



Minsthorpe Community College

Knowledge Organiser **Year 8 – Spring Term 1**

Name:

P&A group:

Knowledge Assessment: Tuesday 6th February 2024 – Period 3

Vision

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

Motivation ♦ Commitment ♦ Care



Look

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



Cover

Cover it with your hand or a piece of paper.



Write

Write it out from memory.



Check

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

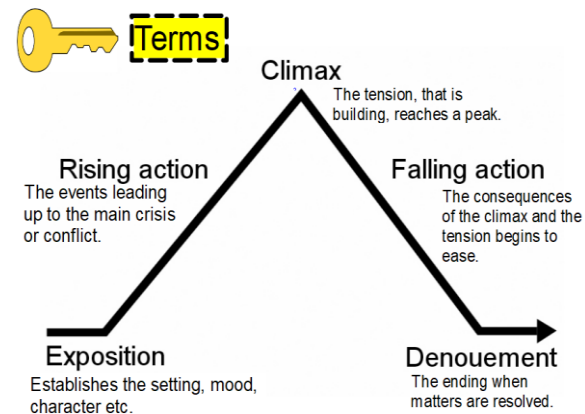


Correct

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





Subject: English	KPOW: What is Love? Reading	Year 8: Spring Term 1
Week 1 & Week 2	Week 3 & Week 4	Week 5
<p>What is Love? Much Ado About Nothing- Characters</p> <ul style="list-style-type: none"> • Leonato – the Governor of Messina • Hero – Leonato's daughter (the stereotypical heroine) • Beatrice – Leonato's niece (the atypical heroine) • Don Pedro – the Prince • Don John – the malcontent, Don Pedro's illegitimate brother • Claudio – the romantic hero • Benedick – the comic wit <p>Vocabulary stereotypical – adjective: a widely held but fixed and over-simplified idea of someone or something. atypical – adjective: unusual, not representative of a type, group or class. antagonistic – adjective: showing or feeling active opposition or hostility towards someone or something. superficial – adjective: a shallow view of what is important, only appearing on the surface. deception – noun: creating misunderstanding or a false view by hiding the truth.</p> <p>An oxymoron is a figure of speech putting two contradictory or opposing ideas together eg: the deafening silence. An extended metaphor is a metaphor that continues and is developed over a number of lines or verses. The malcontent is the antagonist, an unhappy character who causes trouble.</p>	<p>Terminology Dramatic irony is a situation when the audience knows something the characters do not. A soliloquy is the act of speaking one's thoughts aloud on stage. A malapropism is the mistaken use of a word often for a similar sounding one, often with amusing effect.</p> <p>Vocabulary duty – noun: a responsibility, a moral or legal obligation. duplicitous – adjective: deceitful, someone who cannot be trusted. gull – verb: the act of deceiving or fooling someone. infidelity – noun: being unfaithful or cheating upon a loved one. treachery – noun: an act of betrayal and deceit. defame – verb: to ruin someone's good reputation. epitaph – noun: an inscription on a tombstone.</p> <p>Prose is written or spoken language without rhyme or rhythm. Ordinary sentences, the opposite of poetry. Blank verse is poetry with a regular rhythm that does not rhyme. Bathos is a sudden change from a serious subject to a ridiculous or very ordinary one.</p>	<p>Vocabulary misogynist – adjective: a person who strongly dislikes or is prejudiced to women, a woman-hater. hubris – noun: excessive pride. volatile – adjective: liable to change rapidly and unpredictably. tempestuous – adjective: characterised by strong and turbulent or conflicting emotion.</p> <p>Terminology Antithesis is the placing of opposite ideas together to create a contrasting effect. A pun is a play on words, creating a joke from similar-sounding words with different meanings.</p> <p>Context recap: William Shakespeare wrote 'Much Ado About Nothing' in 1599. The monarch at that time was Queen Elizabeth 1. It was a patriarchal society. The genre of the play is comedy.</p> <p>The narrative structure of the play is:</p> 





Subject: Maths

Week 1: Real life graphs

Linear relationships

A **linear relationship** is one that will create a **straight line** when plotted.

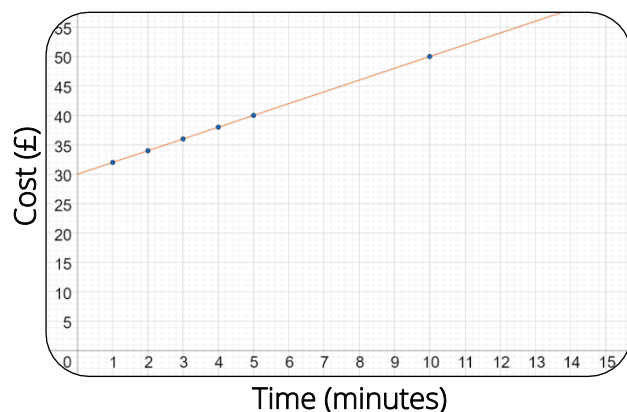
For example

A mobile phone costs £30 upfront and then £2 per minute on a call.

Time (mins)	1	2	3
Calculation	$£30 + 2 \times 1$	$£30 + 2 \times 2$	$£30 + £2 \times 3$
Cost	£32	£34	£36

Here is a graph to show the cost of having the phone over time.

Plotting this scenario creates a straight line so time and cost have a **linear** relationship here.



KPOW: Proportional Reasoning

Week 2: Rate of Change

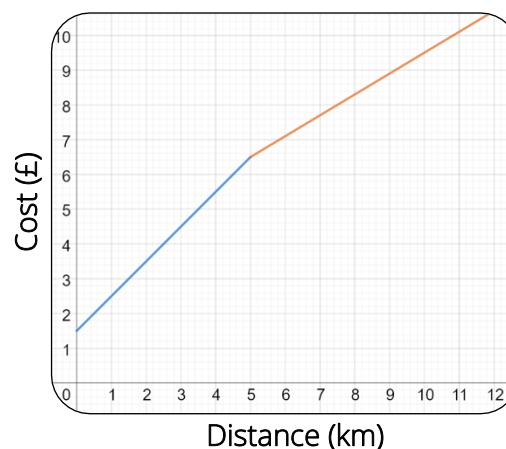
Gradient is a measure of the **steepness** of a line. A gradient can either be **positive** (uphill direction) or **negative** (downhill direction).

Piecewise relationships

When a graph has **different gradients** in different sections it is called a **piecewise relationship**.

For example

A taxi drive costs £1.50 call out fee, £1 for the first 5 kilometres and 80p for every kilometre after that.



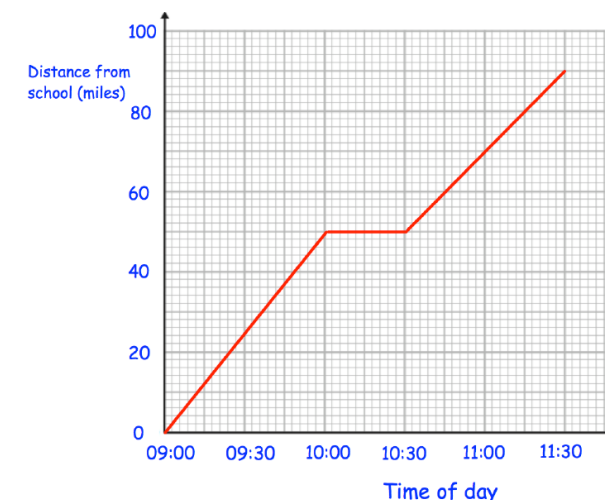
Here the **blue** and **orange** sections have different gradient, so **distance** and **cost** have a **piecewise** relationship here.

Therefore, we cannot write a single equation to capture **both** rates.

Year 8: Spring Term 1

Distance-time graphs

Here is an example of a distance-time graph.



In the **sloped** sections, you can calculate the **speed** they are travelling in the first hour by

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{speed} = \frac{50 \text{ miles}}{1 \text{ hour}} = 50\text{mph}$$

Between 10:00 and 10:30 there is a **horizontal** line, this means they were in one place for half an hour.

Displacement is a measure of distance in **any direction** from a point of reference.





Subject: Maths

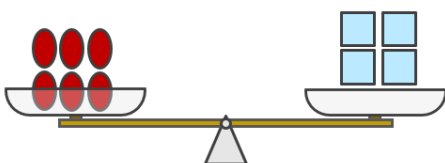
Week 3: Direct and inverse Proportion

Multiplicative relationships

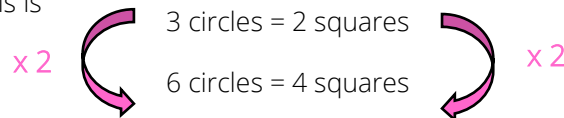


These scales are **balanced**.

Therefore 3 circles = 2 squares. Using this we also know that 6 circles = 4 squares.



This is



multiplicative relationship and **directly proportional** as both amounts have been multiplied by the **same** number.

Ratio

We can use this to calculate **equivalent** ratios.



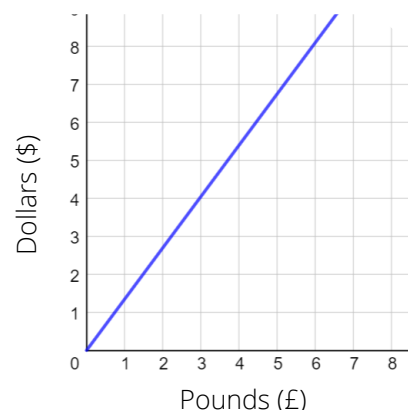
3 : 2 = 6 : 4 because both parts have been multiplied by the **same** number. The number that we multiply by is called the **constant of proportionality**.

KPOW: Proportion

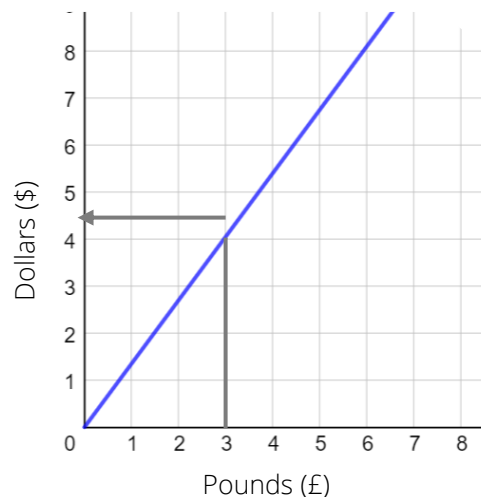
Week 4: Direct and inverse Proportion

Direct proportion graphs

If the relationship between two amounts is **directly proportional**, the graph will be a **straight line** and go through (0,0). For example:



We can use this graph to help calculate the value of £3 in dollars:



Draw a **straight** line up from £3 to the graph and then a **straight** line across to read off £3 = \$4.50.

Year 8: Spring Term 1

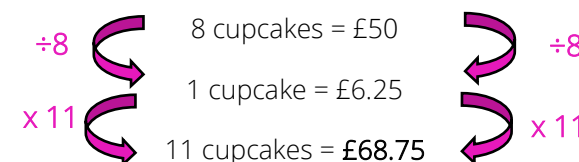
Week 5: Direct and inverse Proportion

Unitary method

When it is not obvious what the constant of proportionality is, find the value of 1.

For example

8 cupcakes cost £50. How much do 11 cupcakes cost?



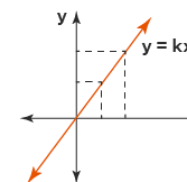
Direct proportion is where one value **increases**, the other **increases**.

Inverse proportion is where one value **increases**, the other is **decreases**.

Direct Proportion

$$y \propto x$$

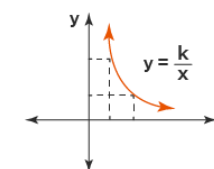
$$y = kx, \text{ for a constant } k$$



Inverse Proportion

$$y \propto \frac{1}{x}$$

$$y = \frac{k}{x}, \text{ for a constant } k$$





Subject: Biology

Week 1: Aerobic Respiration

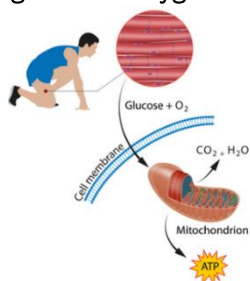
Keyword definitions

Respiration: A chemical reaction that breaks down glucose and releases energy.

Aerobic respiration: Respiration that happens in the mitochondria in the presence of oxygen.

The equation for aerobic respiration is:

glucose + oxygen → carbon dioxide + water



Aerobic respiration is constantly happening in the body and carbon dioxide is lost when we exhale whilst water is lost as water vapour and through urine.

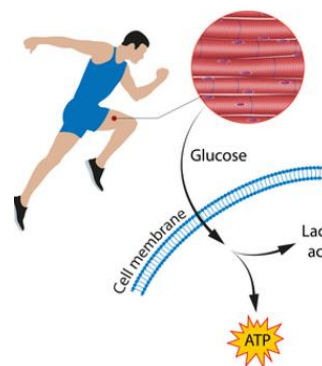
Week 1 continued: Anaerobic Respiration

Keyword definitions

Anaerobic respiration: Respiration that happens in the cytoplasm and not in the presence of oxygen.

Lactic Acid: This is a waste product produced during anaerobic respiration in animals. It can build up in your muscles and it is this that causes muscle fatigue.

Anaerobic respiration is only used when there is not enough oxygen available to release all the energy that is needed. This often happens during intensive exercise.



Year 8: Spring Term 1

Week 2: Fermentation of Yeast

Keyword definitions

Fermentation: Chemical reaction in plants and fungi to convert glucose into carbon dioxide and ethanol releasing energy.

The equation for fermentation is:

glucose → ethanol + carbon dioxide (+energy)



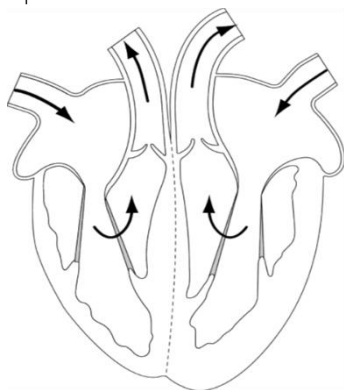
You can investigate fermentation by capturing the carbon dioxide in a balloon and seeing how large the balloon gets.

Week 3: Structure of the Heart

Key definitions

Heart: A muscular organ in the chest that pumps blood around the circulatory system.

Circulatory system: A series of veins, arteries and capillaries that circulate blood around the body.

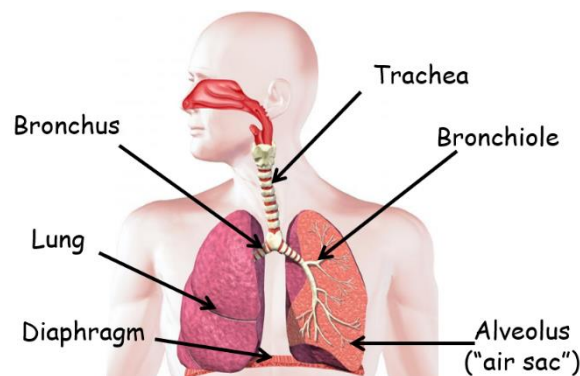


The heart is made of four chambers, two **atria** and two **ventricles**. The ventricles pump the blood to the lungs and the body. The atria receive blood from the lungs and body.

Week 4: Lungs

Keyword definitions

Breathing: The process of taking air into the lungs and out again. This is done by **exhaling** air out and **inhaling** it in.



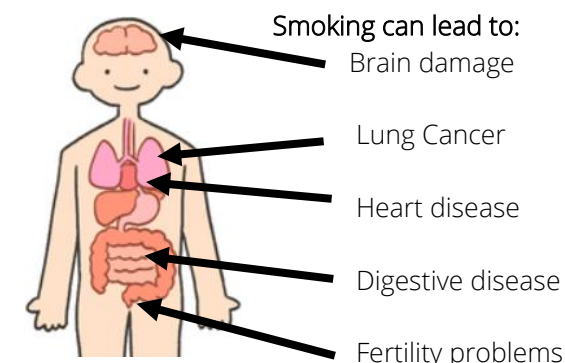
The diagram above shows the main parts of the lungs.

Week 5: Smoking

Keyword definitions

Nicotine: The chemical found in cigarettes that is addictive.

Tar: A sticky brown substance that collects in the lungs when you smoke. Tar contains cancer causing chemicals.



Smoking can lead to:

- Brain damage
- Lung Cancer
- Heart disease
- Digestive disease
- Fertility problems





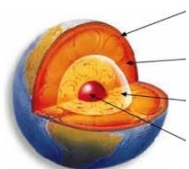
Subject: Chemistry

Week 1: Structure of the Earth

Keyword definitions

Structure – What something is made of and how it is arranged.

The Structure of the Earth



The Earth is made up of 4 layers. The centre is the **core** which is made up of the **inner core** and **outer core**. The next layer is the **mantle** then the outer layer is the **crust**.

The **inner core** is the **hottest** layer and is **solid** because of

pressure from the other layers. The **outer core** and **mantle** are in **liquid** form. The **crust** is the **coolest** and **thinnest** layer and is also **solid**.

Earthquakes are caused by the moving **magma** which makes up the **mantle**.

Week 1 continued: Rock types

Keyword definitions

Intrusive – igneous rock formed from magma which cools slowly beneath the Earth's surface.

Extrusive – igneous rock formed from lava which cools quickly above the Earth's surface.

Sedimentary – rocks formed from compaction of layers of sediment.

Examples – limestone and sandstone.

Igneous rocks – rocks formed from cooling of molten material.

Types of Igneous rock

Granite – Intrusive – large crystals.

Basalt – Extrusive – small crystals.

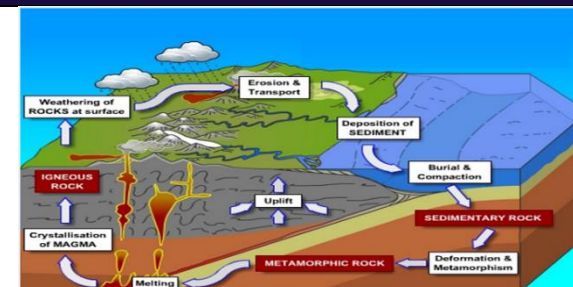
Metamorphic – Rocks that have been changed by heat and pressure.

Examples – marble and slate.



Year 8: Spring Term 1

Week 2: The rock cycle



Keyword definitions

Weathering – gradual break down of rocks due to exposure to the atmosphere.

Erosion – the movement of sediment from one place to another.

Deposition – the settling of sediment in one place.

Crystallisation – cooling and solidifying of hot liquid into crystals.

Week 3: Fossils and crude oil F

Key definitions

Fossil – the preserved remains of an ancient organism.

Fossil fuel – a fuel formed from the remains of dead plants and animals (coal, oil and natural gas).

Hydrocarbon – compound made of hydrogen and carbon only.

When organisms die the soft parts decompose but the hard parts (e.g. skeletons) remain.

Fossils form when **rocks** form around the hard remains of organisms which then dissolve leaving an **imprint** in the rock.



Crude oil forms when **layers** of **sediment** build up on top of the remains of organisms. The **heat** and **pressure** caused by this build up convert the remains into crude oil. **Crude oil** is a mixture of **hydrocarbons**.

Week 4: The carbon cycle

Keyword definitions

Carbon cycle – shows how carbon atoms are transferred between the atmosphere, organisms and the Earth.

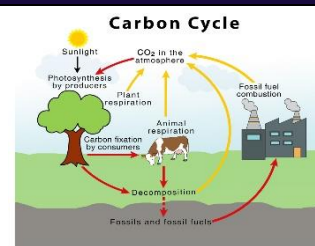
Carbon stores – a molecule/substance/organism) where carbon can be found.

Carbon enters plants by **photosynthesis**.

Carbon enters the **food chain** when plants are **eaten** by animals. When an organism **dies**, the carbon is recycled through **decay**.

The carbon can then become part of a **fossil fuel**.

When fossil fuels are **burned** the carbon re-enters the **atmosphere**.



Week 5: Earth's atmosphere & greenhouse effect

Keyword definitions

Atmosphere – a layer of gases surrounding the planet.

The Earth's atmosphere is 78% **Nitrogen**, 21% **oxygen**

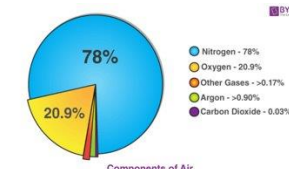
and 1% other gases such as **carbon dioxide** and

noble gases.

The early atmosphere contained mainly **carbon dioxide** and no **oxygen**.

When plants evolved and carried out **photosynthesis**, this reduced the carbon dioxide in the atmosphere and increased the oxygen.

Carbon dioxide is a **greenhouse gas** (along with methane and water vapour). These gases **absorb heat** in the atmosphere and reflect it back towards earth, causing the temperature to increase.



Subject: French	KPOW: Les Vacances Reading	Year 8: Spring Term 1
Week 1: Present tense jouer & sports/hobbies	Week 2: Time phrases	Week 3: Adjectives for giving reasons
jouer [to play] je joue [I play] on joue [we play] au basket [basketball] au foot [football] au rugby [rugby] au cricket [cricket] au tennis [tennis] aux cartes [cards] aux échecs [chess] avec des amis [with some friends]	de temps en temps [from time to time] deux fois par semaine [twice a week] pendant le week-end [during the weekend] tous les jours [every day] tous les samedis [every Saturday] tous les soirs [every evening] tous les week-ends [every weekend] une fois par mois [once a month]	c'est [it is] qui est [which is] amusant [fun] dangereux [dangerous] barbant [boring] ennuyeux [boring] nul [rubbish] facile [easy] difficile [difficult] intéressant [interesting] génial [great] tranquille [peaceful] reposant [relaxing] solitaire [lonely / solitary] cher [expensive] bon marché [cheap] bon pour la santé [good for my health]
Week 4: Past & future verbs and time phrases	Week 5: Revision	
hier [yesterday] le weekend dernier [last weekend] j'ai joué [I played] on a joué [we played] c'était [it was] qui était [which was] demain [tomorrow] ce weekend [this weekend] le weekend prochain [next weekend] je vais jouer [I am going to play] on va jouer [we are going to play] je voudrais jouer [I would like to play] j'aimerais jouer [I would like to play] ce sera [it will be] qui sera [which will be] ce serait [it would be] qui serait [which would be]	Revise weeks 1-4	



Subject: Geography

Week 1 & 2: Glaciers Erosion and Deposition

Week 1: Glacial Landforms - Erosion

Glaciers erode the landscape through the processes of abrasion and plucking.

The main erosional landforms are corries, arêtes, pyramidal peaks, and u-shaped valleys.

Hollow: a bowl-shaped dip in the land's surface.

Name and description	How does it form?
Corrie – A bowl-shaped hollow at the top of a mountain or hill.	Layers of snow compact and turn into ice – the ice erodes the land.
Arete – A knife like ridge with steep slopes either side.	Two corries erode back-to-back and create a narrow ridge and steep slopes.
Pyramidal Peak – Three-sided Mountain.	Three corries erode back-to-back meaning three aretes meet creating a sharp point.
U -Shaped Valley – a deep valley with steep sides and a wide valley floor.	When Glaciers flow down old river valleys, they make the Valley wider and deeper.

Week 2: Glacial Landforms - Erosion

Glaciers **deposit** material when they lose energy. This material is called **moraine**. **Terminal moraine** is found at the snout (end) of a glacier. Lateral moraine is found at the sides of the glacier.

Erratics are large boulders that do not fit in with the surroundings. They have been carried there by the glacier and deposited when it melted.

Drumlins are small hills that look like the back of a spoon.

KPOW: Glaciation

Week 3 & 4: Tourism and Glaciation & KPOW

Week 3: Tourism in the Lake District



The Lake district is a great example of a glaciated **landform**. The Lake District is a National Park which is an area where the Landscape is preserved and protected. However, **conflict** can arise between locals and tourists who want to use the National Park for different reasons.

Tourism in the Lake District

Around **18 million** people visit the Lake District each year to hike, bike ride, climb and do water sports; there are some advantages and disadvantages to tourism in the Lake District.

Advantages: Tourism creates jobs, money from tourists can be used to preserve the area and improve local facilities.

Disadvantages: Tourism can cause traffic and congestions; holiday homes drive up the house prices for local families and tourism can create more pollution and litter.

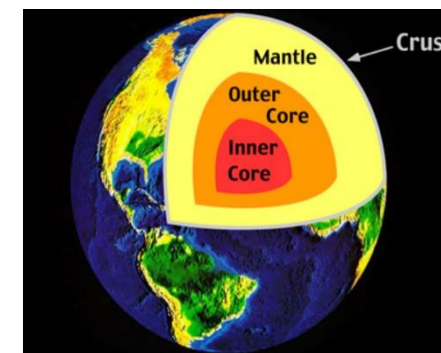
Week 4: KPOW

Year 8: Spring Term 1

Week 5: Structure of the Earth

New topic: Our restless Earth: Lesson 1 Structure of the earth

The Earth is split into **four** layers, the inner core, outer core, mantle, and crust.



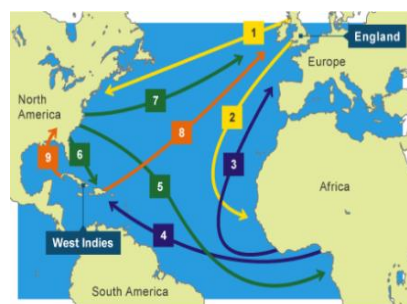
The crust is the **outer** layer of the Earth. There are two types of crust: **oceanic and continental** crust. The crust is split into tectonic plates. Where the plates meet is called a **plate boundary**. There are three types of plate boundary. **Destructive boundaries** where the plates collide. **Constructive boundaries** where the plates move apart and **conservative boundaries** where the plates slide past each other.





Subject: History

Week 1 & Week 2: Slave Trade and Experiences



1 Manufactured goods, luxuries	6 Fish, flour, livestock, lumber
2 Guns, cloth, iron, beer	7 Whale oil, lumber, furs, rice, silk, indigo, tobacco
3 Gold, ivory, spices, hardwoods	8 Sugar, molasses, wood
4 Slaves	9 Slaves, sugar, molasses
5 Rum, iron, gunpowder, tools	

What was the Slave Trade?

Human beings were bought and sold.

'Triangular Trade' was the sailing route taken by British slave traders. It was a journey of three stages, **via the Transatlantic route**.

The Capture of African People

Criminals and members of rival tribes were sold into the slave trade as a punishment.

The Middle Passage: Second leg of the triangle: Africa to the Americas across the Atlantic Ocean. African people were treated as cargo, they were shackled by their arms and legs, so they could not escape.

How enslaved people were sold in the Americas.

Enslaved people were sold by auction to highest bidder.

Life on the plantations

Enslaved people were forced to work on plantations without pay to grow crops such as coffee and sugar. Workers were split into gangs depending on ability, age, health, and gender.

Punishments: Enslaved people were punished in several ways, for example whipping and beatings were common for stealing food or refusing to work.

KPOW: Yaa Asantewaa: A hero?

Week 3 & Week 4: Abolition and Asante

Why was the Slave Trade abolished in Britain in 1807?

1 – Slave resistance made the trade less profitable and less attractive. Some enslaved people used



passive resistance e.g., pretending to be sick. Others used active methods e.g., destroying crops/attempting to kill their master. **Example of successful resistance:** Enslaved people of St Dominique violently resisted, this led to the abolition of slavery on the island in 1804 and the creation of independent Haiti. **2 – Abolitionists:** William Wilberforce was an MP who made many speeches in parliament against the slave trade. Campaigners tried many times to get parliament to abolish the slave trade. In 1807, they finally succeeded.

3 - Economy: From the 1770s onwards, the West Indies became less important to Britain as Cuba and Brazil could produce cheaper sugar, as a result many plantations in the West Indies were closed.

History of an African nation: Rise of Asante

Asante rose to power in the 1700s. The Akan people (later the Asante people) traded gold and enslaved people in return for weapons, with the Portuguese - increasing their economic and military strength.



Fall of the Asante Kingdom

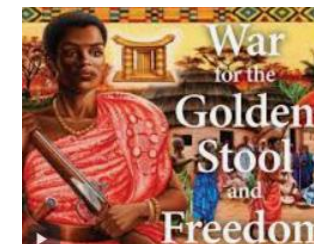
After the banning of the slave trade in 1807 – Britain was looking for a new way to profit from West Africa, so they attempted to colonise the region. The Asante put up a formidable opposition and managed to remain independent for almost a century. It took 4 wars for the British to gain control of the Asante.

Year 8: Spring Term 1

Week 5: Yaa Asantewaa and KPOW

Why should Yaa Asantewaa be remembered?

The kingdom of the Asante was a matrilineal society - people living there inherited their mother's name and status not their father's.



The Asantehema (Queen mother) would advise the male Asantehene (ruler). Some argue she was a co-ruler. They would sit on chairs of equal size to show their equal status. Women proved their power in Asante when the Asantehema led a rebellion against the Asantehene in 1820. **Significance:** After the 4th Anglo-Asante war in 1896, the Asantehene was exiled by the British leaving the Asantehema – Yaa Asantewaa to rule over the Asante people. She then led her people in war against the British over the Golden Stool (believed to hold the souls of the Asante people). Initially, the Asante men did not respond to her call to war – they soon changed their minds when she threatened to call on the women instead.

Results: Short term: The British army defeated the Asante and exiled Yaa Asantewaa. However, they were not able to take the Golden Stool – Yaa Asantewaa proved she was a hero by keeping the Stool safe. Consequently, protecting the souls of her people.

Long- term: After being colonised by the British, the Asante Kingdom became known as Ghana. After WW2, the Ghanaian people wanted a reward: Their freedom. They became the first colonised African nation to gain independence in 1957. **Their leader used the stories of Yaa Asantewaa to inspire his people to fight for this.**





Subject: DT - Food

Week 1 & Week 2

Kitchen Health and Safety recap from year 7

- Aprons must be worn during all practical sessions to protect against burns and splashes.
- Long hair must be tied back.
- Hands must be washed regularly throughout but always at the start.
- Equipment must be washed, dried, and put back after use.



Knife safety

Bridge method- when the hand is curled and shaped like a bridge for knife to go under- rounded products, like apple, strawberries, and onion.

Claw method- when a product is gripped by the fingertips in a claw shape and the fingertips are pulled back for safety before cutting- long products such as cucumber and leeks.

The bridge and claw method can be used to produce fruit kebabs with a garnish.

Weighing and measuring ensures **accuracy** when making food during practicals. Always measure in grams (g).



KPOW: End of Module

Week 3 & 4

Bread ingredients

- 500g Strong Plain flour, 1 sachet yeast, 1 teaspoon salt, 25g margarine, 1 teaspoon sugar, 1/2 pint warm water
- Extra ingredients e.g.: Cheese, tomato puree, pepperoni, cocoa/chocolate, berries

Function of ingredients

So what is in bread? What do the ingredients do?

Flour is the main ingredients and forms the framework of the bread.

Dextrinization (The effect of dry heat on starch) occurs when bread is cooked.

Yeast produces Carbon Dioxide (CO₂) GAS, which makes the bread rise. **FOOD. WARMTH. MOISTURE. TIME** In order to multiply.

Water (H₂O) is needed to **Bind** the ingredients together & help the gluten development. Water is needed for the yeast to ferment.

Salt and/or sugar, adds **Flavour** & aids the development of Gluten.

Fat & Oil **Weaken** the gluten and **Restrict** the action of the yeast. This gives it a close texture.

Method for making bread

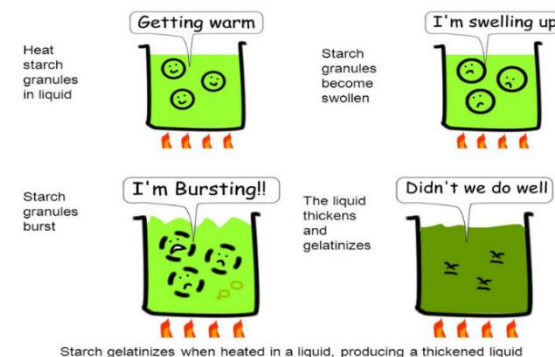
1. Weigh out the ingredients
2. Add bread flour, sugar and butter in a bowl
3. Rub in until light and golden – add salt
4. Make a well and add yeast and extra flavouring
5. 150 ML of warm water A DROP AT A TIME
6. Mix until it forms a dough - if DRY ADD MORE WATER IF WET ADD MORE FLOUR
7. Knead on a floured surface for 8 minutes until stretchy
8. Shape into desired shape and place on a baking tray to prove
9. Bake at 220 degrees for 15-20 minutes

Year 8: Spring Term 1

Week 5

Gelatinisation

This is the process that occurs when making a sauce and it thickens. A plain sauce is called a ROUX sauce.



Dishes that use a ROUX sauce are:

Macaroni Cheese / Carbonara Ingredients

25g (40g for thicker sauce) Plain flour
25g (40g for thicker sauce) Margarine
1 pint milk, 200g cheese, 300g Pasta

Topping – 100g cheese and/or breadcrumbs (optional)

Extra ingredients that can be added - Bacon, cooked chicken, onions, mushrooms, garlic etc

Lasagne

50g Plain flour
50g Margarine
1 pint milk
200g cheese
1 pack lasagne
1 pack mince meat
1 onion (optional)





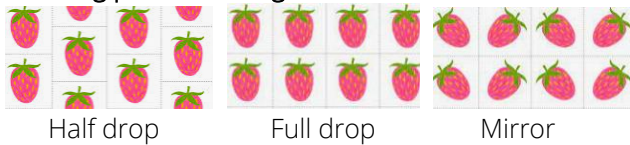

1 tin tomatoes and ½ tube tomato puree OR 1 tin of tomato pasta sauce
Extra cheese for the topping

Garnish = a small amount of food used to decorate other food e.g. Parsley or herbs



Subject: DT – Product Design	KPOW: Design & Evaluation	Year 8: Spring Term 1
Week 1 & Week 2: Dull to Dynamic Strategy	Week 3 & Week 4: Wooden Bottle Opener	Week 5: Storage Box
<div data-bbox="105 234 331 451"> </div> <p data-bbox="351 234 752 343">Design rules – Generating quick sketches to help develop unique designs.</p> <p data-bbox="351 376 752 485">Dull to Dynamic strategy helps create the final idea considering anthropometric measurements (so the bottle opener fits in the hand comfortably when using it). Dull to dynamic means turning a basic (dull) idea, into a dynamic outcome.</p> <div data-bbox="105 531 515 842"> </div> <p data-bbox="105 855 752 1072">Key terms: Ergonomics - The study of people and their working environment, especially to improve effectiveness. Specification – Precise description of the design and make details that the final product is required to achieve/ meet.</p> <p data-bbox="105 1112 752 1362">Theory Workshop Health and Safety.</p> <ul data-bbox="147 1187 730 1355" style="list-style-type: none"> • Goggles must be worn on all workshop machinery. • Long hair must be tied back on machinery. • Aprons must be worn during all practical lessons. <p data-bbox="105 1402 752 1463">Key terms: PPE – Personal Protective Equipment</p>	<div data-bbox="781 234 1140 458"> </div> <p data-bbox="1162 234 1438 485">Workshop skills to cut and shape and smooth the bottle opener using a range of tools and equipment. Product should reflect the design and match the design specifications given.</p> <p data-bbox="781 558 1438 815">Tools and equipment Countersink drill bit – Drills a cone like hole so the flat head screw sits flush against the wood. Chuck key – Attaching drill bit to the pillar drill. Forstner drill bit – Drill blind holes (the holes to attach the 2p and open your bottle). Chuck key – Used to attach drill bit to the pillar drill.</p> <p data-bbox="781 855 1438 997">Evaluation You will evaluate your completed product and your skills in detail looking at WWW (what went well) and EBI (even better if). Testing for quality of finish.</p> <p data-bbox="781 1038 1438 1321">Theory Ergonomics = making products efficient to use. Ergonomics considers issues such as:</p> <ul data-bbox="824 1145 996 1321" style="list-style-type: none"> • Shape • Size • Pressure • Use • Features <p data-bbox="781 1335 1438 1396">Ergonomics uses anthropometrics (size) to improve products and make them comfortable to use.</p>	<div data-bbox="1489 234 1919 531"> </div> <p data-bbox="1939 234 2114 558">Workshop skills - measure, mark and cut ½ lap joints and shape a frame for the wooden storage box</p> <div data-bbox="1489 545 1765 815"> </div> <p data-bbox="1787 558 2114 707">complete with inserts. Decoupage – gluing pictures to the surface and sealing with varnish.</p> <p data-bbox="1787 748 2114 815">Key words: Tenon saw – Cuts straight lines.</p> <p data-bbox="1478 855 2114 997">Tri square – Used to mark and check 90° angles. ½ lap joint – A joint between two timbers halved together so they overlap each other to create a flush surface.</p> <p data-bbox="1478 1003 2114 1145">Metal file – A tool to shape and smooth materials. Filler – a mixture of PVA glue and sawdust to create a wood filler that is designed to fill holes and imperfections.</p> <p data-bbox="1478 1152 2114 1220">Aesthetic – Pleasing qualities of a product e.g., shape, design, colour, pattern.</p> <p data-bbox="1478 1227 2114 1287">Keynote 10cm = 100mm (for every 1 cm = 10 mm) Theory</p> <p data-bbox="1478 1294 2114 1362">Product Analysis – looking at existing products and studying how well they do their job looking at</p> <p data-bbox="1478 1369 2114 1436">ACCESS FM – Aesthetics, cost, customer, environment, size, safety, function, materials.</p>



Subject: DT - Textiles	KPOW: Storage Product	Year 8: Spring Term 1
Week 1 & Week 2	Week 3 & Week 4	Week 5
<p>Mixed Materials Storage Product</p> <p>Taping wood together:</p>  <p>Tape around the wood with masking tape to hold it firmly so that you can then accurately drill all 4 pieces together.</p> <p>Measuring & Marking the wood before drilling it:</p>  <p>The blue template that is used to help you achieve accuracy is called a 'JIG' (something that guides you to achieve the same again and again therefore consistent and accurate).</p> <p>Design theme: Pop Art – Art movement of 1950s & 60. Challenged traditional fine art using images from popular culture like comic books and product labels – everyday life things. It uses bright colours. Famous artists of this movement include Andy Warhol and Roy Lichtenstein.</p> 	<p>Creating a block print</p>  <p>Place template on foam, draw round, cut out, stick on block with double-sided tape</p> <p>Creating patterns using a block:</p>  <p>THEORY: SMART materials Respond Automatically to a Changing Environment (RACE = acronym) Examples of change are: temperature, light, electrical current, pressure and motion.</p> <p>Microencapsulation: microscopic bubbles filled with a substance then sprayed onto fabric. Examples of substances are anti-bacterial, fragrance, antiallergic & mosquito repellent.</p> <p>D30 = smart material that is like playdough until it is hit (blunt force), its molecules then lock solid.</p> <p>Thermo chromic = dyes that change colour in response to changes in TEMPERATURE.</p> <p>Photo chromic = dyes that change colour in response to ULTRAVIOLET LIGHT (UV).</p>	<p>Product Analysis Investigating similar products to those you wish to design and make. Gathering useful information such as what materials they are made from, the cost, the function, what is successful about them and what, in your opinion would make them even better.</p> <p>A Hem – the finish made to the bottom of clothes such as trousers and skirts. The edge is turned up to create a neat finish (overlocked and turned, or turned twice so no raw edge).</p> <p>Plain Seam – how most clothing is joined, it's the most common joining seam. Two pieces of the garment are laid together and sewn on the Seam Allowance (normally 1.5cm).</p> <p>Casing – this is like a hem, but the fold is larger which creates a space between the stitch and the top that something like elastic or a drawstring could be pulled through. For this project, the space will need to be big enough to push the dowel through.</p>  <p>THEORY: modern materials that have been created through technological development. Examples of such are Kevlar (V strong, bullet proof vests), Super hydrophobic (repels water), Nomex (fire resistant), Carbon Fibre (light, rigid – racing cars) and Rhovyl (long lasting antibacterial).</p>





Subject: Core PE

Week 1 & Week 2: Strain

Definition- A stretch or tear in the muscle. Sometimes this is known as a pulled muscle. Strains occur due to overstretching.

Example- A footballer might strain their hamstring when they are overstretching for an interception.

Prevention of injury- A strain could be prevented by doing a proper warm up and stretching before exercise.



KPOW: Key Words

Week 3 & Week 4: Concussion

Definition- A concussion is a mild head / brain injury. It's caused by a blow to the head or by whiplash.

Example- A rugby player might get a concussion if there is a clash of heads or if there is an impact with the ground.

Prevention of injury- A concussion can be avoided by playing to the rules of the sport or by wearing protective headwear.



Year 8: Spring Term 1

Week 5: Dislocation

Definition- A dislocation is where one of the bones at a joint comes out of place.

Example- A netball player may dislocate their shoulder if they put their arms out to stop a fall.

Prevention of injury- A dislocation could be avoided by playing to the rules of the sport and avoiding any unnecessary contact.





Subject: Computing & Digital Media		KPOW: Number Systems		Year 8: Spring Term 1																																													
Week 1 & Week 2		Week 3 & Week 4		Week 5:																																													
<p>Keywords:</p> <p>Denary: Also known as decimal, a base 10 number system that uses 10 different units (0-9).</p> <p>Binary: A base 2 number system, that uses two units: 1 and 0.</p>		<p>Keywords:</p> <p>Hexadecimal: A base 16 number system that uses 16 different units (0-F).</p> <p>Binary Overflow: 8-bit binary has a maximum value of 11111111 (255). Anything over this value, for example 278 will produce an overflow error.</p>		<p>Keywords:</p> <p>Storage: Something that holds data.</p> <p>LAN: Local Area Network</p> <p>WAN: Wide Area Network</p>																																													
<p>Computers uses the binary number system since the CPU is made up of billions of transistors. These are like switches which turn on and off (1 and 0).</p> <p>Humans use the denary number system; this is our standard counting numbers. We need to convert between binary & denary.</p> <p>A binary number is written as a pattern of 8 digits, each digit is either a 0 or a 1. We use placeholders to help us read and write binary numbers.</p> <p>The pattern 00001001 when written out under the placeholders would be the number 9 as shown below: (8 + 1 = 9)</p> <table><tr><td>128</td><td>64</td><td>32</td><td>16</td><td>8</td><td>4</td><td>2</td><td>1</td></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td></tr></table> <ul style="list-style-type: none">Converting denary into binary: 66 = 01000010 (0+64+0+0+0+0+2+0).Converting binary into denary: 01010001 = 81 (0+64+0+16+0+0+0+1).		128	64	32	16	8	4	2	1	0	0	0	0	1	0	0	1	<p>Binary addition rules</p> <table><tr><td>Rule One:</td><td>0 + 0 = 0</td></tr><tr><td>Rule Two:</td><td>1 + 0 = 1</td></tr><tr><td>Rue Three:</td><td>1 + 1 = 10 (binary for 2)</td></tr><tr><td>Rule Four:</td><td>1 + 1 + 1 = 11 (binary for 3)</td></tr></table> <p>Hexadecimal number system Numbers 0 – 9 are the same as denary.</p> <table><tr><td>Den</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr><tr><td>Hex</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr></table> <p>Converting Binary to Hexadecimal</p> <ol style="list-style-type: none">Break the binary up into groups of 4 digits.Convert each group of 4 digits into denary.Convert each denary value into its hex.Put the hex digits together. <p>Converting Hexadecimal to Binary</p> <ol style="list-style-type: none">Split the hex number into 2 individual digits.Convert each hex value into denary.Convert denary digit into 4 binary digits.Combine all 8 binary digits to make one 8 bit binary number.		Rule One:	0 + 0 = 0	Rule Two:	1 + 0 = 1	Rue Three:	1 + 1 = 10 (binary for 2)	Rule Four:	1 + 1 + 1 = 11 (binary for 3)	Den	10	11	12	13	14	15	Hex	A	B	C	D	E	F	<p>Primary storage: is directly accessed by the CPU and is fast access memory.</p> <p>Secondary storage: is slower and is used for long term storage of files. There are 3 types of secondary storage:</p> <table><tr><th>Magnetic</th><th>Solid State</th><th>Optical</th></tr><tr><td>Hard disk drive (HDD) Tape drive</td><td>USB Flash drive SD Card</td><td>CD DVD Blu ray</td></tr></table> <p>Types of networks: LAN covers a small geographical location. E.g. LANS are used in small businesses, schools, and in homes.</p> <p>WAN covers a large geographical location. e.g: The internet is the largest WAN.</p>		Magnetic	Solid State	Optical	Hard disk drive (HDD) Tape drive	USB Flash drive SD Card	CD DVD Blu ray
128	64	32	16	8	4	2	1																																										
0	0	0	0	1	0	0	1																																										
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Subject: Music

Week 1 & Week 2

What is classical Music?

Classical music is traditional, Western, often orchestral, music / music that isn't jazz, popular music or folk music.

A specific type of 'classical' music written between 1730 and 1820.



What is an orchestra

An orchestra is a group of lots of musicians from the classical period. There are four sections we call families:

String, Woodwind, Brass & Percussion



KPOW: Classical

Week 3 & Week 4

Conductor

This is the person who stands at the front of an orchestra and keeps them in time. They usually have a stick called a baton to keep them in time.



Classical composers

There are many great classical composers of music, the ones we will focus on are:



Beethoven -

(1770 - 1827, Germany)



W.A. Mozart

(1756 - 1791, Austria)

Year 8: Spring Term 1

Week 5

Note Values

Music Theory is the written aspect of music which gives us information about how long musical notes should be held on for.

Notes	Name		Value
	Semibreve	Whole note	4 beats
	Minim	Half note	2 beats
	Crotchet	Quarter note	1 beat
	Quaver	Eighth note	½ beat
	Semi-quaver	Sixteenth note	¼ beat
	2 Quavers	2 Eighth notes	1 beat
	4 Semi-quavers	4 Sixteenth notes	1 beat

Baroque music

Baroque music is one of the earliest types of 'classical' music.




Baroque refers to a time period from 1600s-1750s.

Instruments

The main Instruments of Baroque music was the harpsichord.








Subject: Art	KPOW: Culture - Pop Art	Year 8: Spring Term 1
Week 1 & Week 2: Baseline	Week 3 & Week 4: Artist Page	Week 5
<p>Keywords and definitions</p> <ul style="list-style-type: none">• Depth: The perceived distance between the background and foreground of a composition.• Influence: The capacity to have an effect on the character, development or behaviour of someone or something.• Research: A creative activity to increase knowledge and understanding. <p>Observational Drawing: to record a subject as accurately as possible.</p> 	<p>Research – Pop Art. Sarah Graham</p> <p>During this topic you will learn about Pop Art and the artist Sara Graham.</p> <ul style="list-style-type: none">• Popular Culture: is all the elements that make up our everyday life. This includes our routines, jobs, fashions, food and belongings and are usually shared interests with our friends, families and communities.• Pop (short for popular) Art: is an Art movement from the 1950s to 1960s. The movement challenged the idea of other traditional art forms by including imagery from popular culture such as advertising, comic books and regular, everyday items.• Sarah Graham: works with oil paints on canvas to create hyper realistic paintings. She uses everyday objects to inspire her work. 	<p>Artist page development.</p> <p>Create a page all about the Pop Art. Think about the layout carefully. This page is very important as it will form the basis of the next stage of your project. 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: Physical Theatre	Year 8: Spring Term 1
Week 1 & 2: Introduction to Physical Theatre	Week 3 & 4: Techniques	Week 5: Practical Exploration
<p>Physical Theatre - is a type of performance that uses physicality of movement as the primary method of Storytelling.</p> <p>Warm up: prepare for physical activity or a performance by exercising or practising beforehand.</p> <p><i>'Warming up your body before a performance is critical for the actor.'</i></p>  <p>Break into 8: is a physical theatre device with 8 simple steps.</p> <p>Cannon: occurs when an actor performs a phrase of movements one after the other.</p> <p>Synchronised Movement: is when two or more actors move in the same way at the exact same time.</p> <p>Transition: The movement from one scene to another is called a transition.</p>	<p>Frantic Assembly: are an internationally renowned physical theatre company founded in 1994.</p> <p>Abstract Theatre – Abstract theatre is centred around the concept of representing situations and emotions, as opposed to acting them out in a realistic way.</p> <p><i>'Our aim is to make inspiring and accessible work across the world.'</i></p>  <p>Mirroring – Partners stand facing each other. One is the leader, the other, the "mirror." The leader begins to make simple gestures or movements. The "mirror" duplicates the leader's movements exactly how a mirror would.</p> <p>Round by Through: When you create a series of movement by going 'round' your partner, being 'by/parallel to your partner and going 'through' your partner.</p>	<p>Verbatim – Copied, quoted, or translated in the same words as were used originally.</p> <p>Rehearsal: a session of exercise or practice, usually private, in preparation for a play or a performance.</p> <p><i>'Don't practice until you get it right. Practice until you can't get it wrong'.</i></p>  <p>Performance – An act of presenting a play, concert, or other form of entertainment.</p> <p>Peer Feedback – Enables the performer to improve their work, based on feedback of strength and weaknesses.</p> <p>Self - Reflection – Enables you to question your performance work, in a positive way, what you do and why you do it and then deciding whether there is a better, or more efficient way of doing it in the future.</p>





Subject: Learning 4 Life

Week 1 & Week 2: Key Words






Please learn the definitions of the following 12 words:

Segregation	To separate black people from white people.
Equality	To treat all people in the same way.
Civil Rights	The rights of all people to receive equal treatment.
Sexism	The belief that some people are superior to others due to their sex.
Suffragettes	Women seeking the right to vote through organised protests.
Martyr	A person who is killed because of their religious or other beliefs.
Campaign	To work in an organised/active way towards a particular goal.
Motivation	A reason for acting/behaving in a certain way.
Career	A job done for a long period of time with the opportunity to progress.
STEM	It stands for science, technology, engineering and mathematics.
Aspiration	A dream or ambition to achieve something.
Compassion	Sympathetic pity and concern for the sufferings or misfortunes of others.

Week 3 & Week 4: Lazarus & the Rich Man

Please read and learn the story below:

Lazarus and the Rich Man

	The rich man had everything he needed and more.
	Lazarus had nothing, but he always did all he could to help others.
	The rich man does nothing to help Lazarus, he even forbids his servant from giving Lazarus his scraps.
	When the rich man dies he goes to Hell. This is because he didn't help Lazarus when he was alive.
	When Lazarus dies he goes to Heaven. This is because he was always willing to help others.







Year 8: Spring Term 1

Week 5: The Suffragettes

Please learn these key facts below:

The suffragettes were women who organised protests in order to earn the right to vote for women.

Read and learn the facts below about the suffragettes:

	There were many women who were suffragettes including: Millicent Fawcett, Emmeline Pankhurst and Emily Wilding Davison.
	The suffragettes weren't scared to speak out, they even shouted at Winston Churchill when he was an MP.
	The suffragettes protested in many ways; chained themselves to Buckingham Palace, burned down churches and attacked politicians.
	In 1913, the Cat and Mouse Act was introduced which meant those in prison, on hunger strike, could be released then re-arrested when healthy again.
	Emily Wilding Davison is famous as she was killed by the King's horse at the Epsom Derby trying to place a suffragette sash on the horse mid race.
	Finally in 1918, women over the age of 30 earned the right to vote. It wasn't until 1928 that women were given the same voting rights as men.





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, on Satchel:One, every **Monday** and will be submitted in P&A Time every Monday.

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