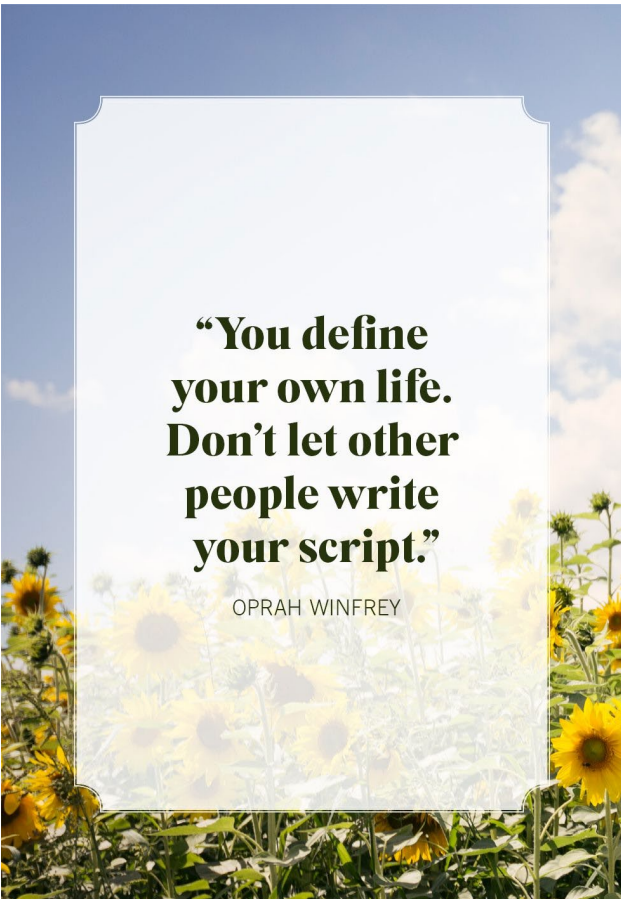




Year 7

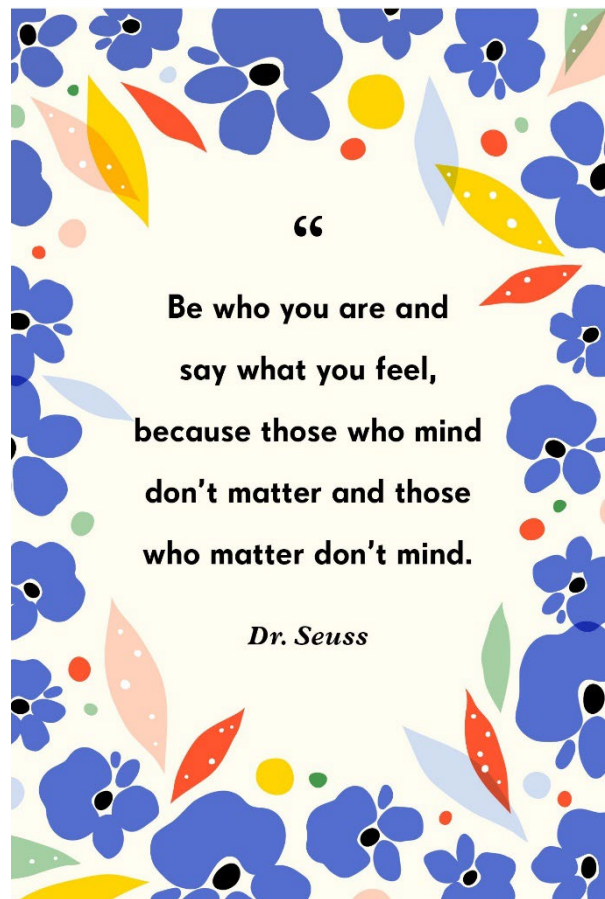
Knowledge Organiser

Cycle 4 – 2023/24



**“You define
your own life.
Don’t let other
people write
your script.”**

OPRAH WINFREY













“
Be who you are and
say what you feel,
because those who mind
don’t matter and those
who matter don’t mind.



Dr. Seuss



ENGLISH

Language – vocabulary, phrases, techniques and devices by the poet.

Interesting Adjectives	Describing words that are specific or beyond the most obvious, creating a clear effect.		“Parting with his poison – Flash of <u>diabolic</u> tail in the <u>dark</u> room - he risked the rain again.”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Interesting Verbs	Doing words that are specific or beyond the most obvious, creating a clear effect.		“ <u>Stumbling</u> across a field of clods towards a green hedge That <u>dazzled</u> with rifle fire, hearing Bullets <u>smacking</u> the belly out of the air”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Imagery	Words or phrases that appeal to any sense or any combination of senses.		“Yellow, and black, and pale, and hectic red, Pestilence-stricken multitudes: O thou, Who chariotest to their dark wintry bed”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Similes	A comparison between two objects using “like” or “as”		“O my Love is <u>like</u> a red, red rose That’s newly sprung in June O my Love is <u>like</u> the melody That’s sweetly played in tune.”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Metaphors	A comparison between two things in order to give clearer meaning to one of them.		“‘Hope’ is the thing with feathers— / That perches in the soul And sings the tune without the words/ And never stops - at all”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Alliteration	The repetition of initial consonant sounds		“With <u>swift, slow; sweet, sour;</u> <u>adazzle, dim;</u> He fathers-forth whose beauty is past change.”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Assonance	The repetition of vowel sounds		“With its <u>leaping, and deep, cool</u> murmur... ... <u>White and shining</u> in the silver- flecked water.”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Repetition	The repeating words, phrases, lines, or stanzas		Keeping <u>time, time, time,</u> In a sort of Runic rhyme, To the tintinnabulation that so musically wells From the <u>bells, bells, bells, bells,</u>	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Onomatopoeia	The use of words which imitate sound		“A child sitting under the piano, in the <u>boom</u> of the <u>tingling</u> strings And pressing the small, poised feet of a mother who smiles as she sings.”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Oxymoron	A figure of speech in which apparently contradictory terms appear together.		“Down the close, darkening lanes they sang their way To the siding-shed, And lined the train with faces <u>grimly gay.</u> ”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?

Personification	A figure of speech which gives animals, ideas, or inanimate objects human traits or abilities		“ <u>Death, be not proud,</u> though some have called thee Mighty and dreadful, for thou art not so;”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?
Hyperbole	Exaggerated statements or claims not meant to be taken literally.		“ <u>The sea him lent those bitter tears</u> Which at his eyes he always wears/ And from the winds the sighs he bore, Which through his <u>surging breast do roar.</u> ”	Consider these questions: -Why is the technique used? -What did the writer intend? -How does the reader react?

Wilfred Owen

Wilfred Owen (18 March 1893 – 4 November 1918) is best known as one of the most powerful war poets, who depicted the reality and horrors of the First World War.

- He was born in Oswestry, Shropshire, England – where there is now a memorial to him.
- Owen was influenced by the great romantic poets of Keats, Byron, Shelly, Coleridge and Wordsworth.
- When the war broke out, Owen was teaching in France. He even considered joining the French army but joined the British Army in 1915.
- Owen’s first experience of the war was in hospitals treating the wounded soldiers – often without anaesthetic.
- Wilfred Owen was invalided out of the army in 1916 suffering with shell shock.
- Recuperating in an Edinburgh hospital, Wilfred Owen became close friends with poet Siegfried Sassoon. Sassoon played a key role in encouraging the young war poet.
- When Owen returned to the front in 1918, he hid the fact from his friend Siegfried Sassoon, who didn’t want him to return.
- Wilfred Owen was killed in battle during the last month of the war – November 1918. He died exactly one week (almost to the hour) before the signing of the Armistice which ended the war. He was only 25 when he died.
- His parents received a telegram on Armistice Day 1918, as the bells were ringing in celebration at the end of the war.
- After his death, he was awarded the Military Cross. Owen wanted this medal to make his anti-war poetry appear even stronger.

The First World War and its legacy

Timeline	
28 June 1914	Archduke Franz Ferdinand is assassinated in Bosnia.
4 August 1914	Britain declares war on Germany.
8 August 1914	Britain passes DORA (the Defence of the Realm Act) which gives the government powers such as to ration food, control the news and use factories.
September 1914	The French stop the German attack at Marne, leading to the start of Trench Warfare on the Western Front.
April 1915	Poison gas is used for the first time at the Second Battle of Ypres.
July 1916	Battle of the Somme, the largest battle of the war.
September 1916	The first ever tank is used in the Battle of the Somme.
January 1917	Conscription introduced in Britain.
11 November 1918	An armistice is signed, Germany surrenders and World War 1 ends.

Key Concepts	
Trench Warfare	Trench Warfare is a type of fighting where both sides build deep trenches as a defence against the enemy. These trenches can stretch for many miles and make it nearly impossible for one side to advance.
Western Front	The area of fighting in Western Europe in the First World War. A majority of fighting was done in North-Eastern France and Belgium in trenches.
Alliance	An agreement between countries to protect each other in war. This was major cause WW1, there were two main alliances in 1914. The Triple Entente (France, Britain and Russia) and the Triple Alliance (Germany, Austria-Hungary and Italy).

Key Words	
Conscription	Compulsory order for all men 18 to 41 to join the army
Schlieffen Plan	German plan in 1914 to attack and defeat France, then attack Russia so they would not have to fight both
Stalemate	A deadlock where no side is able to make progress to win
No Man's Land	Area separating opposing armies in trench warfare
Barbed Wire	Strong wire with sharp barbs at regular intervals, used to stop people passing
Mustard Gas	Poisonous gas used by the Germans, French and British
Artillery	Large guns that fire explosive shells over long distances
Trench Foot	A painful condition of the feet caused by long exposure in cold water or mud, as a result some feet were amputated
Trench Fever	A disease caused by lice bites which made soldiers very ill in the trenches
Dugout	Shelter dug into the side of the Trench
Bayonet	A blade attached to the end of a soldier's rifle
Armistice	An agreement made to stop fighting
War effort	How people at war and at home contribute to the war
Conscientious Objector	Someone who refuses to fight or be involved in war for religious, moral or political reasons, also called 'Conchies'

Siegfried Sassoon

Siegfried Loraine Sassoon, CBE, MC (8 September 1886 – 1 September 1967) was an English poet, writer and soldier. Decorated for bravery on the Western Front, he became one of the leading poets of the First World War.

- Siegfried Sassoon was born on 8 September 1886 in Kent.
- Sassoon studies at Cambridge University but left without a degree. He then lived the life of a country gentleman, hunting and playing cricket while also published small volumes of poetry.
- In May 1915, Sassoon was commissioned into the Royal Welsh Fusiliers and went to France.
- He impressed many with his bravery in the front line and was given the nickname 'Mad Jack' for his near-suicidal exploits. He was decorated twice.
- In the summer of 1916, Sassoon was sent to England to recover from fever. He went back to the front line, but was wounded in April 1917 and returned home.
- Meetings with several prominent pacifists, including Bertrand Russell, had reinforced his growing disillusionment with the war and in June 1917 he wrote a letter that was published in The Times in which he said that the war was being deliberately and unnecessarily prolonged by the government. As a decorated war hero and published poet, this caused public outrage.
- It was only his friend and fellow poet, Robert Graves, who prevented him from being court-martialed by convincing the authorities that Sassoon had shell-shock.
- He was sent to Craiglockhart War Hospital in Edinburgh for treatment. Here he met, and greatly influenced Wilfred Owen. Both men returned to the front where Owen was killed in 1918. Sassoon was posted to Palestine and then returned to France, where he was again wounded, spending the remainder of the war in England.
- Many of his war poems were published in 'The Old Huntsman' (1917) and 'Counter-Attack' (1918).
- He died on 1 September 1967.



War Poetry

Over the Cycle we will be reading a variety of poems and non-fiction texts written during the First World War. We will consider how writers express the reality of war and develop our skills of interpretation and analysis.

Key Authors

Wilfred Owen

- Anthem for Doomed Youth
- Dulce Est Decorum Est

Siegfried Sassoon

- Counter Attack
- Attack – Skills Assessment poem
- The Hero

Thomas Hardy

- The Man he Killed

John McCrae

- In Flanders Field

Poetic Keywords	Definitions
Simile	a figure of speech involving the comparison of one thing with another thing of a different kind using like or as.
Metaphor	a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable.
Alliteration	the occurrence of the same letter or sound at the beginning of adjacent or closely connected words.
Personification	the attribution of a personal nature or human characteristics to something non-human
Repetition	the action of repeating something important that has already been said or written
Onomatopoeia	the formation of a word from a sound associated with what is named
Verb	a word used to suggest an action.
Adjective	a word that describes a noun or pronoun
Adverb	a word that describes or gives more information about a verb
Noun	a word that is the name of something, such as a person, animal, place, thing, quality or idea.
Stanza	Lines of a poem collected together. Similar to a verse in song or a paragraph in prose writing.
Enjambement	from the French meaning “a striding over,” is a poetic term for the continuation of a sentence or phrase from one line of



MATHS

Cycle 4 in **Maths** will focus on building on our angle skills to develop our geometric reasoning (understanding key principles of angles in shapes and space). In the second half of the cycle we will consolidate our key algebra skills, ensuring what we learnt in cycle 1 is still at the forefront of our minds as we look to extend those skills in year 8, and finish the year by exploring key groupings of numbers, factors and multiples and beginning to prove and disprove theorems, linking to our big idea that ‘Mathematicians formulate new conjectures’.

Geometric Reasoning – Key words and definitions

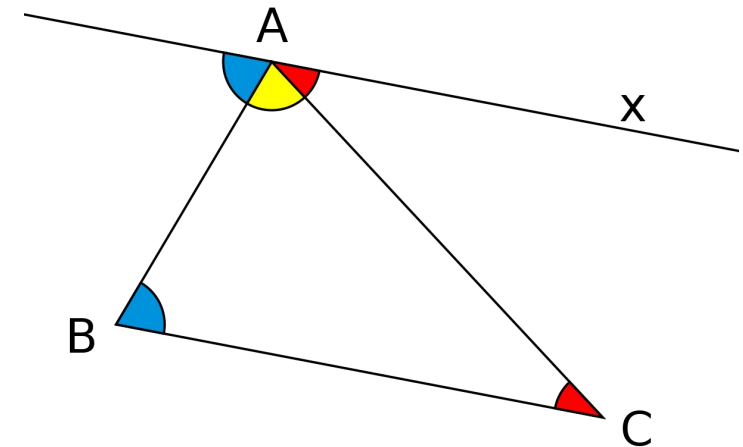
Parallel	Continually the same distance apart; never getting closer or further away. I.e. parallel lines
Perpendicular	Meeting at 90 degrees (a right angle).
Quadrilateral	A four sided shape
Alternate	Vertically opposite a corresponding angle on parallel lines (makes a ‘z’ shape when you link them on a diagram)
Corresponding	A angle in the same relative position around a matching point on parallel lines (forms an ‘f’ shape when you link them on a diagram)
Co-interior	A paired angle enclosed within two parallel lines. They always sum to 180 and form a ‘c’ shape when linked on a diagram.
Vertically Opposite	The opposite angle at a vertex (point) where two straight lines cross. They are always equal.
Interior	Inside

Topic 1

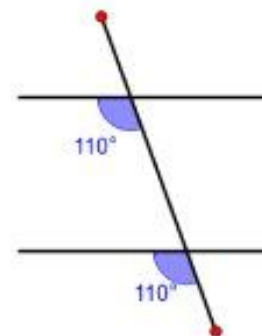
To be able to prove angle facts using key angle rules.

Sparx Clips: M818, M606, M351, M653

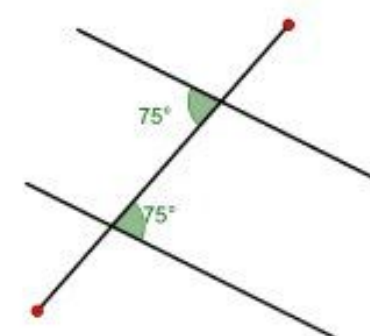
The angles in a triangle can be rearranged to make a straight line, proving that they must sum (add to) 180 degrees.



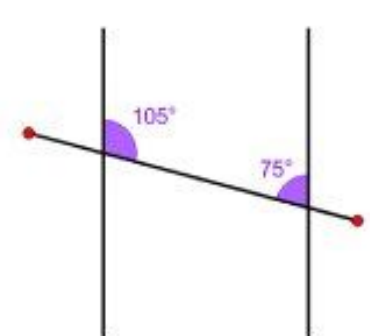
Corresponding Angles



Alternate Angles



Interior Angles



Topic 2

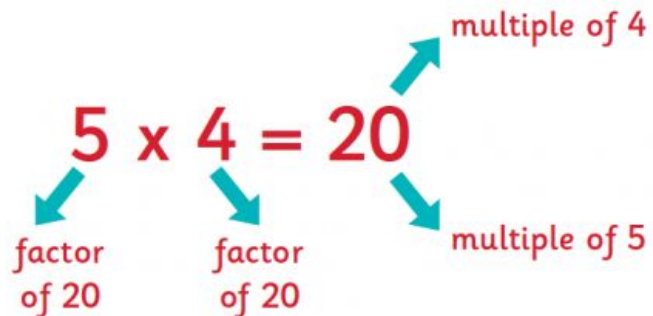
To consolidate algebra skills. TBAT write and substitute into simplified expressions and solve equations.

Sparx M830, M957

Topic 3

To be able to identify prime numbers, factors and multiples

Sparx M322, M108, M365, U582



EXAMPLES:

1. Solve $x + 7 = 11$. The opposite of +7 is -7

$$x + 7 = 11$$

$$(-7) \quad x + 7 - 7 = 11 - 7$$

$$x = 4$$

This means 'take away 7 from both sides'.

2. Solve $x - 2 = 3$. The opposite of -2 is +2.

$$x - 2 = 3$$

$$(+2) \quad x - 2 + 2 = 3 + 2$$

$$x = 5$$

3. Solve $2x = 10$. $2x$ means $2 \times x$, so do the opposite — divide both sides by 2.

$$2x = 10$$

$$(\div 2) \quad 2x \div 2 = 10 \div 2$$

$$x = 5$$

Essential Knowledge:

$$a + a + a = 3a \quad 4 \times d = 4d$$

$$y \times y \times y = y^3 \quad 7 \times e \times f = 7ef$$

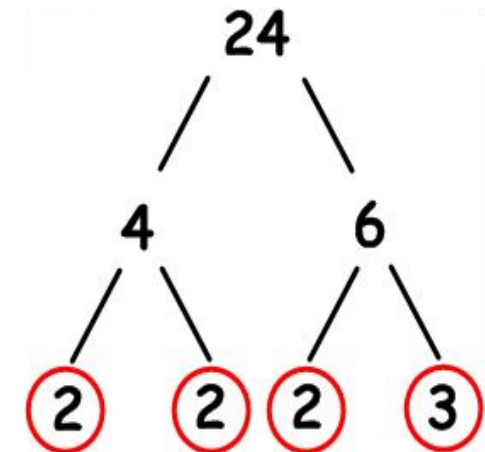
Prime numbers are numbers with 2 factors 1 and itself.

2 3 5 7 11 13 17 19 23 29 31 37 ...

2 is a special prime number as it is the only one that is even.

Any number can be written as a list of prime numbers multiplied together — this is called **product of prime factors**

- 1) Start with the number at the top, and **split** it into **factors** as shown.
- 2) Every time you get a prime, **ring it**.
- 3) Keep going until you can't go further (i.e. you're just left with primes), then write the primes out **in order**.



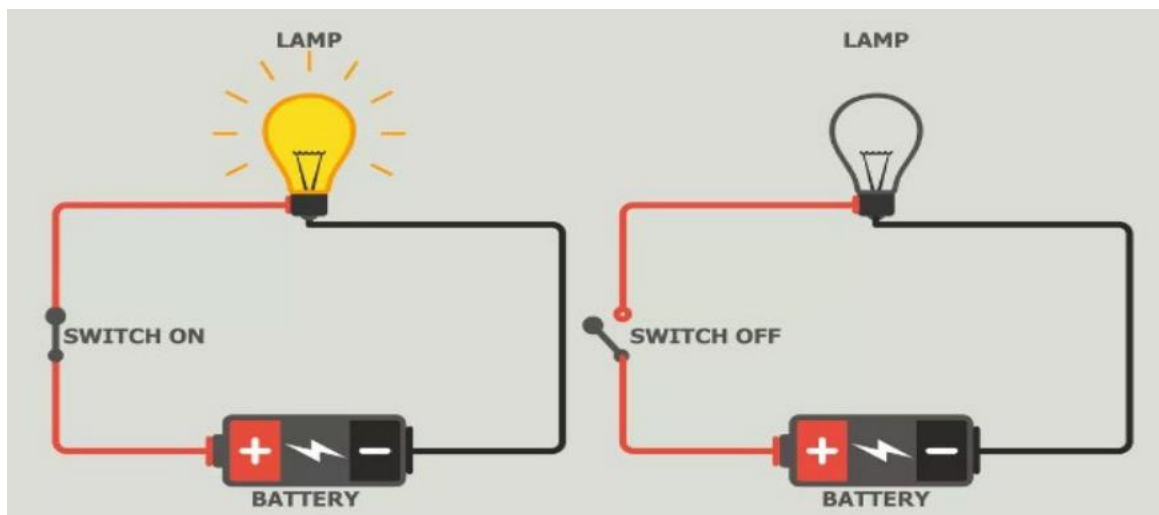
$$24 = 2 \times 2 \times 3 \times 3 = 2^2 \times 3^2$$

SCIENCE

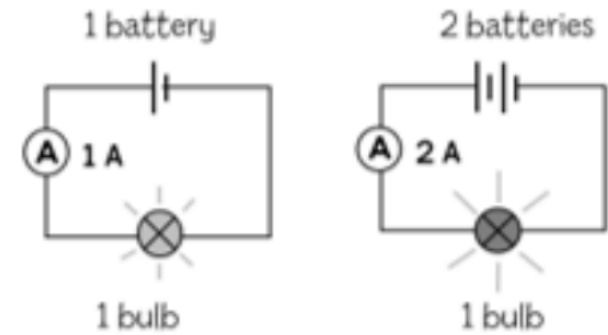
Electric Cells

Key words and definitions

Current	A flow of electricity, measured in amps.
Electric Force	An attractive and repulsive force between particles, caused due to their electric charges.
Electron	A negatively charged subatomic particle.
Electric Force	The attraction or repulsion that occurs between electrically charged particles because of their motion.
Parallel Circuit	Comprises branches so that the current divides and only part of it flows through any branch.
Potential Difference	The difference of electrical potential between two points, measured in volts.
Series Circuit	Comprises a path along which the whole current flows through each component.
Van De Graaf generator	An electrostatic generator which uses a moving belt to accumulate electric charge.
Resistance	A measure of the opposition to current flow in an electrical circuit, measured in ohms.

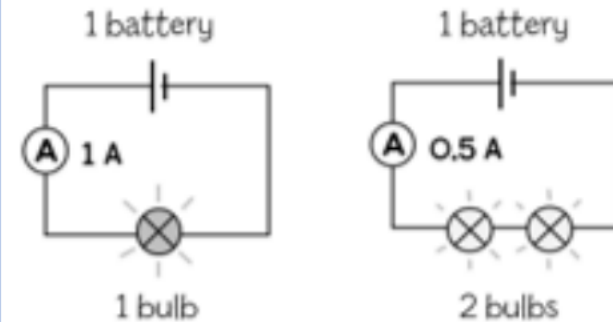


Effect of adding more batteries to a circuit:



When you add more batteries, the current increases.

Effect of adding more bulbs to a circuit:



When you add more bulbs, the current decreases.

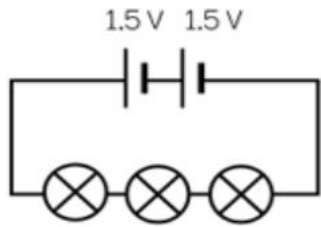
How the current depends on the ratio of voltage to resistance:

$$\text{Current} = \frac{\text{voltage (number of batteries)}}{\text{resistance (number of components e.g. bulbs)}}$$

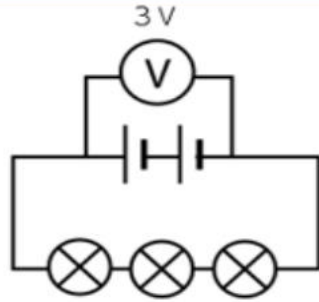


The higher the ratio of voltage : resistance, the bigger the current.

1. How to work out battery voltage

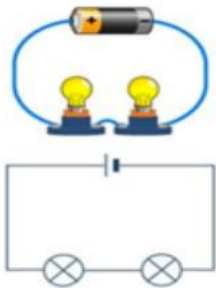


There are two batteries. Each supplies a voltage of 1.5 V.

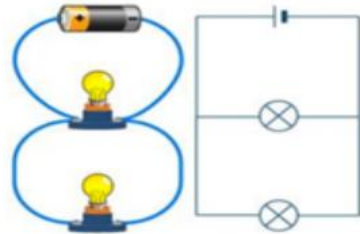


You calculate the total voltage in by adding up the individual voltages of each battery.

$$1.5\text{ V} + 1.5\text{ V} = 3\text{ V}$$

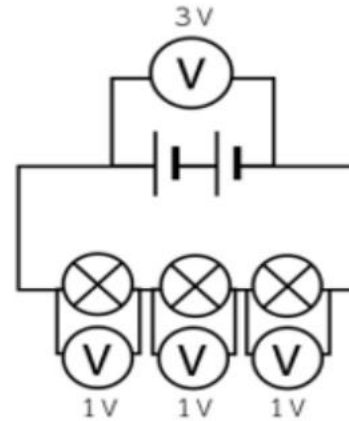


Series Circuit



Parallel Circuit

2. How to work out voltages in a series circuit



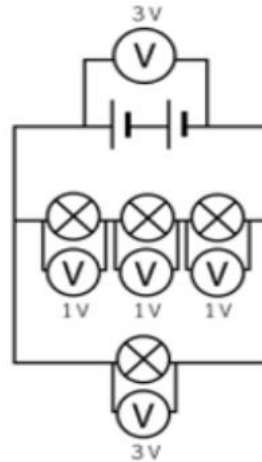
In a series circuit the battery voltage is shared between the components.

Here the bulbs are identical, so they share the voltage equally.

$$3\text{ V} \div 3 = 1\text{ V}$$

There is 1V across each bulb.

3. How to work out voltages in a parallel circuit



A parallel circuit has several loops. The voltage across the whole of each loop is the battery voltage.

Here there are two loops. The bottom loop has 1 bulb, the top loop has 3 bulbs.

The voltage across each loop is 3 V.

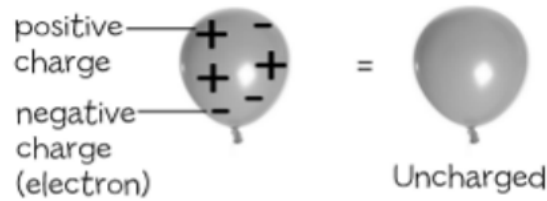
In the bottom loop, the bulb gets the full 3 V.

In the top loop, the bulbs share the 3V between them.

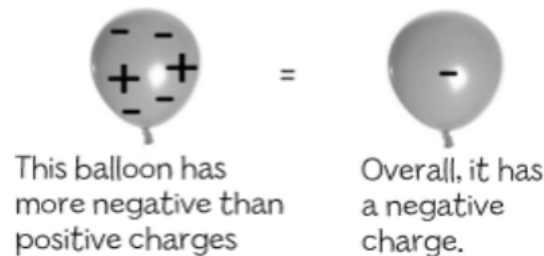
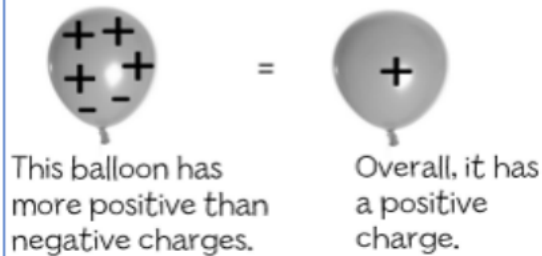
	Series	Parallel
Appearance	One loop	More than one loop or branch
Current	Same in all components	Total current is the sum of each components current.
Potential difference (p.d.)	Total p.d. from battery is shared between all the components.	P.d. Across all components is the same.
Resistance	Total resistance is the sum of each components resistance.	Total resistance is $1 \div$ sum of the resistance.



1. Why objects are uncharged or charged

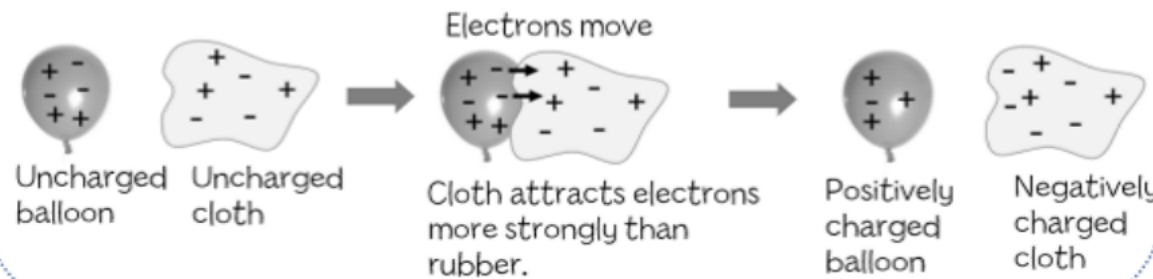


Positive and negative charges cancel each other out. This balloon has equal numbers of positive and negative charges. So, overall it has no charge.



2. How to charge objects

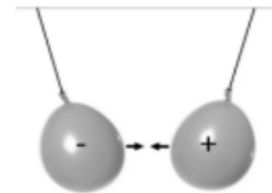
Some materials attract electrons more strongly than others. When you rub two materials together, electrons can move onto the material that attracts them more. The charges stay on the surface of the material.



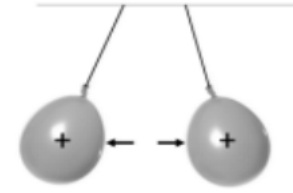
Electric force is a **non-contact force**.

Like magnetic and gravitational force, it works at a distance.

3. How charges attract and repel



Opposite charges attract

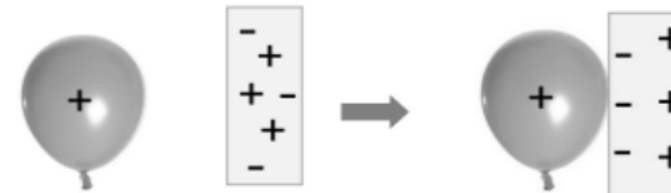


Identical (like) charges repel

4. How objects are attracted by induction

The negative electrons in the wall can move. They are attracted by the positively charged balloon.

The electrons move to the side of the wall nearest the balloon. Now the positively charged balloon is attracted to the negative charges in the wall.



The charges in the wall are mixed up

The charges are separated - electrons are nearest the balloon

The closer you put the two charged rods, the stronger the electric force.



bigger distance = weaker repulsion



smaller distance = stronger repulsion

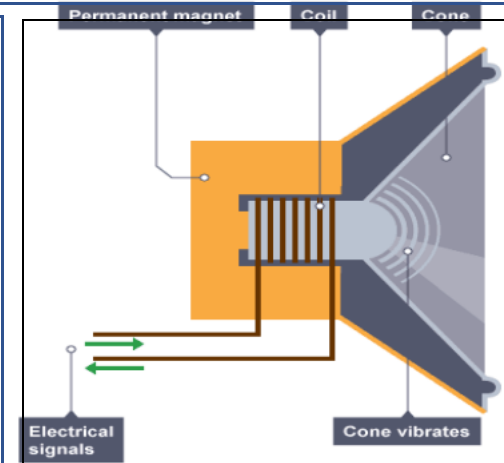
Sound	
Key words and definitions	
Vibration	The rapid back-and-forth movement of physical particles, as a reaction to different forces.
Pitch	How high or low a sound is.
Loud	A noise with high volume and intensity.
Vacuum	An area where there is no matter or particles.
Absorption	The transfer of energy of a wave to matter as the wave passes through it.
Reflected	A ray of light or sound bouncing off a surface.
Scattered	A change in the direction of a ray of sound or light because of collision with a medium.

Properties of sound waves

When an object or substance vibrates, it produces sound. These sound waves can only travel through a solid, liquid or gas. They cannot travel through empty space.

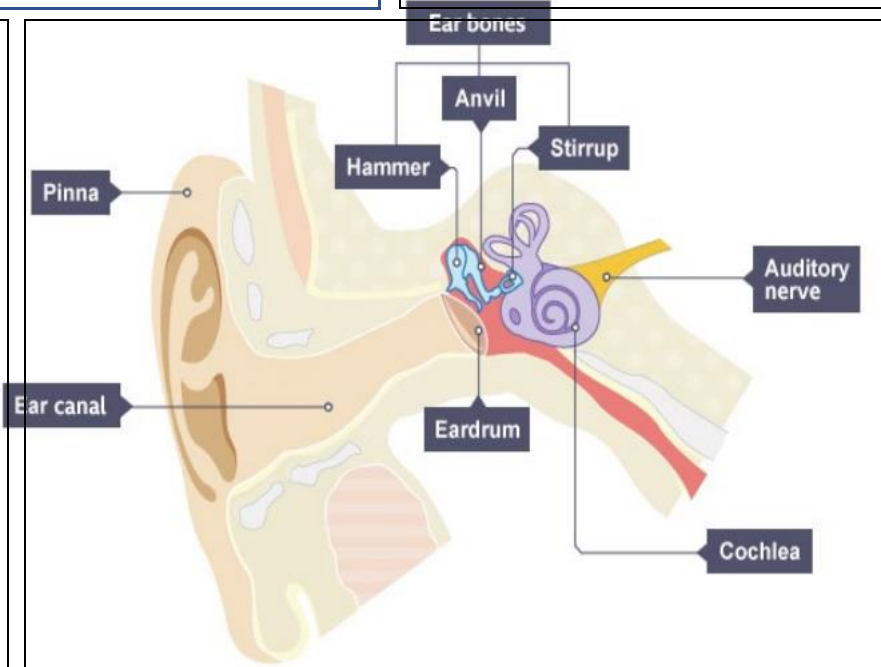
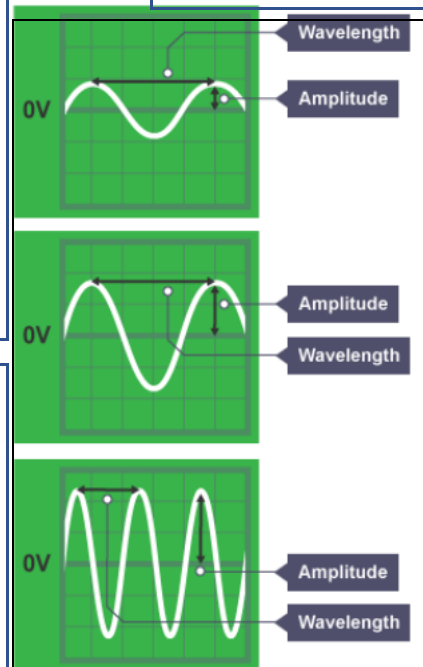
Loudspeakers

Sound waves are produced by all vibrating objects. Loudspeakers work by converting electrical energy into kinetic energy. This moves the cone which creates the sound waves.



Reflection

Sound waves can reflect off surfaces. We hear sound reflections as echoes. Hard, smooth surfaces are particularly good at reflecting sound. This is why empty rooms produce lots of echoes. Soft, rough surfaces are good at absorbing sound. This is why rooms with carpets and curtains do not usually produce lots of echoes.



Oscilloscope traces

The graphs shown by an oscilloscope:



Light
Key words and definitions

Shadow	A dark area caused by an opaque object blocking light rays.
Illuminate	To make something visible or bright by shining light on it.
Dim	A lower brightness of light.
Angle of incidence	The angle between the normal and the incident ray.
Angle of reflection	The angle between the normal and the reflected ray.
Normal	A line drawn at right angles to the reflecting surface.

How light travels

Light travels as waves. These are transverse waves, like the ripples in a tank of water. The direction of vibration in the waves is at 90° to the direction that the light travels. Light travels in straight lines, so if you have to represent a ray of light in a drawing, always use a ruler.



	Light waves	Sound waves
Type of wave	Transverse	Longitudinal
Can they travel through matter (solids, liquids and gases)?	Yes (if transparent or translucent)	Yes
Can they travel through a vacuum?	Yes	No
How are they detected?	Eyes, cameras	Ears, microphones
Can they be reflected?	Yes	Yes
Can they be refracted?	Yes	Yes

A ray diagram shows how light travels, including what happens when it reaches a surface. In a ray diagram, you draw each ray as:

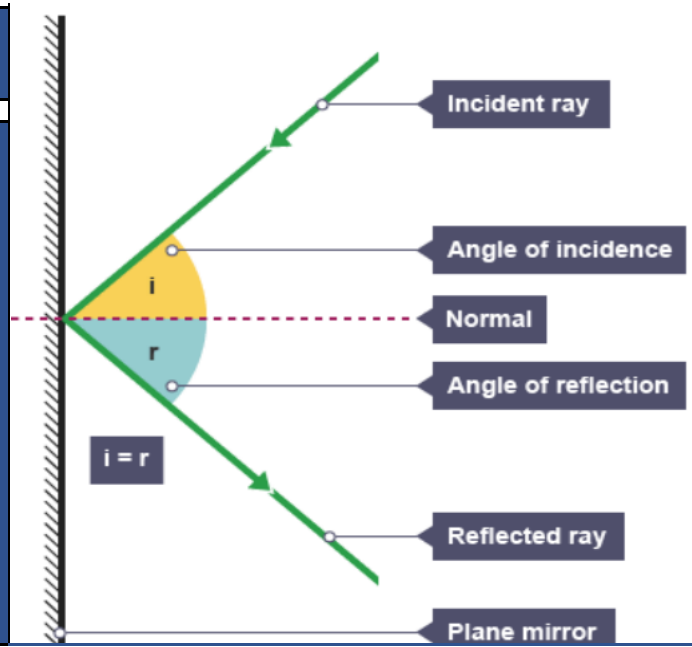
- a straight line
- with an arrowhead pointing in the direction that the light travels

Remember to use a ruler and a sharp pencil.

Reflection

The law of reflection
When light reaches a mirror, it reflects off the surface of the mirror:

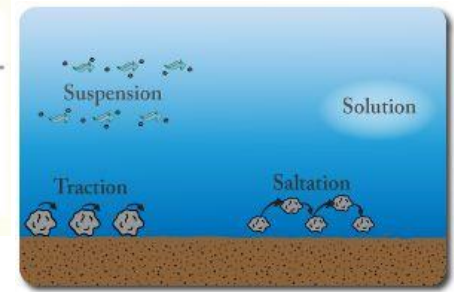
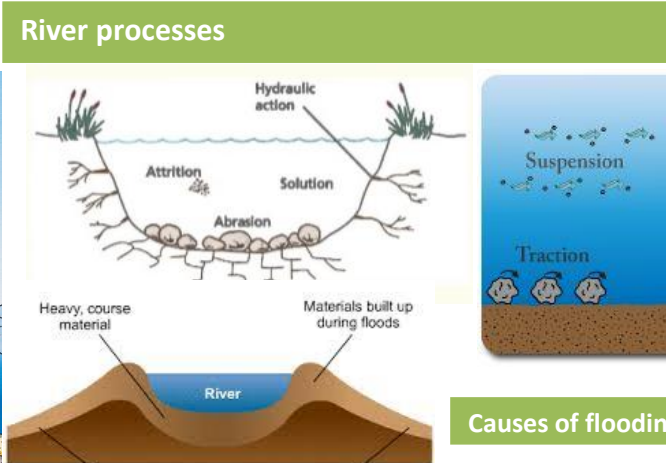
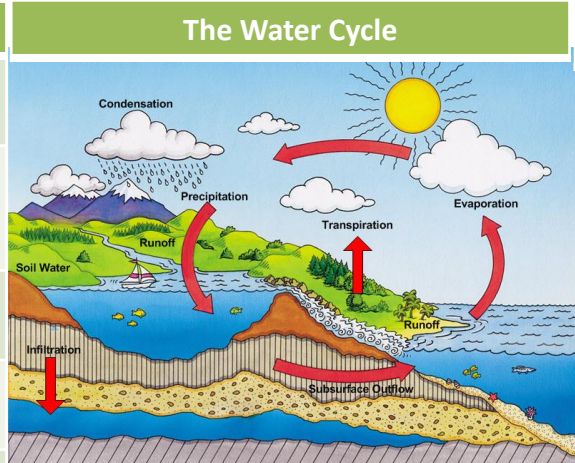
- the incident ray is the light going towards the mirror
- the reflected ray is the light coming away from the mirror



HUMANITIES

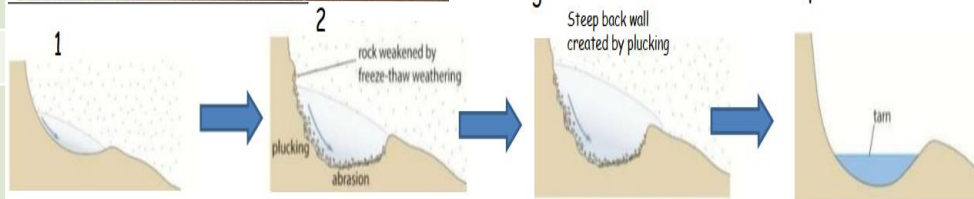
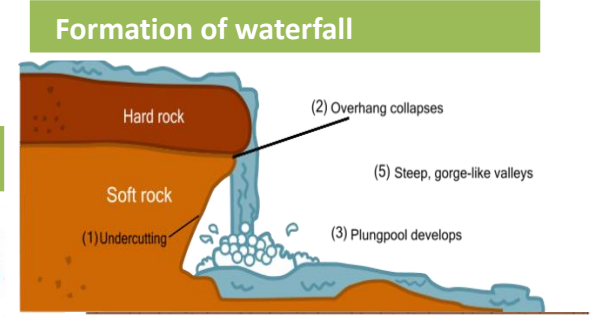
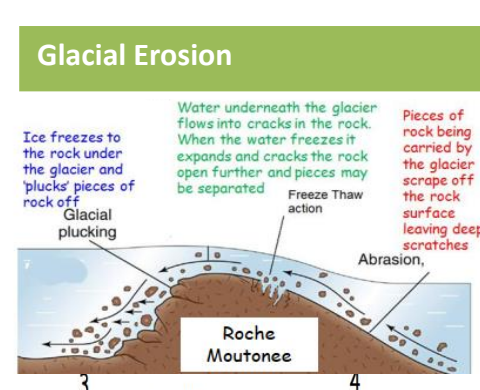
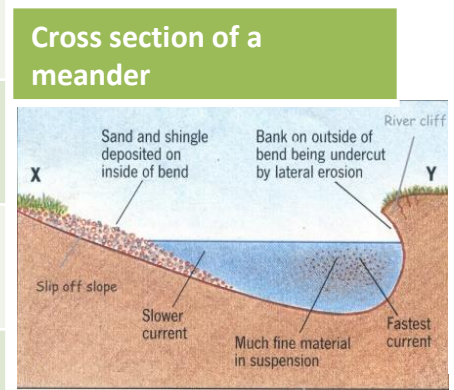
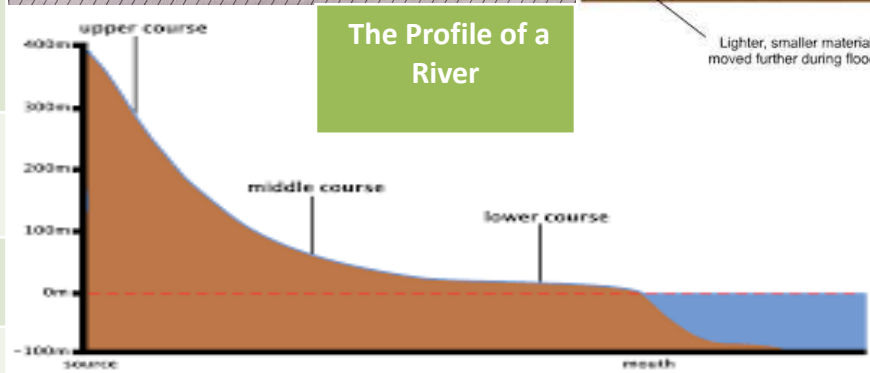
- **Geography**
- **History**
- **RE**

Key Terms	
Abrasion	Rocks grinding on the river bed
Attrition	Where rocks bash against each other in a river.
Deposition	Material is dropped.
Erosion	The wearing down of material
Flooding	When an area is covered in water that is normally dry.
Hydraulic Action	The pressure of water in gaps on a river bank.
Meander	A large bend in a river.
Lower Course	The lower part of a river where it flattens out.
Middle course	Where the river starts to flatten and become wider.
Mouth	The point where a river flows into the sea.
Solution	Materials dissolved in the river
Source	The start of a river.
Upper course	The upper part of a river



Causes of flooding -

- | Physical | Human |
|--|---|
| <ul style="list-style-type: none"> use precipitation Prolonged rainfall Snow Melt or Ice Thaw Storm Surges Landslides Volcanic Eruptions | <ul style="list-style-type: none"> Changes in land use Urbanisation Climate Change Poor dam construction Poverty |



- ### Corrie Formation
- A corrie begins as a sheltered hollow, where snow builds up year after year.
- The snow **compacts** to ice. When the ice is thick enough, it starts to **flow downhill** due to gravity. It is now a glacier! First it flows into the hollow.
 - Through **plucking and abrasion** the hollow grows deeper and the walls steeper. Freeze-thaw weathering helps.
 - Eventually the glacier is big enough to flow over the edge of the corrie. It's off on its journey down the mountain.
 - Once the glacier melts, the corrie is revealed. It may have a lake within, these lakes are called **tarns**.

1. What causes waves

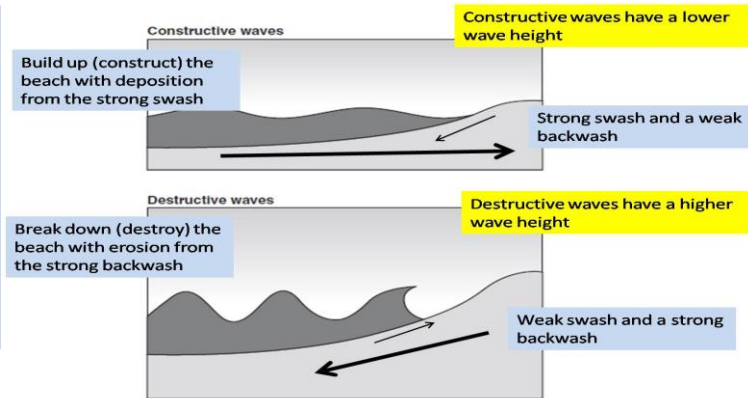
They are formed by the wind **dragging** along the surface of the water. The length of water the wind blows over is called the **fetch**.

The size of waves is determined by:

- The **strength** of the wind
- How long it has blown for
- The length of the **fetch**



2. The Types of wave



3. The work of waves

Waves shape our coastline 24 hours a day! It is rather like a digger! It takes things away (**erosion**), it moves material (**transportation**) and it puts it down (**deposition**).

Erosion – this is when the waves wear away the coast.

Transportation – this is when the sea moves the **eroded** material.

Deposition – this is when the eroded and weathered material it put down in more sheltered parts of the coastline.



The Types of Erosion

Hydraulic Action – The force of water gets into cracks in the rocks and forces them apart.

Solution – The slightly acid nature of sea water dissolves the rocks.

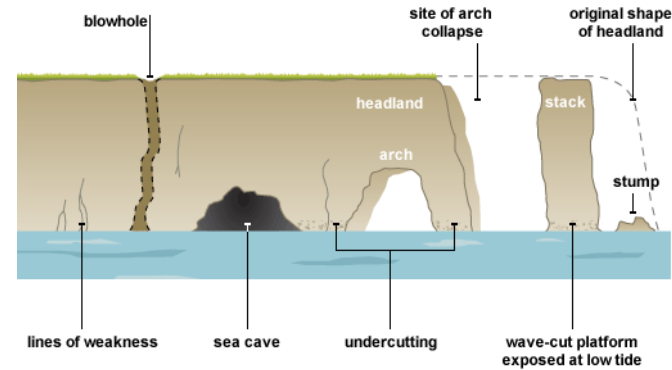
Abrasion - this is the sand and rocks wearing away and the rocks, rather like sandpaper.

Attrition –rocks bashing together and making them smaller

4. Longshore Drift

This is the movement of material along a coastline. This happens when waves break on a shoreline at an angle.

5. Coastal Landforms – Headlands (erosional)



How do glaciers form and shape the landscape?

1. **Snow accumulates** in the mountains. The valleys have been carved out by rivers and are V shaped.
2. The **snow compacts over many years** and turns into **ice**. This river of ice is called a **glacier**.
3. The **glacier begins to move** down the valley under the force of **gravity**. They scrape across the ground surface and can 'slide' along on melt water beneath them.
4. As the glacier moves downhill it **erodes** (wears away) the ground surface. There are 2 types of erosion called **plucking** and **abrasion**. Also **weathering** through **Freeze Thaw** breaks down the rock.
5. The ground surface is eventually moulded by the ice to form a **flat bottomed and steep sided valley**.
6. When temperatures warm up the glacier melts leaving behind it a clear U shaped valley.

Living with Glaciers

Glaciers can be both **hazardous** to people who live near them, as well as a **vital resource** they need to survive.

Hazards	Benefits
Temperatures can drop to around -60°C making living there difficult	Glacial melt water provides vital drinking water.
Deep crevasses (cracks) form in glaciers and people may fall to their death.	Glacial melt water can be used to irrigate farmers' crops.
Glacial movement (sudden and steady) can trigger avalanches.	The lakes and landforms around glaciers attract many tourists and income.
Some glacial areas receive no sunlight for long periods of the year e.g. Alert Bay NE Canada is in darkness for 50 days a year.	Damming glacial melt water can generate electricity.

English Civil War happened in the middle 17th century. The term covers a period between 1642 and 1651 in England, Scotland and Ireland. Some people consider all this fighting to be one big war, while others think it should be seen as several different wars that were linked.

Causes:

- The reasons for the fighting were mostly to do with power, money and religion:
- King Charles I of England married a French princess, Henrietta Maria, who was a Catholic. Charles I tried to change Church of England services, introducing incense and bells, things associated with Catholic services. This worried many people who hated Catholicism.
- When the members of Parliament demanded certain rights, he closed Parliament for eleven years, ruling without them.
- Charles tried to raise extra taxes called ship money without Parliament. The tax built and restored ships to protect the country, but Charles extended the tax from charging all those living by the coast to charging the whole country.
- The Parliament were reluctant to help Charles deal with the Scottish Rebellion of 1637.
- Parliament took control of the army in 1642, to deal with the Irish Rebellion.

Civil War 1642:

- After a few years of quarrelling, the members of Parliament raised an army to fight against the King.
- The first war was fought between King Charles's army and the army of Parliament. King Charles's army soldiers were called "Cavaliers", and the army of Parliament's soldiers were called "Roundheads".
- The **English Civil War** is remembered most for **three major battles** – the **Battle** of Edgehill, the **Battle** of Marston Moor and the **Battle** of Naseby.
- Parliament won the first war, and King Charles was put in prison, but he escaped and a second war broke out. Parliament won the second war.
- They put King Charles on trial because they did not want any more fighting. He was found guilty of treason and was executed in 1649.

Oliver Cromwell:

During the war, Parliament found a new leader, a man called Oliver Cromwell, who was very good at leading an army and also had ideas about how to rule the country. Not everyone liked him, but he was the strongest leader and in time he became the ruler of the whole country. Cromwell took the title of "Lord Protector" rather than King, because he did not think the country needed another king. His government was called "the Protectorate".



Roundhead fought for Parliament



Cavalier fought for the King.

Key dates:

November 1640 The Long Parliament was convened.

November 1641 The Grand Remonstrance

January 1642 Charles I entered the Commons chamber to arrest five Members of the House

August 1642 Civil war begins

January 1649 Charles I was executed.

Key vocabulary:

A civil war is a war where the sides involved in the fighting are from the same country.

Divine Right of Kings is the belief that Kings were put on the throne by God so they are accountable for their actions to God alone and not the people.

Hinduism: What are the common and divergent experiences of Hinduism?

Hindu Gods:

Hindus have many gods as a part of their religion but all of them are part of the main god- **Brahman**. All of the gods are representations of different sides of him. The three main forms, known as the **trimurti**, are:

Brahma – the god of creation. He is the source of all knowledge in the universe.

Vishnu – the preserver of life. He encourages his followers to be kind and compassionate.

Shiva – the destroyer. He is considered to be responsible for death, destroying in order to bring rebirth and new life.



Most Hindus have a personal god or goddess such as Shiva, Krishna or Lakshmi to whom they pray regularly.

Beliefs about life after death:

Hindus believe in reincarnation - a belief that the soul (**atman**) is **eternal** and lives many lifetimes, in one body after another. The soul is sometimes born in a human body, sometimes in an animal body and sometimes in a plant body etc. Hindus believe that all forms of life contain a soul, and all souls have the chance to experience life in different forms. This cycle of rebirth is known as **samsara**. Hindus believe that existence of this cycle is governed by **karma** and that this has a direct impact on what you are reincarnated as in the next life.

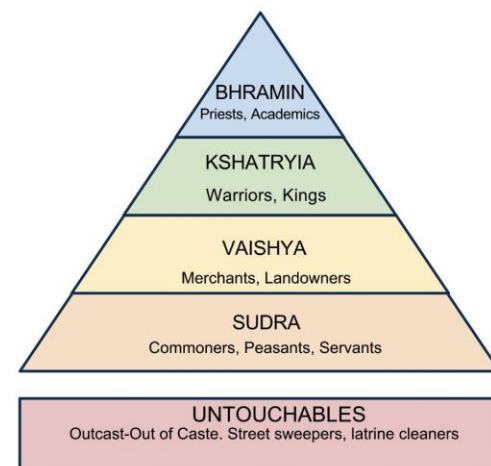
For a Hindu they believe that Karma is the cause of their particular destiny. Misfortunes in their present life are the result of acts that they have committed in the past. In the same way, their actions in their present lives will determine their fate in the lives that follow. Hindus therefore aim to live in a way that will cause each of their lives to be better than the life before.

The ultimate aim for a Hindu is to achieve **moksha** where they have escaped this cycle of life, death and rebirth.

There are different ways to Moksha:

- Spiritual: involves acquiring spiritual knowledge through yoga and meditation.
- Devotion to god: working selflessly for the good of society.

The Caste system:



The system which divides Hindus into rigid hierarchical groups based on their karma and **dharma** is generally accepted to be more than 3,000 years old. It links to the samsara cycle as people want to be reborn into the higher **castes**. Indian society used to be strictly structured in this way but is less affected by it today.

The system gives many benefits to the upper castes while allowing for the repression of the lower castes by those above them.



Vocabulary:

Atman- Hindu word for the soul.

Brahman- the overall Hindu god.

Caste- a class in Hindu society.

Dharma- importance of doing their duty as a Hindu.

Diwali- Hindu festival of light

Eternal- goes on forever.

Holi- Hindu colour festival

Karma: what you are reborn as in the next life is affected by how the previous life was lived.

Moksha- freedom from samsara.

Murti- image of a god involved in worship

Puja- a form of worship for a Hindu.

Reincarnation: a belief that the soul is eternal and lives many lifetimes, in one body after another

Samsara: going through the cycle of repeated births and deaths (reincarnation).

Trimurti – the three main forms of the Hindu god, Brahman.

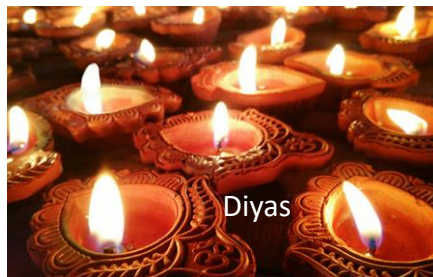
Hindu worship:

One of the main ways that Hindus worship their gods is by performing **puja**. In its simplest form it usually consists of making an offering of flowers or fruit to an image of a god. They will often use a tray like this:



The objects on the tray are for different things:

- Murti: the image of a god to be worshipped
- Bell: The worshipper will ring the bell to let the God know that they have come to worship
- Diva lamp: shows God’s presence
- Incense: purifies the air and is a nice smell for the God
- Water: is used to wash the Murti
- Kumkum powder: mark their foreheads to show respect to God and the he has blessed them
- Prashad: blessed food and flowers offered to the god(s)



Hindu festivals: Diwali

Diwali lasts for 5 days and is a festival of light. It celebrates the story of Rama and Sita (see below), especially their defeat of evil and their return after 14 years in exile. They believe that the goddess of wealth- Lakshmi enters only the clean houses on the evening of Diwali.

Houses, shops and public places are decorated with small oil lamps called diyas. Lights are used to show the heavenly bodies that we are in joy and prosperity. People also enjoy fireworks, exchange gifts and give sweets too, so it's really popular with children.

Hindu temples:

Every village and town in India has at least one temple or mandir and, because there are many gods, the style varies greatly. Some are very elaborate and the appearance is designed to create a kind of heaven on Earth, where worshippers can be still and find the truth within. The decorated nature is also meant to drive away evil forces. Temples will contain a murti (image of God) which is seen as an important and honoured royal guest. Worshippers prepare offerings to honour the god(s) in the temple.



Hindu temple in London

Hindu festivals: Holi

Holi is one of the most significant festivals of India mostly celebrated in the month of March every year. It symbolizes the victory of good over evil, truth over lies and happiness over sorrow.

Holi is also a way to welcome the blooming of flowers and sense of warmth and happiness. It is a festival of colour.

It’s a two-day. On the first day, people will gather around a bonfire and celebrate good triumphing over evil. But it’s the second day that most people will recognise - that’s when perfumed powder called gulal is pelted at everyone and made to stick with water pistols and balloons.



Gulal powder comes in many colours and some are thought to signify specific things:

- red = love
- blue = Krishna
- yellow = turmeric (a spice used in lots of Indian food)
- green = spring

The legend that some believe inspires this festival centres around two demon siblings, Holika and Hiranyakashipu.

LANGUAGES

- **French**
- **Spanish**

Learning Cycle 4 is a module that will enable you to talk about where you live in French. You will be able to conjugate verbs correctly in the present tense and be introduced to the near future tense.

Key words and definitions	
Subject pronouns	Je (I), tu (you), il / elle (he / she), nous (we), vous (you plural), ils/ells (they M / they F)
Nouns	Used to identify a class of people, places or things (French nouns have a different gender. They are either masculine or feminine)
Adjectives	Used to describe a noun
Verbs	A word used to describe an action, state or occurrence, and forming the main part of the predicate of a sentence (such as hear, become, happen)
Adverbs of frequency	Used to say how often someone does something
Infinitive	A verb in its unchanged form / a verb which can be found in a dictionary / a verb which has an ER/IR/RE ending in French (jouer) / a verb which has 'to' in front of it in English (to play)
Present tense	Used to say what someone is currently doing (I do / I play)
Perfect tense / Passé-Composé / Past tense	Used to talk about a completed action which took place in the past
Imperfect tense / past tense	Used to talk about an action in the past which took place regularly (I used to play football on Saturdays)
The future tense	Used to talk about what someone will do in the future (I will play football)
The near future tense	Used to talk about what someone is going to do in the future (I am going to play football)
The conditional tense	Use when you want to say would / should or could (I would like)

Looking for patterns in language:
 Try to make links as you're learning French. Look for patterns to help you memorise things. Think about why you're using a particular article. If you're not sure, check the gender in a wordlist or a dictionary.

	singular			plural
	masculine	feminine	before vowel sound	
the	le	la	l'	les
a	un	une	un/une	des
to the	au	à la	à l'	aux

Regular -er verbs in the present tense

rester	<i>je reste</i> <i>tu restes</i> <i>il/elle/on reste</i> <i>nous restons</i> <i>vous restez</i> <i>ils/elles restent</i>	I stay you stay (singular, informal) he/she stays/we stay we stay you stay (plural/formal) they stay
---------------	---	---

aller
aller (to go) is an important irregular verb.

<i>je vais</i>	I go	<i>nous allons</i>	we go
<i>tu vas</i>	you go (singular, informal)	<i>vous allez</i>	you go (plural/formal)
<i>il/elle/on va</i>	he/she goes/we go	<i>ils/elles vont</i>	they go

The near future tense

Use **aller + the infinitive** to say what you're going to do.

<i>je vais</i>	<i>regarder</i>	I'm going to watch
<i>tu vas</i>	<i>jouer</i>	you're going to play (singular, informal)
<i>il/elle/on va</i>	<i>danser</i>	he's/she's going to dance/we're going to dance
<i>nous allons</i>	<i>nager</i>	we're going to swim
<i>vous allez</i>	<i>sortir</i>	you're going to go out (plural/formal)
<i>ils vont</i>	<i>manger</i>	they're going to eat
<i>elles vont</i>	<i>dormir</i>	they're going to sleep

Les adverbes de fréquence

• Expressions of frequency

d'habitude	usually
normalement	normally
quelquefois	sometimes
tous les weekends	every weekend

Les mots essentiels • High-frequency words

assez	quite
mais	but
ou	or
puis	then
très	very

Modal verbs

vouloir (to want) and **pouvoir** (to be able) are modal verbs.

vouloir	to want
je veux	I want
tu veux	you want (singular, informal)
il/elle/on veut	he/she wants/we want
nous voulons	we want
vous voulez	you want (plural/formal)
ils/elles veulent	they want

Modal verbs are followed by an infinitive.

je **veux aller** – I want to go

on **peut visiter** – you can visit

pouvoir

je **peux**

tu **peux**

il/elle/on **peut**

nous **pouvons**

vous **pouvez**

ils/elles **peuvent**

to be able

I can/am able

you can/are able (singular, informal)

he/she can/is able; we can/are able

we can/are able

you can/are able (plural/formal)

they can/are able

Make sentences longer using **si**.

Si tu aimes l'histoire, tu peux visiter les châteaux de la Loire.

– **If** you like history, you can visit the castles in the Loire Valley.



Stratégie 4

Mnemonics

One way of remembering new words is to invent a mnemonic: a rhyme or saying that sticks easily in the mind. Here's an example from the word list on page 86, but it's best to make up your own – you'll find them easier to remember/harder to forget.

My
Aunt
Gets
Alligator
Shoes
In
Normal
Shops

You can't learn every word like this – it would take ages! But it's a great way of learning those words that just don't seem to stick.

Stratégie 5

Letter and sound patterns

Just as in English, many French words contain the same letter patterns. Recognising these patterns will help you to spell and say more words correctly. You have practised some of these throughout *Studio*. One way of remembering these is to write lists of words with identical letter patterns. Add to them as you come across more. Here are some from Module 5 to start you off:

montagne
campagne
soif
voile
footballeur
danseur

Je voudrais + infinitive

You can use *Je voudrais* (I would like) to refer to your hopes and dreams for the future.

Je voudrais aller en Australie.

I would like to go to Australia.

Je voudrais visiter la tour Eiffel.

I would like to visit the Eiffel Tower.



Learning Cycle 4 is all about where you live. You will learn to describe your town and talk about what you can do there. You will learn more about verbs and practise using the present tense of various verbs as well as learning the near future tense.

Key words	Definitions
Subject Pronouns	Yo (I) / tu (you) / el/ella (he/she), nosotros (we) / vosotros (you (pl)) / ellos/ellas (they (m)/they (f))
Nouns	used to identify any of a class of people, places, or things
Adjectives	used to describe a noun
Verbs	a word used to describe an action, state, or occurrence, and forming the main part of the predicate of a sentence, such as <i>hear, become, happen</i> .
Adverbs of frequency	used to say how often someone does something
Infinitive	A verb in its unchanged form / A verb which can be found in a dictionary / A verb which has an AR/IR/RE ending in Spanish (jugar) / A verb which has 'to' in front of it in English (to play)
Present tense	Used to say what someone is currently doing (I do / I play)
The Near Future tense	Used to talk about what someone is going to do in the future (I am going to play football)

'a', 'some', 'many'

The words for 'a', 'some' and 'many' change according to the gender of the noun and whether it is singular or plural.

	a/an	some	many/a lot of
masculine	un museo	unos museos	muchos museos
feminine	una tienda	unas tiendas	muchas tiendas

Make sure your adjectives agree with the noun (piso or casa), e.g. **un piso bonito, una casa bonita.**

The verb 'ir' (to go)

Ir (to go) is a key irregular verb.

ir	to go		
voy	I go	vamos	we go
vas	you go	vais	you (plural) go
va	he/she goes	van	they go

Voy al parque. I go to the park.
Van a la bolera. They go to the bowling alley.

a + el = al
Voy **a el** parque.
→ Voy **al** parque.

The near future tense

You use the near future tense to say what you are going to do. To form the near future tense, use the present tense of ir (to go) plus a, followed by the infinitive.

Voy a jugar al fútbol. I am going to play football.
Vamos a hacer deporte. We are going to do sport.

Using two tenses together

To reach a higher level, you need to show that you can use two tenses, for example, the present tense and the near future tense.

Los lunes
Los miércoles
Los viernes
A veces
Todos los días
Los fines de semana

voy
vas
va
vamos
vais
van

al parque.
al cine.
a la playa.
a la bolera.
a la cafetería.
de compras.

voy a salir con mis amigos
vas a ver la televisión
va a ir de paseo
vamos a jugar al voleibol
vais a chatear
van a hacer los deberes

I am going to go out with my friends
you are going to watch TV
he/she is going to go for a walk
we are going to play volleyball
you (plural) are going to chat online
they are going to do their homework

The present tense

1 Regular verbs

There are three types of regular verbs in Spanish: **-ar**, **-er** and **-ir**.
 Rule: Replace the infinitive ending with the endings shown in bold.

-ar verbs

hablar	to speak		
(yo) hablo	I speak	(nosotros) hablamos	we speak
(tú) hablas	you speak	(vosotros) habláis	you (plural) speak
(él/ella) habla	he/she speaks	(ellos) hablan	they speak

In brackets you can see the pronouns I/you/he/she/we/you/they. Often these are not used in Spanish as it is clear who is speaking from the verb ending.

-er verbs

comer	to eat		
como	I eat	comemos	we eat
comes	you eat	coméis	you (plural) eat
come	he/she eats	comen	they eat

-ir verbs

escribir	to write		
escribo	I write	escribimos	we write
escribes	you write	escribís	you (plural) write
escribe	he/she writes	escriben	they write

Once you know the pattern they follow, you can apply the rules to other regular **-ar**, **-er** and **-ir** verbs you come across.

El profesor/La profesora dice...

¡Entrad!	<i>Come in!</i>
¡Sentaos!	<i>Sit down!</i>
¡Silencio, por favor!	<i>Silence, please!</i>
Sacad los libros.	<i>Take out your books.</i>
Sacad los cuadernos.	<i>Take out your exercise books.</i>
Mirad la página 20.	<i>Look at page 20.</i>

Tú dices...

¡Por favor, profesor/ profesora!	<i>Please, Sir/Miss!</i>
¿Cómo se escribe...?	<i>How do you spell...?</i>
¿Cómo se dice 'book' en español?	<i>How do you say 'book' in Spanish?</i>

¡Está perfecto!	<i>Perfect!</i>
¡Atención!	<i>Careful!</i>
¿Cómo se puede mejorar?	<i>How can it be improved?</i>
¿Puedes poner un ejemplo?	<i>Can you give an example?</i>
¿Voluntarios?	<i>Who can help?</i>

¿Qué significa 'boli'?	<i>What does 'boli' mean?</i>
No entiendo.	<i>I don't understand.</i>
¿Puedes repetir?	<i>Can you repeat that?</i>
¿Puedo hablar en inglés?	<i>Can I speak in English?</i>
Tengo un problema...	<i>I have a problem...</i>
¡Te toca a ti!	<i>It's your turn.</i>

2 Stem-changing verbs

Some Spanish verbs are called stem-changing verbs or 'boot' verbs.

jugar	to play		
juego	I play	jugamos	we play
juegas	you play	jugáis	you (plural) play
juega	he/she plays	juegan	they play

querer	to want		
quiero	I want	queremos	we want
quieres	you want	queréis	you (plural) want
quiere	he/she wants	quieren	they want

3 Irregular verbs

Some verbs don't follow the usual patterns.

Rule: Learn each verb by heart.

tener	to have		
tengo	I have	tenemos	we have
tienes	you have	tenéis	you (plural) have
tiene	he/she has	tienen	they have
ser	to be		
soy	I am	somos	we are
eres	you are	sois	you (plural) are
es	he/she/it is	son	they are

Palabras muy frecuentes	High-frequency words	
Aquí = here	bastante = quite	muy = very
Con = with	si = if	cuando = when
También = also	siempre = always	o = or

Porque = because	nunca = never	
Un poco = a bit	nada = nothing	
Mucho = a lot	pero = but	y = and
Mi / mis = my	tu / tus = your	

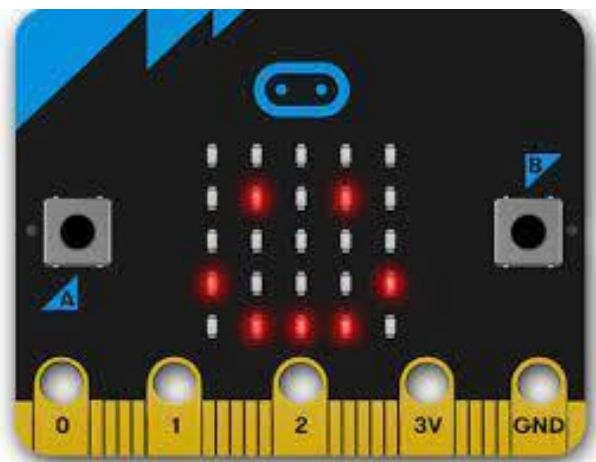
ICT

Cycle 4 in Computing you will focus on coding Micro:bits using the block programming language. You will start by learning the basic functions of the Micro:bits, which will allow you to program the Micro:bit devices to react to your inputs and produce various outputs.

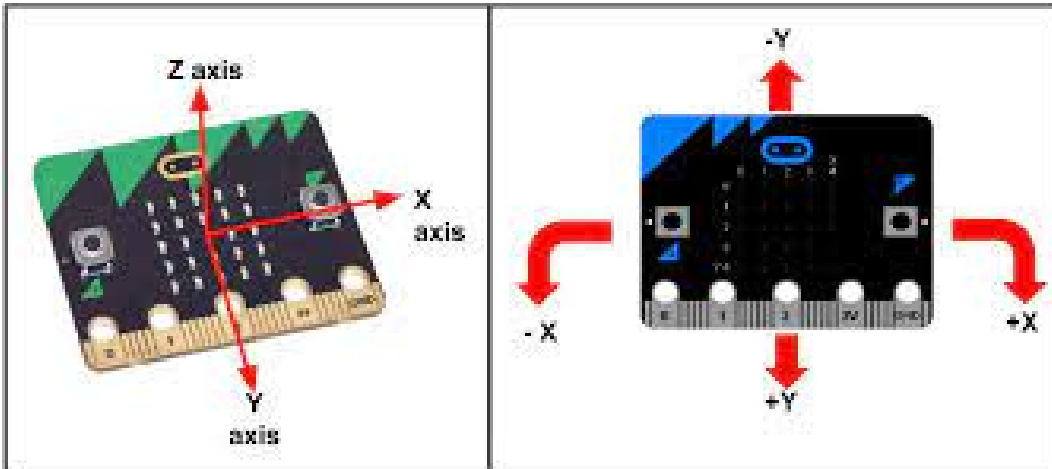
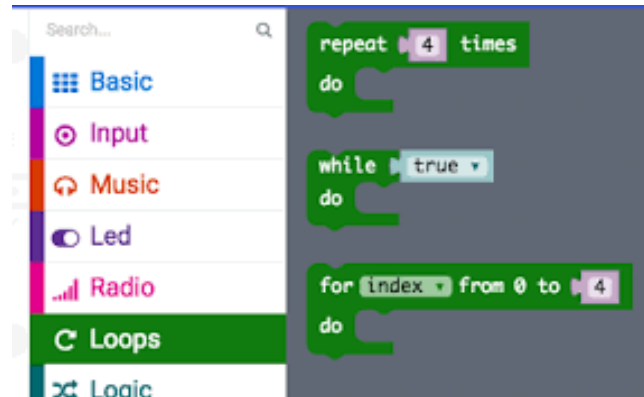
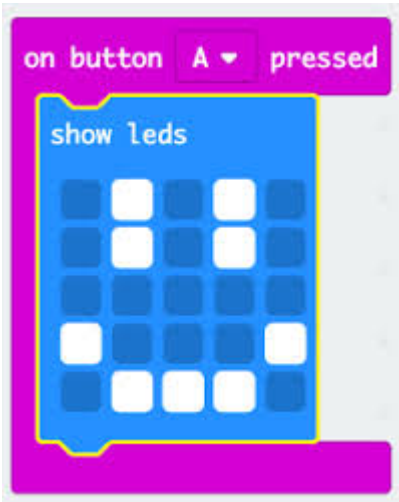
Debugging Strategies

If your code does not work try the following debugging strategies.

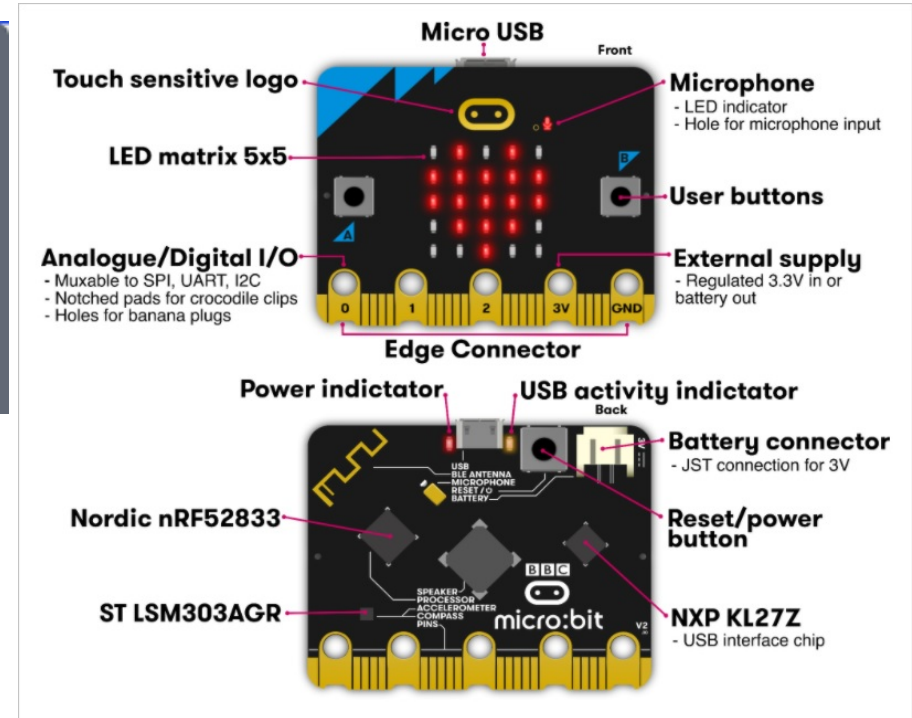
- Spot the Difference**
Read your code – now read my code code. Do they look the same?
- Does it make sense?**
Explain your code to your neighbour
- Read the Error Message**
Be a detective – look for clues
- Highlights**
Has IDLE highlighted any code?



Key vocabulary	
Python	A high level programming language.
Programming	The process of writing computer programs.
Code	The instructions that a program uses.
Sequence	Parts of the code that run in order and the pathway of the program reads and runs very line in order.
Selection	Selects a pathways through the code based on whether a condition is true
Iteration	Code is repeated (looped), either while something is true or for a number of times
Algorithm	A set of rules/instructions to be followed by a computer system
Variable	A value that will change whilst the program is executed. (eg. temperature, speed)
Comparative Operator	When comparing data, an operator is used to solve the equality such as <>, != or ==
Syntax	The punctuation/way that code has to be written so that the computer can understand it. Each programming language has its own syntax.
Data Type	This indicates how the data will be stored. The most common data types are integer, string, and float/real.
String	A collection of letters, numbers or characters. (eg, Hello, WR10 1XA)
Integer	A whole number. (eg. 1, 189)
Float/Real	A decimal number, not a whole number. (eg. 3.14, -26.9)
Boolean	1 of 2 values. (eg. True, False, Yes, No)



Practice your Micro:bit online here:
<https://makecode.microbit.org/>



Comparative Operators	
==	Equal to
!=	Not equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to

DESIGN & TECHNOLOGY

- **Design & Technology**
- **Food & Nutrition**

Knowledge Organiser

Natural Woods

During this topic you will learn the types, properties, structures and uses of the main natural and manufactured boards.







Wood is an organic material that is the main substance in the trunk and branches of a tree. Wood prepared for use in building and carpentry is known as timber.

Hardwoods – most come from broad-leaved, deciduous trees (trees that shed their leaves annually). They are generally low growing and are therefore usually more scarce and expensive than softwoods.



Softwoods – come from coniferous trees that have long needle-like leaves and are generally found in cold climates. They are quick growing and can therefore be replaced quicker than hardwoods.



Oak	Mahogany	Beech	Balsa	Pine	Cedar
Very strong, heavy, durable and hard. Attractive grain.	Hard, strong, easy to work & resistant to rot. Expensive.	Hard, tough, strong and finishes well.	Very light & soft, but has great strength-to-weight ratio.	Easy to work with, reasonably strong. Lots of knots.	Natural oils make it durable and resistant to weather.
					
Flooring Furniture Whisky barrels	Flooring Fine furniture Jewellery boxes	Laminated furniture Children's toys Flooring	Surfboard cores Air craft and model making	Furniture Construction Door frames	Outdoor furniture Sheds Fencing

Manufactured boards

Woodchips broken down into pulp (small fibres), mixed with glue and compressed.

Plywood

- Very strong in all directions; often stronger than solid wood.
- Outside layers are finished with a higher-quality veneer.
- Must always include an odd number of layers with the grain running in alternating directions.
- **Used in construction, furniture.**
- **Comes in water-resistant marine grades used in boats.**



Alternate layers of wood (veneers) are glued together at 90 degrees to each other.


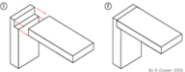



Medium density fibreboard (MDF)



- Has a smooth surface, which makes it easier to paint and finish. (often with higher-quality veneer).
- Denser than other manufactured boards.
- Produces hazardous dust (work in ventilated area).
- **Used in flat-pack furniture, storage units.**

Manufactured boards are made from fibres, chips, blocks or sheets of wood bonded together with adhesives.

During this topic you will learn new tools, equipment and joining methods for woods.

Key word	Definition
Hardwood	Broad leaf trees, slow growing, generally more expensive than softwoods.
Softwood	Needle shaped leaves, faster growing, generally cheaper than hardwoods. Coniferous.
Evergreen	Keep their leaves all year round.
Deciduous	Trees that lose their leaves in winter.
Coniferous	Conifer trees (softwoods) Have their seeds in cones.
Varnish	Used in wood finishing applications where the natural tones and grains in the wood are intended to be visible.
Butt joint	 <p>The most basic and simple wood joint to construct. Made with only two pieces of timber that are butted together at the ends. The weakest wood joint, held together with glue, nails, screws or dowel.</p>
Lap joint	 <p>Similar to the butt joint however one of the ends of the timber has a groove cut out of it to create much better holding strength.</p>
Grain	 <p>A pattern of fibres seen in a cut surface of wood.</p>
Knot	 <p>Appear in the trunk where branches died. Knots are imperfections that cause living wood grain to grow around them.</p>
Dowel	 <p>Used to reinforce wood joints.</p>

1. 	2. 
3. 	4. 
5. 	6. 
7. 	8. 
9. 	10. 

Tool name	Use	Tool name	Use
1. Try square	Marking 90° angles	6. File/s	Removes fine amount of material from work.
2. Tenon saw	Cutting straight lines in wood.	7. Rasp	Coarse file used for shaping wood or other material.
3. Coping saw	Cutting curves in wood and plastic.	8. Sanding disc	Sanding and finishing wood.
4. Bench hook	Helps hold wood in place whilst cutting.	9. G clamp	Holding work down whilst cutting or gluing.
5. Wood vice	Holding working whilst cutting/filing.	10. Steel rule	Measuring material in cm/mm.

During this cycle you will learn the safe use of equipment; basic practical cookery skills; safety and hygiene.

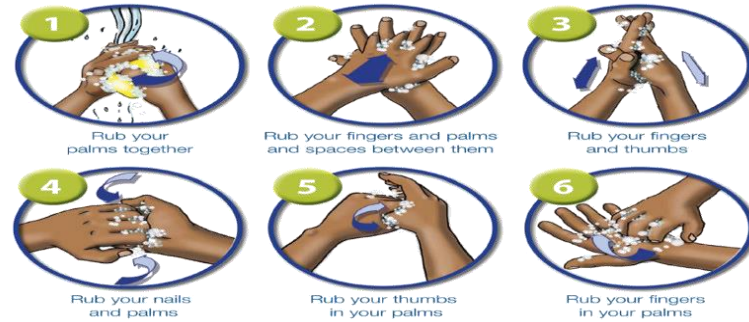
Key words and definitions:	
Hazard	Something dangerous
Control	To make a hazard safer
Safety	Reducing the risk of accidents
Hygiene	Keeping food clean and preventing bacterial growth
Evaluation	Looking back at what you have done and assessing it
Boiling	100°C, large bubbles
Simmering	95°C, small bubbles
Bridge hold	Make a bridge with one hand to hold veg/fruit, picture overleaf
Claw grip	Make a claw with one hand to hold fruit/veg, picture overleaf



Theory work: Safety and Hygiene

- ☑ Roll up long sleeves
- ☑ Tie up long hair
- ☑ Stack the stools
- ☑ Wash hands in warm soapy water
- ☑ No nail varnish
- ☑ Short nails
- ☑ Put on an apron
- ☑ Make sure your work surface and equipment are clean
- ☑ Throw away food you drop on the floor
- ☑ If you need to sneeze or cough, move away from the food to do it
- ☑ If you touch your hair, cough or sneeze, wash your hands again
- ☑ Keep your work area free of rubbish
- ☑ Wash up properly in hot soapy water
- ☑ Dry equipment thoroughly
- ☑ Keep high risk foods in the fridge

Wet your hands under warm running water and apply soap.



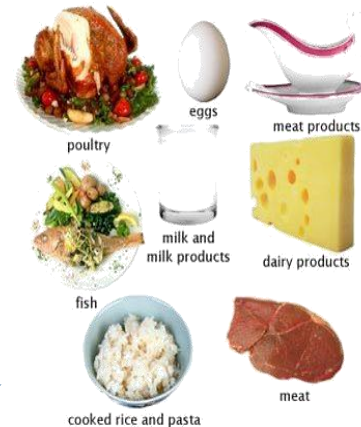
Dry your hands thoroughly with a paper towel or clean towel.



Conditions for bacteria to grow:

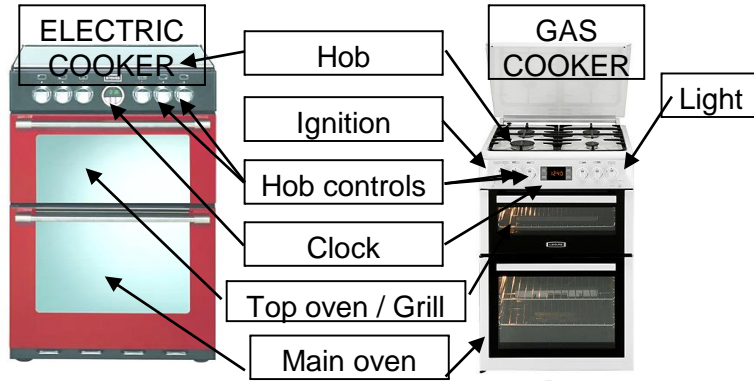
- Food
- Moisture
- Warmth
- Time

High Risk Foods:



In a Food room you need to be able to identify hazards while you are working and make them safe. Everyone in the room is responsible for their own safety and the safety of the rest of the class.

Theory work: Equipment



Teaspoon
Dessert spoon
Table spoon



Practical work:

Peeling and Chopping:

- Focus and concentrate
- Keep your eyes on the knife
- Peel downwards and away from your hands
- Check your knife is the right way up
- Use bridge or claw grip
- Keep peelings OFF the chopping board
- Keep raw meat and fish well away from other foods
- DO NOT leave knives in the washing up bowl

Using the oven:

- Pre-heat before cooking food
- Use oven gloves
- Keep trays level
- Do not put food on the bottom of the oven
- Turn off after use

Using a liquidiser:

- DO NOT plug in until you are ready to use
- Make sure your hands are dry
- Fill max 2/3 way
- Check jug is locked on
- Check lid is properly on
- Keep your hand on the top when turned on
- Pulse for 5 seconds max per time
- Turn off and unplug after use
- Wash up jug and lid only and watch out for spikes

Boiling 'v' Simmering

- Boiling is a higher temperature than simmering (100°C compared to 95 °C).
- Boiling liquids have big bubbles, whereas simmering liquids have little bubbles.



Using the grill:

- Open the door
- Leave the door OPEN
- Pre-heat before cooking food
- Check food frequently
- Turn off after use

Washing up:

- Stack dishes next to the sink
- Use hot soapy water
- Use a dishcloth or a brush
- Check equipment is clean
- Put washed equipment on the draining board
- Dry up with a clean dry tea towel
- Put clean dry equipment away from any remaining dirty equipment
- Return equipment to cupboards

Using the hob:

- Choose a ring the same size as your pan
- Keep the pan handle to the side
- Be careful that pan and lid handles are not hot
- Once food is up to temperature, reduce the heat
- Use a lid whenever you can
- If you are stirring food make sure your spoon is in contact with the bottom of the pan
- Check on the food often
- Adjust the temperature when necessary
- Turn off after use

Where do polymers come from?

Polymers are often referred to as 'plastics', this is because of their property of *plasticity* (mouldable). The majority of polymers used in modern products are *synthetic*, although natural polymers do exist.

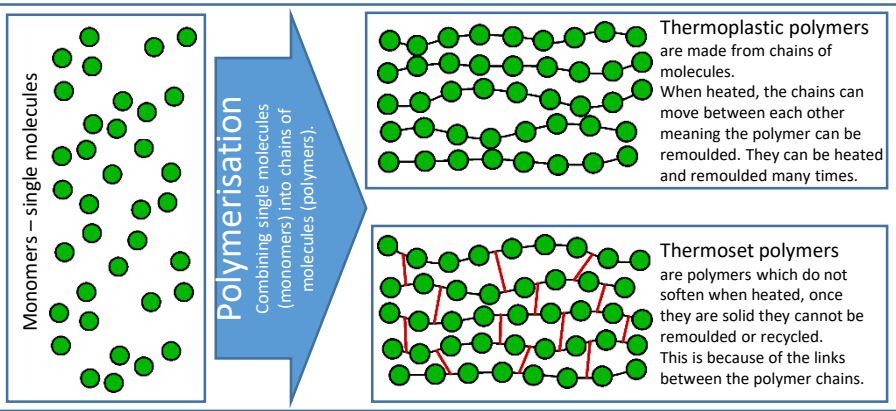
Synthetic polymers are often made from crude oil, a non-renewable fossil fuel. Although some polymers are being developed which are made from renewable sources such as vegetable oils, this is still a very small proportion of the polymers used to make products.

The process of manufacturing polymers is called **polymerisation**.

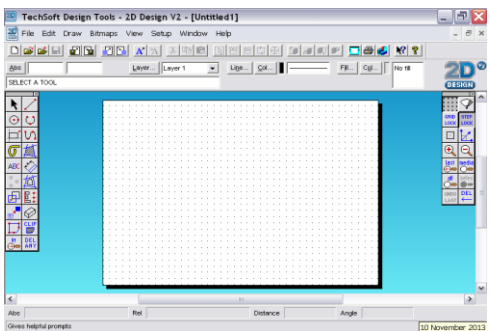
There are two categories of polymers, **thermosetting plastics** and **thermoplastics**. Thermoplastics soften when they are heated so they can be reshaped many times, thermoset plastics cannot.

Thermoset plastics	Thermoplastics
Polyester Resin	Acrylic (Polymethyl methacrylate/PMMA)
Epoxy Resin	ABS (Acrylonitrile butadiene styrene)
Urea Formaldehyde	Low-density polythene (LDPE)
Melamine Formaldehyde	High-density polythene (HDPE)
	Polyvinyl chloride (PVC)
	High density polystyrene (HDPS)
	High impact polystyrene (HIPS)
	Polypropylene (PP)

Polymerisation



Key word	Definition
Plasticity	The ability to be pressed or moulded into shape.
Hard	The resistance to indentation or scratching.
Brittle	Shatters easily under pressure or vibration.
Toughness	The ability to withstand impact..
Flexible	The ability to allow some flex or movement without snapping.
Insulator	A material which does not conduct electricity or heat.
Sustainability	The impact that using the material has on the environment.










CAD
Computer Aided Design
e.g. 2D Design Tools

CAM
Computer Aided Manufacture e.g. Laser Cutter



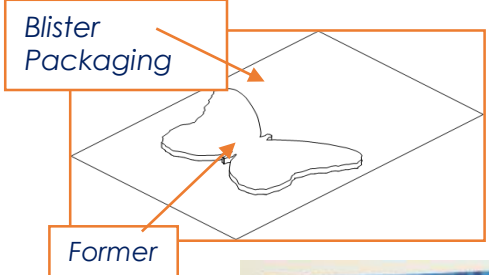
Laser Cutter



Recycling Symbol	Definition
 Mobius Loop	Indicates an object is capable of being recycled.
 The Green Dot	Shows the producer has made a financial contribution towards the recovery and recycling of packaging.
 PET Plastics	Identifies the type of plastic resin used to make the item using a number between 1 and 7.
 Paper	Paper or board is made from a minimum of 50%, 75% or 100% genuine waste paper and/or board fibre.
 Waste Electricals	Waste electrical items can be recycled.
 Age Warning	Unsuitable for children that are younger than three years old.
 Tidy Man	A reminder to be a good citizen, disposing of the item in the most appropriate manner.

During this topic you will learn the purpose of packaging and relevant symbols.

Thermoplastics
<ul style="list-style-type: none"> • Can be heated and reshaped. • Can be recycled. • Poly Vinyl Chloride (PVC) • High impact polystyrene (HIPS)



Scales of measurement
 mm = millimetre
 cm = centimetre
 m = metre



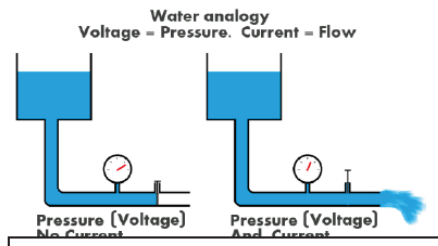
Recycling Symbol	Definition
 Lion Mark	Product has been made by a company who believes in making good quality, safe toys.
 CE Mark	Product meets all the requirements of the European legislation and can be sold within the EU.
 British Kite Mark	Product conforms to the relevant British Standards.

Purpose of packaging

- Protecting from impact and all outside interference.
- Ensuring food inside is going to be hygienic.
- Extending the shelf life or the freshness of the content.
- To identify the product.
- Printed Information for customers.
- To keep the product together to contain it.
- Easier for storing and transporting.

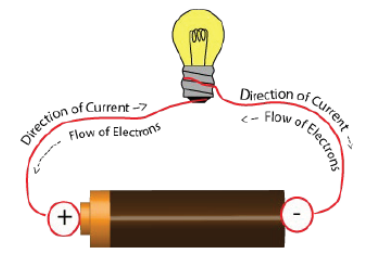
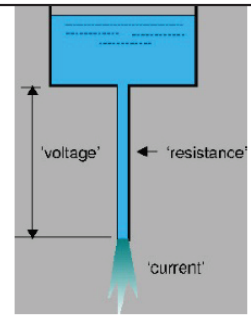
During this topic you will learn about electronic components and circuit construction. You will also learn how vacuum forming is used to manufacture a casing for your design.

The Basics




Voltage - Electrical charge. How much 'oomph' is available. Measured in Volts - V

Resistance - Does the circuit restrict the flow of current? Does it resist? Ohms - Ω



Current - The flow of electrons in a circuit. How fast/much 'oomph' is being used. Measured in Amps - I



-

+

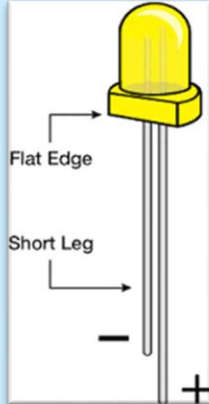
Cell symbol

-

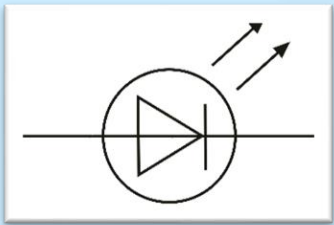
+

Battery symbol

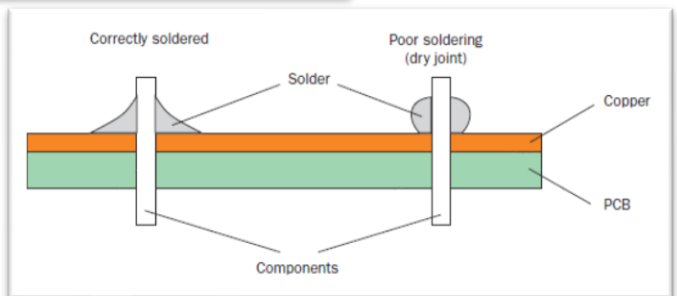
Circuit Symbol	Component Name
(M)	Motor
— _ —	Resistor
• / \ •	Switch
+ +	Wires Crossing
•	Wires (Joined)



Light Emitting Diode
LED



Dry Solder Joints



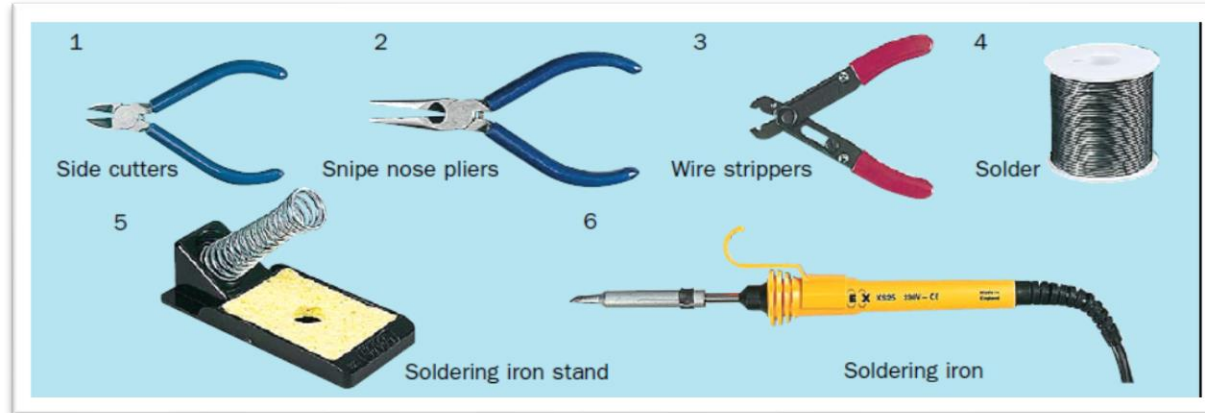
Soldering

Soldering is the method we use to join electronic components together. Solder is a metal alloy of tin (60%) and lead (40%), that becomes molten at around 200C. Solder contains flux that helps the join form correctly.

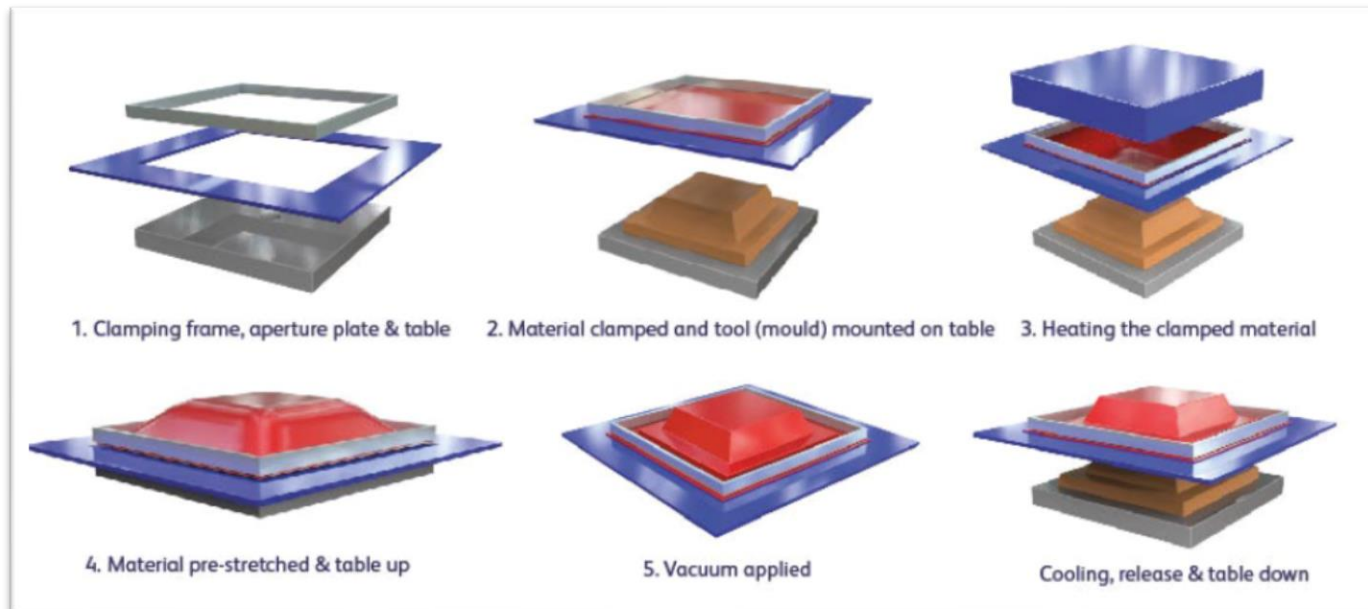
The Soldering Process

1. Collect soldering equipment.
2. Make sure the sponge in the stand is damp.
3. When the soldering iron has reached its temperature, clean the tip on the sponge.
4. Place a small amount of solder on the tip of the soldering iron. This is called tinning and helps the transfer of heat from the soldering iron to the components.
5. Place the soldering iron against the two parts to be joined and hold it there for a few seconds.
6. Touch the solder against the two components so that just enough solder runs onto both.
7. Remove the solder and then the soldering iron and allow to cool before you attempt to move it.
8. Cut off any excess using the cutters.

Soldering Equipment



The Vacuum Forming Process – the Basics



Thermoplastics

- Can be heated and reshaped.
- Can be recycled.
- Poly Vinyl Chloride (PVC)
- High impact polystyrene (HIPS)

Thermoset Plastics

- Can only be heated and shaped once.
- Cannot be recycled.

CREATIVE

- **Art**
- **Drama**
- **Music**

Cycle 4 in Art will focus on: **Multi-cultural art.**
 You will be assessed on your ability to produce a final outcome that captures the style of your chosen cultural artwork.

KEYWORD LOG –Multi-cultural art

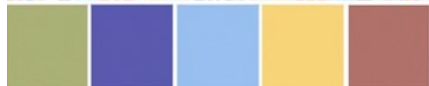
Art Terms	Definition
Tradition	The spread of customs or beliefs from generation to generation, or the fact of being passed on in this way.
Culture	The ideas, customs, and social behaviour of a particular people or society
Research	The investigation into finding facts and information to improve your understanding of something or someone.
Authentic	Made or done in the traditional or original way, or in a way that truly resembles an original.
Symmetry	The quality of being made up of exactly similar parts facing each other. Same on both sides.
Geometric	Characterized by or decorated with regular lines and shapes.
Ornate	Elaborately or highly decorated.
Embellish	Make (something) more attractive by the addition of decorative details or features.
Pattern	A repeated decorative design
Design	A plan or drawing of something before it is made.

This cycle we will be developing an understanding of **Multicultural art.**

Further into the project you will begin to **design and create your own piece of artwork inspired by your chosen culture.**



It is really important that you spell the art terms correctly. Take some time to learn the spellings of these words.



Multiculturalism seeks the inclusion of the views and contributions of diverse members of society while maintaining respect for their differences and withholding the demand for their assimilation into the dominant culture.

Art influences society by changing opinions, instilling values and translating experiences across space and time. Research has shown **art** affects the fundamental sense of self. Painting, sculpture, music, literature and the **other arts** are often considered to be the repository of a society's collective memory.

Aboriginal

Aboriginal art is **art** made by indigenous Australian people. It includes work made in many different ways including painting on leaves, wood carving, rock carving, sculpting, ceremonial clothing and sand painting.

Morocco

The influence of the Berbers represents the oldest cornerstone. ... Berber crafts feature colorful carpets and carved doors with geometric patterns.

Africa

A major form of expression, **African patterns** are popular as a **means** of personal adornment and a medium of communication. These exquisite **textiles** give wearers and admirers insight into social, religious, and political **African** contexts in an abstract and approachable way.

Multicultural art

Bhutan

In Bhutan, the traditional arts are known as **zorig chusum** (zo = the ability to make; rig = science or craft; chusum = thirteen). These practices have been gradually developed through the centuries, often passed down through families with long-standing relations to a particular craft.

India

10 Indian Folk **Art Forms** That Have Survived Generations. Ancient Indian folk painting and **art** styles have been passed down from generation to generation, and are still practised in **different** parts of the country.

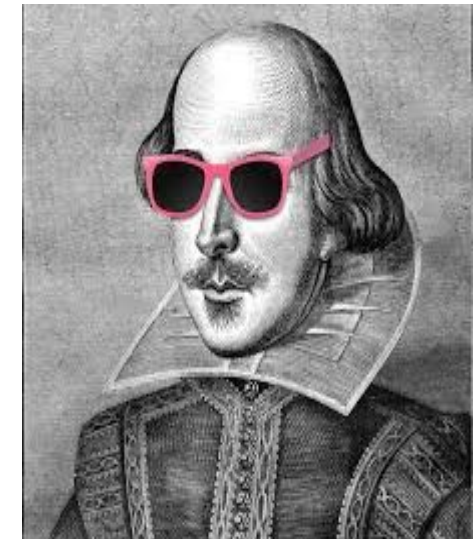
Cycle 4 in Drama we look at the English Playwright Shakespeare and his plays.

KEYWORD LOG – Shakespeare

Drama Skill	Definition
Audience	The assembled spectators of a performance/show.
Body language	The way you use your body to show your character and their thoughts and feelings.
Choral speech	A group of people speaking as one.
Conscience corridor	A technique used to exploring thoughts of a character by making a 'corridor'.
Facial expressions	The way you use your face to show your character and their thoughts and feelings.
Gestures	The movement you make with your hands and body to show your character and their thoughts and feelings.
Monologue	A lengthy speech given by a character.
Playwright	A person who writes plays.
Posture	The way you stand on stage.
Rhyming Couplets	A rhyming pair of successive lines of verse, typically of the same length.
Shakespeare	William Shakespeare – an English playwright from 16 th Century.
Theatre	A collaborative form of performing art that uses live performers in front of a live audience.
Thought tracking	A character steps out of a scene to address the audience about how they're feeling.
Vocal techniques	The way you use your voice to show your character.

Facts about Shakespeare

- Full name: William Shakespeare.
- He was born in Stratford-upon-Avon, England in 1564
- He is a famous playwright.
- His plays were performed in London.
- Born and died on 23 April.
- In 1582, he married Anne Hathaway.
- They had three children together – a daughter called Susanna, and twins, Judith and Hamnet.
- During his lifetime, Shakespeare wrote around 37 plays for the theatre and over 150 poems.
- He created a theatre called The Globe (An octagon) – it burned down twice!
- His performances began with a cannon shot to alert the audience.
- He wrote different kinds of plays; **Tragedy, Comedy and History.**



He came up with these well-known phrases:

- To wear your heart on your sleeve
- Method to your madness!
- Love is blind
- Neither here nor there
- To catch a cold
- Dead as a doornail



MACBETH: ONE PAGE SUMMARY

Three witches tell Macbeth he will become king.

Macbeth tells Lady Macbeth he will become king.

Lady Macbeth tells Macbeth to kill the king.

Macbeth kills the king.

Macbeth becomes king.

Macbeth has his friend Banquo murdered.

Macbeth gets more prophecies from the witches.

Macbeth kills the family of Macduff, Thane of Fife.

Macduff joins up with Malcolm, son of the dead king.

Lady Macbeth goes mad and dies.

Macduff and Malcolm dress up like trees and attack Macbeth.

Macduff kills Macbeth.

Choral speech

A choral speech means a group of people speaking together as one. This can be a poem or a dramatic piece. When performing a choral speech it is important to think about how you all use your voice and vocal skills.

You can also use your voices in a more abstract way to create a sound scape or atmosphere. Choral speeches usually comment upon the action but it can also be a way to convey thoughts, emotions and ideas.

Conscience Corridor/Alley

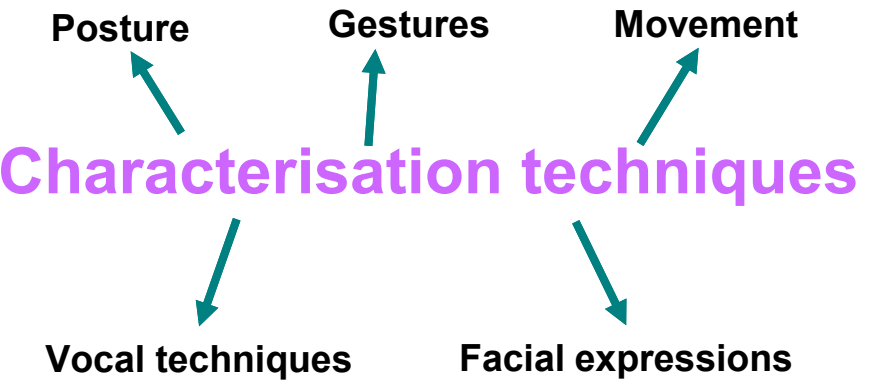
This strategy is used at a key point in a drama, and is a way of exploring thoughts of a character. It provides an opportunity to reflect in detail on the underlying issues and dilemmas of a character at that particular moment.

It can used to:

- Help a character make a decision
- Present different thoughts and feelings going on in a character's mind
- Present the memories of a character.

Monologue

A monologue is a speech given by a single character in a story. During the speech the character tells the audience their thoughts and feelings. This helps the audience have an insight to the characters motivations and actions.

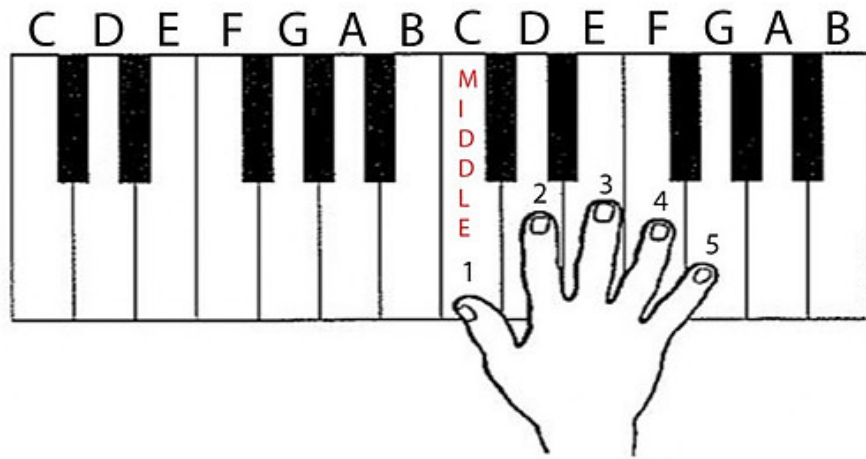


These different elements need to be **over-exaggerated** to come across clearly to the **audience**.

Make sure you are **consistent** with your use of these characterisation elements and have **full belief** in what you are doing when on the stage.

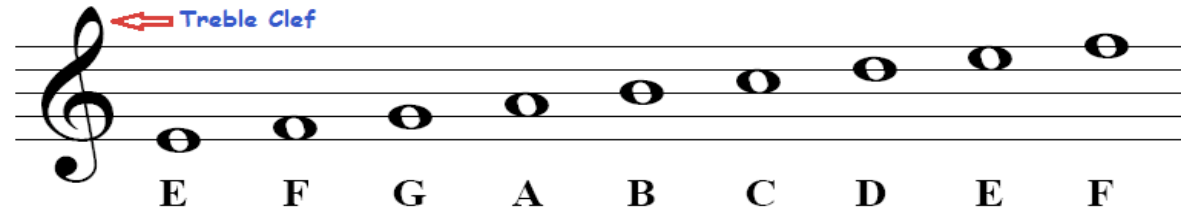
KEYBOARD SKILLS – UNIT 1

A piano or keyboard is laid out with **WHITE KEYS** and Black Keys. C is to the left of the two Black Keys and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of a piano keyboard.

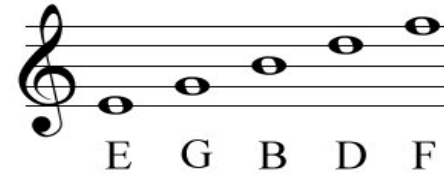


NOTATION

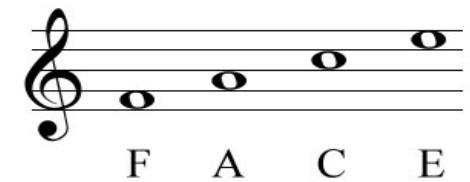
Treble Clef Notes



Line Notes



Space Notes



KEY WORDS	
Treble Clef	A symbol used for high pitched instruments
Pitch	High/Low
Duration	Long/short
Beat	Unit of time
Stave / staff	5 lines that music is written on
Rest	Symbol that tells the musician NOT to play
Octave	Notes with the same letter but higher/lower on the keyboard

	Note	Rest	Beats
Semi-breve			4
Minim			2
Crotchet			1
Quaver			1/2

PE

Cycle 4 Knowledge Organiser

QR code to basic cricket rules video



Basic Rules

Players: 11 players per side.

The game: A run is scored when the batsmen at either end cross and reach the opposite end before the fielders can take the balls off the stumps.

How to score: A run is scored when the batsmen at either end cross and reach the opposite end before the fielders can take the balls off the stumps.

If you hit the cricket ball over the boundary without it bouncing you get 6 runs. If you hit the ball over the boundary but it bounces before going over, you get 4 runs. The team that scores the most runs, wins.

A batter is out if:

If the batter leaves the crease and the keeper stumps the wickets.

A batter is caught out when they hit the ball in the air and a fielder catches it without it touching the floor.

If 2 batters are running between the wickets and a fielder throws the balls at the stumps without the batters being in the crease they are run out.

You double hit when you deliberately hit the ball in the same movement more than once.

Leg before wicket When you are hit in the leg by the ball, in line with the stumps which could have gone on to hit the stumps

It is a no ball:

If when bowling you over step the crease line it is a no-ball.

If you bowl a ball and it bounces more than 2 times before the batter it is a no ball.

If you bowl a ball above waist height it is a no-ball

If you bend your arm more than 15 degrees while bowling it is a no-ball.

The same bowler can not bowl consecutive overs.

A wide ball is called when the ball is out of reach of the batter in his original stance.

Principles of Training

Speed

The ability to move your body or some parts of your body quickly.

How to test: 30m sprint test

Strength

The extent to which a muscle or muscle groups can contract against resistance

How to test: 1 rep max/ hand grip dynamometer

Agility

Being able to move quickly and change direction under control (e.g. weaving between objects or opponents in a zig-zag motion).

How to test: Illinois agility run

Coordination

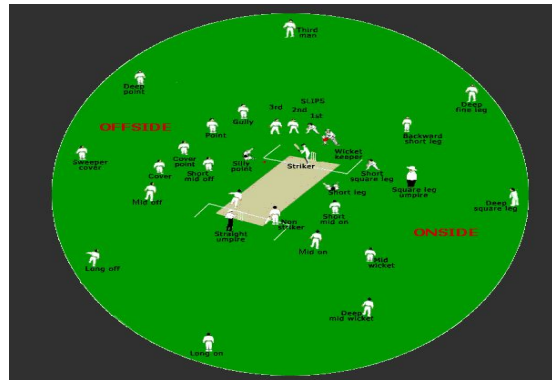
The ability to use two or more body parts together accurately and fluently

How to test: Alternate hand wall toss

Reaction time

The length of time a performer takes to respond or move when they see something happening.

How to test: Ruler drop test



TBAT understand rules of cricket and identify principles of training