



MALBY ACADEMY

YEAR 7 TERM 2 2024-2025
KNOWLEDGE ORGANISER

WWW.MALBYACADEMY.COM

OUR KEY DRIVERS



RESILIENCE

Learn from failures, work through problems and never give up. Be better today than you were yesterday.



ASPIRATION

Aim high and set yourself challenging goals both academically and personally. What does the future hold for you?



COMMUNITY

Accept support and offer it. Give something back to the Academy and the community.



RESPONSIBILITY

Be responsible for your actions, celebrate successes and learn from your failures. Do not make excuses.



CONFIDENCE

Don't be afraid to get things wrong. Believe in yourself and your abilities and step outside your comfort zone.

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Introduction

Foundational Knowledge and Retrieval Practice

If we try and build a house on sand it will fall down, as the foundations are not secure and over time will disappear. That's a bit like what happens if your teacher tries to get you to understand complex ideas, but you haven't yet grasped the basics on which to connect the new information, and therefore you cannot build on it and develop what scientists call **schema** in your mind.

To support you in having foundational knowledge in each subject, your teachers have identified some key basic knowledge that they will teach you first, but then you will be asked to consolidate this by reviewing it at home and completing a quiz about it for homework - this process is called **retrieval**.

Research tells us that the process of **keep reviewing key chunks of material by reading it, rehearsing it, trying to recall it** and **checking you got it right** will help you to remember it longer term, so that you feel more confident in your lessons when teachers do refer to it.



Introduction

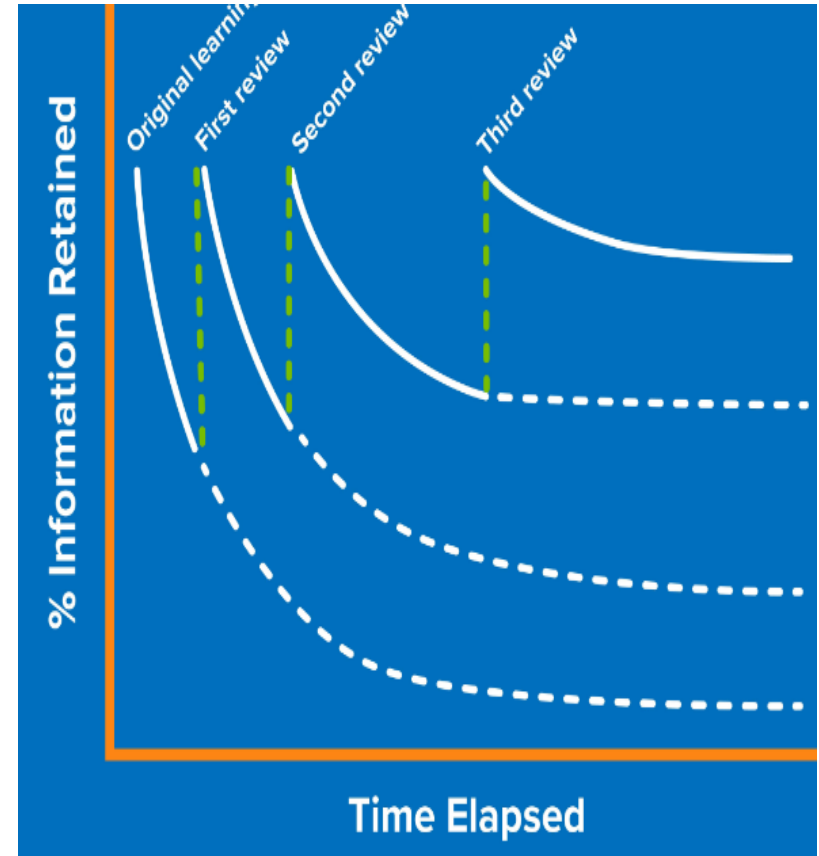
The Forgetting Curve

A psychologist called Hermann Ebbinghaus discovered that shortly after you have learned something, you quickly forget some of it. He represented this process with this ' **forgetting curve**'.

He found however that if you reviewed that information at specific time points after having first learned it – the rate at which you forget can be reduced. He called this '**spaced practice**'

To help you to remember key information your teachers will do the following:

- Identify in lesson key terms or pieces of information that are important to learn.
- Tell you which bits of the subject knowledge organiser to review and recall at home.
- Set you a homework quiz to check what you can recall.
- In future quizzes include some questions already tested.
- Revisit key questions that most of the class struggled with.



English

Using this knowledge organiser:

Every **Week A** you will be given **ten pieces of vocabulary**.

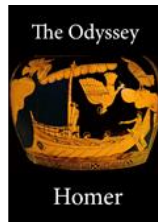
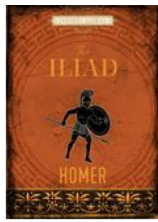
Across this week, you will need to find a coherent definition for each piece of vocabulary and practice the spelling.

This will be tested as part of your English lessons, across that week. In **Week B**, you will use these same words to complete a short piece of **writing**. You will use the information on this sheet to support you.

At the end of the term, you will complete a project that utilises all you have learnt across this half term.

Myths and Legends:

Through journeys of heroes, villains and the inspirations of many great narratives, Myths and Legends gives us a chance to explore the ways in which human nature is composed. A chance to consider what makes us human, to debate what is morally good and right and to question, have we changed so much over thousands of years?



Week A/B 1:

1. Yield
2. Pestilence
3. Plague (verb)
4. Fiercely
5. Sceptre
6. Loom
7. Provoke
8. Wreath
9. Illustrious
10. Clamour

Week A/B 2:

1. Sovereign
2. Bountiful
3. Labour
4. Hasten
5. Dishonourable
6. Covetous
7. Rending
8. Bewildered
9. Gambolling
10. Inexplicable

Week A/B 3:

1. Fortune
2. Parched
3. Burrow
4. Serpent
5. Sacrifice
6. Writhe
7. Foul
8. Snuffling
9. Suspicion
10. Alarmed

Week A/B 4:

1. Toil
2. Convulsive
3. Delineate
4. Ensure
5. Inanimate
6. Inarticulate
7. Lassitude
8. Infuse
9. Endeavour
10. Detain

Week A/B 5:

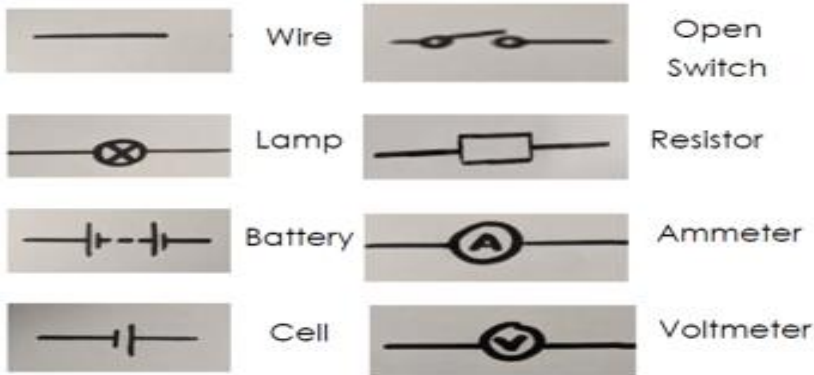
1. Cruelty
2. Vicious
3. Continual
4. Oblation
5. Lack
6. Marvel
7. Withdraw
8. Dissemble
9. Cower
10. Doom

Week A/B 6:

1. Prevent
2. Devastation
3. Principles
4. Monstrous
5. Reliable
6. Inevitable
7. Prevent
8. Mournful
9. Clusters
10. Degrade

Science: Electromagnetism

Here are the eight standard circuit symbols you need to know:



Type of circuit	Current (A) is	Voltage (V) is..
Series	The same everywhere	Shared by components
Parallel	Shared by components	The same everywhere

You need to know the function of each of these components:

- Wire:** connects components, allowing charge to flow
- Switch:** Completes or breaks a circuit, determining whether charge may flow
- Lamp:** Emits light (converts chemical energy from the battery into thermal energy)
- Resistor:** Reduces the flow of charge
- Cell:** Does work on the charges in the wire and pushes them around the wire
- Battery:** The total power supply of a circuit (may be several cells)
- Ammeter:** Measures the current in a circuit
- Voltmeter:** Measures the potential difference (voltage) of a component

Ohm's law:

$$\text{Potential Difference} = \text{Current} \times \text{Resistance}$$

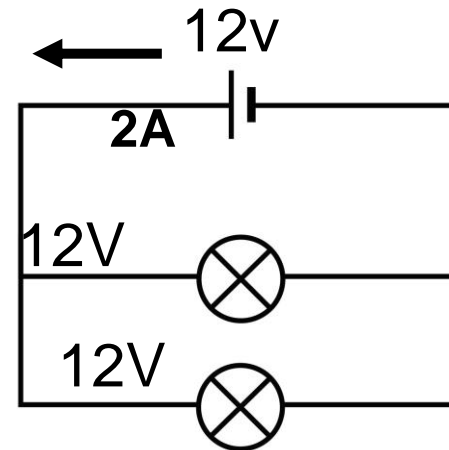
$$V = I \times R$$

Units:

Potential Difference – Volt (V)

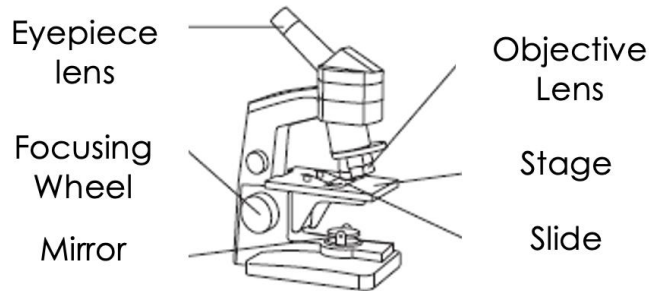
Current – Amps (A)

Resistance – Ohm (Ω)

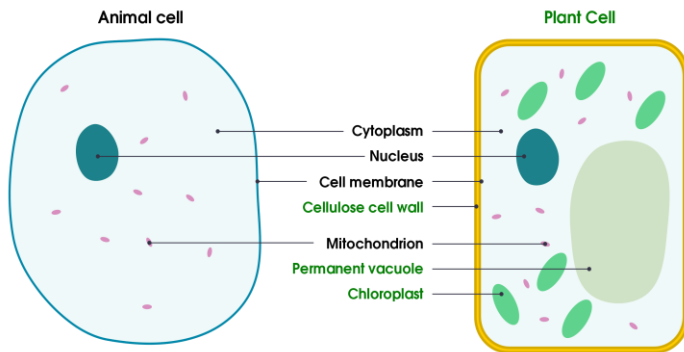


Science: Organisms

Parts of a Light Microscope

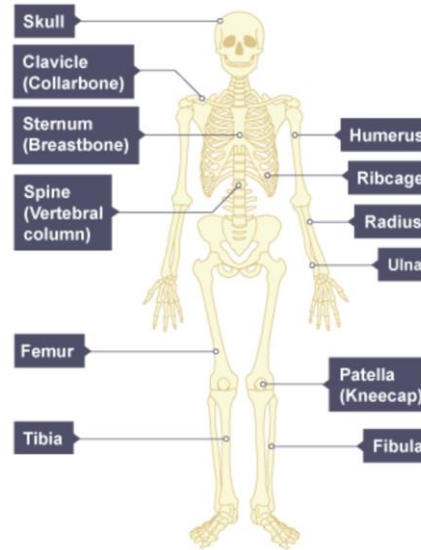


Parts of Cells



Organisation: Cell --> Tissue --> Organ --> Organ System --> Organ System

Human Skeleton



The skeleton is for protection, movement, support and making blood cells.

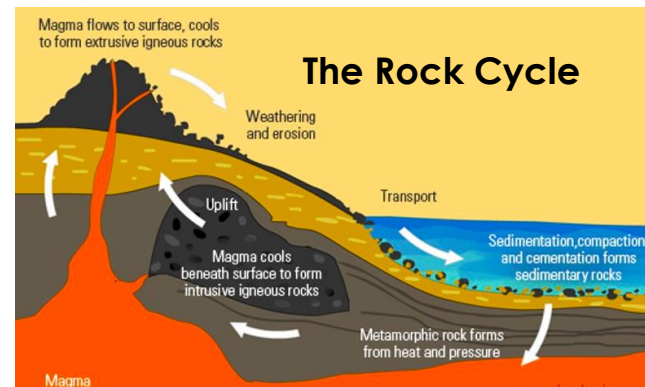
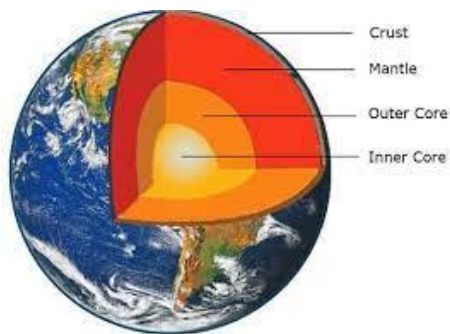
Cardiac muscle: only found in the heart. Contain cells that act as a pacemaker which makes the cardiac muscle contract and so the heart beats.

Smooth muscle: found in internal organs and blood vessels. Involuntary which means we don't think about using them. Smooth in appearance

Skeletal/striated muscle: attached to the skeleton by tendons. Voluntary, which means we do think about using them. They are used for movement and stability. Striated (stripy) in appearance.

Muscles work in antagonistic (opposite) pairs. When one is relaxed, the other is contacted.

Science: Earth



Crust: thinnest layer, contains rocks and minerals.

Mantle: thickest layer, solid rock that can flow (plastic rock). Moves in circles caused by convection currents where hot rock rises and cold rock sinks.

Outer core (liquid) & **Inner core** (hotter, but solid): mainly iron and nickel, the outer core is where the magnetic field comes from.

Day: One complete spin on the Earth's axis (24 hours).

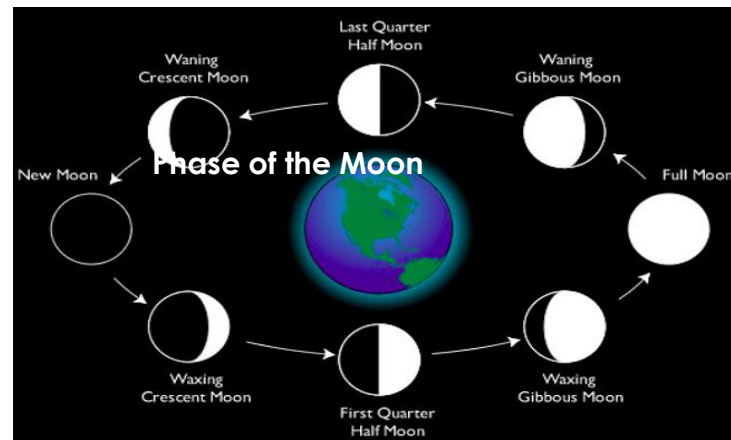
Month: Every 30 days the Moon orbits the Earth.

Year: One complete orbit of the Earth around the Sun (365 days).

Seasons: The Earth is tilted on its axis.

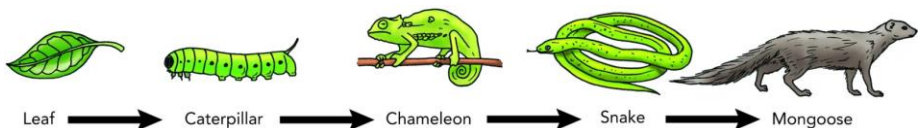
Solar System: Sun, Mercury, Venus, Earth, Mars, asteroid belt, Jupiter, Saturn, Uranus and Pluto (dwarf planet). In the Milky Way which is a spiral galaxy.

Weights is a force measured in Newtons. $\text{Weight} = \text{mass} \times \text{gravity}$. On Earth gravity is 10N/kg . **Mass** is measured in kg.



Science: Ecosystems

Food Chains and Food webs



A food chain is a way of representing the energy transfer between organisms.

The first organism in a food chain is called a **producer** because it makes its own food.

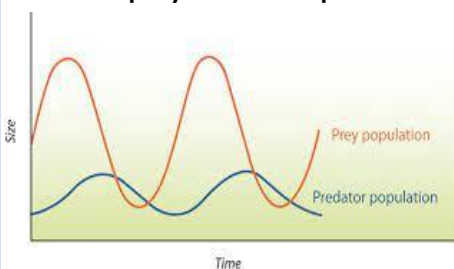
The **primary consumer** eats the producer, the **secondary consumer** eats the primary consumer, and is eaten by a **tertiary consumer**.

Herbivore = consumes only plants

Carnivore = consumes only animals

Omnivore = consumes plants and animals **Apex predator = top of the food chain**

Predator-prey relationships



When the prey population is low, the predator population will decrease as they have less food.

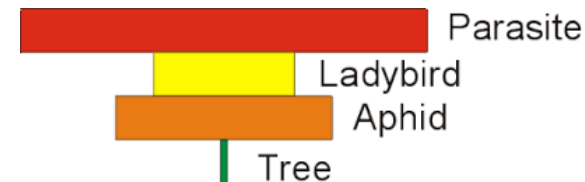
This will cause the prey population to increase as they are being hunted less.

This will cause the predator population to increase as they have more food.

3 adaptations of predators: camouflage, sharp teeth and claws, eyes on front
 3 adaptations of prey: camouflage, eyes on side of head, weapons (e.g. horns)

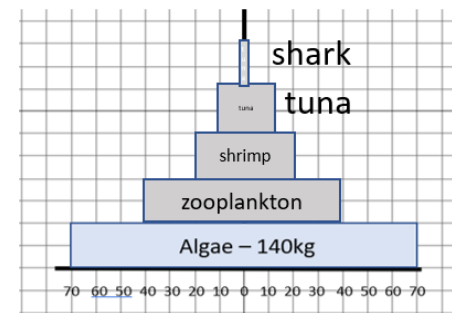
Pyramids of numbers and biomass

A pyramid of numbers shows the population of each species in a food chain. This sometimes might not be a pyramid, as 1 tree could support 1000s of flies.



A pyramid of biomass shows the dry mass of each species in a food chain. It can also represent energy. This will always be a pyramid.

Organism name	Biomass (kg)
Algae	140
zooplankton	80
Shrimp	40
Tuna	20
shark	5



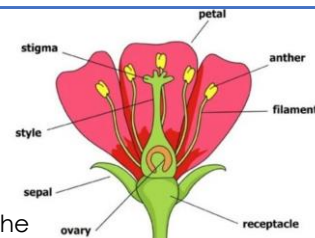
Plant reproduction

What is the plant version of this?

Human: Sperm + egg = embryo

Plant: Pollen + ovum = seed

Sexual reproduction happens in flowering plants.



Seed dispersal: It is not beneficial for the seeds to grow near the parent plants because otherwise they would have to compete for light, water and minerals.

As a result of this, plants have adaptations to disperse their seeds.

By wind, by sticking to or being eaten by animals, by water, or by explosion!



History: Castles

Write like an Historian

Machicolation		Portcullis		Drawbridge	
Variations: Machicolations	Definition: Floor opening in between battlements, which protrude (stick out) from the castle wall, used to fire weapons through.	Variations: <i>None</i>	Definition: A grating of iron hung over the gateway of a fortified place and lowered between grooves to prevent passage	Variations: <i>None</i>	Definition: A bridge that could be lifted to prevent entry, usually used over a moat, or ditch
Use it in a sentence: The defender poured boiling oil through the machicolation onto the attacker below.		Use it in a sentence: The soldier lowered the portcullis when he saw King John's army approaching in the distance.		Use it in a sentence: The attacking army were unable to reach the castle walls, as the drawbridge had been raised.	
Links to: Battlement Crenelation Murder hole Defence	Digging deeper: How successful a method of defence were Machicolations?	Links to: Gateway Defence Entry	Digging deeper: How would a portcullis be used to prevent attack?	Links to: Gateway Defence Entry Moat	Digging deeper: How would a drawbridge be used to prevent attack?

History: Castles

Write like an Historian

Moat		Rampart		Luxury	
Variations: Moat-like Moated	Definition: A deep and wide trench around the walls of a castle, often filled with water.	Variations: <i>None</i>	Definition: A protective embankment or ridge, usually constructed out of soil, which surrounds a castle.	Variations: Luxurious Luxuries	Definition: Something that has been added for pleasure or comfort but is not necessary.
Use it in a sentence: The moat can be crossed by a drawbridge.		Use it in a sentence: The ramparts formed a protective ring around the castle, making it very difficult for attackers to approach the castle.		Use it in a sentence: By the late medieval period, luxury castles began to be built, to show off wealth, rather than for defence.	
Links to: Drawbridge Rampart Defence	Digging deeper: How did a moat slow down attackers?	Links to: Barrier Embankment Ridge	Digging deeper: What was the benefit of adding ramparts to your castle?	Links to: Wealth Comfort Position Environment	Digging deeper: What features would you expect to see in a luxury castle?

History: Castles

Write like an Historian

Security		Authority		Rebellion	
Variations: Secure	Definition: Measures taken to protect against attack	Variations: Authorise Authorities	Definition: The right to be in power.	Variations: Rebel Rebels	Definition: Armed resistance (opposition) to the government or other people in positions of power.
Use it in a sentence: William I ordered the building of castles across England to improve his security as King of England.		Use it in a sentence: The king asserted his authority over the country, using castles a symbol of his power and authority.		Use it in a sentence: Repeated rebellions against William I led to the building of castles..	
Links to: Safety Protection Control Power rebellion	Digging deeper: How did William I secure his position?	Links to: Control Power Security	Digging deeper: Where did medieval kings think their authority came from?	Links to: Defiance Resistance Insurrection Revolt Uprising Revolution	Digging deeper: Why did the Saxons rebel against William I?

History: Castles

Write like an Historian

Curtain Wall		Crenelations		Aristocracy	
Variations: None	Definition: A defensive wall that was both tall and thick, usually with a moat or ditch in front.	Variations: Crenelation	Definition: The battlements of a castle – a wall around the top of a castle, with regular spaces for people to shoot arrows through.	Variations: Aristocrat Aristocratic	Definition: The group of people that included the nobility (earls and lords) who were believed to be more important than ordinary people.
Use it in a sentence: The curtain wall was so tall that it was impossible to climb over.		Use it in a sentence: The castle was topped by crenelations, from behind which an archer shot arrows.		Use it in a sentence: The king was surrounded by members of the aristocracy, who helped him to run the country.	
Links to: Defence fortification Battlements Crenelation Rampart	Digging deeper: Why did curtain walls deliberately not have many doors or windows?	Links to: Battlement Fortification Castellation	Digging deeper: Hat was the benefit to crenelations?	Links to: Nobility Gentry Monarch Earls Lords	Digging deeper: How did life for the aristocracy differ in comparison to life for the peasants?

History: Medieval Life

Write like an Historian

Peasant		Serf		Monarch	
Variations: Peasantry	Definition: A usually uneducated person who was of low social status.	Variations: Serfdom	Definition: A servant or worker who was treated as part of the land that they worked on, so if the land was sold they were sold too. Had few rights.	Variations: Monarchy Monarchical	Definition: A person who rules over a country, kingdom, or empire, such as a king or queen.
Use it in a sentence: The peasants were seen as the least important people in England.		Use it in a sentence: The serfs had very few rights, as they were seen as property that was owned along with land; because of this, they often lived and worked in very poor conditions for little or no pay.		Use it in a sentence: After the death of Elizabeth II in 2022, King Charles III became England's new monarch.	
Links to: Poverty Farmer Village	Digging deeper: What was daily life like for medieval peasants?	Links to: Servant Peasant Villein	Digging deeper: Why were the serfs so unhappy that they rebelled in 1381?	Links to: King Queen Ruler Authority Aristocracy Nobility	Digging deeper: What are the characteristics of a good monarch?

History: Medieval Life

Write like an Historian

Nobility		Aristocracy		Feudalism	
Variations: Noblemen Nobleman Nobles	Definition: A group of people who form the ruling class of a country.	Variations: Aristocrat Aristocratic	Definition: The group of people that included the nobility (earls and lords) who were believed to be more important than ordinary people.	Variations: Feudal system	Definition: The organisation of England's society – a social structure or hierarchy introduced by William I
Use it in a sentence: Queen Elizabeth I was helped by the nobility, who advised her on important decisions.		Use it in a sentence: The king was surrounded by members of the aristocracy, who helped him to run the country.		Use it in a sentence At the top of the feudal system was the king, followed by his Barons, then Knights, and then, finally the peasants or villeins.:	
Links to: Aristocracy Monarch Hierarchy.	Digging deeper: What responsibilities did the nobility have?	Links to: Nobility Gentry Monarch Earls Lords Barons	Digging deeper: How did life for the aristocracy differ in comparison to life for the peasants?	Links to: Hierarchy Nobility Monarch peasants	Digging deeper: How was life different for different groups within the feudal system?

History: Medieval Life

Write like an Historian

Domesday Book		Agriculture		Merchants	
Variations: None	Definition: Survey carried out across England by William I, to assess England's wealth and population for an army.	Variations: Agricultural	Definition: Farming as the basis for daily life.	Variations: Merchants	Definition: Trades people who made money by buying and selling goods.
Use it in a sentence: William I used the Domesday Book to find out how wealthy England was after he conquered the country in 1066.		Use it in a sentence: Medieval England was very agricultural – the main job of the peasants was growing food.		Use it in a sentence: The town's merchants sold all sorts of goods – peasants could buy everything from bread to flowers at the local market.	
Links to: Census	Digging deeper: What can we learn from the Domesday Book about England in 1069?	Links to: Economy Society Wealth Peasants	Digging deeper: What was daily life like for medieval peasants?	Links to: Trader Storekeeper	Digging deeper: What sort of items would have been traded at a medieval market?

History: Medieval Life

Write like an Historian

Knights		Villein		Tithe	
Variations: Knight	Definition: A medieval warrior who fought on horseback and served the king.	Variations: Villeins	Definition: Norman term for a medieval peasant, often unfree and legally tied to their local area and landlord.	Variations: Tithes	Definition A 10 per cent tax that was collected from all people, that was paid to the Church.:
Use it in a sentence: The medieval knights were fierce fighters and excellent horsemen.		Use it in a sentence: The villeins were fed up of poor living conditions and decided to rebel.		Use it in a sentence: The tithes were collected every January.	
Links to: Warrior Fighter Soldier Hierarchy Feudal system	Digging deeper: How were knights expected to behave?	Links to: Peasant Serf Serfdom Hierarchy	Digging deeper: What was life like for villeins in the 12 th Century?	Links to: Church Taxes Finance Money	Digging deeper: What were tithes used to pay for?

History: Medieval Life

Write like an Historian

Wattle		Daub		Miasma	
Variations: Wattle and Daub	Definition: A structure made out of branches and twigs that were woven together, often coated in daub.	Variations: Wattle and Daub	Definition: A plaster-like mixture that was made out of mud, clay, and/or animal dung.	Variations: Miasmata	Definition: Evil air
Use it in a sentence: The house was made out of wattle and daub.		Use it in a sentence: The house was made out of wattle and daub.		Use it in a sentence: Medieval people believed illnesses were caused by miasma (evil air).	
Links to: Daub House Peasant Serf	Digging deeper: What were the benefits of using wattle and daub to construct houses?	Links to: Daub House Peasant Serf	Digging deeper: What were the benefits of using wattle and daub to construct houses?	Links to: Disease Black Death	Digging deeper: What caused ill health in medieval towns?

History: Medieval Life

Write like an Historian

Hierarchy		Clergy		Hue and Cry	
Variations: Hierarchies.	Definition: Classifying different groups of people based on importance or value.	Variations: clergymen	Definition: People who worked for the Church, such as priests, monks, and bishops.	Variations: Outcry	Definition: A loud outcry used alarm others of a criminal.
Use it in a sentence: England had a strict hierarchy in the Middle Ages.		Use it in a sentence: The role of the clergy was to teach people how to live Godly lives, so that they would go to heaven when they died.		Use it in a sentence: Peasants were expected to use hue and cry to make sure criminals – like thieves – were caught, as it would alert everyone nearby to the problem.	
Links to: Structure Society Peasants Nobility	Digging deeper: What was the name given to the hierarchy that was introduced by the Normans?	Links to: Church	Digging deeper: What behaviours and characteristics did the clergy teach were important?	Links to: Crime Peasants	Digging deeper: What punishments were used in medieval England?

Geography - Africa

Exports
Africa

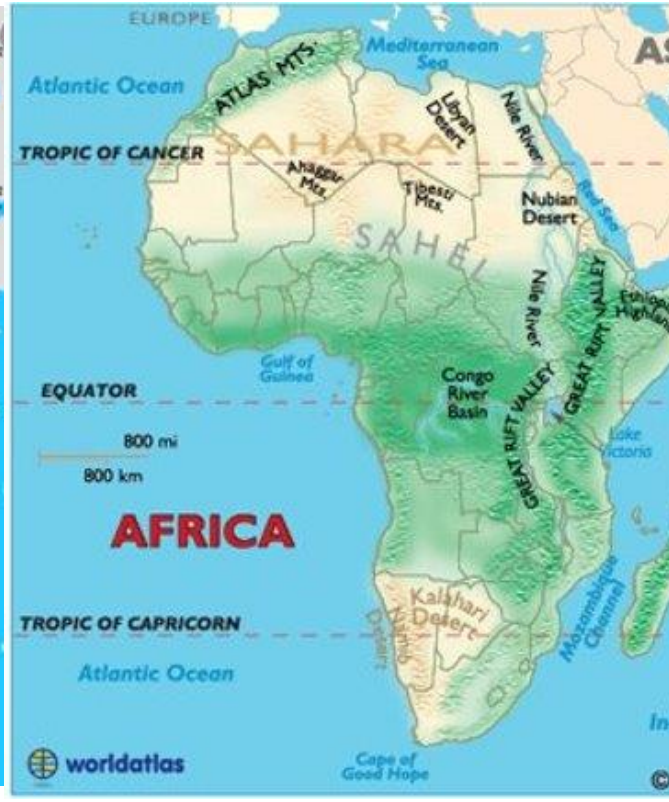


Geography - Africa

Lakes



Deserts and Mountains



Rivers



Geography – S. America

Countries



Rivers



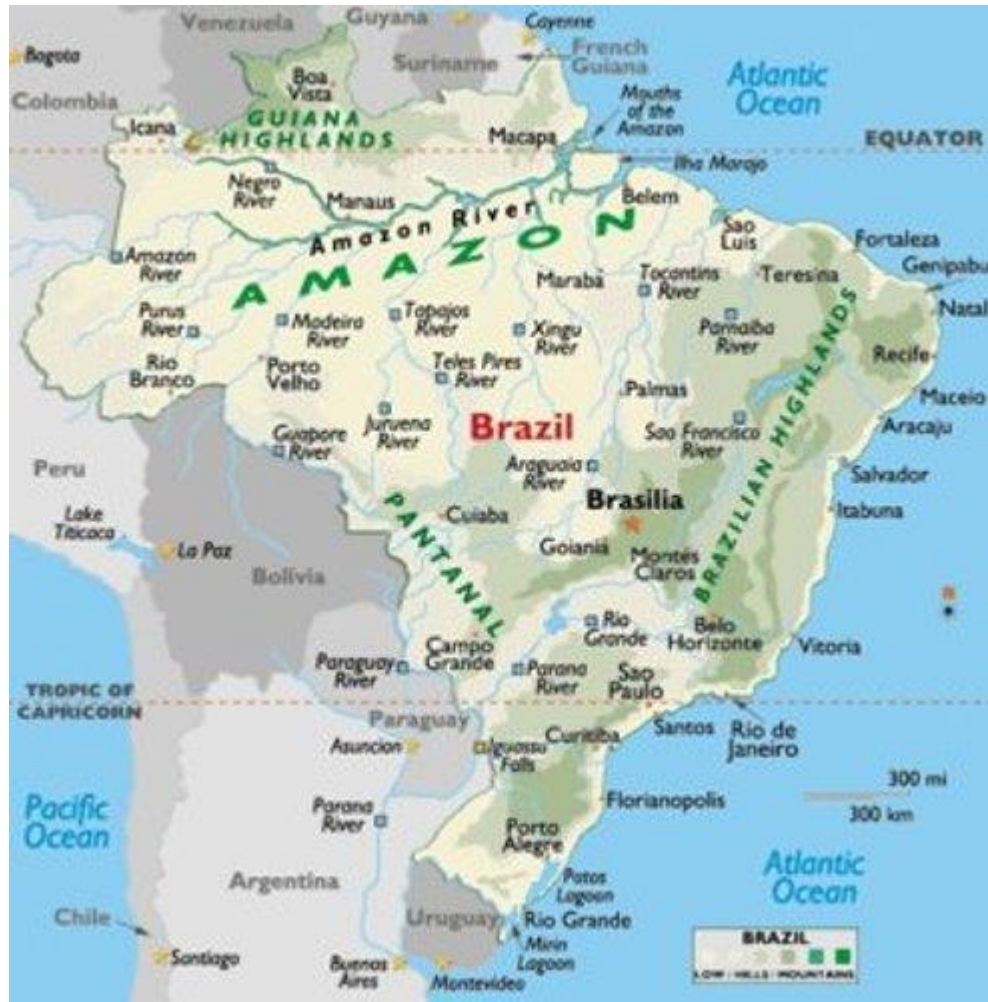
Mountains



Geography – S. America

Climate

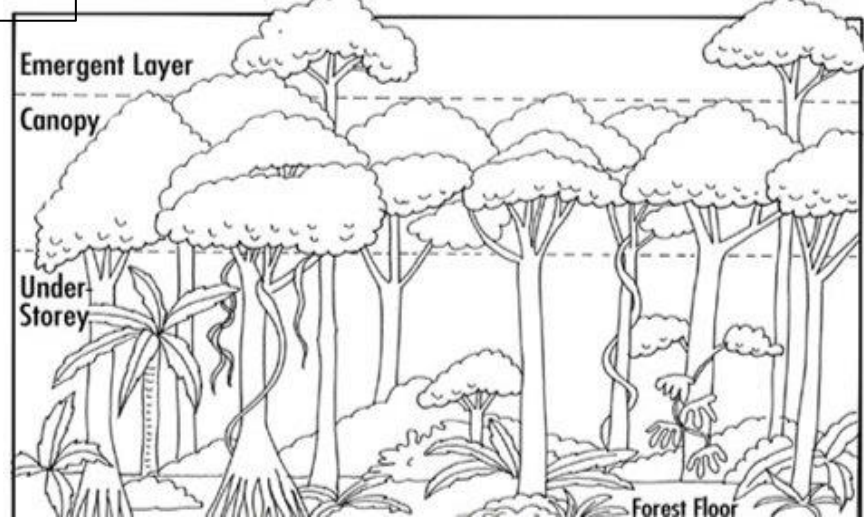
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temp °C	27	27	27	28	28	29	29	30	29	28	27	27
Rainfall (mm)	235	220	245	210	180	140	150	120	130	140	160	200



Favelas



Rainforest Layers



Spanish - Family

Key Verbs	Family Member	Near Future Tense (2nd part)	Possessive Adjectives	Animals
<p>Vivo con... - <i>I live with</i></p> <p>Vivo en York con... - <i>I live in York with</i></p> <p>Me gusta vivir con... - <i>I like to live with</i></p> <p>Tengo... - <i>I have</i></p> <p>No tengo hermanos - <i>I don't have siblings</i></p> <p>Soy hijo/a único/a - <i>I'm an only child</i></p>	<p>Mi familia - <i>my family</i></p> <p>Mis padres - <i>my parents</i></p> <p>Mi mamá / papá - <i>my mum/dad</i></p> <p>Mi abuelo/abuela - <i>my grandfather/grandmother</i></p> <p>Mis abuelos - <i>my grandparents</i></p> <p>Mi madrastra / padrastro - <i>my stepdad/stepmum</i></p> <p>Mi familia acogida - <i>my foster family</i></p> <p>Un hermano - <i>a brother</i></p> <p>Una hermana - <i>a sister</i></p> <p>Dos hermanos - <i>two brothers</i></p> <p>Tres hermanas - <i>three sisters</i></p> <p>Un hermanastro - <i>a stepbrother</i></p> <p>Una hermanastra - <i>a stepsister</i></p> <p>Un hermano menor - <i>a younger brother</i></p> <p>Una hermana mayor - <i>an older sister</i></p> <p>Un tío - <i>an uncle</i></p> <p>Una tía - <i>an aunt</i></p> <p>Dos primos - <i>two cousins (male)</i></p> <p>Dos primas - <i>two cousins (female)</i></p> <p>Un abuelo - <i>a grandfather</i></p> <p>Una abuela - <i>a grandmother</i></p> <p>Un bisabuelo - <i>a great-grandfather</i></p> <p>Una bisabuela - <i>a great grandmother</i></p>	<p>Que se llama – <i>that is called</i></p> <p>Que tiene ... años - <i>who is ... years old</i></p>	<p>Mi - <i>my</i></p> <p>Tu - <i>your (singular)</i></p> <p>Su - <i>his/her</i></p> <p>Nuestro/a - <i>our</i></p> <p>Vuestro/a - <i>your (plural)</i></p> <p>Su - <i>their</i></p>	<p>Un perro - <i>a dog</i></p> <p>Un gato - <i>a cat</i></p> <p>Un pez - <i>a fish</i></p> <p>Un conejo - <i>a rabbit</i></p> <p>Un ratón - <i>a mouse</i></p> <p>Un caballo - <i>a horse</i></p> <p>Una tortuga - <i>a tortuga</i></p> <p>Una serpiente - <i>a snake</i></p> <p>Una cobaya - <i>a Guinea pig</i></p>

Spanish – Descriptions (1)

Key Verbs	Features	Colour	Style	Key Verb	Comparative	Adjective
Tengo - I have Tienes - You have Tiene - He/she/it has Tenemos - We have Tenéis - You have Tienen - They have	el pelo - hair los ojos - eyes	rubio - blonde rojo - red/ginger castaño - brown negro - black Azules - (blue) Marrones - (brown) Verdes - (green) grises - (grey)	rizado - curly liso - straight ondulado - wavy largo - long corto - short	es - It is	también - also y - and pero - but además - moreover sin embargo - however	alto/a - tall bajo/a - short mediano/a - medium-sized gordo/a - fat delgado/a - slim feo/a - ugly guapo/a - beautiful viejo/a - old joven - young musculoso/a - muscular Soy - I am Eres - you are (sing) Es - he/she/it is Somos - we are Sois - you are (pl) Son - they
Un poco: a little, bastante: quite, muy: very						

Spanish – Descriptions (2)

Qué tiempo hace? What is the weather like?

When / if	Weather	Opinion	Activity phrase
<ul style="list-style-type: none"> • Cuando - when • Si - if 	<ul style="list-style-type: none"> • Hace (mucho) calor - it's (really) hot • Hace frío - It's cold • Hace sol - It's sunny • Hace viento - It's windy • Hay niebla - It's foggy • Hay tormenta - It's stormy • Llueve - It rains • Nieva - It snows 	<ul style="list-style-type: none"> • Me mola - I love • Me chifla - I love • Me interesa - ... interests me • Me fascina - fascinates me • Me flipa - I'm crazy about • Mi pasatiempo favorito es - My favourite hobby is • No me gusta - I don't like • No me importa - ... isn't important to me • No me interesa - ...doesn't interest me 	<ul style="list-style-type: none"> • Bailar salsa - to dance salsa • Chatear en el móvil - to chat on the phone • Descansar en casa - to relax at home • Escuchar música - to listen to music • Jugar en la videoconsola - to play games • Leer libros - to read book • Navegar por internet - to search the internet • Practicar deportes - to do sport • Salir con mis amigos - to go out with friends • Ver la tele - to watch TV
			<p>Jugar al – to play</p> <ul style="list-style-type: none"> • Bádminton • Baloncesto - basketball • Balonmano - handball • Béisbol • Fútbol • Golf • Rugby • Tenis • voleibol
			<p>Hacer – to do</p> <ul style="list-style-type: none"> • Atletismo • Ballet • Boxeo • Ciclismo • Equitación - horseriding • Gimnasia • Natación - swimming

Computing

Workbook

A spreadsheet **workbook** is made up of many sheets.

Active Cell

The **Active Cell** is the cell that is being worked in at the moment.

Row

Rows in a spreadsheet go across a worksheet and are labelled with a **number**.

Column

Columns in a spreadsheet go up and down a worksheet and are labelled with a **letter**.

Cell Reference

A **cell reference** is made up of the column letter followed by the row number e.g. D8.

Currency

Used to represent **monetary** values e.g. £,\$ or €.

What is a Spreadsheet?

A **spreadsheet** is a file made of rows and columns that help sort data, arrange data easily, and **calculate numerical data** using **mathematical formulas** and the data in cells. You can use spreadsheets to enter data, calculate equations and create charts and graphs.

Modelling with Spreadsheets

Computer models of mathematical data, such as budgets, are usually done using a spreadsheet application that processes and performs calculations on the data entered by the user.

Charts and Graphs

Charts and graphs provide a visual representation of data, which can often be easier to understand.

There are several types of charts. Choose a chart based on the type of data to be displayed.

Formula

A **formula** is a calculation in a spreadsheet. It uses the **cell references** instead of the values contained in the cells. **Formulas** are usually simple calculations, e.g. adding two or more numbers together. They always start with an equals sign (**=**).

Calculation	Symbol Used	Example
Adding	+	=A1+B1
Subtracting	-	=A1-B1
Multiplying	*	=A1*B1
Dividing	/	=A1/B1

Functions

Functions make more complex calculations. Simple and regularly used functions include:

Function	Description
SUM	adds values in selected cells
MIN	finds smallest value
MAX	finds largest value
AVERAGE	finds the average value

Like **formulas**, all **functions** start with an equals sign (**=**) followed by the **function's** name.

Religious Studies

Key Words

Stewardship- This is the belief that human beings have a moral responsibility to take care of the planet and all living beings.

Climate Change -The rise in average global temperatures due to human activity, e.g. burning of fossil fuels.

Creation Story- Most religions teach that God created the world in a perfect state. Creation stories are contained in holy books and detail how God carefully and purposely designed creation.

Khalifah- In the Qur'an , God calls Adam (the first man God created) his khalifah . This means that God entrusted Adam and all future generations of people to look after the world. A khalifah is a steward – someone who looks after something for someone else.

Environmental Activism- The actions of individuals or groups that protect or aid the environment. This could include protests, boycotts and other campaigns.

The idea of **stewardship** is thousands of years old. It is the idea that God created the world and everything in it. Therefore, most Christians believe that God gave to humans a special responsibility to guard the planet and use its resources wisely and respectfully.

“ *God took man (meaning Adam) and put him in the Garden of Eden to work it and take care of it.*” (Book of Genesis) This quotation is from the book of Genesis in the Bible; it contains the Christian creation story where God creates the Earth and everything in it.

A **steward** is a person who is careful not to damage the environment and thinks carefully about how their day-to-day actions impacts on the world around them. Most Christians consider themselves to be stewards of the Earth.

Many non-religious people (and religious people too) are deeply concerned for the future of the planet. There are lots of examples of non-religious people who are **environmental activists**. These activists strive to take personal responsibility for the environment, as well as encouraging others to do so

Climate change was not an issue 2,500 years ago, when the Buddha lived, so there are no specific teachings about it in Buddhism. However Buddhists believe that it is wrong to kill or harm any living thing, this includes: animals, plants and the eco-systems in which they live.



Design Technology-Materials

Natural fibres

Natural fibres are all derived from vegetation, cellulose-based materials, as well as products that are made from animals.

Natural fibre	Properties	Use
Cotton	Cool, cheap, strong, renewable	Denim jeans, shirts, lightweight clothing
Bamboo	Cheap, renewable, soft, absorbent, comfortable	Knitwear, socks
Linen	Renewable, strong, creases easily	Lightweight clothing
Wool	Soft, hardwearing, renewable	Knitwear, carpets
Silk	Expensive, renewable, drapes (hangs) well, good insulation properties (cool in summer, warm in winter)	Wedding dresses, ball gowns

Synthetic fibres

Synthetic fibres are not plant or animal based; they are made from polymers that are derived from **petrochemicals**.

Synthetic fibre	Properties	Use
Polyester	Cheap, durable, non-renewable	Shirts, school uniform
Acrylic	Warm and soft, non-renewable	Bedding, clothing
Viscose	Cheap, lightweight, versatile, non-renewable	Clothing, underwear
Acetate	Resistant to degradation, cheap, no elasticity, non-renewable	Shiny, reflective clothing and curtains

Design Technology- Types of Stitch

How to do the Back Stitch

Back Stitch is made by taking the thread backward than the conventional forward motion, and thus the name.

It can take curves well. There are no spaces between each stitch, giving it a continuous appearance. Like the Running Stitch, the Back Stitch also lays a foundation for many variations over it.



How to do the Running Stitch

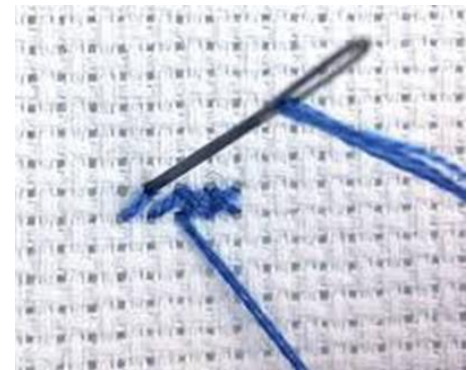
The Running Stitch is done by running the needle and thread up and down the cloth at a regular distance. Keep the stitch consistent to make your work look beautiful.

The length of the stitch on the front side can vary from that on the underside. Usually, there is more thread shown on the front than the underside in a running stitch.



How to do the Cross Stitch

Start your first cross stitch at the top of the design (top left if you are right-handed and top right if you are left-handed). At the end of every cross-stitch row, release the needle (let it hang freely) so the thread can unwind – this will prevent knots forming. When creating a half stitch or completing a full stitch, stop pulling the thread through the fabric when you feel resistance. This keeps the tension loose and creates more even looking stitches.



Art, Craft & Design

AO1

Develop ideas through investigations, demonstrating critical understanding of sources.

25% of your project mark

Theme exploration.
Mindmaps / Collected images.
Facts & statistics.
Interviews.
Artist research & analysis.
Art movements & time periods.
Trips, museums & galleries.

AO2

Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

25% of your project mark

Experimenting with different materials.
Improvements.
Testing ideas.
Contact sheets with selections.
Repeating ideas in materials.
Developed ideas.

AO3

Record ideas, observations and insights relevant to intentions as work progresses.

25% of your project mark

Observational drawings.
Photography.
Annotations.
Ideas.
Planning for tests or photoshoots.
Thumbnail sketches.

AO4

Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

25% of your project mark

Final outcomes.
Final design plan explaining links to prior learning.
Meaningful connections within the work.

Art, Craft & Design: Line

Proportion : the dimensions (sizes) of an image or item and the relationships between height, width and depth.

Observation : What you see

Observational drawing : A drawing of something directly in front of you

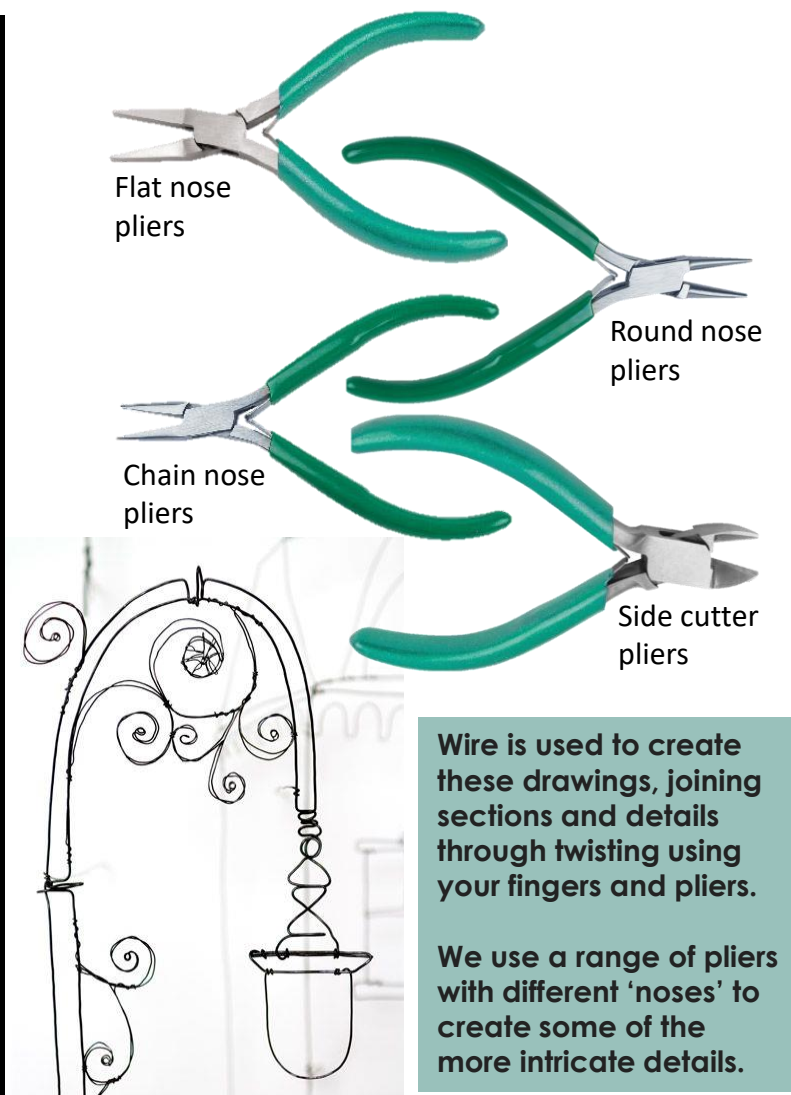
Line drawing : A drawing with no shading added to it.

Ellipse : A circle seen in perspective – such as the top of a teacup.

2D : an object that only occupies space in height and width and is therefore flat.

3D : an object that occupies space in height, Width and Depth and appears to come out of the page.

Detail : the precise designs, patterns and shapes found on the items we are drawing and creating.



Helaina Sharpley uses Iron wire to create intricate and elegant three dimensional wirework wall pieces, that cross the boundaries between drawing and sculpture. Initially inspired by tea and tea drinking, she is also inspired by the decorative designs linked to the Edwardian and Victorian time periods.

Art, Craft & Design: Pattern

Patterns are all around us, in nature as well as in art and design. We see patterns where shapes, lines or colours are repeated.

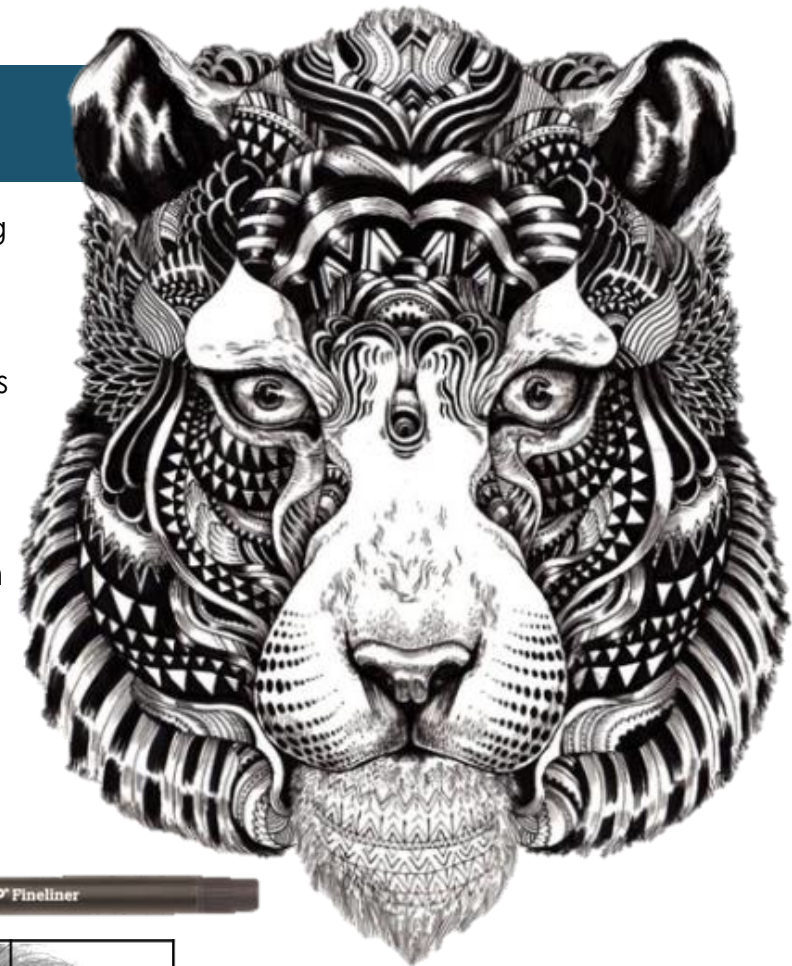
Geometric patterns are repeating arrangements of regular shapes such as squares, triangles, circles & lines.

Organic patterns are created from shapes based on nature, curved swirly lines and not always repeating

Texture is the look & feel of a surface

Iain Macarthur suggests tone through varying the density of his markmaking and patterns. This means he puts patterns closer together (with less white space showing) for darker areas and spreads it out or uses smaller marks for lighter areas, (increasing the amount of white showing through).

Iain Macarthur uses different patterns to create the different areas and textures within his work. He changes the direction of his patterns and sectioning to help give an idea of texture.



Tone is the darkness or lightness of an object.

Reminders

Lighter tones are used to indicate the light source, or where the light reflects off of, and/or shines on an object.

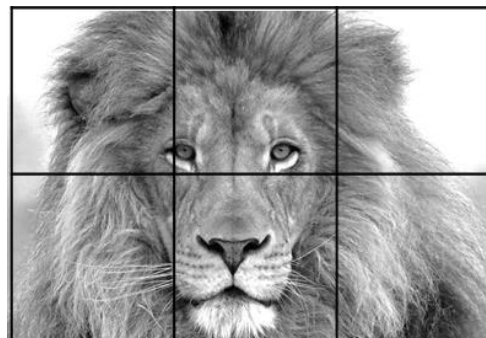
Darker tones are used to indicate the lack of light.

Highlight – Where light directly hits the object it is the lightest part.

Midtone - A medium tone, one that is neither very dark nor very light.

Shadow - Is the dark side on an object not facing the light.

Continuous line drawing – Drawing without taking your pen or pencil off the page.



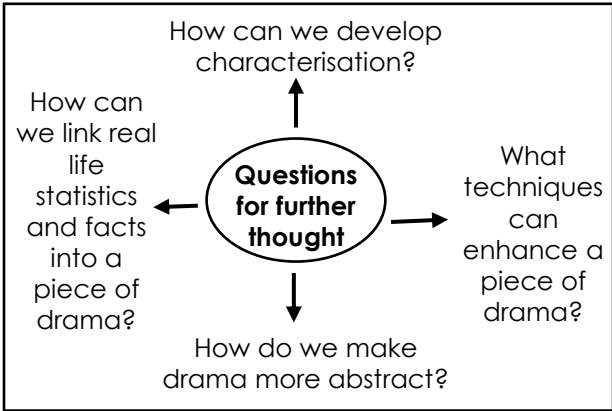
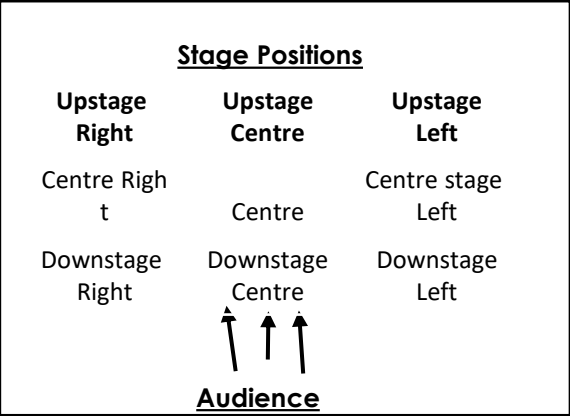
The grid drawing method is used to create realistic drawings based on an image such as a photo or magazine. You can focus on the elements of each square at a time, increasing the accuracy of your drawing and its proportions.

PERFORMING ARTS



Text related terminology
 Text related terminology
 Stage directions –where actors are stood on stage
 Atmosphere –the mood created
 Key moments –main points in a play
 Character relationships –how characters interact
 Monologue –a speech for one person
 Duologue –a speech for two people
 Dialogue –a conversation between two or more
 Artistic Intention – What does the playwright want the audience to think, feel and understand?
 Character Motivation/Objective – what does the character want in a scene/in the play?
 Mental institution – a residential hospital for people with mental conditions

Skills and techniques
 Projection –making the voice travel
 Voice expression –showing emotion through voice
 Facial expressions –showing emotion through the face
 Body language –showing emotion through the body
 Still image –a still picture created physically
 Role on the wall – showing a character's inner thoughts and feelings



Music

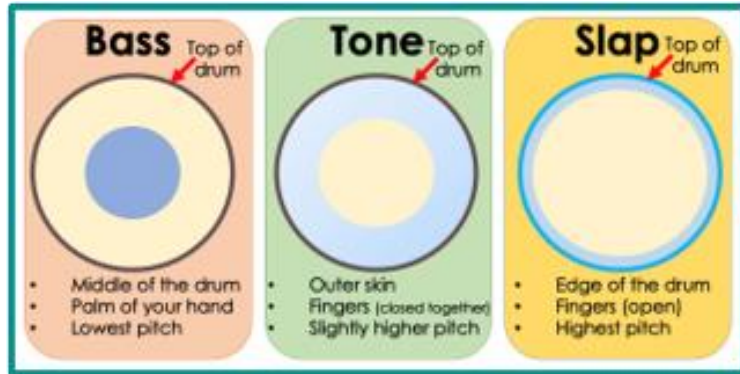
Rhythm
Melody
Harmony
Tempo
Timbre
Structure
Dynamics



C Major Scale (Open Position)



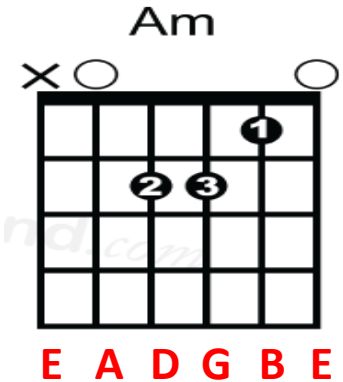
Djembe techniques



Taiko means 'drum' in Japanese. They were originally used to build warrior's confidence on the battlefield.



Samba is from Brazil and is traditionally used at Carnivals. For example, the Notting Hill Carnival, held in London each year.



Ganza



Surdo



Tambourim



Agogo bells



Repinique

PE-Basketball

Skills	
Chest pass	Hold ball with fingertips and thumbs behind ball, wrists cocked slightly. Ball at chest with elbow to sides, flick ball from hands
Bounce Pass	Hold the ball with fingers and thumbs behind the ball, ball starts at chest and then travels down bouncing 1m away from your partner.
Shoulder Pass	Ball on fingertips with elbow at a right angle to body. The hand is behind the ball. The opposite foot forward with hand and transfer weight forward. Extend arm forward releasing ball off fingers
Dribbling	Finger tips to push the ball, not a slap. Contact the ball at hip height or lower. No double handed dribbles
Jump Shot	Shooting hand behind ball, non-hand at side / underneath. Jump, extending legs, shoulders, and elbow. Flex wrist and fingers forward releasing the ball off index finger at the top of the jump. Finish with arm extended and palm facing down.
Lay up	Dribble ball to the side of the basket, hold the ball with 2 hands, take 2 steps with the last step being the opposite foot to shooting hand. Take off extending the shooting arm raising the ball up towards the basket, knee drives up and then pushes down.

Rules	
Rule 1	5 Players on the court at a time with rolling substitutions
Rule 2	Double dribble- players can no longer continue to dribble the ball once they put two hands on the ball.
Rule 3	Once you have possession of the ball in your attacking half you cannot pass back over the half way line.
Rule 4	You can intercept a ball from a player when they are dribbling and take it out of their hands if they are stood with the ball.
Rule 5	Teams have a limited amount of time, 24 seconds to score when in possession of the ball

Scoring
3 points for a shot scored outside of the 3 point line. 2 points for a shot scored from inside the 3 point line. If a technical foul is awarded then between 1 on 3 free shots will be taken.

Fitness Components Required					
Speed	Co-ordination	Cardiovascular endurance	Power	Flexibility	Agility

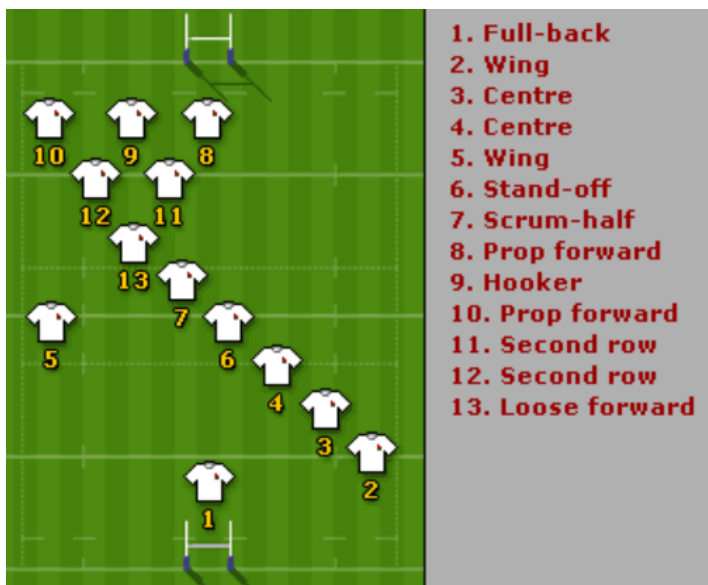
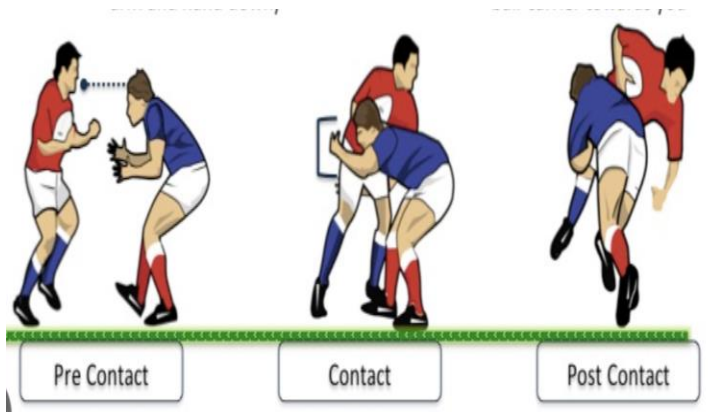
Key Vocabulary	
Mark	Mark your opponent and win the ball
Intercept	Winning the ball by stopping the ball reaching the player.
Layup shot	Dribble the ball and take 2 steps towards the net, then using one hand to bounce the ball off the backboard into the basket to score.
Set Shot	Taking a shot at the basket from a standing position.
Jump Shot	Take a shot at the basket whilst jumping. The ball is released whilst you are in the air.
Dodge	Movement to get away from your defender
Dribble	To win the ball off the opposition



PE-Rugby League

Key Vocabulary

Try	A try is scored when a player touches the ball down over the line
Tackle	A safe tackle is below the shoulders
High Tackle	A tackle about the shoulders
Play the ball	Once you are tackled the player stands up and rolls the ball backwards with their foot
Knock on	When a player knocks the ball forward
Scrum	When a penalty, knock on or forward pass is given the game is restarted by a scrum
Conversion	Rugby conversion rules are a set piece of play which follow a try.



Skills

Grip	The way you hold the ball when carrying the ball or passing
Carrying the ball	Running whilst holding the ball
Pass	Passing the ball behind you to a team mate
Tackling	Tackling a player with the ball by a front, side or behind tackle.
Kick	Kicking the ball

Rules

Rule 1	The winning team is the team who scores the most points
Rule 2	There are 13 players in a rugby league team
Rule 3	The ball must be passed backwards
Rule 4	The team with the ball have 6 chances (tackles) to score
Rule 5	To stop the other team you must perform a safe tackle
Rule 6	A player is offside when they are in front of his team member who has possession of the ball.

Scoring

Try = 4 pts
Conversion = 2pts
Penalty = 2 pts
Drop kicks = 1pts

Fitness Components Required

Power	Agility	Speed	Muscular Endurance	Stamina
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PE-Table Tennis

Key Vocabulary	
Ready position	The position a person should stand in when preparing to hit the ball
Let	When the point is replayed
Receive	The person who receives the ball from the serve
Bat	The name given to the wooden bat that hits the ball
Serve	The way to start the game
Point	The name given when the player wins the rally
Net	The dividing net that separates the court
Rally	The ball being hit backwards and forwards between two players
Spin	Placing spin on the ball to make it harder to hit the ball
Grip	Holding the bat in the correct position

Rules	
Rule 1	Games are played to 11 points
Rule 2	Alternative serves every two points
Rule 3	Toss the ball up when serving
Rule 4	The serve can land anywhere in singles
Rule 5	In doubles the serve must go right side of the table to the other right side of table
Rules 6	A serve that touches the net and drops over the net is called a 'let'
Rules 7	Alternative hitting when playing doubles
Rules 8	The server must show the ball to the opposition

Skills	
Back hand drive	A shot where the player drives the ball
Forehand drive	A shot where the player drives the ball
Forehand push	A shot where the player pushes the ball
Backhand push	A shot where the player pushes the ball
Serve	The way a player starts the rally

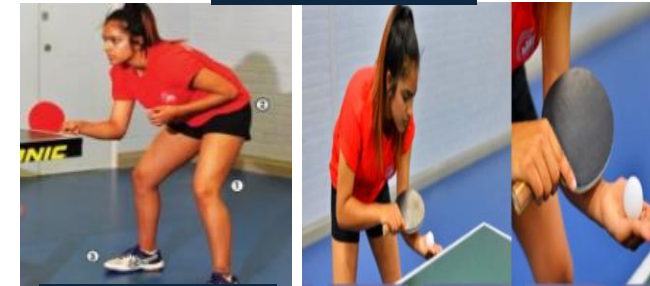
Fitness Components Required				
Speed	Co-ordination	Stamina	Power	Flexibility



Backhand shot



Forehand shot



Ready Position

Serve

Ready Position The ready position is a key starting point when fielding. It provides you with the best opportunity to catch and/or stop the ball and allows you to move into position quickly.



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