



Minsthorpe Community College

Knowledge Organiser Year 11 – Autumn Term 1

Name:

P&A group:

Vision

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

Motivation ♦ Commitment ♦ Care



Subject: Personal Development

Week 2 & Week 3: Fundamental British Values

Fundamental British Values (FBV) are a set of **five** core **standards** defined by the UK government to promote a **safe, inclusive** society and **prepare** citizens for life in modern Britain

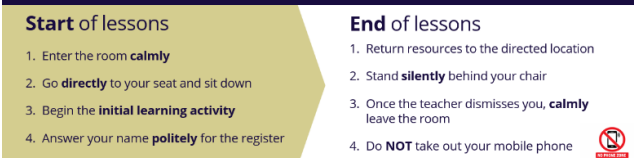
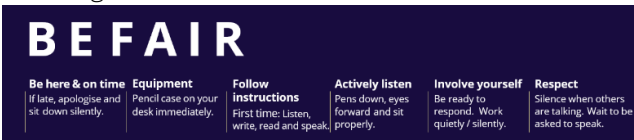
	Democracy – in the UK all citizens over the age of 18 have the right to vote in local and national elections to elect our representatives in the Council or Government. For example: although, you are not yet old enough to vote in elections, you are openly invited to take part in local Youth Parliament. At MCC you will take part in student voice where you are able to share views.
	Mutual Respect – to always be polite, kind and respectful to others regardless of differences. For example: you may disagree with another about the best film, song, food but can discuss this in a polite and sensitive way.
	Tolerance – to recognise that other individuals may have different traditions, interests and views and to accept this. For example: one person may be an avid fan or supporter of one sporting team and another the rival team without it causing any upset, tension or issue, they can continue to be friends.
	Individual Liberty – in the UK we have the freedom to make choices and have viewpoints different to others. For example: you can decide if you wish to attend a place of worship or choose not to eat meat and become a vegetarian.
	Rule of Law – laws that are in place to keep citizens safe and maintain order. For example: school rules – BE FAIR EVERYWHERE to prevent accidents and help everyone to stay safe.

Week 4 & Week 5: FBV in action and BE FAIR

At MCC the rules are in place to ensure that the **5 British Values** are clear.



RULE of LAW – the expectations that we have around site and in classrooms to keep everyone **safe** and **able to learn**. Ensuring that mobile phones do not disrupt learning and **reduce online risks** to students.



They also ensure that everyone is **RESPECTED** and that this is demonstrated at all times. We expect students to show **Care** and **TOLERANCE** to each other. You will be given opportunities to share your views in a **DEMOCRATIC** way through student voice activities. Your **INDIVIDUAL LIBERTY / rights** are respected and the **RULES** in place ensure that all are **treated equally**.

Revision Strategies

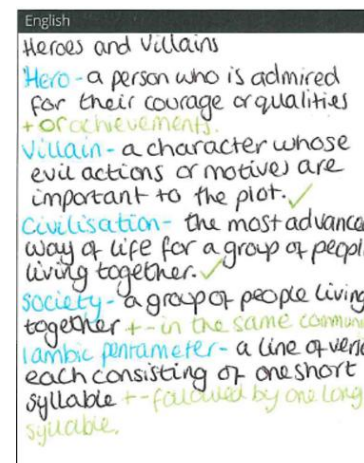
Below is a reminder of how you can use the Look Cover Write Check Correct strategy to complete your Knowledge Organiser Home Learning.

The steps of this strategy are outlined below;

-  **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.

Here is an example of what a box in your workbook should look like when you have completed this strategy.

You can clearly see where the work has been checked and corrections have been made.





Subject: English	KPOW: An Inspector Calls	Year 11: Autumn Term 1
Week 2: The Inspector's Arrival	Week 3: Impact on the Younger Generation	Week 4: Impact on the Older Generation
Symbolism in The Inspector's Arrival Priestley uses the Inspector as a mouthpiece for his own socialist messages. When he enters, the lighting should go from "pink and intimate to brighter and harder" to foreshadow: - The cosy and carefree world lived in by rich families is about to be disturbed - The "brighter" and "harder" lights symbolise how the Birlings can't hide from their mistakes "Brighter" lights might reflect the moral epiphany and enlightenment in the younger generation The Inspector gives a "(sharp ring of the doorbell):" - It cuts off Birling's speech about how a "man has to mind his own business" to undermine the capitalist view - The sound being "sharp" symbolises the idea that the Inspector's message will expose painful truths - It brings about an end, literally and metaphorically, to the party of the rich who feel "pleased with themselves"  The Inspector announces: "a young woman drank some disinfectant and died, after several hours in agony" - The brutal language highlights Eva's plight to show how he cares for the disenfranchised in society who have been neglected and abused by the rich "agony"- shows the anguish she suffered before her death, evoking sympathy in the audience	Sheila's Transformation Priestley shows how the Inspector has a profound impact on the younger generation, who embrace his lessons, thus showing that the hope for a future, socialist society lies with the young. Initially, Sheila is ignorant and oblivious to the world "oh how horrible! Was it an accident?": - showing her naivety to the prospect of Eva's suicide - She is sheltered and unaware of real social problems - Priestley presents Sheila initially as a product of her parents' upbringing; the Edwardian patriarchy demands she is protected, like a child HOWEVER, she changes with the Inspector's influence who warns the family that if society doesn't learn that "we are all members of one body" then they will be "taught it in fire, blood and anguish": "they're not cheap labour, they're people": challenges her father's ruthless mistreatment of Eva. She realises Eva is not simply a commodity to exploit, but a person "If I could help her now I would": she feels regret and is starting to see the benefit of socialist ideas about helping others - She moves from calling her "mummy" to "mother", showing her maturation "if it didn't end tragically, the that's lucky for us. But it might have done": She reminds her parents that they should learn from their mistakes	Mr Birling's Reluctance to Transform Priestley shows how the older generation resist the teachings of the Inspector and his call for more fairness in society. Mrs Birling, refuses to accept responsibility despite refusing charity to Eva when she asked for it, thus turning away her own unborn grandchild "I've done nothing I'm ashamed of": - Feels justified in discriminating against Eva due to her class - Claims to feel no remorse- showing her cold-hearted nature - Finds it impossible to change her fixed mindset: "I can't, I won't believe it" when she discovers Eric is the child's father - The verb "won't" shows she is deliberately choosing to evade the truth; she does not want to know. Similarly, Mr Birling only cares about public perception: "I'd give thousands, thousands..." to cover up Eric's part in the "scandal". - He believes his money can protect him - They fail to realise how immoral their actions have been and want to protect their reputation at all costs, despite the fact a girl died - The repetition of the word "thousands" shows how desperate Birling is and panicked Priestley uses the older generations' resistance to change to show how difficult it is to break prejudice that is ingrained in society. He hopes the audience will learn from their foolishness.

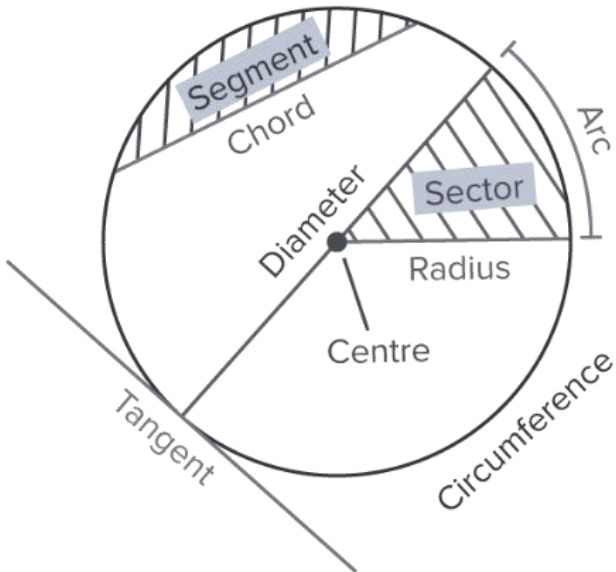
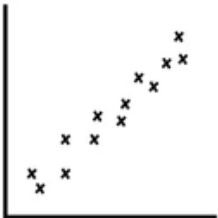
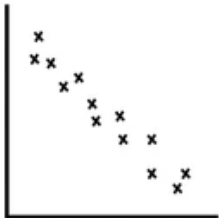
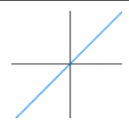
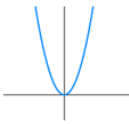
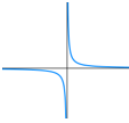
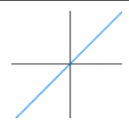
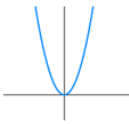
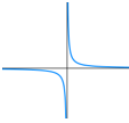
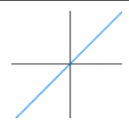
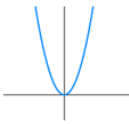
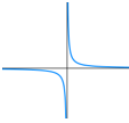




Subject: English	KPOW: An Inspector Calls	Year 11: Autumn Term 1
Week 5: Eva's Introduction	Week 6: Eva as a Victim	Week 7 & Week 8: Eva as an Allegory
Priestley presents Eva Smith as a victim of selfishness and lack of care of the Birlings and Gerald Croft, thus mirroring her fatal neglect by the powerful in Edwardian society.  Priestley wishes to expose the suffering of the working class and women like Eva who are victims of circumstance and do not deserve to suffer. Her death is presented as brutal by the Inspector "drank disinfectant and died"/ "burnt her insides out"/ "died in agony": - Shows Eva's desire to cleanse herself of the shame she was made to feel by society - Died suffering – emphasising how painful her life must have been to take this escape - Attempting to evoke guilt in the Birlings and the audience- awaken them from their naivety and ignorance to the suffering of the poor When the Inspector is questioning the family, he approaches the family "one person and one line of enquiry at a time": - Shows they all played a part in the death and they cannot evade responsibility - His inquiry mirrors how everyone in society is responsible for the death of Eva and those like her. We are all part of the "chain of events" – reinforcing that all of our actions have consequences for others	Priestley uses Eva to symbolise the exploitation of the working class by unscrupulous, exploitative employers in 1912. She is a victim of capitalism. Birling dismisses Eva because she "had a lot to say, far too much, she had to go" / "ringleader": - The working class are powerless to speak out against their unfair treatment - Demonstrates the patriarchal attitude of Mr Birling – he wants to silence women as he thinks she is a threat, especially because of the emerging Suffragette movement driving equality - Represents the desire to quash and suppress rebellion and General Strike - Mr Birling is committed to "lower costs and higher prices" - Despite being "a good worker" and in "line for a promotion" she is dismissed - Priestley exposes the myth of capitalism as a way of promoting social mobility. Priestley also uses Eva to symbolise the exploitation of women in a patriarchal society. Eva is viewed as a sexual object by Eric "good sport" "I was in that state when a chap easily turns nasty": - Shows Eric's sense of entitlement to exploit Eva- developed from the patriarchal society around him - Eric is a product of a fraternity of men who abuse women and cover up their sins - Pregnancy symbolises the double standards in society- men can sin without consequences and Eva is left to suffer and be rejected as a result	Priestley crafts Eva as a representation of the many suffering individuals in an unfair Edwardian society. There are millions and millions of Eva Smiths and John Smiths": - Eva is the archetype for all of the others suffering in society - The Birlings still have a chance of redemption- there are others who require their help - The systemic failing of society is highlighted - no welfare state, no support for unemployed, healthcare "We are all members of one body": - For society to work, everyone must work together as one; we must treat people equally as we are all connected - Mirrors Priestley's socialist agenda to protect future individuals from the cruelty of society Despite the inspector's polemic warning, the older generation fixate on the "hoax" and the authenticity of the Inspector, rather than grasping the moral message. However, Eric, who represents the younger generation, says "the fact remains we did what we did": The play has a cyclical structure, ending with the stage directions "a telephone rings sharply" and Birling stating "a police inspector is on his way here - to ask some questions": - Proving the Birlings should not avoid the truth or revert to the sins of the past or history will repeat itself- appropriate for a 1945 audience on the cusp of social change and Labour's landslide victory

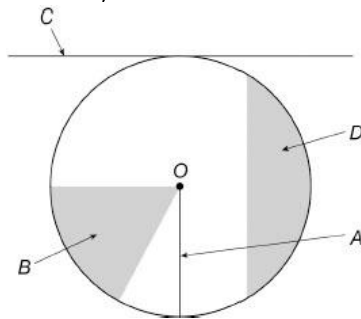
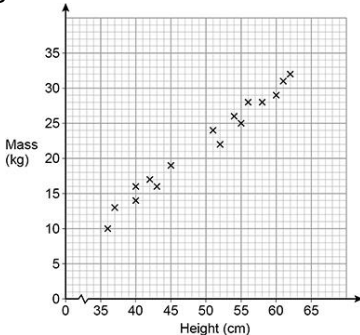
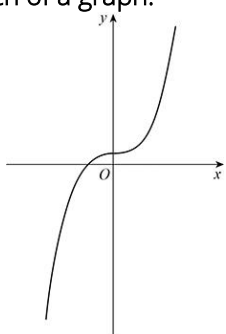




Subject: Maths	KPOW: Bi-Weekly exams (weeks 3, 5 & 7)	Year 11: Autumn Term 1												
Week 2 & Week 3: H & F Recall facts.	Week 4 & Week 5: H & F Recall facts.	Week 6 & Week 7 & Week 8: H & F Recall facts.												
Metric Unit Conversions - Length: 10mm in 1cm, 100cm in 1m, 1000m in 1km. - Mass: 1000mg in 1g, 1000g in 1kg, 1000kg in 1 tonne. - Capacity 1000ml in 1L, 100cl in 1L, 10ml in 1cl. Parts of a Circle 	Averages and Spread Mode = most frequent value Median = middle value (when ordered) Mean = sum the values and divide by how many there are Range = maximum value minus minimum value Scatter Graphs Positive Correlation means as one value increase the value also increases. Negative correlation means as one value increase the other value decreases.  Positive Correlation  Negative Correlation Remember to draw a line of best fit (straight line following the direction of the data). Interpolation: making a prediction within the range of the data [using a line of best fit]. Extrapolation: making a prediction outside the range of the data [unreliable].	Index Laws $a^m \times a^n = a^{m+n}$ $a^{-m} = \frac{1}{a^m}$ $a^m \div a^n = a^{m-n}$ $a^0 = 1$ $(a^m)^n = a^{m \times n} = a^{mn}$ Types of Sequence Arithmetic: add the same amount each time. Geometric: multiply by the same amount each time. Quadratic: common second difference. Fibonacci: add the previous two terms. Standard Graph Shapes <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center;"></td><td style="text-align: center;">LINEAR</td><td style="text-align: center;">$y = mx + c$</td></tr> <tr> <td style="text-align: center;"></td><td style="text-align: center;">QUADRATIC</td><td style="text-align: center;">$y = x^2$</td></tr> <tr> <td style="text-align: center;"></td><td style="text-align: center;">CUBIC</td><td style="text-align: center;">$y = x^3$</td></tr> <tr> <td style="text-align: center;"></td><td style="text-align: center;">RECIPROCAL</td><td style="text-align: center;">$y = \frac{1}{x}$</td></tr> </tbody> </table>		LINEAR	$y = mx + c$		QUADRATIC	$y = x^2$		CUBIC	$y = x^3$		RECIPROCAL	$y = \frac{1}{x}$
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Subject: Maths	KPOW: Bi-Weekly exams (weeks 3, 5 & 7)	Year 11: Autumn Term 1
Week 2 & Week 3 : H & F Exam practice.	Week 4 & Week 5: H & F Exam practice.	Week 6 & Week 7 & Week 8: H & F Exam practice.
1) Jenny walks • 400 metres to the shop • 250 metres to the park • 380 metres home. Show that Jenny walks more than 1 kilometre. (2 marks) Model answer $400\text{m} + 250\text{m} + 380\text{m} = 1030\text{m}$ $1000\text{m} = 1\text{km}$ so $1030\text{m} = 1.03\text{km}$ 1.03m is greater than 1km 2) Here is a circle, centre O  Label each letter to the correct word. One has been done for you. A is a <u>Radius</u> B is a _____ C is a _____ D is a _____ (3 marks)	1) Here is a list of numbers. 10 8 2 11 12 15 4 4 (a) Write down the mode. (1) (b) Work out the median. (2) (c) Work out the range. (1) (Total 4 marks) Model answer Order data first smallest to largest 2, 4, 4, 8, 10, 11, 12, 15 a) Mode means the most common number. Which is 4 b) Median is the middle value when ordered. The middle value is between 8 and 10 which is 9 c) Range is the highest value – lowest value. So, $15 - 2 = 13$. The range is 13. 2) The scatter graph shows the height and mass of some dogs.  (a) The scatter graph shows positive correlation. Describe the relationship between the height and mass of the dogs. (1) (b) Use a line of best fit to estimate the mass of a dog with height 48 cm _____ kg (2) (Total 3 marks)	(a) Simplify $y^4 \times y^7$ (1) (b) Simplify $w^{12} \div w^4$ (1) (c) Simplify $(x^3)^2$ (1) (Total 3 marks) Model answer a) When the base number is the same and it's a multiplication. We add the powers. $y^4 \times y^7 = y^{4+7} = y^{11}$ b) When the base number is the same and it's a division. We subtract the powers. $w^{12} \div w^4 = w^{12-4} = w^8$ c) When the base number is the same and it's a bracket. We multiply the powers. $(x^3)^2 = x^{3 \times 2} = x^6$ 2) Here is a sketch of a graph.  Circle the possible equation of the graph. $y = x^2 + 1$ $y = \frac{1}{x} + 1$ $y = x^3 + 1$ $y = 1 - x^2$ (Total 1 marks)





Subject: Biology

Weeks 2 & 3: Microscopes, stem cells & division

Microscopy (RP)

Resolution - The ability to distinguish between two separate points or objects that are close together.

Magnification - Increasing the image size of an object you are looking at to see more detail (make it look larger).

Focus - Moving the specimen closer or further away from the objective lens to render a sharp image.

To **calculate magnification**, you **divide** the **image size** (in mm) by the **actual size** of the object (in mm).

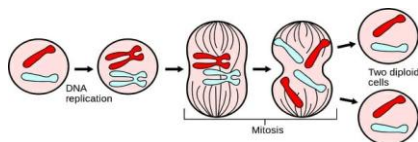
Units are in millimetre (mm), micrometre (µm) and nanometres (nm).

Cell cycle and mitosis

Replicate - To make an exact copy of something or reproduce something (clone).

Mitosis - A type of cell division that results in two daughter cells that have the same number and kind of chromosomes as the parent cell.

Chromosome - A thread like structure found in the nucleus of cells- these contain the genetic information.



Stem cells and therapeutic cloning

A **stem cell** is a cell with the potential to differentiate into any type of body (specialised) cell.

Embryonic stem cell - Are found in embryos and are completely undifferentiated.

Adult stem cell - Can only differentiate into a limited number of related cell types.

Meristem - Are regions of unspecialised cells in plants that are capable of cell division.

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

KPOW: Assessment 1

Weeks 4, 5&6: Movement of molecules & digestion

Transport across membrane

Concentration - The amount of substance in a defined space. For example: amount of substance in 1g or 10ml.

Diffusion is the net movement of a substance from an area of high concentration to an area of low concentration.

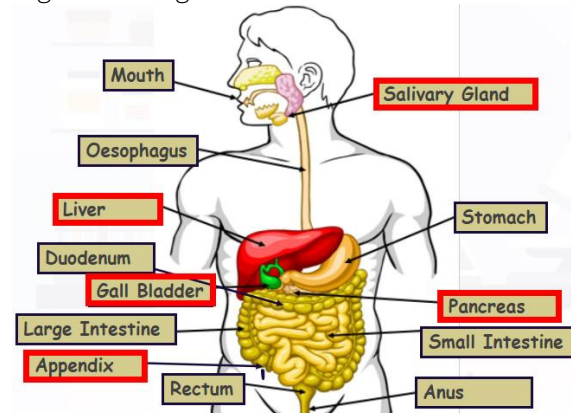
Active transport is the movement of substances from an area of low concentration to an area of high concentration using energy (ATP) and a protein channel.

Osmosis- The net movement of water molecules from areas of high to low concentration of water through a partially permeable membrane.

Digestive system

Digestion - A process of breaking down large insoluble substances into small soluble molecules to be absorbed into the bloodstream.

Digestive system - A group of organs that work together to digest and absorb food.



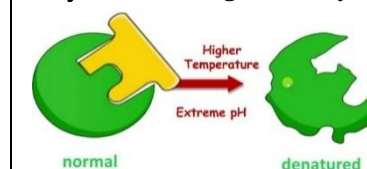
Organs highlighted in red are part of the digestive system, but food does not pass through them.

Year 11: Autumn Term 1

Weeks 7 & 8: Digestion, enzymes & circulation

Digestive enzymes

Enzyme - A biological catalyst made from protein.



Enzymes can "**denature**" if the temperature goes too high, or if the pH is too acidic or too alkali.

This causes the shape of the active site to change, so the **substrate** no longer fits.

Optimum - The optimum **pH** or **Temperature** is where an enzyme reaction is at its fastest.

Protease

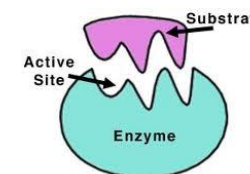
Protein → Amino acids

Carbohydrase

Carbohydrates → Simple sugars

Lipase

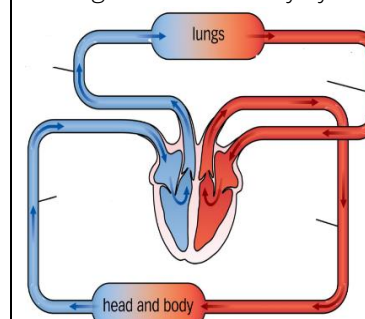
Fats → Fatty acids & glycerol



Lungs and heart

Lungs - A pair of organs in the chest that supplies the body with **oxygen**, and removes **carbon dioxide** from the body.

Heart - A muscle in the chest that pumps blood through the circulatory system around the body.



The heart and lungs work together to ensure that **oxygenated blood** flows from the lungs to the body and **deoxygenated blood** flows from the body back to the heart and lungs.





Subject: Chemistry

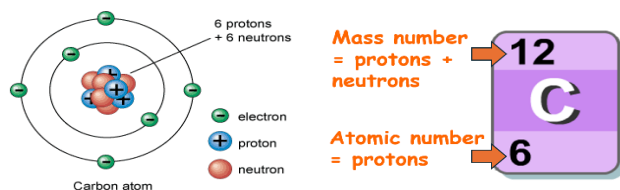
Week 2 & Week 3 & Week 4: Atomic structure

Atomic structure and the periodic table.

Vocabulary: **Element** – Made of one type of atom.

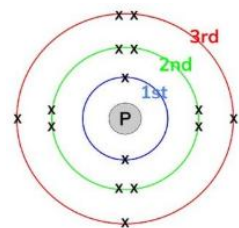
Compound – Two or more different elements chemically joined together.

Knowledge: An **atom** is the smallest part of an element. They are made of the subatomic particles' **protons**, **neutrons** and **electrons**.



Each element has a fixed number of protons. If the number of protons changes, then the atom becomes a different element. The **periodic table** of elements is arranged by increasing number of protons.

An **isotope**, however, is an atom of the same element, with the same number of protons, but **different number of neutrons**.



Electrons are arranged in an atom in a specific way; 2 electrons can fill the **1st shell** and up to **8** in the **2nd** and the **3rd shells**. This example is for phosphorus, and we can also write 2, 8, 5.

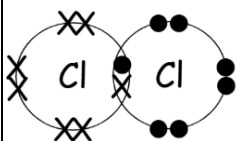
The number of **electrons** in the **outer shell** of each atom also represents what **group** they belong to on the periodic table e.g. Carbon (as shown above) has 4 electrons in its outer shell so is therefore in group 4. Carbon also has 2 electron shells which means it is in period 2 of the periodic table.

KPOW: Assessment 1

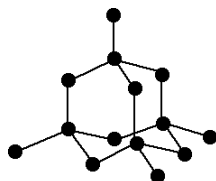
Week 5 & Week 6: Bonding

Vocabulary: **Covalent bond** – The sharing of outer shell electrons between non-metal atoms.

Knowledge: Covalent bonds are formed between non-metal atoms. A **pair of electrons** is **shared** to make a **covalent bond**. This gives them both full outer shells so become more stable. We represent the bonding in **simple molecules**



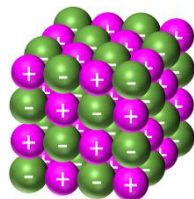
using dot-cross diagrams, thus showing the electrons from each atom. Do not confuse the **strong covalent bond** between atoms with **weak intermolecular forces** that occur between molecules.



Other structures can form strong covalent bonds between the same type of atom; this is seen in **diamond**. Each **carbon** atom in its structure forms **4 strong covalent bonds** to other carbon atoms

forming a **giant covalent structure**. All the strong bonds make it extremely **hard** with a very **high melting and boiling points**.

Ionic bonding – The **strong electrostatic force** of attraction between **oppositely charged ions**. **Metals** always form **positive ions**, and the charge is the same as the group they are in on the periodic table. **Non-metals** always form **negative ions**.



Due to the strong forces of attraction holding the **ionic lattice** together, ionic compounds have **high melting and boiling points**. However, they can dissolve in water and as the ions become free to move, can carry a charge and conduct electricity.

Year 11: Autumn Term 1

Week 7 & Week 8: Quantitative chemistry

Thermal decomposition of metal carbonates.

Vocabulary: **Thermal decomposition** – The breaking down of a substance using heat. **Conservation of mass** – total mass of the reactants must equal the total mass of the products.

Knowledge: A metal carbonate, when heated, will break down to produce a metal oxide and carbon dioxide gas.

General equation: Metal carbonate → Metal oxide + Carbon dioxide

Word equation: Copper carbonate → Copper oxide + Carbon dioxide

Symbol equation: $\text{CuCO}_3(\text{s}) \rightarrow \text{CuO}(\text{s}) + \text{CO}_2(\text{g})$

Explanation: 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.

Forming metal oxides. **Vocabulary:** **Oxidation** – adding oxygen during a chemical reaction.

Knowledge: If a substance like a metal reacts with oxygen, the mass of that substance will increase.

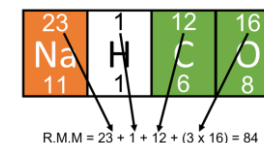
General equation: Metal + Oxygen → Metal oxide

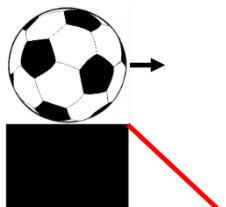
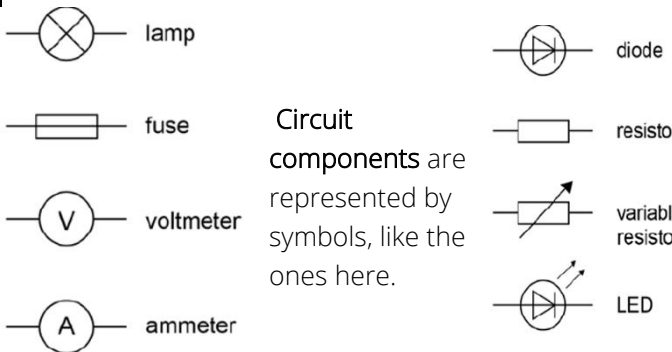
Word equation: Copper + Oxygen → Copper oxide

Symbol equation: $2\text{Cu}(\text{s}) + \text{O}_2(\text{g}) \rightarrow 2\text{CuO}(\text{s})$

Explanation: Mass appears to increase during reactions that have gases as reactants. This is because gases cannot 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 metals mass.

Relative formula mass – The mass number of all the atoms in a compound added together.



Subject: Physics	KPOW: Assessment 1	Year 11: Autumn Term 1
Week 2 & Week 3: Energy Stores & Transfers	Week 4 & Week 5 & Week 6: Energy Resources	Week 7 & Week 8: Circuits
Energy Stores Kinetic – The energy store of moving objects. Elastic – The energy store of stretched or deformed objects. Joules – The unit of measurement for energy. Energy can be found in different stores, and it is often transferred from one store to another. For example, a ball that was placed high up will have energy in its gravitational potential energy store.  When it rolls down the slope, this is transferred to kinetic energy (due to its movement) and thermal energy (wasted). Wasting Energy Dissipation - The process through which energy is transferred to the surroundings in a wasteful manner. Efficiency – A measure of how well a machine or device transfers input energy into useful energy. All systems waste energy due to dissipation. This cannot be avoided, and usually results in a transfer of thermal energy (heat). However, we can reduce how much energy is wasted (for example, by adding engine oil to a car engine. 	Heating Up Specific heat capacity – The amount of energy needed to raise the temperature of 1kg of a material by 1°C. When heating up a material, three factors must be taken in account in order to calculate how much energy is needed: - The amount of material (mass). - How much you want to heat it up (temperature change). - The material itself (specific heat capacity). For example, heating up water requires a lot more energy than copper, due to its chemical bonds. Energy Resources Fuel – A fuel is a substance that stores and can release energy. Fossil fuels – Coal, oil and natural gas are the fossil fuels that can be burnt to release thermal energy.  Although burning fossil fuels is reliable, it also releases harmful gasses into the environment that contribute towards global warming and acid rain. They are also non-renewable which means they will eventually run out.  Nuclear energy does not contribute towards global warming, but it does produce very dangerous nuclear waste.	Circuit Components Current – The rate of flow of electrical charge. An Electrical Circuit is a series of components that are connected together by electrical wires.  Circuit components are represented by symbols, like the ones here. Resistance and Length of wire RP Resistance - Opposition to the flow of charge in a circuit- it is measured in Ohms (Ω). Potential Difference - The amount of energy transferred to each unit of charge that flows around a circuit. Risk Assessment, during this practical: 1) The wire can get very hot so turn it on and off quickly when getting your readings. 2) The wire is live and uninsulated so there is the risk of an electric shock. Make sure the electrical supply is turned off before touching the wire or the clips. 



Subject: Separate Science

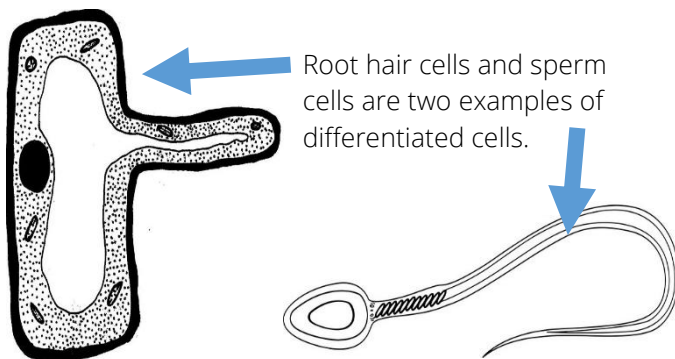
Weeks 2 to 8: Biology

Keyword definitions

A **stem cell** is a cell with the potential to develop into many different types of cells in the body.

Cellular differentiation – The process in which a stem cell changes into a different type of cell.

Fertilisation - The fusion of male and female sex cells (gametes) to form a zygote.



Root hair cells and sperm cells are two examples of differentiated cells.

Keyword definitions:

Prokaryote – A simple cell that does not have a nucleus.

Culturing is the process of growing microorganisms or tissues in a controlled way.



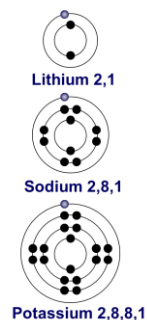
Contamination is the unwanted addition of microorganisms to something. This can affect the results of an experiment or cause potential health hazards. This **agar plate** has been contaminated.

KPOW: Assessment 1

Weeks 2 to 8: Chemistry

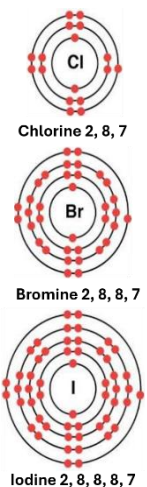
Patterns in reactivity

Group 1 – The **reactivity increases** as you go down group 1, but why?



- The atoms increase in size.
- The outer electron is further from the nucleus.
- More electron shells that shield the outer electron from the nucleus (we call this shielding).
- Weaker attraction between the outer electron and the nucleus.
- Becomes easier to lose the outer electron.

Group 7 – The **reactivity decreases** as you go down group 7, but why?



- When non-metals react, they gain electrons to complete their outer shells.
- As you go down group 7, reactivity decreases.
- This is because there are more shells and therefore more shielding of the nucleus, and less attraction between the positive nucleus of the halogen and an outer electron from another atom.
- This means it's harder to gain electrons from other atoms.
- This explains why fluorine is more reactive than bromine – fluorine pulls an electron much easier from other atoms than bromine does.

Year 11: Autumn Term 1

Weeks 2 to 8: Physics

Keyword definitions:

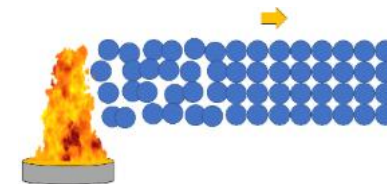
Conduction – The process by which thermal energy is transferred through a solid.

Convection – The process by which thermal energy is transferred through a fluid (liquid or gas).

Radiation – The transfer of thermal energy by waves.

Insulation – The use of materials which are poor conductors of heat to reduce unwanted energy transfers.

Particles in a **solid** cannot move freely and they can only **vibrate** around



a **fixed position**. When a solid is heated, particles near the source of heat start to vibrate first. This **vibration** will slowly **spread** through the solid, which will transfer energy (this is **conduction**).

Any object that is **hotter** than its **surroundings** will slowly **cool down** by transferring thermal energy to its surroundings. This cannot be avoided, but it can be **reduced** by using materials like **rock wool** in the loft of a house for example.



We can **investigate** insulation by wrapping a certain **material** around a beaker or conical flask and pouring a **known volume** of hot water in, then measuring the **temperature** over a period of **time** to monitor how quickly (or slowly) it **decreases**.





Subject: French HIGHER		KPOW: Environment and where we live		Year 11: Autumn Term 1					
Week 2: Adjectives & adverbs		Week 3: Feminine Nouns		Week 4: Masculine Nouns					
ancien (former, ancient) conscient (conscious, aware) démocratique (democratic) divers (varied, diverse) économique (economic) efficace (efficient, effective) étroit (narrow, tight) le pire/la pire/les pires (the worst) mondial (worldwide, global) occidental (western) puissant (powerful) tranquille (peaceful, quiet) vif (lively) vivant (alive, living) relativement (relatively) autour (around)		La banlieue (suburbs, outskirts) La circulation (traffic) La cité (council estate) La communauté (community) La démocratie (democray) La direction (management) L'enquête (survey) L'espèce (species) L'explication (explanation) La feuille (leaf, sheet) La frontière (border) La météo (weather forecast) La nécessité (need, necessity) La république (republic) La souffrance (suffering) L'utilisation (use)		L'attaque (attack) L'affiche (poster) L'addition (bill) La bataille (battle) La guerre (war) L'humanité (humanity) L'industrie (industry) La loi (law) La paix (peace) La pierre (stone) La plante (plant) La pluie (rain) La puissance (power) La richesse (wealth) La rivière (river) La vague (wave)		L'arme (weapon, arms) L'attentat (attack, attempt) Le champ (field) Le changement (change) Le chercheur (researcher) Le choc (shock) Le citoyen (citizen) Le commerce (trade) Le débat (debate) L'effet (effect) L'électeur (elector, voter) L'est (east) L'étage (floor) L'établissement (establishment) Le public (audience, public) L'humain (human) Le lac (lake) Le métro (underground) L'objectif (aim, goal) L'oiseau (bird) Le papier (paper) Le siège (seat, bench) Le terrain (ground) Le verre (glass) Le soldat (soldier) Le développement (development) Le paysage (landscape, scenary) L'état (state) Le sol (floor, ground)			
Week 5: Foundation & Higher verbs		Week 6: Higher verbs		Week 7 & Week 8: Revision					
aider (to help) améliorer (to improve) augmenter (to increase) comparer (to compare) conduire (to drive) construire (to build) décrire (to describe) détruire (to destroy) développer (to devbelop) diminuer (to decrease) donner (to give) fabriquer (to make, produce, maufacture) habiter (to live) s'inquiéter (to be worried) jeter (to throw)		participer à (to take part) polluer (to pollute) protéger (to protect) rechercher (to research) recycler (to recycle) réduire (to reduce) surprendre (to surpirse) travailler (to work) traverser (to cross) trouver (to find) se situer / se trouver (to be situated) tuer (to kill) vivre (to live) utiliser (to use) vendre (to sell) menacer (to threaten)		brûler (to burn, be on fire) contribuer (to contribute) disparaître (to disappear) gérer (to manage, deal with) lutter (to fight, struggle) manifester (to protest) préserver (to preserve, protect) prévenir (to warn, let know) remplacer (to replace) respecter (to respect) sauver (to save, rescue) se sauver (to escape, get away) défendre (to defend, stand up for, forbid)		allumer (to turn on) attaquer (to attack) causer (to cause) élire (to elect) nettoyer (to clean) refuser (to refuse) risquer (to risk) souffrir (to suffer) transformer (to transform) tourner (to turn, go around) bénéficier de (to get, receive, benefit from)		Revise all of the vocabulary on this Knowledge Organiser page.	





Subject: French Foundation & Higher		KPOW: Environment and where we live		Year 11: Autumn Term 1	
Week 2: Adjectives		Week 3: Feminine Nouns		Week 4: Feminine Nouns Continued	
actuel (current)	jeune (young)	L'aide (help)	L'église (church)	La mosquée (mosque)	La plage (beach)
chaud (hot) froid (cold)	joli (pretty, attractive)	L'Angleterre (England)	L'énergie (energy)	La neige (snow)	La porte (door)
droit (right)	mort (dead)	La banque (bank)	La faim (hunger)	La pauvreté (poverty)	La poste (post office)
égal (equal)	pauvre (poor)	La bibliothèque (library)	La fenêtre (window)	La planète (planet)	La poubelle (bin)
énorme (current)	pire (worse, worst)	La boîte (box)	La ferme (farm, firm)	La politique (politics)	La route (road)
gauche (left)	pratique (practical)	La boulangerie (bakery)	La fleur (flower)	La capitale (capital city)	La rue (street)
grave (serious)	propre (clean)	La caisse (checkout, till)	La forêt (forest)	La chaise (chair)	La saison (season)
historique (historic)	sale (dirty) vert (green)	La campagne (countryside)	La gare (train station)	La pièce (room, play)	La salle (room)
vide (empty)	sûr (safe, sure)	La chambre (bedroom)	L'île (island) La mer (sea)	La piscine (swimming pool)	La société (society)
inquiétant (worrying, disturbing)		La clé (key) La côte (coast)	La liberté (liberty, freedom)	La terre (earth, world, soil, land)	La sortie (exit)
juste (fair, correct, true, right)		La course (race, shopping)	La lumière (light)	La place (room, space, square)	La toilette (toilet)
beau / bel / beaux / belle (beautiful)		La crise (crisis)	La maison (house)	La cuisine (cooking, kitchen)	L'usine (factory)
commercial (commercial, shopping)		La droite (right)	La menace (threat)	L'inquiétude (worry, anxiety)	La vente (sale)
courant (current, common)		L'eau (water)	La montagne (mountain)	La manifestation	La ville (town)
inquiet / inquiète (worried, anxious)		L'égalité (equality)	La mort (death)	demonstration) La voiture (car)	La visite (visit, tour)
Week 5: Masculine Nouns		Week 6: Masculine Nouns Continued		Week 7 & Week 8: Additional Vocabulary	
L'abri (shelter)	Le château (castle)	Le manque (lack)	Le problème (problem)	dehors (outside)	derrière (behind)
L'appartement (flat)	Le chemin (way, path)	Le marché (market)	Le progrès (progress)	là-bas (over there)	devant (in front of)
L'arbre (tree)	Le ciel (sky)	Le monde (world)	Le projet (plan)	loin (far)	entre (between)
L'arrêt (stop)	Le climat (climate)	Le mur (wall)	Le quartier (district, area)	pire (worse)	proche (close, nearby)
L'autobus (bus)	Le coin (corner)	Le musée (museum)	Le recyclage (recycling)	près (near)	voici (here is)
L'automne (autumn)	Les déchets (rubbish)	Le niveau (level)	Le souci (worry, concern)	Revise all of the vocabulary on this Knowledge Organiser	
L'avantage (advantage)	L'endroit (place)	Le nord (north)	Le stade (stadium)		
L'avion (plane)	L'espace (space)	L'ouest (west)	Le sud (south)		
Le bain (bath, bathing)	L'été (summer)	Le parc (park)	Le temps (time, weather)		
Le bâtiment (building)	Le gaz (gas)	Le pays (country)	Le touriste (tourist)		
Le besoin (need)	L'habitant (resident)	Le pied (foot)	Le véhicule (vehicle)		
Le bois (wood)	L'hiver (winter)	Le plastique (plastic)	Le vélo (bike)		
Le bord (edge, side)	L'hôpital (hospital)	Le poisson (fish)	Le vent (wind)		
Le brouillard (fog, mist)	Le jardin (garden)	Le pont (bridge)	Le voisin (neighbour)		
Le bruit (noise)	Le lieu (place)	Le sac (bag)	Le salon (living room)		
Le bureau (office, desk)	Le lit (bed)	Le soleil (sun)	Le concours (competition)	Le la bénévole (volunteer)	
Le candidat (candidate)	Le magasin (shop)	Le printemps (spring)	Le médicament (medicine)	Le la propriétaire (owner)	
				Le la scientifique (scientist)	
				L'adolescent / l'ado (teenager)	
				Le chômage (unemployment)	
				L'environnement (environment)	
				Le gouvernement (government)	
				L'inconvénient (disadvantage)	
				Le réchauffement (warming)	
				Le supermarché (supermarket)	
				Le tableau (board, picture, painting)	
				Les courses (shopping)	





Subject: Geography

Weeks 2 - 4: Coastal Processes & Landforms

Coastal Processes

- Erosion** is when land is worn away by the waves.
Hydraulic action – force; **abrasion** – sandpaper/friction; attrition – collisions; solution – dissolving.
- Transportation** is when **sediment** (sand and rocks) is moved by the waves.
Traction – rolled; saltation – bounced; suspension – carried; solution – dissolved.
- Deposition** is when the waves lose energy and drop the sediment they are carrying.
- Weathering** is the weakening or breaking down of rocks in situ (in place).
Mechanical – freeze-thaw; biological – plant roots; chemical – rain.
- Mass movement** is the movement of land/rocks or loose material down a slope under gravity.

Waves begin in deep ocean and are formed by the transfer of energy between the wind and the ocean surface. Wave strength is controlled by wind speed, prevailing wind (most common wind direction), and fetch.

When waves break on the beach, the material is moved up the beach by swash and back to the sea by backwash. There are 2 types of wave: destructive and constructive.

Coastal Landforms

Erosional Landforms	Depositional Landforms
- Headland & bay. - Cave. - Arch. - Stack. - Stump.	- Beach. - Spit. - Bar. - Tombolo. - Sand dune.



KPOW: UK Physical Landscapes

Weeks 5 & 6: Coastal Management & Example

Hard engineering – building structures to prevent natural processes, such as erosion.

- Sea walls** – made from concrete & have a curve which reflects waves back to the sea. They are resistant, but very expensive.
- Rock armour** – large boulders which absorb the waves' energy. They are relatively cheap but makes access to beach difficult.
- Gabions** – cages filled with rocks. They are cheaper but are unattractive and corrode quickly.
- Groynes** – wooden barriers that trap sediment. They help to build a beach, but other beaches down drift can lose their supply of sediment.

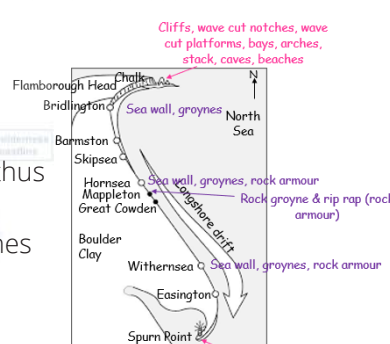
Soft engineering – using natural processes to reduce the rates of erosion. The most common examples are beach nourishment & dune fencing.

Managed retreat – a strategy that allows the coastline to move inland, instead of attempting to stop the erosion with hard or soft engineering strategies. E.g. Donna Nook, NE Lincolnshire.

UK Coastal Example – The Holderness Coast

Flamborough Head, in the north, is made of resistant chalk. The rest of the coastline is made of boulder clay, thus making it one of the fastest eroding coastlines in Europe.

Landforms
Management strategies



Year 11: Autumn Term 1

Weeks 7 & 8: River Basins & River Landforms

Features of a drainage basin

- Drainage basin** – the area of land drained by a river and all its tributaries.
- Watershed** – the land forming the edge of a river basin.
- Source** – where a river starts.
- Mouth** – where a river meets the sea.
- Confluence** – the point at which two rivers meet.
- Tributary** – a small river/stream that joins a larger river.
- Channel** – this is where the river flows.

River Profiles

- Long profile** – how the river channel and valley shape change from source to mouth. The gradient and height above sea-level decrease downstream.
- Cross profile** – how the valley and channel appear from side to side. The channel gets wider & deeper; the gradient of the valley sides decreases & the valley floor widens.

River Processes

Look at coastal processes but replace 'waves' with 'river.' They are the same because waves and rivers are both water.

River Landforms

Erosional landforms:

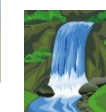
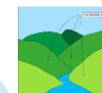
- V-shaped valley.
- Interlocking spurs.
- Waterfalls & gorges.

Erosional & depositional landforms:

- Meanders & oxbow lakes.

Depositional landforms:

- Floodplain.
- Levées.
- Estuaries (mudflats).





Subject: History	KPOW: Sources and Similarities	Year 11: Autumn Term 1
Week 2 & Week 3: Extending the Franchise	Week 3 & Week 5: Anti- Corn Laws and Abolition	Weeks 6,7,& 8: Factory reform and Trade Unions
Causes: Workers in Britain faced low wages, high food prices, and little political representation, as most could not vote. Growing frustration led to demands for change. In 1819, around 60,000 people gathered peacefully at St Peter's Fields to hear Henry Hunt speak. Many women and children attended, some bringing picnic baskets. Events: Magistrates panicked and ordered troops to arrest the leaders. Soldiers charged the crowd, thus killing around 15 people and injuring many others. Consequences: The government responded with the Six Acts which limited protest. While repression increased in the short term, support for reform grew, thus helping lead to the Great Reform Act (1832), although the working class still could not vote. Chartism: The Chartists continued the fight for reform; demanding votes for all men and a secret ballot; they laid out their 6 main demands in the People's Charter. - William Lovett led the moral force Chartists, using peaceful petitions; two were rejected by Parliament. This led to some Chartists getting fed up and wanting to try something new. - Feergus O'Connor led the physical force Chartists, who turned to violence after the second petition was rejected. They submitted a third petition and encouraged actions like damaging machinery. Chartist Consequences: They failed in the short term; the third petition was a disaster as it had thousands of forged signatures. Yet in the long term all but one of their demands were achieved within 100 years.	Anti-Corn Law League Causes: The Corn Laws (1815) kept wheat prices high to protect British farmers, thus making bread expensive. This angered working people, who saw the laws as unfair. Events: The Anti-Corn Law League, mainly middle-class and supported by MPs Richard Cobden and John Bright, campaigned through speeches and newspaper articles. Consequences: The Prime Minister repealed the Corn Laws, although this decision was also influenced by the Irish Famine. Campaign methods: The Anti-Slavery Society, led by William Wilberforce, held meetings, produced pamphlets and posters, and used badges to raise awareness. Key individuals: William Wilberforce: MP who led the campaign in Parliament helped secure the Abolition of the Slave Trade Act (1807). Olaudah Equiano: Former enslaved person who wrote about his experiences to highlight slavery's horrors. Other factors: - Some politicians opposed abolition due to profits. - Women (e.g. Hannah More) supported the campaign despite lacking political power. - Slave resistance, including Toussaint L'Ouverture's rebellion in St Domingue, promoted ideas of freedom. Outcome: The Abolition Act (1833) ended slavery, although freedom took time and illegal trading continued. Long term, Britain pressured other nations to abolish slavery.	Factory and Social Reform: The Industrial Revolution caused rapid urban growth and poor working conditions. Conditions: Factories = Long hours, dangerous conditions, and child labour (as young as six). Mines = Whole families worked including children as young as four. Workers were sometimes called "white slaves"- linking to the anti-slavery campaign. Key reformers: Robert Owen: Factory owner who improved conditions, introduced an 8-hour day, and provided education for children. Josephine Butler: Campaigned to raise the age of consent from 13 to 16. Development of Trade Unions: 1825 Combination Act: Unions legal, but restricted to discussing wages and conditions. 1833 GNCTU (Robert Owen): Attempted to unite all workers. 1851 ASE formed: Beginning of New Model Unions for skilled workers. Later in the 1880s New Unionism started: Unskilled workers began forming unions. Case study: Tolpuddle Martyrs (1834) = Farm workers formed a union to protest low wages and took an illegal oath. They were arrested and transported to Australia. Public outrage (petitions, protests) led to their pardon. Match Girls Strike (1888): Poor conditions, low pay, 'phossy jaw'. Successes: Pay rise and end of fines. Docker Strike (1889): Irregular work and low pay led to demands for minimum 4 hours. They held mass strikes and marches. Success: Pay rise and guaranteed hours. Political significance = Growth of unions led to working-class politics: 1893: Independent Labour Party formed. 1892: Keir Hardie elected MP. 1906: Labour Party established.





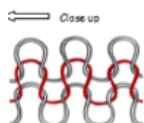
Subject: Hospitality and Catering	KPOW: Theory	Year 11: Autumn Term 1
Week 2 & Week 3: Unit 1.1	Week 4 & Week 5: Unit 1.1	Week 6 & Week 7 & Week 8: Unit 1.1
Unit 1.1 Commercial provider: an establishment which makes a profit. Non- commercial: an establishment that doesn't make a profit. Residential: somewhere that you can stay at. Non- residential: somewhere you can't stay over. Contract catering: where an establishment doesn't have catering facilities, so the company are paid to come in and provide menus, cook and clean up after. Types of food service Buffet: where a customer pays a fixed price and selects their own food from the buffet table. Fast food: where food is being cooked all the time; you order at a counter or screen, and food is given straight away. Silver service: where food is served from large platters with a fork and spoon typically at weddings and proms. Gueridon: where the chef finishes the cooking at the table for a show i.e. setting a steak on fire with alcohol. Tray or trolley service: popular for long distance travel and in hospitals; dishes are stacked up inside a trolley and served to customers. Vending machine: machines found in places such as hospitals and leisure centres where you can get snacks at any time of day. Home delivery: customers order via an app or by a phone call then a delivery person drops off food at a given time.	Unit 1.1 Structure of a kitchen brigade (team of chefs) Head chef Sous chef Chef de partie (section chefs) Commis chef Apprentice Pot washer/kitchen porter BOH- Back of house FOH- Front of House Skills needed for BOH jobs Organisation Flexibility Hardworking Punctual Team player Focused Dedicated Skills needed for FOH jobs Personable Approachable Great communication Well presented Knowledgeable about the company and products Team worker Friendly	Unit 1.1 Q1=What is the roles and responsibilities of the head chef and what skills are needed to do that job? Exam Tips/Modelled answer Firstly, explain the job of the head chef and what he does everyday- menu plans, hires staff, oversees the kitchen etc. Then explain the skills he needs to do those everyday tasks such as good communication, friendly manner, being a good leader, good at organisation and being able to multi- task. This needs to be written in a paragraph as a full answer. Q2= Describe and explain 3 different types of food service? Exam Tips/Modelled answer Firstly, choose 3 types of food service- this is the different ways you can be served food such as silver service, fast food, buffet, café. The next step is to then describe what happens at each of these services. Eg- Gueridon service is where the chef finishes the cooking at the table in front of the customer and shows his flair and skill like when brandy is poured over steak and then set alight for a few seconds- this is enticing for the customer. This needs to be written in a paragraph as a full answer.



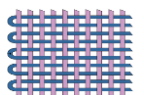
Subject: DT

Weeks 2&3: Materials – Fabric & Fibres

Plant (Natural)	Animal (Natural)	Regenerated (Manufactured)	Synthetic (Manufactured)
Flax	Wool	Viscose	Acrylic
Jute	Angora	Rubber	Nylon
Ramie	Silk	Tencel (Lyocell)	Polyester
Cotton	Cashmere	Rayon	Lycra (Elastane)



Knitted=Loops of yarn that interlock.



Laminated= Layers of fabric that are glued/bonded together.



Woven=Straight yarns that go under & over each other.

Microfibre=Fine fibre, less than 1 denier thick.

Properties=soft, dirt trapping, high absorbency.

Common products=Underwear, sportswear, dusters, towels.

Aramid fibres= Fire/heat/flame proof

Geotextiles=A non-woven fabric used in civil engineering. (for example, to reinforce roads).

KPOW: Mocks

Weeks 4&5: Timbers & Manufactured boards.

Hardwood	Key Feature	Softwood	Key Feature
Oak	Strong, durable	Pine	Lightweight, cheap
Beech	Hard, smooth	Spruce	Straight grain
Mahogany	Stable, attractive	Cedar	Rot-resistant
Teak	Water-resistant	Fir	Strong for weight
Maple	Tough, light	Larch	Durable

Manufactured boards (pieces bonded to form boards)

Plywood

Property: Strong and stable (layers glued at right angles reduce warping)

Use: Furniture, construction (e.g. floors, walls, roofing)

MDF: (Medium Density Fibreboard)

Property: Smooth surface, easy to cut and shape

Use: Interior furniture, shelving, and painted products

Chipboard (Particle Board)

Property: Cheap, but less strong than other boards

Use: Flat-pack furniture and kitchen cabinets

Veneer

A veneer is a very thin layer of real wood that is glued onto the surface of another material, such as MDF, plywood, or chipboard.

Wood finish

A finish on wood is a protective coating or treatment applied to the surface of wood

Year 11: Autumn term 1

Weeks 6,7 & 8: Polymers/Plastics

Thermoforming Plastics		Thermosetting Plastics	
Name	Property & Use	Name	Property & Use
Acrylic (PMMA)	Transparent, rigid → signs, display cases	Epoxy Resin	Strong adhesive → Clear resin jewellery, river top tables.
HDPE	Tough, chemical resistant → milk bottles	Melamine Formaldehyde	Heat resistant, hard → kitchen surfaces
Polypropylene (PP)	Fatigue resistant → ketchup bottle lid.	Urea Formaldehyde	Good insulator → plug socket, light switches.
PVC	Durable, weather resistant → pipes, window frames	Polyester Resin	Strong, waterproof → fibreglass (boats, car panels)

Thermoforming plastic

Heated, shaped, and then cooled to keep its new shape — and it can be reheated and reshaped again.

Thermosetting plastic

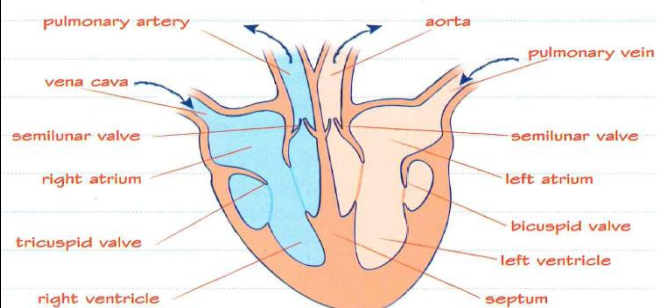
Sets permanently when heated and cannot be reshaped again.



Subject: PE and Health and Fitness

Week 2: Structure of the cardiovascular system

Structure of the cardiovascular system-



Components of the cardiovascular system-

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

KPOW: Cardiovascular System

Week 3: Functions- cardiovascular system

Functions of the cardiovascular system-

- Transport oxygen
- Transport carbon dioxide
- Transport nutrients
- Regulate body temperature

Transport of oxygen. Red blood cells carry oxygen to the vital organs and to the working muscles.

Transport of carbon dioxide. The plasma takes carbon dioxide away from the working muscles.

Transport of nutrients. Nutrients are broken down from the food that we eat and transported to the body in the plasma of the blood.

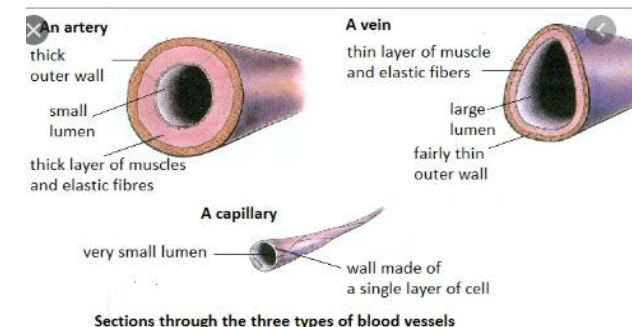
When we are too hot. The blood vessels under the skin vasodilate. They get wider. They do this by the involuntary muscles relaxing. This means that more blood can get to the surface of the skin and more heat can be radiated out.

When we are too cold. The blood vessels under the skin vasoconstrict. They get narrower. They do this by the involuntary contracting. This means that less blood can get to the surface of the skin and less heat can be radiated out.

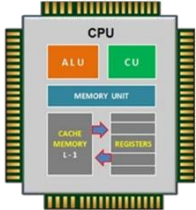
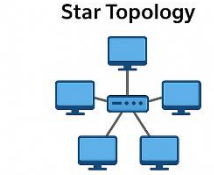
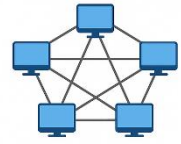
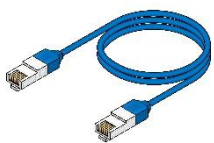
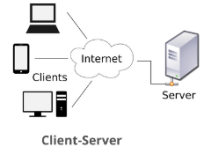
Year 11: Autumn Term 1

Week 4: Blood vessels

Blood Vessel	Structure	Function
Artery	Thick muscular walls No valves Small lumen	Carry mainly oxygenated blood at high pressure away from the heart
Blood Vessel	Structure	Function
Vein	Thin walls Contain valves Large lumen	Carry mainly deoxygenated blood at low pressure towards the heart
Blood Vessel	Structure	Function
Capillaries	Very thin walls (one cell thick) Small lumen	Link the smaller arteries with smaller veins



Subject: PE and Health and Fitness		KPOW: Cardiovascular System	Year 11: Autumn Term 1
Week 5 & Week 6: Blood cells		Week 7: Redistribution of blood flow	Week 8: Exam technique
Red Blood Cells	Carry oxygen to the working muscles. The oxygen diffuses through the thin walls of the alveoli. It then binds with the haemoglobin in the red blood cells and travels in the plasma to the working muscles.	Vascular Shunting- The process that increases blood flow to active areas during exercise by diverting blood way from inactive areas. This is achieved by vasodilation and vasoconstriction. 	Exam Command Word Explain Requires two developed statements 1. Make a point 2. More Detail (What else do I know about this that I can write down) 3. How can this help the sports performer? Example from a past paper (b) Explain two functions of the cardiovascular system that enable a long distance cyclist to perform well in their event. Function 1 Function 2 (Total for Question 7 = 8 marks)
White Blood Cells	Help fight infection. They travel around the body in the plasma and fight any infections or diseases that might be there.	Vasodilation Vasodilation is when the blood vessels leading to the working muscles widen, thus allowing more blood and hence more oxygen to the working muscles. This happens by the involuntary muscles, in the blood vessels, relaxing. 	
Platelets	Help prevent bleeding. They stick to each other and the walls of the blood vessels.	Vasoconstriction Vasoconstriction is when the blood vessels leading to the non-working muscles narrow, thus allowing less blood and hence less oxygen to the muscles that are not working as hard. This happens by the involuntary muscles, in the blood vessels contracting. 	
Plasma	Transports the red blood cells, white blood cells, platelets and nutrients to the different parts of the body.		Point State a function (Transport) More Detail What is transported? How is the oxygen transported? How are the nutrients transported? How do they create energy? How can this help the sports performer? How does this help the cyclist in his event?

Subject: Computer Science	KPOW: Mock Preparation	Year 11: Autumn Term 1																					
Week 2 & Week 3:	Week 4 & Week 5:	Week 6 & Week 7 & Week 8:																					
Storage & Virtual Memory <i>RAM:</i> Volatile, stores current programs/data <i>ROM:</i> Non-volatile, stores boot instructions (BIOS) <i>Secondary storage:</i> Non-volatile, long-term/permanent storage (magnetic/optical/solid state) <i>Virtual memory:</i> Uses secondary storage when RAM full CPU Architecture & Performance ALU: Performs calculations CU: Controls flow of data around CPU Cache: stores frequently used instructions & data Registers: very fast storage (e.g. PC, ACC) <i>Performance factors (Three C's):</i> • Clock speed • Cores • Cache size Arrays • Stores multiple values (same data type) • Indexing starts at 0 • Fixed size Topologies <i>Star:</i> All devices → central switch + Reliable, easy to manage – Switch failure = network down <i>Mesh:</i> Each device connected to all others + Very reliable – Expensive, complex   	Wired & Wireless <i>Wired (Ethernet):</i> Uses cables + Fast, reliable, secure – Less flexible  <i>Wireless (Wi-Fi & Bluetooth):</i> Uses radio signals + Flexible, no cables – Slower, less secure, interference  Subprograms Reusable block of code (procedure/function) + Reduces repetition + Easier to test/debug + Improves readability Network Hardware Router: connects networks (internet) Switch: connects devices in LAN WAP: provides wireless access NIC: allows device to connect Server: provides services   Client-Server & Peer-to-Peer <i>Client-Server:</i> Central server manages network + Secure, efficient management – Expensive, server failure affects all <i>Peer-to-Peer (P2P):</i> All devices equal + Cheap, simple – Less secure, harder to manage  	File Handling Used to store/read data from text files Operations: open, read/write, close DNS (Domain Name System) Converts domain name → IP address Allows users to access websites using names; do not need to remember IP address of every website. Addressing & Protocols <i>IP Address:</i> Unique identifier for a device on a network <i>MAC Address</i> Unique physical address (set in hardware) <i>Protocols (rules for communication):</i> • HTTP: web pages • HTTPS: secure web (encrypted) • FTP: file transfer • TCP/IP: sends data reliably • SMTP: sending email • IMAP/POP: receiving email Trace Tables / Flowcharts <i>Trace Tables:</i> Track values of variables Used to test algorithms <i>Flowcharts:</i> Diagram of an algorithm Uses symbols <table border="1"> <thead> <tr> <th>Symbol</th><th>Name</th><th>Usage</th></tr> </thead> <tbody> <tr> <td></td><td>Line</td><td>Represents the flow from one component to the next</td></tr> <tr> <td></td><td>Process</td><td>An action</td></tr> <tr> <td></td><td>Subroutine</td><td>Calls a subroutine</td></tr> <tr> <td></td><td>Input/Output</td><td>An input or output</td></tr> <tr> <td></td><td>Decision</td><td>A yes/no/true/false decision</td></tr> <tr> <td></td><td>Terminator</td><td>The start or end of the process</td></tr> </tbody> </table>	Symbol	Name	Usage		Line	Represents the flow from one component to the next		Process	An action		Subroutine	Calls a subroutine		Input/Output	An input or output		Decision	A yes/no/true/false decision		Terminator	The start or end of the process
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Subject: Creative iMedia		KPOW: Y11 Mock Exam		Year 11: Autumn Term 1	
Week 2 & Week 3:		Week 4 & Week 5:		Week 6 & Week 7 & Week 8:	
CREATIVE ROLES IN THE MEDIA INDUSTRY		TECHNICAL ROLES IN THE MEDIA INDUSTRY		TECHNICAL ROLES IN THE MEDIA INDUSTRY	
Role	Responsibilities	Role	Responsibilities	Role	Responsibilities
Graphic Designer	- Creates images from scratch and edits photos. - Produce rough sketches to show the client.	Camera operator	- Films what is happening in a tv or film. - Sets up the appropriate shot, angle or movement.	Campaign manager	- In charge of the overall marketing campaign that advertise a media product. - Decides which media products and sectors will feature in the campaign.
Content Creator	- Creates content such as videos, text and audio. - Uploads content to social media platforms. - Advertises brands.	Games developer	- Writes code for a game - Make use of 3D models. - Work with scriptwriters to create an engaging game.	Director	- Oversees the creative parts of a tv or film production. - Work with actors, scriptwriters and sound & video editors.
Copy writer	- Writes the text for media products. - Written text will persuade/inform/educate.	Sound editor	- Synchronises the video and audio together in post-production. - Adds in SFX and music.	Editor	- Decides what is included in a printed publication such as magazine or newspaper. - Review the content that will appear in the publication to make sure its suitable.
Animator	Creates a series of still images that are put together to make an animation.	Audio technician	- Sets up and operates the audio equipment in the production stage. - Records the main audio such as dialogue in production.	Creative director	- In charge of creative job roles such as graphic designers, script writers etc. - Ensure media product is suitable for the client and all requirements are met.
Photographer	Captures high quality images that are used on media products.	Video editor	- Edits the footage in post-production. - Works closely with director to make the final cut of the film.	Production manager	- Responsible for liaising with different departments of a media production. - Manages the scheduling and budget.
Scriptwriter	- Writes a script for film, tv or radio productions. - They will create the characters and storyline.	Wed developer	- Uses code to create and maintain websites (front-end developer) - Program the technical parts of the website such as payment screens. - Update databases.		
Web designer	Plan and design the look and layout of websites and apps.				
Illustrator / graphic artist	- Creates drawings or images for books, magazines. - These are hand drawn or created using a tablet.				



Subject: Religious Education Week 2 & Week 3: Nubuwwah Please read and learn the key facts about 5 of the key prophets:		KPOW : Mock Exam Week 4 & Week 5: Key Words – Unit 3 Islam Please learn the definitions of the following 12 words:		Year 11: Term Autumn 1 Week 6 & Week 7 & Week 8: Revision - Family Please learn these key facts below; The family unit is very important within Christianity; Why is the family important? What is its purpose?	
Adam  - The first prophet - Created by Allah to look after the earth the way Allah wanted (Khalifah). - This teaches Muslims that it is their duty to care for the world.		Shahadah The first pillar - declaration of faith, Muslims stating they believe in Allah.		 To have and raise children; children are seen as a gift from God and so they should be loved and cared for by their parents.	
- Regarded as the greatest prophet before Isa. - He had two sons; Isma'il and Ishaq. - Ibrahim was asked to sacrifice his son to test his faith.	Ibrahim 	Jummah Prayers which Muslims complete on a Friday.		 God created the idea of family at creation and having a family shows you are following God's plan.	
Musa  - Has more mentions in the Qur'an than any other prophet. - He was sent by Allah to give guidance to the Pharaoh of Egypt. - He was chosen to receive the holy book of Tawrat.		Zakah The third pillar – donating 2.5% of their wage to charity.		How does the parish help families? They might run Sunday Schools where children learn about their faith in a way they understand whilst their parents can attend church services.	
- Isa and Maryam (Mary) are major figures in the Qur'an. - Muslims believe Isa had a virgin birth. - They also believe Isa performed many miracles, but through the grace of Allah.	Isa 	Khums Literally meaning 'fifth' - an additional charity tax for Shi'a Muslims.		Churches may also run toddler groups like Messy Church to help parents with young children to socialise and learn from each other.	
Muhammad  - Called by Allah to deliver his final message. - His message must be followed, those who do will be rewarded. - He is only mentioned by name in the Qur'an 4 times.		Sawm The fourth pillar – fasting during the month of Ramadan.			
		Iftar The name given to the meal that breaks the fast in the evening.			
		Id ul Fitr This falls at the end of Ramadan to celebrate of the completion of fasting.			
		Hajj The fifth pillar – that Muslims complete the pilgrimage to Makkah			
		Ka'bah The House of God in Makkah; it contains the black stone which dates back to the time of Adam & Eve.			
		Id ul Adha It is the 'festival of sacrifice', remembering ibrahim's submission to Allah. It falls at the end of Hajj.			
		Jihad Literally meaning 'struggle' – a Muslim's struggle to follow the teachings of Islam.			
Why does the parish help families?  The family is where children are introduced to the faith, if the parish doesn't help with this then Christianity will not grow.					
 The main purpose of a Christian marriage is to have and raise children so surely it is the job of the parish to help in this process?					



Subject: Health and Social Care		Year 11: Autumn Term 1
Weeks 2: Types of care settings	Week 3: Rights of service users	Week 4: The benefits of rights
Health Care Purpose: 1. Provides medical care 2. Preventative screening 3. Treatment Settings: Walk-in centre, dentist, GP/Doctor, Health Centre, Hospital, Nursing home, Pharmacy, Opticians. Social Care Purpose: 1. Provides care in people's homes 2. Support services 3. Practical help with daily living Settings: Homeless shelter, Food Bank, Day Centre, Community Centre, Support Group, Retirement/Residential Home, Social Services.	Choice – service providers must provide options that service users can make decisions about. Confidentiality – keeping personal information safe and secure, in a locked cabinet or password protected. Conversations should take place in private. Consultation – service users must be involved in decisions made. Information should be shared so service users can make an informed choice. Protection from abuse and harm – everyone has the right to feel safe. Includes protection from other people as well as health and safety issues, e.g. fire evacuation or food hygiene. Equal and Fair Treatment – ensuring everyone can access services- regardless of who they are. It is not about treating them the same, but meeting the individual needs of the person.	Mnemonic – “Everyone Has a Nice Time” Empowerment – relates to the control a service user feels they have over their life. It should make them feel like they have more independence, more in control, and are more able to make choices. High self-esteem – service users will feel more valued and more respected. Service users' needs are met – care should be specific to the service users' needs. If needs are met, then the service users should see improvements in their physical and mental health. Trust – trust is developed between service user and service providers if their rights are supported. It will keep them reassured that they will be safe from harm and have more confidence in their care, as they have their best interests in mind.
Week 5: Person centred values	Week 6 & Week 7: 6C's	Weeks 8: Benefits of 6C's
Person-centred values ensure that the service users is at the centre of all decisions made about their care Mnemonic “Ripped Ric” • Respect • Individuality • Partnership • Privacy • Encouraging Decision-making • Dignity • Rights • Independence • Choice	6Cs – all service providers should demonstrate. • Care – what is offered to the service user- linked to their age and needs. • Compassion – the empathy and respect shown to an individual. • Competence – the provider's ability to look after someone, thus making sure they have up-to-date knowledge of the patient's needs. • Communication – talking/listening to each other to ensure the best care for individuals. • Courage – ensuring the provider speaks up about any concerns. • Commitment – showing they can deliver the PVCs (Personal Centred Values) and treatment to a high level.	Benefits for the service provider – provides clear guidelines on how to care for an individual; improves job satisfaction as they have a positive relationship, maintains or improves the quality of life as you feel supported, supports rights of choice and consultation, helps develop skills, and shares good practice. Benefits for the service user – ensures they receive the same standard of care from all providers; improves their quality of care given; increases the confidence they have in the provider; maintains or improves their quality of life as they are being correctly supported with all their needs; helps develop their strengths as they are given the opportunity and support to develop their self-efficacy.





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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