



Minsthorpe Community College

Knowledge Organiser Year 9 – Autumn Term 1

Name:

P&A group:

Knowledge Assessment: Thursday 23rd October 2025 – Period 2

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: How is suffering presented at the end of the tragedy?

Year 9: Autumn Term 1

Week 2 & Week 3: Aristotle's Tragic Conventions

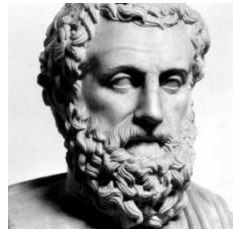


Tragedy: 1. a play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character (protagonist) e.g. "Shakespeare's tragedies".

2. an event causing great suffering, destruction, and distress, such as a serious accident, crime, or natural catastrophe e.g. "a tragedy that killed 95 people".

Aristotle's Definition of Tragedy:

Aristotle was a famous Greek philosopher whose text "Poetics" noted several conventions (rules) that tragedies should follow.



In summary, Aristotle's idea of a tragedy involves a noble character who suffers due to a personal mistake or weakness, which induces pity and fear in the audience, and leads to a cathartic experience.

According to Aristotle, tragedies are made up of three main elements:



Hamartia: a character's tragic or fatal flaw that leads to their downfall.



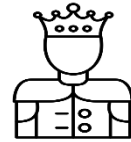
Anagnorisis a character's realisation of their fatal flaw or mistakes.



Peripeteia: a sudden or unexpected reversal of circumstances; the point of no return.

Week 4 & Week 5: The Tragic Hero

Tragic Hero: a main character in a story or drama who, despite possessing virtuous traits, has one or more personal flaws that lead to a downfall.



Typically, a tragic hero should begin the tragedy with a high rank or status.



Tragic heroes will often suffer from hubris, which means excessive pride. This blinds them to their flaws and causes their downfall.

The hero's tragic mistake or flaw leads to:



Suffering: the protagonist and other characters must suffer as a result of the protagonist's mistakes. This creates:

Pathos: a feeling of sadness and/or sympathy for a character or situation created by the writer.

The hero's downfall causes:

- chaos and disorder in which the natural order will be overturned.
- the death of the protagonist, most likely causing the death or hurt of others along the way.



The death of the tragic hero should create feelings of pity and fear in the audience, leading to a catharsis- an emotional release for the audience.

Week 6, 7 & 8: Tragic Themes & Dramatic Devices

Tragic Themes:



Fate: the development of events outside a person's control, regarded as predetermined by a supernatural power. In any tragedy, fate always ensures that tragedy will occur despite the best efforts of the protagonists; it creates a feeling on inevitability (that their death cannot be avoided).

Motif: a recurring symbol, theme or idea in a literary text e.g., motif of time.

Destiny: noun: the events that will happen to a particular person or thing in the future; the hidden power believed to control future events; fate.

Vengeance: noun: revenge; punishment or retribution for an injury or wrong

Dramatic Devices (devices used in plays and performance)

Soliloquy: an act of speaking one's thought aloud when alone, regardless of any hearers, especially by a character in a play.

Situational irony: a type of irony where the opposite of what is expected happens, resulting in humorous or tragic consequences.

Juxtaposition: the fact of two things being seen or placed together with contrasting effect.

Prologue: a separate introductory section of a literary, dramatic, or musical work.





Subject: Maths

Week 2: Algebra Review

Keywords:

Expression: Numbers, symbols and operators grouped to show the value of something. They do not have an equals sign.

Equation: When two expressions are equal, they always have an equals sign.

Identity: An equation that is true no matter what values are chosen. Identities have this symbol \equiv .

Expressions

$2a$ means $a + a$ or $2 \times a$

$a + 2$ means 2 more than a

a^2 means $a \times a$

The value of the expression depends on the value of the variables. We can find the value by substituting.

For example

If $a = 2$ substitute into $3a + 1$

$$\begin{aligned} &= 3 \times a + 1 \\ &= 3 \times 2 + 1 \\ &= 6 + 1 = 7 \end{aligned}$$

Collecting Like Terms

To simplify expressions, we collect like terms.

For example

$$2a + 3b + 4a - b \text{ simplifies to } 6a + 2b$$

$$2a + 4a = 6a$$

$$3b - 1b = 2b$$

KPOW: Equations & Inequalities

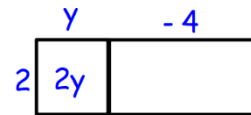
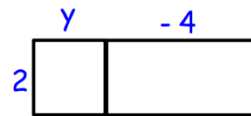
Week 3: Algebra Review

Expanding brackets

To expand brackets, multiply each term by the number outside the brackets.

For example

$$\text{Expand } 2(y - 4) = 2y - 8$$



$$2 \times y = 2y$$

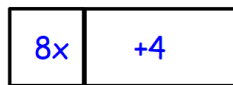


$$2 \times -4 = -8$$

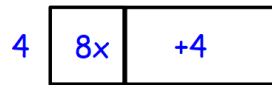
Factorising

Factorise means to put into brackets.

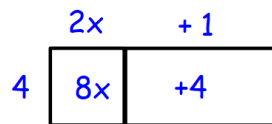
For example: Factorise $8x + 4$



Check your answer by expanding the brackets.



The highest common factor of 8 and 4 is 4.



$$\begin{aligned} 4 \times 2x &= 8x \\ 4 \times 1 &= 4 \end{aligned}$$

ANSWER $4(2x + 1)$

Year 9: Autumn Term 1

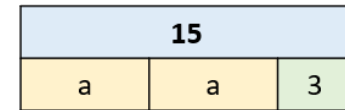
Week 4: Equations & Inequalities

Equations

Bar models help us understand equations.

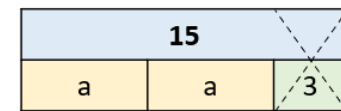
This bar model shows:

$$2a + 3 = 15$$

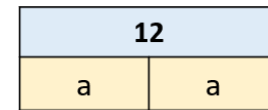


To solve an

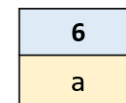
equation, rearrange to get letters on one side and numbers on the other.



$$2a = 15 - 3$$



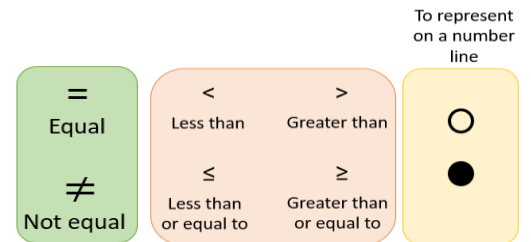
$$2a = 12$$



$$a = 6$$

Inequalities

An inequality compares two values.



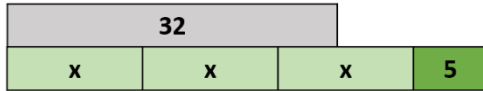


Subject: Maths

Week 5: Equations & Inequalities

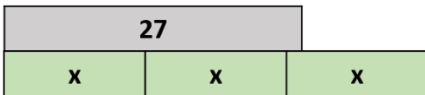
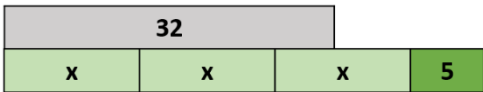
We can use bar models to solve and understand inequalities.

For example

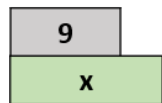


This bar model shows $3x + 5 > 32$ because 32 is represented by the shorter bar.

Solve an inequality in the same way we solve an equation.



Therefore $3x > 27$



So $x > 9$. Therefore, for any value of x greater than 9, the value of $3x + 5$ will be greater.

KPOW: Inequalities

Week 6: Equations & Inequalities

Quadratic expression

The Standard form of a quadratic expression is $ax^2 + bx + c$

a , b and c can be any number.

Substituting into a quadratic

Substitute $x = 4$ into

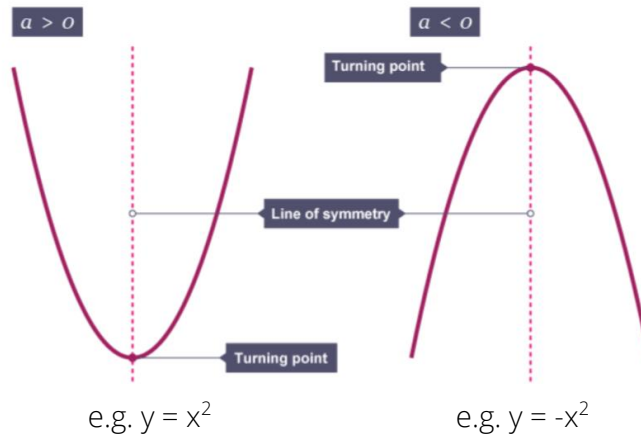
$$x^2 + 2x - 6$$

$$\begin{aligned} &= (4^2) + (2 \times 4) - 6 \\ &= 16 + 8 - 6 \\ &= 18 \end{aligned}$$

We can substitute different x -values into a quadratic to find coordinates for the graph.

Quadratic graphs

The shape of a quadratic graph is called a parabola. Graph of ax^2+bx+c



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Week 7 & 8: Quadratics

Factorised form

Quadratic expressions can often be written in the form $(x + a)(x + b)$

For example

$x^2 + x - 6$ can be written in the form $(x + 3)(x - 2)$



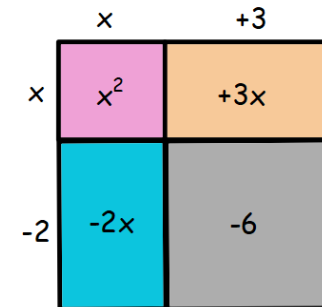
In algebra, we don't need to write the multiply sign. This still means $(x + 3) \times (x - 2)$.

Expanding double brackets

We can use an area bar model to expand quadratic expressions written in the factorised form and express them in the standard form.

For example

Expand $(x + 3)(x - 2)$



$$\begin{aligned} &= x^2 + 3x - 2x - 6 \\ &= x^2 + x - 6 \end{aligned}$$





Subject: Biology

KPOW: Stem Cells

Year 9: Autumn Term 1

Week 2: Microscopy (RP)

Keyword definitions

Resolution - The ability to see more detail, as you can more easily tell apart 2 separate points on an object.

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.

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

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

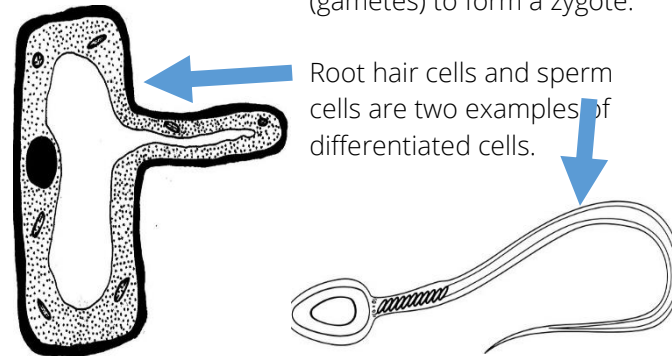
Week 3: Cell differentiation

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.



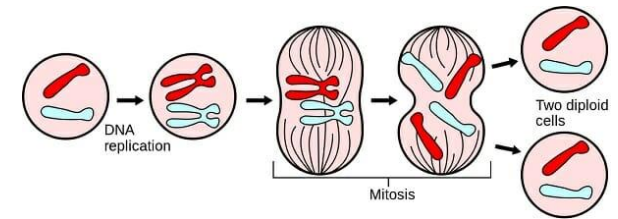
Week 4: Cell cycle and mitosis

Keyword definitions

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

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.



The image above shows mitosis that results in two **diploid cells** (one with a full set of chromosomes)

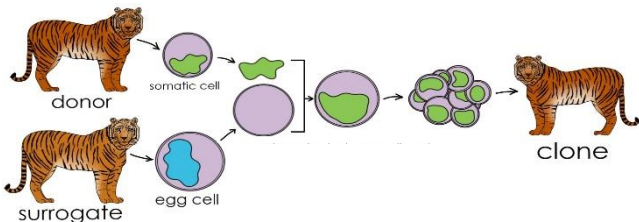
Week 5: Stem cells and therapeutic cloning

Keyword definitions:

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.



A **clone** is a genetically identical plant or animal.

Week 6: Prokaryote and culturing bacteria

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.



Week 7 & 8: Diffusion and active transport

Keyword definitions

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

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



The diagram above shows **active transport**, this is the movement of dissolved molecules into or out of cell through a membrane from region of lower concentration to a higher one.





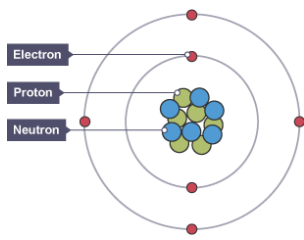
Subject: Chemistry | KPOW: Separating Mixtures | Year 9: Autumn Term 1

Week 2: Atoms, Elements, Compounds

Keyword definitions
Atom - The smallest unit of matter.
Element - A type of atom (each element is made of only one type of atom).
Compound - Two or more different elements chemically bonded together.

Atoms make up **everything** around us. They are made of **subatomic** particles called protons, electrons, and neutrons.

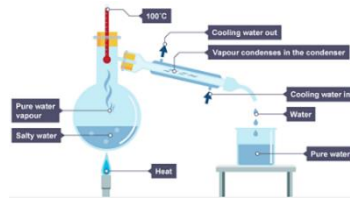
Atoms can be organised into different **elements** such as Carbon or Hydrogen, based on **how many protons** they have.



Week 3: Mixtures and Separations

Keyword definitions
Mixture - A substance made of two or more different elements not bonded together.
Filtration - A technique used to separate an insoluble solid (like sand) from a liquid.
Evaporation - A technique used to separate a soluble solid (like salt) from a liquid).
Chromatography - A technique used to separate different parts of a mixture.

Distillation is a common separation technique used to separate a liquid from a soluble solid (or another liquid with a different **boiling point**).

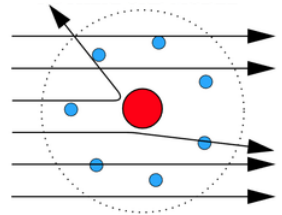


Week 4: Models of the Atom

Keyword definitions
Nucleus - The central part of the atom, which contains protons and neutrons.
Indivisible - Something which cannot be divided or broken down into small parts.
Scattering - When particles or waves are spread out in different directions after going through a medium.

Ernest Rutherford's **nuclear** model was supported by his **alpha scattering** experiment. His conclusions were:

- Most of the atom is **empty space**.
- The nucleus is **positive**.
- Most of the mass is found in the nucleus, so it is **very dense**.

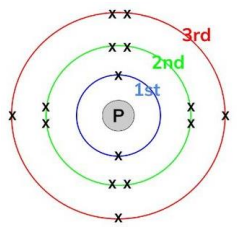


Week 5: Electron Structure

Keyword definitions:
Subatomic particle - Something found within an atom, like an electron, proton or neutron.
Shell - The place when electrons are found, orbiting the nucleus.

When filling out the electrons on an atom, you should always follow these **rules**:

- Start with the 1st shell (inner shell)
- Always fill a shell **fully** before moving on to the next shell
- The 1st shell can hold up to 2 **electrons**, the 2nd and 3rd shell can hold up to **8 electrons** each.



Week 6: Development of the Periodic Table

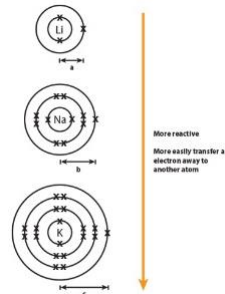
Keyword definitions:
Property - Something that describes how a substance behaves, a characteristic.
Period - A row of the periodic table (horizontal). Dmitri Mendeleev was a Russian chemist who had the idea to **leave gaps** in his periodic table when the **properties didn't match**, assuming that there were more elements not yet discovered that would fit in the gaps. Discovery of elements such as **Gallium** proved him right.

H 1.01	II		III	IV	V	VI	VII	VIII	
Li 6.94	Be 9.01	B 10.8	C 12.0	N 14.0	O 16.0	F 19.0			
Na 22.9	Mg 24.3	Al 27.0	Si 28.1	P 31.0	S 32.1	Cl 35.5			
K 39.1	Ca 40.1		Ti 47.9	V 50.9	Cr 52.0	Mn 54.9	Fe 55.9	Co 58.9	Ni 58.7
Cu 63.5	Zn 65.4			As 74.9	Se 79.0	Br 79.9			
Rb 85.5	Sr 87.6	Y 88.9	Zr 91.2	Nb 92.9	Mo 95.9		Ru 101	Rh 103	Pd 106
Ag 108	Cd 112	In 115	Sn 119	Sb 122	Te 128	I 127			
Ce 133	Ba 137	La 139		W 184			Os 194	Ir 192	Pt 195
Au 197	Hg 201	Tl 204	Pb 207	Bi 209					
			Th 232	U 238					

Week 7 & 8: Groups of the Periodic Table

Keyword definitions
Trend - When something increases/decreases in a certain direction.
Reactivity - How likely a substance is to react with another substance.
Group - A column of the periodic table (vertical).

Different groups in the periodic table have different **patterns of reactivity** as we go down the table. This is due to their electron structure. E.g. as we go down **Group 1**, it is easier for bigger elements to lose an electron, so they become **more reactive**.

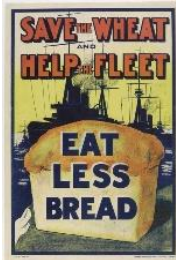




Subject: Geography	KPOW: Development	Year 9: Autumn Term 1										
<p>Week 2: Global Development</p> <p>Development is about improving people's lives. Development means that people have an acceptable quality of life or standard of living.</p> <p>Quality of life - how happy and healthy someone is.</p> <p>Standard of living - the wealth and possessions people have.</p> <p>Development is measured using social (people) and economic (money) indicators such as: birth rate, death rate, life expectancy, and GNI (gross national income) per capita.</p> <p>HDI (Human Development Index) is a more accurate measure of development as it is an average of GNI per capita, health and education. HDI is scored 0-1, the closer to 1 the more developed a country is.</p> 	<p>Week 3: Causes of the Development Gap</p> <p>The Development Gap - the widening difference in levels of development between the world's richest (High Income Countries) and poorest (Low Income Countries) countries.</p> <p>This has led to inequality between countries in terms of poverty and wealth, as well as in people's wellbeing and access to things like jobs, housing, and education.</p> <p>Inequality - the idea that different people experience different standards of living and quality of life.</p> <p>Many factors affect the development status of a country. These may fall under historical, economic, or physical causes.</p> 	<p>Week 4: Consequences of the Development Gap</p> <p>The three most important resources on the planet are food, water and energy. Some countries have more of these than others and this causes inequalities. Inequalities in food causes food insecurity (not enough food for the population). This can cause famine as crops may fail this means that people become malnourished. Some countries rely on aid from charities and other countries to help its population.</p> <p>Health Inequalities:  In India, over half a million children under 5 die from diarrhoea every year. This is caused by a lack of safe water, poverty, and available healthcare. The UK does not suffer from the same illnesses as they have access to safe water, less poverty and access to more doctors.</p> 										
<p>Week 5: Globalisation and TNCs</p> <p>Globalisation is the spread of ideas around the world. Developments in technology such as transport and the internet has led to globalisation.</p> <p>Transnational Corporations (TNCs) are companies that have many factories in LICs across the world, whereas their headquarters are often in a HIC.</p>  <table border="1" data-bbox="112 1197 761 1388"> <thead> <tr> <th>Advantages of TNCs</th> <th>Disadvantages of TNCs</th> </tr> </thead> <tbody> <tr> <td>Employment</td> <td>Poor working conditions</td> </tr> <tr> <td>Taxes to the government</td> <td>Low pay</td> </tr> <tr> <td>Education</td> <td>Environmental pollution</td> </tr> <tr> <td>Training/skills</td> <td></td> </tr> </tbody> </table>	Advantages of TNCs	Disadvantages of TNCs	Employment	Poor working conditions	Taxes to the government	Low pay	Education	Environmental pollution	Training/skills		<p>Week 6: Geography of Chocolate</p> <p>Chocolate is made from cocoa, sugar, and milk. Cocoa beans come from the cocoa tree which can only be grown in places with a tropical climate. The beans are grown and harvested by farmers and ground into cocoa power and shipped around the world to make chocolate. Most of the world's cocoa comes from Ghana and Cote d'Ivoire.</p> <p>Fairtrade is a global organisation that helps farmers in LICs get a fair price for the crops and goods that they sell. This will hopefully help the farmers work their way out of poverty and help the country they live in to develop.</p> 	<p>Week 7 & Week 8: Reducing the Gap</p> <p>The United Nations (UN) is an organisation of 192 countries. It aims to bring nations together to prevent future conflict.</p> <p>In 2015, a set of 17 targets called the Sustainable Development Goals. They were created to help reduce the development gap.</p>  <p>Other ways countries are trying to develop is through tourism; this is a way to attract people into your country to see what it has to offer. In doing this, many jobs are created, and people spend in your country, both add to the economy therefore government spending can occur to develop the country.</p> <p>.....</p> <p>Week 8 – Development KPOW</p>
Advantages of TNCs	Disadvantages of TNCs											
Employment	Poor working conditions											
Taxes to the government	Low pay											
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Training/skills												





Subject: History	KPOW: Why did women get the vote?	Year 9: Autumn Term 1
<p>Week 2: Causes of World War One</p> <p>Long Term Causes: Militarism - European countries were increasing the size of their armies and navies. Alliances - Triple Entente = Britain, France and Russia. Triple Alliance = Germany, Austria-Hungary and Italy. Imperialism - European countries were competing to see who had the biggest empire (group of countries ruled over by another country). Nationalism - Some countries thought they were better than other countries. Short Term Cause: The assassination of Franz Ferdinand. 28th June 1914. The heir to the Austro-Hungarian throne was shot by a Serbian terrorist. This led to the outbreak of World War One because of the alliance system.</p> 	<p>Week 3: Joining Up</p> <p>Recruitment: At first, huge numbers of people volunteered to fight. When the numbers started to drop, the government used propaganda posters to encourage more men to join up. Pals Battalions were created. This meant people would fight alongside friends and neighbours, rather than strangers. Conscription: By the summer of 1916, the number of volunteers dwindled. As a result, the government introduced conscription - any man aged between 18 and 41 could be forced to join the army. Some men believed that war was wrong under any circumstances and refused to join up. They became known as conscientious objectors. There were around 16,000 conscientious objectors.</p> 	<p>Week 4: The Nature of Warfare - Presentations</p> <p>Battle of the Somme: July – November 1916 - Led by General Haigh, the British launched an attack on German lines along the River Somme. The Germans lost 500,000 men, the British and French lost 620,000. Battle of Gallipoli: April 1915 – January 1916 - An Allied plan for Australian and New Zealand troops to distract the Turkish army from British troops landing further down the peninsula. Battle of Verdun: February – July 1916 - The French defended the fortress of Verdun against the German army. The Germans lost 400,000 men, the French lost 620,000. Battle of Jutland: May – June 1916 - The only major naval battle between the main British and German fleets. It involved 250 ships and 100,000 men. The total loss of life on both sides was 9,823 personnel.</p>
<p>Week 5: Empire Soldiers</p> <p>The war involved people from all over the world. Great Britain, Germany, Russia and Austria-Hungary all ruled empires. Their colonies sent supplies, food and soldiers to help in the war effort. Britain's colonies sent over two and a half million men to fight. India sent the most soldiers. At that time, India included modern day Pakistan and Bangladesh. Colonies as far away as Canada, Australia, New Zealand, South Africa and Rhodesia (which is now Zimbabwe) also sent thousands of soldiers. That meant that Britain had soldiers from five different continents: Europe, North America, Australasia, Asia and Africa.</p> 	<p>Week 6: The Home Front</p> <p>The war did not just involve soldiers, sailors and airmen. People left at home had their part to play too. Defence of the Realm Act (DORA): This law gave the government powers to do whatever they felt was necessary to win the war. They could take over mines, railways and shipyards, control newspapers and radio. Britain was short of food so rationing was introduced to make sure food was equally shared out. Each person was allowed a set amount of butter, sugar, bacon, ham and so on. The government issued posters showing people how to recognise German aircraft, warning them to take cover if they spotted an enemy aircraft.</p> 	<p>Week 7 & Week 8: Consequences of WWI</p> <p>Female Suffrage: Groups such as the suffragists and the suffragettes had been campaigning for women to have the vote for years. During the war, women did the jobs of the men who had gone to fight. This led to some women getting the vote in 1918, followed by all women over 21 in 1928 with the Representation of the People Act. The Treaty of Versailles: Determined to avoid another war, the Allies met to decide what to do next. The Big Three were David Lloyd-George (Great Britain), Woodrow Wilson (USA) and Georges Clemenceau (France). They drew up the Treaty of Versailles which set out the terms Germany had to agree to. These included reducing their army and paying £6,600 million in reparations (payment for war damages).</p> 





Subject: DT - Hospitality and Catering

Week 2 & Week 3: Health and Safety and recipes

Skills/terms and health in Food

A HAZARD in a kitchen is something that could cause illness or injury.



Plan to make deep fried chicken nuggets and chips:

1. Cut chicken and coat in flour, egg, and breadcrumb.
2. Place in hot oil to cook.
3. Chop potatoes into chip shapes and fry in same oil.

DEEP FAT FRYING – COMPLEX SKILL

ENROBING= coating an ingredient in another-E.g.- coating the chicken in flour, egg then crumbs.

Plan to make sausage rolls:

1. Lay out pastry and place meat in 2 rows on the long side.
2. Cut in half and fold over.
3. Cut into pieces and glaze with an egg then bake. Heat: 75 degrees.
4. BAKING- MEDIUM SKILL

GLAZING= brushing an egg wash onto the outside of a product-E.g.- covering pastry in egg to bake.

KPOW: Skills in Practical

Week 4 & Week 5: Hospitality Theory

Type of provider	Definition	Examples
ACCOMODATION	Somewhere that you can stay overnight.	Hotels, Bed and Breakfasts (B&Bs), hostels, holiday parks, campsites, cruise ships.
RESTAURANTS and BARS	A place that you would go to eat and/or drink.	Pubs, nightclubs, casinos, restaurants, cafes, tearooms, coffee shops, fast food outlets.
TRAVEL and TOURISM	Anything that allows people to travel to another destination away from their home (e.g. for holidays)	Airlines, leisure centres, travel agents, train services, bus services, taxis/Uber

The Kitchen Brigade

Head chef/executive chef- in charge

Sous chef- second in charge

Chef de partie (section chefs)- responsible for specific items

Commis chef- trainee chef

Plongeur (dishwasher)- cleans up and washes pots.

COMMERCIAL Vs NON-COMMERCIAL

Commercial establishments are there to make a profit- examples include- restaurants, fast food outlets, hotels, guest houses.

Non-commercial residential establishments do not make a profit- examples include- hospitals, prisons, armed forces barracks, council run care homes.

TYPES OF FOOD SERVICE

- CAFETERIA- customers line up and are served ready made food from a selection.
- BUFFET- customers pay and can select as much food as they want.
- FAST FOOD- quick turnaround from ordering to receiving- typically unhealthy and convenient.
- WAITED ON- waiters bring food to the table.
- SILVER SERVICE- served to a large amount of guests from silverware.

Year 9: Autumn Term 1

Week 6, 7 & 8: Recipes

Plan to make a cheesecake:

1. In a bowl, add biscuits and smash up, then add melted butter to pack together and add to tin.
2. Add cream cheese, cream, icing and vanilla and whisk together and add to the top of biscuits- leave to set and decorate.



WHISKING=COMPLEX SKILL-E.g- using an electric whisk to combine ingredients together.

Plan to make curry and naan bread:




1. Cut chicken up and fry with onions and garlic then add curry powder and chilli and cream- leave to simmer.
2. In a bowl, add all dry ingredients with water and yoghurt and mix until it forms a dough.
3. Split into pieces, roll out and dry fry.



DOVETAILING=COMPLEX SKILL- E.g.- making multiple products at one time.





Subject: DT – Product Design	KPOW: Product Analysis & Initial Ideas	Year 9: Autumn Term 1
Week 2 & Week 3:	Week 4 & Week 5:	Week 6, Week 7 & Week 8
<p>De Stijl inspire Desk Lamp Product Analysis Using ACCESSFM A – Aesthetics C – Cost C – Customer E – Environment S – Size S – Safety F – Function M – Materials</p>  <p>Sustainable Design To create products and services that are not harmful to the environment or use up the planet's natural resources, therefore protecting our planet for future generations.</p> <p>In order to achieve this, design use the 6 Rs of sustainability.</p> <p>Recycle - Reprocess a material or product and make something else.</p> <p>Re-use - Use a product to make something else with all or parts of it.</p> <p>Reduce - Cut down the amount of material and energy you use as possible.</p> <p>Refuse - Don't buy a product if you don't need it or it's bad for environment.</p> <p>Rethink - Design in a way that considers people and the environment.</p> <p>Repair - When a product breaks down or doesn't work, try to fix it.</p>	<p>Globalisation Building a worldwide network of communication, transportation, and trade.</p> <p>Global Production This term is used to describe how one product can be produced all over the world.</p> <p>Advantages Makes products cheaper, therefore lower cost for consumers.</p> <p>Disadvantages Carbon footprint (environmental) & ethical/moral considerations.</p> <p>Product Manufacture CAD Design - Computer aided designs can be e-mailed from one side of the world to the other.</p> <p>Transportation Ships, lorries and sometimes aeroplanes are used to transport products and components around the world.</p> <p>Just-in-time Manufacturing Just-in-time manufacturing is when materials/ components are ordered so they arrive just as they are needed.</p> <p>Advantages The company does not have to pay for large amounts of stock in one go.</p> <p>Disadvantages There is no spare finished product available to meet unexpected orders.</p>	<p>Materials - Timbers Hardwoods Come from deciduous trees & grow slowly. Ash, beech, oak, mahogany, more expensive</p> <p>Softwoods Come from evergreen trees & grow quickly. Cedar, Scots pine, Parana pine, Spruce.</p> <p>Properties OAK - The timber is very <i>strong</i> and <i>hard</i> to work with. PINE - Easy to work with/ lightweight prone to scratches/dents.</p> <p>Materials - Fibres Natural Fibres – From plants or animals. Manufactured fibres – Combined with chemicals.</p> <p>Properties Natural These fibres come from renewable source. They are also biodegradable (something that will decay (break down) over time). Generally absorbent. Poor resistance to chemical damage. Durable – especially animal fibres.</p> <p>Manufactured Less absorbent than natural fibres. Wrinkle less than plant fibres. Easier to care for than natural fibres (i.e. wash/clean). Resistant to moths/insects. Durable</p>  





Subject: DT - Textiles

Week 2 & Week 3: Mobile Phone Holder



Specification = a list of requirements that the product should fulfil.

- **Specification Points:** Target Market, Function, Aesthetics, Materials, Ergonomics & Quality.
- There are 2 categories, **Essential** (product MUST do this) and **Desirable** (the product COULD do this).

Theory:

SEC - Social, ethical and cultural factors relating to manufacture and buying products:

- **Social** – consider how products can affect communities (child labour, working conditions, working hours and wage)
- **Ethical** – consider the welfare of people and animals (Coltan mineral known as Conflict mineral, child labour used, destroying gorillas' habitats, animals being poached. Angora rabbits, fur ripped out)
- **Cultural** – take care not to offend groups of people with different traditions & beliefs (cultural appropriation, copying ideas without understanding or respect e.g. Sikh Turban – used by Gucci and Navajo tribe images used by Urban Outfitters)



KPOW: EOM Test

Week 4 & Week 5: Market Push & Technology Pull

This drives the development of new products:

Technology push



Advances in technology drive the design and manufacture of a new product.

Market pull



Consumer needs or wants drive the design and manufacture of new products.

Technology Push - Research & Development: In industry Research & Development departments are always coming up with new technologies, materials, and manufacturing methods. This then drives the design of new products or improves existing ones making them **cheaper, function better, look better** and are **more efficient**.

Smart Phone is a product which has been developed by 'Technology Push'. Touch screen technology & GPS.



Market Pull – Designers design and manufacturers make products to satisfy consumer wants, needs, and demands. Changing fashions and social attitudes affect people's wants. New Products are developed to meet society's desire for products that **are better for the environment, meet trends** and respond to **focus groups' feedback**.

Energy efficient lightbulb is an example of 'Market Pull'.



Year 9: Autumn Term 1

Week 6, 7 & 8: New Technologies & their Impact

Artificial Intelligence ~ Computers that copy or simulate human intelligence.

Example: Cars self-park/ drive = could reduce road accidents.

Biometrics ~ Parts of a person's body are used for identification purposes.

Example: Smartphone uses fingerprint readers, retina or voice recognition = more secure.

Robotics ~ Perform wide range of sometimes difficult physical tasks.

Example: defusing bombs, search & rescue operations = safer for humans. Spraying cars = consistency and speed improved, and costs reduced.

Virtual Reality ~ Computers are used to create an artificial environment where users can interact with it as if it were real.

Example: Virtual Buildings, designers and architects can walk through it checking for potential errors – modifications can be made quickly and safer buildings created.

Key Words:

Appropriating – The act of appropriating or taking possession of something, often without permission or consent.

Focus Group – Market research method companies use to better understand their target audience's thoughts and opinions about products.

Criteria – A standard by which something can be judged or decided.

Manipulate – Handle or control (a tool, mechanism, information etc.) in a skilful manner.





Subject: Core PE

Week 2 & Week 3: Reaction Time

Definition - Reaction time is the time it takes to respond to a stimulus.

Example - A sprinter would need a good reaction time to respond quickly to the starter's gun. This would give the sprinter an advantage of getting into their running strides quicker than their fellow competitors.



KPOW: Key Words

Week 4 & Week 5: Agility

Definition - Agility is the ability to change direction at speed whilst maintaining control.

Example - A basketball player would need agility to be able to dribble around defenders without the ball being stolen. A footballer would also use agility to dribble around defenders without being tackled.



Year 9: Autumn Term 1

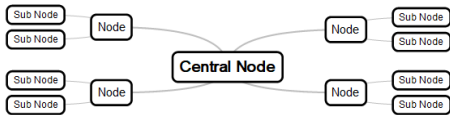

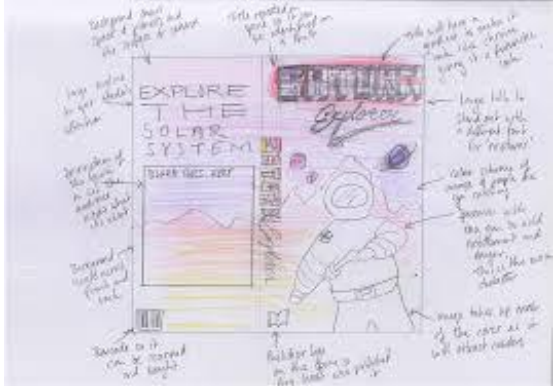
Week 6, Week 7 & Week 8: Power

Definition - Power is the ability to do strength performances quickly. To have power, you must have both strength and speed together.

Example - A boxer would need power to throw strong punches quickly. This would give the boxer a greater chance of knocking out their opponent. A weightlifter would also need power to move the weights quickly into their desired position.





Subject: Computing & Digital Media	KPOW: Digital Graphics	Year 9: Autumn Term 1
Week 2 & Week 3	Week 4 & Week 5	Week 6, Week 7 & Week 8:
Keywords: Audience: The group or groups of people that a product is aimed at. Client Brief: The person or company that you are creating the product for.	Keywords: Mind map: A pre-production document to quickly generate ideas. Mood board: A pre-production document that will give a mood or feel for a product.	Keywords: Visualisation Diagram: A pre-production document that will show a rough sketch of what the final product will look like. Assets: This can be a video, image or sound file and is an item that is used to create a product.
<p>A client brief is a document that outlines the requirements that a product must meet. A client brief can include information on:</p> <ul style="list-style-type: none"> • Product type and purpose • Audience and genre • Content • Timescales • Budget <p>Almost all media products are aimed at a specific target audience rather than everyone on earth. This means that they are designed with a particular group of people in mind. These can be broken down into the following categories:</p> <ul style="list-style-type: none"> • Age – This could be a group of people e.g. primary children, people over 40 etc. • Gender – products may be targeted mainly at one gender e.g. females or at both genders. • Income – Products may be targeted at people with different levels of income (how much they earn). • Location – products are likely to be aimed at people in particular places. • Ethnicity – Products may be aimed at a particular race, religion, or culture. 	<p>Designers and project managers use a mind map to collect everyone’s early ideas on a new media product. They are easy to make and can be done on paper or using software.</p> <p>Mind maps are structured like this:</p> <ul style="list-style-type: none"> • Central node – this is the key theme. • Nodes – main ideas linked to the key theme. • Sub nodes – more detailed ideas based on the node. • Branches – Used to connect all of the nodes and sub nodes together.  <p>Designers use mood boards to get some visual ideas onto a page. This means everyone involved can look at them and feel inspired. A mood board is made up of:</p> <ul style="list-style-type: none"> • Images - photos, graphics and shapes • Fonts – font type and styles • Colours – used to show a theme • Materials – textures (physical mood board) • Sound and Video – If mood board is digital 	<p>Before a final product is produced, a visualisation diagram is created to show what the product will look like. If the client is happy with this then the design team can create the product digitally. A visualisation diagram would include:</p> <ul style="list-style-type: none"> • Dimensions – e.g. height and width of product. • Concept sketch – the main graphic to be produced. • Annotations – to explain colour, fonts and layout  <p>Assets are anything used to create an original graphic, such as shapes, colours, text and images. These need to be collected or created before the main product can be produced. The client may also provide some assets such as a company logo.</p>





Subject: Music

KPOW: Classical 2

Year 9: Autumn Term 1

Week 2 & Week 3: Music History

Week 4 & Week 5: Developing Keyboard Skills

Week 6, 7 & 8: Theory & Music History

Romantic Music

The Romantic period was a time in music from 1820- 1900. It was after the Classical period (1750-1820) which you studied in Year 8.



Classical music timeline:

- Baroque era (1600-1750)
- Classical era (1750-1820)
- Romantic era (1820-1900)
- 20th Century era (1900-Present)

Romantic Composers

Two of the most famous Romantic composers were Richard Wagner, who wrote powerful operas like *The Ride of the Valkyries*, and Pyotr Ilyich Tchaikovsky, who composed famous works such as *The Nutcracker* and *Swan Lake*. Their music is still performed around the world today.



Tchaikovsky (1840 – 1893)



Wagner (1813- 1883)

Sharps and Flats

Flat: Lowers the pitch of a note by one semitone.

Think of a flat tyre...it goes DOWN.

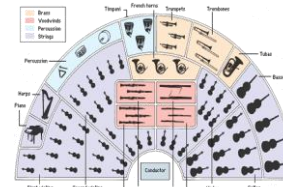


Sharp: Raises the pitch of a note by one semitone. Therefore you go UP.



20th Century Music

The Classical music in the 20th century was between 1900 – 2000s and represents a period of dramatic change and experimentation. Romantic music was often more expressive and structured, 20th century music was more experimental and freer.



Two of the most famous 20th Century composers were Igor Stravinsky, who revolutionised music with bold and dramatic pieces like *The Rite of Spring*, and Dmitri Shostakovich, who wrote powerful symphonies. Their music is still performed and admired all over the world today.

Stravinsky: (1882–1971)



Shostakovich: (1906–1975)



Beethoven: He lived at the end of the Classical era and died in the Romantic era. His music became part of the Classical era and the Romantic era.



Fur Elise is an example of one of Beethoven's Romantic pieces. Although it was composed in the classical era 1820, it wasn't published until 1867.

Recording Technology

The invention of recording equipment in the 1920s changed how music was heard, making it more accessible, and allowing for new forms of musical expression.



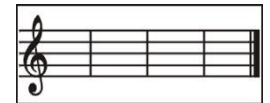
Note Values

Music note duration refers to how long or short a note is played.

Note Names	Note Symbols	Note Value
Semibreve		4 beats
Minim		2 beats
Crotchet		1 beat
Quaver		1/2 of a beat
Semiquaver		1/4 of a beat

Stave

A set of five horizontal lines and four spaces that represent different musical pitches. Notes are placed on the lines and in the spaces to indicate their pitch, with higher positions indicating higher pitches.



Treble clef

A symbol you see at the start of music. It tells us we are playing or singing higher notes. It's used for:

- The right hand on the piano
- Higher instruments like the violin, flute, and trumpet
- Singers with higher voices







Bass Clef

A symbol you see at the start of music. It tells us we are playing or singing lower notes. It's used for:

- The left hand on the piano
- Lower instruments like the cello, double bass, bassoon, and tuba
- Singers with lower voices (like basses and baritones)









Subject: Art	KPOW: Cultures - Day of the Dead	Year 9: Autumn Term 1
Week 2 & Week 3: Baseline	Week 4 & Week 5: Artist page	Week 6 & Week 7 & Week 8: Development
<p>Keywords and definitions</p> <ul style="list-style-type: none"> • Cultural - social traits, beliefs, ideas and possessions that characterise your community and time period. • Composition – the way in which different elements in an artwork are combined or arranged. • Influence - the capacity to have an effect on the character, development or behaviour of someone or something. • Inspiration – being positively influenced to do something creative. <p>Observational drawing - to record a subject as accurately as possible.</p> 	<p>Culture Research - Mexico</p> <p>During this topic, you will learn about Mexican culture and the festival of the Day of the Dead.</p> <ul style="list-style-type: none"> • Mexico is situated in the southern region of North America. The main language spoken is Spanish and the population is around 126 million. • The Day of the Dead festival is celebrated on the 1st and 2nd November. • It is used as a time to think about the life cycle and remember family and friends who have died and passed into the afterlife. • During this colourful festival big parades are held, and people often paint their faces to look like skulls. <p>The flag of Mexico</p>  <p>Where is Mexico -</p> 	<p>Research age development.</p> <p>Create a page all about the Day of the Dead festival. Think about the layout carefully. This page is very important as it will form the basis of the next stage of your project.</p> <p>Change the size of images, overlap, and add pencil colour using your knowledge of colour blending.</p> <p>Outcome – A piece of Art that you have created using inspiration from others along with your own ideas.</p> <p>Layout – The arrangement of elements on a page usually referring to specific placement of image, text, and style.</p> 





Subject: Drama	KPOW: Pantomime	Year 9: Autumn Term 1
Week 2 & Week 3	Week 4, Week 5 & Week 6	Week 7 & Week 8
<p>Introduction to Pantomime</p> <p>Pantomime – Is a production which involves music, jokes, and slapstick comedy. It is typically based on a fairy tale and usually performed around Christmas.</p>  <p>Proscenium Arch Stage- This type of stage is where the audience sits on one side only and the frame around the stage is called the proscenium arch.</p>  <p>Stock Characters- Characters that represent a specific stereotype.</p> <ul style="list-style-type: none"> Hero/Heroine Villain Good Fairy Side kick Dame 	<p>Skills and techniques of Pantomime</p> <p>Slapstick Comedy – Slapstick is a type of physical comedy that uses exaggerated actions, timings, and practical jokes for comedic effect.</p> <p>Narration - Narration is when an actor speaks the commentary over the action happening in the drama.</p> <p>Direct Address - When an actor directly addresses the audience and breaks the 4th wall.</p>  <p>Acting skills and characteristics</p> <ul style="list-style-type: none"> • Practical Jokes • Chases • Repetition • Exaggerated body language • Improbable Situations 	<p>Bringing the narrative</p> <p>Simple Plot – Pantomimes typically use an easy-to-follow plot with plenty of recognisable characters. This makes the stories easy for audiences of all ages to enjoy.</p> <p>Audience Participation – The active involvement of the audience during a live performance. The audience are encouraged to shout catch phrases to the actor's mid performance.</p>  <p>Audience awareness – the position you stand on stage. A vital skill in Pantomime so the audience can see body language and facial expressions clearly.</p> <p>Peer Feedback – Enables the performer to improve their work, based on feedback of strength and weaknesses.</p>





Subject: Learning 4 Life

Week 2 & Week 3

Please learn the following keywords & definitions:

Offensive weapon	An article made or adapted for use for causing injury.
Law	System of rules which a particular country or community recognises.
Conviction	Act or process of finding someone guilty of a crime.
Decalogue	Greek term for list of ten – Ten Commandments.
Illegal	Forbidden by the law.
Stimulants	Classification of drugs which speeds up messages to the brain / body.
Misconceptions	View / opinion that is incorrect based on faulty understanding.
Sofa Surfer	Person sleeping at various friends or family homes.
Statutory	Required or permitted.
Respect	Regard for the wishes or rights of others.
Seva	Hindu / Sikh concept of selfless service.
Salvation Army	Christian organisation with 1.7 million followers worldwide.

Week 4 & Week 5

The Commandments in order:

1. You shall have no other Gods before me.
2. You shall not make idols.
3. You shall not take the Lord your God's name in vain.
4. Remember the sabbath day and keep it holy.
5. Honour your mother and father.
6. You shall not murder.
7. You shall not commit adultery.
8. You shall not steal.
9. You shall not bear false witness against your neighbour.
10. You shall not covet.

Where have the commandments originated from?

The Ten commandments are also known as the Decalogue, a Greek term meaning list of ten. They were established by Moses. Moses led his people out of Egypt and slavery, however with such a large group of people, in facts thousands of people, there was bound to be unrest, therefore there needed to be rules, laws, guidance for people to follow.

Moses was given the 10 commandments by God. These gave people a code of living together in peace.



Today Jews and Christians still follow these commandments. The commandments are also a basis for rules and laws in other countries, for example, do not murder and do not steal.



Year 9: Autumn Term 1

Week 6, Week 7 & Week 8

Age	What you can do
10	You are criminally responsible for your own actions.
14	You are responsible for wearing a seatbelt.
16	You can enlist in the Armed Forces with parental consent.
16	You can consent to heterosexual and homosexual sex.
17	Hold a drive license.
18	Buy tobacco and vapes.
18	Vote in elections and be on jury service.

Some laws have changed.



In 2000, the law was changed so that homosexual couples had the same rights as heterosexuals to consent to sex at 16. Previously this was 18, and 21.



In England, you could marry at the age of 16 with parental consent, however this was increase to 18 in 2023.



October 2021, the National Lottery increased its age of participation from 16 to 18 for lottery tickets as well as scratch cards.





Home Learning Schedule

Day	Subject to Learn	
Monday	English and Learning 4 Life	
Tuesday	Maths and Computing & Digital Media	Sparx Week B
Wednesday	Science	Educake Week A
Thursday	French, History and Geography	
Friday	Design Technology, PE & Creative	

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

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