



Minsthorpe Community College

Knowledge Organiser Year 7 – Spring Term 1

Name:

P&A group:

Knowledge Assessment: Tuesday 6th February 2024 – Period 1

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: Diary extract exploring inner conflict in your character		Year 7: Spring Term 1
Week 1 & Week 2: Context of Lord of the Flies.	Week 3 & Week 4: Conflict and Villainy.	Week 5: Writing Skills
<p>Heroes and Villains Key Word Definitions:</p> <p>Hero: a person who is admired for their courage, qualities or achievements.</p> <p>Villain: a character whose evil actions or motives are important to the plot.</p> <p>Civilisation: the most advanced way of life for a group of people living together.</p> <p>Society: a group of people living together in the same community.</p> <p>Patriarchy: A society ruled by men.</p> <p>Iambic Pentameter: A line of verse each consisting of one short syllable followed by one long syllable.</p> <p>Key Learning Points:</p> <p>World War Two: the war between the Axis (Germany, Italy and Japan) and the Allies, (Britain, France, Soviet Union) beginning on September 1, 1939, with the German invasion of Poland and ending with the surrender of Germany on May 8, 1945, and of Japan on August 14, 1945.</p> <p>William Golding was horrified by what war revealed about people's capacity to harm their fellow humans. Eg: Nazi Concentration camps and their persecution of Jewish people and other minorities.</p> <p>Japanese mistreatment of their Prisoners of War.</p> <p>British and American mass bombing of civilians.</p> <p>Cold War: The state of hostility that existed between the USSR (Russia) and the Western powers (America) from 1945 to 1990, where nuclear war was a threat, but never materialised.</p>	<p>Key word Definitions:</p> <p>Propaganda: information, especially of a biased or misleading nature, used to promote a political cause or point of view.</p> <p>Dictator: a ruler with total power over a country, typically one who has obtained control by force.</p> <p>Key Skills: Writing</p> <p>POV: Develop a clear point of view.</p> <p>STRUC: Plan your ideas and structure them appropriately paying particular attention to your intro and ending.</p> <p>Grammar Terminology:</p> <p>Simple Sentence: A simple sentence contains one main clause. It contains a subject, a verb.</p> <p>Compound sentence: A compound sentence consists of two main clauses joined together by a co-ordinating conjunction. E. g. and, but, or, therefore.</p> <p>Complex Sentence: A complex sentence consists of a main clause plus one or more subordinate clauses.</p> <div data-bbox="871 1013 1352 1342" data-label="Image"> </div>	<p>Key Word Definitions:</p> <p>Soliloquy: an act of speaking one's thoughts aloud when by oneself or regardless of any hearers, especially by a character in a play.</p> <p>Inner conflict: an internal conflict is the struggle occurring within a character's mind.</p> <p>Diary: a book in which one keeps a daily record of events and experiences.</p> <p>Key skills</p> <p>AV: use ambitious vocabulary.</p> <p>CD: craft devices that are effective for purpose. Remember to avoid clichés.</p> <p>OP: vary sentence openers for effect. Ly/ing/ed words.</p> <p>SS: vary sentence structures for effect. simple/compound/complex</p> <div data-bbox="1496 989 2016 1251" data-label="Image"> </div>



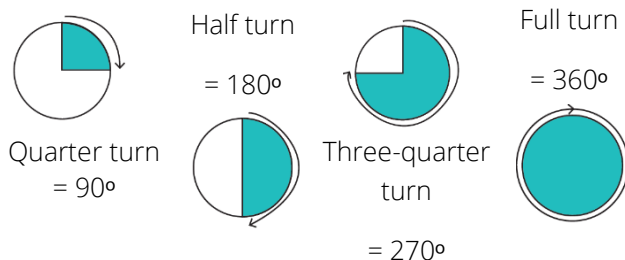


Subject: Maths

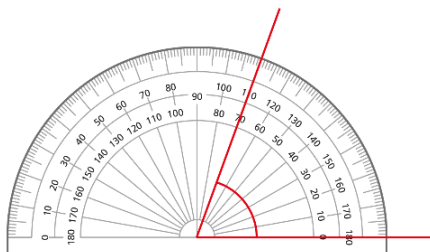
Week 1: Angles

Measure of turn

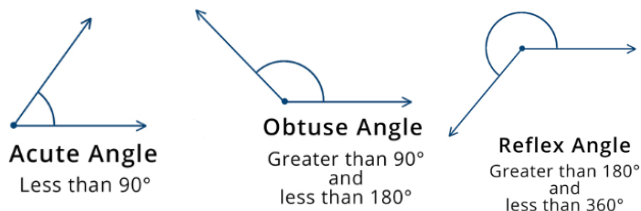
An angle represents a measure of a **turn**.



We use a **protractor** to measure and draw angles. For example, this angle is 70° because it is acute.



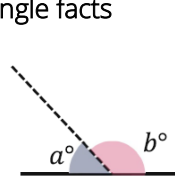
Types of angles



KPOW: Geometry

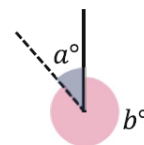
Week 2: Angles

Angle facts



a and b are adjacent and lie on a straight line so

$$a + b = 180^\circ$$



a and b lie round a point so

$$a + b = 360^\circ$$

Parallel lines

Parallel lines: Lines that always stay the same distance apart and they never meet.

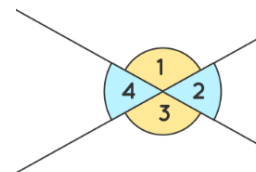


Transversal line: A line that crosses at least two other lines.

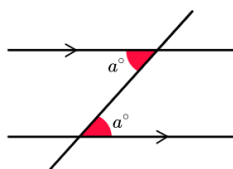


Angle facts

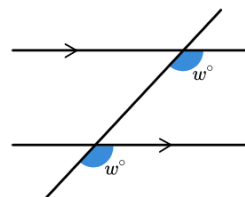
Vertically opposite angles are equal. $1 = 3$ and $2 = 4$.



Alternate angles are equal



Corresponding angles are equal.



Year 7: Spring Term 1

Week 3: Classifying 2D shapes

Rotational symmetry

A shape has rotational symmetry when it still looks the **same** after rotation of 360° . How many times it matches as it rotates is the **order**.



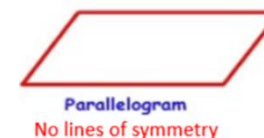
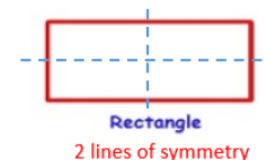
This shape has rotational symmetry order 2.



This shape has rotational symmetry order 3.

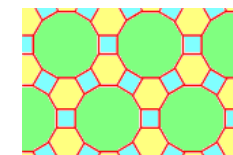
Reflectional symmetry

A line of symmetry is a line through an object where one side of it is **reflected** on the other.



Tessellation

A pattern made up of one or more shapes. They must fit together with **no gaps** and the shapes should not overlap.





Subject: Maths

KPOW: Geometry

Year 7: Spring Term 1

Week 4: Triangles & Circles

Types of triangles

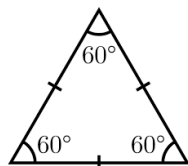
Scalene triangle: all side lengths and angles are different.



Isosceles triangle: Two sides and two angles are equal.

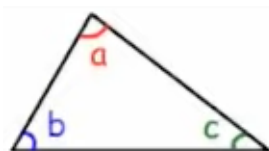


Equilateral triangle: All sides and all angles are equal.



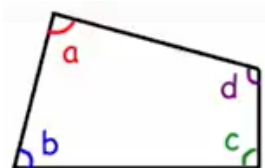
Angle facts

Angles in a triangle add to 180° . $a + b + c = 180^\circ$.

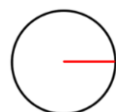


Angles in a quadrilateral add to 360° .

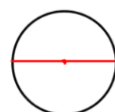
$a + b + c + d = 360^\circ$.



Parts of a circle



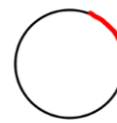
Radius



Diameter



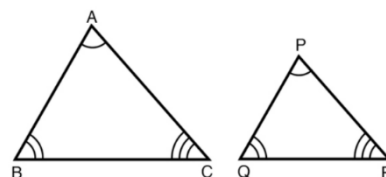
Circumference



Arc

Similar triangles

Two shapes are similar when one can have been enlarged.



Congruent triangles

Congruent shapes are shapes that are **identical**. There are three conditions to accurately construct a triangle:

1. SSS: 3 side lengths
2. SAS: 2 side lengths and an angle
3. ASA: 2 angles and 2 sides

Keywords

Perpendicular: Where two lines meet at a right angle

Construction: To draw a shape, line or angle accurately using a ruler and a pair of compasses

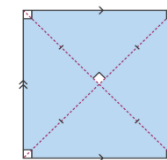
Regular shapes: Shapes with the same length sides

Quadrilateral: A 4-sided shape

Properties of quadrilaterals

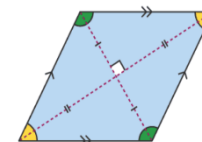
Square

- All angles equal
- All side lengths equal
- The diagonals bisect at a right angle



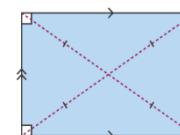
Rhombus

- All side lengths are equal
- Diagonally opposite angles are equal
- The diagonals bisect at a right angle



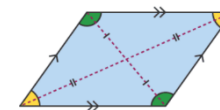
Rectangle

- Opposite sides are equal length
- All angles are equal (90°)
- The diagonals are equal in length



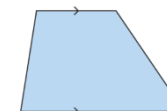
Parallelogram

- Opposite sides are equal length
- Diagonally opposite angles are equal



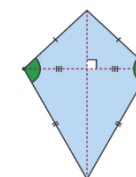
Trapezium

- One pair of opposite sides is parallel



Kite

- Two pairs of sides with equal length
- One pair of diagonally opposite angles is equal
- Only one diagonal is bisected by the other
- The diagonals cross at 90°





Subject: Chemistry

Week 1: Presentations

- When you are delivering a presentation you need to;
- Look up!** – Make eye contact with your audience, don't look down at your notes or feet.
 - Project!** – Speak loudly and clearly so everyone can hear you.
 - Enjoy it!** – Smile and speak with enthusiasm so that the audience will be interested in what you have to say.
 - Take your time!** – Don't speak too quickly. Pause in between key points to allow the audience time to take in what you have said.

Your main focus is to make sure you speak loud enough for everyone to hear you.



KPOW: Hybrid Test

Week 2: Health and Safety

Keyword definitions:

Corrosive – can weaken or destroy solid substances.

Concentration – the amount of a substance in a certain volume or space.

Corrosive substances can cause **burns** if they come into contact with your skin.

Acids are corrosive so they are mixed with water to make them safe to use. The more water is added, the lower the **concentration** of the acid.

Acids are not only used in labs. They can be found in foods, cleaning products, batteries, vitamins etc.



Year 7: Spring Term 1

Week 3: Acids and Alkalis

Keyword definitions:

Acid – a substance with a sour taste which produces H^+ ions when dissolved in water.

Alkali – a substance with a soapy texture which produces OH^- ions when dissolved in water.

Examples of acids

Hydrochloric acid

– HCl

Sulfuric acid –

H_2SO_4

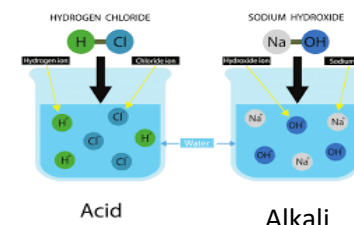
Nitric acid – HNO_3

Examples of alkalis

Metal oxides e.g. CuO (copper oxide)

Metal hydroxide e.g. $NaOH$ (sodium hydroxide)

Metal Carbonates e.g. $CaCO_3$ (calcium carbonate)



Week 4: Indicators

Keyword definitions

Indicator: A substance that changes colour in acidic, alkaline or neutral conditions.

Indicator	Colour in acid	Colour in alkali
Universal indicator	Red/orange/yellow	Blue/Purple
Red Cabbage	Red/pink	Blue/green
Red litmus paper	Red	Blue
Blue litmus paper	Red	Blue

Universal indicator is the only indicator that can also indicate the **strength** of the acid/alkali and identify if a substance is **neutral**.

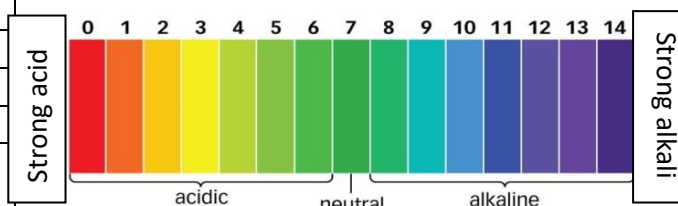
pH can also be measured using an electronic **pH meter** which is more **accurate** as it gives the pH as a number.

Week 4 continued: pH scale

Keyword definitions

pH scale – a scale to show the acidity or alkalinity of a substance.

The colours on the pH scale are produced by universal indicator.



Strong acids have a pH of 1. **Weak acids** have a pH of 6.

pH 7 is **neutral** (neither acidic or alkaline).

Weak alkalis have a pH of 8. **Strong alkalis** have a pH of 14.

Week 5: Neutralisation

Keyword definitions

Neutralisation - A reaction between an acid and a base to produce a neutral substance.

Base – A substance that can react with an acid and neutralise it. An alkali is a base that can dissolve in water.

Salt – A neutral substance formed from a metal and an acid.

Neutralisation reactions follow the general equation:

Acid + Base (or alkali) → Salt + Water

Rules for naming salts;

The first part of the name of the salt is the first part of the name of the **alkali**.

The second part comes from the **acid** (hydrochloric = **chloride**, nitric = **nitrate** and sulfuric = **sulfate**).





Subject: Physics & Biology

Week 1: Energy in Food

Keyword definitions

Chemical Energy – The store of energy in food, measured in Joules.

Typical Values (boiled)	Per 100g	Per 80g	Reference Intake
Energy kJ	388	310	8400
Energy kcal	92	74	2000
Fat	1.6g	1.3g	70g
of which saturates	0.3g	0.2g	20g
Carbohydrate	10g	8.0g	260g
of which sugars	1.2g	1.0g	90g
Fibre	5.6g	4.5g	
Protein	6.7g	5.4g	50g
Salt	<0.01g	<0.01g	6g

Calories – How energy levels are measured in food.

Labels on the back of food packets show how many calories are in foods.

KPOW: Energy and Power

Week 2: Energy and Fuels

Keyword definitions

Fossil Fuels – Coal, oil and natural gas are fossil fuels.

Non-Renewable – An energy resource that will eventually run out.

Renewable – An energy resource that will not run out.



Electricity is generated in power stations which burn a fuel or use nuclear energy.

Year 7: Spring Term 1

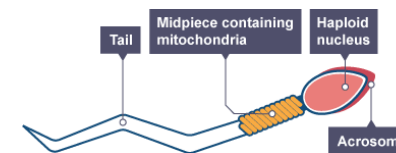
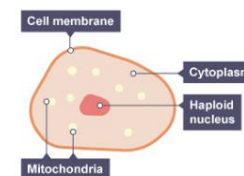
Week 3: Fertilisation

Key word definitions

Fertilisation: When the nucleus of a sperm cell fuses with the nucleus of the egg cell.

Egg Cell: The gamete that comes from the female, released from the ovaries.

Sperm Cell: The gamete that comes from the male, released from the testes. It has a tail to help it swim to the egg cell.



Week 4: Gestation

Key word definitions

Gestation: The period of time where a foetus develops inside the womb.

Placenta: The organ that grows into the wall of the uterus and is joined to the foetus by the umbilical cord.

When the sperm and egg cell fuse, they form a **zygote**. This then develops into an **embryo** which will then become a **foetus**. The foetus is protected by a sac filled with **amniotic fluid** which acts like a cushion.



Week 5: Contraception

Key word definitions

Contraception: The prevention of the sperm and egg cell meeting or of a fertilised egg implanting on the womb.

Barrier methods- **male condoms** which are made of rubber and worn on the penis, **female condoms** which are worn inside the vagina and **diaphragms** which are dome shaped devices worn inside the vagina during sex.

Chemical methods – the **contraceptive pill**, **injection** and **implant** use hormones to prevent the release of eggs and the **IUD** causes cervical mucus to thicken preventing the sperm from entering.

Week 5 continued: Skeleton

Key word definitions

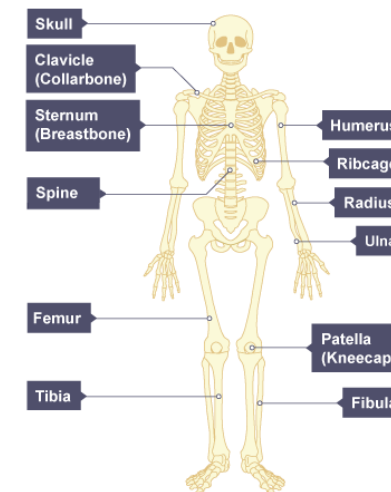
Skeleton: Allows movement, provides support and protection for vital organs and makes blood cells.

Bones and joints:

The parts that make up the skeleton.

Key learning points

To be able to name the **main bones** in the human body.





Subject: French	KPOW: Hair & Eyes Reading KPOW	Year 7: Spring Term 1	
Week 1: Nouns (pets)	Week 2: Verbs	Week 3: Adjectives	
un canard [a duck] un chat [a cat] un cheval [a horse] un chien [a dog] un cochon d'Inde [a guinea pig] un hamster [a hamster] un lapin [a rabbit] un oiseau [a bird] un perroquet [a parrot] un poisson [a fish] un serpent [a snake] une araignée [a spider] une perruche [a budgie] une souris [a mouse] une tortue [a turtle/tortoise]	À la maison, j'ai [At home I have] Chez moi, j'ai [At home I have] Je n'ai pas de [I don't have] On a [we have] Mon ami <u>Denis</u> a [My friend <u>Denis</u> has] Mon amie <u>Sarah</u> a [My friend <u>Sarah</u> has] Je voudrais avoir [I would like to have] Je ne voudrais pas avoir [I wouldn't like to have]	Masculine petit [small] grand [big] jaune [yellow] bleu [blue] blanc [white] orange [orange] noir [black] rouge [red] vert [green] barbant [boring] joli [pretty] amusant [fun] moche [ugly] rigolo [funny] intelligent [clever]	Feminine petite [small] grande [big] jaune [yellow] bleue [blue] blanche [white] orange [orange] noire [black] rouge [red] verte [green] barbante [boring] jolie [pretty] amusante [fun] moche [ugly] rigolo [funny] intelligente [clever]
Week 4: Hair	Week 5: Eyes & other physical features		
J'ai les cheveux _____ [I have _____ hair] Il a les cheveux _____ [he has _____ hair] Elle a les cheveux _____ [she has _____ hair] On a les cheveux _____ [we have _____ hair] blonds [blond] bruns [brown] châtains [light brown] noirs [black] roux [red] courts [short] en épis [spiky] frisés [curly] longs [long] mi-longs [mid-length] ondulés [wavy] raides [straight] rasés [shaved]	J'ai les yeux _____ [I have _____ eyes] Il a les yeux _____ [he has _____ eyes] Elle a les yeux _____ [she has _____ eyes] On a les yeux _____ [we have _____ eyes] bleus [blue] marron [brown] noirs [black] verts [green] je porte [I wear] il porte [he wears] elle porte [she wears] on porte [we wear] j'ai [I have] il a [he has] elle a [she has] on a [we have]		
	des lunettes [glasses] une moustache [a moustache] une barbe [a beard] un tatouage [a tattoo] un piercing [a piercing]		



Subject: Geography

Week 1: Drainage Basin

Drainage basin: the catchment area of land drained by a river.

Catchment area: land that precipitation falls on that will end up in a given river.

Features of a drainage basin

Watershed - the land forming the edge of a river basin.

Source - where a river begins.

Mouth - where a river meets the sea.

Confluence - the point at which two rivers meet.

Tributary - a small river/stream that joins a larger river.

Channel - this is where the river flows.

Rivers of Yorkshire

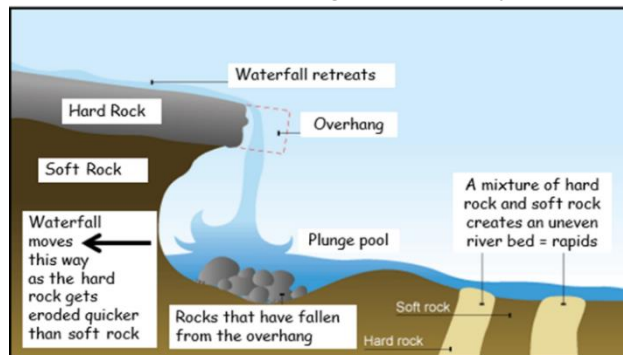
All but one river with their source in Yorkshire flow into the North Sea. The River Don is our closest main river.

KPOW: UK Rivers

Week 2: Erosional Landforms

Erosion is the wearing away of the land by water, ice, or wind. There are 4 types of fluvial erosion:

- **Hydraulic action** – the force of the water.
- **Abrasion** – scraping of sediment.
- **Attrition** – material in the river collides.
- **Solution** – the dissolving of the land by the water



Formation of a waterfall – Upper course

Week 4: Why do rivers flood?

There are both **human** and **physical** causes of flooding. Human causes include creating more **impermeable** surfaces (where water cannot pass through) whereas physical causes are created by the natural world, such as prolonged rainfall and steep slopes.

Examples of the **effects** that flooding causes.

Social	Economic	Environmental
- Homes flooded - Homelessness - Loss of possessions - Death	- Businesses ruined - Insurance costs go up - People cannot work	- Trees knocked down - Drowned habitats

Week 5: Managing River flooding

Management is the controlling of something. In the UK, we use various strategies to control river flooding. This is done to try and reduce the effects.

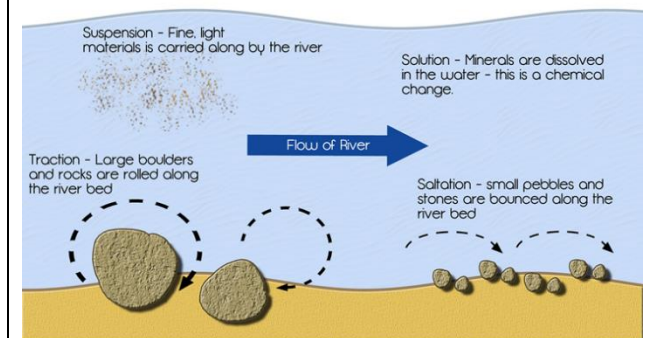
Strategy	Methods
Control the water level	You can build a dam or put a pumping station in.
Building barriers	Build embankments at the side of the river or build flood walls.
Alter the river channel	You could straighten the river to move water away from towns and cities quicker.
Control land use around the river	One way to do this is to stop people building near to rivers.

Year 7: Spring Term 1

Week 3: Transport and deposition

Transportation – the moving of sediment/material along the course of a river.

Deposition – when a river drops the material it is carrying due to a loss of energy.



Formation of a meander

- Meanders are bends in a river.
- Meanders are created by erosion and transportation.
- The fastest flow and deepest part is on the outside bend.
- The slowest flow and the shallowest part is on the inside bend.
- A river cliff is on the outside bend.
- A river beach/slip-off slope is on the inside bend.

Floodplains and Levees




When a river floods, material that is transported by a river is deposited on the land at the sides of a river. This is called a **floodplain**. At the edge of the river **levees** (natural banks) are built up over many flood events.



Subject: History		KPOW: Did life change under Norman rule?	Year 7: Spring Term 1
Week 1: Religion		Week 2: Medieval Towns and Villages	Week 3: Law and Order
<p>Role of the Church:</p> <ul style="list-style-type: none"> • Praying • Baptising a child, marriage, and funerals • Sharing news, holidays, games, and plays <p>Role of Religion:</p> <p>Everyone was religious and were Catholic. The head of the Church was the Pope in Rome. Services were in Latin and Doom Paintings were used to show heaven and hell. The Church was a major landowner, and everyone paid a tax called a tithe to the Church.</p> <p>Monks and Nuns:</p> <p>They played an important role in communities by helping the poor, providing care for the sick and providing rooms to travellers.</p>		<p>How did villages change?</p> <p>Before 1066, most people lived in the countryside. Farm work was hard all year round for peasants. Saxon thegns were replaced by Norman knights. Forest laws were introduced which limited food for peasants, as they could no longer hunt.</p> <p>How did towns grow?</p> <p>King William encouraged the growth of towns to increase trade and taxes to the crown, as goods were sold in markets.</p> <p>Towns started to grow around castles and ministers.</p> <p>Between 1066 and 1100, 21 new towns were created. Trade e.g., salt and wool played an important role in the growth of towns.</p>	<p>The Rise of Islam:</p> <p>For hundreds of years, the Roman and Persian Empires were fighting. Eventually the constant fighting weakened them.</p> <p>Muslim leaders conquered the old Roman and Persian Empires creating an Islamic Caliphate. Baghdad became its capital. The city was very developed with parks, markets, bathhouses, Mosques, schools, and hospitals.</p> <p>The Silk Roads:</p> <p>These were a network of trading routes between the Eastern and Western worlds (mainly Asia and Europe). Goods were bought and sold.</p> <p>The House of Wisdom:</p> <p>Baghdad represented a high point in Islamic civilisation.</p> <p>The time of the Abbasid Caliphates between 750 and 1258 is often called a 'Golden Age'.</p> <p>As well as goods, wisdom and ideas travelled along the Silk Roads to Baghdad.</p> <p>The books that were brought to Baghdad were stored in the House of Wisdom. The building was mainly used as a library.</p> <p>This was a time that saw major breakthroughs in science, mathematics, medicine and astronomy and literature. Baghdad was one of the most developed civilisations in the world until it was destroyed by the Mongols in 1258. They threw all the books from the House of Wisdom into the river.</p>
Week 4: Law and Order		Week 5: KPOW	
<p>Watchmen – Made people stick to a curfew.</p> <p>Hue and Cry – People shouted if they saw a crime.</p> <p>Courts: In addition to the existing courts, the Norman's introduced the Lord's Court.</p> <p>Ordeals and Punishments</p> <p>Ordeal by fire – Accused would carry a hot metal bar. If the wound healed, they were innocent.</p> <p>Ordeal by water – Accused was pushed into water. If they sank, they were innocent!</p> <p>Ordeal by combat – A <u>new trial</u> introduced by the Normans for nobles. The accused had a battle, if they won, they were innocent. The Murdrum Fine was also new. It forced the Anglo-Saxon villagers to prove that any corpse found near their village was not a Norman – or face a heavy fine!</p>		<p>Did life significantly change for ordinary people under Norman Rule?</p> <p>Explain = To make (an idea or situation) clear to someone by describing it in more detail or revealing relevant facts.</p> <p>Change = To make something different.</p> <p>Significantly = In a great or important way such as something changing to a large extent.</p> <p>Life changed under the Normans. The Church became more important and played a large part in everyday life. Villages grew and towns developed with markets. Law and order remained similar to Anglo-Saxon times, though some new laws and ordeals were introduced to give the Normans greater control.</p>	

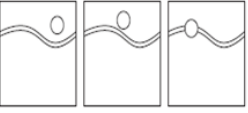


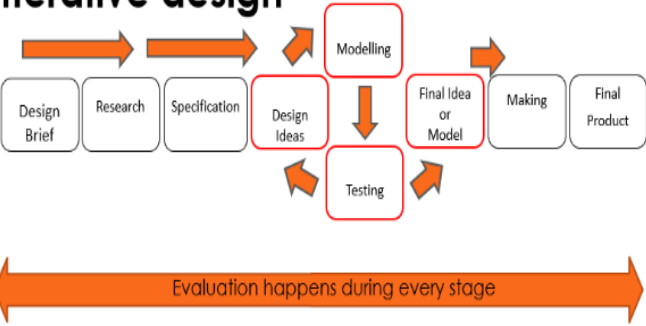
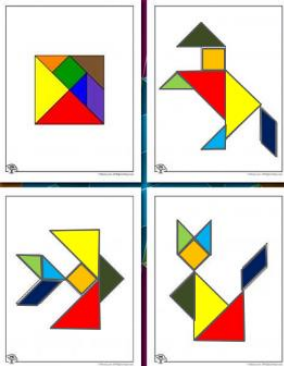
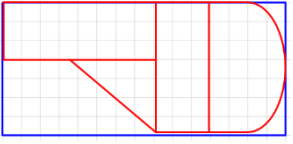




Subject: DT - Food		Year 7: Spring Term 1																		
Week 1 & Week 2	Week 3 & Week 4	Week 5																		
<p>Key terms in cooking:</p> <p>Simmering- cooking a product then reducing the heat to low, e.g. curry.</p> <p>Boiling- cooking a product in bubbling water, e.g. pasta.</p> <p>Frying- cooking something in a small amount of fat, e.g. onions.</p> <p>Chopping- using a knife to cut a product into small chunks, e.g. peppers.</p> <p>Peeling- taking the skin off a product, e.g. apple.</p> <p>Knife safety</p> <p>Bridge method- when the hand is curled and shaped like a bridge for knife to go under- rounded products, like apple, strawberries, and onion.</p> <p>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.</p> <p>Practical planning</p> <p>You will plan to make fruit kebabs that will be garnished by using the bridge and claw method.</p> <p>Simple method</p> <ol style="list-style-type: none"> 1. Wash and chop fruit into even pieces. 2. Slide onto skewer through the centre. 3. Melt chocolate in 30 second bursts in the microwave and drizzle over. 4. Present on a plate. 	<p>Practical Planning</p> <p>You will make a hot sandwich by showcasing skills in knife safety, time management, using a sequence of work and health and safety as well as using a hob and managing pan handles safely to the side.</p> <p>Simple method</p> <ol style="list-style-type: none"> 1. Put pan on heat and add a small amount of oil. 2. Add bacon or sausage and cook until crispy and brown. 3. While meat is cooking butter bread & place on serving plate. 4. Add cooked bacon/sausage to bottom slice of bread and place another slice on top. 5. Add sauce and cut in half. 6. Present and enjoy!  <p>Nutrients and Eatwell</p> <table border="1"> <thead> <tr> <th>Nutrient</th><th>Function</th><th>Where from?</th></tr> </thead> <tbody> <tr> <td>Carbohydrate Fast release- sugars Slow release- starches</td><td>Gives us energy</td><td>Starches- cereal, potatoes, pasta, rice Sugars- white sugar, sweets, honey</td></tr> <tr> <td>Fat Saturated- bad Unsaturated- good</td><td>Keeps us warm and insulated</td><td>Processed meat- meatballs, burgers, fried food-chips, junk food-biscuits, cakes Avocado, coconut, plant oils, olives, nuts</td></tr> <tr> <td>Vitamins and Minerals</td><td>Prevent illness</td><td>Any fruit, vegetable or salad item</td></tr> <tr> <td>Protein</td><td>Helps bodies to grow and repair</td><td>Lean meat- chicken, steak, fish, eggs, milk</td></tr> <tr> <td>Fibre</td><td>Helps our digestion</td><td>Brown bread, brown rice, brown pasta ie wholewheat items- cereals such as Weetabix, bran flakes</td></tr> </tbody> </table>	Nutrient	Function	Where from?	Carbohydrate Fast release- sugars Slow release- starches	Gives us energy	Starches- cereal, potatoes, pasta, rice Sugars- white sugar, sweets, honey	Fat Saturated- bad Unsaturated- good	Keeps us warm and insulated	Processed meat- meatballs, burgers, fried food-chips, junk food-biscuits, cakes Avocado, coconut, plant oils, olives, nuts	Vitamins and Minerals	Prevent illness	Any fruit, vegetable or salad item	Protein	Helps bodies to grow and repair	Lean meat- chicken, steak, fish, eggs, milk	Fibre	Helps our digestion	Brown bread, brown rice, brown pasta ie wholewheat items- cereals such as Weetabix, bran flakes	<p>Practical Planning</p> <p>You will plan to make Spaghetti Bolognese, this will showcase you using a hob as well as following a plan of making, using time management, and following health and safety rules.</p> <p>Half of the group will make Spaghetti Bolognese and the other half will be the sous chef (helper).</p> <p>Simple method</p> <ol style="list-style-type: none"> 1. Put water in a saucepan up-to the half-way mark and get onto boil. 2. Chop up onion and crush garlic- use bridge or claw method. 3. Fry off in a wok pan until soft. 4. Add mince and cook until brown. 5. Add tomatoes, herbs, spices and leave to simmer for 10 minutes. 6. Drain pasta and plate up pasta on the base and meat sauce on top.  <p>Food provenance and seasonality</p> <p>You will learn where food comes from and where in the world fruit and vegetables grow.</p> <p>Food provenance- where food is grown raised or reared.</p> <p>Seasonality- when food is harvested and grown at specific times of the year, e.g., strawberries in the UK in June/July.</p>
Nutrient	Function	Where from?																		
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Subject: DT – Product Design	KPOW: Design & Workshop	Year 7: Spring Term 1
Week 1 & Week 2	Week 3 & Week 4	Week 5
<p>Use the Landscape strategy to create 3 designs for your wooden key ring. This strategy helps you understand how a piece of acrylic can be inlayed (stuck) between two pieces of wood. These designs are to be colour rendered (to look realistic), with the inlayed acrylic having a bright contrasting colour</p> <p>Tools and machinery used to create the wooden keyring:</p> <p>Tenon saw – for cutting straight lines Band facer – for hard sanding Sandpaper – for light sanding Files – for chamfering (removing) the edges of the timber. Pillar Drill – to drill the key ring hole</p> <p>Workshop Health and Safety.</p> <ul 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>Iterative design process is where the designer will test the success of a product throughout, rather than just at the end.</p> <p>This iterative process will help to produce a design for a wooden children's toy that is themed on transport.</p> <p>Woods. Natural wood comes from trees, synthetic wood is man-made. Softwoods grow faster than hardwoods, and therefore are less expensive. Coniferous trees – Softwood – Scots pine, parana pine, spruce, cedar. Deciduous trees (grows leaves that are lost in Autumn) – Hardwood – Beech, elm, ash, mahogany, oak.</p> <p>The Design Process Iterative design</p> 	<p>The tangram strategy helps you to create simple ideas using geometric shapes. Tangrams originated in China as a puzzle.</p> <p>Designs produced are in grids of 7cm by 15cm. 15cm = 150mm 7cm = 70mm</p> <p>Man-made boards: MDF (Medium density fibreboard), chipboard, hardboard, blockboard, plywood.</p> <p>Man-made boards are made in factories and generally use the leftovers, such as sawdust and wood chippings. They are less expensive than natural wood but can be more stable.</p>  





Subject: DT - Textiles

Week 1 & Week 2

Sketching – quick, initial ideas drawn in pencil.

Key Word: CULTURE – ideas, customs and social behaviour of a group/society.

Theme – *British Culture*

Cuisine – typical British food, fish & chips, English breakfast, cream tea.

Iconic images – (iconic = Very famous/widely recognised) e.g. Houses of Parliament, London Bus, Union Jack Flag.

Symbolism (use of symbols, in this case pictures, to represent ideas) – **umbrella** because that's what British businessmen carry because it rains a lot; a **crown** for the royal family; a **football** to show a love of sport.



Surface decoration techniques – how you can decorate fabric to enhance (improve) its appearance (how it looks).

Key Word: RESIST – coating/method applied to prevent dye being absorbed (soaked up) by the fabric.

Techniques:

Batik – is a resist method, the resist is the dried wax. Tool used is Tjanting (see pic below).



Tie dye – is a resist method, the resist is the elastic band tied tightly around the material (see pic below).



Stencil – Is NOT a resist method. Cut shape out of card, that becomes your stencil which is a template (see pic below). Dabbing paste on using a sponge.

Theory: Fibres - Thin strands are joined together to make a yarn.

Key Word: FIBRES

Fibre: hair like structure. **Yarn:** lots of fibres twisted together.

Woven: yarns placed over and under each other to create a fabric.

Table showing
SOURCES (where they come from)
of fibres

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

KPOW: Design & Make a Cushion Cover

Week 3 & Week 4

Sewing machine introduction – threading a machine (top thread and bottom thread [spool]).

Key Word: DISRUPT – prevent a system or process from continuing as usual (DO NOT DISRUPT OTHERS). The sewing machine & the skills to sew around to help develop control (directing the machine) and accuracy (precise and where the stitch should be).



Health and Safety:



Surface decoration technique Applique

Key Word & Technique: APPLIQUE – stitching a small piece of fabric onto a larger piece to make a pattern or design.

Materials & Method: Bondaweb – double sided fabric glue.

1. Iron rough side of bondaweb to the back of the small piece of fabric.
2. Draw image onto tracing paper side.
3. Steps 3,4 & 5 see image below:

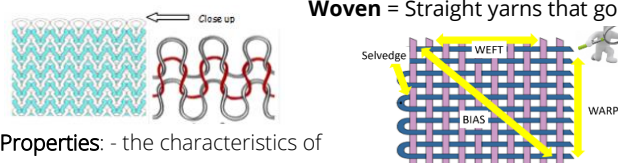


Theory: Fabric Construction methods Woven & Knitted – How yarn is made into fabric.

Key Word: CONSTRUCTION – The process of building something i.e. how it is made.

Knitted = Loops of yarn that interlock.

Woven = Straight yarns that go



Properties: - the characteristics of either a fibre, yarn or fabric:

Properties of knitted fabric – stretchy, doesn't fray, unravels if damaged, drops creases easily. Common knitted products – woolly hats, gloves, scarves, tights, socks, t-shirts. Properties of woven fabric – strong, frays, creases easily, doesn't stretch. Common woven products – trousers, shirts, bedding, curtains.	Weft – thread that goes from left to right, right to left & over and under the warp thread. Warp – threads that are vertical and which are set on the loom (machine you weave on). Seldedge – the finished edge of the fabric that does not fray. Bias – is positioned diagonally across the fabric (at 45 degrees), so the fabric is stretchy and then hangs differently.
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Year 7: Spring Term 1

Week 5

Final Idea – a development of the cushion design which evolves from the sketches page ideas, selecting the most suitable images/ideas for each surface decoration technique (Batik, tie dye, stencil, applique).



Key word: SUITABLE – right or appropriate.

Successful colour shading – even use of the pencil to get clear colouring in.



Tonal shading – to add deeper colour on parts of the design by pressing harder to add a more realistic finish.

Representing batik – double line

your design so it remains white, add colour either side of it (see image above).

Annotation of Final Idea – a note of explanation or comment added to a diagram / drawing.

Key Word: CONCISE – giving a lot of information clearly in a few words

Areas to explain:

1. How images link to British Culture –

Reflecting – shows what it is like / **Common** – Found or done often / **Iconic** – famous or popular / **Symbolises** – to represent something / **Monarchy** – country with a king or queen / **Popular** – liked by many / **Recognisable** – capable of being identified / **Represents** – sign or symbol of something / **National** – of a country & its people / **Famous** – known and recognised by many / **Historical** – used to describe something from the past

2. The challenges are:

Curves / fiddly processes / difficult area of ... / complicated ... / complex process of ... / being able to ... / Symmetry of ... / ensuring the accuracy of ...

Theory: Fabric construction methods, Laminated and Bonded & Microfibres

Key words: COMPRESSED - flattened by pressure. **MICRO** -ancient Greek word meaning small.

Laminated Fabric (layers of fabric glued and bonded together).

Bonded Fabric (fibres that are compressed [PRESSURE PRESSED] together using heat, pressure and an adhesive [GLUE]).

Microfibre – less than 1 denier thick which is equivalent to 60/100 times finer than a human hair.

Look like: shaped like a star (snowflake or flower describes them too).

How they work: they trap dust and dirt in their grooves.

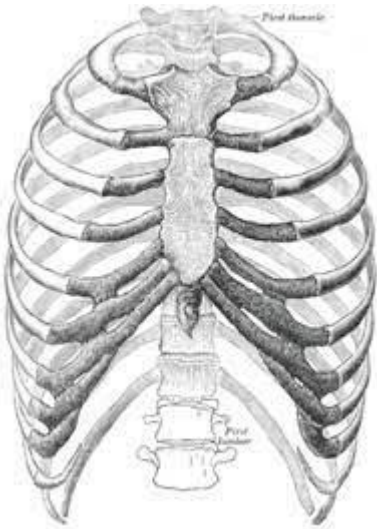


Made from: synthetic fibres, normally polyester or nylon.

Common products made from microfibre: sportswear, dusters, sports & dog towels and underwear.

Properties: ultra fine, Washable, high strength, comfortable, high absorption, breathable.





Subject: Core PE		KPOW: Bones	Year 7: Spring Term 1
Week 1 & Week 2: Ribs		Week 3 & Week 4: Femur	Week 5: Tarsals
<p>Ribs</p> <p>Located in the upper trunk.</p> <p>Bone type – FLAT (protective)</p> <p>The ribs protect the heart and the lungs.</p> <p>When a player is getting tackled in rugby their ribs protect their heart and their lungs from getting damaged.</p> <p>Ribs – Flat bones = protection</p> 		<p>Femur</p> <p>Located in the upper leg.</p> <p>Bone type – LONG (movement)</p> <p>Long bone – longer than it is wide</p> <p>Movement available at the hip is flexion (bending), extension (straightening), abduction (taking away from the middle of the body), adduction (bringing back to the middle of the body) and rotation (circles).</p> <p>The hip joint is a ball and socket joint.</p> <p>Femur – Long bone = movement</p> 	<p>Tarsals</p> <p>Located in the ankles.</p> <p>Bone type – SHORT (weight bearing)</p> <p>Short bones – Same height, width & length</p> <p>The tarsals bear the weight of the body and absorb impact when landing.</p> <p>When a player lands from jumping up to head the ball, the tarsals absorb the shock when landing and when stood up bear the weight of the body.</p> <p>Tarsals – Short bones = weight bearing</p> 






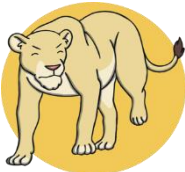
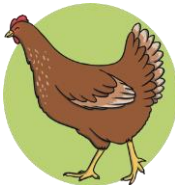

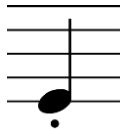




Subject: Computing & Digital Media	KPOW: Computer Hardware	Year 7: Spring Term 1																																																
Week 1 & Week 2	Week 3 & Week 4	Week 5:																																																
<p>Keywords:</p> <p>Denary: known as decimal, a base 10 number system.</p> <p>Binary: a base 2 number system using two digits: 1 and 0.</p> <p>Transistors: device used to switch electronic flow in a circuit.</p> <p>Computers use 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>Keywords:</p> <p>Addition: adding two 8-bit binary numbers together.</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>Binary numbers can be added together. For example, to work out the following:</p> <p>01010011 + 01110110</p> <p>Work from the right and use these four rules, carry under to the left as required:</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> <table><tr><td>01010011</td><td></td></tr><tr><td>01110110</td><td></td></tr><tr><td>_____</td><td></td></tr><tr><td>11001001</td><td>+</td></tr></table> <p>Add the following binary numbers:</p> <table><tr><td>10110101 00110011 _____</td><td>10010101 00100011 _____</td></tr><tr><td>10111101 01110011 _____</td><td>11110111 00110001 _____</td></tr></table>	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)	01010011		01110110		_____		11001001	+	10110101 00110011 _____	10010101 00100011 _____	10111101 01110011 _____	11110111 00110001 _____	<p>Keywords:</p> <p>Storage: Something that holds data.</p> <p>Capacity: The maximum amount a storage device such as a hard drive can hold.</p> <p>There are two types of storage that computers make use of- these are primary and secondary storage:</p> <p>Primary storage: is directly accessed by the CPU and is normally the fastest memory in the computer. Primary storage is RAM, ROM and cache (memory inside the CPU).</p> <p>Secondary storage: this is where you can permanently save your files.</p> <p>Secondary storage is split into three different categories. See below:</p> <table><tr><th>Magnetic</th><th>Solid State</th><th>Optical</th></tr><tr><td>Hard disk drive Tape drive</td><td>USB Flash drive SD Card</td><td>CD DVD Blu ray</td></tr></table> <p>Storage is measured in Bytes and speed, such as the CPU, is measured in Hertz.</p> <table><tr><th>Order</th><th>Hertz</th><th>Bytes</th></tr><tr><td>Smallest ↑ ↓ Largest</td><td>Hz KHz MHz GHz</td><td>Bit Byte KB MB GB TB</td></tr></table>	Magnetic	Solid State	Optical	Hard disk drive Tape drive	USB Flash drive SD Card	CD DVD Blu ray	Order	Hertz	Bytes	Smallest ↑ ↓ Largest	Hz KHz MHz GHz	Bit Byte KB MB GB TB
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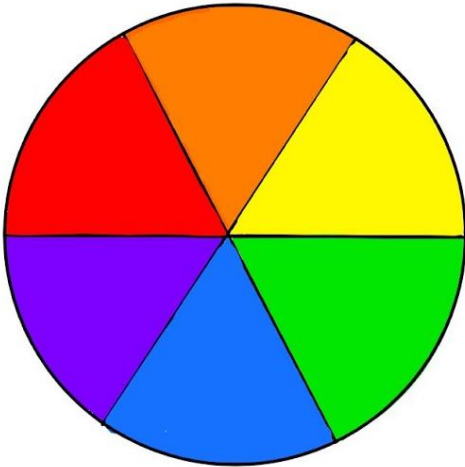
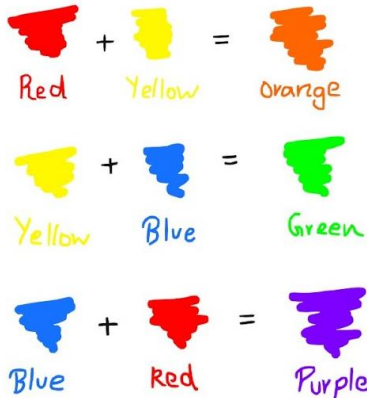

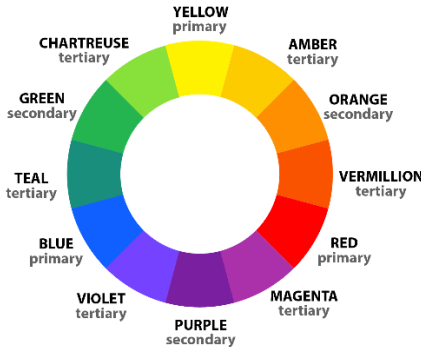




Subject: Music	KPOW: Carnival of the Animals	Year 7: Spring Term 1
Week 1 & Week 2: Exploring Movements	Week 3 & Week 4: March of the Lions	Week 5: Assessment
<p>Rhythm A pattern of notes of different lengths. Unlike the pulse, which stays the same throughout.</p>  <p>Pulse A steady beat throughout a piece of music. The part you can clap along to.</p>  <p>Carnival of the Animals A piece of music by French composer Camille Saint-Saëns, 1886. The piece has 14 movements, each one representing an animal.</p> 	<p>March of the Lion The first piece is about a lion. The lion is sometimes known as 'th king of the jungle'. The music sounds very grand. Part of the piece sounds like a fanfare, where someone royal is being presented.</p>  <p>Hens and Roosters The second movement is about hens and roosters. The music sounds like hens and roosters pecking seeds on the ground and flapping their wings.</p>  <p>Swans Movement 13 is about swans. This beautiful music is probably the most famous piece from The Carnival of the Animals. It is about a swan. The cello plays long, graceful notes to show how the swan moves. The gentle music from the piano makes us think of ripples of water.</p> 	<p>Articulation The musical direction performance technique which affects the transition or continuity on a single note or between multiple notes or sounds.</p> <p>Types of Articulation:</p> <p>Staccato: Short and detached notes, shown by putting a dot under the note.</p>  <p>Legato: Smooth, flowing notes, shown by putting an arch over/ under the notes.</p>  <p>Pitch of instruments: Size impacts the pitch of instruments. Usually, the larger the instrument, the lower in pitch it is. Usually, the smaller the instrument, the higher in pitch it is.</p> 













Subject: Art	KPOW: Observational drawing	Year 7: Spring Term 1
Week 1 & Week 2:	Week 3 & Week 4:	Week 5:
<p>Keywords and definitions</p> <p>Blend: Moving from one tone or colour to the next smoothly.</p> <p>Colour: Colour <i>is the element of art that is produced when light, striking an object, is reflected back to the eye</i></p> <p>Complimentary: Combined in such a way that something is enhanced or emphasised.</p> <p>Mood: The feelings or atmosphere that a piece of Artwork creates.</p> <p>Observational drawing (colour)</p>  <p>To record a subject as accurately as possible.</p>	<p>The Colour Wheel</p> <p>Primary Colours: Red, Blue and Yellow</p> <p>Secondary Colours: Orange, Green and Purple</p>  <p>How are secondary colours mixed?</p> 	<p>Types of Colours</p> <p>Complimentary Colours: Colours such as red/green, Blue/orange and yellow/purple.</p> <p>Warm colours: Red, orange, yellow. These colours help to give a warm feeling or mood.</p> <p>Cool colours: Blue, green, purple. These colours help to give a cold feeling or mood.</p>  <p>Tertiary colours: Colours that are formed by mixing a secondary colour with a primary colour.</p> 





Subject: Drama	KPOW: Commedia Del Arte	Year 7: Spring Term 1
Week 1 & Week 2	Week 3 & Week 4	Week 5:
<p>Introduction to Commedia dell'Arte</p> <p>Characterisation– a description of the distinctive nature or features of someone or something.</p> <p>Stock Characters– Characters that represent a specific stereotype.</p> <p><i>Commedia originated in the 15th Century in Italy.</i></p> <p>Exploring Characters:</p> <p>Arlecchino is a servant who is an acrobat and is always hungry. He is highly energetic and a loved by audiences.</p>   <p>Pantalone is a high-status character in commedia performances; he is rich greedy and spiteful.</p> <p>Zanni is the lowest on the social ladder. He is the poorest, stupidest, and hungriest servant imaginable.</p>   <p>Il Dottore is the doctor, he is large, talks loud and babbles. He thinks he is intelligent but talks nonsense.</p>	<p>Skills and techniques of Commedia</p> <p>Gibberish– unintelligible or meaningless speech or writing; nonsense.</p> <p>Lazzi– A physical or verbal prank, adding comedy to the narrative.</p> <p>Commedia was performed as street theatre</p>  <p>There were 10 members of a commedia troupe when touring shows.</p> <p>Skills and techniques:</p> <ul style="list-style-type: none"> • Masks, • Improvisation • Physical comedy • Tonality • Stereotypical characters 	<p>Bringing the narrative</p> <p>Narrative: a spoken or written account of connected events; a story.</p> <p><i>The storylines in commedia are mostly improvised.</i></p>  <ul style="list-style-type: none"> • Audience awareness – the position you stand on stage. A vital skill in Commedia Dell'Arte, so the audience can see body and facial expressions clearly. • Peer Feedback – Enables the performer to improve their work, based on feedback of strength and weaknesses. 





Subject: Learning 4 Life

Week 1 & Week 2: Key Words

Key Words

Please learn the definitions of the following 11 words:

Motivation	A reason for acting/behaving in a certain way.
Aspirations	A hope or ambition to achieve something.
Work Experience	A short-term period of employment.
Skills	The ability to do something well.
Career	An occupation undertaken for a good period of time, with the opportunity to progress.
Further Education	Education below degree level for people above school age.
Higher Education	Education at university or a similar education establishment.
A levels	A UK subject-based qualification for students aged 16 and over.
Apprenticeship	When you learn a trade, 20% of the time is theory, 80% is practical training.
Vocational	Education or training for a particular occupation.
Determination	The ability to keep trying to do something, even if it is difficult.

Week 3 & Week 4: James Dyson





James Dyson

An Entrepreneur (a person who sets up a business)

Please learn these facts about James Dyson:

 <p>A British entrepreneur Born in 1947 in Norfolk.</p>	<p>Talking about long distance running at school:</p> <p>"I was quite good at it, not because I was physically good, but because I had more determination. I learnt determination from it."</p>
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His inventions:

	<p>The Ballbarrow A wheelbarrow but instead of a wheel, a ball is used. Released in the UK in 1974.</p>
	<p>The Trolleyball Boat Launcher Using the same idea as the Ballbarrow but this was used to launch boats. Released in the UK in 1978.</p>
	<p>The G Force Vacuum Cleaner This was the first vacuum that did not need a dust bag. Released in Japan in 1986.</p>
	<p>The Dyson Ball Vacuum Cleaner This vacuum incorporated his idea from the Ballbarrow. Released in the UK in 2005.</p>

Year 7: Spring Term 1

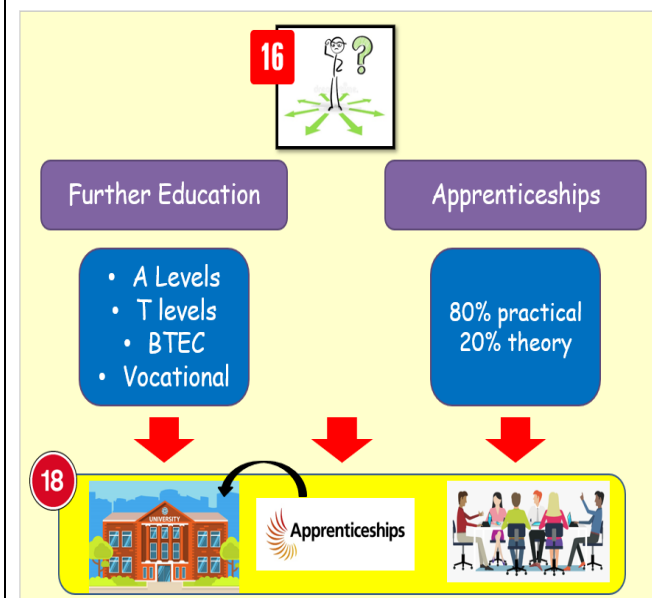
Week 5: Careers

Skills

There are 8 key skills which future employers look for:



Routes to the future you want:





Home Learning Schedule

Day	Subject to Learn
Monday	English and Learning 4 Life
Tuesday	Maths and Computing & Digital Media
Wednesday	Science
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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