



Minsthorpe Community College

Knowledge Organiser Year 7 – Autumn Term 2

Name:

P&A group:

Knowledge Assessment: Wednesday 20th December 2023 – 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: "Show not tell"

How to convey feelings and emotions implicitly in writing – "show not tell".

New Skills:

R: INF – **Inference**. This means to read between the lines and work out the implied meaning that is suggested, not explicitly stated.

W: CD- **Craft devices** that are effective for purpose. Remember to avoid clichés.

W: AV- Ambitious vocabulary (more interesting words in your writing e.g. big- colossal, significant, towering).

Terminology

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, as below:



A city in the rain at night.

A romance

A desert island

An adventure story

An abandoned house

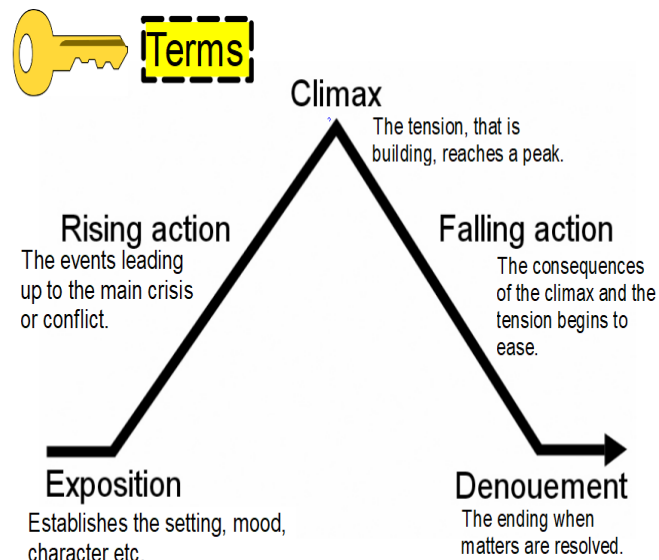
A gothic story

Vocabulary

- **Implicit** – (*adjective*) suggested though not directly expressed.
- **To Lament**- (*verb*) to express grief or disappointment about something.
- **Nostalgia** – (*abstract noun*) a sentimental longing for the past.

Week 3 & Week 4: Structuring a narrative.

How to structure an effective narrative:



Terminology

- 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.

Vocabulary

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

Week 5, 6 & 7: Creating our own narratives

Narratives and descriptions often make use of figurative language devices:

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."

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.

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?

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.

Apostrophes serve two basic functions in writing:

- to show possession e.g. John's work.
- to show omission / indicate that letters have been removed to form a contraction e.g. It is raining - It's raining.

Possession: 1. 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 Smiths's house. 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.

Omission: 1. When you combine **two words** to make a contraction, you will always **take out** some letters. In their place, you add an apostrophe. E.g. they + have = they've (you took out "ha").

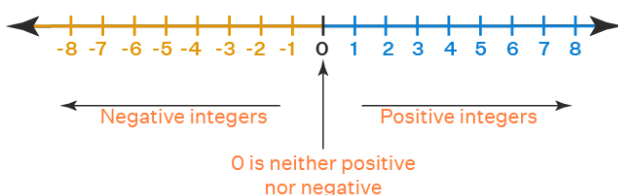




Subject: Maths

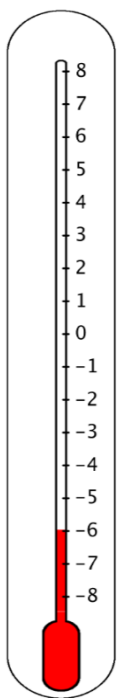
Week 1: Positive & Negative Numbers

Number line representations

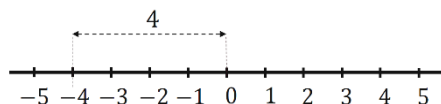


Integer: a whole number

Absolute value



The **absolute value** of a number is its distance from 0.



For example, the **absolute value** of -4 is 4.

Comparing numbers

To compare numbers, use the symbols $<$ or $>$.

The absolute value of -8 is more than the absolute value of -6 because it is further away from 0. Therefore, we can say -8 is less than -6

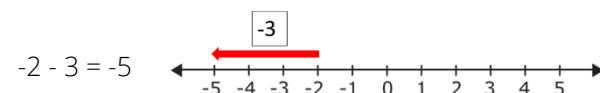
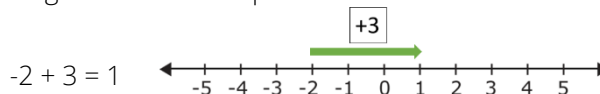
$$-8 < -6$$

KPOW: Generalising

Week 2: Positive & Negative Numbers

Number line addition

Use a number line when adding and subtracting negatives. For example:



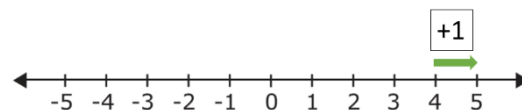
Subtracting negative numbers

For example

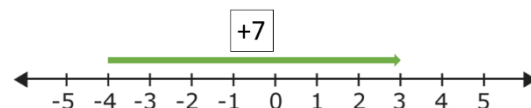
$4 + (-7) = 3$ is the same as $4 - 7 = -3$



$4 - (-1) = 5$ is the same as $4 + 1 = 5$



$-4 - (-7) = 3$ is the same as $-4 + 7 = 3$



Year 7: Autumn Term 2

Week 3: Positive & Negative Numbers

Multiplying negatives

There are rules for multiplying negatives:

negative number $\times$ positive number = negative number

$$-3 \times 4 = -12$$

positive number $\times$ negative number = negative number

$$3 \times -4 = -12$$

negative number $\times$ negative number = positive number

$$-3 \times -4 = 12$$

Dividing negatives

The rules are the same for division:

negative number $\div$ positive number = negative number

$$-12 \div 4 = -3$$

positive number $\div$ negative number = negative number

$$12 \div -4 = -3$$

negative number $\div$ negative number = positive number

$$-12 \div -4 = 3$$





Subject: Maths

Week 4: Notation & Substitution

Algebraic notation

$2 + a$ means 2 more than a

$2 - a$ means a less than 2

$2a$ means 2 lots of a

$\frac{2}{a}$ means $2 \div a$

$\frac{a}{2}$ means $a \div 2$

Substitution

Substitution means to replace a letter with the given number to find the value of the expression

For example, if $a = 3$, the value of the following expressions are shown:

$$2 + a = 2a =$$

$$2 + 3 = 5 \quad 2 \times a =$$

$$2 \times 3 = 6$$

KPOW: Generalising

Week 5: Expressions and Brackets

Like terms

Terms whose variables are the same. For example:

Like terms	Not like terms
$2a$ and a	a and b
$2a^2$ and a^2	a and a^2
ab and $2ab$	a and 4

Simplifying expressions

To simplify expressions, we collect *like terms* together

For example

$$2a + 2 + a + 1 = 3a + 3$$

Expanding brackets

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

For example

$$2(x + 3) = 2 \times x + 2 \times 3 = 2x + 6$$

Year 7: Autumn Term 2

Week 6 & Week 7: Factorising & Inequalities

Factorising

Factorise means to put into brackets.

For example

$$8x + 4 = 4(2x + 1)$$

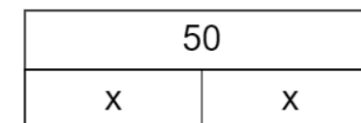


Equations

Two expressions are equal if they are the same.

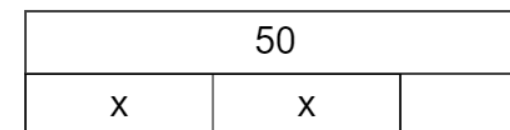
For example,

This bar model shows $2x = 50$

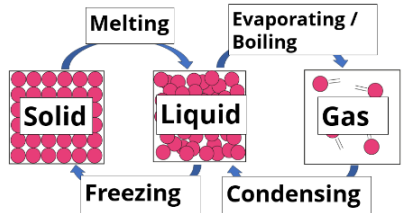
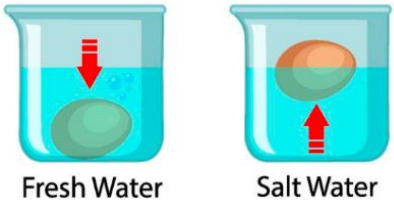
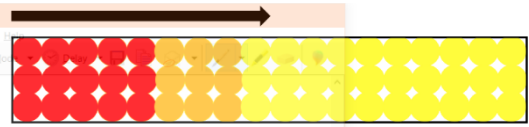
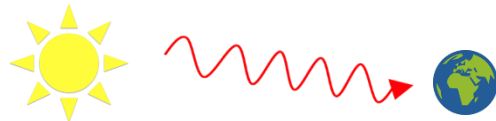


Inequality

An inequality compares 2 values, showing one is less than or greater than the other. For example, this bar model shows $2x$ is less than 50 or $2x < 50$.





Subject: Physics	KPOW:	Year 7: Autumn Term 2
Week 1: Particle Theory and changes of state	Week 2: Density and Floating	Week 3: Energy stores
Keyword definitions Particle: Everything in the universe is made up of particles. Solid, liquid and gas: The three states of matter. Bonds: These hold particles together in solids and loosen as the solid changes to liquid, and then a gas.  As a solid gets heated it melts to a liquid, and then evaporates to a gas. As a gas cools, it condenses into a liquid, and then freezes into a solid.	Keyword definitions Density: The amount of mass per unit volume of an object. Mass: A measure of how much there is of an object in kg. Volume: A measure of the size of an object in cm^3 or m^3.  Fresh Water Salt Water The egg is less dense than salt water so it floats. The egg is more dense than fresh water so it sinks.	Keyword Definitions Energy: The ability of an object or objects to do work. Joules: The unit that energy is measured in.  A moving object will have a store of kinetic energy.  An object that is up high will have a store of gravitational potential energy.  An object that is warm will have a store of thermal energy.
Week 4: Energy transfers and efficiency	Week 5 & Week 6: Conduction and convection	Week 7: Radiation and insulation
Keyword Definitions Conservation of energy: Energy cannot be created or destroyed, only transferred from one store to another. Transfer: The process in which energy changes from one store to another.  As this candle burns, it transfers its store of chemical energy to thermal and light energy.  As this ball is dropped, it transfers its gravitational potential energy to kinetic energy as it falls.	Keyword Definitions States of Matter: Solid, liquid and gas. Conduction: The transfer of heat energy through a solid object. Convection: The transfer of heat energy through a liquid or gas (fluid).   In a solid, heat travels through vibrations in the particles. The particles are very close to each other so can easily transfer the heat along the material.	Keyword definitions Radiation: The transfer of heat using waves. Insulation: A material or object that reduces the transfer of heat.  The sun radiates heat to the earth in waves.  The polar bear has lots of fur for insulation. It stops lots of heat from escaping from its body into the cold environment.





Subject: Science - Working Scientifically

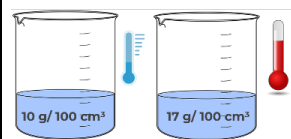
Week 1: Investigating Solubility (Chemistry)

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.

KPOW:

Week 2: Safety & Apparatus

Keyword definitions

Hazard: Something that could cause harm. (e.g. kettle)

Risk: How something is likely to cause harm. (e.g. burn)

Risk Assessment: Identifying hazards and ways to reduce risk. (e.g. do not reach over hot steam)

Apparatus: A set of materials or equipment designed for a particular use.

Accurate: Close to the true (correct) value.

Precise: How close together measurements are.



If apparatus has smaller graduations, it is more **precise** and will give a more **accurate** measurement. For example, this ← beaker has 10ml graduations but the measuring cylinder → has 1ml graduations so is more **precise**.



Year 7: Autumn Term 2

Week 3: Hypothesis & Variables

Keyword Definitions

Hypothesis – A statement that needs to be proven.

Variables – Things that can be changed.

To prove a hypothesis, you need to carry out a scientific investigation. An investigation will involve three types of variables.

Independent variable – The variable that is changed.

Dependent variable – The variable that is measured and recorded.

Control variable – Things that are kept the same. For example;

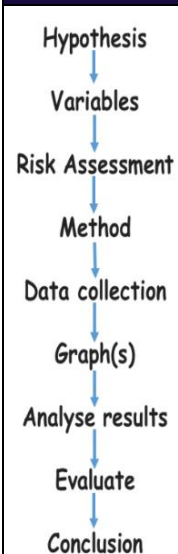
Hypothesis – Seeds need sunlight to grow.

Independent variable – The amount of sunlight.

Dependent variable – Height grown by plant.

Control variables – Type of plant used, amount of water

Week 4: The Scientific method



The Scientific Method

Hypothesis – A statement which needs to be tested.

Variables – Things that can be changed in an investigation.

Method – The steps you will carry out in the investigation.

Evaluate – Identify how reliable your results are and how they could be improved.

Conclusion – A judgement/ decision based on reasoning (using your results to decide whether the hypothesis was correct).

Week 5 & Week 6: Processing data

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** which 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

To calculate the **mean** you add up the repeated results then divide the answer by the number of repeats.

E.g. for boy 1 above $(0.28 + 0.27 + 0.26) \div 3 = 0.27$

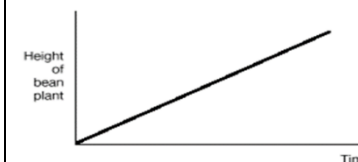
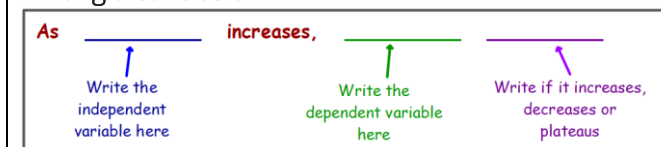
Week 7: Interpreting Data

Keyword definitions

Plateau – When the data/line levels off after an increase/decrease.

Graphs are plotted to see **patterns** in results. When plotting a graph, the independent variable goes on the x axis, the dependent variable goes on the y axis.

Writing a conclusion



Example – As the time **increases**, the **height of the bean plant increases**.

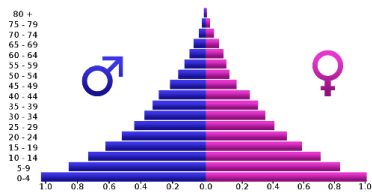
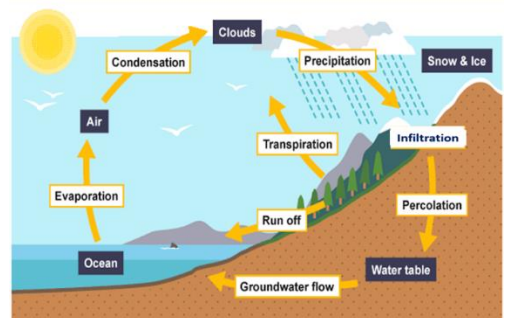




Subject: French		KPOW: Les Opinions Writing	Year 7: Autumn Term 2	
Week 1: Nouns		Week 2: Opinion Verbs	Week 3: Reasons / adjectives	
le rouge (red) le bleu (blue) le sport (sport) le foot (football) le rugby (rugby) le cinéma (the cinema) le racisme (racism) le chocolat (chocolate) le weekend (the weekend) la musique (music) la natation (swimming) la danse (dancing) la pizza (pizza)	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)	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)	intéressant (interesting) génial (great) fantastique (fantastic) passionnant (exciting) reposant (relaxing) amusant (fun) facile (easy) formidable (wonderful) délicieux (delicious) vif (bright) joli (pretty)	difficile (difficult) nul (rubbish) barbant (boring) ennuyeux (boring) stressant (stressful) pas mal (not bad) déprimant (depressing) moche (ugly)
Week 4: Opinion Openers		Week 5: Connectives	Week 6 & Week 7: Revision	
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)		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)	Revise all of the vocabulary from weeks 1-5.	

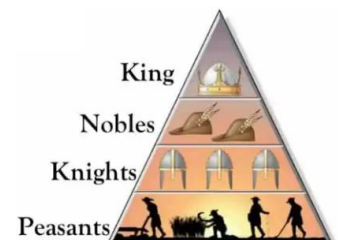




Subject: Geography.	KPOW: People of the UK	Year 7: Autumn Term 2
Week 1: Diversity & Measuring Population	Week 2: Impacts of Migration	Week 3: Living in Leicester
Diversity means a wide variety. The UK has a diverse population which includes a wide range of ethnic groups that make up our population. 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 job 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.	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. Forced migration is where people move because they fear for their safety. 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 one hand, it brings cultural diversity and people to do much needed jobs, but on the other hand, it can create over-crowding.	Leicester is a city in the East Midlands. Leicester grew as a city due to its transport routes in and out of the city, farms, and factories. People have migrated from other countries e.g. India due to migration; Leicester is a multicultural city. Some opportunities for people living in Leicester are: • Shopping • Education • Sport • Employment • Tourism
Week 4: Comparing Rural Areas	Week 5 & Week 6: Population Pyramids/ KPOW	Week 7: New Topic: The Water Cycle
The term rural refers to the countryside. Across the UK, there are many different types of rural areas. Places like Hildenborough, near London, have been created for people to live in a rural place, but have access to large cities for work. These are referred to as commuter settlements. This means people can live in a rural setting, but still have access to large cities for work and leisure. However, the Shetland Islands is different and has vast open landscapes for miles. People are attracted to these places for different reasons. 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.	Population means the number of people in a place. The population is split into sex and divided into age groups in order 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. 	Water is found in three states on Earth: solid (ice), liquid (oceans/ivers) 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 of Hastings		Week 2: The Battle of Hastings	Week 3: The Feudal System
Harold was crowned King of England on the 6th January 1066, but he faced several problems. 300 Viking ships led by 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 and his army marched up North from the South to fight the Vikings 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 home.		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.	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). Feudal System = A type of medieval hierarchy. In return for land, people gave loyalty (fealty) to the people above. 
Week 4: Castles		Week 5: Dealing with rebellions	Week 6 & Week 7: KPOW
Motte and Bailey Castles William began to build these castles as soon as he had 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. 		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.	KPOW: How did William control the Saxon people? 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. 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.





Subject: DT - Food

Week 1 & Week 2

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

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 DON'T 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

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

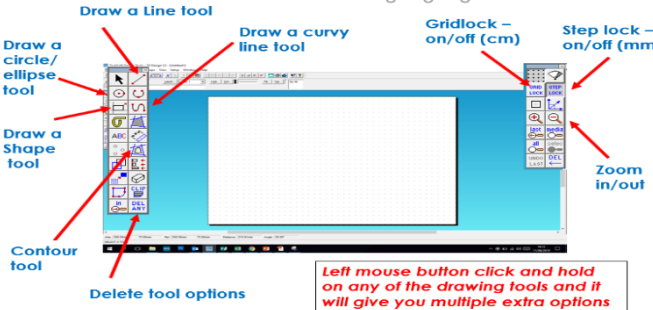
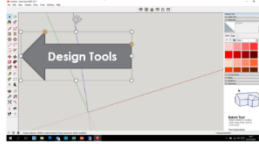
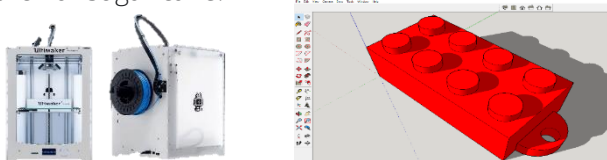
FOOD PROVENANCE IS WHERE YOUR FOOD COMES FROM, IT'S IMPORTANT TO BUY AND EAT LOCALLY GROWN FOOD TO HELP THE LOCAL COMMUNITY TO PLOUGH MONEY BACK INTO FARMING

Spellings Test:

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





Subject: DT – Product Design	KPOW: Design, Workshop & CAD CAM	Year 7: Autumn Term 2															
Week 1 & Week 2	Week 3 & Week 4	Week 5, Week 6 & Week 7															
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. 	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. 	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  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: <table border="0"> <tr> <td>Creative</td><td>Template</td><td>Design</td></tr> <tr> <td>Machine</td><td>Colour</td><td>Sketch</td></tr> <tr> <td>Safety</td><td>Folding</td><td>Scoring</td></tr> <tr> <td>Material</td><td>Knowledge</td><td>Hazard</td></tr> <tr> <td>Analysis</td><td>Planning</td><td>Rendering</td></tr> </table>	Creative	Template	Design	Machine	Colour	Sketch	Safety	Folding	Scoring	Material	Knowledge	Hazard	Analysis	Planning	Rendering
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Subject: DT - Textiles	KPOW: Design & Make a Cushion Cover	Year 7: Autumn Term 2																								
Week 1 & Week 2	Week 3 & Week 4	Week 5, Week 6 & Week 7																								
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	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).	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.																								
<table><tr><th colspan="3">FIBRES</th></tr><tr><th>Type & Category</th><th>Properties</th><th>Common Products</th></tr><tr><td>Cotton (plant-natural)</td><td>Absorbent, creases easily, soft</td><td>Dresses, jeans, t-shirts</td></tr><tr><td>Wool (animal – natural)</td><td>Warm to wear (insulates)</td><td>Jumpers, scarves, gloves</td></tr><tr><td>Silk (animal – natural)</td><td>Shiny, drapes well (means hangs nicely), strong, expensive</td><td>Nightwear, underwear, wedding and bridesmaid dresses, ties</td></tr><tr><td>Polyester (manmade – synthetic)</td><td>Doesn't crease, strong and hardwearing, easy to wash</td><td>Office work wear, ties, bags</td></tr><tr><td>Elastane (manmade - synthetic)</td><td>Lightweight, usually mixed with other fibres to make fabric stretchy and comfortable to wear</td><td>Sportswear, gym wear, swimwear, leggings</td></tr><tr><td>Viscose (manmade – regenerated)</td><td>Soft, drapes well, smooth, inexpensive</td><td>Clothing, scarves</td></tr></table>	FIBRES			Type & Category	Properties	Common Products	Cotton (plant-natural)	Absorbent, creases easily, soft	Dresses, jeans, t-shirts	Wool (animal – natural)	Warm to wear (insulates)	Jumpers, scarves, gloves	Silk (animal – natural)	Shiny, drapes well (means hangs nicely), strong, expensive	Nightwear, underwear, wedding and bridesmaid dresses, ties	Polyester (manmade – synthetic)	Doesn't crease, strong and hardwearing, easy to wash	Office work wear, ties, bags	Elastane (manmade - synthetic)	Lightweight, usually mixed with other fibres to make fabric stretchy and comfortable to wear	Sportswear, gym wear, swimwear, leggings	Viscose (manmade – regenerated)	Soft, drapes well, smooth, inexpensive	Clothing, scarves		
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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
Name of Bone: Femur Location: Upper leg Type of bone: Long Function of bone: Major movement of the leg. Sporting Example: When a footballer kicks the ball, the femur allows movement of the leg. 	Name of Bone: Tarsal Location: Ankle Type of bone: Short Function of bone: Weight bearing. Sporting Example: When a netballer lands from catching a ball, the tarsals absorb the body's weight. 	Name of Bone: Metatarsal Location: Foot Type of bone: Long Function of bone: Give the foot its arch and allows movement. 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. 

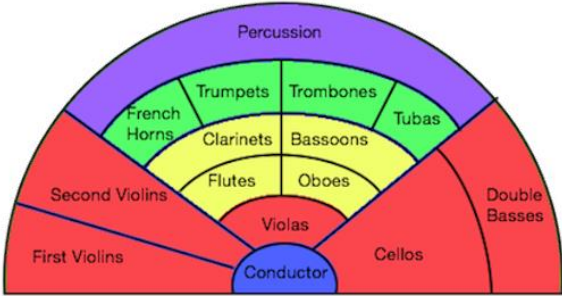
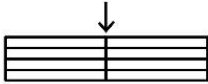




Subject: Computing & Digital Media	KPOW: Computer Hardware	Year 7: Autumn Term 2																											
Week 1 & Week 2: Keywords	Week 3 & Week 4: Hardware	Week 5, Week 6 & Week 7: Keywords																											
Online Safety - The safe and responsible use of the internet and the technology you use. Peripheral – A piece of equipment, such as a printer, that can be connected to a computer. Input & Output – An input refers to data being entered into a computer, whereas data generated by a computer is referred to as an output. Storage – Something that holds data. Capacity – The maximum amount a storage device such as a hard drive can hold.	Hardware is any item of a computer that you can physically touch. Examples of hardware are: • 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. The computer uses two types of storage for data: • 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"> <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> Storage is measured in Bytes. CPU Speed is measured in Hertz. <table border="1"> <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>Largest</td><td></td><td>TB</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	Largest		TB	Keywords: Bitmap is an image made up from pixels. Vector is an image made up from a mathematical formula. There are two types of digital images, one is called a bitmap and the other is a vector image. Bitmap images: • Made from a series of 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).  Vector Images: • 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. • Logos, illustrations and cartoons are made using vector images. 
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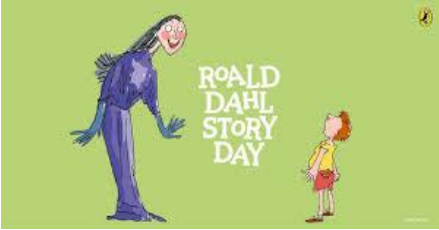
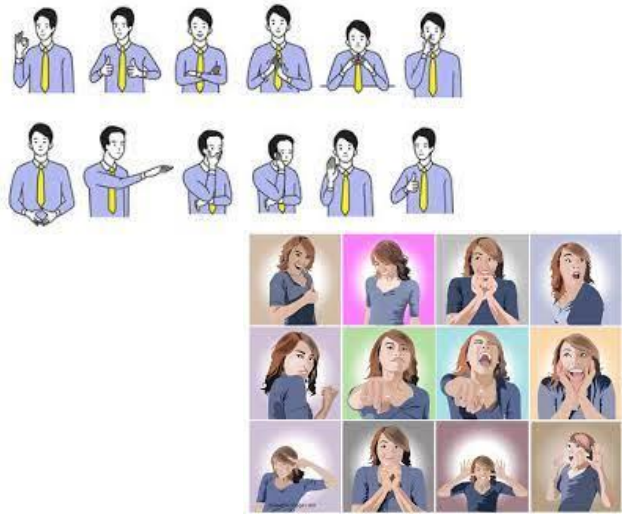
Subject: Music	KPOW: Ode to Joy	Year 7: Autumn Term 2
Week 1 & Week 2: Instruments of the Orchestra	Week 3 & Week 4: Families of Instruments	Week 5, 6 & 7: Time Signatures
Orchestra A group of instrumentalists, especially one combining string, woodwind, brass, and percussion sections, playing classical music. Sections of the Orchestra  Conductor A conductor keeps all of the 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 of the instrumentalists. Melody The Melody is the tune of a song, usually the part you could sing/ hum along to.	Chords A chord is 2 or more notes played at the same time. In Ode to Joy there are 3 chords: C (CEG) F (FAC) G (GBD) 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. 	Bar A bar is a small section within a piece of music that is separated by vertical lines through the stave.  Crotchet This Symbol is called a crotchet and it lasts for 1 beat.  Time Signatures Most music is in either $\frac{4}{4}$ or $\frac{3}{4}$ time. This means that there are either 4 crotchet beats, or 3 crotchet beats in a bar. Ode to Joy Is in $\frac{4}{4}$ time and most notes played are crotchet beats.





Subject: Art		Year 7: Autumn Term 2
Week 1 & Week 2:	Week 3 & Week 4:	Week 5, Week 6 & Week 7:
Joseph Amedokpo - Artist page development Artist research page - show our understanding of the work of others, especially styles, colours and shapes. - Born in Togo, West Africa in 1946 and moved to Nigeria for his education. - Paints using locally available oils and his canvases are recycled flour sacks. - One of his designs was used by DELL on a limited-edition laptop to raise awareness of the global fight against AIDS. - Joseph Amedokpo is not a wealthy artist; he lives with his family and does not own a car. 	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	KPOW: Storytelling using Dahl's BFG	Year 7: Autumn Term 2
Week 1 & Week 2: Introduction to Storytelling	Week 3 & Week 4: Using voice to convey character	Week 5, 6 & 7: Using body when story telling
Why do we tell stories? We tell stories for different reasons. It can be for survival, to pass on history, to warn of dangers or simply to entertain.   • Roald Dahl is known as one of the greatest story tellers of all times. He was a British novelist, writer of short stories, screen writer and poet. • Character - a person portrayed in a drama, novel, or other artistic piece. • Characterisation - how an actor uses body, voice, and thought to develop and portray a character. Key Word: Storytelling - The art of storytelling is a social and cultural activity of sharing stories. Every culture has its own stories or narratives.	 Skills • Vocal Expression – to convey emotion and character to your audience simply by your pitch, pronunciation, and the speed at which you speak. • Tone – a vocal sound with reference to its pitch quality and strength, expressing a particular feeling or mood. • Pitch – in speech, pitch refers to the relative highness or lowness of a tone as perceived by the ear. • Pronunciation – the way in which a word is pronounced. • Pace - the speed at which you speak, fast or slow. • Narrator - a person who tells the story, delivers a commentary, especially a character who recounts events. Key Word: Voice - The sound produced in a person's larynx and uttered through the mouth, as speech or song.	Proxemics – is the use of space/distance between characters on stage. This can represent the relationship between characters.  Skills • Facial Expression – conveys an emotion that tells us about the character and the way they react to the situation. A facial expression shows the character's true feelings. • Gesture – a sign that communicates a character's action, state of mind and relationship with other characters to an audience, usually a hand gesture. Key Word: Body Language - The conscious and unconscious movements and postures by which attitudes, and feelings are communicated.



Subject: Learning 4 Life

Week 1 & Week 2: Physical and Mental Health

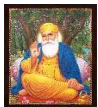
Please learn the following 10 facts about physical and mental health:

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/_gl5V525SCK

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
	India • This is where Sikhism started • The religions in India at the time of Guru Nanak were Hinduism and Islam
	Nishan Sahib • Found outside every Gurdwara • On the flag is 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 is treated as a human Guru would be
	Seva • This means service, helping others • By helping other 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. Physical changes in puberty are accompanied by emotional changes as brains develop and hormones change.
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Sleep

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

<https://youtu.be/MBVpK4EiwmM>





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**.

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