a special job.</b>



Functions of the Skeleton-

- Blood cell production
- Storage of minerals
- Protection of vital organs
- Muscle attachment
- Formation of joints for movement



Year 10: Autumn Term 1

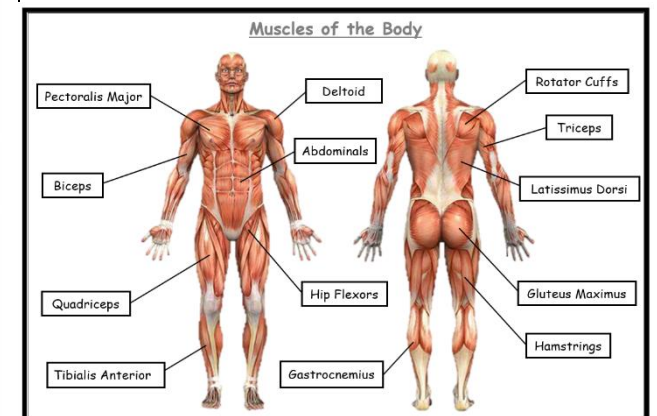
Week 4: Muscular System

Types of muscles

- Voluntary Muscles
- Involuntary Muscles
- Cardiac Muscles

Location of Muscles-

<b>Quadriceps</b>	I am at the front of your upper leg.
<b>Deltoid</b>	I am in your shoulder
<b>Pectorals Major</b>	I am in your chest
<b>Triceps</b>	I am at the back of your upper arm
<b>Tibials Anterior</b>	I am attached to your shin
<b>Latissimus Dorsi</b>	I am in your back
<b>Hip Flexors</b>	I am attached to your hips
<b>Gluteals</b>	I am in your backside
<b>External Obliques</b>	I am just to the side of your six pack
<b>Hamstrings</b>	I am at the back of your leg at the top
<b>Gastrocnemius</b>	I am the back of your leg at the bottom
<b>Biceps</b>	I am at the front of your arm





Subject: PE & Sport

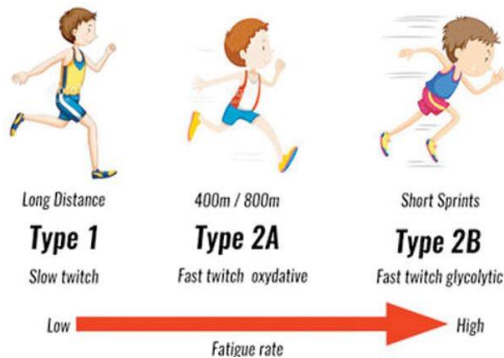
Week 5: Muscular System

Antagonistic muscle pairs-

Antagonistic Muscle Pair	Sporting Example
<b>Bicep and Tricep</b>	Flexion and extension of the arms, at the elbow, whilst passing a rugby ball.
<b>Quadriceps and Hamstrings</b>	Bending and straightening the leg at the knee when kicking a football
<b>Gastrocnemius and Tibialis Anterior</b>	Dorsi Flexion and plantar flexion of the foot at the ankle when taking off for each part of the hop, skip and jump in the triple jump.
<b>Hip Flexors and Gluteus Maximus</b>	Flexion and extension of the leg at the hip when performing a pike in a dive

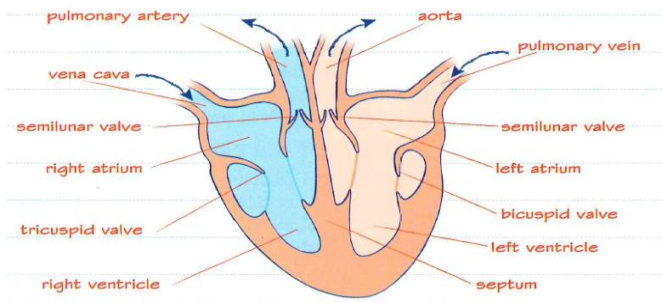
Muscle Fibre Types-

- Type 1- Very good endurance / Slow speed of contraction
- Type 11a- Some endurance / Some power
- Type 11b- No endurance / Very powerful



KPOW: Key Topics

Week 6: Cardiovascular System



<b>Pulmonary Artery</b>	Receives deoxygenated blood from the right ventricle to take to the lungs to receive oxygen
<b>Pulmonary Vein</b>	Brings oxygenated blood from the lungs to the left atrium
<b>Left Atrium</b>	Receives oxygenated blood from the lungs via the pulmonary vein
<b>Left Ventricle</b>	Receives oxygenated blood from the left atrium
<b>Aorta</b>	Carries oxygenated blood away from the left ventricle to take oxygen to the working muscles
<b>Vena Cava</b>	Takes deoxygenated blood from the working muscles back to the heart, so it can be pumped to the lungs to collect oxygen
<b>Right Atrium</b>	Receives deoxygenated blood from the body via the vena cava
<b>Right Ventricle</b>	Receives deoxygenated blood from the right atrium via the tricuspid valve
<b>Septum</b>	The wall that separates the right and left side of the heart
<b>Tricuspid, Bicuspid, Semilunar valves</b>	Help keep the blood moving forward by shutting behind blood that has passed through, to prevent it from flowing back the way it came.

Year 10: Autumn Term 1

Week 7 & 8: Respiratory System

**Lungs** There are two lungs left and right. The lungs allow the movement of air in and out of the body. (ventilation). Air enters the lungs during inspiration (the process of breathing in) Air leaves the lungs during expiration. (the process of breathing out)

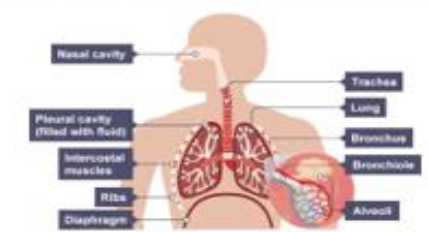
**Bronchi** The air travels to each of the lungs through the bronchi. The term for the right and left bronchus that take air to each of the lungs.

**Bronchioles** The passages that the air travels down get smaller as the bronchi subdivide. These are known as the bronchioles. The bronchioles branch out throughout the lungs and carry the air from the bronchi to the alveoli.

**Alveoli** The alveoli are tiny air sacs. They are attached to the branches of the bronchioles throughout the lungs. There are millions of alveoli in the lungs. At the alveoli the exchange of oxygen and carbon dioxide occurs.

**Diaphragm**

- During inspiration the diaphragm contracts and flattens to make more space in the chest so the lungs can expand to pull air in
- During expiration the diaphragm relaxes and returns to a dome shape, making the chest cavity smaller. This helps force the air out of the lungs.





Subject: Computer Science

KPOW: Topic 1

Year 10: Autumn Term 1

Week 2 & Week 3: Number Systems

- Computers use **binary (base 2)** to represent data (0s and 1s).
- Decimal (base 10)** is the number system we use daily.
- Hexadecimal (base 16)** is used for compact binary representation (0-9 and A-F).
- Conversions:**
  - Binary ↔ Decimal
  - Binary ↔ Hexadecimal

Binary place holders:

128	64	32	16	8	4	2	1
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Hexadecimal placeholders:

8	4	2	1	8	4	2	1
---	---	---	---	---	---	---	---

A	B	C	D	E	F
10	11	12	13	14	15

- Binary addition:** 1+1 = 10 (carry the 1).
- Overflow error:** Happens when a calculation exceeds the number of bits available.

Principles of Computational Thinking

- Abstraction:** Removing unnecessary details to focus on what's important.
- Decomposition:** Breaking a problem into smaller, manageable parts.
- Algorithmic Thinking:** Creating a step-by-step solution to a problem.

These principles help in designing efficient and effective algorithms.

Week 4 & Week 5: Units of Data

- Bit:** Smallest unit of data (0 or 1).
- Nibble:** 4 bits.
- Byte:** 8 bits.
- Kilobyte (KB):** 1,024 bytes.
- Megabyte (MB):** 1,024 KB.
- Gigabyte (GB):** 1,024 MB.
- Terabyte (TB):** 1,024 GB.

Images, Sound & Characters

Images:

- Stored as **pixels**.
- Each pixel has a **binary colour value**.
- Resolution:** Number of pixels (width × height).
- Colour depth:** Bits used per pixel.
- File size ≈ width × height × colour depth.

Sound:

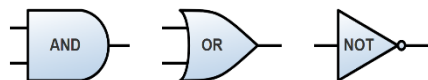
- Stored as **samples** of amplitude.
- Sample rate:** Number of samples per second (Hz).
- Bit depth:** Bits per sample.
- File size ≈ sample rate × bit depth × duration.

Characters:

- Represented using **character sets**:
- ASCII:** 7-bit, 128 characters.
- Unicode:** Supports many languages and symbols.

Logic Gates:

- AND:** Output 1 if both inputs are 1.
- OR:** Output 1 if at least one input is 1.
- NOT:** Inverts the input (1 → 0, 0 → 1).

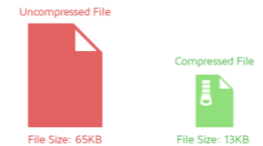


Week 6, Week 7 & Week 8: Compression

**Purpose:** Reduce file size to save space and speed up transfer.

Lossy Compression:

- Permanently removes data.
- Used for images, audio, video (e.g., JPEG, MP3).
- Smaller file, lower quality.



Lossless Compression:

- No data lost.
- Original file can be perfectly restored.
- Used for text, software (e.g., ZIP, PNG).

Data Types

- Integer:** Whole numbers (e.g., 7, -3).
- Float/Real:** Decimal numbers (e.g., 3.14).
- Boolean:** True or False.
- Character:** A single letter, digit, or symbol (e.g., 'A', '7').
- String:** Sequence of characters (e.g., "Hello123").

Primary & Secondary Storage

Primary Storage:

- Directly accessible by CPU.
- RAM:** Volatile, temporary memory for active tasks.
- ROM:** Non-volatile, stores startup instructions.

Secondary Storage:

- Non-volatile, long-term storage.
- Examples: Magnetic, Solid State, Optical.
- Used to store OS, applications, and files.





Subject: iMedia

KPOW: Media Theory Part A

Year 10: Autumn Term 1

Week 2 & Week 3

Week 4 & Week 5

Week 6, Week 7 & Week 8

**Media industry:** The companies, organisations and individuals that plan, create and distribute media products.

**Media products:** content created to communicate a message to an audience, such as a film, magazine, video game, website, or advertisement.

**Traditional media sector:** This media industry dates back to the late 17th century. Existed before the use of modern technology such as computers and phones.



**Produces media products that include:**

Film	TV	Radio	Print Publishing
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**New media sector:** New media is any method of communication which makes use of digital technologies for publication and distribution.



**Produces media products that includes:**

Computer games	Interactive media	Internet	Digital publishing
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Many different products are created and used by media industry sectors. In fact, the same media product can be used by multiple different sectors.

**The table shows different types of products:**

Video	Audio	Music
Animation	SFX	Digital images
Social media	Digital games	Comics & novels
Websites	Multimedia	eBooks
AR/VR		

**Job roles:** The different responsibilities people have when creating media products, such as a graphic designer, video editor, or production manager.

There are three key stages to completing a media related product:

**Pre-Production** - The pre-production stage of the production process is where you create a vision for your product. (i.e. design).



**Production** - The production stage is when all the development of the product happens.

**Post-production** - Post-production is where all of the pieces of your product come together. (i.e. editing).

There are a variety of job roles within the media industry, these can be split up into three separate categories:



**Creative Job Roles:**

Animator	Copywriter	Script writer	Content creator
Graphic designer	Illustrator	Photographer	Web designer

**Technical Job Roles:**

Camera operator	Games developer	Sound editor
Audio technician	Video editor	Web developer

**Senior Job Roles:**

Campaign manager	Creative director	Director
Editor	Production manager	

**Audience segmentation** is the process of breaking down an audience and placing them into categories:

Audience segment	Description
Age	People can be categorised by age bracket (e.g. 30-40 years).
Gender	Products may be targeted at one gender, e.g. women or all genders.
Occupation	Products may be targeted at people in different jobs.
Income	Products may be targeted at people with different levels of income.
Education	Products may be targeted at people with different levels of education.
Location	Products are likely to be aimed at people in particular places.
Interests	Products may be aimed at people with specific interests e.g. cooking.
Lifestyle	Products may be aimed at people who live a particular way or make particular choices.

When a project starts, the **client** provides a **brief** that includes information and outlines the **requirements** that the new product must meet.

**There are different requirements that you might see in a brief:**

Product type/purpose	Target audience/genre	Branding & Ethos
Content	Style & Theme	Timescales





Subject: Music	KPOW: Classical 2	Year 10: Autumn Term 1
<b>Week 2 &amp; Week 3: Punk Music</b>	<b>Week 4 &amp; Week 5: Punk and Britpop</b>	<b>Week 6 &amp; Week 7 &amp; Week 8: Britpop (1990s)</b>
<p><b>UK Punk (1970s UK):</b> Emerged in 1976 as a <b>raw, aggressive, and politically charged</b> reaction against <b>those in power</b>.</p> <ul style="list-style-type: none"> <li>It was fiercely <b>anti-establishment</b>, challenging the <b>government</b>, the <b>police</b>, and <b>big corporations</b>.</li> <li>Many punks also had <b>anti-monarchy</b> views, rejecting the idea of kings or queens.</li> <li>It was known for its <b>DIY ethic, simple music</b>, and <b>rebellious spirit</b>.</li> </ul> <p><b>Punk Sound: Fast Tempos:</b> Songs are quick and energetic, matching the anger and excitement of punk.</p> <ul style="list-style-type: none"> <li><b>Political &amp; Anti-Establishment Lyrics:</b> Lyrics often challenge authority, government, and the royal family.</li> <li><b>Shouted Vocals:</b> Singing is raw and shouted, not polished – full of emotion and power.</li> <li><b>Loud and Distorted Guitars:</b> Guitars sound fuzzy, rough, and very loud, creating a rebellious feel.</li> <li><b>Do-It-Yourself (DIY) Ethic:</b> Bands recorded, promoted, and performed their music themselves – no need for big record labels.</li> <li><b>Simple Song Structures:</b> Songs are short and straightforward, using just a few basic chords.</li> </ul> <p><b>Instruments</b></p> <ul style="list-style-type: none"> <li><b>Electric Guitar:</b> Typically played with a <b>raw, distorted</b> sound to create an <b>aggressive</b> tone.</li> <li><b>Bass Guitar:</b> Often played with a <b>rhythmic</b> style to <b>drive</b> the music.</li> <li><b>Drums:</b> <b>Fast, simple</b> beats with an emphasis on <b>snare</b> and <b>hi-hat</b> to maintain <b>high energy</b>.</li> <li><b>Vocals:</b> Characterized by a <b>raw, shouted</b> style to convey <b>emotion</b>.</li> </ul>	<p><b>Sex Pistols:</b> Formed in London, 1975</p> <ul style="list-style-type: none"> <li>Started UK punk movement, inspired later bands.</li> <li>Members: Johnny Rotten, Steve Jones, Paul Cook, Glen Matlock (later replaced by Sid Vicious)</li> <li>Famous for "God Save the Queen," which was banned across the UK.</li> <li>Their message: Anger at the government, anti-monarchy, anti-establishment — their music was designed to shock.</li> </ul> <p><b>The Clash:</b> Formed in London, 1976.</p> <ul style="list-style-type: none"> <li>Members: Joe Strummer, Mick Jones, Paul Simonon, Topper Headon</li> <li>Famous albums include "London Calling" and "Combat Rock".</li> <li>Their message: Political activism, anti-racism, social justice, and working-class struggles, their songs combined punk energy with a serious message about global and local issues.</li> </ul> <p><b>Oasis:</b> Formed in Manchester, 1991.</p> <ul style="list-style-type: none"> <li>Members: Liam Gallagher, Noel Gallagher, Paul Arthurs, Paul McGuigan, Tony McCarroll.</li> <li>Famous albums include "<i>Definitely Maybe</i>" and <i>(What's the Story) Morning Glory?</i></li> <li><b>Their message:</b> Working-class pride, escapism, attitude, and defiance — their music captured the voice of 90s Britain with raw emotion &amp; swagger.</li> </ul> <p><b>Blur:</b> Formed in London, 1988</p> <ul style="list-style-type: none"> <li>Members: Damon Albarn, Graham Coxon, Alex James, Dave Rowntree.</li> <li>Famous albums include "<i>Parklife</i>" and "<i>Blur</i>".</li> <li><b>Their message:</b> Satire of British life, class commentary, identity, and culture their music blended intelligence and humour to reflect the everyday experience of 90s Britain.</li> </ul>	<ul style="list-style-type: none"> <li>Emerged in the <b>early 1990s</b> as a proud <b>celebration of British culture</b>, reacting against <b>American grunge music</b>.</li> <li>Focused on <b>everyday British life, working-class identity</b>, and <b>nostalgia for 1960s</b>.</li> <li>Often explored themes like <b>youth, love, boredom</b>, and <b>modern British society</b>.</li> <li>Britpop bands were <b>competitive</b>, especially <b>Blur</b> and <b>Oasis</b>, who had a famous rivalry known as the <b>"Battle of Britpop."</b></li> </ul> <p><b>Britpop Sound: Catchy Melodies:</b> Songs had <b>singalong choruses</b> and <b>memorable hooks</b>, influenced by <b>60s British pop</b>.</p> <ul style="list-style-type: none"> <li><b>British Accents &amp; Lyrics:</b> Artists proudly sang in their own accents about <b>UK culture</b> and <b>experiences</b>.</li> <li><b>Guitar-Driven Rock:</b> Clean, melodic guitar riffs with a <b>polished sound</b>, not as raw as <b>punk</b> or <b>grunge</b>.</li> <li><b>Lyrics About Everyday Life:</b> Songs often mentioned <b>local towns, working-class struggles</b>, and <b>British slang</b>.</li> <li><b>Retro Influences:</b> Inspired by <b>The Beatles, The Kinks</b>, and other classic British bands.</li> </ul> <p><b>Instruments</b></p> <ul style="list-style-type: none"> <li><b>Electric Guitar:</b> Used for <b>melodic riffs</b> and <b>layered textures</b> rather than distortion or aggression.</li> <li><b>Bass Guitar</b> a <b>groovy, supportive</b> role to add depth.</li> <li><b>Drums:</b> <b>Clean and steady beats</b> that supported the <b>catchy rhythms</b>.</li> <li><b>Vocals:</b> <b>Strong melodies</b>, often sung with a <b>clear British accent</b> and <b>storytelling tone</b>.</li> </ul>



Subject: Art

Week 2 & Week 3

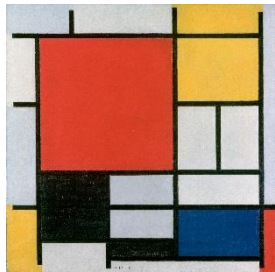
Keywords



**Natural form** – objects or elements found in nature.

**Development** – The process of refining and evolving ideas, techniques and materials to create a final piece of artwork.

**Abstract** – Art that does not attempt to represent reality.



**Inspired** – Taking elements from another artist's work and using them as a starting point for your own creation.

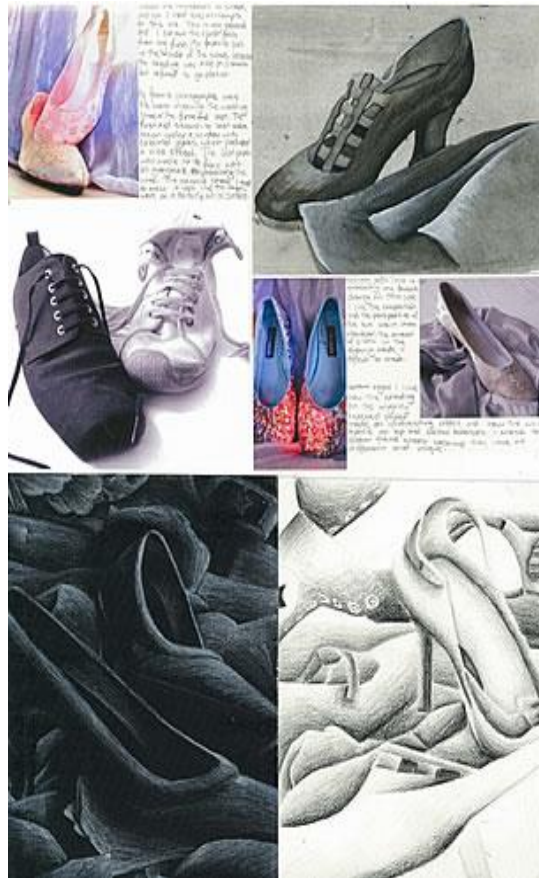
KPOW

Week 4 & Week 5

Primary drawing

**Primary source** – An original object.

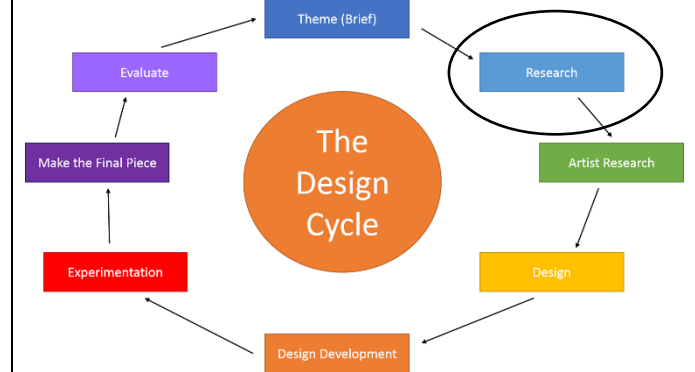
A primary drawing develops observational skills by studying an original object and translating it onto paper using basic formal elements.



Year 10: Autumn Term 1

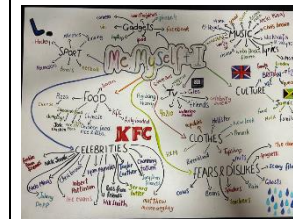
Week 6 & Week 7 & Week 8

Design Cycle Focus



**Research - Mind maps**

A mind map art is a diagram that starts in the middle of a blank page with a theme or idea in the form of a keyword or sentence. You will create branches and sub-branches from this core "concept" to compose related phrases, concepts, and even pictures that contribute to the principal idea. This process allows you to develop an idea in Art based on a given theme.


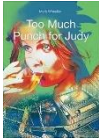



**Research - Mood boards**

A visual tool used in the creative process to gather and organize inspiration for an art project.

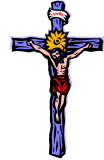



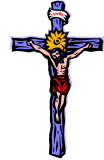



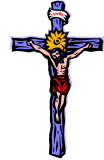







Subject: Performing Arts	KPOW: Contextual Factors	Year 10: Autumn Term 1
<p>Week 2: Learning Aims A and B</p>	<p>Week 3: Too Much Punch</p>	<p>Week 4: The Playwright</p>
<p>Component 1 introduction.</p> <p>Component 1 – Exploring the Performing Arts</p> <p><b>Pearson Set Assignment (PSA) theme:</b> Acceptance</p> <p><b>Acceptance</b> - The action of consenting to receive or undertake something offered.</p>  <p><b>Theme:</b> Refers to the central idea or message that the play conveys, often reflecting moral lessons.</p>	<p>The production.</p>  <p>Too Much Punch for Judy by Mark Wheeller.</p> <p><b>Plot summary:</b> Too much punch for Judy tells the story of a drink-driving accident where a young woman, Judy, kills her sister, Jo. Set in Essex in 1983.</p> <p><b>Themes:</b> Grief, death, consequence, blame, guilt, acceptance.</p> <p><b>Style:</b> Verbatim / Documentary theatre. The play uses a verbatim theatre style, incorporating real-life accounts and dialogue to explore the tragedy and its aftermath.</p>	<p>The Playwright</p> <p><b>Playwright:</b> A person who writes plays.</p> <p>Mark Wheeller – British Playwright, Director and Actor. Born on 15th April 1958.</p> <p>Wheeller specialises in verbatim playwriting using the exact words of real people to create plays. He was the director at the Oasis Youth Theatre.</p>  <p>He has worked extensively in schools, both as a teacher and teacher-trainer.</p>
<p>Week 5: Creative intentions and Stylistic Qualities</p>	<p>Week 6: Techniques</p>	<p>Week 7 and Week 8: Characters</p>
<p>Creative intentions and Stylistic Qualities.</p> <p><b>Artistic Aims:</b> To raise awareness, educate and entertain about the consequences and dangers of Drink driving.</p> <p>Documenting a real-life event:</p> <p><b>Intentions:</b> To explore the tragic consequence of Drink Driving.</p> <p><b>Genre:</b> Tragedy and Comedy.</p>	<p>Key Features</p> <p><b>Techniques:</b> The tools and methods actors, directors, and playwrights use to create and convey meaning in theatrical performances.</p> <p>Throughout 'Too much punch for Judy' the following techniques are seen:</p> <ul style="list-style-type: none"> <li>• Placards / signs</li> <li>• Unison</li> <li>• Ensemble</li> <li>• Frozen Image</li> <li>• Monologue</li> <li>• Flashback</li> <li>• Physical theatre</li> <li>• Choral Speech</li> </ul>	<p>The Characters</p> <p><b>Judy</b> - The Protagonist. A young woman who drives under the influence and causes the accident that kills her sister.</p> <p><b>Jo</b> - Judy's sister, who is the passenger in the car and dies in the accident.</p> <p><b>Bob &amp; Nob</b> - Friends of Judy, who represent the "lads" culture and are present during the night out.</p> <p><b>Duncan:</b> The first person to arrive at the scene of the accident.</p>











Subject: Religious Education		KPOW: Mock Exam	Year 10: Autumn Term 1																
Week 2: Key Words		Week 3 & Week 4: Exam Questions	Weeks 6-8: Salvation																
Trinity	The belief that there is one God who has appeared to the world in 3 ways.	<p>Please read and learn how to answer the different types of questions:</p> <p>Types of Question:</p> <table border="1"> <tr> <td>Part a)</td> <td> <p>'Outline three...'</p> <ul style="list-style-type: none"> <li>• 3 marks</li> <li>• 3 short sentences</li> <li>• - 1 mark per sentence</li> </ul> </td> </tr> <tr> <td>Part b)</td> <td> <p>'Explain two...'</p> <ul style="list-style-type: none"> <li>• 4 marks</li> <li>• 2 paragraphs</li> <li>• - 2 sentences per paragraph</li> </ul> </td> </tr> <tr> <td>Part c)</td> <td> <p>'Explain two...'</p> <ul style="list-style-type: none"> <li>• 2 marks</li> <li>• 2 paragraphs</li> <li>• 2 sentences/3 sentences</li> <li>• - 1 paragraph must contain a SoWA</li> </ul> </td> </tr> <tr> <td>Part d)</td> <td> <p>'A statement'</p> <ul style="list-style-type: none"> <li>• 12 marks**</li> <li>• 1 paragraph to agree with the statement</li> <li>• 1 paragraph to disagree</li> <li>• - 1 conclusion</li> </ul> </td> </tr> </table> <p>**There are an additional 3 marks awarded for SPaG for the Unit 1 and Unit 3 part d) questions.</p>	Part a)	<p>'Outline three...'</p> <ul style="list-style-type: none"> <li>• 3 marks</li> <li>• 3 short sentences</li> <li>• - 1 mark per sentence</li> </ul>	Part b)	<p>'Explain two...'</p> <ul style="list-style-type: none"> <li>• 4 marks</li> <li>• 2 paragraphs</li> <li>• - 2 sentences per paragraph</li> </ul>	Part c)	<p>'Explain two...'</p> <ul style="list-style-type: none"> <li>• 2 marks</li> <li>• 2 paragraphs</li> <li>• 2 sentences/3 sentences</li> <li>• - 1 paragraph must contain a SoWA</li> </ul>	Part d)	<p>'A statement'</p> <ul style="list-style-type: none"> <li>• 12 marks**</li> <li>• 1 paragraph to agree with the statement</li> <li>• 1 paragraph to disagree</li> <li>• - 1 conclusion</li> </ul>	<p>Please learn these key facts below:</p> <p>Salvation means to be granted eternal life with God after death.</p> <p>There are a variety of ways a Christian can achieve salvation, here are the main ones:</p> <table border="1"> <tr> <td></td> <td>Most believe salvation is possible because of Jesus' death on the cross. Salvation is available through the grace of God to everyone who believes in God and accept Jesus as their saviour (Justification by Faith).</td> </tr> <tr> <td></td> <td>Some believe faith in Jesus alone is enough for salvation as long as their faith is life changing. This kind of faith can be triggered by prayer- when a person repents their sins (says sorry) and asks God for forgiveness.</td> </tr> <tr> <td></td> <td>Others believe salvation is achieved through faith, but also through participating in sacraments which are a channel for God's grace. Baptism is especially important as it is referred to in the Nicene Creed.</td> </tr> <tr> <td></td> <td>Other Christians believe it is more of a gradual process which happens by living a Christian life, following rules, being a good Christian etc. Individuals must try and become more like God.</td> </tr> </table>		Most believe salvation is possible because of Jesus' death on the cross. Salvation is available through the grace of God to everyone who believes in God and accept Jesus as their saviour (Justification by Faith).		Some believe faith in Jesus alone is enough for salvation as long as their faith is life changing. This kind of faith can be triggered by prayer- when a person repents their sins (says sorry) and asks God for forgiveness.		Others believe salvation is achieved through faith, but also through participating in sacraments which are a channel for God's grace. Baptism is especially important as it is referred to in the Nicene Creed.		Other Christians believe it is more of a gradual process which happens by living a Christian life, following rules, being a good Christian etc. Individuals must try and become more like God.
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Nicene Creed	A Christian statement of belief e.g. that God is the creator.																		
Omnipotent	God has endless amounts of power.																		
Omni-benevolent	God is all-loving and cares about human beings.																		
Righteous	God is without fault who always does things that are right and morally good.																		
Creator	God made the world and everything in it. God cares about his creation and has a plan for it.																		
Incarnation	The belief that God became a human being in Jesus.																		
Ascension	The act of rising to a higher level.																		
Salvation	To be granted eternal life with God in heaven after death.																		
Sin	An act against God.																		
Eschatology	Christian beliefs about what happens after death.																		
Resurrection	The raising of the dead.																		





Subject: Health and Social Care	KPOW: RO35 Coursework	Year 10: Autumn Term 1
<p><b>Week 2: What is health?</b></p> <p>Health involves physical, intellectual, emotional and social health. It is not just the absence of disease.</p>  <p><b>Physical health:</b> Involves fine and gross motor skills, mobility, characteristic body changes and ageing characteristics.</p> <p><b>Intellectual health:</b> Involves language development, logical thinking, problem solving, decision making and deterioration of mental abilities.</p> <p><b>Emotional health:</b> Involves bonding, different attachments, independence, self-confidence, self-image, self-esteem love and affection.</p> <p><b>Social health:</b> Involves relationships, social skill and responsibilities.</p>	<p><b>Week 3: The importance of a healthy society</b></p> <p>Reasons why a healthy society is important</p> <ol style="list-style-type: none"> <li>1. Control of communicable (infectious) diseases.</li> <li>2. Decreased cost of care.</li> <li>3. Decrease sickness and dependency.</li> <li>4. Increased life expectancy.</li> </ol> 	<p><b>Week 4: Smoking as a public health concern</b></p> <p><b>Smoking:</b></p> <ol style="list-style-type: none"> <li>1. Smoking damages the protective barrier in the respiratory tract. It also compromises the immune system which make the body vulnerable to infections.</li> <li>2. In 2024, it was estimated smoking cost society £21.8 billion. £1.9 billion to the NHS, £1.2 billion to local authorities in social care and £18.3 billion in lost productivity.</li> <li>3. Around 16% of hospital admissions for respiratory disease, 8% of cancer and 7% of cardiovascular admissions in 2023 were related to smoking.</li> <li>4. Smoking can decrease life expectancy by 10 years on average.</li> </ol> 
<p><b>Week 5: Factors influencing health</b></p> <p>Factors that can influence the health and wellbeing of teenagers</p> <p><b>Lifestyle choices:</b> Alcohol, diet, exercise, unprotected sex, smoking and self-help.</p> <p><b>Physical and mental health:</b> illness, stress, anxiety and genetics.</p> <p><b>Education and socio-economic:</b> disposable income, employment, literacy, qualifications and culture.</p> <p><b>Access to health services:</b> Location, opening times, local resources and availability.</p> 	<p><b>Week 6: Barriers to leading a healthy lifestyle</b></p> <p>What prevents individuals from being healthy?</p> <p><b>Advertising/media:</b> Promoting unhealthy products on TV and social media.</p> <p><b>Peer pressure:</b> Direct, indirect, positive and negative.</p> <p><b>Lack of support:</b> Friends and family, role models and health professionals.</p> <p><b>Cost:</b> Expense of gym membership, healthy foods, treatments, holistic therapies and cost outweighing the benefits.</p> 	<p><b>Week 7 and Week 8: Plan a campaign</b></p> <p><b>How to plan a health promotion campaign:</b></p> <p><b>Aims:</b> What do you want to change/improve/educate on? Aims related to PIES.</p> <p><b>Timescales:</b> Planning and delivery time.</p> <p><b>Resources needed:</b> Materials, equipment and additional help.</p> <p><b>Safety:</b> Minimising risks, sensitivity to the audience and protecting the rights of individuals.</p> <p><b>Communication:</b> Verbal and nonverbal communication.</p> <p><b>Methods to engage target audience:</b> Activity, film, quiz and/or demonstrations</p> <p>Feedback methods: Asking questions, questionnaires and witness testimonies.</p> 





## Home Learning Schedule

Week A Day	Subject to Learn	Week B Day	Subject to Learn
Monday	English	Monday	Maths
Tuesday	Science	Tuesday	Science
Wednesday	Option Subject A	Wednesday	Option Subject B
Thursday	Option Subject C	Thursday	Option Subject E
Friday		Friday	

Home Learning is set every **Monday** and will be submitted in **P&A Time** every **Monday**.

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