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KNOWLEDGE ORGANISER

NAME & FORM

YEAR 7

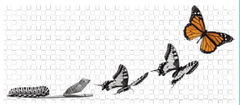
SPRING TERM

English Knowledge Organiser

Etymology Check In

Break down the etymology and define these key words:

Metamorphosis



Definition:

Zoomorphism

Definition:

Malevolent

Definition:

Duality

Definition:

Alter-ego

Definition:

Engaging writing:

Here's what you need to include to be successful!

✓ ***Interesting adjectives:*** give an INTERESTING synonym(s)

SCARY: _____

LIGHT: _____

COLOURFUL: _____

✓ ***Detailed noun phrases***: Improve this sentence!

His eyes were scary.

_____

_____

✓ ***Interesting verbs:*** give a more interesting synonym(s)

WALK: _____

SEE: _____

TALK: _____

✓ ***Add adverbs:*** Add an ADVERB to this sentence (describes verb). **TIF:** Can you improve it further with a technique?

Terrified, she ran.

_____

_____

The killer watched the victim.

_____

_____

Punctuation Rules:

Add your own example!

; Semi-colon = replace 'and', 'so'; connects two linked main clauses

Example: *I have a big test tomorrow; I can't go out tonight.*

_____

_____

: Colon = replace 'because'; introduce list; introduce quote in PEAR paragraph

Example: *Its dangerous to drive today: it's icy.*

The heroes are the Pevensie children: Lucy, Edmund, Peter, and Susan.

The White witch is presented as demanding: 'Speak, vermin!'.

_____

_____

( ) Brackets = adds information (subordinate clause)

Example: *Mrs Pratchett (the sweetshop owner) is horrible!*

_____

_____

- Dashes = adds information (subordinate clause); shows a pause

Example: *He stopped in shock – the door was already open.*

Mrs Pratchett – the sweetshop owner – is horrible!

_____

_____

Paragraphing Rules:

Ensure your paragraphs are accurate!

Ti... you move to a new period of time

P... you move to a different place/location

To... you move from one topic to another

P... you bring a new person into your writing, or change from one person to another - including dialogue (speech)

Sentence starters:

Have a range of interesting sentence starters!

- ✓ ***Start with an adverb:*** Quickly, suddenly, angrily etc

  Carefully, he looked round.
- ✓ ***Start with a preposition:*** Above, around, below etc

  Above the skyscraper roof, the stars twinkled.
- ✓ ***Start with a verb:*** Running, laughing, watching etc.

  Roaring, the monster sprang at them!
- ✓ ***Start with a subordinate clause:***

  Although her heart was racing, she crept forwards.
- ✓ ***Start with a simile:*** like/as

  Like a crashing wave, the charged forwards
- ✓ ***Create a mystery:*** grab your reader's attention!

  It was only meant to be a game. But it went wrong...

Techniques: *Give your own example!*

Simile: compares with like/as:

The city was buzzing like a hive.

_____

Metaphor: compares directly

The moon was a golden coin.

_____

Personification: describes non-human as human

The trees danced in the wind.

_____

Rhetorical question: question to make the reader think

What should I do?

_____

Zoomorphism: describes human as an animal

She snarled angrily.

_____

Triplet/tricolon: list of 3

The storm was terrifying, fierce, and overwhelming.

_____

Sentence Forms

Minor: 1-2 words – '*Stop!', 'Go now!'*

Simple: One main clause (Subject + verb) – *'You need to leave', 'She frowned'*

Compound: Sentence with two main clauses, linked with **;** or a connective – '*The lord was evil; he was plotting against the king.*', '*It was a beautiful day and the sun was shining'.*

Complex: Main clause with 1 or more subordinate clause – '*Slowly, he rose to his feet',* 'Although it was night, the streets were crowded'

Different sentence types have different effects:

- ✓ *Minor/simple sentences* = slower pace and more tension
- ✓ *Compound/complex sentences* = faster pace, quick action, detailed description

English Literature Timeline:

Roman Britain
43BC– 410AD
- ✓ Boudicca burns London
- ✓ Greek literature/culture
- ✓ Hadrian's wall built

- *Illiad/Odyssey*
- *Greek/Roman myths*
- *Metamorphoses* (Ovid)

Anglo-Saxon/ Vikings
500-1066
- ✓ Sutton Hoo ship burial
- ✓ Viking raids

- *Beowulf*
- Viking myths
- Bede's histories

Medieval
1066-1485
- ✓ Norman invasion
- ✓ War of Roses

- *Canterbury Tales* (Chaucer)
- *Arthurian legends*

Tudors
1485-1603
- ✓ Renaissance (Da Vinci, Shakespeare etc)
- ✓ Slave Trade/ Empire begins

- *Shakespeare plays*
- *Divine Comedy* (Dante)
- *Utopia* (More)

Stuarts
1603 - 1714
- ✓ English Civil War
- ✓ Witch Hunts

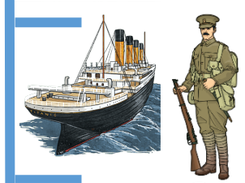
- *Paradise Lost* (Milton)
- *Demonologie* (King James I)

Georgian
1714 - 1837
- ✓ Slave trade banned
- ✓ Industrialisation
- ✓ French Revolution

- *Pride and Prejudice* (Austen)
- *Frankenstein* (Shelley)
- Romantic poets

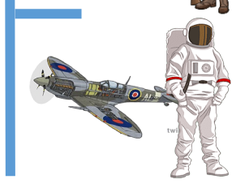
Victorians
1837 - 1901
- ✓ British Empire
- ✓ American Civil War

- *Christmas Carol* (Dickens)
- *Jekyll and Hyde* (Stevenson)



Edwardian/WW1
1901-1918
- ✓ WW1 (1814-18)
- ✓ Women gets right to vote

- *War poets*
- *'Room of One's own'* (Woolf)



'Modern era'
1919 - 1945
- ✓ Russian Revolution
- ✓ WW2 (1939-45)
- ✓ British Empire collapses

- *Animal Farm (Orwell)*
- *An Inspector Calls (Priestley)*

English Knowledge Organiser

Brief Summary of Poems:

Spellbound by Emily Brontë
This poem describes a storm, which appears to be 'trapping' the speaker like a spell. The storm is overpowering and threatening.

Below the Green Corrie by Norman MacCaig
This poem uses a lot of personification to describe the speaker's experience when he is surrounded by mountains. He experiences a range of emotions as a result of the beauty of the mountains.

Storm in the Black Forest by D.H. Lawrence
This poem describes the sheer power of nature over man- by describing the power and beauty of a storm. It goes into detail about the beauty and strength of the lightening.

Wind by Ted Hughes
In this poem, the speaker is trapped inside a house due to the ferocious winds outside. The poem describes how chaotic and dangerous the wind is outside. The speaker goes onto say how the wind and being trapped in the house takes a toll on their mental state.

The Moment by Margaret Atwood
This poem reminds us of the power of nature over humanity. In the poem nature is given a voice and it threatens humanity. It states even though humans feel they are in control, nature can take back that control at any time.

Whispering Waves by Edel T. Copeland
This poem describes the sea and expresses the power nature holds over humanity. It addresses the emotional impact nature can have on us.

Hurricane by James Berry
This poem portrays the aftermath of a hurricane and the physical effects of such a powerful storm.

Daffodils by William Wordsworth
This poem considers the positive effects of being around nature and how it positively affects the wellbeing of people.

What do we need to include in a successful paragraph?

- ✓ **Point**
- ✓ **Example**
- ✓ **Analysis**
- ✓ **Technique**

Can you note down a key quote for each of these poems?

Spellbound	Wind	Whispering Waves	Daffodils
			
Storm in the Black Forest	**Below the Green Corrie**	**The Moment**	**Hurricane**
			

Add your quotes in here:

Key Themes in Poems:

Can you fill in the missing lines with themes of your choice as we cover the poems?

- **Nature**
- _____
- **Fear**
- _____
- **Weather**
- _____

English Knowledge Organiser

Key Quotes from Poems

Spellbound- What do these quotes show?
'A tyrant spell has bound me'
'The wild winds coldly blow'

The noun 'tyrant' suggests...
The adjective 'wild' could show...

Below the Green Corrie- What do these quotes show?
'The mountains gathered around me like bandits'
'Their leader swaggered up close in the dark light'

The verb 'gathered' makes us...
The verb 'swaggered' implies...

Storm in the Black Forest- What do these quotes show?

'Jugfull after jugfull of pure white liquid fire'
'A still brighter white snake wriggles among it'

The repetition of 'jugfull' could suggest...
The metaphor 'still brighter white snake' shows us...

Wind- What do these quotes show?
'This house has been far out at sea all night'
'Winds stampeding the fields'

The preposition 'far out' makes us think...
The verb 'stampeding' could portray...

Key Quotes from Poems

The Moment- What do these quotes show?
'The trees unloose their soft arms from around you'
'The air moves back from you like a wave and you can't breathe'

The personification in 'unloose' shows...
The simile 'like a wave' could make us...

Whispering Waves- What do these quotes show?
'Powerful and strong, it breathes and roars.'
'Cascading and caressing each grain of sand'

The personification in 'breathes and roars' could imply...
The alliteration in 'cascading and caressing' creates...

Hurricane- What do these quotes show?
'Zinc sheets are kites.'
'Then growling it slunk away.'

The metaphor 'zinc sheets are kites' is used to show...
The personification in 'growling' could make us think of...

Daffodils- What do these quotes show?
'Fluttering and dancing in the breeze.'
'Ten thousand saw I at a glance'

The personification in 'dancing' suggests...
The hyperbole in 'ten thousand' could indicate...

PEA Sentence Structures:

POINT:

In the poem, one way the poet displays _____ is...

EXAMPLE:

This is shown through the use of (mention a technique here) in ' ... '

ANALYSIS:

This suggests/this shows...

It could also suggest that...

The word _____ could highlight...

Another word that supports this is _____ because...

As a reader I understand...

Key Poetic Techniques:

Rhyme- The ends of the lines have the same sound *e.g. pie and sky.*
Repetition – A word or phrase is used more than once. *E.g. faster and faster, the cheetah ran...*
Onomatopoeia- When a word sounds as it is *e.g. boom.*
Metaphor- Two things are compared by saying one thing is the other *e.g. the sun was a glittering ball in the sky.*
Simile- Comparing something using 'like' or 'as. *E.g. the sun was like a glittering diamond.*
Personification- When an inanimate object is given human features. *E.g. the tree danced in the breeze.*
Hyperbole- Exaggeration *e.g. the sun melted my skin.*

Pablo Picasso

Key features:

Bright colours- line- bold- geometric- shape- profile- unusual features- mark making.

Working in the style of an artist:

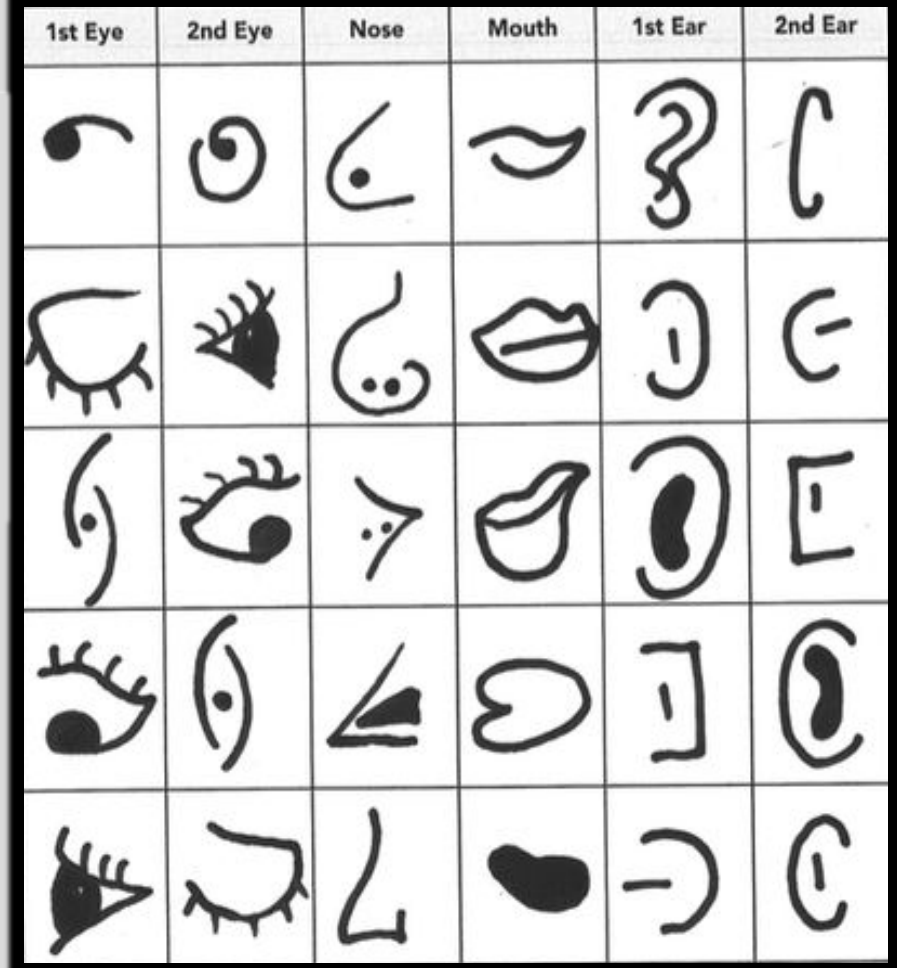
You need to use these techniques and features in your own study.

KEY WORDS – test yourself! (definitions on the next page)

Geometric- Abstract- Cubism- Surrealism- Bold- Painterly- Outline- Features- Bright- Complementary colours- Contrast- Shape

Portraiture

Year 7 Spring term



In the style of:

When creating a piece of art in the style of an artist it is very important you thoroughly understand their techniques in order to copy them effectively.

Besides using their techniques, you also need to take pride in your work and be as neat as possible. Here are some things to consider:

- Have you used bold colours?
- Have you used patterns in Picasso's style?
- Have you used unusual features?
- Is the scale correct?
- Have you included geometric shapes?
- Is your colour scheme appropriate to the artist?

KEY WORDS AND MEANINGS:	
Abstract	Art that does not represent reality accurately, instead the art is made from lines, shapes, colours, forms etc.
Cubism	In Cubist artwork, objects are analysed, broken up and reassembled in an abstracted form.
Surrealism	Art that is made to portray the workings of the unconscious mind as manifested in dreams.
Painterly	The application of paint in a 'loose' or less than controlled manner leaving visible brush strokes in the piece.
Complementary colours	Pairs of colours that contrast with each other more than any other colour
Outline	The line by which an element or object is defined or framed.
Bold	A bold colour or pattern is very bright and noticeable.
Contrast	when opposite elements are arranged together, e.g. Black next to white.
Geometric shapes	Shapes that are are characterised by straight lines, angles and points.
Features	Distinctive attributes or aspects of something. For example, facial features.

Colour code: BLUE= Tier 3 words ORANGE= Tier 2 words Look out for colour coding during lessons!

Drama Knowledge Organiser

KEYWORDS AND TECHNIQUES EXPLORED

Role Play - The act of pretending to be somebody else, of taking on a role

Split focus – Two separate scenes occurring at one time- once scene freezes whilst the other scene performs

Multi-role – When an actor plays more than one character onstage

Thought Track – When a character steps out of a scene to address the audience about how they're feeling

Levels – How high or low a character stands to show status (how powerful they are)

Devising - Creating your own performance using your own ideas

Tension - A growing sense of expectation within the drama, a feeling that the story is building up towards something exciting happening

Stereotypes - an idea or belief many people have about a thing or group that is based upon how they look on the outside, which may be untrue or only partly true.

Storytelling Theatre

Levels

UPSTAGE RIGHT	UPSTAGE CENTRE	UPSTAGE LEFT
CENTRE STAGE RIGHT	CENTRE STAGE	CENTRE STAGE LEFT
DOWNSTAGE RIGHT	DOWNSTAGE CENTRE	DOWNSTAGE LEFT

AUDIENCE

Split Focus

Key Skills:

Audience Awareness, Vocal projection, Facial Expressions, Body Language, Gestures, Pitch, Pace, Pause, Tone

Proxemics

Madame Tussauds

A famous wax work museum full of wax figures of famous people!

GREEK THEATRE

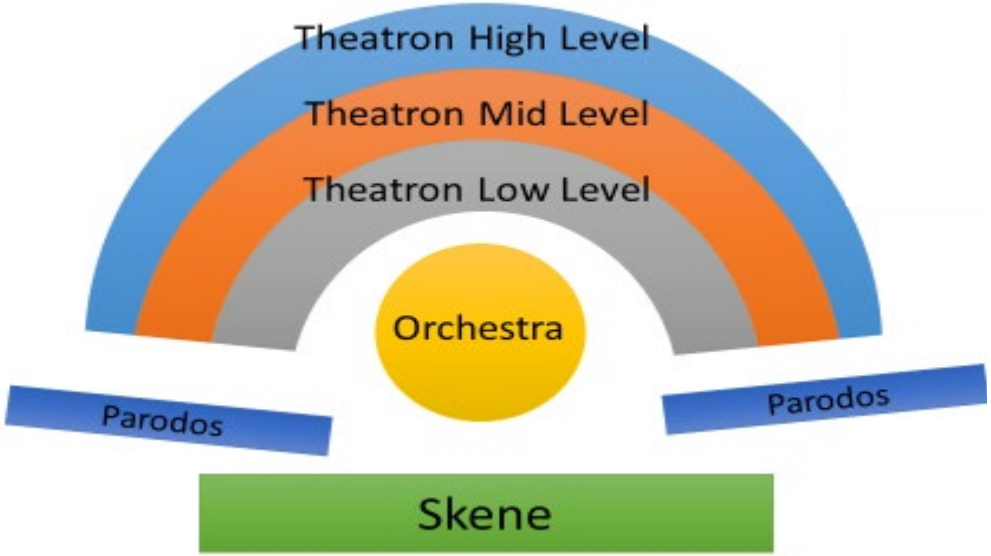
Canon – moving one after another (the same movement)

Choral Speaking – Saying exactly the same lines as each other at the same time

Key Question: What is a Amphitheatre? What was theatre like in Ancient Greece?

Amphitheatre

- The stage where the actors performed was called the Skene
- The Theatron was the semi-circular seating area.
- The semi-circular dancing space where the chorus performed was called the Orchestra
- The Skene had underground passages, trap doors and different staging levels
- Parodos on each side of the stage. They were used for the chorus to enter and exit the Orchestra.



1. The chorus was one of the most important components of the play.
2. They narrated and reflected on the action.
3. Without them, the audience would have no background information, and the play would be more confusing.
4. Originally the chorus had **twelve** members.
5. They moved and spoke as one **(Choral Speaking)**

They sang, or sometimes said, basic information.

RHYTHM and PULSE

Year 7 Spring Term

KEY WORDS – test yourself! (definitions on the next page)

Semibreve **Minim** **Crotchet** **Quaver** **Semiquaver**
Rhythm **Duration** **Tempo** **Time signature**
Pulse/Beat **Bar**

NOTE NAMES, VALUES AND RESTS

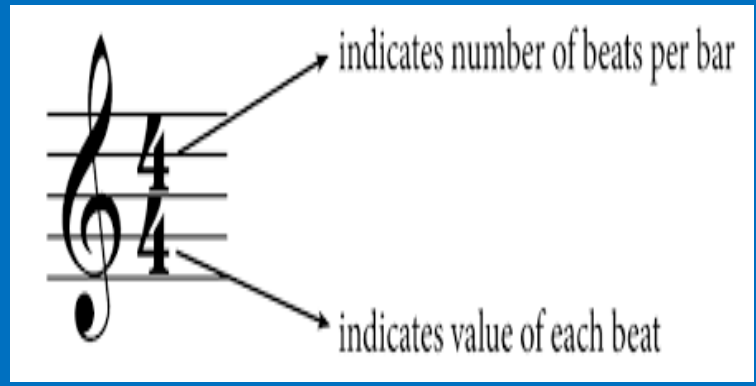
name	relative length	note	rest	in $\frac{4}{4}$ time
semibreve	whole note			4 beats
minim	half note			2 beats
crotchet	quarter note			1 beat
quaver	eighth note			½ beat
semi quaver	sixteenth note			¼ beat

TEMPO MARKINGS

Time signature

A time signature is found at the beginning of a piece of music and simply tells you how many beats to count in each bar (small section of music)

It looks like a fraction:

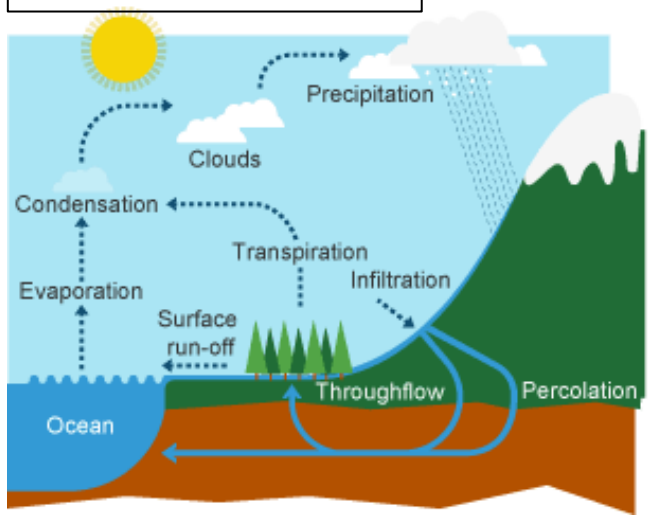


There are lots of different time signatures but you will be using this one which means you are counting 4 crotchet beats per bar.

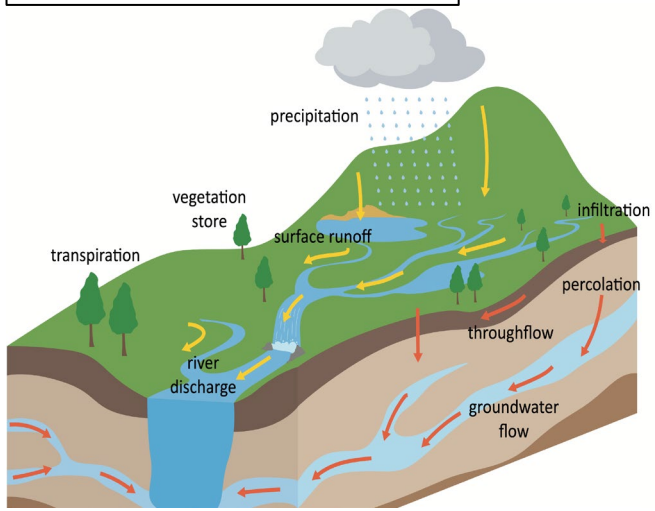
KEY WORDS AND MEANINGS (Tier 2 words in ORANGE, Tier 3 words in BLUE)	
Semibreve	A note that lasts for 4 beats
Minim	A note that lasts for 2 beats
Crotchet	A note that lasts for 1 beat
Quaver	A note that lasts for ½ of a beat
Semiquaver	A note that lasts for ¼ of a beat
Rhythm	Different lengths (durations) of notes mixed together create a rhythm. This fits into the beat.
Duration	The length of a note
Tempo	The speed of the music
Time Signature	A sign (looks like a fraction) that tells us how many beats are in each bar
Beat	The pulse in music

Geography Knowledge Organiser – Rivers

Water Cycle Diagram



Drainage Basin Diagram



The Nile River.

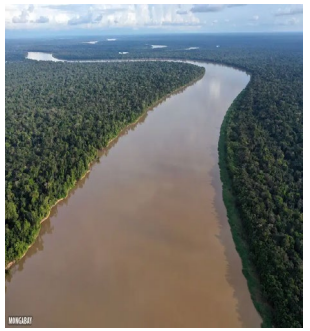
The Nile River flows over 6,600 kilometres (4,100 miles). The Nile River's basin spans across the countries of Egypt, Sudan, South Sudan, Eritrea, Ethiopia, Kenya, the Democratic Republic of the Congo, Burundi, Rwanda, Uganda, and Tanzania. About 238 million people live within the Nile basin. Canals bring water from the Nile to irrigate farms and support cities. The Nile supports agriculture and fishing

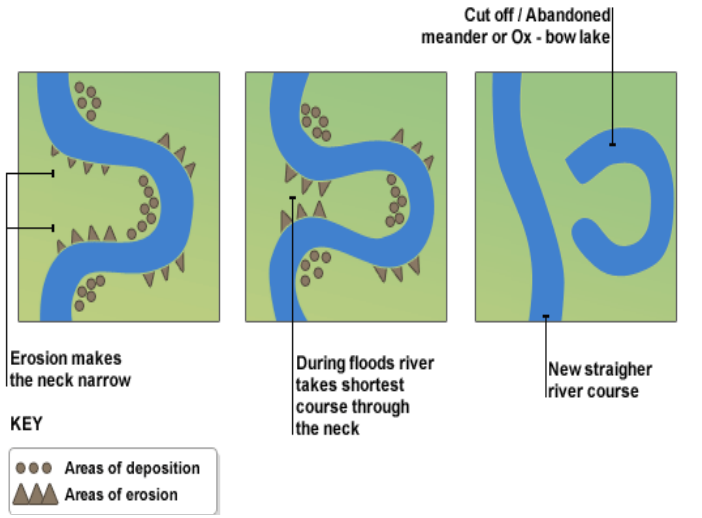
The Amazon River

The Amazon River is the second-longest river in the world, after the Nile. It is located in South America and runs through several countries, including Brazil, Peru, Colombia, and others. More than 40 million people, including over 400 Indigenous and ethnic groups. The Amazon River stretches approximately 7,062 kilometres (4,388 miles) and discharges more water into the ocean than any other river, accounting for about 20% of the world's total river flow.

Yangtze River

The Yangtze River is the longest river in Asia and the third-longest in the world and stretches approximately 6,300 kilometres (3,917 miles). A third of all the inhabitants of China (which means more than 400 million people) live in the area covered by the Yangtze's river basin. The economy of much of the Yangtze basin is focused largely on agricultural production. Situated at Sandouping Town of Yichang City, Hubei Province, the Three Gorges Dam is the largest hydro-power station in the world





Key words:

Hydraulic action - This is the sheer power of the water as it smashes against the river banks. Air becomes trapped in the cracks of the river bank and bed, and causes the rock to break apart.

Abrasion - When pebbles grind along the river bank and bed in a sand-papering effect.

Attrition - When rocks that the river is carrying knock against each other. They break apart to become smaller and more rounded.

Solution - When the water dissolves certain types of rocks

Traction- large heavy pebbles are rolled along the river bed

Saltation- pebbles are bounced along the river bed

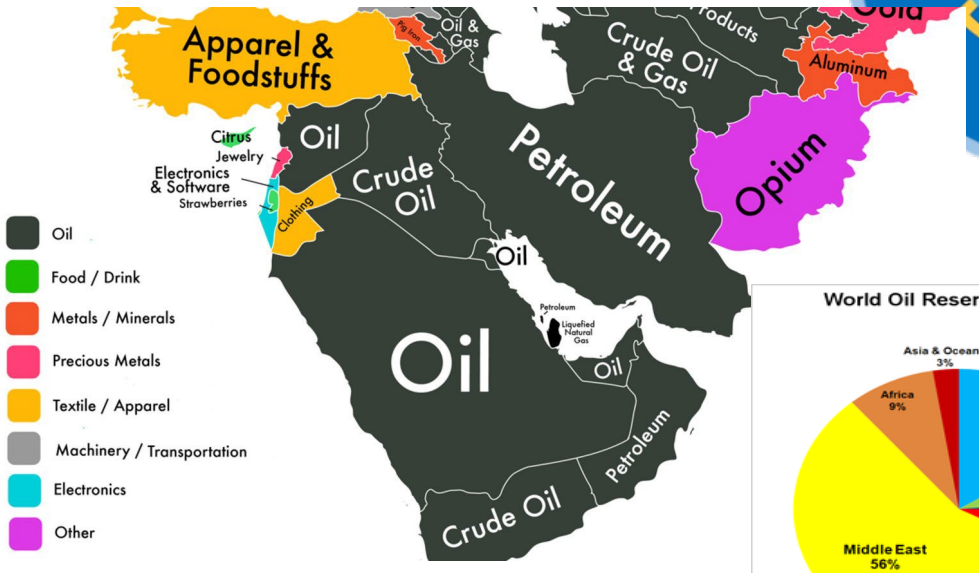
Suspension- lighter sediment is suspended (carried) within the water

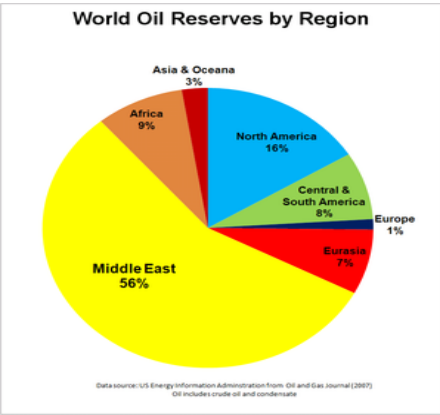
Solution- transport of dissolved chemicals

Geography Knowledge Organiser – Middle East

The Arabian Desert covers parts of Saudi Arabia, United Arab Emirates, Yemen and Oman. Whilst it is predominantly located in Saudi Arabia the most Southern parts of the Arabian Desert cross into Yemen and Oman.

The Middle East is globally significant due to its abundant natural resources. With vast oil and natural gas reserves in countries like Saudi Arabia, Iraq, and Iran, the region is a key player in the energy market. The Tigris and Euphrates rivers support agricultural productivity, cultivating crops such as wheat and cotton. Additionally, the Middle East possesses valuable minerals, including phosphates and copper. These resources have profound economic implications, shaping international trade, investments, and geopolitical dynamics in the region.





The 3 largest oil producers in the Middle East are Iran, Iraq and Saudi Arabia.

Migration Patterns in the Middle East:
Push factors:

- **Persistent political instability and conflicts** in various Middle Eastern countries, such as Syria, Iraq, Yemen, and Libya, drive individuals and families to seek safety and escape violence.
- **High unemployment rates**, limited job opportunities, and economic hardships in certain Middle Eastern nations push people to search for better economic prospects elsewhere.
- In regions with **restricted access to quality education**, individuals may migrate to pursue better educational prospects and enhance their skills.
- **Persistent human rights abuses**, including restrictions on freedom of speech

Migration Patterns in the Middle East:
Pull Factors:

- **Opportunities for career growth** and professional advancement, often associated with industries like finance, technology, and oil, attract skilled workers and specialists to the Middle East.
- **higher quality of life**, including factors like safety, cleanliness, and a well-organized urban environment, can be a pull factor for migrants seeking an improved lifestyle.
- **offers lucrative job opportunities** and higher wages,
- **geographic location** and well-connected transportation networks make it a hub for international travel and business

History Knowledge Organiser

Topic 3: Medieval Religion

Why was the Church so important?

*People in England were Christians. This religion had been introduced by the **Romans** and had been continued by the **Anglo-Saxons, Vikings and Normans.** People wanted to be good Christians and so they would listen to the Church and those who worked for it.*

Medieval views of Heaven:

A Christian who lived their life in the right way and only did good was believed to go to heaven. This is believed to be a paradise to spend all eternity in after you died. To get to heaven, you could:

- *Pray regularly*
- *Donate **tithes** (money to the Church)*
- *Travel on a **pilgrimage***
- *Fight (or die) in a **crusade***

Medieval views of Hell:

*On the other hand, a Christian could live their life in a wicked way and they could **sin.** For doing this they could risk going to Hell. Priests warned people about Hell in two ways:*

- *Speaking about the dangers of sinning in sermons*
- *Showing **peasants** horrible pictures of what Hell may look like called **doom paintings***

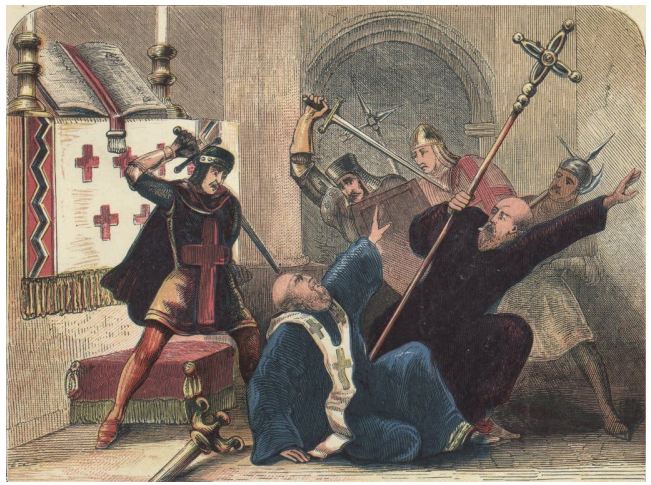
Who was powerful in the Church?

*People believed priests were powerful and influential as they understood God, Heaven, and Hell. Many peasants were illiterate and could not read for themselves. Powerful **clergy** included:*

- *The **Pope** who was the head of the Catholic Church in all of Europe. He declared crusades to the Holy Land.*
- *The **Archbishop of Canterbury**. He was the head of the Church in England. He took his orders from the Pope.*

What happened between Becket and King Henry II?

One famous Archbishop of Canterbury was Thomas Becket. He was Archbishop under King Henry II of England. The two were close friends until:



- *Henry II was upset that Becket would not change the Church to make the Crown more powerful*
- *Becket fled to France from 1164 to 1170*
- *He returned and the pair still were not friends*
- *Four knights on behalf of the king killed Becket in Canterbury Cathedral*

What were pilgrimages?

*Christians who really wanted to show their dedication to God would become **pilgrims**. They would travel long distances to important locations linked with Christianity such as Walsingham, Lindisfarne or even important overseas locations like Jerusalem. They believed doing so could make them closer to God and they could even be healed or experience **miracles!***

Why did people fight over the Holy Land?

*The **Holy Land** is territory in the Middle East. Multiple religious groups believe it is important for varying reasons. Christian warriors known as **crusaders** fought Muslim warriors known as **Saracens** for control of the region. Everyone from peasants to kings fought! The reason crusaders battled include:*

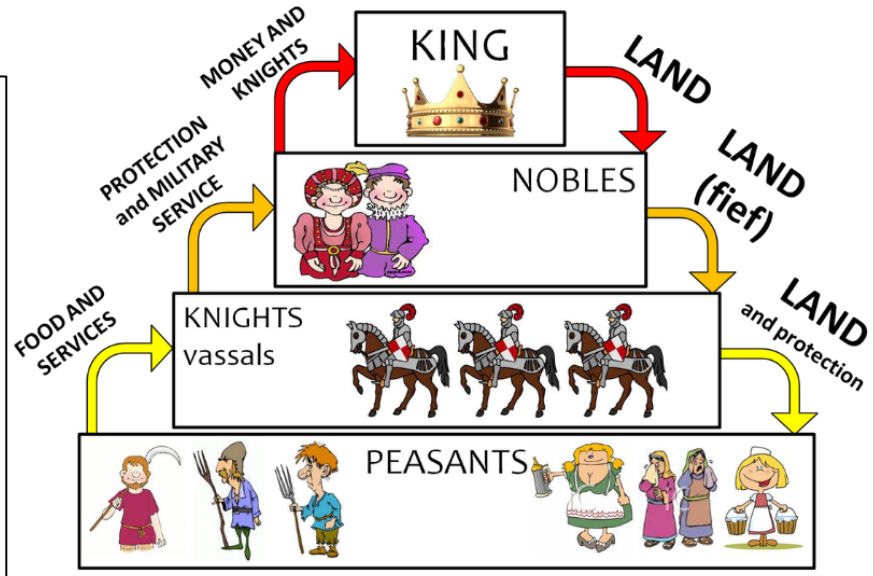
- *Religious reasons. Crusaders were serving their God and their sins were forgiven if they went on crusade (even if they died!)*
- *Economic reasons. They could loot resources and take riches from the enemy. They could tax conquered people.*
- *Political reasons. They could set up powerful states and make themselves more powerful.*

History Knowledge Organiser

Topic 4: Medieval Monarchs

Who had power in Medieval England?

*When the Normans conquered England they realised that they needed help controlling the country. The King gave land in return for loyalty and taxes. Those further down the **feudal system** were meant to be loyal to those above them, even though at the very bottom the peasants had very little political and economic power. Those lower down the feudal system were not meant to challenge those above them. As well as this, the **monarch** was believed to have been chosen by God.*



Feudal Pyramid of Power

Famous Medieval Queens of England:

Men were believed to be more powerful than women and were believed to be suited to ruling. This did not stop women from having a position of power and influencing English history:

***Empress Matilda** – In the 12th Century she had claim to the English throne. She did not get chance to rule for long but her son Henry II became heir and ruled next.*

***Eleanor of Aquitaine** - In the 12th Century she travelled on a crusade, successfully demanded a divorce, and formed a rebellion and even spent time arrested.*

***Isabella of France** - In the 14th Century she received a high quality education, joined her husband in battle against the Scots and started a rebellion for her son.*

***Margaret of Anjou** – In the 15th Century she ruled on behalf of her husband when he was unwell to do so. She gathered troops and participated in battles.*

Who was King John?

John ruled from 1199-1216. He was unlikely to have become King. He had very little political experience. He began ruling when England had no money – it had been spent on the Third Crusade! He became very unpopular by demanding high taxes.

Why did the barons challenge the Feudal System?

The barons were unhappy with King John. King John charged high taxes, lost land in France, and is believed to have killed his nephew Arthur. The barons demanded more power as they helped the monarch to rule the country.

What did the barons do?

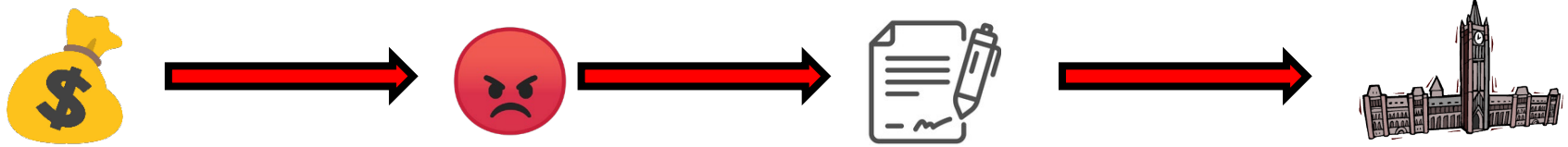
In 1215 they forced King John to sign the Magna Carta. This was a legal document. It meant the King was not above the law and had to follow rules. For example, he could not raise taxes on his own. John and other kings agreed to the rules of the Magna Carta.

What did the Magna Carta change?

Kings now had to follow a legal system to raise taxes and to arrest people. He could not take more money from his subjects without their approval. This gave the barons more power, and eventually under Edward I a parliament was established. However peasants did not receive any legal protection and did not have any political status as a result of the Magna Carta.

Who was King Edward I?

Edward ruled from 1272-1307. He was a very experienced military king. Both Wales and Scotland were conquered by Edward and he ordered stone castles built to keep control of them. However Edward faced rebellions from the Scottish. Rebel leaders included Robert the Bruce and William Wallace.

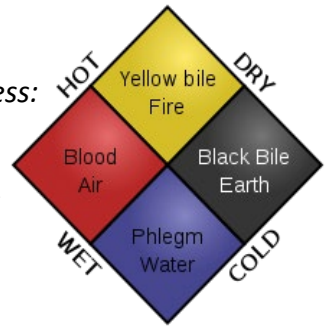


History Knowledge Organiser

Topic 5: Medieval Medicine

What was Medieval medicine like?

Before the discovery of germs they were very different ideas on what caused sickness:



Four Humours *– the idea behind this theory was that the body was made up of four different parts and if there was an imbalance then the person would be ill.*

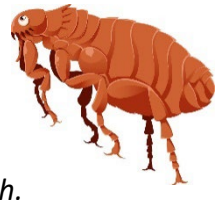
Supernatural *– many believed in superstitious causes of disease. Ghosts or witches could cause somebody to fall ill. If the planets were in the wrong position then it could cause people to become unwell.*

Religion *– people in Medieval times believed if they were good then God would reward them. If they were sinful then God would punish them with disease. Some believed the plague was God ending all life on Earth.*

Miasma (bad smells) *– Medieval towns were very filthy places and some people believed bad smells caused by butchers, tanners and other businesses could pollute the atmosphere and cause disease.*

What was the Black Death?

*The Black Death is also known as the **bubonic plague**. It was spread by fleas carrying a deadly type of bacteria. The fleas, spread by rats, would bite humans. Symptoms included swellings, black marks on the skin, high fever, and eventually death.*



What cures did people use for the Black Death?

*The **barber surgeons** and **monks** of Medieval Europe tried to do what they could to treat the disease. It killed 30-60% of Europe. Those who did survive were often left disfigured and ill. Treatments included:*

Prayer *– they believed God would forgive them and their disease might go away. Some extreme Christians known as **flagellants** would even hurt themselves to be forgiven.*

Bloodletting *– bloodsucking leeches and medical tools would be used in an attempt to drain blood from a sick patient.*

Natural cures *– herbs and plants found in nature were used to try and relieve the symptoms*

What were the consequences of the Black Death?

The Black Death arrived in England in 1348 and lasted until 1350. However it caused lasting changes:

Plague epidemics *– every few years cases of plague would return and many more would die of disease*

Starvation *– farmland was abandoned and villages were deserted. Crops were not looked after and so there was a decrease in food leading to starvation.*

Increase in food price *– those who did still have crops to sell started to charge people more money for their goods.*

Increase in crime *– people began to live as if they were living their last day. They drank heavily and broke the law.*

Why did the peasants challenge the Feudal System?

The Black Death had killed lots of peasant workers. Fewer peasant workers had to work even harder to collect food to feed their lords. Many of these did not receive wages. In 1381 peasants rebelled in the Peasants Revolt. They marched on London, met with King Richard II and left believing that Richard II would give them more power and wages.

The King went back on his word and killed the peasant leaders. Over time unpopular taxes were stopped and lords of villages had to pay their peasants more and charged them less rent. Within 50 years peasants were allowed to buy their own freedom and move around the country freely.

Religion and Ethics Knowledge Organiser

Keywords

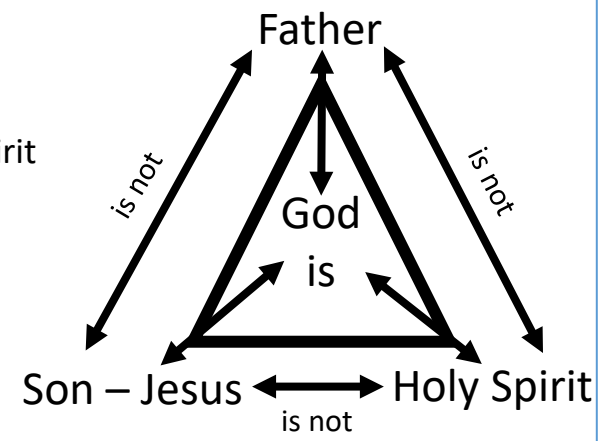
Trinity – three persons of God: the Father, Son and Holy Spirit.
Incarnation – God made flesh, Christianity teaches that Jesus is God in human form.
Messiah – 'anointed one' a title given to a saviour king. A title given to Jesus.
Salvation – freed from sin and punishment through Jesus' sacrifice.
Grace – A gift from God that you did not earn and do not deserve.
Denomination – a recognised branch of the Christian Church.
Catholic – The largest Christian denomination: Catholics follow the Authority of the Pope.
Protestant – a type of Christianity that originated in the protest of Martin Luther.
Parable – a simple story with a moral message.
Miracle – something that cannot be explained by science.
Resurrection – rise again after death.
Sacrament - an outward sign of inward grace.

Jesus

Incarnation Christianity teaches that Jesus was the human form of God. In this way Jesus is both fully human and fully divine.

Trinity Christianity teaches that there are three persons of God:

1. The Father
2. The Son
3. The Holy Spirit



Sacraments

There are seven sacraments: Baptism, Confirmation, Eucharist, Reconciliation, Sacrament of the Sick, Marriage and Holy Orders.
Sacraments are an outward sign of inward grace, taking place at key times in a person's life they include receiving the gift of grace.

Parables

Jesus often taught in Parables these are short stories with a moral message. Jesus used parables to teach bold messages to those who believed in him but also conceal his message from those who were against him.

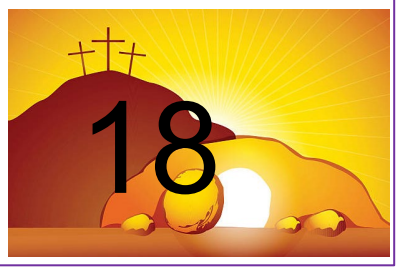
Denominations

Catholic the **Pope** is the head of the Catholic Church, through Apostolic Succession. Bishops and Priests lead the Church.
Protestant There are thousands of Branches of Protestant Christianity. The **Church of England** is the official religion of the United Kingdom, but we live in a diverse society with many different faiths represented. The King is the official head of the Church of England but the **Arch Bishop of Canterbury** is the most senior religious official.

YEAR 7 SPRING 1 – What is Christianity?

Miracles

Miracles are things which cannot be explained or seem to defy the laws of science.
The Wedding at Cana The first miracle Jesus performed was turning water into wine at the wedding at Cana.
The Resurrection The most important of Jesus' miracles is the resurrection. Three days after his death Jesus followers go to his tomb and he has risen from the dead.
Christianity teaches that through Jesus' resurrection he:
Defeated Death
Secures our Salvation
gives us **Hope for Heaven**



Religion and Ethics Knowledge Organiser

Keywords

Allah – the Arabic term for God.
Prophet – A messenger of God.
Muhammad (pbuh) – the most important prophet in Islam, he received the Qur'an.
Qur'an – Holy Book of Islam.
Hadith– Sayings of the Prophet Muhammad (pbuh).
Sunni – A branch of Islam that follows the succession of Abu Bakr.
Shia – A branch of Islam that follows the succession of Ali.
Shahadah- declaration of Faith.
Salah- prayer.
Zakat- charity, giving 2.5% of wealth to charity.
Sawm – Fasting (not eating) for Ramadan.
Hajj – Islamic Pilgrimage.
Ramadan – Islamic month when Muslims fast.

The Five Pillars of Islam

1) Shahadah – the declaration of faith says that: "There is no God, but Allah and Muhammad is His messenger."
2) Salah – prayer, Muslims pray five times per day.
3) Zakat – charity, giving 2.5% of wealth to charity.
4) Sawm – fasting (not eating or drinking) during the months of Ramadan. Muslims do not eat or drink anything during daylight hours for a month.
5) Hajj – pilgrimage there is a pilgrimage (religious journey) to Makkah that every Muslim should complete at least once in their lifetime.

YEAR 7 SPRING 2 –What is Islam?

Hajj

Hajj is the fifth pillar of Islam. It is a pilgrimage to Makkah in Saudi Arabia where the prophet Muhammad (pbuh) was born and where the Ka'aba (house of Allah) is. Makkah is the holiest site in Islam.

- Hajj takes six days
- Pilgrims who have completed Hajj are cleansed of their sins.
- After completing Hajj a Muslim can use the title Hajji.

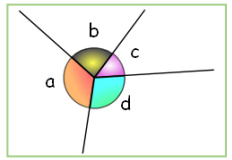
Sawm

Sawm is the fourth pillar of Islam. It is fasting (not eating or drinking) during daylight hours for the month of Ramadan. Before sunrise Muslims will get up early to have a meal called **Suhur** and after sunset, they have a meal called **Iftar.**

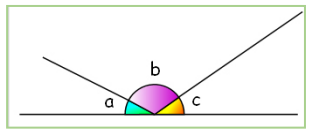
Maths Knowledge Organiser

ANGLES

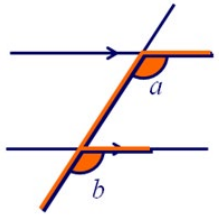
Key Concepts



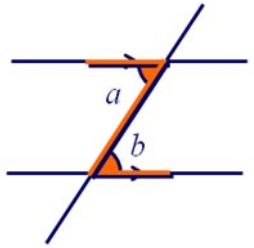
Angles at a point add to 360°



Angles on a line add to 180°



Corresponding angles are equal.



Alternate angles are equal.

Key Words

Angle: This is formed by two lines joined by a common endpoint

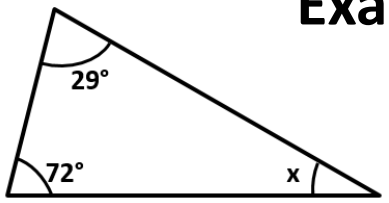
Quadrilateral: 4 sided shape

Intersect: Two lines which cross

Parallel: Two lines which never intersect. Marked by an arrow on each line

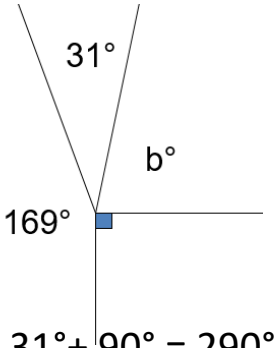
Transversal: A line which intersects two parallel lines

Examples



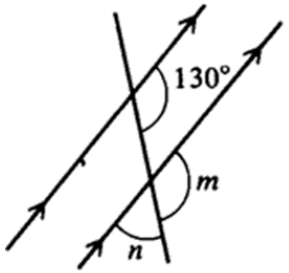
29° + 72° = 101°

180° – 101° = 79°



169° + 31°+ 90° = 290°

360° – 290° = 70°



m = 130° as corresponding angles are equal.

n = 50° as angles on a line add to 180°

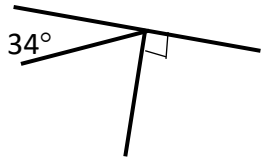
Year 7

Tip

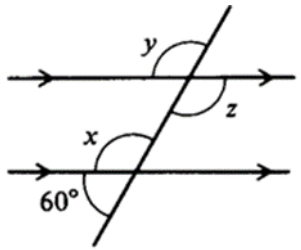
These angle properties can be used alongside all the other angle properties that you have learnt.

Questions

1) Find the missing angles:



2)



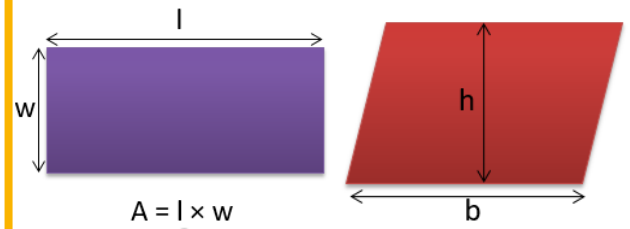
ANSWERS: 1) 56° 2) x = 120°, y = 120°, z = 120°

Maths Knowledge Organiser

PERIMETER AND AREA

Key Concepts

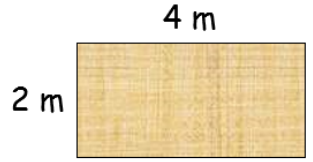
Area



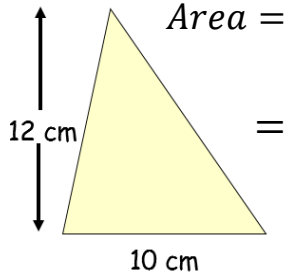
Key Words

Perimeter: The distance around the outside of the shape.
Area: The amount of square units that fit inside the shape.
Dimensions: The lengths which give the size of the shape.
Shapes:
Rectangle, Triangle, Parallelogram, Trapezium, Kite.

Examples

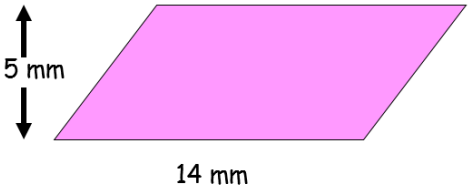


$Area = 2 \times 4 = 8m^2$



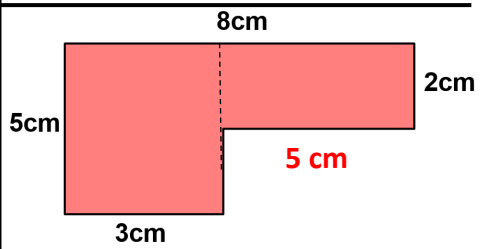
$Area = \frac{1}{2}(10 \times 12)$

$= 60cm^2$



$Area = 5 \times 14$

$= 70mm^2$



$Area = (5 \times 3) + (2 \times 5)$

$= 25cm^2$

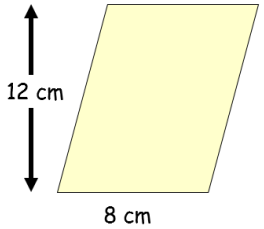
Year 7

Tip

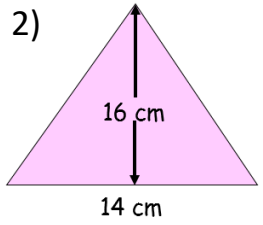
Always remember units. These units are squared for area.
mm^2, cm^2, m^2, etc

Questions – Find the area.

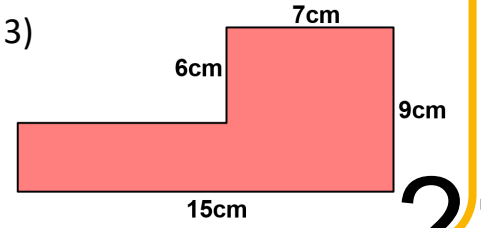
1)



2)



3)



ANSWERS: 1) 96 cm^2 2) 112 cm^2 2) 87 cm^2

Maths Knowledge Organiser

Averages

Key Concept

A measure of average is a value that is typical for a set of figures. Finding the average helps you to draw conclusions from data.

Key Words

Frequency: Total.
Mean: Total of data divided by the number of pieces of data.
Mode: The value that occurs most frequently.
Median: Middle number when they are in order.
Range: Difference between the largest and smallest values.

Tips

- There can be more than one mode.
- Range is a measure of spread, not an average.
- Bar charts have gaps between the bars.

Examples

5, 9, 9, 9, 11, 12, 13, 15, 16

Averages

$$Mean = \frac{5+9+9+9+11+12+13+15+16}{9} = \frac{99}{9} = 11$$

Median = 11 (The middle number shown above)

Mode = 9 (This number occurs most often)

Measure of Spread

Range = 16 – 5 = 11
(A bigger range means the data is more spread out)

Questions

1) Find the mean, mode, median and range of:
a) 3, 12, 4, 6, 8, 5, 4 b) 12, 1, 10, 1, 9, 3, 4, 9, 7, 9

2) For the table:
a) Work out the mode
b) Work out the median.
c) Work out the mean of the data.

Age	Frequency
11	17
12	11
13	8

ANSWERS: 1) a) Mean = 6, Mode = 4, Median = 5, Range = 9 b) Mean = 6.5, Mode = 9, Median = 8, Range = 11 2) a) 11 b) 12 c) 11.75

Year 7

Maths Knowledge Organiser

FRACTIONS

Key Concepts

Mixed numbers

These are made up of a whole number and a fraction.

$$4\frac{3}{5}$$

$$= \frac{4 \times 5 + 3}{5}$$

$$= \frac{23}{5}$$

Equivalent fractions

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16}$$

Key Words

Fraction: A fraction is made up of a numerator (top) and a denominator (bottom).

Equivalence: Two fractions are equivalent if one is a multiple of the other.

Simplify: Cancel a fraction down to give the smallest numbers possible.

Examples

Simplify $\frac{3}{24}$

$\frac{3}{24}$ $\xrightarrow{\div 3}$ $\frac{1}{8}$ $\xrightarrow{\div 3}$ $\frac{3}{24}$

+ $\frac{3}{5} + \frac{2}{7}$

Make the denominators the same

$\frac{3}{5} + \frac{2}{7}$ (×7, ×5)

$\frac{21}{35} + \frac{10}{35} = \frac{31}{35}$

− $\frac{3}{5} - \frac{2}{7}$

$\frac{3}{5} - \frac{2}{7}$ (×7, ×5)

$\frac{21}{35} - \frac{10}{35} = \frac{11}{35}$

Year 7

Tip

- A larger denominator **does not** mean a larger fraction.
- To find equivalent fractions multiply/divide the numerator and denominator by the same number.

Questions

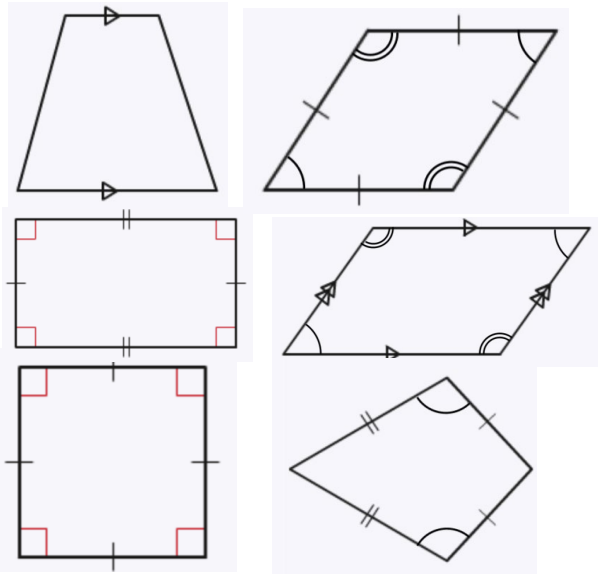
1)Simplify a) $\frac{42}{96}$ b) $\frac{64}{120}$ 2) $\frac{3}{5} + \frac{4}{15}$ 3) $\frac{2}{7} + \frac{5}{8}$ 4) $\frac{7}{9} - \frac{2}{5}$

ANSWERS: 1) a) $\frac{7}{16}$ b) $\frac{8}{15}$ 2) $\frac{13}{15}$ 3) $\frac{51}{56}$ 4) $\frac{17}{45}$

Maths Knowledge Organiser

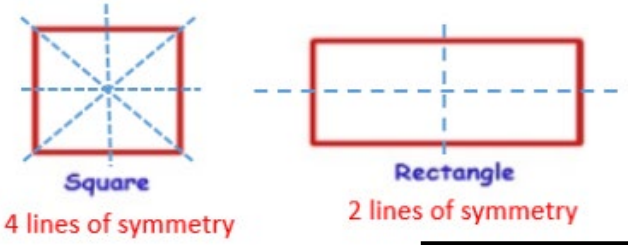
Geometry

Key Concept
Quadrilaterals



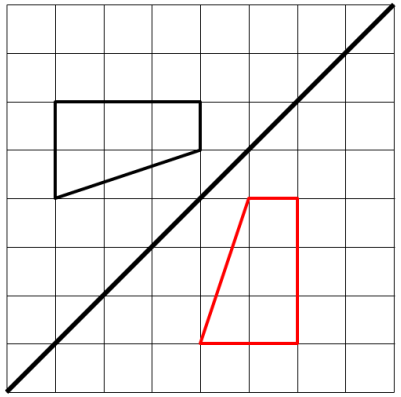
Key Words
Angle: This is formed by two lines, joined by a common endpoint.
Symmetry: A shape has symmetry if there is a line which forms two equal parts which are a mirror image of each other.
Reflection: This is where a shape is flipped.
Rotation: This is where a shape is turned.
Co-ordinates: points that can be plotted. Remember that x comes before y (x, y)

Examples
Lines of symmetry and reflection

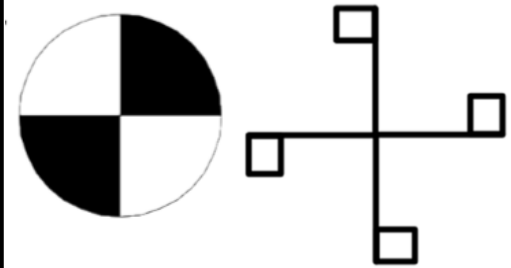


4 lines of symmetry

2 lines of symmetry



Rotational Symmetry

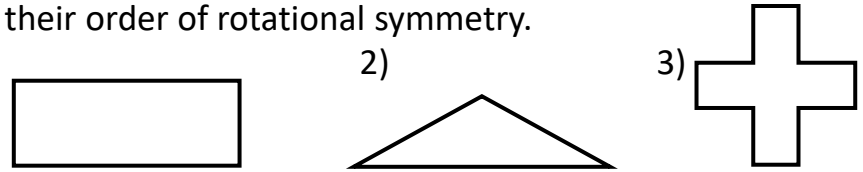


Order = 2 Order = 4

Tip
- The smallest the order of rotational symmetry can be, is 1.
- To see if a line of symmetry works fold along the line and see if the both halves lie exactly on top of each other.

Questions - For the shapes below draw on their lines of symmetry and state their order of rotational symmetry.

1) 2) 3)



Year 7

ANSWERS: 1) 2 lines of symmetry, order = 2 2) 1 line of symmetry, order = 1 3) 4 lines of symmetry, order = 4.

Maths Knowledge Organiser

ALGEBRAIC EXPRESSIONS

Key Concepts

Algebra Meanings

a means 1a or 1 x a
3a = 3 x a
a^2 = a x a
m/n = m ÷ n
n/m = n ÷ m
ab = a x b

a + b = b + a
a x b = b x a

a – b and b – a don't mean the same thing
a ÷ b and b ÷ a don't mean the same thing

Key Words

Operation: In maths these are the functions × ÷ + -.
A **formula** involves two or more letters, where one letter equals an **expression** of other letters.
An **expression** is a sentence in algebra that does NOT have an equals sign.
When **substituting** a number into an expression, replace the letter with the given value.

Examples

1. Simplify the following expressions:

a) $4p + 6t + p - 2t = 5p + 4t$

b) $3 + 2t + p - t + 2 = 5 + t + p$

c) $f + 3g - 4f = 3g - 3g$

d) $f^2 + 4f^2 - 2f^2 = 3f^2$

2) Find the value of $3x + 2$ when $x = 5$

$(3 \times 5) + 2 = 17$

3) $5 \times 4 - 8 \div 2$

$20 - 4 = \mathbf{16}$

Questions

1) **Simplify:**
a) 7p + 3q + p – 3q
b) 5 + 4t + 3p – 2t + 7
c) m – 8g – 5m
d) $b^2 - 7b^2 + 2b^2$
2) Find the value of 5m – 6 when m = 7

ANSWERS: 1)a) 8p b) 12 + 2t + 3p c) -4m – 8g d) $-4b^2$ 4) 29

Year 7

Tip
Use different colours when collecting like terms

MFL Knowledge Organiser Spring 1 ¡Vamos al instituto!

Son= they are
Hay - there is
Es - is
Tiene - has

A

Tenses

B

PRESENT	-ar verbs	-er verbs	-ir verbs
I	-o	-o	-o
you	-as	-es	-es
he/she/it	-a	-e	-e
we	-amos	-emos	-imos
you (pl)	-áis	-éis	-ís
they	-an	-en	-en

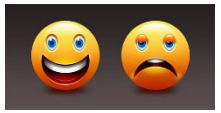
3 KEY IRREGULAR VERBS			
PRESENT	-tener – to have	Ser – to be	Llevar – to wear
I	Tengo	Soy	Llevo
you	Tienes	Eres	Llevas
he/she/it	Tiene	Es	Lleva
we	Tenemos	Somos	Llevamos
you (pl)	Tenéis	Sois	Lleváis
they	Tienen	Son	llevan

C

Opinions & Pronouns

D

Me gusta (mucho)
Me encanta
me chifla
Me interesa
BUT….. Prefiero – I prefer



No me gusta (nada)
Odio
detesto
Me irrita
Me molesta –annoys me

Connectives

E

También	also
Pero	but
sin embargo	however
que	which
Donde	where
Porque	because

Complexity – infinitive phrases

F

Prefiero *tener* – I prefer *to have*
Quiero *tener* – I want *to have*
Me gustaría *tener* – I would love *to have*

Tengo que *llevar*… - I have *to wear*

más…que – more…than
menos…que – less…than

G

aburrido - boring
bueno -good
divertido - fun
difícil – difficult
gracioso - funny
serio - serious
interesante -interesting
relajante - relaxing
simpático – nice
estricto – strict
emocionante – exciting
práctico – practical
útil – useful
inútil – useless
perezoso - lazy
trabajador - hardworking

H

Mi gato **es** divertid**O**
La madre **es** divertid**A**
Las hermanas **SON** divertid**AS**
Los tíos **SON** divertid**OS**

TOPIC VOCABULARY TRANSLATED

KO. Yr7 mod 2/3

¿De qué color es tu pelo? **What colour is your hair?**

Tengo…	**I have…**
el pelo castaño	brown hair
el pelo negro	black hair
el pelo pelirrojo	red hair
el pelo rubio	fair hair
el pelo corto	short hair
el pelo largo	long hair
el pelo liso	straight hair
el pelo ondulado	wavy hair
el pelo rizado	curly hair

claro – light
oscuro - dark

1

Soy…		I am…
alto / bajo	=	tall / short
gordo / delgado	=	fat / thin
mediano	=	average
guapo / feo	=	pretty / ugly

2

más…que – more…than
menos…que – less…than

Soy…		
rubio	=	fair
moreno	=	dark / tanned
negro	=	black
blanco	=	white
pelirojo	=	red head

3

¿De qué color son tus ojos? **What colour are your eyes?**

Tengo … **I've got …**

los ojos azules	blue eyes
los ojos marrones	brown eyes
los ojos negros	black eyes
los ojos verdes	green eyes
Tengo pecas	I've got freckles.
Llevo barba	I've got a beard.
Llevo bigote	I've got a moustache.
Llevo gafas	I wear glasses.
Lleva …	He/She wears …

4

Los países	**Countries**
¿de dónde eres?	**Where are you from?**
Soy de…	**I'm from…**
Australia	**Australia**
Escocia	**Scotland**
España	**Spain**
Estados Unidos	**United States**
Gales	**Wales**
Inglaterra	**England**
Irlanda	**Ireland**
Jamaica	**Jamaica**
México	**Mexico**
Nigeria	**Nigeria**
Paquistán	**Pakistan**

5

La nacionalidad-Nationality - ¿Cuál es tu nacionalidad?

Soy …	**I am …**
¿Eres …?	**Are you …?**
australiano/a	**Australian**
escocés/escocesa	**Scottish**
español/a	**Spanish**
estadounidense	**American**
galés/galesa	**Welsh**
inglés/inglesa	**English**
irlandés/irlandesa	**Irish**
jamaicano/a	**Jamaican**
mexicano/a	**Mexican**
nigeriano/a	**Nigerian**
paquistaní	**Pakistani**

6

Hablo I speak…

e.g. hablo inglés	**I speak English**
alemán	**German**
catalán	**Catalan**
español	**Spanish**
francés	**French**
galés	**Welsh**
italiano	**Italian**

7

MFL Knowledge Organiser Spring 2 ¡vamos al instituto!

Son= they are
Hay - there is
Es - is
Tiene - has

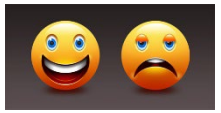
Tenses

PRESENT	-ar verbs	-er verbs	-ir verbs
I	-o	-o	-o
you	-as	-es	-es
he/she/it	-a	-e	-e
we	-amos	-emos	-imos
you (pl)	-áis	-éis	-ís
they	-an	-en	-en

PRESENT	-tener – to have	Ser – to be	Llevar – to wear
I	Tengo	Soy	Llevo
you	Tienes	Eres	Llevas
he/she/it	Tiene	Es	Lleva
we	Tenemos	Somos	Llevamos
you (pl)	Tenéis	Sois	Lleváis
they	Tienen	Son	llevan

Opinions & Pronouns

Me gusta (mucho)
Me encanta
me chifla
Me interesa
Me asignatura preferida es



No me gusta (nada)
Odio
detesto
Me irrita
Me molesta –annoys me

Connectives

también	also
pero	but
sin embargo	however
que	which
donde	where
porque	because

Complexity

Suelo estudiar – I tend to study
Quiero estudiar – I want to study
Tengo que estudiar… - I have to study
Me gustaría estudiar – I would love to have

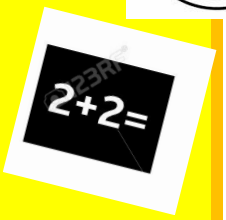
malo – bad
divertido - fun
difícil – difficult
duro - hard
fácil - easy
relajante - relaxing
simpático – nice
estricto – strict
emocionanate – exciting
práctico – practical
útil – useful
inútil – useless
creativo – creative
activo – active
práctico - practical

El español **es** divertid**O**
La historia **es** divertid**A**
Las ciencias **SON** divertid**AS**
El español y la historia **SON** divertid**OS**

28

TOPIC VOCABULARY TRANSLATED
KO. Yr7 mod 3-instituto

Las asignaturas	School subjects
la educación física	PE
El deporte	Sport
el inglés	English
el español	Spanish
el francés	French
el alemán	German
el teatro	Drama
el dibujo/el arte	Art
la geografía	Geography
la historia	History
la informática	ICT
las matemáticas	Maths
las ciencias	sciences
la música	Music
la religión	RE
la tecnología	Technology
la física	Physics
La quimica	Chemistry
La biología	Biology



1

los profesores **teachers**

2

Mi professor de ….tecnología…. **es**
– my teacher of… DT…is

Mi profersor(a) preferido(a) **se llama..**

Mi profersor(a) preferido(a) **es.. / no es**

tiene el pelo….largo / rubio / negro

tiene los ojos…. azules / verdes / negros

me gusta porque es….
– I like him.her because he/she is…

INTENSIFIERS
muy – very
bastante – quite
un poco – a bit
***realmente – really**
***increíblemente - incredibly**

3

4

Frequency phrases

a veces	sometimes
generalmente	usually
normalmente	usually
nunca	never
siempre	always

5

La hora	Time
¿Qué hora es?	**What time is it?**
Es la una.	It's one o'clock.
Son las cinco.	It's five o'clock.
Son las cinco **y diez**	It's 10 past 5
Son las cinco **y cuarto**	It's quarter past 5
Son las cinco **y veinte**	It's 20 past 5
Son las cinco **y media**.	It's half past 5.
Son las seis **menos cinco**	It's 5 to 6.
Son las seis **menos cuarto**	It's quarter to 6
Son las seis **menos veinte** .	It's 20 to 6
Son las doce.	It's twelve o'clock.
Es mediodía	it's midday
Es medianoche	it's midnight

7I Energy

1. Energy from Food	
Energy	Needed to live, helps us to grow and repair our bodies, move and keep warm. Food is a source of energy.
Joule	A unit for measuring energy.
Kilojoule	1000J = 1kJ
Diet	The food that a person eats.
Weight	The amount of force with which gravity pulls things- measured in Newtons (N).
Balanced Diet	Eating a variety of foods to provide all the things that the body needs.
Nutrients	Substances needed from food.

2. Energy Stores and Transfers	
Transferred	When energy is moved from one store into another.
Forces	A push, pull or twist and a type of energy transfer.
Electricity	A way of transferring energy through wires.
Stored	When energy is captured within an object and can be moved to another store by energy transfers.
Chemical Energy	Energy stored in chemicals (such as food, fuel and batteries).
Kinetic Energy	Energy stored in moving things.
Thermal Energy	Energy stored in hot objects.
Strain Energy	Energy stored in stretched or squashed objects. Also called elastic potential energy.
Gravitational Potential Energy	Energy stored in objects in high places that can fall down.
Nuclear Energy	Energy stored inside materials (also called atomic energy).
Law of Conservation of Energy	The idea that energy can never be created or destroyed, only transferred from one store to another.

3. Fuels	
Fuel	A substance that contains a store of chemical or nuclear energy that can easily be transferred.
Nuclear Fuels	Used in nuclear power stations to generate electricity.
Uranium	A radioactive metal that can be used as a nuclear fuel.
Generate	To produce electricity.
Fossil Fuels	A fuel formed from the dead remains of organisms over millions of years.
Coal	A fossil fuel made from the remains of plants.
Oil	A fossil fuel made from the remains of microscopic dead plants and animals that lived in the sea.
Natural Gas	A fossil fuel made from the remains of microscopic dead plants and animals that lived in the sea.
Non-Renewable	An energy resource that will run out because we cannot renew our supplies of it.
Renewable	An energy resource that will never run out (such as solar power)
Biofuels	A fuel made from plants or animal droppings.
Hydrogen	Can be used as a fuel by combining with oxygen from the air to produce electricity.

4. Other Energy Resources	
Solar Power	Generating electricity using energy from the Sun.
Solar Panel	Flat plats that use energy from the Sun to heat water.
Solar Cell	Flat panels that use energy transferred by light from the Sun to produce electricity.
Solar Power Station	A large power station using the Sun to heat water to make steam which then generates electricity.
Wind Turbine	Generates electricity using energy transferred from the wind.
Hydroelectric Power	Electricity generated by moving water turning turbines and generators.
Geothermal Power	Electricity generated using heat from rocks underground.
Photosynthesis	Carbon dioxide + water → glucose + oxygen

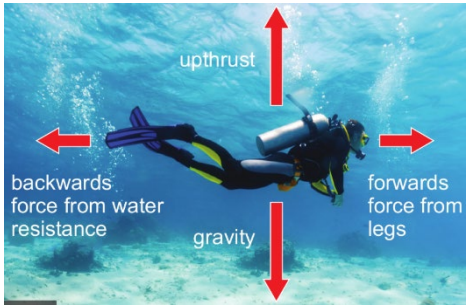
5. Using Resources	
Fossil Fuel Advantages	Cheap compared to the others and convenient to use in cars/vehicles.
Fossil Fuel Disadvantages	Non-renewable Releases polluting gases when burnt.
Nuclear Advantages	No polluting gases generated.
Nuclear Disadvantages	Non-renewable Very expensive Dangerous waste materials
Renewable Advantages	No polluting gases Renewable
Renewable Disadvantages	Most not available all the time and only available in specific locations.
Climate Change	Fossil fuels are making the earth warmer due to the carbon dioxide given off when they are burnt.
Efficiency	How much of the energy transferred by a machine is useful.
Using Less Fossil Fuels	Using efficient appliances, insulating homes, public transport/walking/cycling

Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

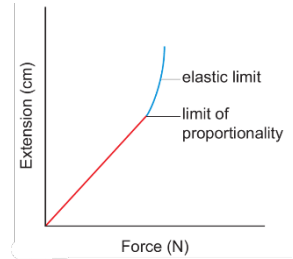
7K Forces

1. Different Forces	
Force	A push or a pull.
Contact Forces	The thing providing the force needs to touch an object to affect it. *Friction, air resistance, water resistance, upthrust*
Upthrust	The force that makes things float.
Air Resistance	A force acting on objects moving through the air.
Water Resistance	A force acting on objects moving through water.
Non-Contact Forces	Forces that can affect an object from a distance. *Gravity, static electricity, magnetism*
Gravity	A force that pulls objects downwards.
Static Electricity	A force that attracts things.
Magnetism	A force that attracts objects made of iron, nickel or cobalt.
Newton (N)	The units for measuring forces.
Weight	The force of gravity pulling on something- measured in Newtons (N)
Mass	The amount of matter that makes up something- measured in kilograms (kg)
Representing Forces	We draw arrows on force diagrams to show the direction of a force; a bigger arrow shows a bigger force.

Force Diagram



2. Springs	
Stretched	Made longer
Compressed	Made shorter
Spring	Made from coils of wire,
Extension	The difference between the original length and the stretched length.
Elastic	An object that returns to its original length when the force is removed.
Investigating Extension	Hang a spring from a clamp and measure its length. Add increasing numbers of masses and measure the extension each time.
Hooke's Law	Extension is proportional to the force applied.
Proportional	A relationship between two variables where if one doubles, the other will double.
Limit of Proportionality	The point at which the extension and force are no longer proportional.
Elastic Limit	The point at which the spring cannot return to its original length.
Force Meter	Springs are used inside to measure the force.

How Extension Depends on Force	

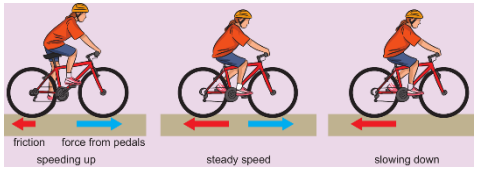
3. Friction	
Friction	Force between two touching objects.
Increasing Friction	Using certain materials like rubber (used on racing cars to stop them from sliding off the road).
Reducing Friction	Make surfaces smooth or by using lubricants such as oil or grease.
Lubrication	Adding a lubricant
Friction Damage	Friction can wear things away like brake pads on a bike. Friction between parts of a car can cause it to overheat and stop working.

4. Pressure	
Pressure	The amount of force pushing on a certain area.
The Size of Pressure	Depends upon the size of the force and the size of the area it is pushing on.
Pressure in Sport	Snowshoes spread out weight, reduce pressure and stop people sinking into soft snow.
Pressure in Everyday Life	It is easier to cut something with a sharp knife because it has a smaller edge so the force is concentrated over a smaller area.
Pressure formula	$\text{pressure} = \frac{\text{force}}{\text{area}}$

Pascal (Pa)	The units for measuring pressure. $1Pa = 1N/m^3$

5. Balanced and Unbalanced Forces	
Balanced Forces	Two forces of the same size acting upon an object in opposite directions. Balanced forces will not change the speed of a moving object.
Unbalanced Forces	When one of the forces acting upon an object is larger than the other. If acting on a moving object unbalanced forces will change its speed.
Stationary	Not moving- stationary objects have balanced forces acting on them.

Force Diagram



Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

7B Sexual Reproduction in Animals

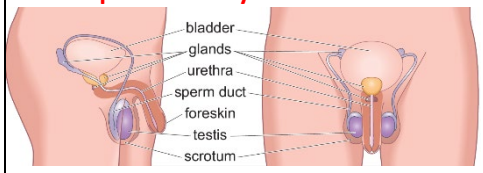
1. Animal Sexual Reproduction

Offspring	The new organisms produced by reproduction.
Sexual Reproduction	Reproduction that needs two parents to produce offspring.
Gametes	Sex cells
Sperm	Gamete that males make
Egg	Gamete that females make
Fertilisation	Sperm enters an egg cell and nuclei fuse forming a fertilised egg cell.
External Fertilisation	The sperm and egg cell meet outside of the body. e.g. fish
Internal Fertilisation	The sperm and egg cell meet inside the body.
Using External Fertilisation	Large numbers of eggs are produced because many get washed away. The parents don't look after their young.
Using Internal Fertilisation	Fewer egg cells produced because sperm is more likely to reach egg. The parents usually look after their young.

2. Reproductive Organs

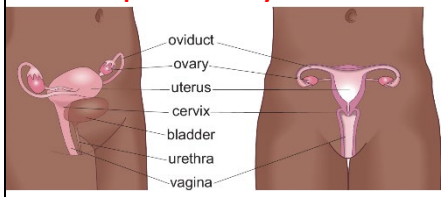
Testes	Where sperm cells are made.
Scrotum	Bag of skin containing the testes.
Sperm Ducts	Sperm travels through here after leaving the testes.
Glands	Fluids are added to the sperm- it is now called semen.
Urethra	The tube the semen leaves the body through.

Male Reproductive System



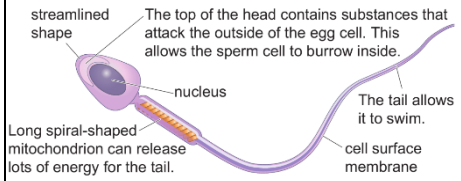
Ovary	Where the egg cells develop and are released from.
Oviduct	Tube lined with cilia (tiny hairs).
Uterus	Where the baby will develop if the egg is fertilised.
Cervix	Ring of muscle between uterus and vagina.
Vagina	Part that leads from the cervix to the outside.

Female Reproductive System

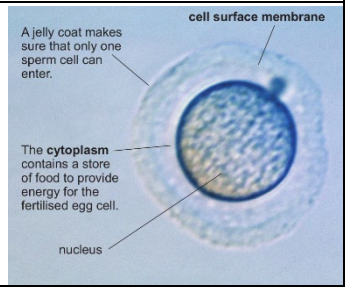


Puberty	When males start to produce sperm cells and egg cells in female start to mature.

Sperm Cell Adaptations



Egg Cell Adaptations



3. Becoming Pregnant

Sexual Intercourse	The erect penis is inserted into the vagina.
Ejaculation	Semen is pumped out of the urethra.
Route the sperm takes	Vagina → sucked up through cervix → uterus → oviduct → meets egg cell
Implantation	If fertilisation occurs the cell starts to divide forming an embryo which will then sink into the uterus lining. The woman is now pregnant.
Amniotic Fluid	Watery fluid to protect growing embryo / foetus.
Amnion	Bag containing the amniotic fluid.
Placenta	Allows oxygen, food and water to be passed from mother's blood into embryo's blood. Waste materials (like carbon dioxide) pass from embryo's blood into mother's blood.
Umbilical Cord	Carries the embryo's blood to and from the placenta.

4. Gestation and Birth

Gestation Period	The time from fertilisation until birth.
Foetus	When an embryo develops a full set of organs we call it a foetus (around 8 weeks).
Ultrasound Scans	Produce images of foetus to check for problems.
Harm to Baby	Alcohol, drugs, cigarette smoke and viruses can pass through placenta and harm foetus.
Premature	Baby born small and early.
Labour	The act of giving birth.
Stages of Giving Birth	1. contractions start and cervix begins to widen. 2. amnion breaks and amniotic fluid leaves vagina. 3. cervix at 10cm, stronger contractions pushes baby through. 4. Umbilical cord cut.
Afterbirth	The placenta is passed out of the vagina- end of labour.
Mammary Glands	Produces milk for babies- contains nutrients and antibodies to protect from disease

5. Growing Up

Sex Hormones	Released by brain, tests & ovaries- start puberty.
Changes to Boys During Puberty	Voice deepens, shoulders widen, hair grows, testes/ penis grow, sperm produced.
Changes to Girls During Puberty	Breasts develop, hair grows, hips widen, ovaries start to release eggs.
Menstrual Cycle	Days 1-5: uterus lining lost from body (**menstruation**) Days 6-14: egg cell starts to mature and is released around day 14 (**ovulation**) Days 14+: egg cell swept towards uterus, if not fertilised cycle starts again.

Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

7D Ecosystems

1. Variation

Habitat	The place where an organism lives.
Variation	The difference between organisms.
Continuous	Type of variation where the measurement can be any value in a given range. *e.g. height, mass*
Discontinuous	Type of variation where the measurement falls into certain categories. *e.g. eye colour, blood group*
Offspring	The new organism produced by reproduction.
Species	Group of organisms that can reproduce to produce offspring that can also reproduce.
Hybrid	The offspring of two different species. They cannot reproduce.

2. Adaptations

Environment	The conditions in a habitat.
Adaptations	Features that help an organism to survive in the environment where it lives.
Polar Bear Adaptations	• Thick fur to keep warm • small ears to stop heat loss • white fur for camouflage • rough soles to grip ice • large feed to spread out weight / swimming
Cactus Adaptations	• Stem stores water • roots cover large area to absorb water • no leaves to stop water loss
Jack Rabbit Adaptations	• large ears to allow heat to escape • large hind legs to increase running speed • gets all its water from food, doesn't drink
Community	All the animals and plants that live in a habitat.
Ecosystem	The community and all the physical environmental factors together.
Inherited Variation	Variation between features caused by an organism's DNA
Inherited Variation Between Same Species	Gametes contain different instructions for features. A different sperm and egg produce each offspring, so each has different features.
Identical Twins	Identical because they develop from one fertilised egg cell.

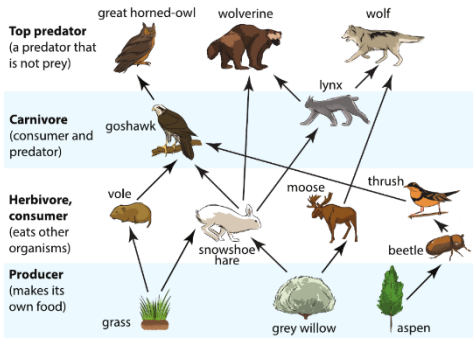
3. Effects of the Environment

Environmental Variation	Variation caused by environmental factors. *e.g. hairstyle, accent*
Daily Changes	Environmental changes during the day.
Seasonal Changes	Environmental changes during the year.
Nocturnal	Animals that are only active at night.
Nocturnal Animal Adaptations	Excellent eyesight Nocturnal owls have superb hearing as well and can fly.
Deciduous	Trees that lose their leaves in winter to stop water loss.
Evergreen	Trees with tougher leaves that don't lose much water so they keep them all year.
Hibernation	Organisms become inactive in winter so they don't need food.
Migration	Birds fly to warmer places for winter to find food.

4. Effects on the Environment

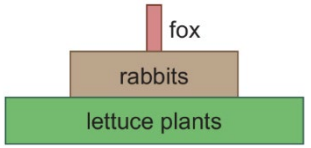
Resources	What an organism needs to survive and grow- oxygen, food, water, etc. for animals.
Population	The numbers of a specific organism.
Food Chain	Represents what eats what in a habitat Grass → hare → lynx
Competition	Organisms compete over the resources that they need.
Food Web	Formed by joining together all food chains in an ecosystem.

Food Web Example



Interdependent	Organisms in an ecosystem all depend on one another.
Predator	Eats another animal.
Prey	Eaten by another animal.

5. Transfers in Food Chains

Food Chain Arrows	Represent energy passed between organisms.
Energy Flow	Energy is lost at each stage along a food chain due to being released by respiration for movement etc. and some food remains undigested.
Pyramid of Numbers	Diagram showing number of each organism at each stage of a food chain. 
Pesticides	Poison that kills pests.
Pests	Organisms that cause problems.
Persistent	Poisons that are not broken down in nature.
Poisons in a Food Chain	Poisons get more concentrated the further along a food chain.
DDT	Persistent pesticide used in the UK that caused bird shells to become weak and break easily. Banned in 1984.

Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

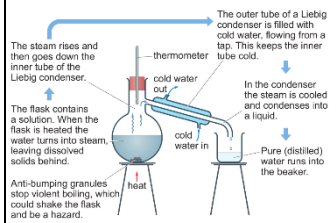
7E Mixtures and Separation

1. Mixtures	
Mixture	Two or more substances jumbled together but not joined together.
Suspension	A mixture of a solid and liquid, where the solid bits are heavy enough to settle out if the mixture is left to stand.
Colloid	A mixture of a solid, liquid or gas in a solid, liquid or gas where the substances do not settle out if left to stand.
Dispersed	Spread out without settling out, such as the bits in a colloid.
Opaque	Cannot be seen through- colloids are opaque / cloudy.
Solution	When a substance has dissolved in a liquid.
Transparent	Light can pass through and it can be seen through- solutions are transparent.
Filter	Something through which a liquid is passed to remove suspended pieces of solid.

2. Solutions	
Solvent	The liquid in which a substance dissolves to make a solution.
Solute	The substance that has dissolved in a liquid to make a solution.
Dissolve	When a substance breaks up into such tiny pieces in a liquid that it can no longer be seen and forms a solution.
Soluble	Describes a substance that can dissolve in a liquid.
Conservation of Mass	The total mass of a solution is the same as the mass of the dissolved substance plus the mass of the liquid at the start.
Saturated	A solution that contains so much dissolved solute that no more solute can dissolve in it.
Solubility	The amount of a substance that dissolves in a particular solvent at a particular temperature to make a saturated solution.

3. Evaporation	
Evaporation	When a liquid changes into a gas. Can be used to separate a liquid from the solid dissolved in it.
Sodium Chloride	The scientific name for table salt that we use on our food.
Rock Salt	When sodium chloride is found in thick layers of rock underground.
Extracting Rock Salt	Can be dug up or mined. Water can be pumped into layers of salt underground, dissolving the sodium chloride which is then pumped to the surface and heated to evaporate the water, leaving behind sodium chloride.
Boiling	When there is liquid turning into a gas in all parts of a liquid- creates bubbles of gas in the liquid.
Boiling Point	The temperature at which a liquid boils.

4. Chromatography	
Chromatography	Used to separate substances dissolved in a mixture.
Paper Chromatography	A concentrated dot of a mixtures is placed at the bottom of special chromatography paper. The bottom of the paper is dipped into a solvent (such as water). As the solvent moves up the paper is carries the dissolved substances.
Concentrated	A solution that contains a large amount of solute dissolved in a small amount of solvent.
Chromatogram	The results of chromatography such as a dried piece of paper for paper chromatography showing when the dissolved solids have been separated.
How chromatography works	Different substances in a mixture are carried at different speeds, depending on how soluble they are, which separates them out from each other.

5. Distillation	
Desalination	Separating water from the salts in salty/sea water to produce fresh drinking water.
Distillation	The process of separating a liquid from a mixture by evaporating the liquid and then condensing it to be collected.
Steam	Water as a gas.
Condenses	When a substance changes from its gas state into its liquid state.
Pure	A single substance that does not have anything else in it. (Pure water only contains water and no dissolved solutes)
Distillation Apparatus	
Solar Still	Energy from the Sun is used to evaporate salty/dirty water which is then condensed, forming pure/clean water.

Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

7F Acids and Alkalis

1. Hazards

Hazard	Something that could cause harm.
Risk	The chance that a hazard will cause harm.
Hazard Symbols	Internationally agreed symbols representing the type of risk from using a substance.
	**Dangerous to Environment** Can cause long term damage to animal and plant life.
	**Toxic** Poisonous and can cause death if taken into the body.
	**Corrosive** Attacks certain substances like metals, stonework & skin.
	**Explosive** Heating may cause an explosion.
	**Flammable** These substances catch fire easily.
	**Caution** similar to toxic/corrosive but less serious- may cause skin irritation
Diluted	Dangerous substances are mixed with water to make them less dangerous.

2. Indicators

Indicator	A substance that changes colour in solutions of different acidity/alkalinity.
Litmus	An indicator made from a type of lichen.
Acid	Turns litmus indicator **red**.
Alkali	Turns litmus indicator **blue**.
Neutral	A substance that is neither acidic or alkaline.
Red Cabbage	Can be used as an indicator.

3. Acidity and Alkalinity

pH Scale	A scale measuring acidity and alkalinity in numbers.

The pH Scale

Acid	pH lower than 7- the lower the number the more acidic.
Neutral	pH of 7
Alkali	pH higher than 7- the higher the number the more alkaline.
Universal Indicator	Indicator that gives a range of colours depending on the pH.
Acid Rain	Rainwater more acidic than usual due to pollution.

4. Neutralisation

Neutralisation	A reaction where an acid and alkali are mixed together forming a neutral substance.
Chemical Reaction	A change in which one or more new substance is formed.
Word Equation	Used to model chemical reactions.
Reactants	The starting substances- written on left of word equation.
Products	The new substances made- written on right of word equation.

Neutralisation General Word Equation
Acid + alkali → salt + water

Neutralisation Word Equation Example
Hydrochloric acid + sodium hydroxide → sodium chloride + water

Salts	Formed when acids and alkalis react. Different acids and alkalis will form different salts.
Sodium Chloride	The chemical name for common/table salt.

5. Neutralisation in Daily Life

Base	Any substance that neutralises an acid forming a salt and water.
Alkali	A soluble base
Antacids	Remedy for indigestion that neutralise the stomach acid

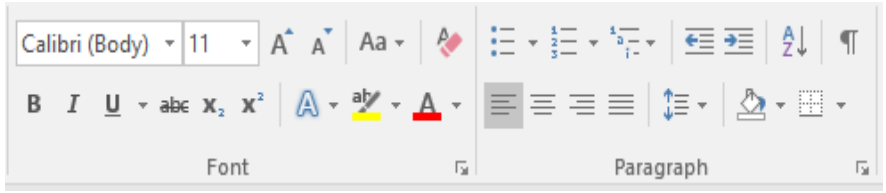
Antacid Word Equation Example
Magnesium hydroxide + hydrochloric acid → magnesium chloride + water

Toothpaste	Contains bases that neutralise acids in your mouth from food that you eat.
Bee Sting Remedy	A bee sting, being acidic can be treated with a weak alkali like baking soda.
Wasp Sting Remedy	A wasp sting, being alkali, can be treated with a weak acid like vinegar.
Cleaning Metals	Acids clean the rust off metals using a neutralisation reaction.
Waste Gases	Acidic waste gases from industries are sprayed with calcium hydroxide to neutralise them.

Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

Computer Science Knowledge Organiser

Year 7 Using media



Formatting can be using tools like **bold**, *italic*, underline, changing colour, font style and size, alignment and many more.

Formatting can be used for many reasons. Including to make text easier to read, easier for the audience to use, highlight important information or attract attention.

It is important to select the appropriate formatting for the audience!

Images play an important role when using software. It is important that **appropriate** images are used, ones that meet the requirements of the **audience** and the **purpose** of whatever is being created.

A **blog** is a regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

Is it real? Is it true?

When researching and reading stories online you need to check that they are **reliable**, **trustworthy** and **credible**. Anyone can upload content so it is not always accurate.

· Check the source, find out which other sources are reporting it

· Check whether other sites are saying the same thing,

· Don't trust all the stories and all pictures

· Check for facts not rumours

· Check any citations or references

When you are researching a topic you will come across a lot of useful information. Once the reliability and accuracy has been checked you may decide to use the information. Check the law

Plagiarism using someone else's work or ideas and using them as if they were your own. This can be any type of work either printed or electronic.

C**itation** the audience where the information came from. Anything that is used needs to have **citations** or **references** to the original work. the audience details about the source so that they can see that the source is relevant and recognised so they can find the source themselves if they want to.

It is the law

Copyright Law gives the creators of literary, dramatic, musical, artistic works, sound recordings, broadcasts, films and typographical arrangement of published editions, rights to control the ways in which their material may be used.

©opyright

Creative Commons(CC) license is one type of copyright license. This allows the copyright owner to say exactly what other people can and can't do with or to their work.

creative commons

They help copyright owners share their work while keeping the copyright. For example, a Creative Commons licence might allow other people to copy and distribute the copyright owner's work, if they give them credit.

Keywords

Format

Source

Licensing

Audience

Plagiarism

Copyright

Citation

Blog

Credibility

Referencing

Appropriate

Computer Science Knowledge Organiser

Year 7 Modelling Data

Spreadsheets

Spreadsheets are used to model data.
That means that they can be used to perform calculations on data and make predicts.

Data and **information** are not the same.
· **Data**: facts and figures in their raw form
· **Information**: data that has been given structure or meaning

For example:
Data—10, 2107, 18
Information—Time 10am, date 21st July, temperature 18º

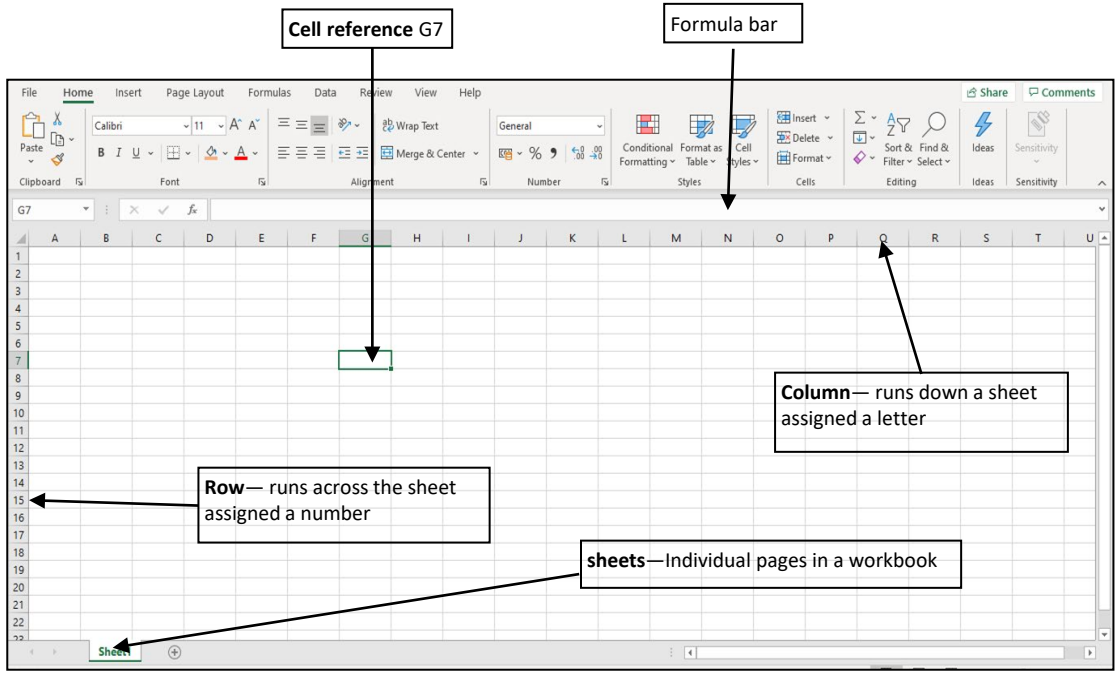
The tool bar ribbon at the top allows for **formatting** of the data. Changing colour, size, style etc

There is a **sort** and **filter** tool that allows for data to be arranged in ways that is most useful for the user e.g. alphabetical, highest, lowest etc.

Conditional formatting can be set to allow the cell **formatting** to **automatically** change if certain criteria is met. For example a cell might turn red if there was a negative number

In order to complete calculations spreadsheets make use of **formula**.
A formula uses the following basic symbols
The **=** symbol is always at the start of a formula
The **+** symbol is used for addition
The **-** symbol is used for subtraction
The ***** symbol is used for multiply
The **/** symbol is used for divide

Functions are also used which are predefined formula.



Common **functions** are
SUM—adds a range of cells
MAX—returns the largest value from selected cells
MIN—returns the smallest value from selected cells
AVERAGE—provides the arithmetic mean (average) of selected cells
COUNTIF—counts the number of cells in a range that meet the given criteria
IF— allows logical comparisons
COUNTA—counts cells that are not empty

Data can be gathered from different sources
· **Primary** source: collecting data yourself
· **Secondary** source: someone else collects the data

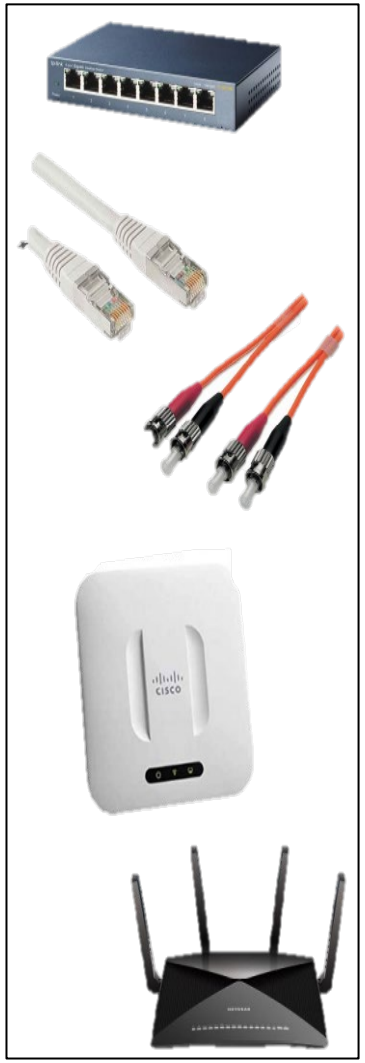
Each box on a spreadsheet is called a **cell** and they hold data.
Each **cell** has a unique **cell reference** to identify its location.
You can fill data automatically by using AutoFill

Computer Science Knowledge Organiser

Year 7

Networks

Key Words	
Bandwidth	Amount of data that can be moved from one point to another in a given time.
Buffering	Data arriving slower that it is being processed
Internet	A worldwide network of computers
internet of Things (IoT)	Takes everyday 'things' and connects them to the Internet e.g. smart light bulb, fridge, heating etc.
IP address	A unique address for every device on the internet
Packet	Networks send/receive messages in units called packets
Protocol	All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called 'protocols'
Search Engine	A website that allows user to look up information on WWW e.g. Bing, Google etc.
Web browser	Piece of software(code) used to view information on the Internet
WWW	Part of the Internet that contains websites and webpages. NOT the same as the Internet.



A **network** is where devices are connected together usually by cable or Wi-Fi. This could be a few computers in a room, many computers in a building or lots of computers across the world.

Wired and **Wireless** data transmission

A computer network can be either wired or wireless.

· Wired networks send data along cables.
· Wireless networks send data through the air using radio waves.

Bandwidth—Bandwidth is the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second

Bandwidth is measured in bits per second
A bit is the smallest unit of data
Data transfer rates are now so good that bandwidth is usually measured in Megabits per second (Mbps)
1Mb—1 million bits

Internet services

There are a range of services provided by the internet. These include:
· World Wide Web
· Email
· Online gaming
· Instant messaging
· Voice over IP (VoIP) – audio calls
· Internet of Things (IoT)
· Media streaming (e.g. watching Netflix online)
The rules for each service are different.
As a result, a different protocol is used.

HTTP—HyperText Transfer Protocol—used so that data can be understood when sent between web browsers and servers.
HTTPS—is the secure version of HTTP where data sent is encrypted.

Network Hardware—physical equipment required to set up a network
Hub—Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.
Router—Used to connect two separate networks together across the internet
Sever—A powerful computer which provides services to a network
Cable—Used to connect different devices together. They are often made up of a number of wires.

Computer Science Knowledge Organiser

PROGRAMMING 1 - SCRATCH

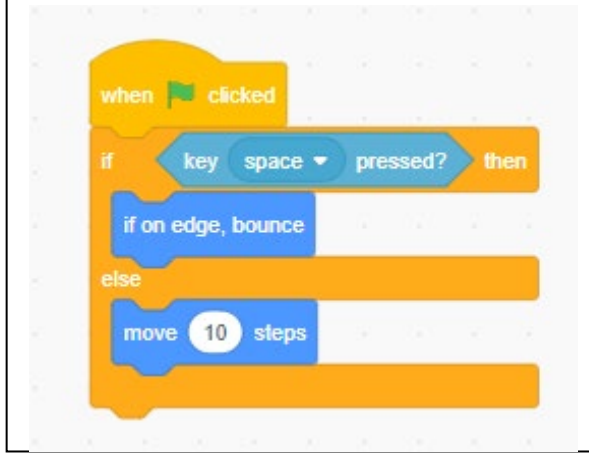
Scratch is a **block based programming language**. We can use predefined code drag and drop blocks to create a sequence of code.

Key Words	
Abstraction	Identify the important aspects to start with
Algorithm	Precise sequence of instructions
Computational thinking	Solving problems with or without a computer
Debugging	Looking at where a program might have errors or can be improved
Blocks	Scratch bricks that we can use to code algorithms
Decomposition	Breaking down a problem into smaller parts
Execute	A computer precisely runs through the instructions
Iteration	Doing the same thing more than once
Selection	Making choices
Sequence	Running instructions in order
Variable	Data being stored by the computer

A computer inputs (this might be automatic or via human input), processes that input and then produces an output. as well as producing an output. For example when you use a keyboard and mouse, the mouse is used to input data into the computer to be processed and the output is visible on the computer monitor.

Sequence, **selection** and **iteration** are all processes. In order for computers to perform tasks there is more that is needed. For example a computer will take an **input** (this might be automatic or via human input) which the computer will then **process** and the **output** will be visible on the computer monitor.

A **selection** statement in programming allows a computer to **evaluate** an **expression** to **'true'** or **'false'** and then perform an action depending on the outcome.



Operators
Comparison operators allow us to compare using **< > +**
Logical operators use **AND, OR, NOT**

Variables are used to store data for use in a program. They can store lots of different types of data such as names and scores.
So set variable score to equal 0
If I score a goal then increase variable by 1

Count controlled iteration will execute the commands a set number of times. Example**:** "perform 200 star jumps"

Condition-controlled iteration will execute the commands until the condition you set is no longer being met. Example: "perform star jumps until 3pm"

We use algorithms in every day life . Example an algorithm to get to school, to make a cup of tea, to make a pizza, to order a takeaway. These are just precise sequences of instructions.

Computer Science Knowledge Organiser

DIGITAL SKILLS

IMPACT OF TECHNOLOGY

Cyberbullying is similar to bullying but tends to occur online. Cyberbullying can come in many forms. Some examples are:
· Threatening someone to make them feel scared
· Harassing someone by repeatedly sending them messages
· Ruining somebody's reputation
· Excluding someone from a group
· Stealing someone's identity and pretending to be them
· Publicly displaying private images or messages

Key Words	
Audience	The people you are communicating, presenting information to
Catfishing	A person pretends to be someone they are not.
Collaboration	Working effectively together
Digital tattoo/Digital footprint	Online reputation that is permanent
Email	A tool for online communication
Hazards	Areas/items that could cause damage or injury
Network	Devices are connected together usually by cable or Wi-Fi.
Password	A way to ensure no one access your data or information
Respect	Be mindful of how you are responding to others
Secure	Making sure your online information is safe

STOP cyberbullying

PASSWORDS are like underpants

Never share them | Change them often | Keep them Private

Social media settings
· Profiles should always be set to private
· Profile images should not reveal locations
· Profile images should not be easy to recognise; it is much better to use a picture of a pet or a cartoon character
· Don't reveal locations — this makes it easy to find out where you are.
· Making your date of birth public makes it easy for hackers to steal your personal information and set up fake accounts in your name.
· You should never reveal your phone number, email address, or home address on a public site
· You should never reveal your current location on social media
· Putting your full name, including a middle name, makes it easy for someone to steal your personal information. Always use a nickname or shortened version of your name

Do you really want to send that?
Think before you click.
It is easy to send comments from the other side of a screen.
It is not easy to then remove them.
Actions need to be considered before mistakes are made.

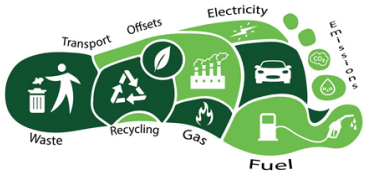
Using technology appropriately, carefully and positively leads to positive digital citizens.
Digital citizenship to the responsible use of technology by anyone who uses computers, the Internet and digital devices to engage with society on any level.

Secure **passwords**
No one should be able to guess/work out your password.
Current government advice is to use 3 random words

Where to get help
Talk to a trusted adult
https://www.ceop.police.uk/
https://www.childline.org.uk/

Design Specification – Key Questions

A	**Aesthetics**	What shape should the product be? What colour should be product be? What texture should the surface have?
C	**Cost**	What should the cost of the product be?
C	**Consumer**	Who is the client or the user of the product? What features of other similar products should it have? Does the client have any specific needs or wants for the product?
E	**Environment**	Should the product be made from recycled materials? How should the product be packaged? How will the product be disposed of when it is no longer needed?
S	**Safety**	What safety risks have to be considered? What safety standards must the product meet?
S	**Size**	How long, wide and tall should the product be? How much should the product weigh?
F	**Function**	What will the product be used for? How will it work? How should it be tested?
M	**Materials and Manufacturing**	What materials should the product be made from? Are there any limits on the sizes of the available materials? How many products need to be made? Which processes should be used to make the product?



Key Words and Definitions

Refuse	Is the product necessary?
Rethink	Are there alternative materials or design options that are more sustainable?
Reduce	Can the product be made from fewer materials? Can the amount of unsustainable materials be reduced?
Reuse	Can parts of the product be reused in a different product?
Recycle	Can the materials used be recycled? If the product made from recycled materials?
Repair	Can the product be repaired rather than being thrown away if it breaks?

Sustainability	The level to which resources can be used without them becoming unavailable in the future.
Carbon Footprint	Carbon foot print is the measurement/amount of greenhouse gases produced in the production of products.
Renewable Energy Source	A source that is quickly replaced by natural means and will not run out.
Non Renewable Energy Source	A source that cannot quickly be replaced and will eventually run out.

Design Process

Primary Research	Data gathered first hand directly from the client
Secondary Research	Data about the client that comes from a second hand source
Product Analysis	Looking at a product in detail to understand more about it using ACCESS FM
Design Brief	A summary of the design opportunity
Design Specification	A document that lists all the design criteria that the finished product must meet.
Design Development	Involves making a model of a design, which is then tested and evaluated. A new, improved prototype is made and the process is repeated until the finished design meets all the needs and wants of the client.
Testing	To check that the product meets the design specification and the needs of the user.
Evaluation	Where a designer reflects on the design of a product, looks at what went well during testing and identifies ways that a product could be improved.

Renewable Energy Sources

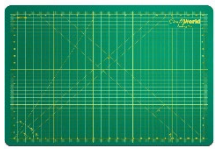
A renewable energy source is quickly replaced by natural means and will not run out. Examples include wind power, solar power and hydroelectric power

Advantages	Disadvantages
It will not run out	Initial cost of installation is high
No carbon emissions	Some types of renewable energy are noisy
No fuel costs	Some types of renewable energy look ugly
No reliance on fossil fuels	Some types of renewable energy need constant sunlight or wind
	Unused electricity could be wasted
	Local habitat could be displaced

How can we reduce our impact on the environment?

- Use **renewable** materials rather than non-renewable means these can be replenished.
- If non-renewable materials are used such as plastic (oil) **carbon emissions** are given off resulting in global warming.
- Choosing **biodegradable** materials means they will break down naturally when the product comes to the end of its life. Non-biodegradable materials that have not been recycled will end up in the landfill or the sea damaging animals and habitats.
- Apply the **6Rs** to ensure minimal impact on the planet.

Tools and Equipment

	Name	• Use • Safety point
	Craft Knife	To cut paper, card and boards **Safety Rules when using it** Lock must be on Point downwards Use a cutting mat and safety ruler
	Cutting Mat	Placed under the material **Safety** It stops the knife from slipping
	Metal Safety Ruler	Used when cutting the material with a craft knife. **Safety** Fingers stay in the indent so protected from the blade
	Glue Gun	Used to join card and boards together **Safety** The glue and nozzle is hot Be careful not to use too much glue

Health & Safety

Follow all verbal and written safety instructions, safety signs and floor markings.
Wear an apron and remove any loose clothing or jewellery. Tie back long hair.
Always walk – never run
Do not crowd other people
Reports any accidents that occur immediately to the teacher.
Do not leave anything on the floor
Leave the workspace clean and tidy when you have finished.

Sources of Timber

Timber is made from trees that are chopped down and then cut into planks in a sawmill.

Timber can be a renewable resource if grown in well-managed forests. Responsible management includes planting trees as older trees are cut down. Timber grown this way can be identified by the Forest Stewardship Council FSC,

FSC FORESTS FOR ALL FOREVER
Forest Stewardship Council®

Types of Timber

- **Hardwood** comes from deciduous trees, which are trees that shed their leaves each autumn. Hardwood trees can take 100 years to grow to a size where they can be harvested for timber.
- **Softwood** comes from coniferous trees. These are trees that keep their leaves or needles all year round, so they typically grow faster than hardwood trees. Softwood trees can reach a size where they can be harvested for timber in 25-30 years so more eco-friendly and cheaper.
- **Manufactured Boards** are made by gluing particles or pieces of wood together. These can be the waste materials from cutting of hardwood softwood or can be recycled woo.

Hardwoods

Type	Properties	Uses
Oak	Very strong and hard Light brown colour	High quality furniture
Mahogany	Fairly strong and durable Pink to reddish brown colour	High quality furniture
Beech	Hard and tough, but easy to work with Light brown with darker brown flecks	Wooden toys, household items and furniture
Ash	Tough and flexible Light creamy brown colour	Tool handles, sports equipment
Balsa	Soft – can be marked using finger Off white to tan colour	Modelling

Softwoods

Type	Properties	Uses
Pine	Fairly strong, easy to work with Light brown or yellowish colour	Interior structures in buildings and furniture
Spruce	Strong and hard, but low resistance to decay. Yellowish-white colour	Wooden aircraft frames

Manufactured Boards

Type	Properties	Uses
Medium Density Fibreboard	Made from fine particles of timber, mixed with glue and compressed together. Smooth, even surface, easily machined	Low cost furniture
Chipboard	Made from course chips of timber, mixed with glue and compressed together. Rough surface with uneven texture	Kitchen worktops (covered with melamine formaldehyde)
Plywood	Made from layers of veneer glued together with the layers grain structures at right angles to each other Layers are cut from timber then glued together	Furniture making Marine plywood is used for building boats

Food Technology Knowledge Organiser

Hygiene and Safety

Personal hygiene-people are sources of contamination. Personal hygiene must be followed to prevent food poisoning such as:-Wash hands before and after handling foods; tie or cover hair; remove jewellery;

Cross Contamination-The transfer of bacteria into food: Food to food, Food handler to food, Equipment to food

High Risk foods are foods high in protein and moisture e.g. meat, dairy, cooked rice, gravy. Must be stored at a temperature below 5◦C to prevent bacteria growth.

Preparing food safely:

Cleaning

Keep yourself and hands clean
Use clean equipment
Use clean dish clothes and tea towels

Cooking

Cook raw foods until the core is 75C, check with a temperature probe.
Reheat foods to 75C
Never reheat food more than once

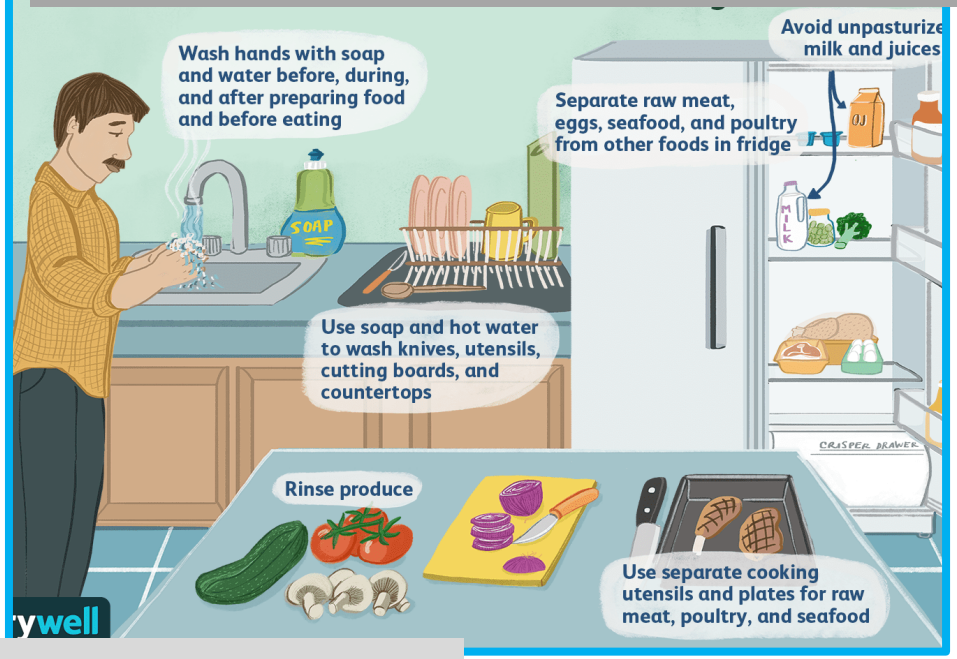
Chilling

Cool cooked foods for no longer than 90mins before refrigerating .
High risk foods must be stored below 5C

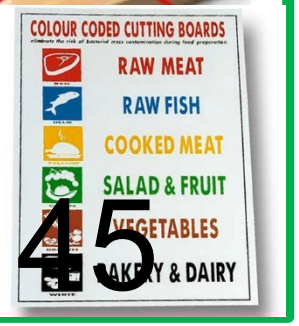
Cross Contamination

Stroe raw foods away from cooked foods
Use separate equipment (chopping boards and utensils
Wash hands after handling raw meat and before preparing food

Code those rules in the picture CC for ways to prevent cross contamination



Preventing cross contamination



Food Technology Knowledge Organiser

Knife Skills

Julienne
3mm*3mm*3~5cm

Rondelle

Medium Dice
1.25*1.25*1.25cm

Small Dice
6*6*6mm

Key abbreviations: Weights and Measurements		
L	Litres	
g	Grams	
ml	millilitres	1000ml =1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml

Claw grip

Bridge hold

Food Spoilage

OVERVIEW

Five conditions needed for microorganisms to multiply:
1. **Warmth**
2. **Moisture**
3. **Food**
4. **pH (not too acidic or alkaline)**
5. **Time**

HIGH RISK FOODS: Cooked meat, fish and poultry; Dairy; Shellfish; Gravies, Stocks, Sauces; Cooked Rice

CAN CAUSE FOOD SPOILAGE:

RIPENING — prevented by adding an acid

BROWNING — prevented by blanching and freezing

ENZYMES

Enzymes are **special proteins** that act as biological catalysts - they **speed up chemical reactions**. You can often see this in fruit & veg

Both are **microorganisms** which means with the above conditions, they can **grow and spread quickly**. Moulds can change the **look**, **smell** and **taste** of food. Yeasts commonly grow on fruit, spoiling them through **fermentation** of sugars

MOULD & YEAST — MOULD; YEAST — prevented by correctly storing food such as breads in dry, cool conditions and fruit in the fridge

Storing and Preparing Food Safely

DON'T let it go past its best — USE BY / BEST BEFORE

key temperatures: Cook/ Reheat 75C; Chilling 0C to 5C

OTHER METHODS: freeze-drying; jam-making; pickling; cool, dry place; vacuum packing; canning/ bottling

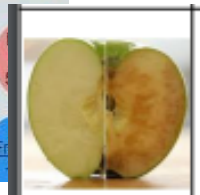
Prevent Cross-Contamination
- Clean utensils and surfaces
- Clean hands thoroughly
- Watch out for pests
- Keep high risk food away from other food
- Follow safety & hygiene rules

LOOK COVER WRITE CHECK

LOVE FOOD LOVE SCIENCE

Alkali | Alkali+Acid | Acid

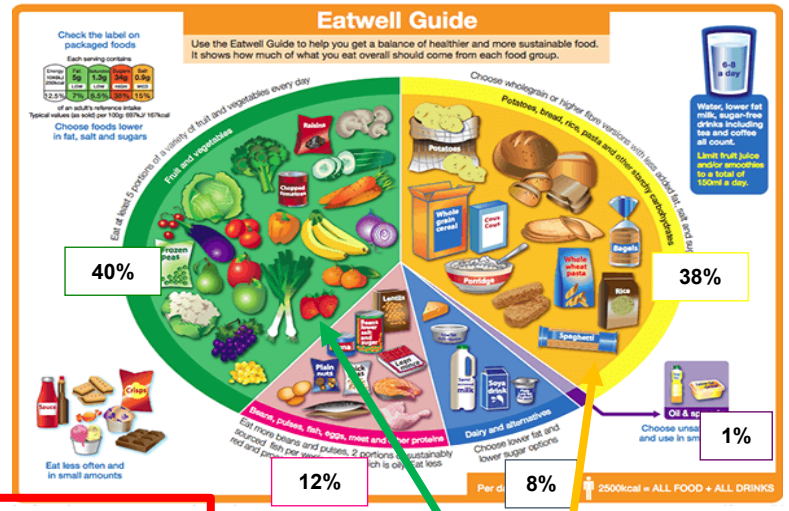
Chemical raising agents produce CO2.
Alkali+ Acid+ liquid+ CO2
Makes baked products like scone rise, light and soft



7. Enzymic browning: the process where fruit and vegetables turn brown due to them being exposed to oxygen (oxidisation).

14. Rubbing in method is a method whereby you rub using your fingers together usually butter and flour to create a breadcrumb like mixture, usually the ba[illegible]r scones.

Food Technology Knowledge Organiser



Occasional treats: Foods high in fat and sugar

Eat plenty of these because:

*Adds bulk so gives a feeling of fullness.
*Slow releasing energy.

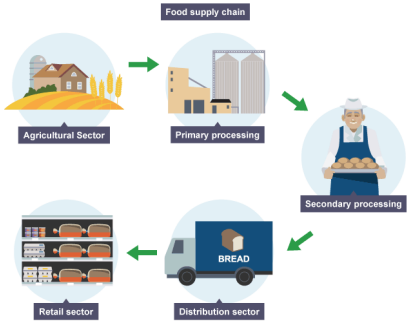
Great source of fibre Packed full of vitamins, minerals and fibre.

LOOK COVER WRITE CHECK

Nutrient	How	Why
Cutting Fat	*Eat more chicken and fish and less red meat *Use skimmed or semi-skimmed milk instead of full fat milk *Grill food instead of frying *Cut fat off meat before cooking	*Overweight *Obesity *Increase in Cholesterol in the blood *Heart attack. *Type 2 diabetes
Cutting down on Sugar	*Avoid fizzy drinks and high calorie drinks. Have fruit juice or water instead. *Eat fewer cakes, biscuits and sweets *Eat more fruit as an alternative *Try the natural sweetness of fresh fruit in puddings instead of sugar	*Overweight *Obesity * *Heart attack. *Type 2 diabetes
Have more Fibre	•Eat lots of fresh fruit and vegetables •Eat more wholemeal flour, bread, pasta, rice •Use more canned beans, peas and lentils - eat more •Try jacket potatoes with a variety of fillings	*Helps to protect against diseases of the bowel. *Gives you a feeling of fullness and so can help in diets.
Eat less salt	•Use herbs and spices as an alternative to salt	* Too much salt can lead to high blood pressure. This will increase the risk of suffering heart problems and strokes.

Food miles and the environment

Task: When you next visit your supermarket check the food labels to see where the fruits and vegetables in your basket comes from.

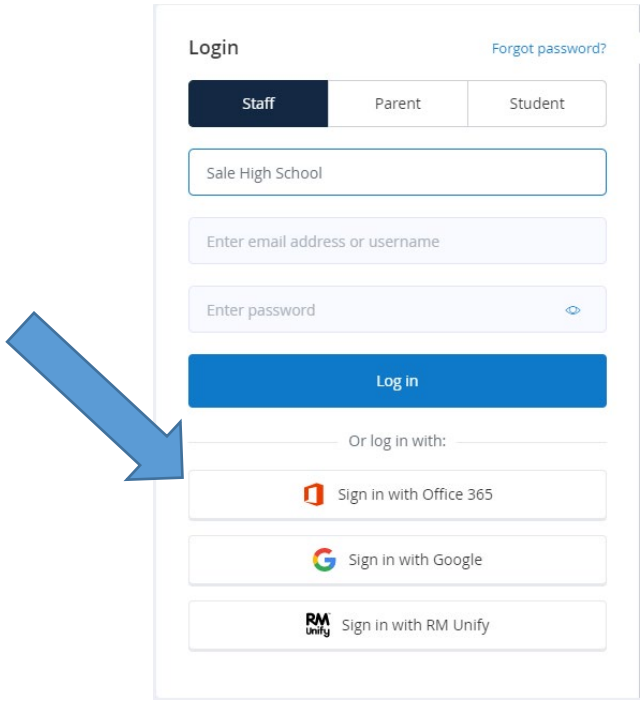
Key Term	Meaning	
Food Miles	the distance food has travelled to get to your plate. Food must travel from the farm it is grown on or the factory it is made in to a supermarket or shop to be sold	 Chocolate – ingredients coming from all over the world has a lot of food miles.
Carbon Emission	harmful gases such as carbon dioxide are released into the earth's atmosphere when we use fossil fuels (coal and oil) to provide energy. We need energy to grow, produce and transport food. Some food uses more energy than others.	
Local	a place close to where you live. Fruit and vegetables that were grown near you would be considered local.	 Strawberries grown in Manchester/UK

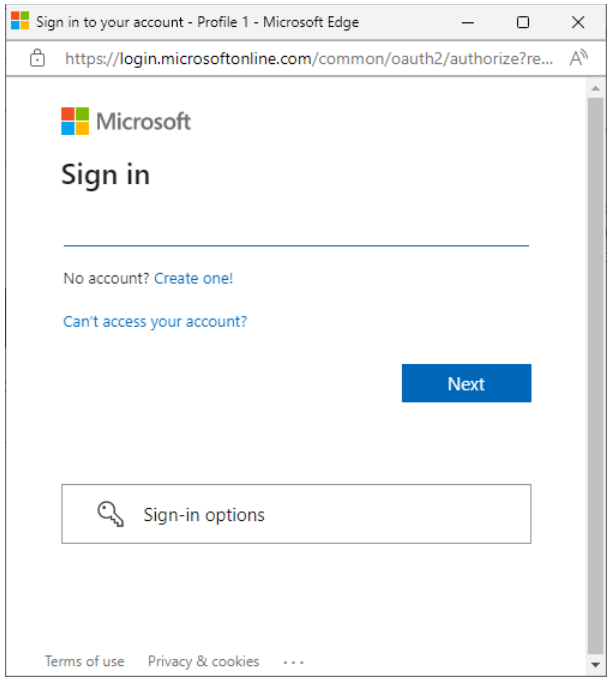
https://www.bbc.co.uk/bitesize/topics/zjr8mp3/articles/zjnxwnb

Satchel:one log in guide

How to Log into satchel:one

1. At the Log in Screen, Click ‘Sign in with Office 365’





2. Type in your school email address.

Your School Email Address is made up from the year you started Highschool,

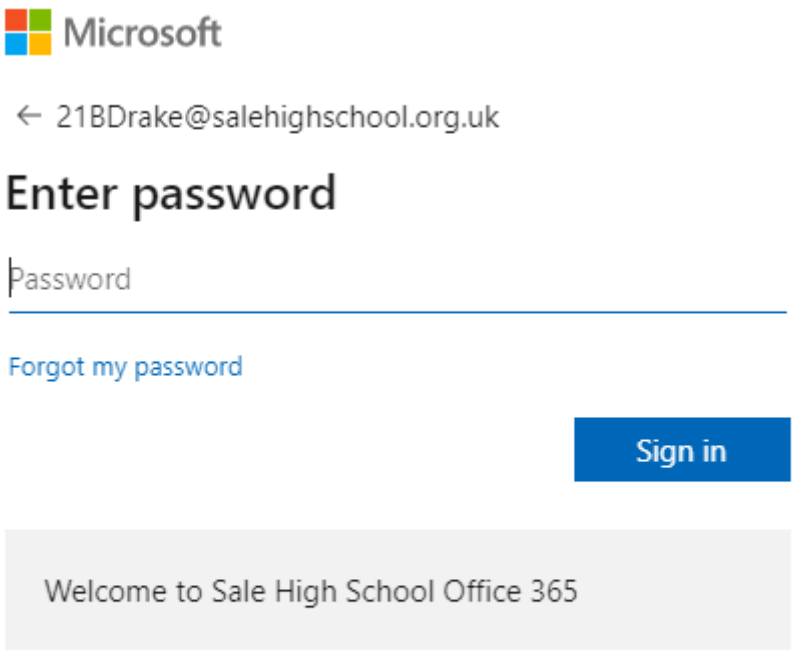
Year Started	School Year
23	7
22	8
21	9
20	10
19	11

Follow this with your first initial, second name, and the school domain address (@salehighschool.org.uk)

e.g: 21BDrake@salehighschool.org.uk

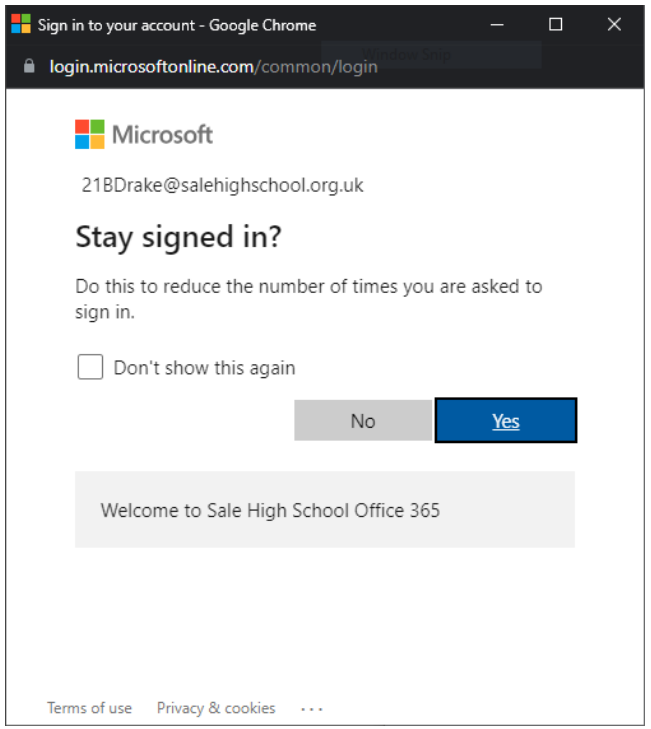
Satchel:one log in guide

3. Enter your password.
This is a six digit number.
(Your teachers can give you)



4. Finally, Office 365 asks about signing in.

Yes can be pressed if your log in is from your phone or own computer.



Logging into Satchel:one in this way is the same on all devices:
PC, Laptop, Tablet, iPad, and Phone.

PLEASE BE PATENT!
If you are on a mobile device (phone or tablet) Satchel often ‘snaps’ back to the original log in screen.
Wait for a few seconds and the system will change to your logged in account.