



KNOWLEDGE ORGANISER

NAME & FORM

*YEAR 7
AUTUMN TERM*



Boy- key scenes we will be reading

Overview- 'Boy' is an autobiographical book by **Roald Dahl**. This book describes his life from birth until leaving school, focusing on living conditions in Britain in the 1920s and 1930s, the public school system at the time, and how his childhood experiences led him to writing as a career.

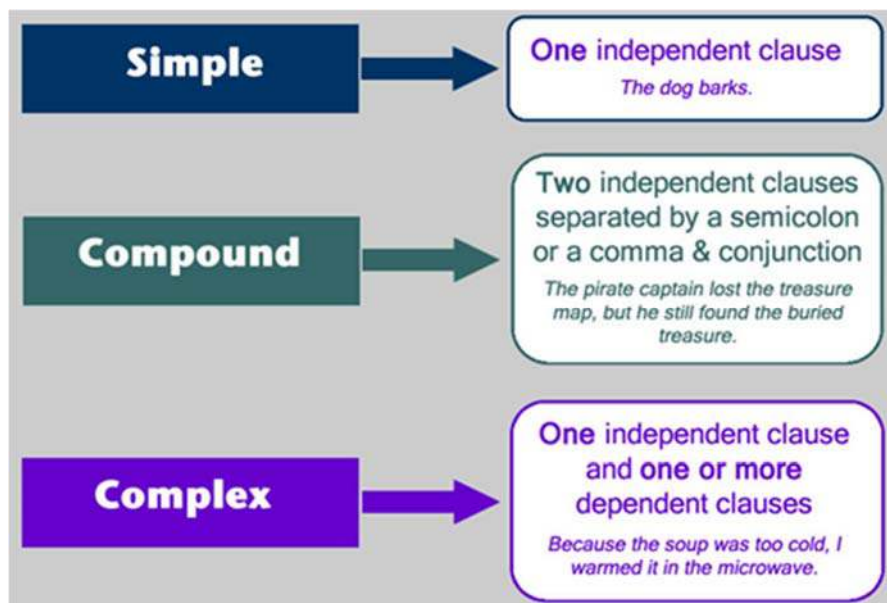
- We are firstly introduced to Dahl's arrival at his new boarding school in Weston-Super-Mare.
- Dahl then introduces us to his most feared teacher, Captain Hardcastle.
- Dahl continues to tell us some stories about Captain Hardcastle and how strict he is. He recaps the story about when the nib of his pen broke.
- Dahl also tells us about his parents. His father moved from Norway to France where he made his fortune. He met his first wife there who bore him two children, but she sadly died after. When taking a trip to Norway, Dahl met his second wife who bore him four children, including Dahl himself. At this point they were living in Wales. Dahl explains how his father was a tremendous diary writer and was one of the many inspirations for him becoming a writer.
- Dahl also tells us about a sweet shop he used to visit with his friends in Wales and about the awful owner, Mrs Pratchett who was a dirty woman and almost put them off eating any of the sweets.
- Dahl then tells us about the 'Daring Mouse Plot', where Dahl and his friends planned to place the dead mouse in the sweets at the sweet shop.
- Dahl and his friends indeed success, however they are later found out when Mrs Pratchett comes to the school and identifies the boys. They are punished by the cane in the headmaster's office.
- Dahl also tells us memories of the 'magic island' and how him and his family went out on boats fishing and exploring.
- Dahl also discusses a bad memory with us from Norway, where he experienced a bad trip to the doctors.

What do we need to include in a successful paragraph?

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

Match up task- this help you with important techniques and word classes that you will need to remember.

Adjective		Normally referred to as a 'doing word', for example walk, read or sing.
Simile		When two or more words that are next to each other in a sentence begin with the same letter, for example the cautious cat crept carefully.
Noun		A word that describes <i>how</i> something happens or occurs, for example yesterday, quickly and silently.
Verb		A term used to describe a sentence that makes full and complete sense on its own.
Alliteration		A punctuation mark, usually used to separate two parts of a sentence, to indicate a pause.
Metaphor		A part of a sentence that doesn't make sense on its own and relies on the main clause to make sense.
Adverb		A word that indicates a place, person or thing, for example car, Rome or Mrs O'Grady.
Main Clause		A word used to describe something, for example tall, orange or old.
Subordinate Clause		A comparison between two things for effect, by saying that one thing <i>is</i> something else. For example, the man was a mountain.
Semi-Colon		A comparison between two things using the words 'like' or 'as', for example the man was as big as a mountain.



What could I write about in my autobiography?

- ✓ Your primary school?
- ✓ Your hobbies and interests?
- ✓ Any memories that were important to you?
- ✓ Family and friends?
- ✓ Home life?
- ✓ Pets?
- ✓ Ambitions for the future?
- ✓ Any interesting holidays you have ever been on?
- ✓ Any talents or skills?

Adverbs to use in your writing...

Look below at a variety of different adverbs you could use.

-Quickly –Gingerly –Speedily –Suddenly –Fierciously -Angrily -Passionately -
Tenderly -Hurriedly -Jokingly -worriedly –Clumsily

Can you add four of your own?

Key Vocabulary:

Add in anymore in the lines available

Synonyms- _____

Adjective- _____

Adverb- _____

Simile- _____

Hyperbole- _____

_____ - _____

_____ - _____

PEA Sentence Structures:

POINT:

In the extract, one way the writer 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...

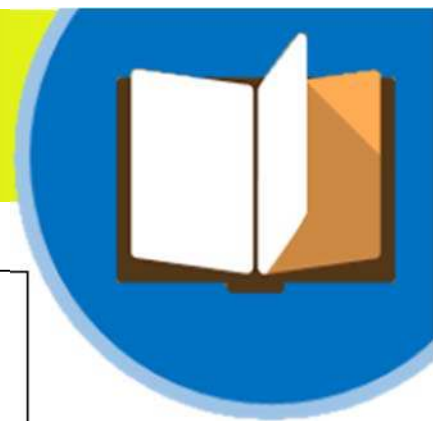
As a reader I understand...

WORD BANK:

Use this word bank as a space for you to add the different synonyms that we explore in the lessons.



English Knowledge Organiser



The Lion, the Witch and the Wardrobe

Overview- This is the first story of Narnia written by C.S. Lewis, and it tells the story of how the four Pevensie siblings, with the help of Aslan, the Great Lion, help defeat the White Witch who holds Narnia.

- The Pevensie children are sent out of London during the war to an old country house. Here, they stumble through a wardrobe to the magical land of Narnia, where animals talk and magic exists.
- The first of the children to make their way into Narnia is Lucy, the youngest. There she meets Mr Tumnus, the faun who confesses to her that he is an agent of the White Witch and he is supposed to capture any humans he meets. He explains that the Witch has held Narnia under an enchantment, making it always winter and never Christmas. The only way the Witch can be defeated is to have four humans sit on the throne at the castle of Cair Paravel.
- When Lucy returns home, her siblings think she is lying, but soon Edmund follows Lucy into the world and meets the White Witch who plies him with Turkish Delight, extracting a promise from him that he will bring his siblings to her.
- Finally, all of the children go through the Wardrobe into Narnia. There they go on a journey to rescue Tumnus, who has been arrested, find Aslan the Great Lion and defeat the White Witch forever.
- Aslan the Great Lion is a Christ figure who sacrifices his life to save Edmund's. During the journey to find Aslan, Edmund betrays his siblings and goes to join the White Witch, becoming her prisoner. After his rescue, the Witch approaches Aslan claiming the right to Edmund's life because of his traitorous act. Aslan later goes willingly to the Witch in Edmund's place, letting her kill him.
- Aslan is shorn of his mane, tied up and killed. As Lucy and Susan despair, he suddenly appears to them alive again and leads them to the aid of Peter's army, defeating the Witch forever.
- The children spend years in Narnia, where they grow up to be Kings and Queens, having many adventures until one day they are hunting in the woods and find their way back to their own world through the Wardrobe. There they are children again and find that no time at all has passed.

AUT 2





The Lion, the Witch and the Wardrobe

Character Match-up: match up each character to the correct description

Aslan		The evil queen of Narnia who places a spell on the land so that it is winter and never Christmas.
The White Witch		Spiteful and mean, and likes to tease his sister, Lucy. Joins forces with the White Witch, but eventually sees the error of his ways and returns to the good side.
Peter Pevensie		Tumnus's friend, and he aids the Pevensie children in the search for the petrified faun.
Susan Pevensie		The youngest Pevensie is cheerful, kind, and brave. This curious, happy-go-lucky girl is the first of the children to venture into Narnia.
Tumnus		A wolf and the chief of the Witch's Secret Police.
Lucy Pevensie		Mr. Beaver's wife, who is kindly, good-natured, motherly, and a good cook.
Professor Kirke		The second oldest of the Pevensie children, who is sweet, kind, and perhaps a little bland.
Mrs. Beaver		The oldest of the Pevensie children, who is noble and courageous.
Maugrim		A slightly eccentric, elderly professor.
Mr. Beaver		A faun who Lucy meets on her first excursion into Narnia. He initially intends to kidnap her and bring her to the White Witch. However, he does not go through with it, and he spares her life.

What do we need to include in a successful paragraph?

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

Simile	Metaphor
<p>Compares two different things.</p> <p>Something is like or as something else.</p>  <p>For example:</p> <ul style="list-style-type: none"> • He was as quiet as a mouse. • She swam like a fish. 	<p>Compares two different things.</p> <p>Something is something else.</p>  <p>For example:</p> <ul style="list-style-type: none"> • Ali is a walking dictionary. • Time is money. 

✓ **Context**

Many aspects of Lewis's life factored into the writing of *The Lion, the Witch and the Wardrobe*. As a child, Lewis loved imaginative stories populated by knights and human-like animals. Lewis also developed a deep love of mythology. His studies of literature and classics helped steer Lewis toward university studies in those disciplines. In his 30s, Lewis converted to Christianity. In this novel, Lewis tells the story of Christ's sacrifice on the cross symbolically. Finally, Lewis sheltered children evacuated from London during World War II, which gave him the idea to set his story at this time.

Fun Facts!

The name 'Narnia' comes from a tiny, ancient town in Italy.

J.K Rowling has cited LWW as a major inspiration for her *Harry Potter* series.

Aslan means 'lion' in Turkish.

Key Vocabulary:
Add in anymore in the lines available

Synonyms- _____

Adjective- _____

Metaphor- _____

Simile- _____

Hyperbole- _____

Onomatopoeia- _____

PEA Sentence Structures:

POINT:

In the extract, one way the writer displays _____ is...

EXAMPLE:

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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...

WORD BANK:

Use this word bank as a space for you to add the different word classes that we explore in the lessons.



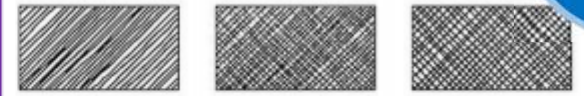
Key Words

Formal Elements	The parts used to make a piece of artwork.
Line	Line is the path left by a moving point. For example, a pencil or a brush dipped in paint. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. It could be just an outline or it could be shaded in. Shapes can be geometric or irregular .
Form	Form is a three dimensional shape , such as a cube, sphere or cone. Sculpture and 3D design are about creating forms.
Tone	This refers to the lightness or darkness of something. This could be a shade or how dark or light a colour appears. Tones are created by the way light falls on a 3D object. The parts of the object on which the light is strongest are called highlights and the darker areas are called shadows .
Texture	This is to do with the surface quality of something, the way something feels or looks like it feels. There are two types of texture: Actual texture really exists, so you can feel it or touch it; Visual texture is created using marks to represent actual texture.
Pattern	A design that is created by repeating lines, shapes, tones or colours. The design used to create a pattern is often referred to as a motif . Motifs can be simple shapes or complex arrangements.
Colour	Red, yellow and blue are primary colours , which means they can't be mixed using any other colours. In theory, all other colours can be mixed from these three colours.

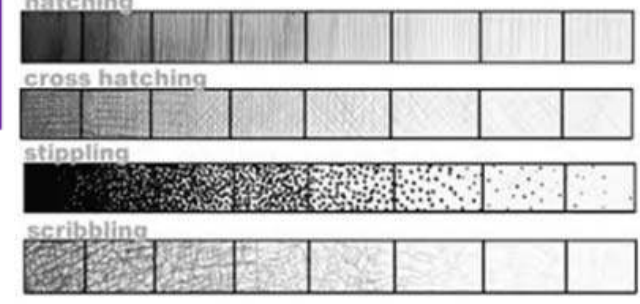
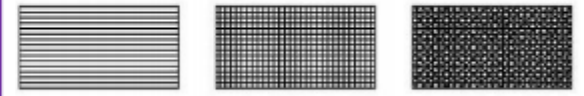
Hatching and Cross-Hatching

Hatching is a technique used to create depth, shade and texture in a drawing. It involves drawing closely spaced parallel lines. Cross-hatching involves drawing further parallel lines at a different angle. Has the effect of making the area look darker. The more lines you add, the darker the appearance.

Different effects can be created by experimenting with the thickness and spacing of the lines.



Hatching and Cross Hatching Examples



B. Colour Theory



This is called a **Colour Wheel**.

Primary	Secondary
red + yellow	=orange
red + blue	=purple
blue + yellow	=green

- **Tertiary colours** are created by mixing a primary colour and the secondary colour next to it on the colour wheel.
- Colours that are next to each other on the colour wheel are called **harmonious**.
- **Complementary colours** are colours that are **opposite** each other on the colour wheel. When complementary colours are used together they create **contrast**. Adding a colour's complimentary colour will usually make a darker shade. This is often preferable to adding black.
- Warm colours are colours on the red side of the wheel. These are red and include orange, yellow and browns.
- Cool colours are colours on the blue side of the wheel. These are blue and include green, purple and most greys.

Useful websites and videos:

- <https://www.bbc.co.uk/bitesize/guides/zc7sfrd/revision/2>
- <https://www.studentartguide.com/articles/realistic-observational-drawings>
- <https://www.youtube.com/watch?v=huD94n20iBY>
- <https://www.youtube.com/watch?v=DnPE4W3-V20&t=0s>
- <https://www.youtube.com/watch?v=Fo8Y3dQyHyk&t=0s>
- <https://www.youtube.com/watch?v=fGVdntklOMg>

Artists

Artist link- Stephen Wiltshire

He is a British architectural artist who draws detailed cityscapes. He draws lifelike urban scenes from memory.



His technique- Pen and ink to create detailed mark- making. **Mark- making** is using different effects like lines, dots, marks and textures

Mixed media-

Using a variety of different art mediums and techniques to create a single piece of art

Artist Ian Murphy creates mixed media textural drawings of buildings and details



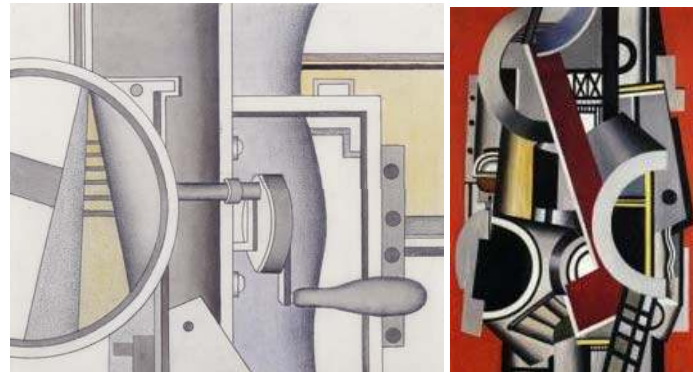
Nestor Ferronato

Argentinian painter Néstor Ferronato has worked in Italy since 1985. His work is influenced by the mechanisms of watches and clocks and he paints looping ribbons moving in and out of the watch parts. The ribbons symbolize the dynamism of the mechanical movement of a watch. His work includes a range of colours and curving parallel lines (what he calls ribbons).



Fernand Leger (1881—1955)

A French painter, sculptor, and filmmaker. His artwork was inspired by modern industrial technology and he was known for creating abstract images of machines. His work mostly included bold colours, geometric shapes, and bold lines.



Hundertwasser was born on 15th December 1928 in Vienna, Austria. His real name is Friedrich Stowasser. After World War 2, Hundertwasser studied for three months at the Academy of Fine Arts in Vienna. The first exhibition of his work was held in Vienna in 1952.

Hundertwasser has produced many different types of works of art (ranging from paintings, postage stamps, clothes, flags). His work often includes bright colours and natural, organic forms. He seldom uses straight lines, and uses lots of spirals.

He also became interested in architecture and he has designed many houses using irregular forms



Physical Skills and Techniques



Body Language

Body language is communication by movement or position, particularly facial expressions and gestures.

Facial Expressions

A facial expression conveys an emotion that tells us about the character and the way they react to the situation



Gesture

A movement of part of a hand or the arm, to express an idea or meaning.

Tableau

In a tableau, participants make still images with their bodies to represent a scene



Levels

The use of different heights e.g. stood up or sat down to show how powerful a character is.

Proxemics

The distance between character/actors and what that means about their relationship/feelings/situation.



THE THREE C's OF DRAMA

Concentration
Cooperation
Communication

AUDIENCE

The people who watch a performance.



PERFORMANCE

A piece that is presented to an audience.



YEAR 7

INTRODUCTION TO DRAMA SKILLS
KNOWLEDGE ORGANISER



Mime

Success criteria for using this technique:

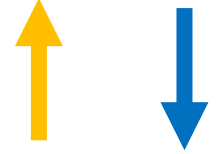
Exaggerated movement

Remember to show the weight and size of the object

Vocal Skills

Pitch

High or low



Volume

Loud or quiet

Pace

Slow or fast



Tone

The emotion in the voice

3 EXAMPLES OF VOCAL TONE:

Angry, happy, shocked

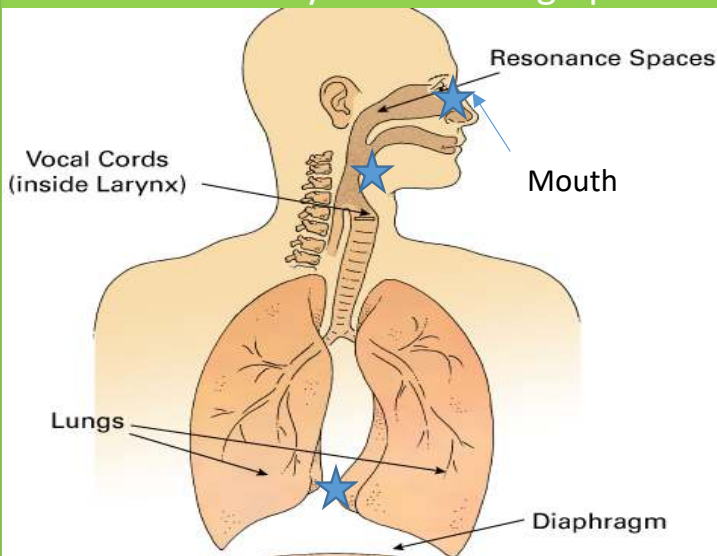
STAGE POSITIONING

Upstage right	Upstage Centre	Upstage left
Stage right	Centre stage	Stage left
Downstage right	Downstage centre	Downstage left

Audience



The Anatomy and warming up



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

Larynx	Vocal chords	Enunciation	Vocal range
Intonation	Pitch	Major	Minor
Voice Projection	Dynamics	Crescendo	Diminuendo
			Diaphragm



SINGING SKILLS

Year 7 Autumn Term

Stage Presence:

When performing a piece of music to an audience it is very important you sound good and present yourself well. Besides knowing your words and singing in tune there are some basic elements you need to consider:

- ENUNCIATE your words clearly
- PROJECT your voice by engaging your diaphragm
- Face the AUDIENCE
- ENGAGE with the music – look like you are enjoying e.g. SMILE if it is a happy piece
- WATCH the conductor/ group leader
- Don't fidget
- Stand up straight – GOOD POSTURE gives the impression of confidence

DYNAMIC MARKINGS

Term	Symbol:	Effect:
pianissimo	<i>pp</i>	very soft
piano	<i>p</i>	soft
mezzo piano	<i>mp</i>	moderately soft
mezzo forte	<i>mf</i>	slightly loud
forte	<i>f</i>	loud
fortissimo	<i>ff</i>	very loud
fortepiano	<i>fp</i>	loud then soft
sforzando	<i>sfz</i>	sudden accent
crescendo	\llcorner	gradually louder
diminuendo	\lrcorner	gradually softer

How to warm up the three areas

Mouth:

- Tongue twister
- Chew the toffee
- 'My Mum'
- Mouth stretches 'AEIOU'

Vocal cords/ Larynx:

- Rollercoaster
- Humming/ Singing exercises

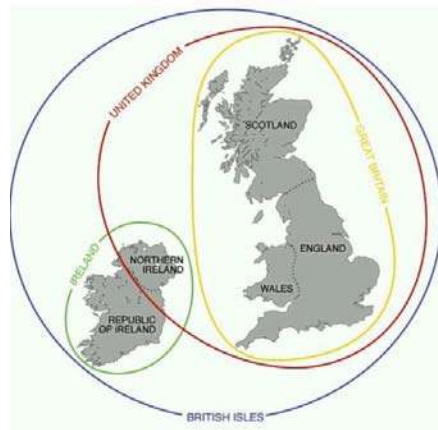
Diaphragm and Lungs:

- Controlled breathing exercises/square breathing

KEY WORDS AND MEANINGS:

Vocal Range	The range of pitches that each individual human voice can reach.
Intonation	The variation in the pitch level of the voice (the ups and downs), but in such languages as English, stress and rhythm are also involved. Intonation conveys differences of expressive meaning (e.g., surprise, anger, wariness).
Diaphragm	A thin muscle that sits at the base of the chest and separates the abdomen from the chest. It contracts when you inhale - which pulls air into the lungs. When you exhale, the diaphragm relaxes and the air is pushed out of lungs.
Larynx	Otherwise known as the voice box, it is an organ in the top of the neck involved in breathing, producing sound and protecting the trachea against food aspiration.
Voice Projection	The strength of speaking or singing whereby the voice is used powerfully and clearly.
Enunciation	The act of pronouncing words or parts of words clearly
Pitch	How high/low a note is
Major tonality	A 'happy' sounding collection of notes
Minor tonality	An 'unhappy' sounding collection of notes
Dynamics	Volume
Crescendo	Gradually getting louder
Diminuendo	Gradually getting quieter

Geography Knowledge Organiser



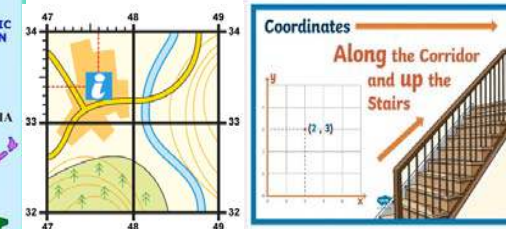
The UK includes the countries of Northern Ireland, Wales, England and Scotland. It is in the continent of Europe.



A continent is a large landmass that is split up into countries. There are seven continents.
These are: North America, South America, Europe, Africa, Asia, Oceania and Antarctica.



When reading grid references always read the bottom left corner



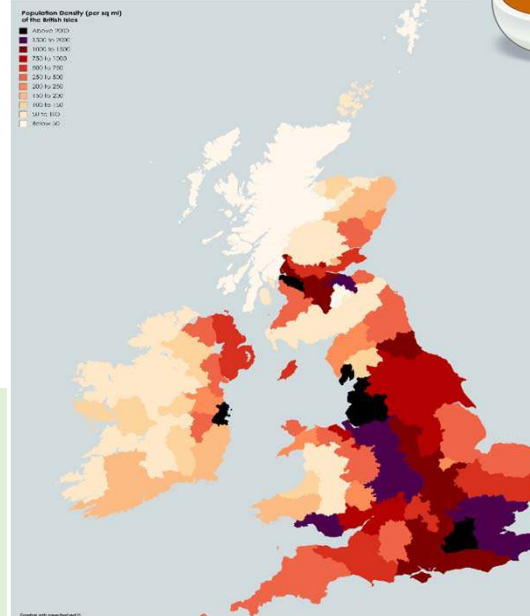
Densely populated areas have a lot of people per unit area. They are very busy and crowded.



Sparsely populated areas do not have many people per unit area. They are very empty and quiet.

Population is all people living within a particular place.
In geography, when we refer to population, we simply mean people.

Choropleth map to show the population densities in different locations



Remember **TEA!**

Trend: There is an uneven population distribution across the UK with most areas having 150-750 people per square mile.

Evidence: For example, the North East of England has a population density of 250-500 people per square mile and South West England has a population density of 200-250 people per square mile.

Anomaly: There are some areas which have extreme population densities such as the Scottish Highlands in Northern Scotland with densities of less than 50 people per square mile. In addition to this, London in the South East of England has population densities of over 2000 people per square mile.



The UK's population distribution is uneven because...

Upland areas such as the Scottish highlands have harsher climates than lowland areas.

Cities including London and Manchester often have better transport links.

Bigger cities tend to have better employment opportunities compared to more remote regions.

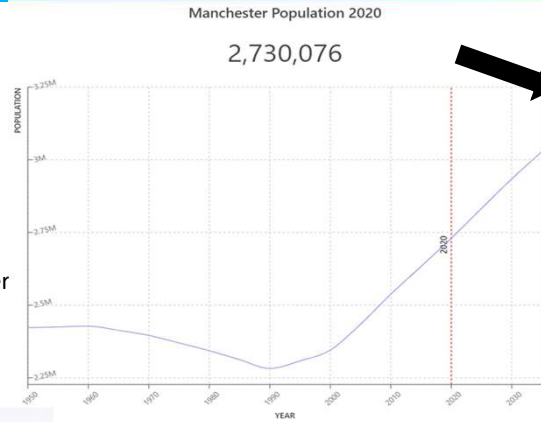
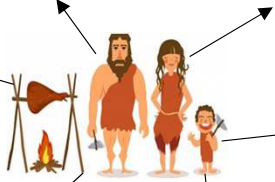
Some regions have steep slopes, making it hard to build a settlement.

Geography Knowledge Organiser



What did early settlers look for in a site?

- A defensible site, e.g. a hilltop or river bend, to protect from attackers
- Good farm land with fertile soils, so people could grow crops
- Dry land, so that people could build on areas that don't flood
- Flat land, to make building easier and safer
- A local water supply for drinking, washing, cooking and transport
- Local raw materials, e.g. wood and stone, to build homes



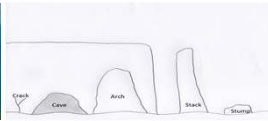
Describing and explaining Manchester's population:

Between **1950** and **1960**, the population stays the same at around **2.425 million**. From **1960** to **1990**, the population decreases from around **2.425 million** to **2.30 million**. This is because people lost their jobs and so moved out of Manchester as mills began to close. From **1990**, the population of Manchester has increased as people moved into Manchester for work and a better quality of life. In **2020**, the population of Manchester was around **2.725 million**. People from all different counties have migrated to Manchester. This has resulted in Manchester being a multicultural city.



How did Old Harry form?

1. Cracks occur in headlands



Migration is the movement from one area to another. Push factors, such as high crime rate can make someone want to leave an area and pull factors, such as more jobs available, can make someone want to move into an area.

2. Abrasion and hydraulic action erode the crack to form a cave



3. The sea cuts through the cave to form an arch



4. The roof of the arch eventually collapses, forming a stack



5. Overtime, the stack is eroded, and a stump forms



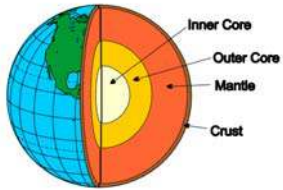
- = Rivers
- = Higher relief areas
- = Settlements
- = Lakes

Storm Name	Storm Desmond, Cumbria
Storm Date	December 2015
Causes of flooding	<ul style="list-style-type: none"> The soil in Cumbria was already saturated due to previous rainfall Water levels upstream of Botcherby bridge were high due to the bridge being an obstacle for the river flow High rainfall levels caused higher river flow
Economic effects	<ul style="list-style-type: none"> Many businesses and shops suffered damaged stock included a toy shop which missed out on Christmas sales The total cost of damage was £500 million across Cumbria
Social effects	<ul style="list-style-type: none"> One person died 5200 people were effected 40 schools in Cumbria were forced to close
Environmental effect	<ul style="list-style-type: none"> Landslides were reported Vegetation was flooded causing habitat loss

Geography Knowledge Organiser



Structure of the Earth:



The Andes is a range of young **fold mountains** formed some 65 million years ago. It is the longest range of fold mountains in the World at 7000 km and extends the length of **South America**. The Andes are about 300km in width and have an average height of 4000 km.



South America is a continent South West of the UK



People use The Andes for:

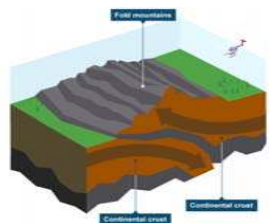
- Tourism
- Mining
- Farming

But there are opportunities and challenges for each of these activities



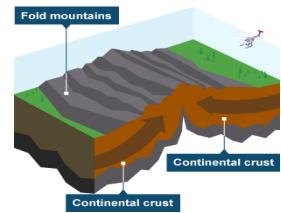
Destructive Plate Boundary:

Destructive plate boundaries form when there is an oceanic plate and a continental plate moving towards each other. Because the oceanic plate is more dense, it subducts (sinks) beneath the continental plate. As this happens, fold mountains form. The Andes were formed at a destructive plate boundary.






Collision Plate Boundary:

Collision plate boundaries form when two continental plates collide. Neither plate is forced under the other, and so both are forced up and form fold mountains.



An **opportunity** is something positive which can occur. It is an advantage.

A **challenge** is something negative which can occur. It is a disadvantage.

Andes Activity	😊 Opportunity	☹️ Challenge
Tourism 	Tourism provides a <u>high number of jobs</u> which allow people to <u>earn an income</u> and <u>improve their quality of life</u>	High numbers of tourists in an area can <u>cause soil erosion</u> and increase the <u>amount of litter</u> in an area.
Mining 	There are a large number of <u>jobs</u> at the <u>Yanacocha mines</u> . The <u>gold</u> from the mines is sold worldwide and supports the economy	<u>Contamination of water supplies</u> due to cyanide from the use of dynamite. This can lead to <u>deaths of local people</u>
Farming 	<u>Terracing can help to overcome the challenge of steep slopes</u> , where steps are built into the landscape. Farmer can <u>sell the crops they grow</u> for money	The slopes are <u>very steep</u> and can result in <u>the soil at higher altitudes being thin</u> which is not suitable for growing crops.

Geography Knowledge Organiser

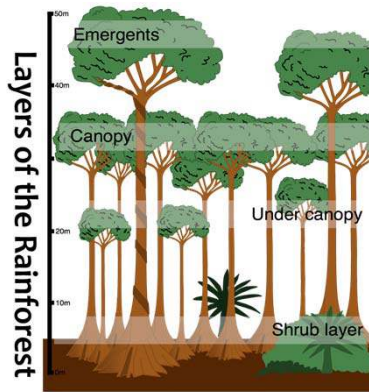


Tropical rainforests are split into different layers; shrub layer, under canopy, canopy and emergent layer. Different layers receive different amounts of sunlight.

The shrub layer is the bottom layer and receives the least sunlight.

The emergent layer is the top layer and receives the most sunlight.

Those plants which receive less sunlight grow slowly and those that receive more, grow quickly



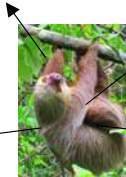
Why is the Tropical Rainforest important?

Use of the TRF	Specific example
Food	Chocolate / Chewing gum
Houseplants	Cheese plant
Medicine	Rosy periwinkle which treats Leukaemia

How are sloths adapted to the Tropical Rainforest?

Brown fur to camouflage with the branches and protect from predators.

Algae can grow on fur to help with camouflage.

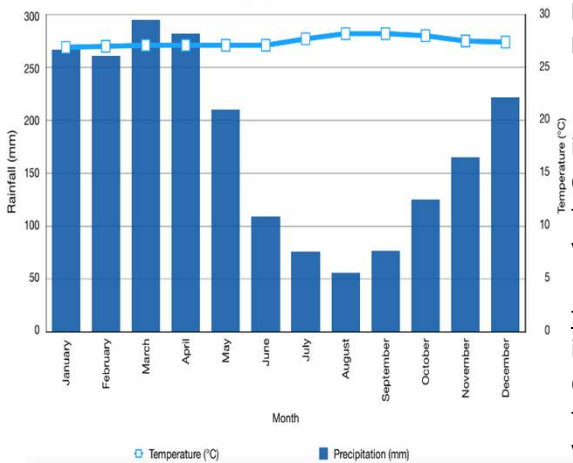


Long arms to swing between branches

Curved claws to grip onto branches

Climate: The average weather conditions over a period of 30 years.

A climate graph for Manaus, Brazil



Line = Temperature
Bars = Precipitation

Brazil's temperature is stable (it does not change much throughout the year)
Brazil's precipitation fluctuates (it increases and decreases throughout the year).

Did the Rio Olympics help Brazil?

I was one of 45,000 volunteers at the Olympics. It was amazing seeing people from all different backgrounds being brought together.



I was one of 77,000 Brazilians who had been forcibly removed from their homes in the favelas to make space for stadiums and roads.



The Rio Olympics have really helped us as a country to leave a lasting legacy. As the mayor of Rio, I am so proud of what our country has achieved.



Palm oil is an edible vegetable oil that is in very high demand and is used of loads of different products. Should we use the Amazon to grow palm oil?



Reasons for growing palm oil in the Amazon

Palm Oil is in high demand so lots of countries will need to buy it, helping Brazil to earn money and therefore increase their economy.

Palm oil plantations provide farming jobs for local people. Therefore, people can earn money and improve their quality of life as they can spend money on food, health care and education for their children.

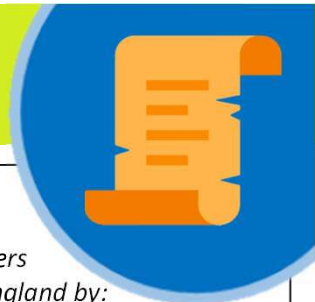
Reasons against growing palm oil in the Amazon

A lot of forest is deforested to make space for plantations which can destroy the habitats for fauna (animals).

Palm oil plantations can interfere with the way of life of local people. For example, local tribe members who rely on hunting rainforest animals for food, may see a decrease in their food supply because of deforestation.



History Knowledge Organiser



Topic 1: Migration Pre-1066

Why did people move to England:

People came to England for multiple reasons.

Pull Factors are positive things to bring people to an area, such as:

- **Resources** – Such as Iron, Zinc and Copper were found in England
- **Farmland** – English soil was incredibly fertile
- **Climate** – England has a good yearly climate for crop-growing

Push Factors are negative things that make people want to move away from an area, such as:

- **Flooding** – Much of the Anglo-Saxon land was prone to flooding.
- **War** – Many Romans were simply told to come to England during the expansion of the Roman Empire.



What were the three groups that settled in England before 1066?

Romans



AD 43 – 410

Anglo-Saxons



AD 459 – 1066

Vikings



AD 793 - 954

Pre-1066 Timeline:

43 AD - Romans invade and Rule England

50 AD - The town of Londinium is Built

410 AD – The Roman Empire abandons England

459 AD – The Anglo-Saxons Invade and rule England

490 AD – The Anglo-Saxons divide England into Seven Kingdoms

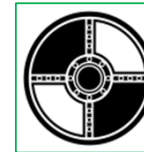
789 AD – The first Viking attack on England

793 AD – The Vikings attack Lindisfarne in 793

829 AD – England stops being seven kingdoms

865 AD – The Vikings invade with a large army

886 AD – England is ruled by both the Vikings and the Anglo-Saxons



How did the Romans Change England?

The Romans were master builders and statesmen who changed England by:

- Introducing running water to major towns and cities in England
- Building paved roads to and from major cities
- Providing a written language to the people of England
- Christian worship was introduced with the Romans

How did the Anglo-Saxons change England?

The Anglo-Saxons were warring tribes from Northern Europe, they changed England by:

- Using wood to construct houses and cities quickly and efficiently
- The Anglo-Saxons expanded upon Roman churches and built them bigger. These were called Monasteries.
- The English Language began to form with the Anglo-Saxons

How did the Vikings change England?

Vikings were raiders and traders from Scandinavia. They changed England by:

- Raiding and pillaging the Monasteries and taking loot back to Scandinavia
- Introducing the Danelaw in England.
- Further developing the English language.

History Key words:

Chronology - Putting dates and events in the correct order of earliest to latest

Migrate – To move to another place or country

History Knowledge Organiser



Topic 2: The Norman Conquest

Who claimed the throne in 1066?

In 1066, England was ruled by an Anglo-Saxon king called Edward the Confessor. By 1066, he was old and dying and did not have any heirs who would succeed him. When he died, there were several contenders to the throne:

Harold Godwinson – Anglo-Saxon

Harold Godwinson was the son of a powerful Earl. He was Edward's brother in law and was recognised as being one of the most powerful men in England at the time. Many in England, such as the Witan, expected Harold to succeed Edward as he had political and military support.

William, Duke of Normandy – Norman

William was a powerful Duke in Normandy France. He was the cousin of Edward the Confessor and was very close to the King. It was claimed that in 1051 that William was promised the throne by Edward! William was a fearsome ruler and had a brilliant army to match his skill. It is also reported that in 1064, Harold Godwinson swore to William that he would be the next King of England.

Harald Hardrada – Viking

Harald was King of Norway and was a fearsome Viking warrior who fought all over Europe. Harald's father, Magnus, had been promised the Kingdom of England by Harthacnut, who was the Viking King of England in 1040. However, the throne passed to Edward instead! Harald believed it was his right to claim the throne as it should have been his fathers before him.

What were the Battles of 1066?

1066 was a monumental year for English history. Three strong contenders to the throne would fight for the right to rule the English. There were two major conflicts of 1066:

The Battle of Stamford Bridge – 25th September 1066

Harold Godwinson had crowned himself King of England on the 6th of January 1066. He was worried about an invasion from William in the South and so had stationed all his men to defend the coast. However, Harald Hardrada had launched an invasion in the North, defeating the **Anglo-Saxons** earlier on the 20th of September. Hearing this, Godwinson hastily recruited his troops and marched 185 miles in 4 days to meet the **Viking** invaders in battle! The **Vikings** were taken completely by surprise, Hardrada's troops had been celebrating and had even left their armour on their ships! During the battle, Hardrada was killed by and arrow to the throat and the **Viking** army was defeated.

The Battle of Hastings – 14th October 1066

Duke William had been waiting for the wind to allow him to sail across the English Channel and invade England. He had been ready since August but the wind refused to change. However, in late September William was able to cross the channel, 700 ships carried 7000 **Norman** warriors ready to claim the throne for William. Harold Godwinson had to march his men all the way from Stamford Bridge, in the north of England, back down south to Hastings! Godwinson established a strong defence on top of a hill and ordered his men to form a shield wall. William had brought Infantry, Archers and, perhaps most importantly, Cavalry, men mounted on horses.

The Battle of Hastings – 14th October 1066

The armies of Godwinson and William were equal in number, and Godwinson was able to keep a strong defensive line, withstanding barrages of arrows from the **Norman** archers. The shield wall proved too strong for the **Norman** Infantry and Cavalry, and as the battle raged on it appeared the **Anglo-Saxons** would be able to hold on and win! A rumour began to circle during the battle that William had died. Upon hearing this, William took off his helmet, showed his face to his men and rallied them for a final attack. Here, William deployed the Feigned Retreat tactic. His cavalry stormed up the hill to the Shield Wall and pretended to run away. The **Anglo-Saxons**, thinking they had won, charged down the hill only to be surrounded by the much faster cavalry! The shield wall had broken down! Soon the **Normans** were pushing through and, following a final hail of arrows, Godwinson was struck in the eye and died. The **Normans** had defeated the **Anglo-Saxons**.



History Key Words:

Earl – A powerful land owner

Witan - The Kings Council

Heir – The next to be King or Queen

Cavalry – Soldiers on Horses

Shield Wall – A strong defence where shields are locked together

History Knowledge Organiser

Topic 2: The Norman Conquest

Why did William win the Battle of Hastings?

There are several reasons William won the Battle of Hastings, including:

William's Strengths:



- *The Feigned Retreat* - William was able to break down the **Anglo-Saxon** shield wall by using his cavalry. The **Anglo-Saxons** could not counter the speed of this tactics.
- *Leadership* - William was a fantastic military leader. He prepared multiple loyal men and knew how to set them up. He even risked his life by proving he was not dead mid-battle, keeping his men fighting.
- *Troops* – The **Norman** army was made up of Infantry, Cavalry and Archers. These were well disciplined and may have even included Crossbowmen, who used deadly Crossbows to punch through shields.

Godwinson's Mistakes



- *Morale*– Before the Battle of Hastings, Godwinson's troops had to march 185 miles to fight again! This left them tired, hungry and with little enthusiasm for the upcoming battle.
- *Troops* – Most of Godwinson's experienced troops, the Housecarls, had died at Stamford Bridge. To face the **Normans**, he had poorly trained members of the Fyrd to defend with.
- *Death* – Although out of hit control, when Godwinson died, any hope of winning was lost. When his troops heard he had died, they quickly surrendered.

Luck



- *The Wind* – William had been waiting for the wind to change since August. He was lucky it changed so quickly after the **Anglo-Saxons** had fought the **Vikings**.
- *Near Death* – William's horse died during the Battle and he could have been crushed underneath it! He was uninjured and was able to mount another horse to resume the battle

How did William Control England?

- *The Harrying of the North* – In 1069, there was an **Anglo-Saxon** revolt against William the Conqueror in the North of England. William took his army and defeated the rebellion. After this, William ordered that every village in the North of England be burnt down and the Earth be "salted" – salt was thrown in the ground so that nothing could grow!
- *The Feudal System* – The Feudal system was a system of order in the Medieval period. It established a social order, with peasants at the bottom, then knights, then Earls and at the top, the King.
- *Domesday Book* – The Domesday Book was a record of all the people in England and what they owned. William used this to see how much tax he could raise and made him rich and made taxation more efficient.

How did the Anglo-Saxons Rebel?

- *Hereward the Wake* – One key character who rebelled against William was Hereward the Wake. Hereward had been from a wealthy family near Peterborough. He went abroad as a fierce soldier and came back late in 1066. His brother's estates had been taken away by the **Normans** and his brothers had been killed! He had a short temper and thought the **Normans** should pay for what they did! He organised for a Danish Army to raid into England. William raised his troops again and paid off the Danish. Hereward was held up in Ely, a monastery, with a small force. William ordered his troops across the marshland, where they sunk and drowned! William was able to find a way around the marshland by bribing some local monks. Once the **Norman** troops were inside the monastery, the rebellion was quickly put down. Hereward disappeared during the fighting but the **Normans**, and William, had effectively crushed any resistance to **Norman** Rule.

History Key words:

Crossbow – A powerful bow that fired bolts at high speed. Housecarls – Elite **Anglo-Saxons** soldiers Feudal System – Social Order of Medieval Europe Tax – How much money a person pays.

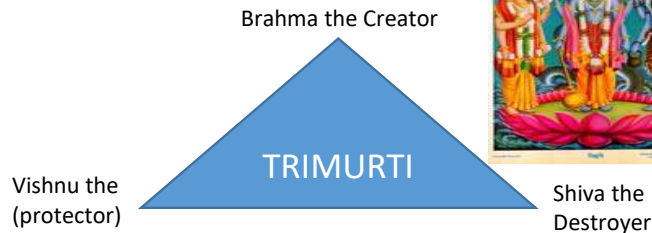


Religion and Ethics Knowledge Organiser



Hindu Belief in Gods- One God in many forms

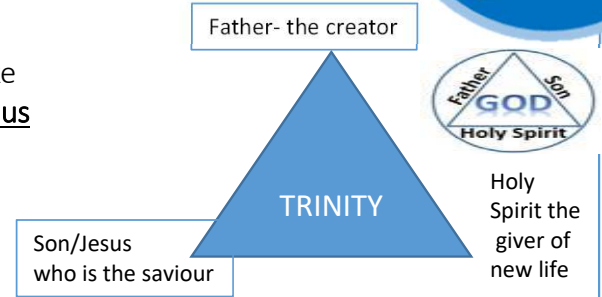
Hindus believe in one supreme God called **Brahman** who is too powerful to be worshipped as one. They therefore break God down into His many qualities or powers. The 3 most important forms of the one God are:



Christian belief in God:

Christians are **monotheists**, but believe their one God can take three forms that do different jobs. Christians believe that **Jesus** is the **human link** between people and God. He is God come to earth as a human to save humans.

Q: Compare Christian and Hindu beliefs about God.



YEAR 7 RE - What do different religions believe about God?

Muslim belief in God:

Muslims are **monotheists** who worship the same God as Christians and Jews but they call God **Allah**. They believe **Muhammad (pbuh)** is a messenger (prophet) of Allah. The first pillar of Islam, the **Shahadah**, teaches Muslims: **“There is no God but Allah and Muhammad is his messenger”**. Muslims use **99 names** for Allah to describe Allah’s qualities instead of having an image which is a sin or offensive to God.

Key terms:

Atheist- someone who does not believe in God
Agnostic- someone who is not sure if God exists
Theist- a believe in God
Monotheist- belief in one God



Sikh belief in God:

Sikhs are **monotheists**. The **Ik Ongkar** is a statement meaning **“One God”** and is sung in their prayer the **“Mul Mantar”**. This teaches Sikhs that God is a **“creator being”** and **“beyond death and birth”**. They show God is powerful through the 5 K’ symbols.

- Kesh** – long hair which is never cut as it is a gift from God
- Kangha** – a comb to be neat and tidy for God
- Kara** – a steel bracelet showing God’s strength & circle shape to symbolise God is eternal
- Kachha** – baggy trousers like Sikh soldiers would wear to symbolise fighting for justice
- Kirpan** – a blade to fight for truth and justice

Religion and Ethics Knowledge Organiser



Shiva- The Destroyer

Coiled Snake – 3 coils represent the past, present and future.

He is beating a drum which is the beat to the rhythm of life which he can destroy.

He is standing on a demon to show he can destroy evil



3rd eye represents knowledge of the world.

Fire to this shows he is able to destroy evil.

Tiger Skin – shows that he has great energy.

What does Hindu worship show about God?

Hindus **personify** the different powers that God has because they feel they can have a **more personal relationship with God**. They have images and statues of gods and goddesses which represent these powers. Each image of **the god will carry symbolic items** to show what their powers are.

The gods are treated like an honoured guest in their home where there will be a **shrine**. **Offerings**, which are gifts, are given to the images as a way of giving gifts and thanks and appreciation to God. These offerings include **candles, flowers and food**, called **prashad**.

Worship engages all of the senses with colourful images, music, incense, flames and chanting of prayers so that the whole person is involved in worshiping and they then feel more **connected to God**.

YEAR 7 RE - What do different religions believe about God?

What do Christians believe about Jesus?

1. Jesus is part of the **Trinity**
2. Jesus is **the incarnation** of God. This means he is God who decided to become human in form.
3. **Jesus is the saviour** - Jesus' role/job is to save people as he is a good example on how to behave
4. His birth story is called the **Nativity** and shows he is special to Christians because his mother was a virgin and angels were present at his birth.
5. **Jesus' baptism** signifies the start of his ministry as a teacher of God's message and the first time he is referenced as part of the Trinity. God speaks saying, **'this is my son, with whom I am pleased'**.





Maths Knowledge Organiser



FACTORS, MULTIPLES AND PRIMES

Key Concept

Factors:

Find these in pairs

12

1, 12

2, 6

3, 4

Multiples:

Start with the number itself

7 – 7, 14, 21, 28, ...

Key Words

Factor: The numbers which fit into a number exactly.

Multiple: The numbers in the times table.

Prime: Numbers which have only two factors which are 1 and itself.

Highest Common Factor: The highest factor which is common for both numbers.

Lowest Common Multiple: The smallest multiple which is common to both numbers.

Examples

Lowest Common Multiple (LCM)

Q - Find the LCM of 6 and 7:

6 – 6, 12, 18, 24, 30, 36, **42**, 48, 54, 60, ...

7 – 7, 14, 21, 28, 35, **42**, 49, 56, ...

LCM = 42

Highest Common Factor (HCF)

Q – Find the HCF of 18 and 24

18 – 1, 2, 3, **6**, 9, 18

24 – 1, 2, 3, 4, **6**, 8, 12, 24

HCF = 6

Tip

There is only one even prime number which is the number 2. This can be used to help solve lots of problems.

Year 7

Questions

- List the first 5 multiples of: a) 7 b) 12 c) 50
- List the factors of: a) 12 b) 15 c) 16
- a) Find the LCM of 5 and 7 b) Find the HCF of 20 and 16

ANSWERS: 1) a) 7, 14, 21, 28, 35 b) 12, 24, 36, 48, 60 c) 50, 100, 150, 200, 250
2) a) 1, 2, 3, 4, 6, 12 b) 1, 3, 5, 15 c) 1, 2, 4, 8, 16 3) a) 35 b) 4

Maths Knowledge Organiser

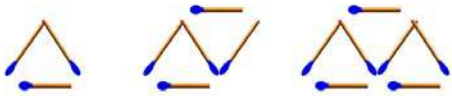
SEQUENCES



Key Concept

Types of Sequence

Sequence as pictures:



Linear sequence:

4, 7, 10, 13, 16, ...



Fibonacci sequence:

(add the previous two terms)

1, 1, 2, 3, 5, 8, ...

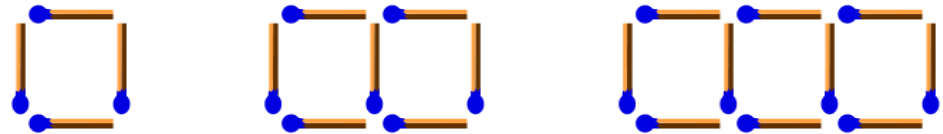
Key Words

Sequence: A list which is in a particular order following a pattern.

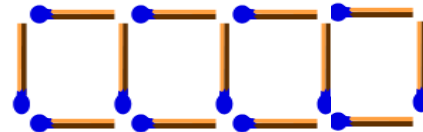
Term: Each particular part of a sequence.

Linear sequence: A sequence which is formed by adding or subtracting the same amount each time.

Examples



Next pattern is:



Sequence = 4, 7, 10, 13, ...

Term to term rule = + 3

Nth term

$$4, 7, 10, 13, 16, \dots = 3n + 1$$

Tip

If a sequence is decreasing, the 'n' term will be negative.
Eg, 15, 11, 7, 3, ...
nth term = $-4n + 19$

Questions

- Find the next two terms and the term to term rule
a) 9, 13, 17, 21, ... b) 7, 12, 17, 22, ... c) 9, 7, 5, 3, ... d) 3, 4, 7, 11, 18
- Find the nth term a) 7, 9, 11, 13, ... b) 8, 13, 18, 23, ...
c) 15, 12, 9, 6, ... d) 1, -3, -7, -11, ...

Year 7

ANSWERS: 1) a) 25, 29 Rule = +4 b) 27, 32, Rule = +5 c) 1, -1, Rule = -2 d) 29, 47, Rule = add previous 2 numbers 2) a) $2n + 5$ b) $5n + 3$ c) $-3n + 18$ d) $-4n + 5$

Maths Knowledge Organiser

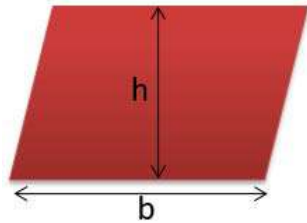
PERIMETER AND AREA



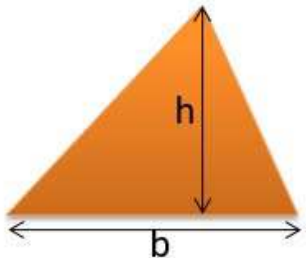
Key Concepts Area



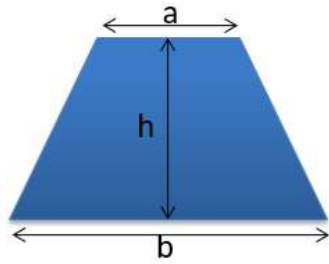
$$A = l \times w$$



$$A = b \times h$$



$$A = \frac{1}{2} (b \times h)$$



$$A = \frac{1}{2} (a + b)h$$

Key Words

Perimeter: The distance around the outside of the shape.

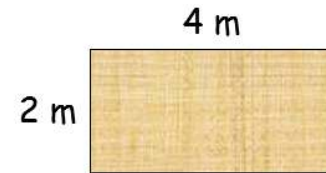
Area: The amount of square units that fit inside the shape.

Dimensions: The lengths which give the size of the shape.

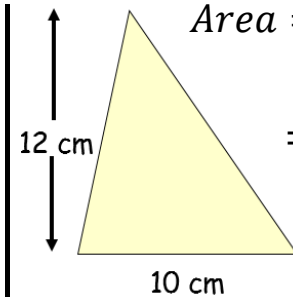
Shapes:

Rectangle, Triangle, Parallelogram, Trapezium, Kite.

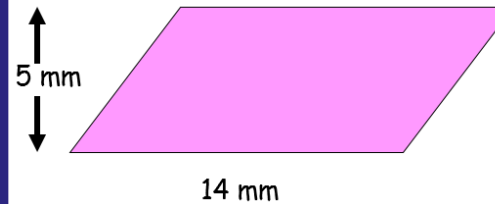
Examples



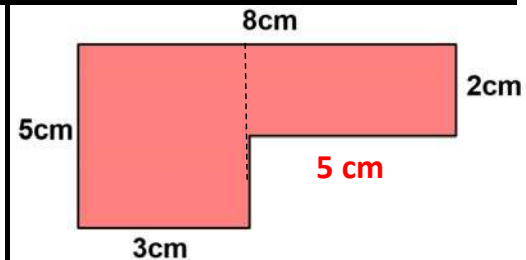
$$Area = 2 \times 4 = 8m^2$$



$$Area = \frac{1}{2} (10 \times 12) = 60cm^2$$



$$Area = 5 \times 14 = 70mm^2$$

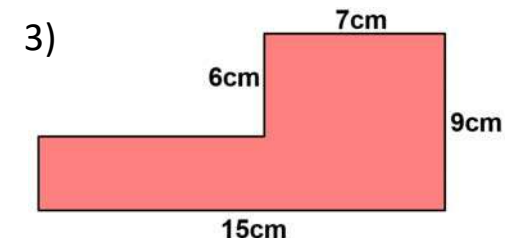
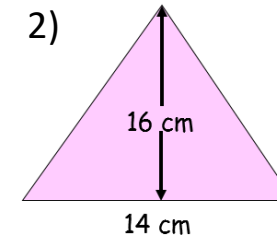
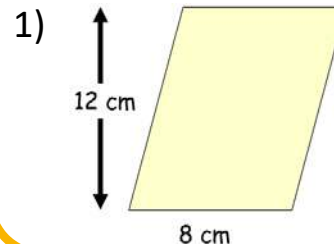


$$Area = (5 \times 3) + (2 \times 5) = 25cm^2$$

Year 7

Tip

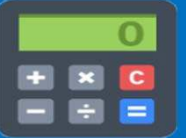
Always remember units. These units are squared for area. mm^2 , cm^2 , m^2 , etc



ANSWERS: 1) $96 cm^2$ 2) $112 cm^2$ 3) $87 cm^2$

Maths Knowledge Organiser

NEGATIVE NUMBERS

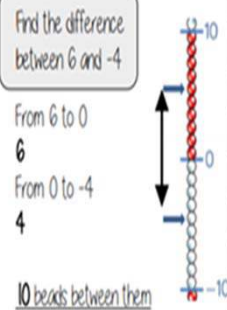


Key Concept

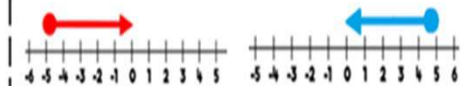


Perform calculations that cross zero

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



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



Key Words

Subtract: taking away one number from another.

Negative: a value less than zero.

Year 7

Tip

Use a number line to help you when adding and subtracting with negative numbers

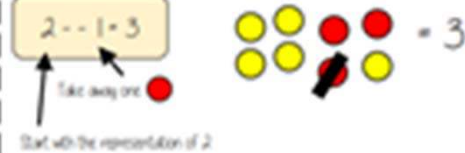
Add directed numbers



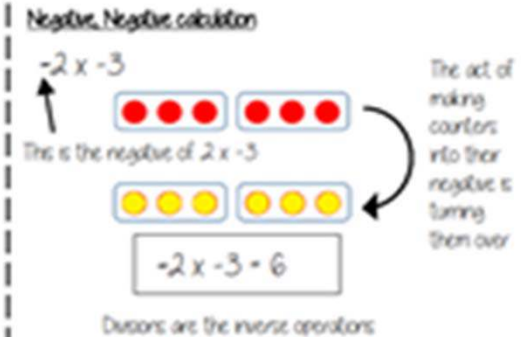
Partitioning



Subtract directed numbers



Multiply/Divide directed numbers



Examples

Questions

- 1) $3 - 7$ 2) $-5 - 6$ 3) $6 - -3$ 4) $-7 - -4$ 5) 5×-4 6) -9×-7 7) $-24 \div 8$

Maths Knowledge Organiser

Averages and Statistical Diagrams



Key Concept Pie Charts

There are 360 degrees in a pie chart. So you need angles that add to 360°.

Eye colour	F	
Blue	15	$\times 4 = 60$
Brown	43	$\times 4 = 172$
Other	32	$\times 4 = 128$

$$\frac{360}{90} = 4 \quad = 90 \quad = 360$$

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

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

Median = 11 (The middle number shown above)

Mode = 9 (This number occurs most often)

Measure of Spread

$$\text{Range} = 16 - 5 = 11$$

(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) Draw a pie chart to show the data.
 - b) Draw a bar chart to show the data.
 - c) Work out the mean of the data.

Age	Frequency
11	17
12	11
13	8

Year 7

ANSWERS: 1) a) Mean = 6, Mode = 6, Median = 4, Range = 5, Mean = 9 b) Mean = 6.5, Mode = 9, Median = 8, Range = 11 2) a) Angles 170°, 110°, 80° c) 11.75

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 $\frac{3}{24}$

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

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

$$- \quad \frac{3}{5} - \frac{2}{7}$$

Make the denominators the same

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

$$\begin{array}{l} \times 7 \\ \times 5 \end{array}$$

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

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

$$\begin{array}{l} \times 7 \\ \times 5 \end{array}$$

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

Tip

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

Year 7

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) $\frac{16}{45}$ b) $\frac{15}{8}$ 2) $\frac{13}{15}$ 3) $\frac{51}{80}$ 4) $\frac{17}{45}$

Maths Knowledge Organiser

ORDER OF OPERATIONS & ALGEBRAIC EXPRESSIONS



Key Concepts

B Brackets

I Indices

D Division

M Multiplication

A Addition

S Subtraction

If a calculation contains division and multiplication or addition and subtraction calculations work from left to right.

Year 7

Key Words

Operation: In maths these are the functions $\times \div + -$.
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) $f + 3g - 4f = 3g - 3f$

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) $5 \times 4 - 8 \div 2 = 16$

20 - 4 = 16

Questions

1) $7 - 10 \div 2$

2) $12 \div (7 - 3)$

3) **Simplify:**

a) $7p + 3q + p - 3q$

b) $5 + 4t + 3p - 2t + 7$

c) $m - 8g - 5m$

d) $b^2 - 7b^2 + 2b^2$

4) Find the value of $5m - 6$ when $m = 7$



MFL Knowledge Organiser

¡Bienvenidos! Listos 1 Mod 1 Aut 1



6 KEY Questions

1. ¿Cómo **TE llamas**? What' are you called?
2. ¿Cómo **SE llama**? What is he/she called?
3. ¿Cómo **estás**? [friendly] How are you?
4. ¿Cómo **está usted**? [formal]
5. ¿Qué tal? How are you?
6. ¿Cuántos años **tienes**? How old are you?
7. ¿Cuándo **es** tu cumpleaños? When is your birthday?
8. ¿Y tú? And you?

ME llamo I m called

SE llama He or she is called

Estoy I am

Tengo I HAVE + age

Tiene he/ she has

Es It is / is

Llamar-se

To call-oneself

Me llamo...

I am called ...

te llamas

You are called...

Se llama

He/She is called...

Nos llamamos

We al called

Os llamaís

You all are called

Se llaman

They are called

tener

To have

tengo ...

I have ...

tienes

You have ...

tiene ...

He/She has ...

Tenemos ...

We have ...

Teneis ...

You all have ...

Tienen ..

They have

¿Cuántos años **tienes**?

Tengo ... años.

I'm ... (years old).

Tiene ... años.

He/She is ... (years old).

¿Cuándo es **TU** cumpleaños? When is **your** birthday?



Mi cumpleaños es **EL ... DE...** My birthday is **THE... OF...**

Mi my

tu your

Su his/her/its/your(formal)

el primero (uno) de ...

the first of ...

¡Feliz cumpleaños!

Happy birthday!

GIVING AGES OF FAMILY MEMBERS

¿Cuántos años **tiene** tu padre? - How old is your father?

PLURAL

¿ Cuántos años **tienen** tus hermanas? - How old are your sisters?

Giving an answer!

Mi padre / madre **tiene** años - My father / mother is ... years old.

Mis hermanos / hermanas **tienen** ... yaños - My brothers / sisters & ... years old.

KO. Yr7 mod 1 ¡BIENVENIDOS!

TOPIC VOCABULARY TRANSLATED

LOS SALUDOS [GREETINGS]



¡Hola!	Hello!/ Hi!
¡Adiós!	Goodbye!
¡Hasta luego!	See you later!
Buenos días.	Good morning.
Buenas tardes.	Good afternoon.
Buenas noches.	Goodnight.
Fenomenal.	Great.
Bien.	Fine.
Regular.	So-so.
Mal.	Bad.
¡Fatal!	Terrible!

Los meses

enero
febrero
marzo
abril
mayo
junio
julio
agosto
septiembre
octubre
noviembre
diciembre



The months

January
February
March
April
May
June
July
August
September
October
November
December

MI FAMILIA

MY FAMILY

Un hermano	a brother
Un hermanastro	a step brother
Una hermana	a sister
Una hermanastra	a step sister
Dos hermanos	2 brothers
Un padre	a dad
Un padrastro	a step dad
Una madre	a mum
Una madrastra	a step mum
Mis padres	my parents
Un abuelo	a grandad
Una abuela	a grandmother
Un tío	an uncle
Una tía	an aunt
Un primo	a cousin (m)
Una prima	a cousin (f)
SOY hijo único	I AM only child(m)
SOY hijA única	I AM only child(f)



LOS NÚMEROS

NUMBERS

uno	1
dos	2
tres	3
cuatro	4
cinco	5
seis	6
siete	7
ocho	8
nueve	9
diez	10
once	11
doce	12
trece	13
catorce	14
quince	15
dieciséis	16
diecisiete	17
dieciocho	18
diecinueve	19
veinte	20
veintiuno	21
veintidós	22
veintitrés	23
veinticuatro	24
veinticinco	25
veintiséis	26
veintisiete	27
veintiocho	28
veintinueve	29
treinta	30
Treinta y uno	31

MFL Knowledge Organiser

AUT 2 ¡tu y yo!



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



Me llamo – I'm called
Se llama – is called
Se llaman – are called

Tengo ____ años – I'm ____ years old

Tiene ____ años – He/she is ____ years old

Tienen ____ años – He/she is ____ years old

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

No me gusta (nada)

Odio

detesto



Connectives

También

also

Pero

but

sin embargo

however

que

which

Donde

where

Porque

because

Complexity

Necesito – I need

Me hace falta / me hacen falta – I'm missing

Me gustaría tener – I would love to have



grande / s

big

pequeño/a /os/as

small

amarillo/a /os/as

yellow

atigrado/a /os/as

tabby

azul/ es

blue

blanco/a /os/as

white

dorado/a /os/as

gold

gris /es

grey

marrón/es

brown

negro/a /os/as

black

rojo/a /os/as

red

verde / s

green

atigrados/as

tabby

genial

great

fantástico/a /os/as

fantastic

aburrido/a /os/as

boring

divertido/a /os/as

fun(ny)

Un bolígrafo blanco

Una regla blanca

Unos libros blancos

Unas gomas blancas

Lápiz → lápices



KO. Yr7 mod 2 tu y yo

¿tienes animales en casa?



Sí tengo...	Yes, I have...
un caballo	a horse
un cobayo	a guinea pig
un conejo	a rabbit
un gato	a cat
un pájaro	a bird
un perro	a dog
un pez	a fish
un ratón	a mouse
una tortuga	a tortoise

dos gatos	two cats
dos pájaros	two birds
dos ratones	two mice

dos peces	two fishes
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Tiene ... años.	It is ... (years old).
No tengo un animal.	I haven't got a pet

¿De qué color es tu animal?	What colour is your pet?
Mi animal es ...+ colour	My pet is ... + colour

En mi mochilla

In my School bag



un bolígrafo	a biro
una carpeta	a file
un cuaderno	an exercise book
un diccionario	a dictionary
un estuche	a pencil case
una goma	a rubber
un lápiz	a pencil
los lápices	pencils
un libro	a textbook
una pluma	a fountain pen
una regla	a ruler
un sacapuntas	a pencil sharpener

A ah	B bay	C thay	CH chay	D day
E ay	F effay	G hay	H ahchay	I ee
J hota	K ka	L elay	LL el-yay	M emay
N enay	Ñ en-yay	O oh	P pay	Q koo
R eray	S essay	T tay	U oo	V oovay
W oovay	X aykis	Y ee-grey-ga	Z theytah	

SPANISH ALPHABET IN ENGLISH

TOPIC VOCABULARY TRANSLATED



¿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

¿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 ...



Science Knowledge Organiser



7A Cells, Tissues, Organs and Systems

1. Life Processes

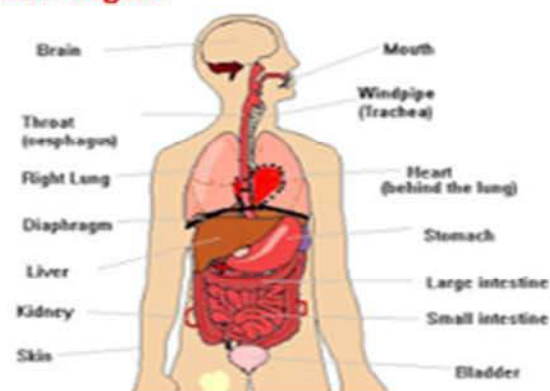
Life Processes	If something can do all 7 life processes it is considered a 'living thing' They are; movement, reproduction, sensitivity, growth, respiration, excretion and nutrition.
Organism	A living thing.
Movement	Being able to move from place to place or move part of themselves.
Reproduction	Being able to make more living things like themselves.
Sensitivity	Being able to sense and react to things around them.
Growth	Being able to increase in size.
Respiration	Being able to release energy through respiration.
Excretion	Being able to get rid of waste materials.
Nutrition	Taking in substances (such as food) to help carry out the other processes.

2. Organs

Organ	A part of animals or plants that does an important job- made up of different tissues.
Function	The job or role something has.
Brain	Controls the body.
Skin	The bodies biggest organ- used for protection and sensing things.
Lungs	Take in oxygen for respiration and excrete carbon dioxide.

Heart	Pumps blood around the body.
Liver	Makes and destroys substances.
Kidneys	Clean the blood and produce urine to excrete waste.
Bladder	Stores urine.
Stomach	Breaks up food.
Small Intestine	Breaks up food and absorbs it.
Large Intestine	Removes water from unwanted food.
Rectum	Stores faeces (waste material)

Human Organs



Leaf	Traps sunlight to make food for a plant.
Stem	Carries substances around a plant.
Root	Holds the plant in place and takes in water and other substances.
Photosynthesis	The process by which a plant makes its own food.

3. Tissues

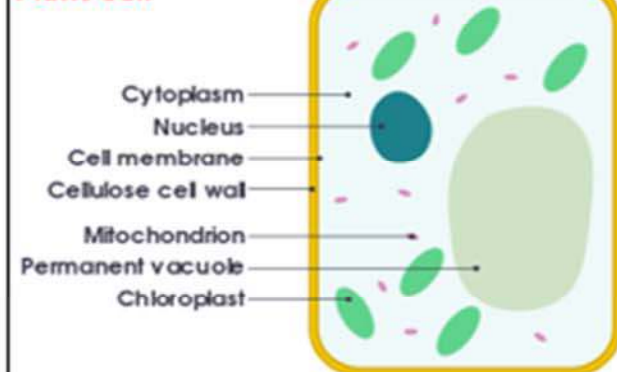
Tissues	Groups of the same cells doing the same job- make up organs.
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The Heart	Made up of muscle tissue so it can move and pump the blood as well as fat tissue to protect it.
Root Hair Tissue	Small hairs on the outside of roots which help to take in as much water as possible.
Xylem Tissue	The tissue which carries water up through plants from the roots.

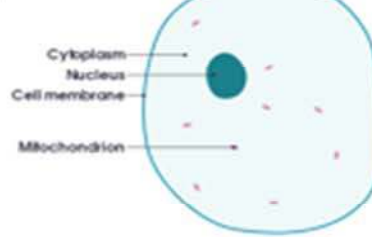
4. Cells

Cells	The basic units from which all tissues and living things are made from.
Specialised	When something has features that allow it to do a particular job.
Cell Surface Membrane	Controls what enters and leaves the cell.
Nucleus	Controls the cell.
Cytoplasm	Jelly like substance where chemical reactions happen.
Mitochondria	(mitochondrion- singular) Where respiration happens.
Chloroplasts	Make food for the plant using photosynthesis- contains chlorophyll.
Cell Wall	Strengthens and supports the cell- made of cellulose.
Vacuole	Storage space filled with cell sap.

Plant Cell



Animal Cell



5. Organ Systems

Organ Systems	A collection of organs working together.
Circulatory System	Heart, blood vessels Carries oxygen and nutrients around the body.
Digestive System	Gullet, stomach, intestines Breaks down food and takes nutrients into the blood.
Locomotor System	Muscles, bones Enables the body to move.
Urinary System	Kidneys, bladder Gets rid of waste materials produced in the body.
Breathing System	Lungs, trachea Allows exchange of gases between blood and lungs.
Nervous System	Brain, nerves, spinal cord Allows the body to sense things and react to them.
Water Transport System	Roots, stem, leaves Transports water around the plant.

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.



Science Knowledge Organiser



7C Muscles and Bones

1. Muscles and Breathing

Breathing	The movement of muscles that allows us to take in and excrete gases.
Respiration	Process by which oxygen is used to release energy- produces carbon dioxide.
Gas Exchange	One gas is exchanged for another- oxygen goes into the blood, carbon dioxide leaves the blood.
Gas Exchange System	The organs that help with breathing / gas exchange- lungs, trachea, diaphragm
Muscle Cell Adaptations	Can change shape- contract (become short and fat) and relax (back to original shape)
Inhale	Breathing in
Exhale	Breathing out
Inhalation	The muscles in the diaphragm contract, moving it downwards. Muscles between the ribs contract, pulling the ribs up and out. Lungs increase in size allowing air to flow in.
Exhalation	The muscles in the diaphragm relax so it rises. Muscles between the ribs relax, moving the ribs down and in. Lungs decrease in size pushing air out.
Ventilation	The movement of air into and out of the lungs
Breathing Rate	Number of times you inhale and exhale in one minute.

2. Muscles and Blood

Pulse	The feeling of the heart beating that can be felt.
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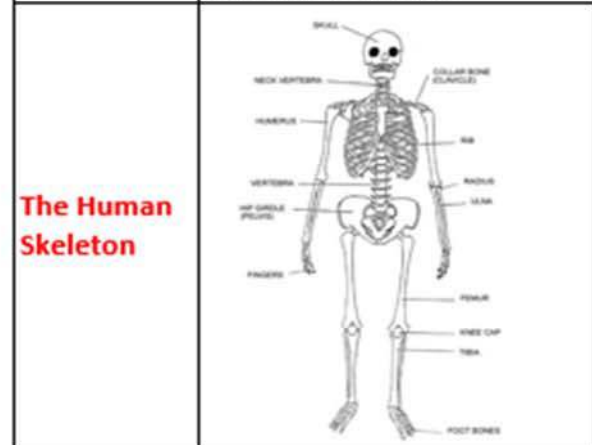
Pulse Rate	The number of pulse beats you feel in a minute.
How the Heart Pumps Blood	Chambers fill with blood and muscle tissue contracts pumping the blood out.
Blood Vessels	A tube that carries blood around the body.
Arteries	Carry blood away from the heart to capillaries.
Capillaries	Tiny blood vessels connecting arteries & veins.
Veins	Carry blood from capillaries towards heart.
Plasma	Main part of blood- the liquid part.
Red Blood Cells	Carry oxygen in the blood- haemoglobin in cells carries the oxygen.
Red Blood Cell Adaptations	No nucleus (more room for haemoglobin). Curved shape increases surface area to take in oxygen quickly.
White Blood Cells	Fight infections and keep us healthy.
Bone Marrow	Where red and white blood cells are made.

3. The Skeleton

Bone Structure	Spongy bone material keeps bones light. Compact bone material is hard and strong. Bone marrow inside bone reduces mass of bone.
Skeleton	Formed by the bones in the body- allows for support, protection and movement.
Backbone	Made up of smaller vertebrae- the bodies main support.
Skull	Made up of 22 bones- protects the brain.
Tendons	Connects muscle to bones.
Ligaments	Connects bones together.

Cartilage Slippery tissue on the ends of bones.

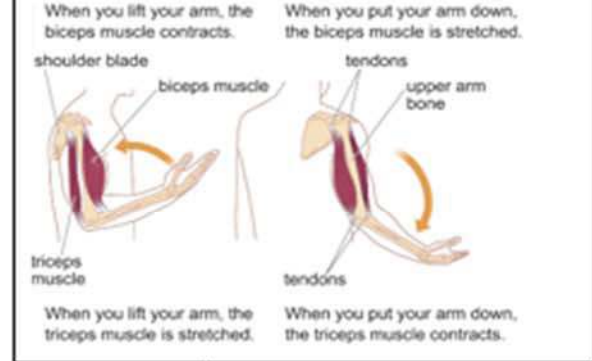
Flexible Joint Two or more bones meeting that can be moved.



4. Muscles and Moving

Locomotor System	The system that allows you to move parts of the body- muscles and bones.
Biomechanics	The study of how muscles and bones work together.
Movement	Muscles contract and pulls on bone it is attached to.
Antagonistic Pairs	Pairs of muscles that allow bones to move in two different directions.

Biceps and Triceps



Impulses	Messages sent from brain that tell muscles to contract.
Mitochondria	Where respiration happens in cells producing energy.

5. Drugs

Drug	Substances which changes the way the body works.
Medicine	Drugs used to help people with illness/injury.
Side-Effects	Harmful / unpleasant effects of using drugs.
Addictive	Feeling of not being able to cope without the drug.
Recreational Drugs	Drugs taken for pleasure- caffeine nicotine and alcohol are legal recreational drugs.
Cannabis	Can cause memory loss and mental illness.
Ecstasy	Can cause mental illness, kidney damage and death.
Cocaine	Addictive and blocks arteries.
Heroin	Addictive, collapses veins, causes vomiting & headaches
Reaction Time	The time taken to respond to a stimulus.
Stimulants	Decrease your reaction time- impulse carried faster. e.g. caffeine
Depressants	Increase your reaction time- impulses carried slower. e.g. alcohol

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.

Science Knowledge Organiser



7G The Particle Model

1. Solids, Liquids and Gases

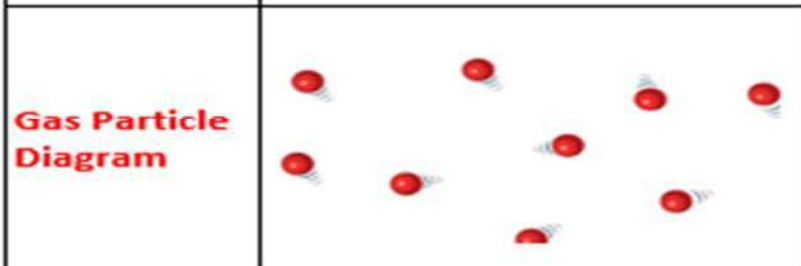
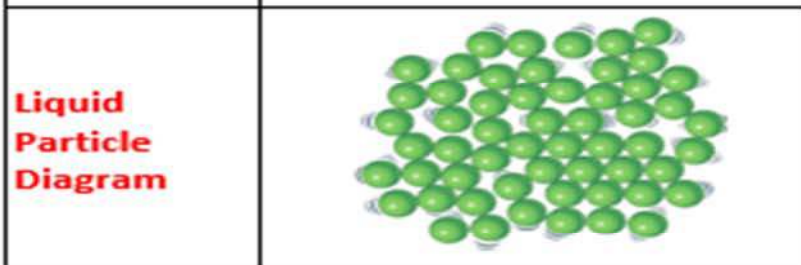
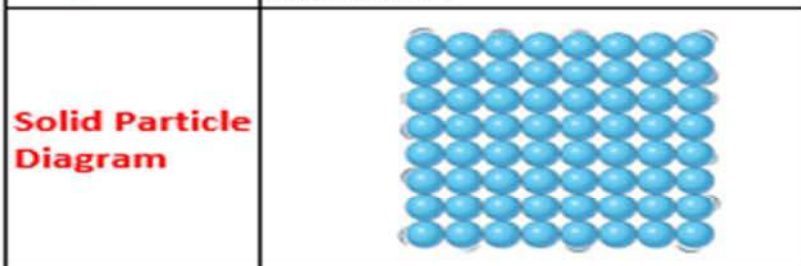
States of Matter	The three forms that a substance can be in; solid, liquid or gas.
Solid Properties	Do not flow Fixed shape Fixed volume Cannot be compressed
Liquid Properties	Can Flow No fixed shape Fixed volume Cannot be compressed
Gas Properties	Can flow No fixed shape No fixed volume Can be compressed
Flow	To move and change shape smoothly.
Volume	The amount room something takes up. Measured in cubic centimetres (cm ³).
Compressed	Squashed into a smaller volume.
Pressure	The amount of force pushing on a certain area.

2. Particles

Particle Theory	A theory used to explain the different properties and observations of solids, liquids and gases.
Particles	Tiny pieces of matter that everything is made out of.
Forces	Tiny forces of attraction hold the particles together.
Solid Particle Properties	Fixed arrangement of particles held closely together that cannot move over each other but vibrate.

Liquid Particle Properties
Held closely together but not in a fixed arrangement and can move over each other.

Gas Particle Properties
Far apart from each other and free to move about in all directions.



Vibrate
To move backwards and forwards.

3. Brownian Motion

Brownian Motion
An erratic movement of small specks of matter caused by being hit by the moving particles that make up liquids or gases.

Trace
Used to plot the movement of a particle and used as evidence for Brownian motion.

Molecule
Two or more atoms joined together in a group.

Nanometre
A unit of measurement. 1 nanometre (nm) is 0.000 000 001 metres (m)

4. Diffusion

Diffusion
The movement of particles spreading out and mixing with each other without anything moving them.

Particle Theory and Diffusion
Occurs quickly in gases because they are able to move freely in all directions. Diffusion is slower in liquids because the particles are still moving but not as freely as in a gas. Diffusion cannot occur in solids because the particles are in a fixed position.

Small Intestine
Diffusion of particles of essential substances in our food pass through the wall of the small intestine.

5. Air Pressure

Air Pressure
The force on a certain area caused by air molecules hitting it.

High Air Pressure
Makes sure tyres are inflated. Can also affect the weather making it dry and settled.

Vacuum
A completely empty space containing no particles (not even air).

Straws
Straws work because when you suck, you reduce the pressure inside the straw so the air pressure outside the straw is greater and the liquid is pushed up.



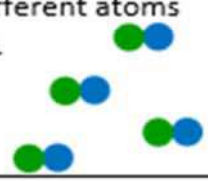
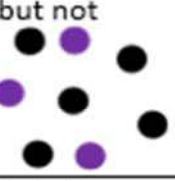


Science Knowledge Organiser



7H Atoms, Elements and Molecules

1. The Air We Breathe

Particles	Tiny pieces of matter that make up everything.
Atoms	The simplest particles of matter that make up everything.
Elements	A substance made up of one type of atom. 
Molecules	Two or more atoms joined together in a group. 
Compound	Two or more different atoms joined together. 
Mixture	Two or more substances jumbled together but not chemically joined together. 
Periodic Table	A table that lists all of the known elements.
Air	A mixture of different gases- nitrogen, oxygen, argon, carbon dioxide
Pure	A substance made up of a single element/compound and nothing else.

2. Earth's Elements

Chemical Symbols	The 1 or 2 letters given to each element
-------------------------	--

Earth's Crust	Made up of oxygen, iron, silicon, aluminium, calcium and other elements.
Naturally Occurring Elements	Usually found as compounds, some found pure. Can be extracted from compounds by simple chemical reactions.
Properties	What an element is like, its appearance and how it behaves.
Recycling	Using a material again to save resources and make sure we don't run out.
Carbon	Can be found as diamond and graphite. The different properties of each form are due to the ways the atoms are joined together.

3. Metals and Non-Metals

Common Metal Properties	Solid, high melting point, strong, flexible, malleable, shiny and good conductors of heat and electricity.
Metals	Three-quarters of all elements are metals- found on the left side of the periodic table.
Common Non-Metal Properties	Low melting points, brittle, not shiny and poor conductors of heat and electricity.
Malleable	Able to be beaten and bent into shape.
Flexible	Able to bend without breaking.
Conductor	A substance that allows something to pass through it (e.g. heat, electricity).
Brittle	Not easily bent- breaks under pressure.
Magnetic	Iron, nickel and cobalt are the only magnetic elements.

Mercury	The only metal that is liquid at room temperature.
----------------	--

4. Making Compounds

Silicon Dioxide	The most common compound in the Earth's crust- found in sand, quartz and granite.
Forming Compounds	The first stage often involves heating a mixture of elements. Energy is often given out when elements react to form compounds.
Iron Sulfide	Compound formed by heating a mixture of iron and sulfur.
Bonds	Formed between atoms when compounds are formed.
Iron Sulfide Properties	Iron can be separated from sulfur using a magnet but iron sulfide is not magnetic.
Metal Ores	A rock containing a compound of a metal.
Naming Compounds	If one of the elements in the compound is a metal its name goes first. the non-metal at the end of the compound's name has its name changed so it ends in -ide.

5. Chemical Reactions

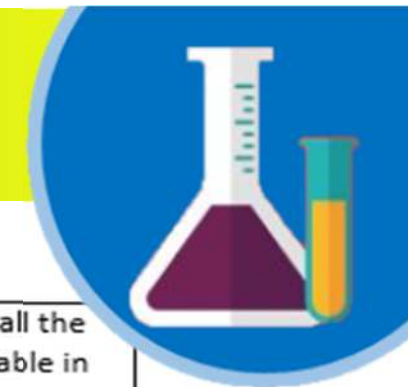
Chemical Reaction	A change in which one or more new substance is formed.
Word Equation	Used to model chemical reactions.
Reactants	The starting substances- written on left of word equation.
Products	The new substances made- written on right of word equation.

Thermal Decomposition	Using heat to break down a compound- used to extract metals from their compounds.
Thermal Decomposition of Mercury Oxide	Mercury oxide → mercury + oxygen
Carbonates	Compounds containing a metal, carbon and oxygen.
Calcium Carbonate	Found in limestone, chalk and marble.
Thermal Decomposition of Calcium Carbonate	Copper carbonate → copper oxide + carbon dioxide
Test for Carbon Dioxide	Carbon dioxide turns limewater cloudy.
-ate	A compound that contains two elements plus oxygen will end in -ate. (e.g. zinc sulfate contains zinc, sulfur and oxygen)

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.



Science Knowledge Organiser



71 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 plates 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.

Science Knowledge Organiser

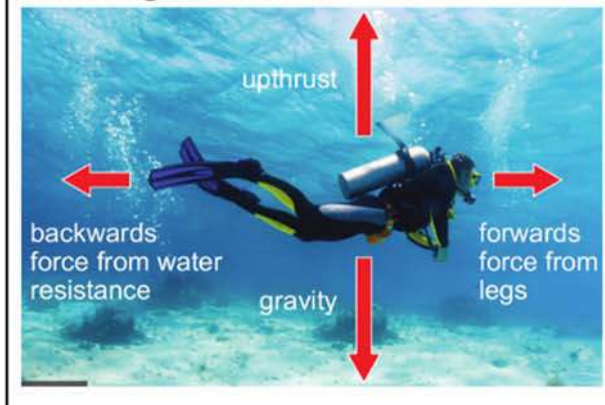


7K Forces

1. Different Forces

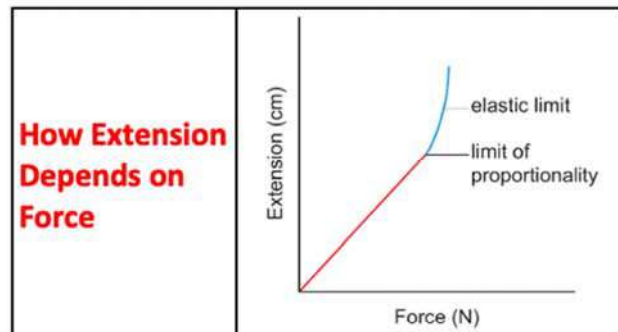
Force	A push or a pull.
Contact Forces	The thing providing the force needs to touch an object to affect it. <i>Friction, air resistance, water resistance, upthrust</i>
Upthrust	The force that makes things float.
Air Resistance	A force acting on objects moving through the air.
Water Resistance	A force acting on objects moving through water.
Non-Contact Forces	Forces that can affect an object from a distance. <i>Gravity, static electricity, magnetism</i>
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.



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.

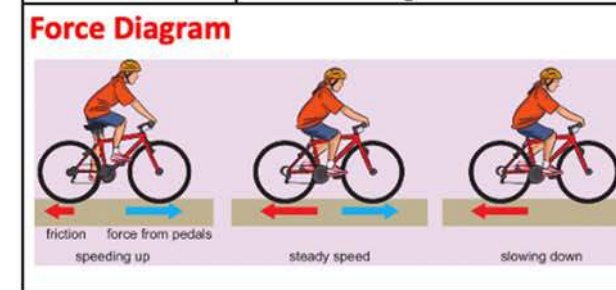
4. Pressure

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. $1\text{Pa} = 1\text{N/m}^2$
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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.



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



IMPACT OF TECHNOLOGY – COLLABORATING RESPONSIBLY

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



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

STOP
cyberbullying



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 is 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/>

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

Computer Science Knowledge Organiser



USING MEDIA: Gaining support for a cause

Different **application software** can be used for different purposes. It is important to think about what the task is and select the most **appropriate** one.

The **application software** chosen allows different formatting techniques to be used.

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.

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.

Citation 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.



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.

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.

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.

Making sure the item being created is successful and actually does what it was intended to do is important.

Setting **success criteria** should be determined at the start of the project and can be revisited frequently.

The success criteria should be clear and easy to follow.

A **blog** is simply 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.

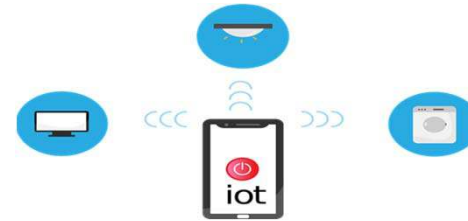


Computer Science Knowledge Organiser



NETWORKS

Key Words	
Bandwidth	Amount of data that can be moved from one point to another in a given time.
Buffering	Data arriving slower than 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
- Server—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

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

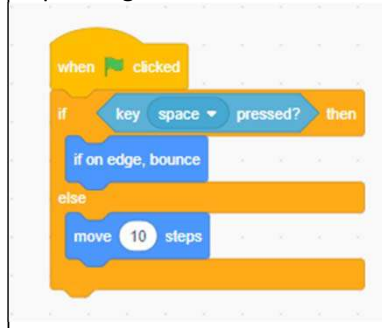
Sequence, selection and iteration are all processes. In order for computers to perform tasks there is more that is needed. For example a computer will take an **input** (this might be automatic or via human input) which the computer will then **process** and the **output** will be visible on the computer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

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

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.

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

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**

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.



SCRATCH

Computer Science Knowledge Organiser



PROGRAMMING 2 - SCRATCH



SCRATCH

Key Words	
Abstraction	Identify the important aspects to start with
Algorithm	Precise sequence of instructions
Debugging	Looking at where a program might have errors or can be improved
Decomposition	Breaking down a problem into smaller parts
Iteration	Doing the same thing more than once
Lists	Allows multiple items of data to be held
Selection	Making choices
Sequence	Running instructions in order
Subroutine	A group of instructions that can run when called
Variable	Data being stored by the computer.

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
A variable can only hold 1 piece of data at a time.

Sequence, selection and iteration are all processes.

These are three of the key concepts –the BIG 3

Sequence—the challenge of arranging precise instructions into the correct order

Selection—allowing a program to branch down a different route IF a condition is met

Iteration (repetition) - allowing a repetition of commands by looping back.

Lists are used to store data for use in a program.

Lists can hold multiple items of data under one name. Just like a shopping list where you can keep adding items.



Iteration allows for the same code to be repeated.

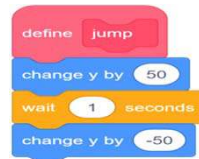
Count controlled iteration will execute the commands a set number of times

Example: “perform 200 star jumps”

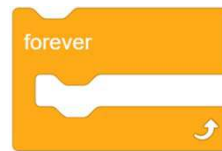
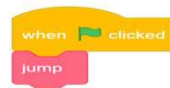
Condition-controlled iteration will execute the commands until the condition you set is no longer being met

Example: “perform star jumps until 3pm”

This subroutine had been named ‘jump’. The y axis has been changed by 50 (so jump up), wait 1 second then jump down (-50).



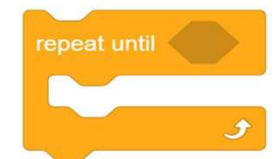
Then the jump subroutine can be called in the program.



Will loop the code forever



Will repeat a set number of times



Will repeat until a condition is met

Computer Science Knowledge Organiser

MODELLING DATA – SPREADSHEETS

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 18°

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

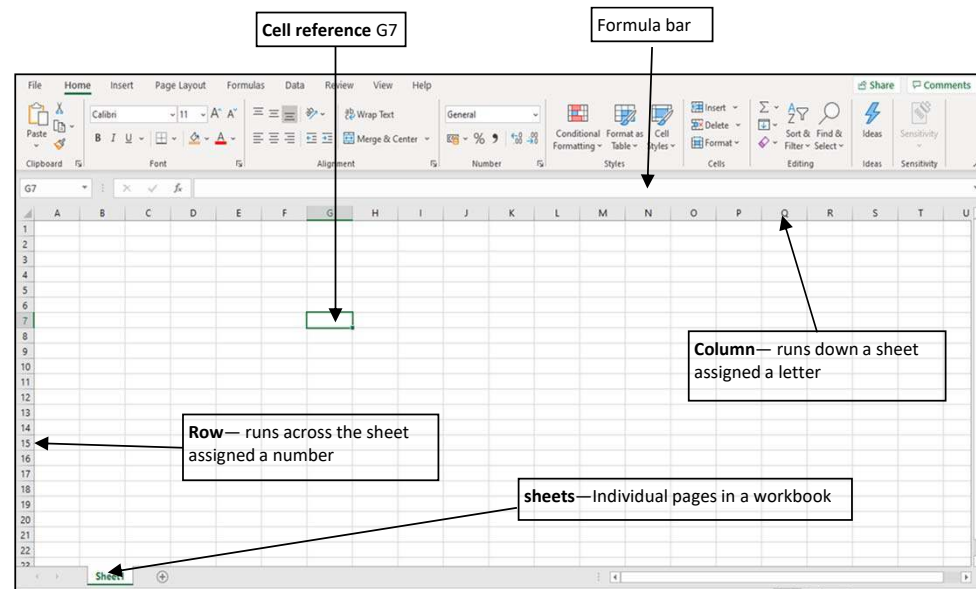
COUNTA—counts cells that are not empty

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.






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

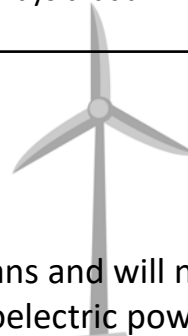
Refuse	Is the product necessary?
Rethink	Are there alternative materials or design options that are more sustainable?
Reduce	Can the product be made from fewer materials? Can the amount of unsustainable materials be reduced?
Reuse	Can parts of the product be reused in a different product?
Recycle	Can 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


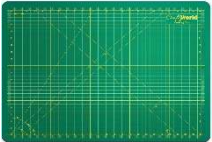


How can we reduce our impact on the environment?

- 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	<ul style="list-style-type: none"> • 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,




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 wood.



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 coarse 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



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

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



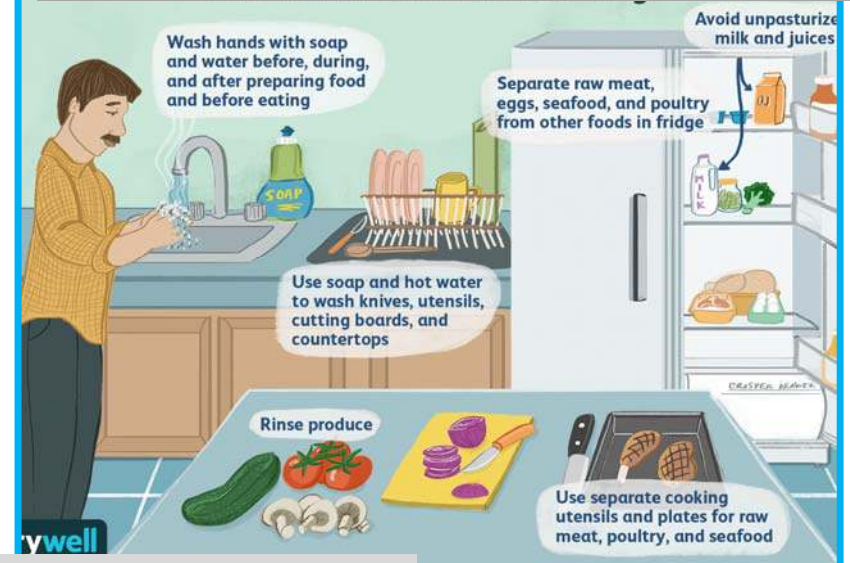
Chilling

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



Cross Contamination

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



Preventing cross contamination



COLOUR CODED CUTTING BOARDS	
	RAW MEAT
	RAW FISH
	COOKED MEAT
	SALAD & FRUIT
	VEGETABLES
	BAKERY & DAIRY

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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

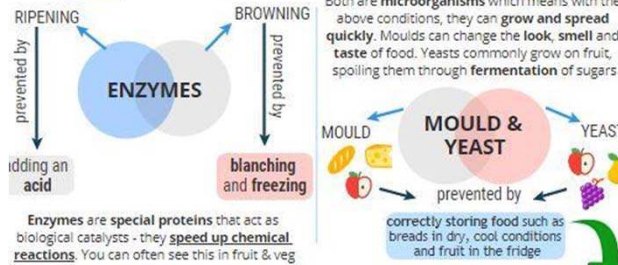
OVERVIEW

Five conditions needed for microorganisms to multiply:

1. Warmth
2. Moisture
3. Food
4. pH (not too acidic or alkaline)
5. Time



CAN CAUSE FOOD SPOILAGE:



Storing and Preparing Food Safely

OTHER METHODS

- freeze-drying
- jam-making
- pickling
- cool, dry place
- vacuum packing
- canning/bottling

USE BY (with exclamation mark icon)

BEST BEFORE

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

KEY TEMPERATURES

- Cook/Reheat 75C
- Chilling 0C to 5C

LOOK COVER WRITE CHECK (with icons)



Alkali

Alkali+Acid

Acid

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

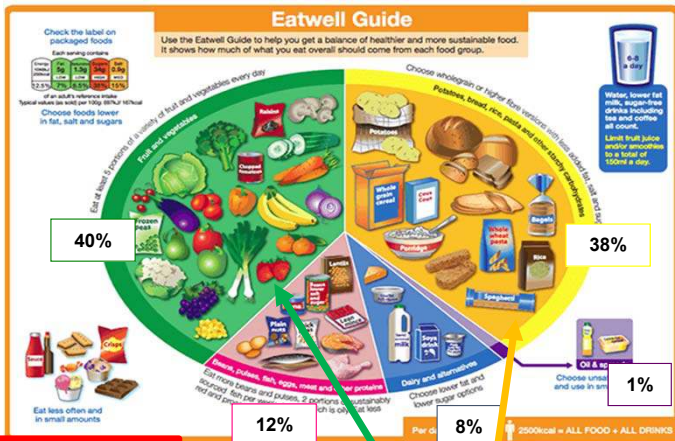


7. Enzymic browning: the process where fruit and vegetables turn brown due to them being exposed to oxygen (oxidisation).



14. Rubbing in method is a method whereby you rub together usually butter and flour to create a breadcrumb like mixture, usually the base for scones.

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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.



Nutrient	How	Why
Cutting Fat	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *Overweight *Obesity *Increase in Cholesterol in the blood *Heart attack. *Type 2 diabetes
Cutting down on Sugar	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *Overweight *Obesity * *Heart attack. *Type 2 diabetes
Have more Fibre	<ul style="list-style-type: none"> •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 	<ul style="list-style-type: none"> *Helps to protect against diseases of the bowel. *Gives you a feeling of fullness and so can help in diets.
Eat less salt	<ul style="list-style-type: none"> •Use herbs and spices as an alternative to salt 	<ul style="list-style-type: none"> * Too much salt can lead to high blood pressure. This will increase the risk of suffering heart problems and strokes.

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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	<p>Chocolate – ingredients coming from all over the world has a lot of food miles.</p>
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.	<p>Strawberries grown in Manchester/UK</p>

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