

Home Learning Booklet



Knowledge Goals Year 7 Half Term 2

How to self-test

Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your knowledge goals booklet to create mind maps, make sure to use colour and images, keep writing to the bare minimum.

How to mind map:



Information for parents on knowledge retrieval



Flash cards

Use your knowledge goals booklet to make flash cards. Write the questions on one side and on the other record the answer. Test yourself or work with a friend to make sure you know all the key information for each topic.

How to mind map:



How should students use the Knowledge Goals booklets?

Your Knowledge Goals booklet provide the essential knowledge that you need to learn in each subject this half term. You are **expected to spend 30 minutes per subject per week 'learning' the content.** You will be assessed during lessons using 'low stake' quizzing. **Your teacher may choose to set you additional homework.**

How can parents support?

- Read through the organiser with your child – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they must fill in. Miss out more and more until they are word perfect.

Subject Index

Suggested Homework Schedule (1 hour of independent study per night).

To help you get organized, we have planned out your weekly home learning to cover all subjects. You may choose to create your own version:

Subject	Page No
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Week A

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)
Monday	Art	English Language	Physics
Tuesday	Biology	Technology	Maths
Wednesday	Chemistry	Spanish	Music
Thursday	Computer Science	Geography	RS
Friday	Design Technology	History	PE

Week B

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)
Monday	Drama	Personal Development	Teir 2 Vocab
Tuesday	Maths	English	Physics
Wednesday	Chemistry	English	Music
Thursday	Teir 2 Vocab	Maths	Biology
Friday			

Literacy Tier 2 Vocabulary

These words are all 'tier 2' words; in other words, they are seen as 'academic vocabulary' and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

#	Key word	Definition
1	Significant	
2	Regional	
3	Analogy	
4	Implication	
5	Enquiry	
6	Pressure	
7	Adjacent	
8	Enhance	
9	Formal	
10	Impact	

Art

Module overview for the term

Using **portraiture** as your theme, you will create a **self-portrait using wire in class** . The skills of observation and imagination are developed through the creation of **continues line drawings**, creating a design that shows understanding of simplified forms and **sculptural work** with wire. You will develop skills in **3D modelling** techniques by manipulating wire. Students research and are inspired by the work of **Alexander Calder**

Success Criteria—what will my work be marked on?

- ⇒ Clear detail in the facial features
- ⇒ Smoothness of outer face shape
- ⇒ Tightness of wire joints
- ⇒ Interesting/creative facial expression
- ⇒ Intricacy of shapes and patterns
- ⇒ A clear visual link to the artist’s style
- ⇒ A clear visual link to your design drawing

Alexander Calder (1898-1976)



Alexander Calder facts and information

Who is he?

Alexander Calder, known to many as ‘Sandy’, was an American sculptor from Pennsylvania. He was the son of well-known sculptor Alexander Stirling Calder, and his grandfather and mother were also successful artists. Alexander Calder is known for inventing wire sculptures and the mobile, a type of kinetic art which relied on careful weighting to achieve balance and suspension in the air. Initially Calder used motors to make his works move, but soon abandoned this method and began using air currents alone



What is Calder’s favourite material ?

Calder always carried wire and pliers with him so that he could “sketch” in his favourite material. This has come to be known as ‘drawing in space’ because he would literally use the wire to create a drawing in the air.

The meaning behind his work

Calder avoided analysing his work, believing that: “theories may be all very well for the artist himself, but they shouldn’t be broadcast to other people.”

As a result this poem-like text which he wrote for the Abstraction-Création group magazine has often been taken as the closest thing to an explanation of his work:

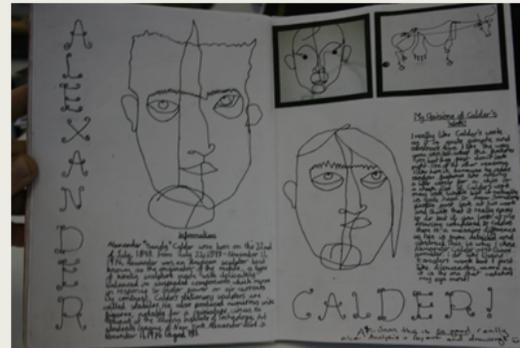
How can art be realized?

Out of volumes, motion, spaces bounded by the great space, the universe.

Out of different masses, light, heavy, middling- indicated by variations of size or colour- directional line - vectors which represent speeds, velocities, accelerations, forces, etc...-these directions making between them meaningful angles, and senses, together defining one big conclusion or many.

Key words

Bend, Shape, Manipulate, Continues, Simplify, Exaggerate, Support, Fluent, Free, Controlled, Expressionistic, Strong, Angular, Delicate, Flowing, Simple, Thick, Thin, Horizontal, Vertical, Broken, Overlapping



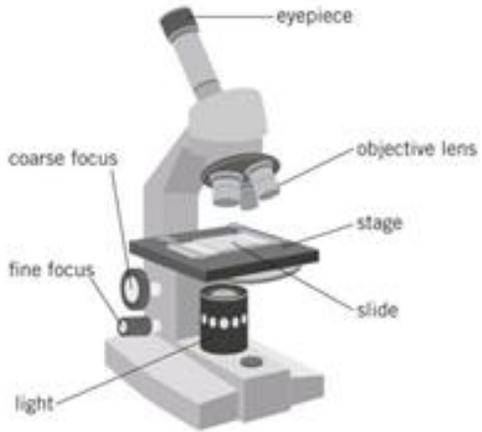
Task

Using the information on the knowledge organiser you will be asked to create a research page on the artist Alexander Calder. This will be explained in lessons.

You need to include : a title , information on the artist, your opinion about the artists work and your own drawing of a face inspired by Calder’s style.

Knowledge Goals. Biology - Cells

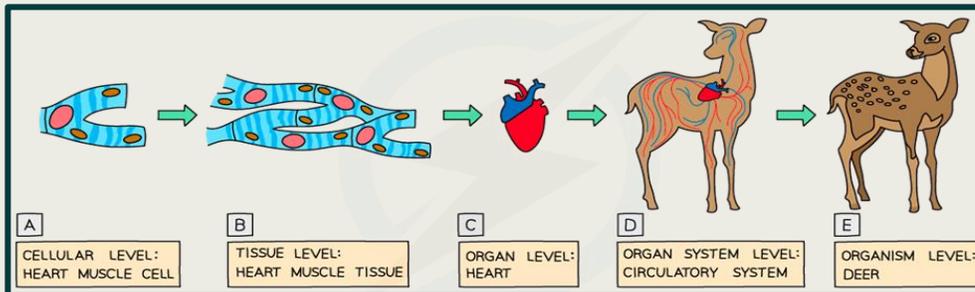
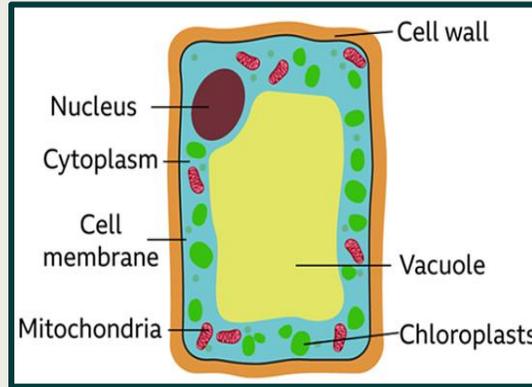
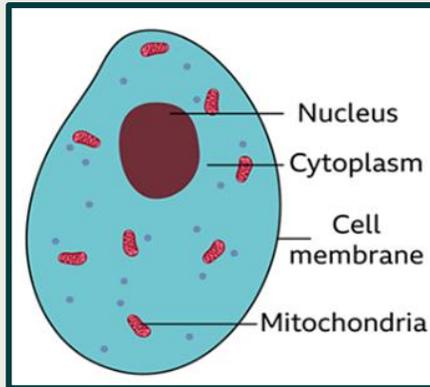
Observing cells using a microscope



1. Move the stage to its lowest position.
2. Place the object on the stage.
3. Select the objective lens with the lowest magnification.
4. Look through the eye-piece and turn the coarse-focus knob slowly until you see the object.
5. Turn the fine-focus knob until the object comes into focus.
6. Repeat steps 1–5 with a higher magnification objective lens to see the object in greater detail.

$$\text{total magnification} = \text{eyepiece lens magnification} \times \text{objective lens magnification}$$

Nucleus	Part of the cell where energy is released during respiration.
Cell wall	Part of the cell where energy is released during respiration.
Cell membrane	Surrounds the cell and controls movement of substances in and out.
Cell wall	Strengthens the cell. In plant cells it is made of cellulose.
Cytoplasm	Jelly-like substance where most chemical processes happen.
Mitochondria	Part of the cell where energy is released during respiration



Nerve cell (neurone) →

Long and thin with connections at the end (to join to other nerve cells).



Red blood cell →

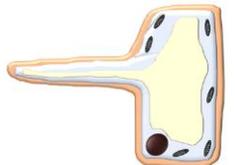
Contain haemoglobin – a red pigment which joins to oxygen. Disk-shaped with no nucleus to increase its surface area.



Sperm → Have a long tail and lots of mitochondria (movement towards the egg).



Root hair cell → Root hair creates a large surface area to absorb water and nutrients from the soil.



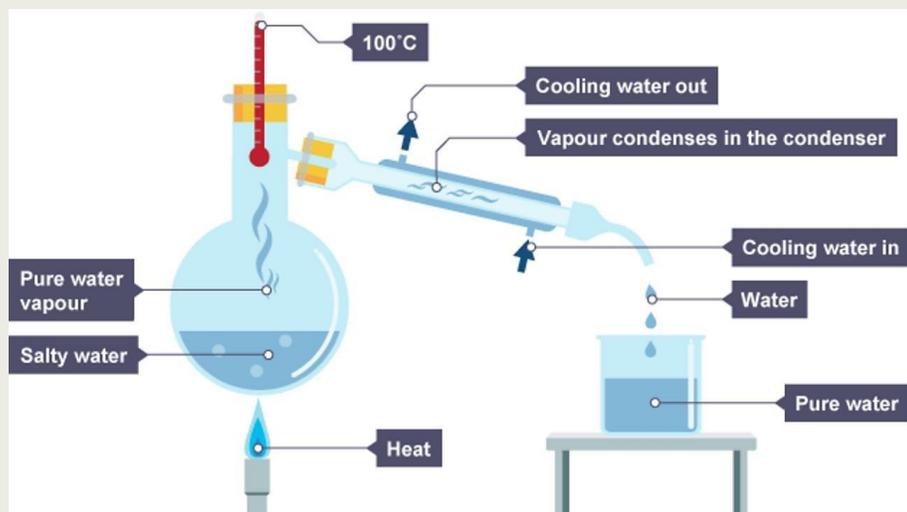
Knowledge Goals: Chemistry – Separating mixtures

Pure and impure substances

A pure substance contains only one type of particle. A mixture is made up of at least two pure substances. There are three main ways to separate pure substances from mixtures; filtration, distillation, and chromatography. These methods are used in chemical analysis of inks, dyes, and paints, the production of perfumes and fuels, and water purification.

Distillation

Separates substances with different boiling points, for example separating water from a salt solution, or separating mixtures of different liquids.

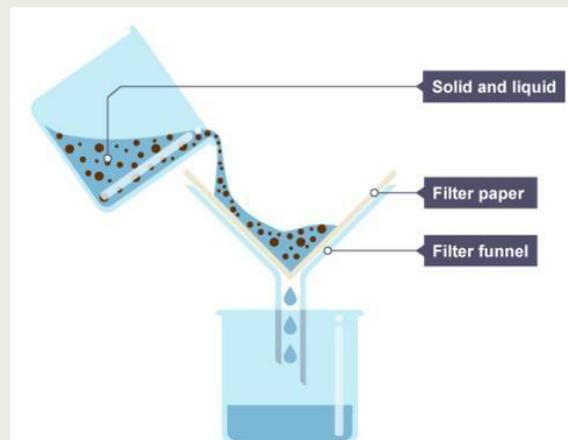


Method

1. Salt mixture is heated to 100°C.
2. The water boils and the water vapour rises.
3. The water vapour passes into the condenser, where it cools and condenses into a liquid.
4. Liquid water drips into a beaker and the salt is left behind in the flask.

Filtration

Separates an insoluble solid from a liquid, for example sand and gravel mixed with water.

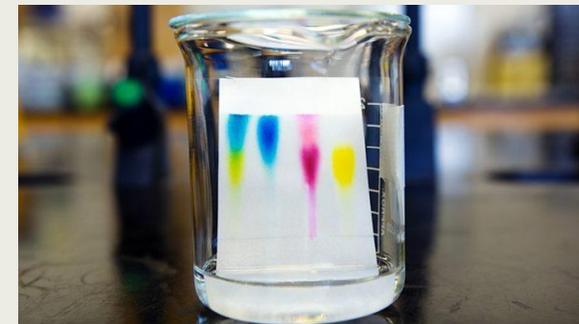


Method

1. The mixture of insoluble solids and liquid is poured through a funnel containing filter paper.
2. The liquid particles pass through, but the solid pieces are too big to pass through the holes in the filter paper and stay behind.

Chromatography

When a solution contains more than one dissolved substance, those substances can be separated using chromatography.



Method

1. Draw a horizontal line with a pencil and ruler about 1 cm above the bottom of a piece of chromatography paper.
2. Place a small spot of the coloured mixture you are investigating onto the pencil line and allow it to dry.
3. Gently lower the piece of chromatography paper into a beaker which contains a small amount of a suitable solvent. The solvent must not cover the pencil line or touch the spots at this stage.
4. Observe as the solvent rises up the piece of paper and reaches the spots on the pencil line.

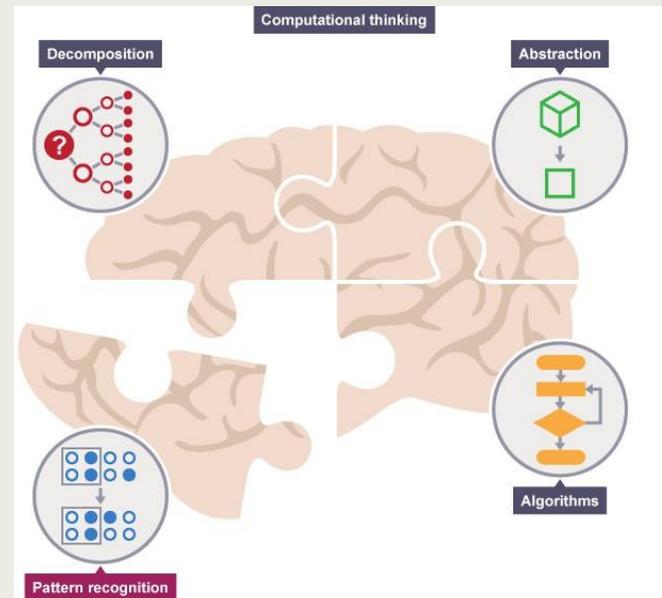
Knowledge Goals: Computer Science – Introduction, what is a Computer?

What is decomposition?

Decomposition involves breaking down a complex problem or system into smaller parts that are more manageable and easier to understand. The smaller parts can then be examined and solved, or designed individually, as they are simpler to work with. If a problem is not decomposed, it is much harder to solve. Dealing with many different stages all at once is much more difficult than breaking a problem down into a number of smaller problems and solving each one, one at a time.

What are patterns?

Imagine that we want to draw a series of cats. All cats share common characteristics. Among other things they all have eyes, tails and fur. They also like to eat fish and make meowing sounds. Because we know that all cats have eyes, tails and fur, we can make a good attempt at drawing a cat, simply by including these common characteristics. In computational thinking, these characteristics are known as patterns. Once we know how to describe one cat we can describe others, simply by following this pattern.



What is abstraction?

Abstraction is the process of filtering out – ignoring - the characteristics of patterns that we don't need in order to concentrate on those that we do. It is also the filtering out of specific details. From this we create a representation (idea) of what we are trying to solve. In order to draw a basic cat, we **do** need to know that it has a tail, fur and eyes. These characteristics are relevant. We **don't** need to know what sound a cat makes or that it likes fish. These characteristics are irrelevant and can be filtered out.

What are algorithms?

If you can tie shoelaces, make a cup of tea, get dressed or prepare a meal then you already know how to follow an algorithm.

In an algorithm, each instruction is identified and the order in which they should be carried out is planned. Algorithms are often used as a starting point for creating a computer program, and they are sometimes written as a flowchart or in pseudocode.



Knowledge Goals: Drama

Telling Tales

Story Telling:

One of the primary elements of Drama is storytelling and the relationship between the actor and the audience.

We will be focusing on techniques such as Direct Address, Narration, Structure and tension/atmosphere.

Soundscape:

Where the actors create noises to combine to help create an environment on stage. For example, wind whistling, owl hooting, floorboards creaking combine to create a scary atmosphere.

We then look at extending these to look at pace, volume and increasing intensity to show tension.

Process of Devising:

Creating your own work, using a **stimulus** as your starting point (the thing you get your initial ideas from), into **mind mapping** ideas, **improvising** into **rehearsing** and **performing** the final piece.

Dramatic Elements:

Lighting and sound can be used together to help create mood and atmosphere on stage. For example, a darkly lit stage, with eerie music will create a creepy atmosphere. We will be exploring how these two main elements combine to suggest atmosphere to the audience.





Knowledge Goals: Drama

Telling Tales



Further research:

Have a listen to this radio play in the genre of horror...

<https://www.youtube.com/watch?v=NSqXfsGV28M>

Half Term 2: Tier 3 Vocabulary

	Key word	Definition
1	Devising	Creating your own work in response to the stimulus.
2	Atmosphere	How a place or setting is portrayed in performance.
3	Mood	How the audience reflect or feel about this place.
4	Stimulus	The starting point, could be an image, poem, piece of music.
5	Rehearsing	Working with your group to try new things and repeat and refine your scenes by performing them.
6	Improvisation	Thinking on the spot and reacting in the moment. No rehearsal time.
7	Direct Address	When the actor speaks directly to the audience.

Link to GCSE:

Bertolt Brecht believed in the audience watching a play should be reminded they are watching a play at all times.

Useful resource: <https://www.bbc.co.uk/bitesize/guides/zwmvd2p/revision/1>



Knowledge Goals: English

TEXT SELECTION		CORE ASSESSMENT SKILLS AND WHAT STUDENTS ARE AIMING TO BE ABLE TO WRITE:				
<ul style="list-style-type: none"> King of Shadows Mr Kreecher The Hobbit Holes (Use as last resort) Stormbreaker Boy Private Peaceful The Breadwinner Cirque Du Freak Ghost of Thomas Kempt 	<ul style="list-style-type: none"> Jungle Book Two Weeks with the Queen Last Vampire The Railway Children The Throwaways The Road to Canterbury Going Solo River Boy Can You See Me? The Pants Project 	<p>Point making (P) Use of evidence (E) Analysis of quote (AQ) Effect on the reader or audience (ERA)</p> <p>One of the things we learn about Parvana's character is that she has mixed feelings about her responsibilities. When describing Parvana's feelings about fetching the water, the writer expresses how these types of obligations "Sometimes made her resentful" yet "Sometimes they made her proud". This highlights how she feels proud to do jobs for her family because her mother and Nooria aren't allowed outside. However, the adjective "resentful" highlights that sometimes she gets fed up because all the work lands on her shoulders. The reader is empathetic towards her as they can understand how difficult these mixed emotions could be, especially considering that it is beyond her control.</p>				
<p>Home Learning Tasks:</p> <ol style="list-style-type: none"> Complete 15 minutes of reading every night, using your AR book. Complete the vocabulary acquisition quizzes, set on Teams every fortnight. Using this knowledge organiser, learn and review how to analyse the language of different texts. Make sure you know and understand the key subject terminology. Read at least one text from the wider reading list! 		<p>Half a Creature From the Sea: a life in stories by David ALLMOND</p>	<p>Alexander the Great & His Claim to Fame (Dead Famous) by Phil ROBINS</p>	<p>D-Day: Lieutenant Andy Pope, Normandy 1944 by Bryan PERRETT</p>	<p>Roald Dahl and His Chocolate Factory (Dead Famous) by Andrew DONKIN</p>	<p>Wartime Princess by Valerie WILDING</p>
		<p>The Loch Ness Monster by Catherine CHAMBERS</p>	<p>Count Dracula by Catherine CHAMBERS</p>	<p>Blitz: the diary of Edie Benson, London, 1940 – 1941 by Vince CROSS</p>	<p>Titanic: an Edwardian Girl's Diary 1912 by Ellen Emerson WHITE</p>	<p>Berlin Olympics by Vince CROSS</p>
		<p>Andrew Flintoff: a life in pictures by Andrew FLINTOFF</p>	<p>Spy Smuggler: Paul Lelaud, France, 1942-1944 by Jim ELDRIDGE</p>	<p>Princess of Egypt: an Egyptian Girl's Diary, 1490 BC by Vince CROSS</p>	<p>Pompeii by Sue REID</p>	<p>Mill Girl by Sue REID</p>
		<p>Desert Danger: Tim Jackson, North Africa WWII by Jim ELDRIDGE</p>	<p>The Hunger by Carol DRINKWATER</p>	<p>Henry VIII & His Chopping Block (Dead Famous) by Alan MacDONALD</p>	<p>Battle of Britain: a Second World War Spitfire Pilot, 1939 – 1941 by Chris PRIESTLEY</p>	<p>Suffragette: the diary of Dollie Baxter, London, 1909 – 1913 by Carol DRINKWATER</p>

Knowledge Goals: Food Technology

Personal Hygiene

Good personal hygiene is vital when cooking to avoid the risk of food poisoning.

- Short Fingernails
- Hair Tied back
- Cuts covered with a BLUE plaster
- Wear clean apron
- Jewellery removed
- Wash hands before cooking, after blowing nose, visiting toilet or touching face or hair

Health and Safety

These are essential for everyone's safety

- Wash in hot soapy water
- Don't put hot food in fridge
- Turn saucepan handles when using
- Don't touch electrical appliances with wet hands
- Store high risk food in fridges
- Use oven gloves

Food Senses

taste, smell, touch, sight, hear

Macronutrients

Needed in large amounts to help the body to function properly

Fat



Function:
Energy
Warmth
Protection of organs

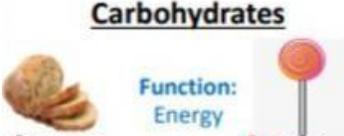
Sources

Saturated Fat (Bad Fats)	Unsaturated Fat (Good Fats)
Meat	Avocado
Processed Foods	Nuts
Lard	Olive oil

Saturated Fats - solid at room temperature and are from animal sources. Unsaturated fats are liquid at room temperature and are vegetable sources.

Too much	Too little
<ul style="list-style-type: none"> • Obesity • Type 2 diabetes • Heart Disease 	<ul style="list-style-type: none"> • Fat soluble vitamin deficiencies

Carbohydrates



Function:
Energy

Sources:
Bread
Pasta
Rice
Wheat
Potatoes
Cereals

Sugars:
Cakes
Sweets
Fizzy drinks

We should consume no more than 30g of sugar per day

Too much	Too Much
<ul style="list-style-type: none"> • Obesity • Type 2 diabetes • Heart Disease 	<ul style="list-style-type: none"> • Tooth decay • Type two diabetes • Obesity

Protein



Function:
Growth and Repair
Energy

Sources:

Plant	Animal
Nuts	Eggs
Quorn	Fish
Beans	Meat
Lentils	

Too much	Too little
<ul style="list-style-type: none"> • Turns to fat if not turned into energy 	<ul style="list-style-type: none"> • Anaemia • Slow growth in children

Water
Keeps us hydrated.

Source
Drinks, fruit and vegetables, soup.

<p>Function</p> <ul style="list-style-type: none"> • Controls body temperature. • Gets rid of waste in the body. 	<p>Too little</p> <ul style="list-style-type: none"> • Dehydration leads to headaches, irritability and loss of concentration.
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Fibre

Function:
It helps with digestion
It helps to get rid of waste

Source:
Wholegrain,
Whole wheat,
Wholemeal cereals,
Peas and beans

Too Little
<ul style="list-style-type: none"> • Constipation • Bowel Cancer

Colour Coded Chopping Boards

- Blue – fish
- White – bread and dairy
- Brown – root vegetables
- Red – raw meat
- Yellow – cooked meat
- Green – vegetables and salad



Knife Skills

Bridge Hold	Claw Hold	Knife pointing down
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Knowledge Goals: Geography



Everywhere you go...take the weather with you!

Climate is the overall pattern of weather. It is measured over 30 years and is the average rainfall and temperature of a place.

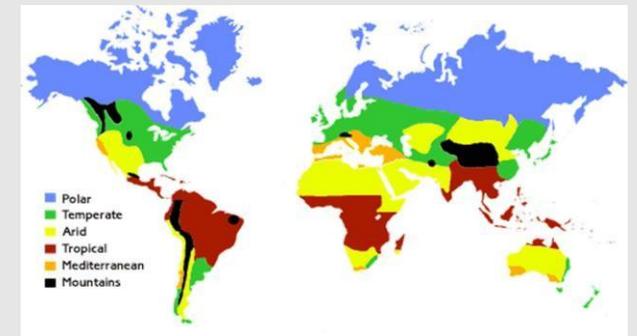
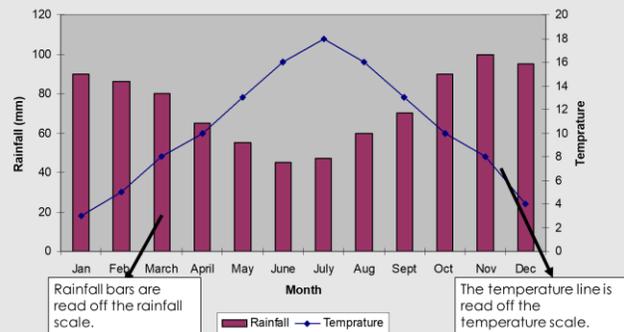
Weather is the day-to-day changes in temperature, precipitation, wind speed, wind direction, cloud cover, and air pressure.

Find out more!



Reason for different climate	What do they mean?
Altitude	Height above sea level. Temperatures decrease with altitude. There is a 1°C drop in temperature for every increase of 100 m in height. This is because the air is less dense in higher altitudes.
Latitude	The distance (north or south) from the equator. The equator lies directly underneath the Sun and so countries that fall on the equator receive the strongest solar energy. This means that in the Northern Hemisphere, the Sun's energy becomes less concentrated and therefore the temperatures become cooler as you travel north.
Distance from the sea	Coastal areas are most affected by the sea. The sea takes longer to heat up and cool down than land. So in the winter the sea keeps coastal areas warm and in summer, it cools them down.
Wind direction	Wind direction is reported by the direction it is blowing from, according to the compass. Wind blowing from the west is travelling eastwards so is called a westerly wind, not an easterly winds.
Ocean currents	The effect that ocean currents have on the temperature depends on whether the ocean current is hot or cold. Britain is on the same latitude as Siberia and parts of Russia, yet it does not suffer the same long, harsh winters. Britain's mild climate is partly due to the Gulf Stream, a large Atlantic Ocean current of warm water from the Gulf of Mexico.

What effects microclimates?	Description
Sun	The direction in which a place is facing is called its aspect. South facing places are usually the hottest.
Trees	Provide shade and shelter and are usually cooler than surrounding areas.
Lakes/sea	Have a cooling effect and may also produce light winds.
Buildings	Give off heat stored from the day. Can break up the wind and reduce wind speed.
Tarmac	The colour of the ground surface can affect temperature. The darker the colour, the warmer it will get.
Walls	Can provide shelter from the wind. Can change the direction of the wind and can also be warmer if sheltered from cold winds.
Mountains	Places at a higher altitudes have colder temperatures. Temperature usually decreases by 1°C for every 100m in



Knowledge Goals: History – Conquest



Jan 5 1066
Edward the Confessor dies

Jan 6 1066
Harold Godwinson crowned

25 Sept 1066
Battle of Stamford Bridge

14 Oct 1066
Battle of Hastings

25 Dec 1066
William crowned King of England

1069
Harrying of the North

1077
Bayeux Tapestry created

1087
William dies

1097
White Tower finished

EDWARD THE CONFESSOR

- Edward the Confessor was the King of England from 1042 until 1066.
- Edward was known as "the Confessor" because he was deeply religious. He was made a saint by the Catholic Church.
- Edward was married to Edith of Wessex. They did not have any children, and this eventually led to a succession crisis after Edward's death.
- Edward's death was the start of a power struggle for the English throne.

Claimant 1:

HAROLD GODWINSON

- 43 years old, speaks English.
- Edward the Confessor's brother-in-law.
- Earl of Wessex - already a powerful man. Advisor to the old King.
- A good leader, experienced.
- Richest man in England.
- Had alliances with many other English families.
- Harold said that Edward the Confessor had promised he would be King next.
- He said he had been tricked into promising he would support William.
- Supported by the Witan.

Claimant 2:

EDGAR THE AETHLING

- Edgar had a strong blood tie to the Anglo-Saxon Kings.
- He was descendant of both Alfred the Great and Edmund Ironside, both Kings.
- He was 10 years old.
- He was not rich or powerful.
- He did not have the support of the Witan.
- He wasn't considered strong enough to defend England from Vikings and Normans.

Claimant 3:

HARALD HARDRADA

- 51 years old, speaks Danish and Norwegian.
- King of Norway.
- Awe-inspiring warrior, fought and led armies since 14 years old.
- Was very tall, could be up to 7 foot 6 inches.
- He had travelled a lot and taken part in many battles.
- He had a link to the throne through his father, though it was quite weak.
- Hardrada means 'Stern Ruler' in Old Norse.

Claimant 4:

WILLIAM, DUKE OF NORMANDY

- 38 years old, speaks French.
- Had a lot of political experience and was very rich.
- Normandy had close ties with Wessex. They were natural trading partners.
- Edward the Confessor had lived in Normandy, and had many friends there.
- William said Edward the Confessor had promised him the English throne.
- William claimed Harold Godwinson had sworn to support him.
- William had the support of the Pope.

Why did William win?

Factics:
English shield wall & Norman feigned retreat.

Energy:

English were tired after marching, Normans were fresh.

Fortune (luck, good or bad!)

Leadership:
English troops were farmers, Normans were trained soldiers.

Castles Why?

1. To control people or trade.
2. To defend areas from attacks.
3. To intimidate people.
4. Centre of administration and military base.

How did they change?

1. Motte & bailey – early wooden and earth design.
2. Stone keep & curtain wall.
3. Concentric design with many defensive features.

Examples:

1. Motte & bailey – Kendal Castle, Yorkshire.
2. Stone keep – Pickering Castle, Yorkshire.
3. Concentric – Conwy Castle, Wales.

How did William control England?

Rewards – loyal followers were given money or land.

Marcher Earldoms – new earldoms created for loyal men. Gave them enormous power.

Domesday Book – compiled 1085 to log all wealth of England.

Destruction – William destroyed houses, farms and crops to intimidate and punish the English, to make them behave.

Feudal system – firmly put Norman nobles at the top, above English noble families peasants. Continued for hundreds of years.

Harrying of the North

- A response to rebellion and resistance against Norman rule in the northern regions of England, 1069-70.
- Intentional destruction of crops, homes, and livestock in the affected areas. The aim was to create famine and terrorize the local population into submission.
- Estimated that thousands of people died from starvation and other brutal tactics. Mostly Northumberland, Yorkshire & Cumbria.
- The effects of the Harrying of the North were long-lasting. It devastated the region and left it in ruins for many years.

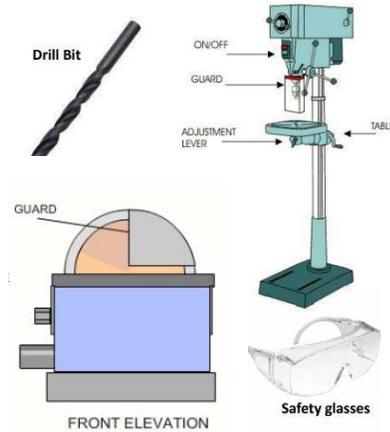
Knowledge Goals: Materials

Health and Safety

It is really important we **ASSESS** the **RISK** and **REDUCE** the **RISK** of Injury by **LISTENING** To the **TRAINING** and following the correct **PPE** usage

- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running

Pillar drill and disc sander



2D DESIGN

CAD: Computer Aided Design

Icon	Meaning
	Used to draw straight lines
	Used to draw freeform curves
	Used to draw circles
	Used to add text
	Click and hold for Shapes tools

CAM: Computer Aided Manufacture

Laser cutter

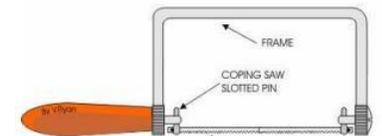
Laser cutting works by directing the output of a high-power laser. The focused laser beam is directed at the material, which then cuts the material leaving an edge with a high-quality surface finish. In school we mainly cut and engrave on Plywood and Acrylic



Saws

Tenon Saw
For straight lines

Coping Saw
For cutting curves

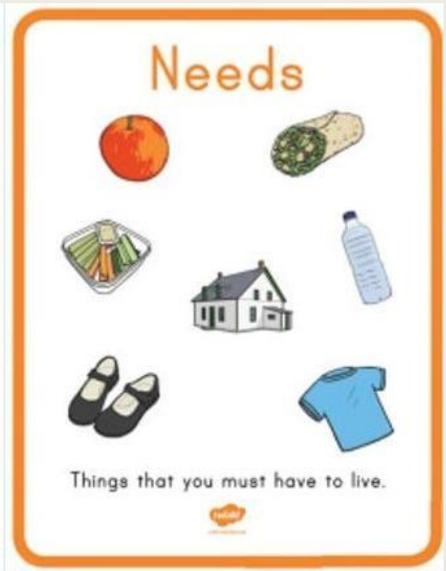
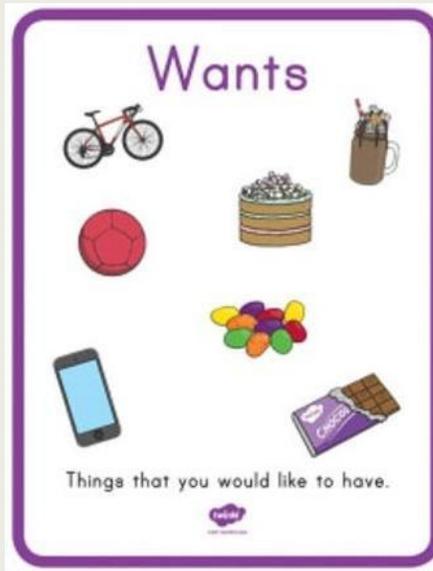


Softwoods	Hardwoods	Manufactured boards															
<p>Coniferous trees - Trees stay evergreen all year round.</p> <ul style="list-style-type: none"> • Coniferous trees will grow at a faster rate. • Tend to have needles rather than leaves. <p><i>evergreen all year round</i></p> <p>Examples of softwoods</p> <p>PINE - used in household furniture</p> <p>CEDAR - used for outdoor furniture</p>	<p>Deciduous trees - Trees will lose their leaves in the winter.</p> <ul style="list-style-type: none"> • Hardwood trees tend to be slow growing broad leaved trees. <p><i>Summer Winter</i></p> <p>Examples of Hardwoods</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Properties</th> <th>Uses</th> </tr> </thead> <tbody> <tr> <td>Beech</td> <td>Hard wearing and strong</td> <td>Fruit Bowl</td> </tr> <tr> <td>Oak</td> <td>Tough and durable</td> <td>Garden furniture</td> </tr> <tr> <td>Mahogany</td> <td>Durable and easy to work with</td> <td>Pianos and furniture</td> </tr> <tr> <td>Teak</td> <td>Strong, durable, resistant to moisture</td> <td>Boats</td> </tr> </tbody> </table>	Name	Properties	Uses	Beech	Hard wearing and strong	Fruit Bowl	Oak	Tough and durable	Garden furniture	Mahogany	Durable and easy to work with	Pianos and furniture	Teak	Strong, durable, resistant to moisture	Boats	<p>Manufacture - It means the making of goods by manual labour or by machinery.</p> <p>MDF - stands for Medium Density Fibreboard.</p> <ul style="list-style-type: none"> • a high quality board made by pulping wood fibres and then compressing them greatly. It is very smooth and stable, it cuts well and is used in high quality furniture. • Easy to work with • Stable and uniform strength <p>Plywood</p> <ul style="list-style-type: none"> • Plywood is made by gluing together thin layers of wood called veneers. Each layer has the grain going across the one below. This makes it strong flat and strong. It is used for roofs, interior doors and lockers of drawers. • Veneers glued at 90 degrees • Very flat and strong • Used in toys and interior doors <p>Examples of Manufactured Boards</p> <p>Normally household items</p>
Name	Properties	Uses															
Beech	Hard wearing and strong	Fruit Bowl															
Oak	Tough and durable	Garden furniture															
Mahogany	Durable and easy to work with	Pianos and furniture															
Teak	Strong, durable, resistant to moisture	Boats															

Knowledge Goals: PDEV



Maslow's hierarchy of needs



Be an UPSTANDER

- Help others who are being bullied.
- Stop untrue or harmful messages from spreading.
- Make friends outside of your circle.
- Respect others' differences and help others to respect differences.

S
Stay Safe
Don't give out your personal information to people / places you don't know.

M
Don't Meet Up
Meeting someone you have only been in touch with online can be dangerous. Always check with an adult you trust.

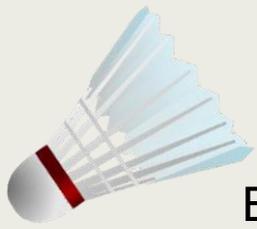
A
Accepting Files
Accepting emails, files, pictures or texts from people you don't know can cause problems.

R
Reliable?
Check information before you believe it. Is the person or website telling the truth?

T
Tell Someone
Tell an adult if someone or something makes you feel worried or uncomfortable.

Follow these SMART tips to keep yourself safe online!

SMART tips based on resources from www.thinkuknow.co.uk



Badminton

- Serving** – I am able to hold the racket using the correct grip for a forehand + backhand serve
- The Clears** – To be able to shadow the correct movement and hit the shuttle using an overhead shot, with a forehand grip
- The Drop Shot** – I can perform a mid court rally with a partner, using overhead shots
- The Smash** – I can hit the shuttle with power in a downward direction using no net
- Net Play** – I can hit the shuttle softly over the net
- Game Play** – I understand which court lines are used for singles and doubles.

Knowledge Goals: PE



Gymnastics

- Floor** – I can perform simple movements and balances, rolls and jump movements and include these in a sequence, holding them for 5 seconds with tension.
- Jumps** – I can recognise the correct take off technique. Perform flight movements (tuck) from the bench and springboard.
- Apparatus** – I can take off a springboard or trampette with two feet and squat onto a box.
- Performance** – I can perform a 6 balance routine showing tension and extension.

Football



- Ball Control** – I can control the ball when it comes to me using my feet while not under *pressure*.
- Passing** – I can pass the ball with some accuracy using my inside foot while not under pressure over a short distance.
- Dribbling** – I can dribble with the ball with some control over a short distance.
- Defending** – I can successfully tackle an opponent in a 1v1 situation.
- Shooting** – I can shoot from close range with some accuracy using the inside of my foot.
- Game Situations** – I understand the importance of getting into space to make myself available for a teammate.



Hockey

- Ball Control** – I can identify the different parts of the stick and how to hold the stick correctly.
- Passing** – I can execute the sweep pass introducing power and speed but often make mistakes in the accuracy of the pass.
- Dribbling** – I can dribble the ball on my forehand side quickly. I can also dribble the ball in a zig zag pattern on the forehand side but sometimes lose control of the ball.
- Tackling** – I understand the rules associated with tackling.
- Game Situations** – At restarts, I can pass the ball to my own players or when receiving attempt to move to get free from defenders.



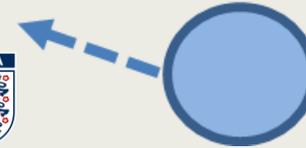
Netball

- Passing** – I am able to chest pass the ball to a partner using the correct technique. I am also able to shoulder pass to a partner with less accuracy.
- Footwork** – I can recognise which foot I am allowed to move when I have caught the ball and which one I need to keep still.
- Attacking skills** – I am able to move in to a space and catch a ball in a closed skill situation.
- Defending skills** – I am able to shadow a player in a closed skill situation.
- Games Situations** – I can identify all 7 positions on the court.



Rugby

- Evasion/Support Play** – I can run with the ball and step out of the way of a defender using a lot of space as part of a conditioned drill, working out methods to get past the defence. Demonstrating the 1st 'principle of play' – go forward.
- Passing & Catching** – I can pass the ball to a teammate whilst moving slowly forward. I can perform the pop pass whilst moving.
- Tackling/Defensive Strategies** – I can perform a side tackle from my knees or front tackle from crouching.
- Rucks & Mauls** – I can present the ball safely and correctly during contact.
- Game Play** – I can perform basic skills in a mini rugby game of 'tag' or 'touch' against players of similar standard.



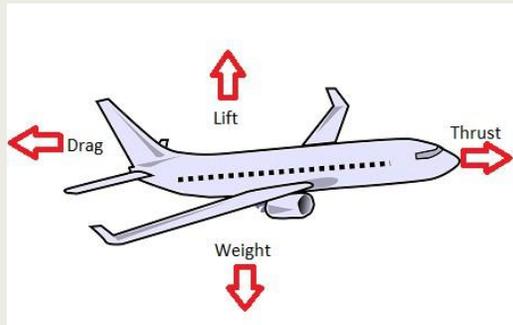
Knowledge Goals: Physics – Gravity

Types of force

- Forces which don't need contact to act are called non-contact forces. Examples include magnetism and gravity.
- Forces which only act when there is contact between objects are called contact forces. Examples include friction and air resistance.

Multiple forces

- More than one force can act on something at the same time.
- The direction of a force can be shown by an arrow. We can show how strong force is compared to another by using different-sized arrows.



Gravity

- Gravity is an attractive (pulling) force between masses.
- The region around a mass affected by its gravity is called a gravitational field.
- A field is an area in which an object feels a force.
- Gravity is quite a weak force and is only large enough to be noticeable around a massive object such as a planet, moon, or star.
- Gravity always pulls towards the centre of a planet.
- Gravity is strongest at the surface of the planet and gets weaker as distance above the planet surface increases.
- Planets in the Solar System have different values of gravity which depend on their mass and size.

Weight and mass

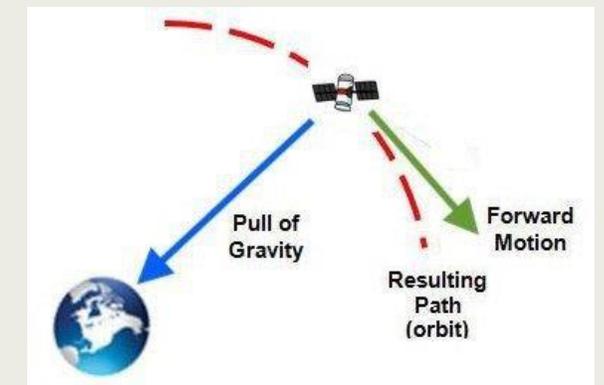
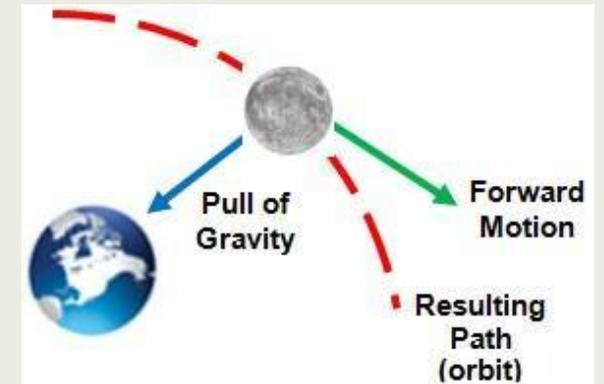
- Mass is the amount of matter in an object. It is measured in kilograms (kg).
- Weight is a force caused by gravity pulling down on the object. It is measured in newtons (N).
- We use a formula to calculate the weight of an object in a gravitational field:

$$\text{weight} = \text{mass} \times \text{gravitational field strength}$$

- The gravitational field strength on the Earth is 10 N/kg. This means that every kilogram of mass feels a force of 10 newtons pulling towards the ground. The planet Jupiter has the largest gravitational field strength of a planet in the Solar System (25 N/kg).

Weightlessness

- When objects are in orbit, such as a planet moving round a star or a space station moving round a planet, it is not in zero gravity. It is still attracted by gravity. If there were no gravity, it would fly off into space.

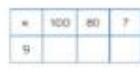


Knowledge Goals: Maths

Unit 3 – The Four Operations		
Topic	Video	Resource
Addition & subtraction	Watch this	Complete Check your work
Multiplication & division	Watch this	Complete Check your work
Decimal calculations	Watch this multiply Watch this divide	Multiply worksheet Check your answers Divide worksheet Check your answers

Multiplication methods

Less effective method especially for bigger multiplication

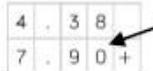

Long multiplication (column) Grid method Repeated addition

Multiplication with decimals
 Perform multiplications as integers
 e.g. $0.2 \times 0.3 \longrightarrow 2 \times 3$

Make adjustments to your answer to match the question
 $0.2 \times 10 = 2$
 $0.3 \times 10 = 3$
 Therefore $6 \div 100 = 0.06$

Estimations: Using estimations allows a 'check' if your answer is reasonable

Addition/ Subtraction with decimals




0 can be used to fill empty places with value

If  represents 1 instead of 100

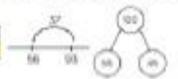
The decimal place acts as the placeholder and aligns the other values

$5.43 + \frac{8}{10}$

Revisit Fraction – Decimal equivalence
 $5.43 + 0.8$

Addition/ Subtraction with integers

Addition is commutative


Modelling methods for addition/ subtraction

- Bar models
- Number lines
- Part/ Whole diagrams

$6 + 3 = 3 + 6$

The order of addition does not change the result

Subtraction the order has to stay the same

$360 - 147 = 360 - 100 - 40 - 7$

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction
- Show your relationships by writing fact families

Formal written methods

	H	T	O
	1	8	7
+	5	4	2

	H	T	O
	4	2	7
-	2	4	9

Remember the place value of each column
 You may need to move 10 ones to the ones column to be able to subtract

Division methods

Short division 512
 3584

Complex division
 $\div 24 = \div 6 \div 4$
 Break up the divisor using factors

Division with decimals

The placeholder in division methods is essential – the decimal lines up on the dividend and the quotient

$24 \div 0.02 \longrightarrow 24 \div 0.2 \longrightarrow 240 \div 2$

All give the same solution as represent the same proportion
 Multiply the values in proportion until the divisor becomes an integer

Knowledge Goals: Maths

Unit 4 – Positive & Negative Numbers		
Topic	Video	Resource
Addition & subtraction of negative numbers	Watch this	Complete Check your work
Multiplication & division of negative numbers	Watch this multiply Watch this divide	Multiply worksheet Check your answers Divide worksheet Check your answers
Real life applications	Watch this	Complete Check your work

Subtract directed numbers

● = -1
● = 1
 Representations

Representation for calculation: $2 - -1 - 3$

"Subtract" - means take away or remove.

Take away one: $2 - -1 - 3 = 3$

Start with the representation of 2: $2 - -3 - 5 = 5$

Generalisation: $... - +$

Multiply/ Divide directed numbers

Two representations of the same calculation: $2 \times -3 = -6$

Negative, Negative calculation: $-2 \times -3 = 6$

This is the negative of 2×-3

The act of making counters into their negative is turning them over.

Divisions are the inverse operations

Perform calculations that cross zero

Number lines are useful to help you visualise the calculation crossing 0

Use the number line to guide subtraction of 6: $4 - 6 = -2$

Start at 4

Find the difference between 6 and -4: 10 beads between them

Rearrangements of the same equation: $-5 + 5 = 0$ and $5 - 5 = 0$

Odd directed numbers

● = -1
● = 1
 Representations

Zero pair $(-1 + 1 = 0)$

Two "-1" left $= -2$

Partitioning: $8 + -3 - 5 = 5 + 3 + -3 = 5$

Partition the value to create a zero pair calculation

Generalisation: $+ - = -$

Knowledge Goals: Music

The Elements of Music

Why are the elements of music important?

The pulse and the rhythm are two of the most important ingredients of any piece of music, but there are many more things that can influence how a piece of music sounds. In this unit you will learn about some of the most important elements of music and the impact they can have. You will learn some of the professional terms for these elements and learn to describe them in a piece of music. You will learn how to read and play a simple rhythm using note values, and you will also get the chance to explore the elements of music through the composition of a graphic score.

Rhythm and Pulse

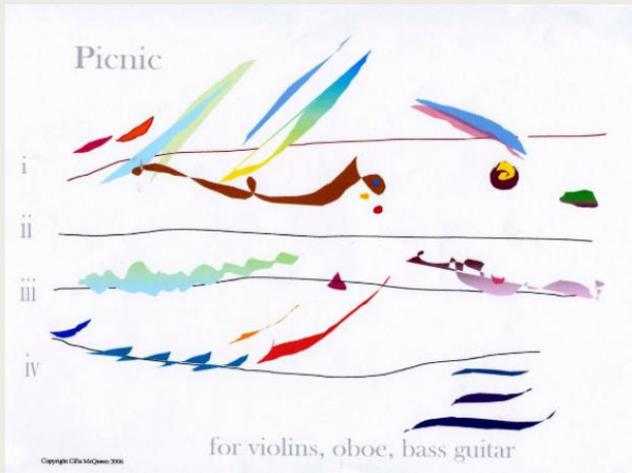
The pulse is the constant (like your heartbeat)

The rhythm is made up of long and short notes played in a combination
Rhythm Helps Your Two Hips Move



Graphic Scores

A graphic score is an alternative way of writing down a piece of music. The idea combines music with art. It is up to the performer to decide how the images or symbols should be interpreted and performed.



Great Composers

György Ligeti
 Artikulation

Cathy Beberian
 Stripsody

Note Values

NAME	LENGTH	SYMBOL	REST
Semibreve	4 beats		
Minim	2 beats		
Crotchet	1beat		
Quaver	½ beat		
Semiquaver	¼ beat		

Dynamic and Tempo Markings

SYMBOL	ITALIAN	ENGLISH
<i>f</i>	Forte	Loud
<i>mf</i>	Mezzo Forte	Moderately Loud
<i>mp</i>	Mezzo Piano	Moderately Quiet
<i>p</i>	Piano	Quiet (soft)
<	Crescendo	Getting Louder
>	Diminuendo	Getting Quieter

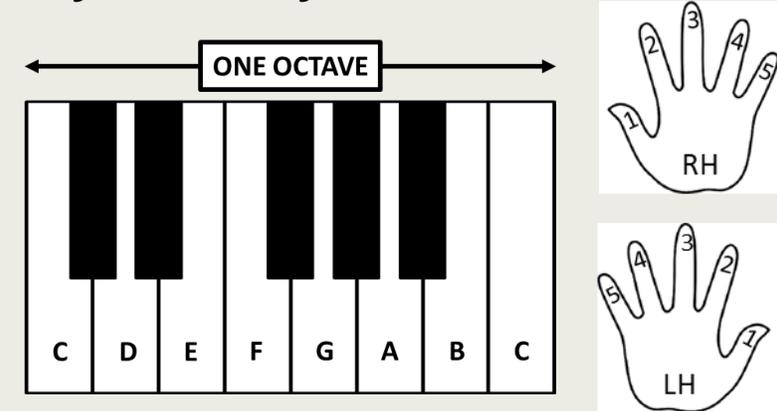
Knowledge Goals: Music

Keyboard Skills Parts I, II and III

Why is notation an important part of music making?

In the Western Classical Tradition, treble clef notation is the gateway to accessing a world of music from many influential composers. In this unit, you will learn how to interpret and understand treble clef notation. You will develop an understanding of the placement of a note on a staff and to where this relates on a keyboard. You will build on the use of musical elements and note values from the last topic to help you perform a variety of melodies from several leading composers. This will then be incorporated into the exploration of riffs and jingles, before further examples are performed

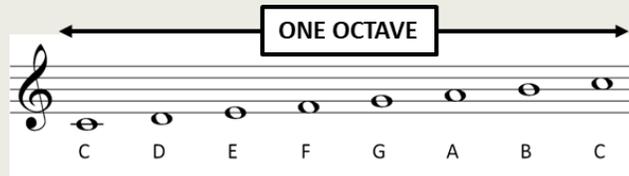
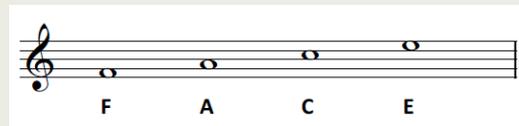
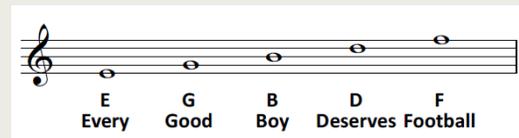
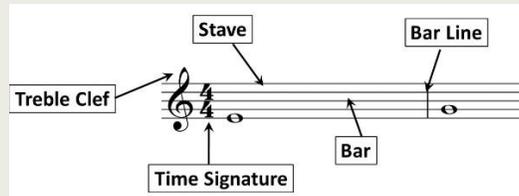
Keyboard Layout



The Treble Clef Staff

A staff or staff is the name given to the five lines where musical notes are written. The position of notes on the staff or staff shows their pitch.

Notes can also be extended beyond the end of the staff with the use of ledger lines



Time Signatures

4
4

The number on the top tells you how many beats there are

The number on the bottom tells you the type of beat. These can be crotchet (4), minim (2) or quaver (8)

2
4

3
4

4
4

6
8

9
8

12
8

Great Composers

Ludwig van Beethoven
'Ode to Joy'

John Williams
Indiana Jones Theme

Wider Listening

Mozart,
Eine Kleine Nachtmusik

Grieg
In The Hall of the Mountain King

Knowledge Goals: Philosophy, Religion & Ethics

PRE and ME

Cumbrian spirituality

Spirituality involves the recognition of a feeling or sense that there is something greater than just us, something more to being human.

This unit allows us to explore the amazing places around us and focus on the natural world and the way that it can make us feel. We will look at both the history and the geography of the beautiful Lake District and take the time to explore our own thoughts and feelings through meditation, poetry, art and mindfulness.



Daffodils

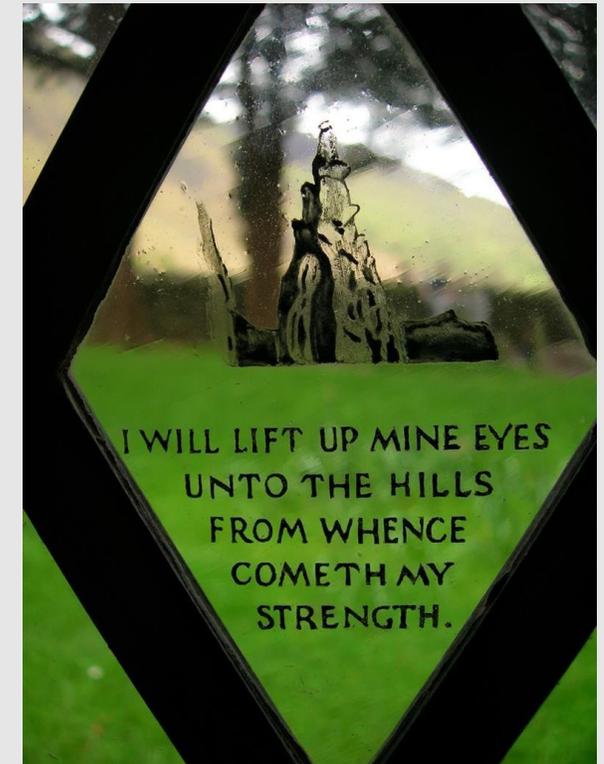
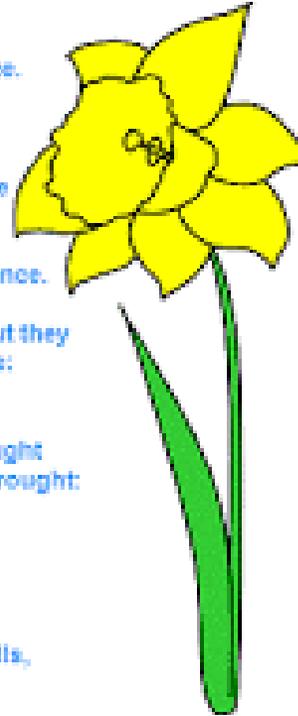
by William Wordsworth

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.

Continuous as the stars that shine
And twinkle on the milky way,
They stretched in never-ending line
Along the margin of a bay:
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.

The waves beside them danced, but they
Out-did the sparkling waves in glee:
A poet could not be but gay,
In such a jocund company:
I gazed—and gazed—but little thought
What wealth the show to me had brought:

For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the bliss of solitude;
And then my heart with pleasure fills,
And dances with the daffodils.



Estrategia



Working with cognates

A **cognate** is a word that is spelt the same way in English and Spanish. A **near-cognate** is spelt almost the same.

- In Chapter 2 there are a lot of near-cognates. Can you find five on this page? Do they all mean exactly the same as the English?

Words like these make learning easier. Just remember that their spelling and pronunciation are slightly different from the English words.

- Study the five words you spotted for 10 seconds each. Then shut the book.
- Try to write the words correctly, remembering any spelling differences.
- Now try to say the words correctly, pronouncing the letters in the Spanish way.

Knowledge Goals: Spanish

¿Qué haces en inglés?

En inglés escucho, hablo, leo y escribo.

Escucho música.
Hablo con mis amigos.

Hablo por teléfono.

No leo.

Escribo mucho.

No como.

Como chicle.

escuchar
hablar
comer
leer
escribir
vivir

What do you do in English?

In English, I listen, speak, read and write.

I listen to music.
I speak with my friends.

I speak on the phone.

I don't read.

I write a lot.

I don't eat.

I chew gum. (I eat chewing gum.)

to listen
to speak
to eat
to read
to write
to live

Opiniones

¿Te gusta el español?

Me gusta el español.

Me gusta la geografía.

Me gusta mucho la historia.

No me gusta el inglés.

No me gusta nada la educación física.

¿Te gustan las ciencias?

Me gustan las ciencias.

bueno/buena
difícil
fácil
importante
interesante
útil

¿Qué te gusta?

¿Por qué?

Me gusta la informática

porque es fácil.

Me gustan las ciencias porque son útiles.

Opinions

Do you like Spanish?

I like Spanish.

I like geography.

I really like history.

I don't like English.

I don't like PE at all.

Do you like science?

I like science.

good
difficult
easy
important
interesting
useful

What do you like?

Why?

I like ICT because it's easy.

I like science because it's useful.

¿Qué comes?

¿Qué comes en el recreo?

Como ...

Come ...

un bocadillo
un plátano
una hamburguesa
una manzana
una pizza
unas patatas fritas

¿Qué bebes?

Bebo ...

Bebe ...

agua mineral
un zumo de naranja
una limonada
una Coca-Cola

Snacks

What do you eat at lunch break?

I eat ...

He/She eats ...

a sandwich
a banana
a hamburger
an apple
a pizza
some crisps

What do you drink?

I drink ...

He/She drinks ...

a mineral water
an orange juice
a lemonade
a Coca-Cola

Las asignaturas

¿Qué estudias?

Estudio ...

Estudia ...

No estudia ...

el dibujo
la educación física
el español
el francés
el inglés
el teatro
la historia
la informática
la música
la religión
la geografía
la tecnología
las ciencias
las matemáticas

School subjects

What do you study?

I study ...

He/She studies ...

He/She doesn't study ...

art
PE
Spanish
French
English
drama
history
ICT
music
RE
geography
technology
science
maths

¿Cómo es tu profesor?

El profesor de ... es ...

aburrido

antipático

divertido

severo

simpático

La profesora de ... es ...

aburrida

antipática

divertida

severa

simpática

What's your teacher like?

The ... teacher (male) is ...

boring

unpleasant

amusing

strict

nice, kind

The ... teacher (female) is ...

boring

unpleasant

amusing

strict

nice, kind

Los días de la semana

lunes

martes

miércoles

jueves

viernes

sábado

domingo

los lunes

The days of the week

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

every Monday

Palabras muy útiles

un poco

bastante

muy

me gusta

no me gusta

Very useful words

a bit

quite

very

I like

I don't like

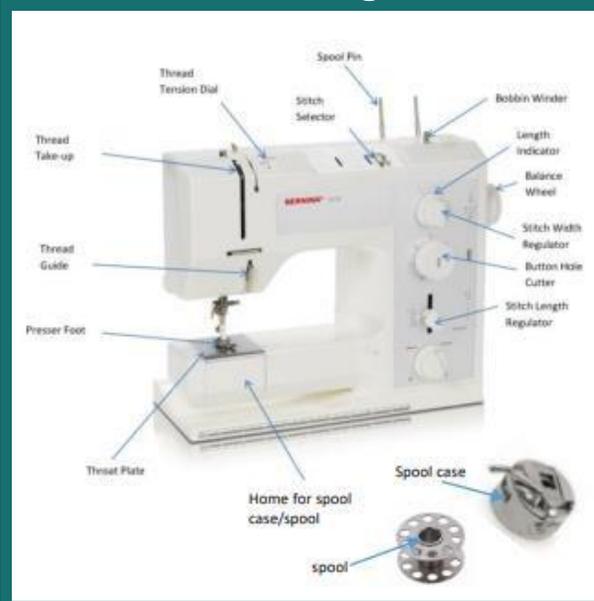
Knowledge Goals: Textiles

Health and Safety

It is really important we **ASSESS** the **RISK** and **REDUCE** the **RISK** of Injury by **LISTENING** To the **TRAINING** and following the correct **PPE** usage

- You must walk with scissors facing downwards next to your side
- Watch where you are sewing on the machine
- Do not press the foot pedal to the floor when using the sewing machine
- Make sure you had in Bodkin needles at the end of the lessons
- If the sewing machine makes an unusual noise, please stop using it and inform teacher

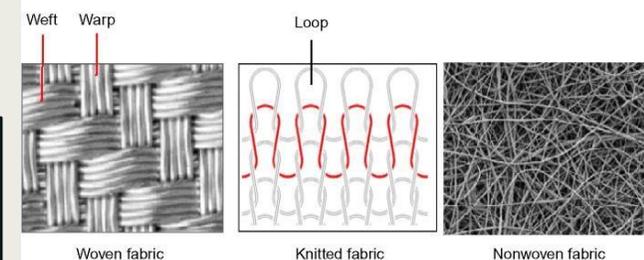
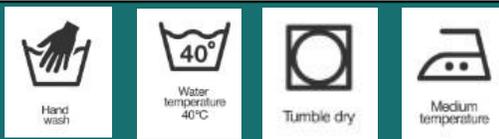
Parts of a Sewing Machine



Smart and modern materials

 Biodegradable Ink	 Aroma Pigments	 Sign in Daylight
 Hydrochromic Ink	 Thermochromic pigment	 Sign in Darkness
 dry		 Photochromic pigment

Care Labels Instructions for laundering

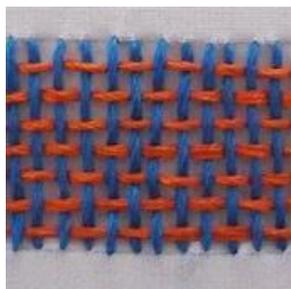


Technique

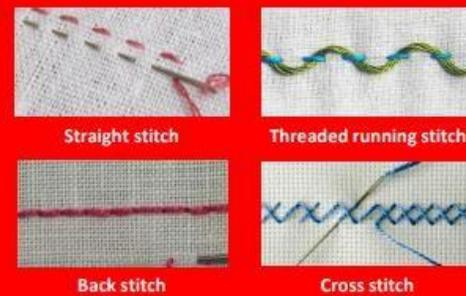
Weaving

Embroidery

Applique



Hand stitches



Textile equipment

Binca

Bodkin

Wool

Thread



