MALTBYLEARNINGTRUST
Exceptional Experiences. Successful Lives.

MALTBY ACADEMY

YEAR 9 TERM 2 2023-2024

KNOWLEDGE ORGANISER

WWW.MALTBYACADEMY.COM

MALTBY ACADEMY

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.

Contents

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

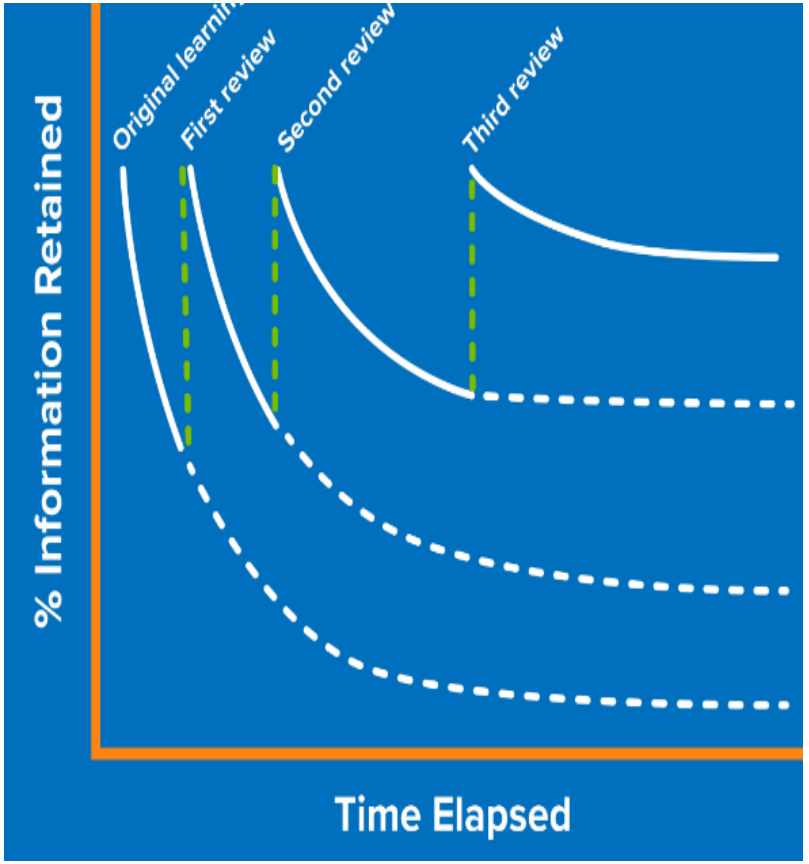
The Forgetting Curve

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: *Rethinking Shakespeare: Hamlet*

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.

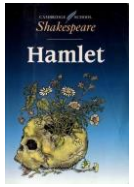
In **Week B**, you will use these same words to complete a short piece of **writing**. You will use the information on this sheet to support you.

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

Hamlet:

Troubled teenager Hamlet struggles to come to terms with the recent death of his father. Upon learning the horrific details of his death, Hamlet's mind and life begin to unravel.

With ample opportunities to learn about, and discuss, themes still relevant to the modern day, Shakespeare's play allows us to explore the importance of feminism, family, revenge, and violence.



Week A/B 1:
1. Unfold
2. Rivals
3. Bitter
4. Dreaded
5. Entreated
6. Apparition
7. Fortified
8. Illume
9. Harrow
10. Avouch

Week A/B 2:
1. Discretion
2. Befitted
3. Auspicious
4. Scarcely
5. Denote
6. Commendable
7. Impious
8. Vulgar
9. Requite
10. Tenable

Week A/B 3:
1. Compassion
2. Surmise
3. Feign
4. Bestow
5. Devotion
6. Judicious
7. Profanely
8. Indifferent
9. Foul
10. Censure

Week A/B 4:
1. Gulf
2. Majesty
3. Purge
4. Idle
5. Visage
6. Divulge
7. Untimely
8. Conjure
9. Hectic
10. Chaos

Week A/B 5:
1. Superfluous
2. Valour
3. Acquittance
4. Revert
5. Contrive
6. Virtue
7. Countenance
8. Revolution
9. Assurance
10. Ambiguous

Week A/B 6:
1. Indiscretion
2. Divine
3. Insinuation
4. Exception
5. Disclaim
6. Ignorance
7. Palpable
8. Scant
9. Union

Science: Skills

Independent variable: the one thing that is changed.
Dependent variable: the one thing that is measured.
Control variables: things that are kept the same.

Six Golden Rules of Line Graph Drawing

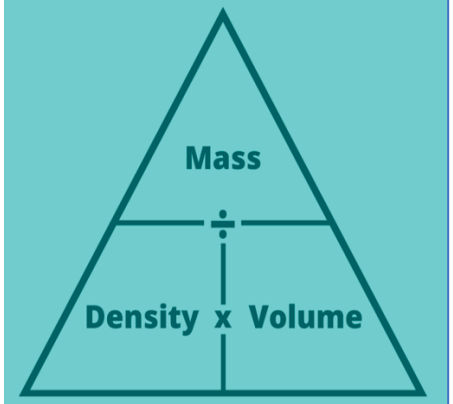
1. Draw with a pencil and ruler
2. Add a title that includes the units on the axis.
3. Label both axis with units.
4. Use even scales, e.g. going up in 5s each time.
5. Plot points with an 'X'
6. Draw a line of best fit close to or through as many points as you can. Ruler if the points appear straight, free-hand smooth curve if points appear curved.

Top Tips

- Never use the word 'amount.'
- If you are referring to a liquid, then use volume.
- If you are referring to a solid, then use mass.
- A thermometer measures temperature NOT heat.
- A balance measures mass NOT weight.
- Use a measuring cylinder to find volume, NOT a beaker.
- If a reaction produces a gas DO NOT call it steam.

To convert	Unit	How many millimetres it is	To convert
	Millimetre (mm)	1 mm	
× 1000			÷ 1000
	Micrometre (μm)	0.001 mm	
× 1000			÷ 1000
	Nanometre (nm)	0.000001 mm	

Density (kg/m^3) = mass (kg) / volume (m^3)
ρ m v



Density = mass / volume
Mass= density x volume
Volume= mass /density

Density of an Irregular Object

1. Find the mass of the irregular object using a balance.
2. Fill a eureka can with water just below the spout.
3. Place a measuring cylinder underneath the spout.
4. Place the irregular object into the eureka can without splashing.
5. Measure the volume of water that goes into the measuring cylinder.
6. Do mass divided by volume to find the density of the irregular object.

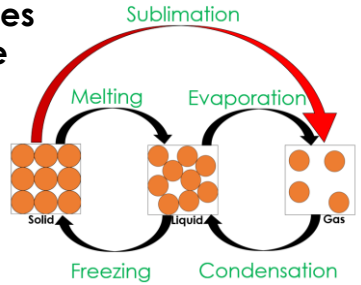
Science: Particle model of matter

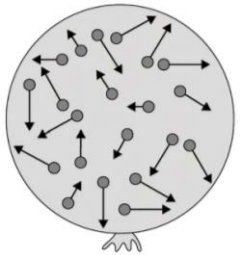
<u>Internal energy</u> = the total kinetic energy and potential energy of all the particles that make up a system. Temperature = the average kinetic energy of particles

States of matter: Almost all substances can be put into the category of "solid, liquid or gas". These are called the states of matter.

	Solid	Liquid	Gas
			
Arrangement of particles	Particles in rows, touching	Particles random but touching	Particles random not touching
Can particles move?	Particles do not move	Particles slide past each other	Particles are always moving
Energy of particles	Very small amount of energy	Small amount of energy	A lot of energy
Fill a container?	Does not fill a container	Fill a container	Fill a container

Changes of state





When heating a substance, this increases the kinetic energy of particles (the diagonal parts of the graph). Therefore, the internal energy increases. When a substance changes state, the heat energy is used to weaken the forces holding the particles together, so the temperature does not change, so the kinetic energy does not change. However, the potential energy increases, so the internal energy increases.

Boiling point and melting point: the boiling point is a **temperature** that something will turn from a liquid to a gas, or gas to liquid. The melting point is the temperature something will turn from a liquid to a solid, or solid to a liquid.

<u>Required practical - calculating</u> <u>density of different shapes</u>

A **regular shape** is a shape that you can measure the sides of, e.g. a rectangular block.

- The find the **volume** you do **length x width x height**, in m^3
- To find the **mass** of the regular object you use a **balance**
- **Then you would do density = mass ÷ volume**

An **irregular shape** is a shape that you can't measure the sides of, e.g. a rock.

1) To find the **volume** of the shape, you fill a **displacement can** with water, lower in the shape attached to string, and then the displaced water into the **measuring cylinder** is the **volume**.

2) Again, to find the **mass** of the regular object you use a **balance**

3) **Then you would do density = mass ÷ volume**

The energy needed to change the temperature of 1kg by 1°C is called the **specific heat capacity.**

The energy needed to change the state of 1kg of a material is called the **specific latent heat.**

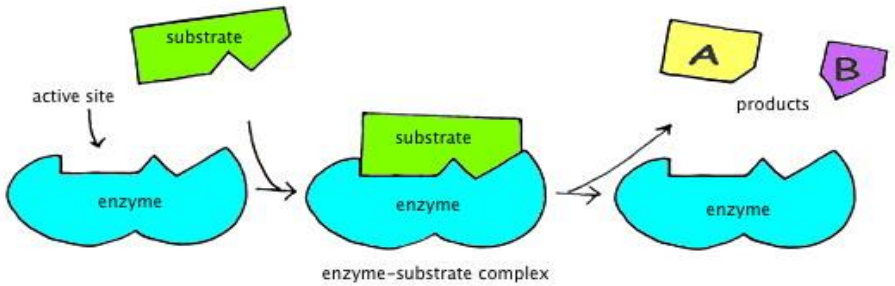
Gas Pressure: Is caused by the collisions of particles with the walls of a container. As the temperature of a gas increases (if the volume stays constant), the particles gain kinetic energy, hit the walls of the container more, so the pressure increases. If the volume of a container decreases, the gas particles will hit the walls of a container less therefore pressure decreases. A high temperature in a small volume could cause too high pressure and lead to an explosion.

Science: Organisation

Cells: the basic unit of life, e.g. red blood cell.
Tissue: group of cells working together to perform a function, e.g. muscle.
Organ: a group of tissues working together to perform a function e.g. bladder.
Organ system: a group of organs working together to perform a function e.g. digestive system.

Protein: for growth and repair, e.g. meat.
Vitamins & minerals: needed for the functioning of a healthy body, e.g. fruit and vegetables.
Carbohydrates: for energy, e.g. bread and pasta.
Fat: for insulation and the slow transfer of energy.

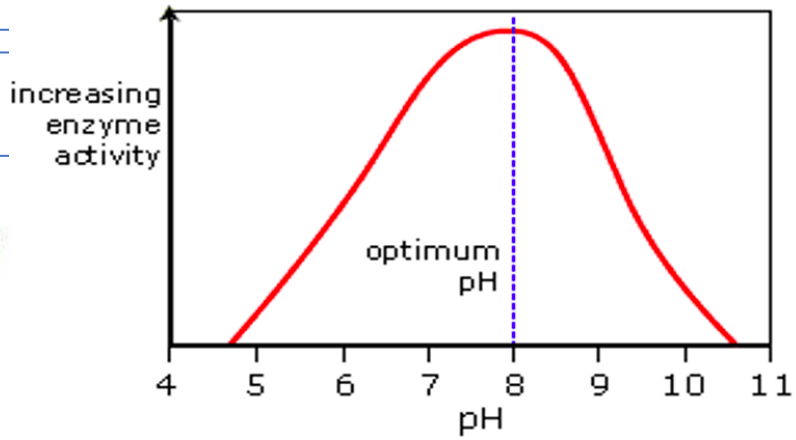
Enzymes: a biological catalyst that speeds up chemical reactions.



Enzymes allow the nutrients from food to be absorbed by making **large insoluble** molecules into **small soluble** ones. It **catalyses** (speeds) up chemical reactions. They are **proteins** that have a very specific shape, if the **active site** changes shape then they are said to be **denatured** and can no longer do their job. **High temperature** and **extreme pH** can cause enzymes to denature. If a word ends in **'ase'** then it is an enzyme.

- **Amylase** breaks down starch (found in carbohydrates).
- **Protease** breaks down proteins.
- **Lipase** breaks down fats.

- **Benedict's** is blue and turns red with sugars.
- **Biuret** is blue and turns purple with proteins.
- **Iodine** is brown and turns black with starch.



This enzyme's **optimum** (best) pH is pH 8. Enzyme activity increases until the optimum is reached, afterwards enzyme activity decreases until the enzyme is **denatured** at pH 10.5 as enzyme activity is 0.

Science: Organisation

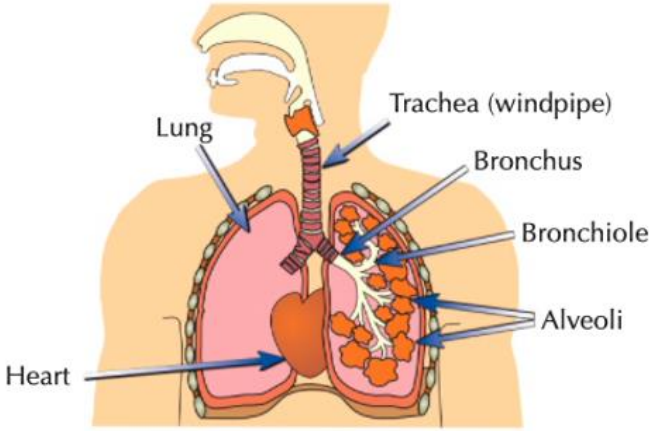
Red blood cell: carries oxygen to body cells, has no nucleus.
White blood cells: destroys pathogens by phagocytosis or by producing antibodies or by producing antitoxins.
Platelets: fragments of cells that clot wounds.
Plasma: the liquid part of blood, it also carries hormones, glucose and CO_2.

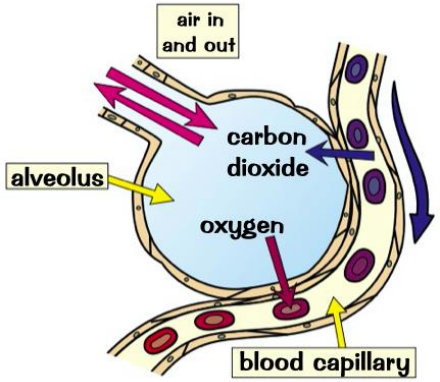
Arteries: thick, elastic muscular wall to cope with the high pressure of blood (can recoil).
Veins: largest lumen (hole down the middle) and has valves to prevent the backflow of blood.
Capillaries: one cell thick to allow substances to diffuse into and out of them.

Coronary arteries supply the heart (cardiac) muscle with oxygen. They can become blocked with **fatty deposits**, so not enough oxygen gets to the cardiac muscle, this is known as **coronary heart disease** (CHD), this causes it to die. When the heart stops beating someone has gone into **cardiac arrest** (heart attack). **Lifestyle factors** can increase the risk of CHD:

- Fatty diet
- Smoking
- Lack of exercise

Communicable disease: caused by pathogens and can be spread, e.g. HIV and the common cold.
Non-communicable disease: inherited and cannot be spread, e.g. cancer and diabetes.





There are millions of **alveoli** (tiny air sacs) in the lungs. They are **one cell thick** so **oxygen** can diffuse out of them and into **red blood cells** and so carbon dioxide can diffuse out of the **plasma** and into them to be breathed out. They are surrounded by a network of **capillaries** that allows this diffusion to take place due to the **steep diffusion gradient** that is maintained.

Health: a state of physical and mental wellbeing.

History: World War II

Write like an Historian

Treaty	
Variations: Treaties	Definition: A formal agreement between different countries.
Use it in a sentence: The Treaty of Versailles harshly punished Germany for its role in World War One.	
Links to: Agreement Peace	Digging deeper: Why were Germans so angry at the Treaty of Versailles?

Occupation	
Variations: Occupy Occupier Occupied	Definition: To be controlled by a military power.
Use it in a sentence: By 1940, the Nazis occupied most of Western Europe.	
Links to: Control Invasion Conquest Captured Overrun	Digging deeper: Why were the Nazis unable to occupy Britain in 1940?

Evacuation	
Variations: Evacuate Evacuee Evacuated	Definition: To divide a country or state into parts.
Use it in a sentence: Children from towns and cities across Britain were forced to evacuate in order to escape the destruction of the Blitz.	
Links to: Move away Leave Abandon Flee Escape	Digging deeper: Why was it necessary to evacuate people in World War Two?

History: World War II

Write like an Historian

Invasion	
Variations: Invasion Invader Invaded	Definition: To treat someone unfairly in order to benefit from their work.
Use it in a sentence: The invasion of Poland by Nazi Germany led to the British declaring war in September 1939.	
Links to: Takeover Attack Overrun Conquer Military	Digging deeper: How did the British prevent an invasion by Nazi Germany?

Civilian	
Variations: Civilians	Definition: A person not in the armed forces or police force.
Use it in a sentence: British civilians helped win World War Two on the home front by working in factories and growing food.	
Links to: Citizen Person People Home front Blitzkrieg	Digging deeper: How were civilians in the UK affected by World War Two?

Rationing	
Variations: Ration Rationed	Definition: Saving resources by giving each person a fixed (limited) amount of food or goods.
Use it in a sentence: In order to keep control of its colonies, the British Empire ruled through oppression.	
Links to: Restrictions Conserve Give out Distribute Share	Digging deeper: How important was rationing in winning World War II?

History: Civil Rights (Other Groups)

Write like an Historian

suffrage	
Variations:	Definition: The right to vote in political elections.
Use it in a sentence: Many people campaigned for universal suffrage – the right for all adults to be able to vote.	
Links to: Voting Women's Rights Enfranchisement Vote Right to vote	Digging deeper: Does everybody value the right to vote?

martyr	
Variations: Martyrs Martyred	Definition: Is someone who suffers persecution and death for advocating, renouncing, or refusing to renounce or advocate, a religious belief or other cause as demanded by an external party.
Use it in a sentence: In giving her life at the Derby, some believe Emily Davison was a martyr for women's rights.	
Links to: Civil rights Persecution sympathy	Digging deeper: What other martyrs have there been in history?

oppression	
Variations: Oppress Oppressing Oppressor Oppressed	Definition: Cruelty or unjust treatment by one person or country to another.
Use it in a sentence: In order to keep control of its colonies, the British Empire ruled through oppression.	
Links to: Tyranny Cruelty Coercion Domination	Digging deeper: What actions can people take to fight back against oppression>

History: Civil Rights (Other Groups)

Write like an Historian

Posthumously	
Variations: Posthumous	Definition: Used to describe something that happens after a person's death.
Use it in a sentence: Years after the battle, the dead soldier was posthumously awarded the Victoria Cross.	
Links to: Retrospectively Afterward Later	Digging deeper: What is the point in doing something posthumously? The person is already dead.

civil disobedience	
Variations:	Definition: Is the active, professed refusal of a citizen to obey certain laws, demands or commands of a government.
Use it in a sentence: Gandhi led a civil disobedience campaign to end rule of the British Empire in India.	
Links to: Revolution Rebellion Unrest Disturbance Uprising.	Digging deeper: What factors make a civil disobedience campaign successful?

encryption	
Variations: Encrypted encrypt	Definition: The process of converting information or data into a code, especially to prevent unauthorised access.
Use it in a sentence: Encryption was used by the Nazis in WW2 to send secret messages the British could not understand, even if they intercepted them.	
Links to: encoding	Digging deeper: Could Britain have won WW2 without breaking the code for the Enigma encryption machine?

History: Civil Rights (Other Groups)

Write like an Historian

movement	
Variations: movements	Definition: A group of people working together to advance their shared political, social or artistic ideas.
Use it in a sentence: Martin Luther King was one of the leaders of the Civil Rights movement in the United States in the 1950s and 1960s.	
Links to: Party, faction, organisation, grouping, wing, camp.	Digging deeper: What motivates people to become part of a movement?

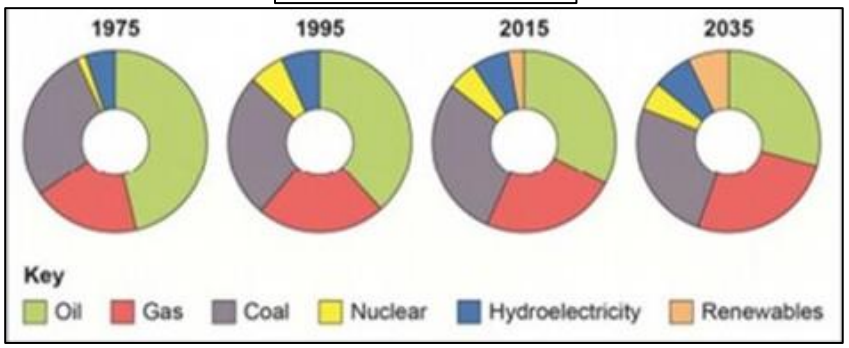
homophobia	
Variations: homophobic	Definition: Dislike or prejudice against gay people.
Use it in a sentence: Homophobia was very much a driving force in the Stonewall Riots.	
Links to: Prejudice Preconception Prejudgement bigotry	Digging deeper: What are the causes of homophobia?

inequality	
Variations: Unequal inequalities	Definition: Difference in size, degree, circumstances etc: lack of equality.
Use it in a sentence: There are many inequalities in society today that are linked to gender, age and class.	
Links to: Disparity Variation Unfairness Inequity	Digging deeper: Do we just have to accept the world will always have inequalities, no matter what we do?

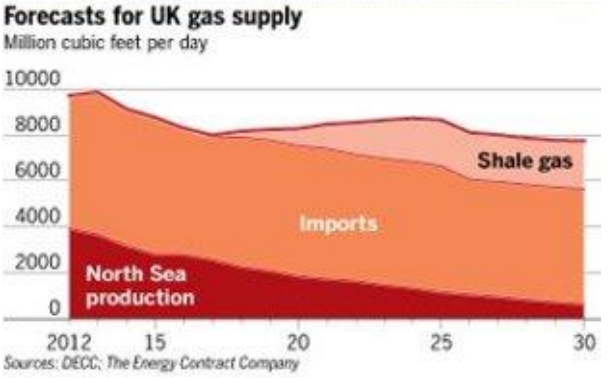
Geography – Resources

Renewables

UK Energy Mix



Fracking Sites in UK



Fracking: this involves drilling into rock, blasting water into cracks in the rock at high pressure to loosen gas pockets and extracting this gas to use as energy.

Geography – Weather/Climate

Category	Wind Speed (mph)	Damage at Landfall	Storm Surge (feet)
1	74-95	Minimal	4-5
2	96-110	Moderate	6-8
3	111-129	Extensive	9-12
4	130-156	Extreme	13-18
5	157 or higher	Catastrophic	19+

Saffir-Simpson Hurricane Scale

Primary effects – The first effects of a natural disaster, e.g. buildings destroyed, people killed/ injured.
Secondary effects – Happen because of the primary effects, e.g. No access to clean water can lead to spread of disease.

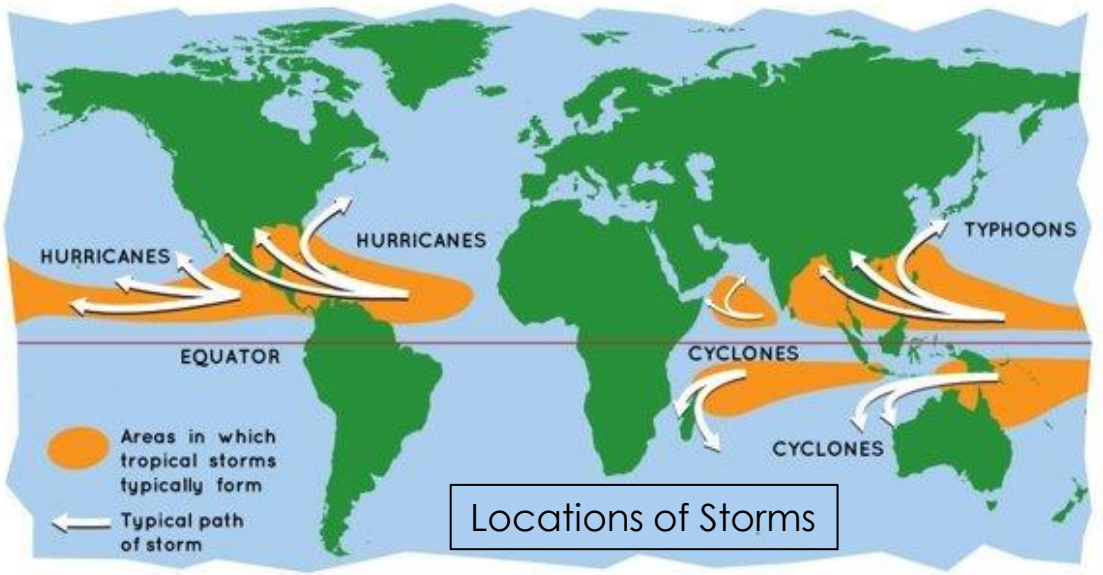
Short-term responses - The reaction of people as the disaster happens and in the immediate aftermath.
Long-term responses - Later reactions that occur in the weeks, months and years after the event.

Climate is the average weather conditions for a larger area such as a country or region over a 30-year period.

Weather describes the day-to-day conditions of the atmosphere.

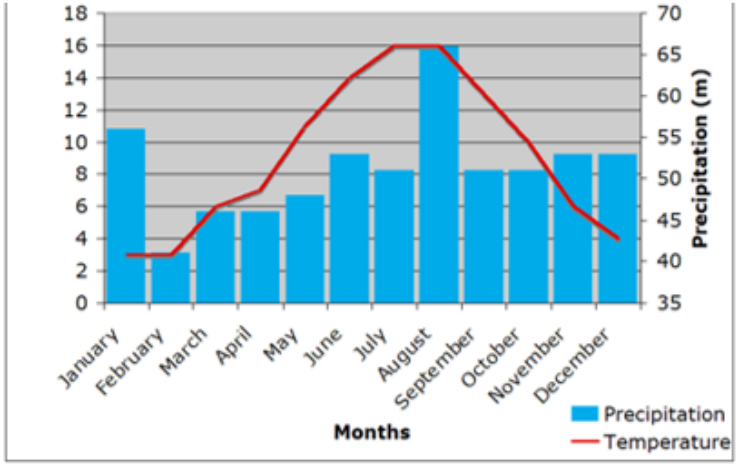
Extreme Weather Types

Tornadoes	Large amounts of snowfall and very low temperatres.	
Snowstorms	A rapidly rotating column of air. They occur in the USA and are much smaller than hurricanes.	
Droughts	High winds and heavy rainfall, sometimes causing thunder and lightning.	
Storms	When rivers burst their banks and cause water to spill out onto the land.	
Hurricanes	Long periods of time when there is no rainfall.	
Flooding	Very high winds (over 74mph) – the most extreme type of storm.	

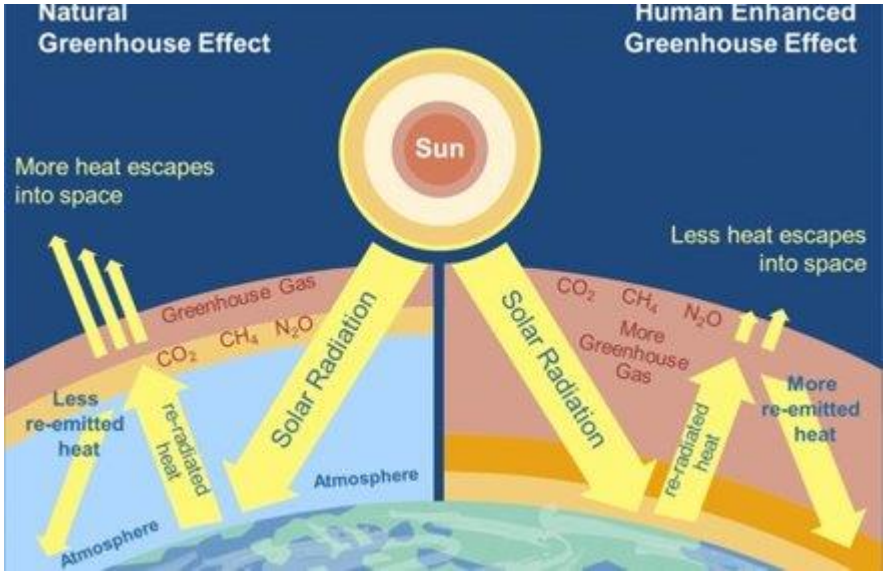


Locations of Storms

Geography – Weather/Climate

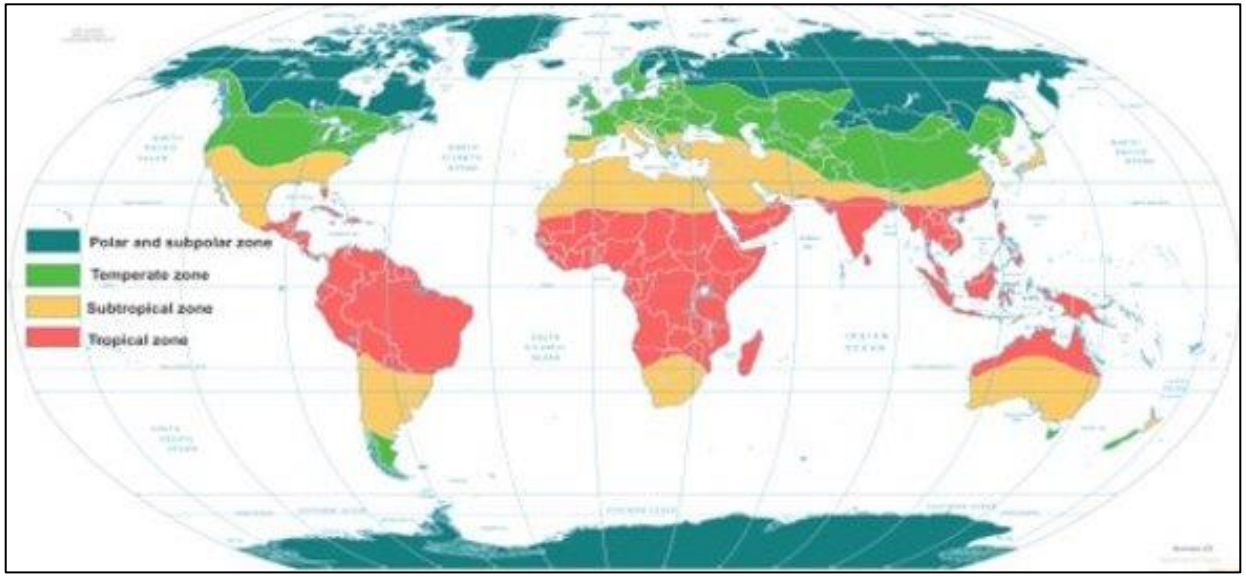


Climate Graph for Rotherham

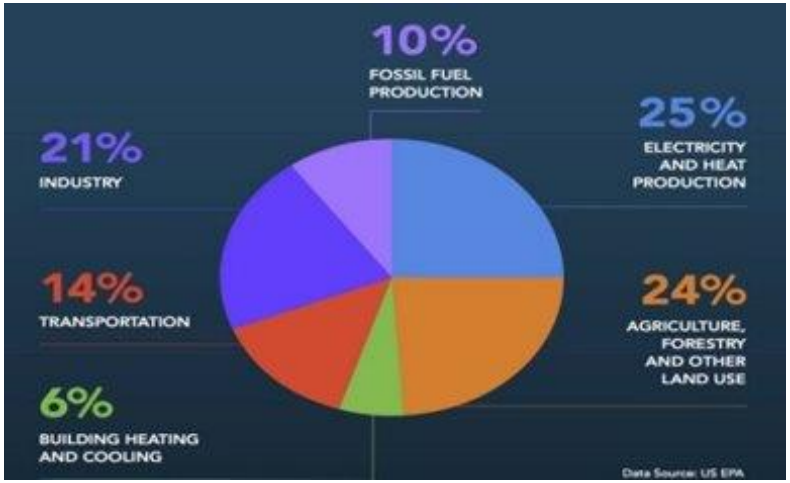


Climate Change Diagram

Global Climate Zones



Causes of Climate Change



Geography – Resources

Reduce - Use less plastic when you can, e.g. take your own shopping bags, don't buy single use plastics, e.g. plastic water bottles.
Reuse - Try to reuse products that don't require new plastic packaging.
Recycle - Use waste materials again to create new products.

Food Miles - The distance food travels from where it has been produced to where it is consumed.

Ecological Footprint

Causes of Damage	Impacts caused on Environment	Possible Solutions	Countries/Examples
-Non-renewable energy -Population Increase -Farming -Technology	-Loss of land -Loss of wildlife/habitats -Economic impacts -CO2 = climate change – floods, extreme weather, droughts, coral bleaching, etc	Renewable energy eg. Solar, wind, etc -Eating less meat -Energy habits reduce	HICs – UK, USA NEEs = India, China

Spanish – clothes

Demonstrative adjectives	
Este/esta	This
Estos/estas	These
Ese/esa	That
Esos/esas	Those
Aquel/aquella	That (over there)
Aquellos/aquellas	Those (over there)
These adjectives change in gender (masculine or feminine) and number (singular or plural) according to the noun they are describing.	
Esta falda	This skirt
Ese jersey	That jumper
Aquella camiseta	That t-shirt (over there)
Estos vestidos	These dressed

Verb		Item of clothing	
Llevo	I wear	unos pantalones	trousers
Llevas	You wear	unos vaqueros	jeans
Lleva	He/she/it wears	una camisa	a shirt
Llevamos	We wear	una camiseta	a t shirt
Lleváis	You lot wear (plural)	una chaqueta	a jacket
Llevan	They wear	una corbata	a tie
Llevé	I wore	un vestido	a dress
Voy a llevar	I'm going to wear	una falda	a skirt
Llevaré	I will wear	un jersey	a jumper
Llevaría	I would wear	una gorra	a hat
Me gustaría llevar	I would like to wear	unos calcetines	socks
		unos zapatos	shoes
		unas zapatillas de dep orte	trainers

Spanish – styles and shops

algunos/as	*some*
ciertos/as	*certain*
muchos/as	*many*
otros/as	*other*
pocos/as	*few*
todos/as	*all*
varios/as	*several*

estampado	*patterned*
largo	*long*
amplio	*baggy/loose*
corto	*short*
estrecho	*tight*
elegante	*smart*
hortera	*tacky*
liso	*plain*

de rayas	*striped*
de cuadros de	*squared*
lunares	*spotted*
de flores	*floral*
de leopardo	*leopard print*

la carnicería	*butcher's*
la chocolatería	*chocolate shop*
la joyería	jewellery shop
la panadería	*baker's*
la papelería	*stationery shop*
la perfumería	*perfume shop*
la pescadería	*fishmonger's*
la tienda de disfraces	*fancy dress shop*
la tienda de ropa	*clothes shop*
la zapatería	*shoe shop*

Spanish – an ideal shopping day

Cardinal numbers		Ordinal numbers	
One	Uno	First	Primero
Two	Dos	Second	Segundo
Tres	Three	Third	Tercero
Cuatro	Four	Fourth	Cuarto
Cinco	Five	Fifth	Quinto

The conditional tense		
The conditional is usually translated as "would". To form the conditional, add the following endings to the infinitive forms of *–ar, -er* and *–ir* verbs.		
I	-ía	Comprarías – you would buy Llevaríamos – we would wear Venderían – they would sell
You	-ías	
He/she/it	-ías	
We	-íamos	Note that the irregular verbs in the future tense are also irregular in the conditional.
You (plural)	-íais	
They	-ían	Tendría – I would have Podrías – you could Haría – he/she would do

Direct Object Pronouns			
Me	Me	Nos	Us
Te	You (s)	Os	You (pl)
Lo/la	It, him, her	Los/los	Them
Look at the position of the pronouns in the examples below. The pronoun is placed directly before a conjugated verb:			
Compré una falda.	I bought a skirt	La compré	I bought it.
Tengo tres vestidos.	I have 3 dresses.	Los tengo.	I have them.
Or at the end of an infinitive:			
Quiero cambiar estos zapatos.	I want to exchange these shoes.	Quiero cambiarlos.	I want to exchange them.

Computing - Programming

Iteration

Algorithms consist of steps that are carried out (performed) one after another. Sometimes an **algorithm** needs to **repeat** certain steps until told to stop or until a particular condition has been met.

Iteration is the process of repeating steps. Iteration is implemented in programming using FOR and WHILE statements.

There are **two** ways in which **programs** can **iterate** or '**loop**':

- count-controlled loops
  - Sometimes it is necessary for steps to iterate a specific number of times.
- condition-controlled loops
  - iteration continues while, or until, a condition is met.

Each type of loop works in a slightly different way and produces different results.

Arrays

An **array** is a series of **memory** locations – or **'boxes'** – each of which holds a single item of **data**, but with each box sharing the same name. All **data** in an **array** must be of the same **data type**.

Arrays are named like **variables**. The number in brackets determines how many **data** items the **array** can hold. The array **score(9**) would allow ten data items to be stored.

Selection

When designing **programs**, there are often points where a **decision** must be made. This **decision** is known as **selection** and is implemented in **programming** using **IF statements**.

Arithmetic Operators

Operator	Meaning	Example
+	Addition	4 + 7 ⟶ 11
-	Subtraction	12 - 5 ⟶ 7
*	Multiplication	6 * 6 ⟶ 36
/	Division	30 / 5 ⟶ 6
%	Modulus	10 % 4 ⟶ 2
//	Quotient	18 // 5 ⟶ 3
**	Exponent	3 ** 5 ⟶ 243

Variables

A **variable** is a location in **memory** in which you can temporarily store text or numbers. It is used like an empty box or the Memory function on a calculator. You can choose a name for the box (the "**variable name**") and change its contents in your **program.**

Functions

Functions are special keywords that do a specific job. **Functions** appear in purple. **print()** and **input()** are examples of functions

Every function needs:

1. A name
2. The values that it needs to use for calculation
3. The program code to perform the task
4. A value to return to the main program

Religious Studies

Key Words:

The Problem of Evil- The idea that the presence of evil and suffering in the world is logically inconsistent with an all powerful, all loving God.

Omnipotent- The belief that God is all powerful.

Omniscient- The belief that God is all knowing/all seeing

Benevolent- The belief that God is all loving

The Inconsistent Triad- The idea that if God is all powerful, all knowing and all loving, then why does he not intervene to stop evil and suffering.

Free Will- The belief held by most Christians and Muslims that God created humans in such as way that they can freely chose their own actions.

Iblis- The Arabic word for the devil that is often referred to in the Qur'an (Muslim holy book)

What does Buddhism teach about Suffering?

Buddhists believe that all life is suffering, we can free ourselves from this if we stop desiring things, it is this constant desire for things and people that feeds our suffering. If we can become an enlightened being through following the Eightfold we can free ourselves from suffering because we will understand the true nature of reality.

What does the Bible say about suffering?

In the book of Genesis (the first book of the Bible where God creates the world) God creates a perfect world.

In the book of Genesis God creates Adam and Eve who later disobey God's instructions and as a punishment sin, along with pain and suffering is brought into the world.

Christians believe that God suffered along with humans in the form of Jesus Christ (God incarnate). Jesus suffered and died on the cross so that humanity could overcome sin and suffering in Heaven.

What does Islam teach about suffering?

Islam teaches that a knowledge of right and wrong is **intrinsic** (built into us) to human nature. Muslim teachings say that individuals should know, without having to be informed, which actions are evil and will contribute to the suffering of others, and which actions are good.

Muslims believe that God (Allah) commanded **Iblis** (the Devil) to bow down to Adam (As in Adam and Eve) but Iblis refused, as Adam was just a mere human. For this Allah cast Iblis out of Heaven. As a result Iblis vowed that for the rest of time he would tempt humans to disobey Allah and turn towards evil.

Design Technology - Hardwood

Hardwoods

Like other hardwoods, mahogany is a strong wood with a close grain

This type of wood comes from deciduous trees. These trees are seasonal and lose their leaves during the winter. This means that they don't grow as fast as other trees and, as a result, they take longer to harvest.

Slow growth results in the wood having a closer grain. This makes it **stronger and harder**. It also gives better aesthetic qualities due to the interesting colours and grain patterns. The slow-growing nature of hardwoods makes them more expensive. They are **less sustainable**.

Hardwood are mainly used in high quality indoor and outdoor furniture. They are also used in decorative interior and exterior joinery within construction such as doors, window frames, and gates.

Examples of hardwoods include:-
- **Oak**
- **Mahogany**
- **Teak**

Design Technology - Softwoods

Softwoods

Softwoods like pine grow quickly and have a wider grain.

This type of wood comes from coniferous, evergreen trees that grow all year round. This means that they **grow quicker** than other types of trees and they can be harvested more regularly and replaced in a sustainable way. Due to this there is always **steady supply** and they are usually **cheaper**.

Faster growth results in a grain structure that is wider and less dense that hardwoods. This makes softwoods easy to work with but **less durable**. Softwoods tend to mainly be light in colour.

The easy availability of softwoods means that they tend to be used to make less expensive furniture and constructions, such as sheds and timber frames.

Examples of softwoods include:-
- **Pine**
- **Spruce**
- **Cedar**

Design Technology - Manufactured Boards

Manufactured boards

Manufactured wooden board is a cheap, strong product that can be sustainable Manufactured boards are a **mechanically engineered** form of wood. They offer a number of different advantages over traditional hard and softwoods as they use a combination of different sources of woods to create a new material.

Boards can be made in several different ways such as:-
- Wood particles and glue pressed together
- A build up of thin wooden veneer layers
- Sandwiches of strips of wood

They can be made from recycled woods and by-products, creating a **cheap, strong product** that can look expensive. It also can be made available in large formats that are more sustainable. Manufactured boards have a range of uses and are often used to create inexpensive flat-pack furniture.

Examples of manufactured boards include:-
- **Chipboard**
- **Plywood**
- **Block board**
- **MDF (medium density fibre-board)**

Art, craft & Design

AO1	AO2	AO3	AO4
Develop ideas through investigations, demonstrating critical understanding of sources.	Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.	Record ideas, observations and insights relevant to intentions as work progresses.	Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.
25% of your project mark	25% of your project mark	25% of your project mark	25% of your project mark
Theme exploration. Mindmaps / Collected images. Facts & statistics. Interviews. Artist research & analysis. Art movements & time periods. Trips, museums & galleries.	Experimenting with different materials. Improvements. Testing ideas. Contact sheets with selections. Repeating ideas in materials. Developed ideas.	Observational drawings. Photography. Annotations. Ideas. Planning for tests or photoshoots. Thumbnail sketches.	Final outcomes. Final design plan explaining links to prior learning. Meaningful connections within the work.

Choices of colour and the relationship between different colours have a huge influence on how a piece or art or design looks and feels and can hugely change the emotions it provokes.

Art, craft & Design

Tone is the darkness or lightness of an object.

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.

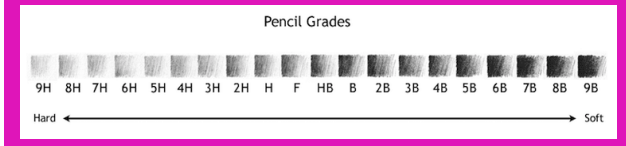
Midtone - A medium tone, one that is neither very dark nor very light.

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.

Shading pencils – get darker the higher the number B.

To create lighter tones – lessen the pressure applied on your pencil.
To create darker tones add pressure to your pencil.



In school we use HB, 2B, 4B and 6B pencils

To create darker areas, start with a mid-tone and build it up in smooth layers.

What are primary colours?

RED BLUE YELLOW

Colours that can't be made by mixing other colours. These are used to create all the other colours.

What are secondary colours?

ORANGE PURPLE GREEN

Secondary colours are made by mixing together two primary colours, how would you know which primary colours make each secondary colour?

What are complementary colours?

Complementary colours sit across from each other on the colour wheel.

These are often referred to as opposite colours and even contrasting colours. Don't be confused by the three different names, they all mean the same thing.
One primary colour and once secondary colour.
Together they include all three primary colours.


YELLOW
PURPLE


ORANGE
BLUE


RED
GREEN

Analysis of artwork : this framework can help us ask questions when looking at the work of other artists and designers, to read the work like we would a book to decipher any meaning or messages within the work..

Art, craft & Design

Content

- What can you see in the artwork? Consider objects, colours, shapes, textures, people, places.
- Can you see anything that is unusual or looks out of place?
- Are any of the items symbolic – do they have hidden meanings or trying to send a message?
- Is the artwork about something or someone?
- Is it realistic, surreal, abstract, a mixture? Why?

Form

- What is the artwork made from?
- What styles or skills can you see within it?
- Is there a colour scheme? Why / Why not?
- What is the composition (layout / arrangement) of the work
- Where is the main subject? What does this show?
- Does the work have any textures, shapes or patterns?

Mood

- What is the atmosphere or general feeling in the artwork?
- What does it make you think about?
- Does it make you feel an emotion – happy, sad, inspired, angry, thoughtful?
- Does it have a lasting impact on your or is it quite forgettable? Why?

Process

- How was the artwork made?
- What was the process, what tools or materials have the artist used?
- What did the artist look at to make this artwork?
- What was happening at the time the artwork was made, in the artists life, in society, in the world? Do you think this shows in the artwork?

This is important in Art & Design as we use other artists and designers work and processes to learn skills, take inspiration, develop our own understanding of messages and responses to worlds events.

Just like reading a book or text, we can read an artwork to understand the narrative or meaning within it.

The more artwork we 'read', the more we are building up ideas to draw on in our head, as well as increasing our understanding of other peoples' viewpoints, social, moral, spiritual and cultural beliefs.

This allows us to reference and include more creative ideas within our own work!

Performing Arts

Questions for further thought

- How can we portray stereotypical characters?
- How can we represent the opposite gender?
- How can music impact a performance?
- To what extent do stereotypes exist in society?

Stage Positions

Upstage Right	**Upstage Centre**	**Upstage Left**
Centre Right	**Centre**	**Centre Left**
Downstage Right	**Downstage Centre**	**Downstage Left**

Audience

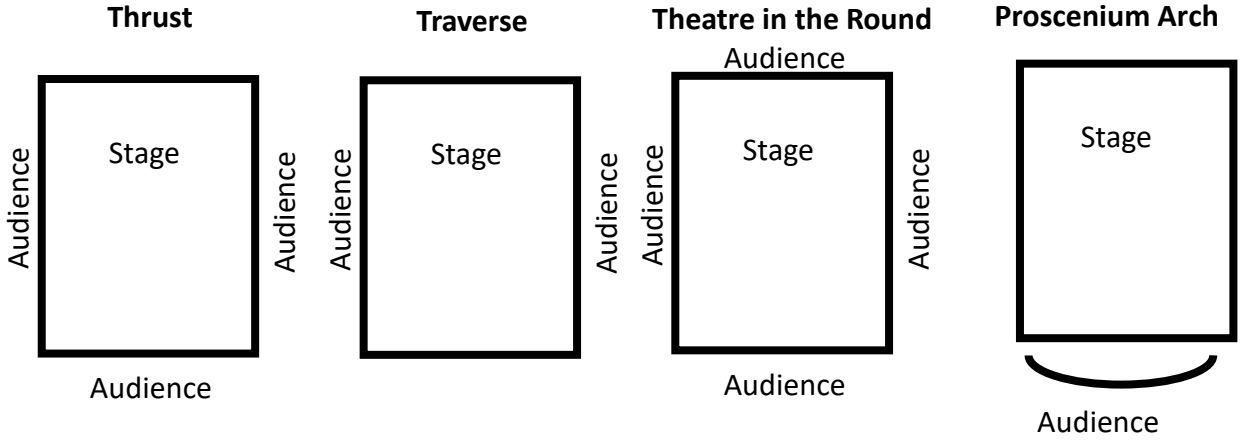
Skills and techniques

Characterisation - creating a character through body language and facial expressions
Mime – physicality without speech
Exaggeration – representing something in a more dramatic way

Text related terminology

Stereotypes – a widely held and fixed idea about a type of person
Artistic Intention – what the director wants the audience to think, feel and understand
Devised theatre – theatre that is created
Scripted theatre – theatre taken from a script
Gender role reversal – playing a role of the opposite sex, often stereotypically

Types of Staging



Music - Notation

A **semiquaver** lasts for a **quarter of a beat**

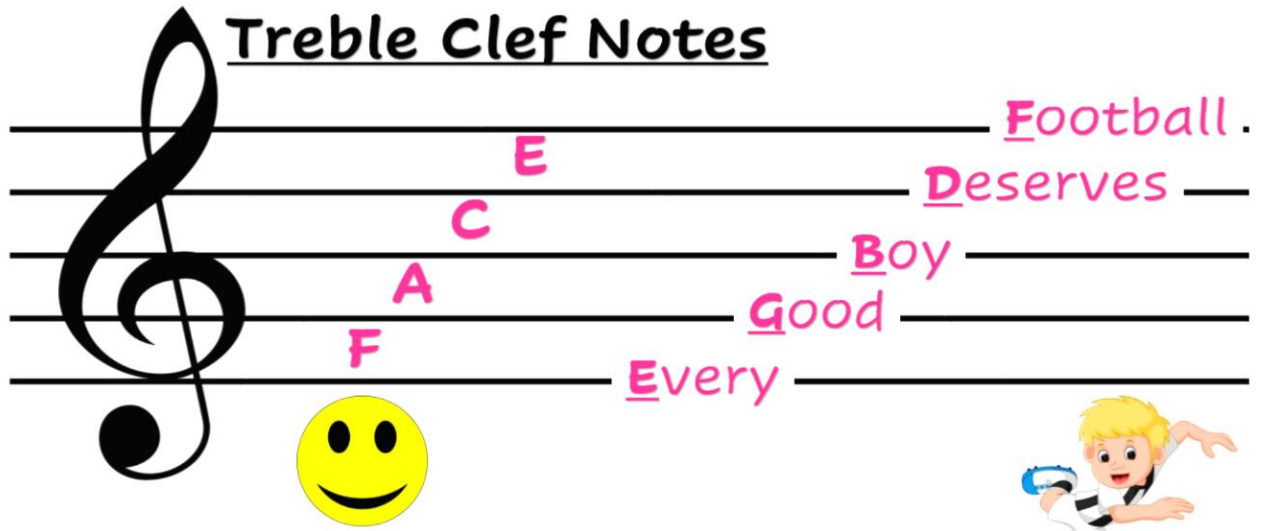
A **quaver** lasts for **half a beat**

A **crotchet** lasts for **1 beat**

A **minim** lasts for **2 beats**

A **semibreve** lasts for **4 beats**

Learn and memorise the notes of the Staff

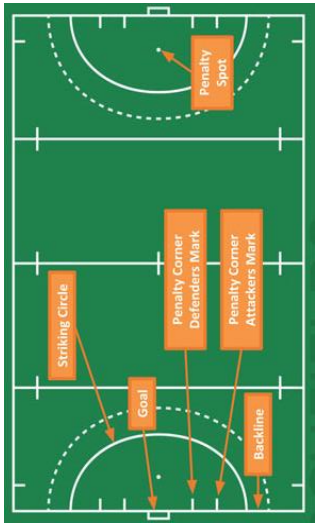


PE-Hockey

Rules	
Rule 1	You may only use the flat side of your stick.
Rule 2	10 field players plus a goalie play at one time.
Rule 3	The field hockey game lasts for two 30 minute halves.
Rule 4	Substitutions – the field player must exit the field at the 50, only then can the new player step onto the field.
Rule 5	The ball cannot go in the air, especially on free hits. This is judged by the discretion of the ref. The exception is a shot on goal, as long as there is not a player in the direct line of the ball and no one is in harm's way.
Rule 6	The ball cannot hit your feet.
Rule 7	You cannot raise your stick above your waste during regular play. If you are taking a free hit, it is up to the discretion of the ref.
Rule 8	You cannot tackle (go for the ball) from behind. You must face your opponent head on (shoulder to shoulder) if you are fighting for the ball.
Rule 9	No third party. It is one vs. one at all times. Once another player tries to go for the ball, a foul is called.

Skills	
First touch	Controlling the ball as it comes to you
Passing	Moving the ball from one person to the next
Hit	Any contact with the ball using a swinging motion of the stick. This stroke is used to make long passes or take shots on goal.
Flat stick tackle	Tackle using the open face of the stick and with both hands on the stick
Dribble	To control the ball with short strokes of the stick while on the move, alternating the ball from the right side of the body to the left side of the body in order to elude defenders.
Jab	To poke continuously at the ball in an attempt to make the attacking player lose possession.
Marking	To poke continuously at the ball in an attempt to make the attacking player lose possession.

Key vocabulary
Open Stick Dribbling – Use the flat side of the stick. Left hand at the top of stick and right hand halfway down.
Indian Dribbling – Stick rolls over the ball pushing it from right, then left.
Push Pass – Hands apart pushing action with no backswing. Use to help a player make the ball travel over a distance.
Centre pass – Taken at the start of a match and after a goal is scored.
Block tackle– Stick flat to the ground and slightly tilted forward to block a hockey ball.
Jab tackle – Jabbing motion to knock the ball away from the opponent.



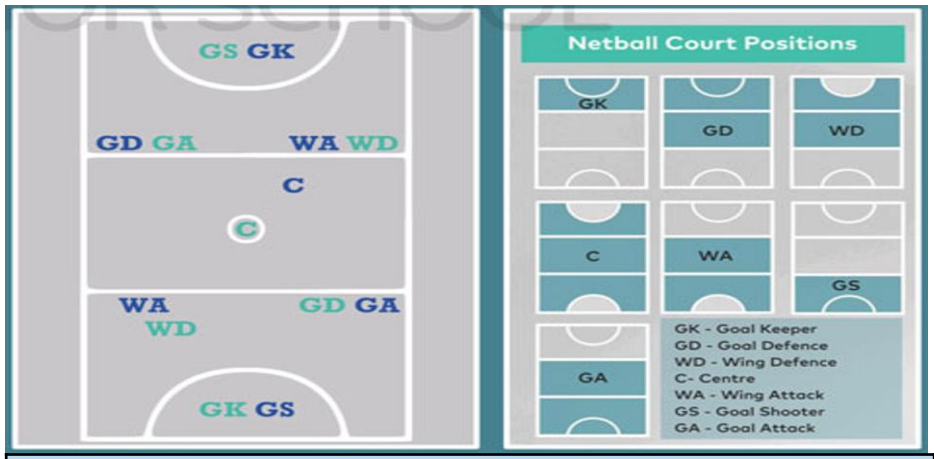
Fitness Components Required

Speed **Power** **Stamina** **Co-ordination** **Balance** **Agility**

PE-Netball

Skills	
Throwing	Releasing the ball with force using different passes.
Catching	To catch the ball and to bring the ball into your chest.
Jumping	Taking off from the floor in an upwards direction
Footwork	when a player is stepping, landing or pivoting while in possession of the ball
Shooting	Shooting the ball into the net from an attacking play
Defending	To gain possession of the ball from the attacking team through an interception

Positions	
GS -Goal shooter GA – Goal attack	These players work together to score goals for their team
WA – Wing attack C – Centre WD – wing Defence	These players bring the ball through the court and receive or intercept centre passes.
GD – Goal defence GK – Goal keeper	These players try and stop the opposition scoring by blocking or intercepting the ball.



Key Vocabulary	
Defend	Mark your opponent and win the ball
Intercept	Winning the ball by stopping the ball reaching the player.
Shoot	Push the ball up towards the ring to the net
Dodge	Movement to get away from your defender
Pivot	Turning by keeping one foot on the floor

Rules

Rule 1	You cannot run with the ball
Rule 2	Land 1 foot 2 foot keeping landing foot 1 on the floor
Rule 3	Release the ball within 3 seconds of having possession.
Rule 4	Mark the ball with a distance of 1 meter and put your arms up.
Rule 5	You cannot make contact or push your opponent.

Fitness Components Required

Agility **Speed** **Stamina** **Power** **Flexibility**

PE-Football

Key Vocabulary	
Mark	Mark your opponent and win the ball
Intercept	Winning the ball by stopping the ball reaching the player.
Shoot	Push the ball up towards the ring to the net
Dodge	Movement to get away from your defender
Tackle	To win the ball off the opposition
Head	Use the head to clear or head towards goal
1 -2	Pass the ball to a player and get the ball back.

Skills	
Passing	Using the inside of your foot to move the ball towards one of your teams mates
Dribbling	Using the inside and outside of your foot to keep close control of the ball when moving around the pitch.
Defending	Marking an opponent to stop them getting space to pass or shoot.
Tackling	Intercepting the ball that is travelling from one opponent to the other or to dispose an opponent from the ball
Striking	Striking the ball into the net from an attacking play
Heading	Jumping up to win the ball in the air using your head to control the flight of the ball

Positions

1– Goalkeeper
2– Right Fullback
3– Left Fullback
4– Center Back
5– Center Back (or Sweeper, if used)
6– Defending/Holding Midfielder
7– Right Midfielder/Winger
8– Central/Box-to-Box Midfielder
9– Striker
10– Attacking Midfielder/Playmaker
11– Left Midfielder/Wingers

How to Score

Strike the ball into the bottom of the net without the goal keeping saving the shot.

Rules	
Rule 1	Offside is If any part of the head, body or feet is nearer to the opponents' goal line than both the ball and the defender (excluding the goal-keeper)
Rule 2	A throw in is won when the ball comes off the opposition team.
Rule 3	A penalty is won when a player is fouled in the 18-yard box.
Rule 4	When a goal is scored the ball goes back to the centre circle to be restarted. The team that has just conceded the gaol starts with it.
Rule 5	When starting with the ball in the centre circle, the ball must be played backwards.

Fitness Components Required

Speed **Co-ordination** **Stamina** **Power** **Flexibility**

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