



Minsthorpe Community College

Knowledge Organiser Year 7 – Autumn Term 2

Name:

P&A group:

Knowledge Assessment: Wednesday 17th December 202 – 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.





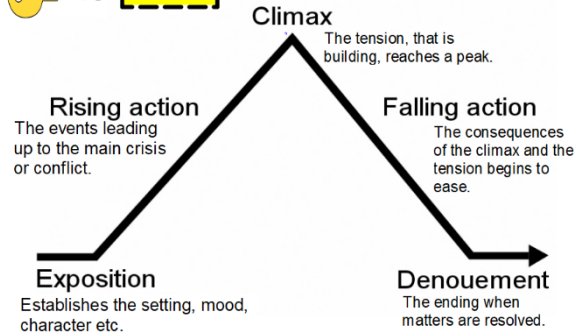
Subject: English

KPOW: Create a gothic short story, using an image as inspiration.

Year 7: Autumn Term 2

Week 1 & Week 2: Narrative structure and setting

Structure- (noun) the way a text is constructed and the order or events.



Circular or cyclical structure- the story ends where it began. Although the starting and ending points are the same, the character(s) undergo a transformation, affected by the story's events.

Setting- (noun) the place or type of surrounding where an event takes place. Writers use the **description of settings** to create a **certain mood**. Some settings are typical (common) in certain genres (types) of texts:



A city in the rain at night.

A romance

A desert island

An adventure story

An abandoned house

A gothic story

Vocabulary

Nostalgia – (abstract noun) a sentimental longing for the past.

Week 3 & Week 4: Mastering Writing Basics.

Full stops

A full stop is primarily used:

1. to mark the end of a sentence
2. in abbreviations. For example: five p.m., Prof. Smith, Sgt. Jones, George W. Bush.

Capital letters and full stops

A.

Capital Letters should be used for:

- the first word of a sentence
- proper nouns and names e.g. John Smith, Minsthorpe Community College.
- the main words in titles e.g. The History of English.
- eras and time periods e.g. the Victorian Age.
- places and dates e.g. Meet on September 23rd in Wakefield.

Apostrophes serve two basic functions in writing:

- to show **possession** e.g. John's work. Use an apostrophe + "s" ('s) to show that one person/thing owns or is a member of something. E.g. Amy's ballet class. 2. Use an apostrophe after the "s" (s') at the end of a plural noun to show possession. E.g. the parents' bedroom. It is not necessary to add an "s" to the end of a possessive plural noun e.g. the parents's bedroom. 3. If a plural noun doesn't end in "s," add an apostrophe + "s" to create the possessive form. E.g. the children's rooms.
- to show **omission** / indicate that letters have been removed to form a contraction e.g. It is raining- It's raining or they + have = they've (you took out "ha")

Week 5, 6 & 7: Figurative Language Devices

Narratives and descriptions often make use of figurative language devices:

Metaphor

A metaphor is a phrase describing something as something it is not in reality. It is used to compare two things symbolically. A metaphor literally describes something as something it is not. "Love is a battlefield"

Onomatopoeia

Onomatopoeia is a form of figurative language in which words which are used to describe a sound actually resemble the sound they are referring to.
• For example: The ghost said boo.

Alliteration

Alliteration is a type of figurative speech in which the repetition of letters or sounds is used within one sentence.
• For example: Eagles end up eating entrails.

Personification

Personification is a type of figurative language. It is used to give an inanimate object or item a sense of being alive. The speaker would talk to the object as if it could understand and was intelligent.
• For example: Why are you so heavy, suitcase?

Simile

A simile is a type of figurative language which is used to compare one thing against another. Similes compare the likeness of two things and often feature the words 'like' or 'as': "As strong as an ox/ As brave as a lion."

Vocabulary:

- Catalyst- (noun) i) a substance that speeds up a chemical reaction ii) a person or thing that starts off an event.





Subject: Maths

Week 1: Order of operations

The order of operations tells you which part of a calculation to do first.

BIDMAS helps us to remember the order of operations.

B Brackets
I Indices
D M Division and multiplication
A S Addition and subtraction

Division and multiplication have the same priority, so these are completed from left to right.

Addition and subtraction also have the same priority, so they are completed from left to right.

Key examples

$$3 + 5 \times 8 = (2 \times 3) - (5 \times 8) =$$

$$3 + 40 = 43 \quad 6 - 40 = -36$$

$$(3 + 5) \times 8 = 5 + 6^2 \div 9 =$$

$$8 \times 8 = 64 \quad 5 + 36 \div 9 =$$

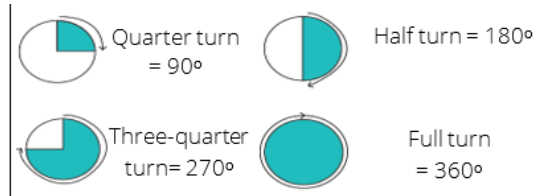
$$5 + 4 = 9$$

KPOW: Shape

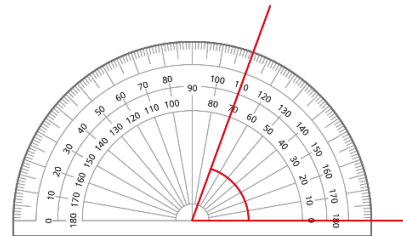
Week 2: Angles

Measure of turn

An angle represents a measure of turn.

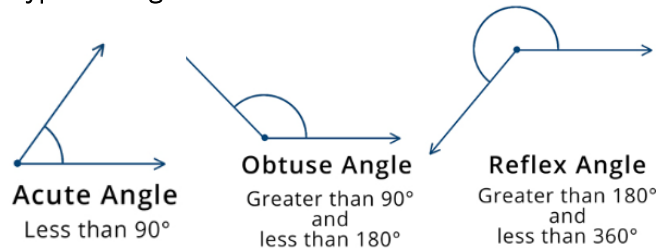


We use a protractor to measure and draw angles.

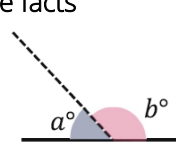


For example, this angle is 70°.

Types of angles

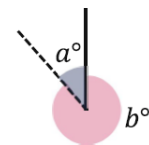


Angle facts



Adjacent angles on a straight line sum to 180

$a + b = 180^\circ$



Angles around a point sum to 360.

$a + b = 360^\circ$

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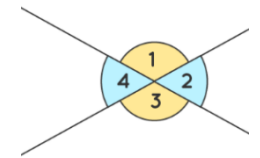
Week 3: Angles

Angle facts

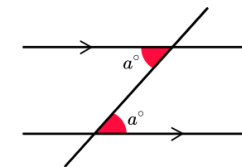
Vertically opposite angles are equal. 1 = 3 and 2 = 4.

Parallel lines

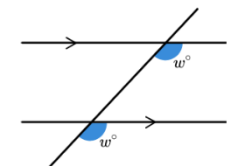
Parallel lines: Lines that always stay the same distance apart and they never meet.



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



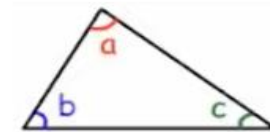
Alternate angles are equal



Corresponding angles are equal.

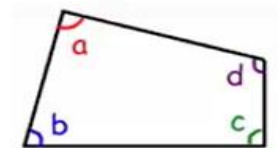
Angle facts

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



Angles in a quadrilateral add to 360°.

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



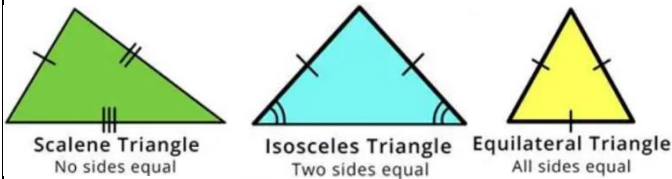


Subject: Maths

Week 4: Classifying 2D shapes

Number of sides	Name of polygon
3	triangle
4	quadrilateral
5	pentagon
6	hexagon
7	heptagon
8	octagon
9	nonagon
10	decagon
12	dodecagon

Types of triangles



Rotational symmetry

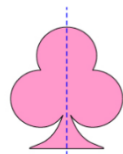
A shape has rotational symmetry when it still looks the same after rotation of 360°. How many times it matches as it rotates is the order.



This shape has rotational symmetry order 2.

Reflectional symmetry

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

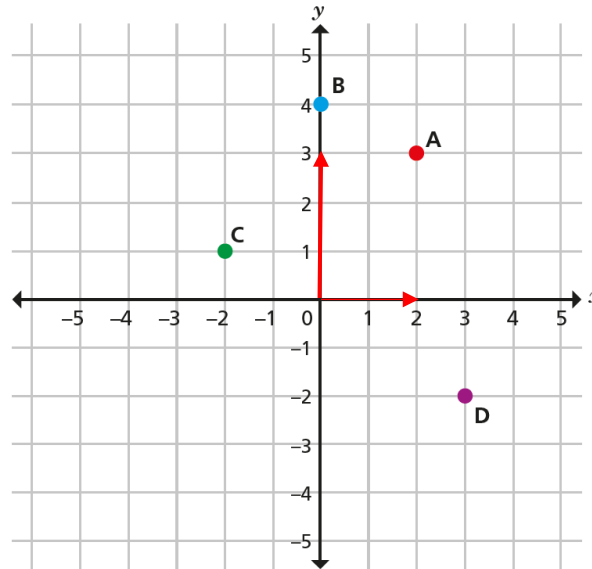


KPOW: Shapes

Week 5 & Week 6: Coordinates

Coordinates

Coordinates are used to describe the position of a point.



To read or plot a coordinate, read the x-coordinate first and then the y-coordinate.

For example, the point A is written as (2, 3).

Keywords:

Equidistant: The same distance.

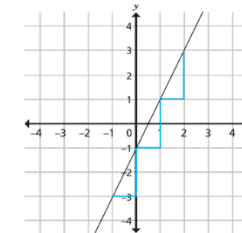
Midpoint: Divides a line segment into two equal parts.

Year 7: Autumn Term 2

Week 7: Coordinates

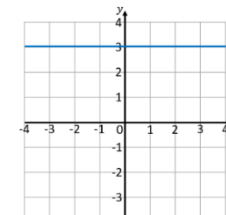
Gradient

Gradient is a measure of how steep the line is.

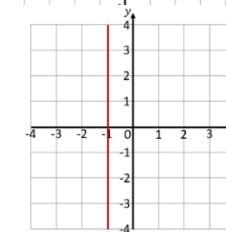


This line goes up 2 boxes for every 1 box it goes across. The gradient = +2

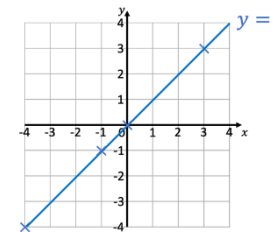
Equation of straight lines



The equation of this line is $y = 3$ because all the y-coordinates on this line are 3.



The equation of this line is $x = -1$ because all the x-coordinates on this line are -1.



The coordinates on this line are: (-4, -4), (-1, -1), (0, 0) and (3, 3) so the equation of this line is $y = x$.





Subject: Science -Chemistry

KPOW: Particles

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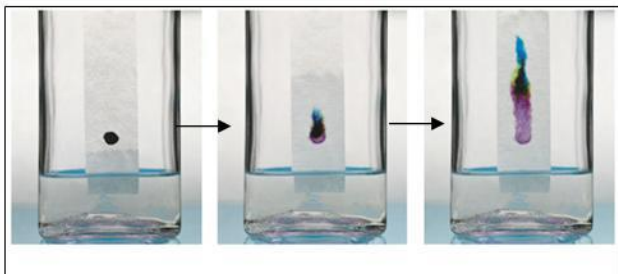
Week 1: Chromatography

Week 2: Solubility

Week 3: Method

Keyword definitions

Chromatography – The process of separating the components of a mixture of soluble substances.



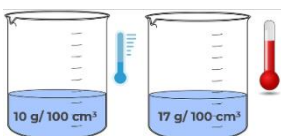
In **chromatography** a small dot is placed onto a piece of **chromatography paper**. As the water rises through the paper it takes the ink particles with it. The larger ones are deposited first which **separates** the mixture into its different parts as the water rises

Keyword definitions

Solubility - If something can dissolve or how much something dissolves.

We can measure **solubility** as the amount of a substance that will dissolve in 100cm³ of solvent. For example, sodium chloride has a **solubility** of 36g/100cm³. This means that 36g of sodium chloride will **dissolve** in 100cm³ of **solvent**.

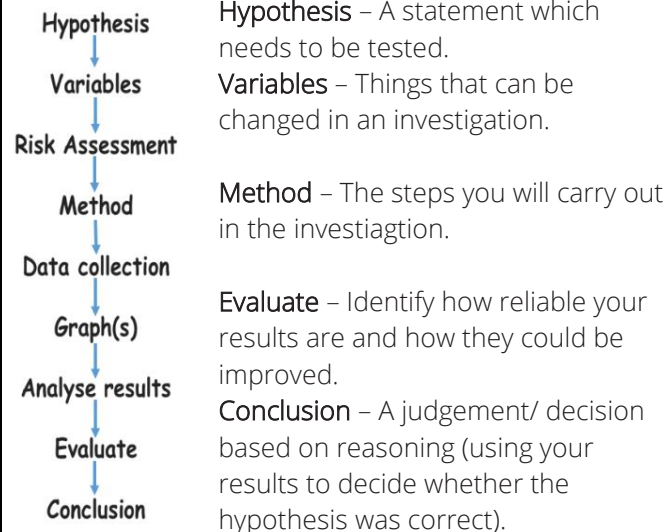
The solubility can be affected by the **solute** and the **solvent**.



Increasing the temperature will increase the solubility.

This means a larger mass of solute will dissolve at a higher temperature than a lower one.

The Scientific Method



Week 4: Data and tables

Week 5: Graphs

Week 6 & Week 7: Summary Lessons

Keyword Definitions

Anomaly: A result that does not follow a pattern. In a table, the **independent variable** goes on the **left** and the **dependent** goes on the **right**. Each time the independent variable is changed, the test is repeated three times to check for **anomalies**. These are not included in the mean average.

Student	Reaction time in s			Mean reaction time in s
	Test 1	Test 2	Test 3	
Boy 1	0.28	0.27	0.26	0.27
Boy 2	0.28	0.47	0.22	0.29
Girl 1	0.31	0.29	0.27	0.29
Girl 2	0.32	0.30	0.29	0.30

Mean = (test1 +test2 +test3) ÷ number of repeats

E.g. for boy 1 above (0.28 + 0.27 + 0.26) ÷ 3 = 0.27

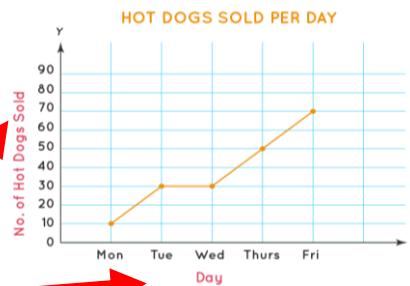
Keyword Definitions

Graph – A diagram showing the relationship between two quantities.

Accurate – A measurement or calculation that is close to the actual value.

The **dependent variable** (what you measure) is always plotted on the y-axis.

The **independent variable** (what you change) is always plotted on the x-axis.

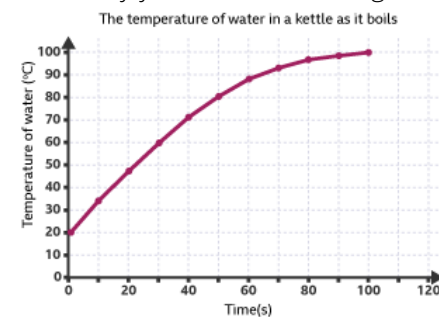


Keyword Definitions

When drawing a graph always look at the **range of data** before you begin, that way you'll know how long to draw your lines.

Always use a **pencil** and **ruler** to draw the lines.

On each **axes** there should be a **label** including the **units** and the graph should have a **title**.





Subject: Science - Biology

KPOW: Specialised cells

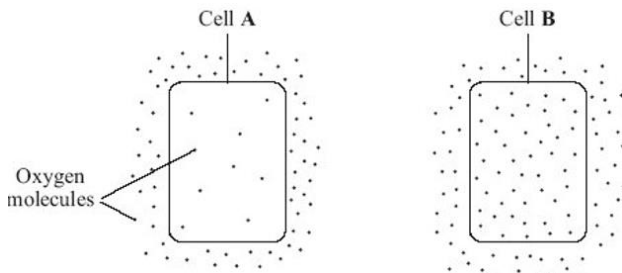
Year 7: Autumn Term 2

Week 1: Diffusion

Keyword definitions

Diffusion - The movement of particles from an area of high concentration to an area of lower concentration.

Concentration - A measure of how much of a substance there is in a particular volume.



In this example oxygen will diffuse into cell A the fastest because there is a higher concentration of oxygen outside the cell compared to inside.

Week 2: Digestive system

Key word definitions

Cell - The basic subunit (building block) of living things.

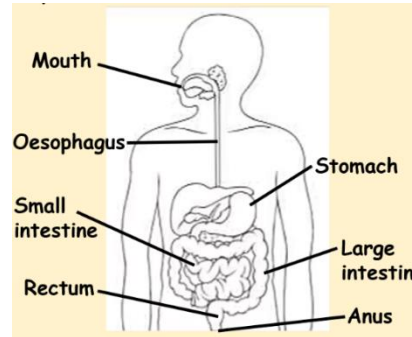
Tissue - Similar cells grouped together.

Organ - Similar tissues grouped together.

Organ system - Different organs that work together and have a shared function.

The Digestive system

contains all the organs that allow you to break down and absorb nutrients from food.



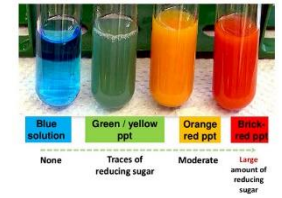
Week 3: Food tests

Key word definitions

Food tests - Chemical tests that allow us to identify certain nutrients in foods.

Nutrient	Test	Positive result
Starch	Iodine	Turns black
Protein	Biuret reagent	Turns lilac.
Sugar	Benedicts reagent	Turns red,

If the **positive result** is seen when these reagents are added to foods, this tells us that particular nutrient is present in the food.



Benedicts reagent can turn different colours depending on the amount of sugar present.

Week 4: Burning food

Keyword definitions

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

Calories - How energy levels are measured in food.

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

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

You can evaluate how much energy is in food by igniting it and seeing how much it can raise the temperature of a small volume of water.

Week 5: Healthy diet

Keyword definitions

Diet - The type of food that a person or animal typically eats.

The seven components of a healthy diet are:

- Carbohydrates
- Protein
- Fat
- Fibre
- Vitamins
- Minerals
- Water



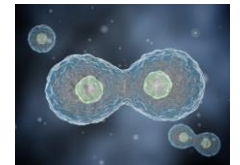
If your diet contains enough of each of the above then it is called a **balanced diet**. If you lack some of the above it can lead to **deficiency diseases**.

Week 6 & Week 7: Summary lessons

Keyword definitions

Having a diet that keeps the body healthy is essential.

A balanced diet ensures that all the food groups are present in the right amounts.



Being healthy allows the **muscles** to move, allows for the body to **keep warm** and ensures that the body can **grow and repair itself**.





Subject: French		KPOW: Les Opinions Writing	Year 7: Autumn Term 2	
Week 1: Nouns		Week 2: Opinion Verbs	Week 3: Reasons / adjectives	
<p>le rouge (red) le bleu (blue) le sport (sport) le foot (football) le rugby (rugby) le cinéma (the cinema) le racisme (racism) le chocolat (chocolate) le weekend (the weekend) la musique (music) la natation (swimming) la danse (dancing) la pizza (pizza)</p>	<p>la géographie (geography) la violence (violence) l'injustice (injustice) l'histoire (history) les animaux (animals) les insectes (insects) les reptiles (reptiles) les chiens (dogs) les chats (cats) les maths (maths) les voyages (trips) les jeux vidéos (video games)</p>	<p>j'adore (I love) j'aime (I like) j'aime beaucoup (I really like/like a lot) je préfère (I prefer) je n'aime pas (I don't like) je déteste (I hate) je ne supporte pas (I can't stand) j'aimais (I liked) je n'aimais pas (I didn't like)</p>	<p>intéressant (interesting) génial (great) fantastique (fantastic) passionnant (exciting) reposant (relaxing) amusant (fun) facile (easy) formidable (wonderful) délicieux (delicious) vif (bright) joli (pretty) y</p>	<p>difficile (difficult) nul (rubbish) barbant (boring) ennuyeux (boring) stressant (stressful) pas mal (not bad) déprimant (depressing) moche (ugly)</p>
Week 4: Opinion Openers		Week 5: Connectives	Week 6 & Week 7: Revision	
<p>À mon avis (In my opinion) Selon moi (In my opinion) Personnellement (Personally) Je pense que (I think that) Je crois que (I believe that) Je trouve que (I find that) Je dirais que (I would say that) Quand j'étais petit(e) (when i was little)</p>		<p>et (and) mais (but) aussi (also) cependant (however) par contre (on the other hand) parce que c'est (because it is) car c'est (because it is) parce que c'était (because it was)</p>	<p>Revise all of the vocabulary from weeks 1-5.</p>	

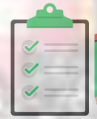




Subject: Geography.

Week 1: Measuring Population

Census means a survey of the population. It happens every ten years. The government then uses census data to plan new infrastructure, including roads, schools, and hospitals.



The UK population is ageing. This is because people are more health aware and there has been a decrease in dangerous jobs such as mining.

An ageing population means more money needs to be spent on healthcare and pensions. This is likely to lead to tax rises.



Pictograms use pictures/symbols to show data.

Week 4: Comparing Rural Areas

The term rural refers to the countryside.

Places like Hildenborough, near London, are commuter settlements where people live in a rural place but travel to large cities for work, so a commuter is someone who travels to work. The Shetland Islands are different and have vast open landscapes for miles. The Shetland Islands have many amazing qualities and these include culture and the arts. There are lots of employment opportunities especially in agriculture, tourism, and the oil industry.



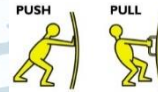
KPOW: The People of the UK

Week 2: Impacts of Migration

Migration is the movement of people from one place to another. There are different types of migration. Economic migration is the most common type, and this is where people move for a job.



Push factors are negative factors that make people want to leave an area. Pull factors are positive factors that attract people to an area.



Migration has had both positive and negative impacts on the UK. On the one hand, it brings cultural diversity and people to do much needed jobs but on the other hand, it can create over-crowding.

Week 5 & Week 6: Population Pyramids & KPOW

Population means the number of people in a place. The population is divided into age bands and gender to analyse the structure.

Population structure is shown on a population pyramid. The shape of the pyramid tells us about the level of development of a country.



Low-income countries have a wide base and a narrow top. High-income Countries have a narrow base and top with a wide middle.

Week 6: The People of the UK KPOW

Year 7: Autumn Term 2

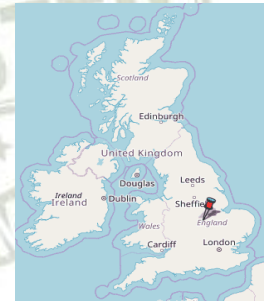
Week 3: Living in Leicester

Leicester is a city in the East Midlands. Leicester grew as a city due to its transport routes in and out of the city, farming, and factories.



People have migrated from other countries, e.g. India. Due to migration, Leicester is a multicultural city. Opportunities for people living in Leicester include:

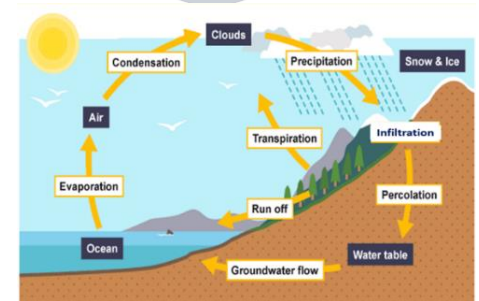
- Shopping.
• Education.
• Sport.
• Employment.
• Tourism.



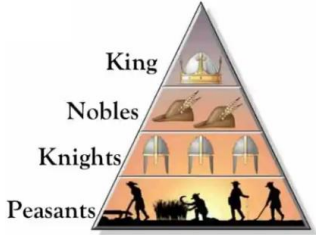
Week 7: New Topic - Rivers

The Water Cycle

Water is found in three states on Earth: solid (ice), liquid (oceans/ rivers), and gas (water vapour). Hydro is the Greek word for water, so the hydrological cycle is just the water cycle. The water cycle means water circulates non-stop between the ocean, the atmosphere, and the land.."





Subject: History		KPOW: How did William control the Saxon people?		Year 7: Autumn Term 2	
Week 1: Before the Battle		Week 2: Battle of Hastings		Week 3: The Feudal System	
<p>Before the Battle of Hastings: Anglo-Saxon Harold Godwinson, was crowned King of England on the 6th January 1066, but he faced several problems. 300 Viking ships led by Viking Harald Hardrada invaded the North of England and English Earls Edwin and Morcar fought the Vikings at Fulford Gate near York. The Vikings won the battle and took control of York. Harold Godwinson and his Saxon army marched up North to fight the Vikings and Harald Hardrada at Stamford Bridge. Harold Godwinson and his men were successful and defeated the Vikings. The Viking leader Harald Hardrada was killed, and they only needed 24 ships to take home the remaining Vikings.</p>		<p>When: The Battle of Hasting took place on Saturday 14th October 1066. Who: Harold Godwinson and William, Duke of Normandy. What: The Battle started at 9am and Harold and the Saxons formed a shield wall at the top of Senlac Hill. William's efforts to break the shield wall were unsuccessful at first. William introduced a new tactic – the feigned retreat. William ordered some of his soldiers to run down the hill as if they were retreating. Harold's soldiers thinking they were winning, ran down the hill. Without the safety of the shield wall Harold's soldiers were quickly killed. At sun set Harold was killed and the battle was lost. William became the new King of England.</p>		<p>When William became King he had many problems, such as not having any money and being a foreign Norman King who did not have the support of the Anglo-Saxons. He also had many loyal knights who had helped him win and he wanted to repay their loyalty. William established the Feudal System in England (a medieval method of governing a country).</p> <p>Feudal System = A type of medieval hierarchy. In return for land, people gave loyalty (fealty) to the people above. King at the top and peasants at the bottom</p> 	
Week 4: Castles		Week 5: Dealing with rebellions		Week 6 & Week 7: KPOW	
<p>Castles Motte and Bailey Castles These were the very first castles William built after he won the Battle of Hastings. There were two main features: a motte, a large mound of earth and on top of the motte was a wooden keep. The second main feature was the bailey, a flat area where the soldiers lived, surrounded by a wooden fence. They were quick, easy and cheap to build, but they could burn and rot. Stone Square Keep Castles The motte and bailey castles were upgraded over time to be built from stone with thick outer walls. They took a long time and were expensive. Their shape evolved from rectangular to circular.</p>		<p>Rebellion 1: Harrying of the North In 1069, things in the North spiralled out of control and one of William's trusted Norman nobles was murdered along with 900 Norman men. William sent his soldiers into the Yorkshire countryside with orders to burn and destroy everything that could sustain human life. Countless thousands would die because of famine (not having enough food). Rebellion 2: Hereward the Wake and Ely Hereward was a Saxon rebel with a grudge against William and the Normans who led a rebellion in East Anglia. After many failed attempts, William was able to defeat Hereward by talking some monks into showing him a secret passage. Hereward was never seen again. He was the final Saxon rebel.</p>		<p>KPOW: How did William control the Saxon people?</p> <p>William used a number of ways to control the Saxon people. He put the Feudal System in place to give order to society and built castles in areas where there was a chance of trouble. This meant he had soldiers where and when he needed them. Finally, if the people still resisted, he would deal with the rebellions harshly.</p> <p>Hierarchy = A system where people are ranked in order of importance. Loyalty = To show support or allegiance. Motte = Mound of earth Rebellion = The action or process of resisting authority or control.</p>	





Subject: DT - Food

Week 1 & Week 2: Practical planning

Practical planning

You will plan to make FRUIT CRUMBLE, this will showcase you using an oven as well as following a plan of making, using time management, and following health and safety rules.

Simple method

1. Peel, core and chop apples.
2. Add the peeled and chopped fruit to base of baking dish and sprinkle with sugar.
3. In a bowl add flour, sugar and butter and use rubbing in method to combine into breadcrumb texture.
4. Cover fruit with crumble topping and sprinkle with a handful of sugar.
5. Place in a pre-heated oven for 20 minutes or until golden brown.



KPOW: Healthy Eating

Week 3 & Week 4: Practical planning

Practical planning

As per week 1 & 2 – The other half of group will cook.



- Food can be described in many ways.
- What you think is tasty other people may not share the same view.
- There are certain words we DONT ALLOW to use like- nice, ok, awful, gorgeous etc as these are opinion words and not giving any description.
- When describing you need to think about using words for- shape, colour, feel, look, smell etc.
- Some words may crossover and work for 2 categories for example a cake could taste and smell sweet.

Year 7: Autumn Term 2

Week 5, Week 6 & Week 7: Revision

Year 7- revision for test

HEALTH AND SAFETY RULES OF THE KITCHEN

- HAIR TIED UP
- APRON ON
- HANDS WASHED WITH HOT SOAPY WATER TO KILL GERMS
- SIDES WIPED DOWN
- PLAN, INGREDIENTS AND EQUIPMENT OUT AND READY TO USE

HAZARDS AND PREVENTION

A HAZARD IS SOMETHING THAT COULD CAUSE ILLNESS OR INJURY

Nutrient	Function- what it does for us?	Where do we get it 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

SEASON	FOOD THAT GROWS
SPRING	PEAS, CARROTS, STRAWBERRY
SUMMER	LETTUCE, AUBERGINE, CUCUMBER, BLUBERRIES
AUTUMN	PUMPKIN, APPLES, MUSHROOMS, PEARS, POTATO, BEETROOT
WINTER	SPROUTS, PARSNIPS, CLEMENTINE, BROCCOLI, CAULIFLOWER

FOOD PROVENANCE IS WHERE YOUR FOOD COMES FROM, IT'S IMPORTANT TO BUY AND EAT LOCALLY GROWN FOOD TO HELP THE LOCAL COMMUNITY TO PLOUGH MONEY BACK INTO FARMING

Spellings Test:

Fibre	Carbohydrate	Protein
Vitamin	Sensory	Ingredient
Delicious	Appealing	Safety
Guide	Modification	Recipe
Evaluation	Product	Hazard





Subject: DT – Product Design

Week 1 & Week 2

Workshop skills used to shape the body of the wooden children's toy:

Cutting – Use of tenon saw for cutting straight lines and coping saw for cutting curved lines.

Scroll saw – complex cuts. Workshop machinery so goggles are required.

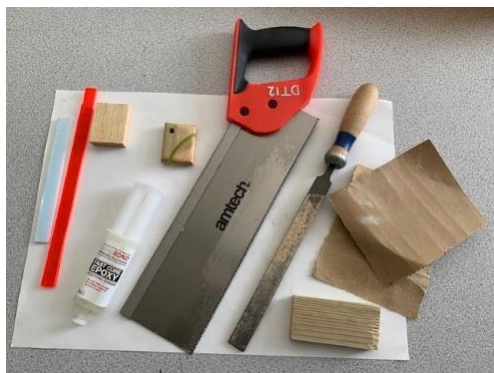
Pillar drill – drilling holes for wheels and decoration. Different sized drill bits.

To finish a product, you need to use sandpaper, a rasp (similar to a file, but has large teeth like a cheese grater) and/or a file in order to remove waste material and smooth the timber.

Wood joining methods – Nails/pins, screws, nuts and bolts, adhesives (glues), knock down fixtures, wood joints.

Wood working tools – Hammer, pincers, screwdriver, spanner, pliers, wooden mallet, chisel.

Wood finishes – Varnish, paint, stain, wax, polish, oil, decoupage, laser engraving.



KPOW: Design, Workshop & CAD CAM

Week 3 & Week 4

Laser cutter – CAM

Precise cutting of the additional pieces and wheels.



Wood tools – Bench hook, G clamp, bench vice, machine vice, pencil, metal rule, tri square, tenon saw, coping saw, file.

Wood working machines – Scroll saw, pillar drill, bobbin sander, band facer.



Mechanisms – A system of parts working together in a machine. Levers, linkages, cams, gears and pulleys.



Motion

- Rotating - in a circular path around a fixed point
- Linear - in a straight line in one direction
- Reciprocating - repetitive movement left to right, up and down
- Oscillating - Swinging movement to and fro, from a fixed point.



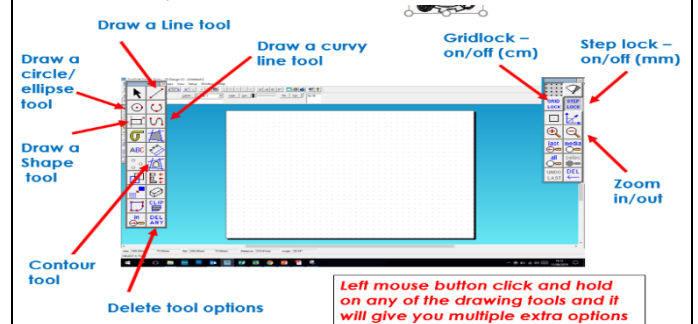
Year 7: Autumn Term 2

Week 5, Week 6 & Week 7

Techsoft 2D Design – CAD software that is used to create designs which will be cut using a laser cutter.

CAD – Computer aided design

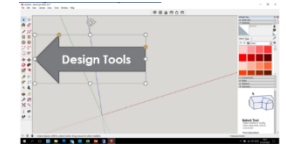
CAM – Computer aided manufacture



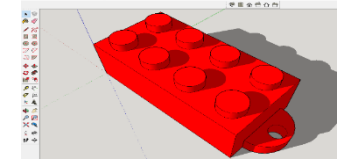
Left mouse button click and hold on any of the drawing tools and it will give you multiple extra options

Google SketchUp – CAD

software that is used to create 3D designs which can be 3D printed.



Ultimaker 2 3D Printer – Builds up the structure of the design using tiny layers of PLA (Polylactic acid) which is a thermoplastic (able to be reheated and reshaped) derived from renewable, organic sources such as corn starch or sugar cane.



Spellings Test:

Creative	Template	Design
Machine	Colour	Sketch
Safety	Folding	Scoring
Material	Knowledge	Hazard
Analysis	Planning	Rendering





Subject: DT - Textiles

KPOW: Design & Make a Cushion Cover

Year 7: Autumn Term 2

Week 1 & Week 2

Practical – produce the Applique section using the sewing machine
Key Word: Accuracy - quality of being true or correct.
Reviewing the technique considering Success and EBI.
Sewing machines – Threading up correctly is very important. Key information:

- Following the arrows embossed (printed on) the machine to thread the top is essential.
Thread through the eye (the small hole) of the needle from front to back then pull through the split in the presser foot.
The spool (or bobbin) holds the thread for the bottom of the sewing machine.
You must always have the presser foot DOWN before you sew.
When you take your sewing off the machine you must leave the thread long so that it doesn't unthread when you sew again.

Theory: Information for poster and presentation

Key Word: Collaborative - working jointly or together on a project.

Table with 3 columns: Type & Category, Properties, Common Products. Rows include Cotton, Wool, Silk, Polyester, Elastane, and Viscose.

Week 3 & Week 4

Practical – Sewing all 4 sections together.
Key Word: Allowance - Seam Allowance which is 1.5cm, an allowance is amount of something that is permitted, especially within a set of regulations.

Seam Allowance (SA) – this is set at 1.5cm, it is the distance from the fabric edge to the line where you sew. The purpose of a SA is so that the stitch is more durable because there is a section of fabric between it and the edge, making it stronger.

Not sewing on the SA – means the seam (stitching joining two pieces of fabric) comes apart when put it under pressure as the fabric may fray and is not strong enough.

Practical – Hemming the two back pieces for cushion.
Key Word: Hem - a hem in sewing is a finishing method. The edge of the fabric is folded over twice and sewn to prevent fraying and to finish it neatly.

A successful hem is:

- 1. Folded evenly so it is the same width all the way across.
2. The stitching is right on the edge of the folded-up edge and is straight and even.
3. The stitch used is a straight stitch (length 2, Width 0 setting on the sewing machine).



Week 5, Week 6 & Week 7

Practical – Sewing the front and two back sections all together to create the cushion cover.

A successfully completed cushion cover will:

- Have an even + (cross) where the four quarters of the front have been joined.
The hems on the two back pieces will be neatly sewn in a straight line.
The two back pieces will be even sizes with the opening in the centre of the back.
Before the cushion is turned the right way out the stitching around all four edges will be straight and even and on the seam allowance line.
When the cushion cover is turned inside out the cover will look square.
The cushion cover will have no loose threads hanging off

Design challenge - Biomimicry – imitating nature in man-made system. Examples are a film like the coating on a moth's eyeballs that minimizes screen glare.






Spellings Test:

Table with 3 columns: Textiles, Applique, Design, Sew, Stitch, Machine, Batik, Thread, Colour, Sketch, Tjanting, Seam allowance, Scissors, Dimension, Stencilling





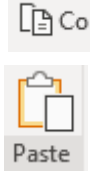
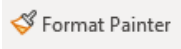
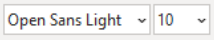


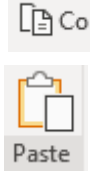
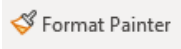
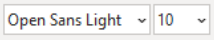


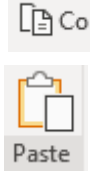
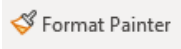
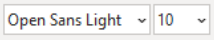




Subject: Core PE	KPOW: Skeletal and Muscular System	Year 7: Autumn 2
Week 1 & Week 2: Femur	Week 3 & Week 4: Tarsal	Week 5, Week 6 & Week 7: Metatarsal
<p>Name of Bone: Femur</p> <p>Location: Upper leg</p> <p>Type of bone: Long</p> <p>Function of bone: Major movement of the leg.</p> <p>Sporting Example: When a footballer kicks the ball, the femur allows movement of the leg.</p> 	<p>Name of Bone: Tarsal</p> <p>Location: Ankle</p> <p>Type of bone: Short</p> <p>Function of bone: Weight bearing.</p> <p>Sporting Example: When a netballer lands from catching a ball, the tarsals absorb the body's weight.</p> 	<p>Name of Bone: Metatarsal</p> <p>Location: Foot</p> <p>Type of bone: Long</p> <p>Function of bone: Give the foot its arch and allows movement.</p> <p>Sporting Example: When a rugby player is running with the ball, the metatarsal shares the load of the body and moves position to cope with uneven ground.</p> 





Subject: Computing & Digital Media	KPOW: Computer Hardware	Year 7: Autumn Term 2																																													
Week 1 & Week 2	Week 3 & Week 4	Week 5, Week 6 & Week 7																																													
<p>Hardware is any item of a computer that you can physically touch. Examples of hardware are:</p> <ul style="list-style-type: none"> • Motherboard – The backbone of the computer, every other piece of hardware connects to this. • CPU – This is the brain of the computer that processes everything. • RAM - Holds the data and software that is currently being used. <p>The computer uses two types of storage for data</p> <ul style="list-style-type: none"> • Primary memory - Fast to access, used to store data that is being used. Examples: RAM, ROM and cache (memory inside the CPU). • Secondary storage - used to store long term data, there are 3 types <table border="1" data-bbox="107 778 719 930"> <thead> <tr> <th>Magnetic</th> <th>Solid State</th> <th>Optical</th> </tr> </thead> <tbody> <tr> <td>Hard disk drive Tape drive</td> <td>USB Flash drive SD Card</td> <td>CD DVD Blu ray</td> </tr> </tbody> </table> <p>Storage is measured in Bytes. CPU Speed is measured in Hertz.</p> <table border="1" data-bbox="107 1075 719 1339"> <thead> <tr> <th>Order</th> <th>Hertz</th> <th>Bytes</th> </tr> </thead> <tbody> <tr> <td>Smallest</td> <td></td> <td>Bit</td> </tr> <tr> <td>↑</td> <td>Hz</td> <td>Byte</td> </tr> <tr> <td></td> <td>KHz</td> <td>KB</td> </tr> <tr> <td></td> <td>MHz</td> <td>MB</td> </tr> <tr> <td></td> <td>GHz</td> <td>GB</td> </tr> <tr> <td>↓</td> <td></td> <td>TB</td> </tr> <tr> <td>Largest</td> <td></td> <td></td> </tr> </tbody> </table>	Magnetic	Solid State	Optical	Hard disk drive Tape drive	USB Flash drive SD Card	CD DVD Blu ray	Order	Hertz	Bytes	Smallest		Bit	↑	Hz	Byte		KHz	KB		MHz	MB		GHz	GB	↓		TB	Largest			<p>Keywords: Bitmap: is an image made up from pixels. Vector: is an image made up from a mathematical formula.</p> <p>There are 2 types of digital images, one is called a bitmap and the other is a vector image.</p> <p>Bitmap images:</p> <ul style="list-style-type: none"> • Made from a series pixels (tiny squares) that form together to create an image. • Each pixel is a different colour. • A binary code is used to represent each pixel. • If an image is enlarged too much, the whole image will become pixelated (blocky). • Photographs are made up of pixels.  <p>Vector Images:</p> <ul style="list-style-type: none"> • Made using a mathematical formula using shapes, lines, strokes and fills. • They have scalability which means that increasing the image size doesn't affect the quality of the image.  <p>Logo's, illustrations and cartoons are made using vector images.</p>	<p>Keywords: Word Processing: The act of using software to create, edit, save and print documents.</p> <p>Common Tools we use in Word Processing Software</p> <table border="1" data-bbox="1476 416 2112 1390"> <tbody> <tr> <td data-bbox="1476 416 1597 564">Cursor</td> <td data-bbox="1597 416 1845 564"></td> <td data-bbox="1845 416 2112 564">A point on the screen that allows you click things and highlight text.</td> </tr> <tr> <td data-bbox="1476 564 1597 679">Tabs</td> <td data-bbox="1597 564 1845 679"></td> <td data-bbox="1845 564 2112 679">Tabs are like menus that have useful tools inside them.</td> </tr> <tr> <td data-bbox="1476 679 1597 876">Copy and Paste</td> <td data-bbox="1597 679 1845 876"></td> <td data-bbox="1845 679 2112 876">Allows you to copy a piece of text and paste it somewhere else on your document.</td> </tr> <tr> <td data-bbox="1476 876 1597 1206">Format Painter</td> <td data-bbox="1597 876 1845 1206"></td> <td data-bbox="1845 876 2112 1206">Allows you to highlight a piece of text with your cursor and copy the formatting and style of the text so you can apply to another piece of text.</td> </tr> <tr> <td data-bbox="1476 1206 1597 1390">Font type & Size</td> <td data-bbox="1597 1206 1845 1390"></td> <td data-bbox="1845 1206 2112 1390">This allows you to change how you want the text to look and what size it should be.</td> </tr> </tbody> </table>	Cursor		A point on the screen that allows you click things and highlight text.	Tabs		Tabs are like menus that have useful tools inside them.	Copy and Paste		Allows you to copy a piece of text and paste it somewhere else on your document.	Format Painter		Allows you to highlight a piece of text with your cursor and copy the formatting and style of the text so you can apply to another piece of text.	Font type & Size		This allows you to change how you want the text to look and what size it should be.
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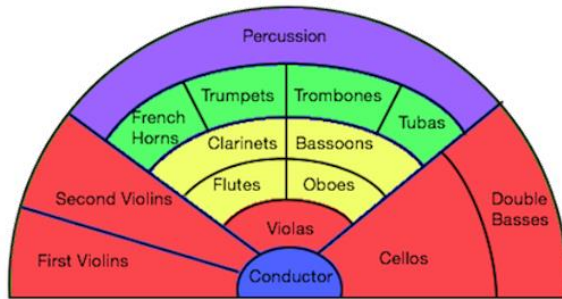
Subject: Music

Week 1 & Week 2: The Orchestra

Orchestra

A group of instrumentalists, especially one combining string, woodwind, brass, and percussion sections and playing classical music.

Sections of the Orchestra



Conductor

Keeps all musicians in time and indicates how the music should be played e.g., softly, or expressively. The conductor always stands at the front of the orchestra and can be seen by all instrumentalists.



Composer

Someone who writes music, for example, Beethoven.



Ensemble

A group of musicians.



KPOW: Ode to Joy

Week 3 & Week 4: Families of Instruments

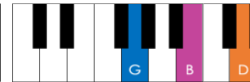
Chords

A chord is 2 or more notes played at the same time. In Ode to Joy there are 2 chords:

C (CEG)



G (GBD)



A Triad chord is 3 notes played at the same time.



Families of Instruments

String Instruments

Violin, Viola, Cello, Double Bass, Harp.



Woodwind

Piccolo, Flute, Clarinet, Oboe, Bassoon.



Brass

French Horn, Trumpet, Trombone, Tuba.



Percussion

Timpani, Xylophone, Cymbals, Triangle, Bass Drum, Snare Drum, Gong.



Year 7: Autumn Term 2

Week 5 & Week 6 & Week 7: Time signatures

Tuned vs Untuned

TUNED – you play a MELODY

UNTUNED – you can't play a MELODY (one sound)



Melody

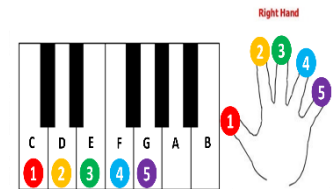
The Melody is the tune of a song, usually the part you could sing/ hum along to.

Five Finger Rule:

Finger Position – Each finger is assigned a number:

- Thumb = 1
- Index finger = 2
- Middle finger = 3
- Ring finger = 4
- Pinky (little finger) = 5

The 5 Finger Rule



Hand Placement

Place your right hand on C start with your thumb, your other fingers naturally cover D, E, F, and G.

Treble clef

A symbol used in music to show the pitch of notes on a musical staff (the five lines where music is written).





Subject: Art

KPOW: Culture poster

Year 7: Autumn Term 2

Week 1 & Week 2:

Week 3 & Week 4:

Week 5, Week 6 & Week 7:

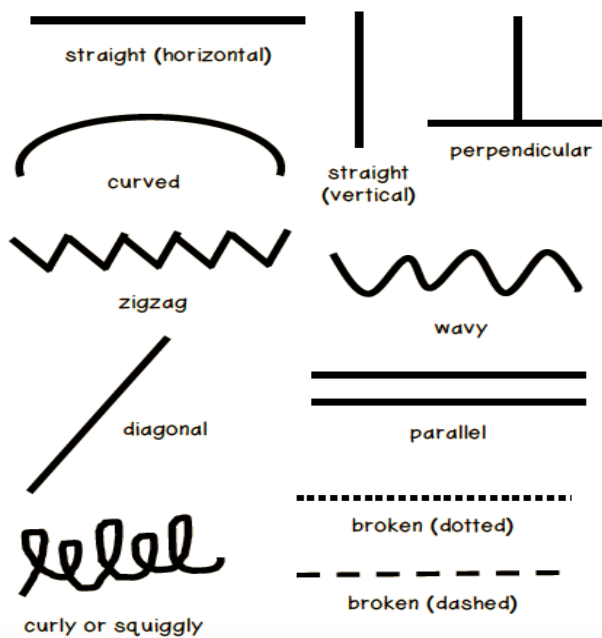
Keywords and definitions

Culture – social traits, beliefs, ideas, possessions that characterise your community and time period.

Outcome - A piece of Art that you have created using inspiration from others along with your own ideas.

Pattern - a design in which lines, shapes, forms or colours are repeated.

Types of Lines



Jon Burgerman – Artist page development

Artist Research page – research pages use composition and layout.

Jon Burgerman is a modern Artist who is creating artwork today.

- Born in the UK, lives in New York City.
- Uses a variety of media such as ink, spray paint and digital.
- He has worked with lots of brands including Apple and Nike.
- Jon Burgerman describes his work as being about people and their emotions often using abstract cartoon shapes and vivid colours.



Development of personal outcome

Personal outcomes use the skills you have **developed** along with the artist's **influence**. Our outcome shows our **response** to the work of others.

Your outcome will consider

- **Layout and Composition** - the way in which the parts of something are arranged or laid out

Your outcome will include materials such as:

- Oil pastels – pigments combined with waxes and mineral oils.
- Felt pens – free flowing ink through a fibre or plastic tip.










Subject: Drama

Week 1 & Week 2: Introduction to Melodrama

Melodrama = Music (melody) and Acting (Drama)



Stock Characters - Stock characters are a form of stereotype, which we expect to see in a particular style of drama. Their appearance, behaviour and speech is predictable.

Hero 	Adventurous, courageous and smart
Heroine 	Brave, challenging and Strong
Villain 	Evil, wicked and conniving
Hero's Sidekick 	Mastermind, loyal and cunning
Damsel in Distress 	Beautiful, dreamy and popular

Key Word:

Melodrama: a story, play, or film in which the characters show stronger emotions than real people usually do.

KPOW: Melodrama

Week 3 & Week 4: Physical and Vocal skills

Use of the voice and body to communicate story.

Physical Performance Skills: an actor's body and how he or she uses it, including

- Body language
- facial expression
- gesture
- movement
- stance
- posture
- eye contact.



Vocal Performance Skills: an actor's voice and how he or she uses it, including

- accent,
- pitch (high and low),
- pace (fast and slow),
- rhythm (smooth and disjointed),
- volume (loud and soft),
- articulation (clarity of sounds and words),
- tone (breathy, throaty, mellow, bright, resonant, thin, harsh, etc



Key Word:

Skill: the ability to do something well.

Year 7: Autumn Term 2

Week 5, 6 & 7: Performance

Scripted melodrama performance.

Melodrama performances should show the following features:

- Unbelievable plots
- Extreme emotions
- Exaggerated acting
- Stories about love with a happy ending
- Music is used to support the mood.



Performing: Showing your piece of theatre to an audience.

Evaluate work: Give feedback to peers on their performance that includes strengths and areas for improvement.

Key Word:

Exaggerated: regarded or represented as larger, better, or worse than in reality.





Subject: Learning 4 Life

Week 1 & Week 2: Physical and Mental Health








Please learn the following 10 facts about physical and mental health:

1. Physical health is how you look after your body.
2. Regular physical exercise can lower the risk of heart disease by 35%.
3. During exercise you breathe faster so your blood can pick up more oxygen.
4. Regular physical activity can improve your memory and your attention span.
5. Physical exercise means your brain produces endorphins and these make you feel more positive.
6. Try to do 10,000 steps a day.
7. Mental health is a person's feelings, thoughts, emotions and moods.
8. Good mental health does involve feeling negative emotions.
9. Every so often take a break and spend time doing something you enjoy.
10. A healthy body and exercise leads to good mental health.

<https://youtu.be/g5V525Sck>

Week 3 & Week 4: Sikhism

Please learn the following facts about Sikhism:


	Guru Nanak - He started off the religion of Sikhism - He was the first of 10 Gurus - He taught the importance of equality
	India - This is where Sikhism started - The religions in India at the time of Guru Nanak were Hinduism and Islam
	Nishan Sahib; - This flag is always on the outside of a Gurdwara showing the Sikh symbol – The Khanda
	Gurdwara - This is the Sikh place of worship - Not all Gurdwaras look the same but they all do have a Nishan Sahib outside
	Guru Granth Sahib - This is the Sikh holy book - It contains hymns from all 10 Gurus - It is treated as a human Guru would be
	Seva - This means service, helping others - By helping others Sikhs believe they are worshipping God
	Langar - This is the kitchen in a Gurdwara - A meal is made for all to eat whether they are Sikh or not, all are welcome

<https://youtu.be/Q6Jx3S5C8Mg>

Year 7: Autumn Term 2

Week 5, 6 & 7: Spectrum

At some point this term you will have a session with Spectrum, an outside agency who comes in to talk to you in Y7 about puberty and other topics; Please learn the information below:

	Puberty Puberty is the stage in life when you develop from a child into an adult. This can happen at different ages in different children. Physical changes in puberty are accompanied by emotional changes as brains develop and hormones change.
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Sleep

1. We spend roughly 1/3 of our time sleeping
2. When we sleep our sensors switch off
3. When we sleep our concentration levels increase
4. Sleep also boosts our immune system
5. During sleep the human growth hormone is released
6. Our brain consolidates new information whilst we sleep
7. Getting enough sleep is more beneficial before a test than late, last minute revision
8. A person should be aiming to get around 8 hours of sleep an evening

<https://youtu.be/MBVpK4EiwmM>

https://www.youtube.com/watch?v=B_G-36tvcn8





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 every **Monday** and will be submitted in P&A Time every **Monday**.

Minsthorpe Lane,
South Elmsall,
West Yorkshire,
WF9 2UJ

T. 01977 657600
E. enquiries@minsthorpe.cc
minsthorpe.cc



Minsthorpe
Community College

