KNOWLEDGE ORGANISER

£2

NAME & FORM

YEAR 7
AUTUMN TERM

Florian Nicolle

Key features:

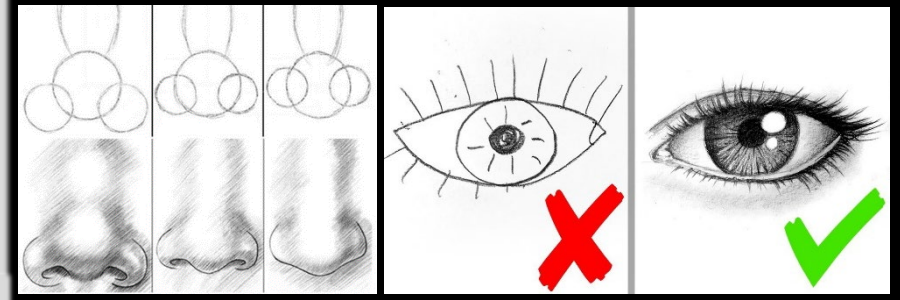
Neutral- line- bold- scratchy- collage- shadows- highlights- mark making.

Working in the style of an artist:

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

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

Mark making- Hatching- Crosshatching- Stippling- Scumbling- Blending- Layering – Texture- Accuracy- Proportion- Neutral colours.



Portraiture

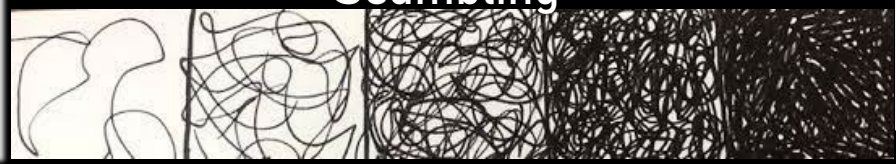
Year 7 Autumn term

Mark Making techniques

Stippling

Hatching

Scumbling



In the style of:

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

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

- Have you used scratchy lines?
- Have you used a range of mark making?
- Have you used correct proportions?
- Is the scale correct?
- Have you included all the detail?
- Is your colour scheme appropriate to the artist?

KEY WORDS AND MEANINGS:	
Mark Making	Mark making describes the different lines, dots, marks, patterns, and textures we create in an artwork.
Hatching	Small lines drawn quickly to represent specific textures such as fur. Hatch lines can be layered up to create tone.
Cross-hatching	A shading technique involving the use of small, intersecting lines. The closer the lines are together, the darker the tone.
Stippling	The creation of shading by using small dots. The closer the dots are together, the darker the tone.
Blending	The technique of softly mixing two colours or light and dark.
Layering	Placing one element over another. This could be coloured pencil, paint, collage etc…
Texture	The display of how an object would feel in reality. This can be created through mark making.
Accuracy	Precision or correctness or exactness, in other words, how much does your work look like the source.
Proportion	How the sizes of different parts of a piece of art or design relate to each other.
Neutral colours	A colour without much intensity e.g beige, cream etc.

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

Drama Knowledge Organiser

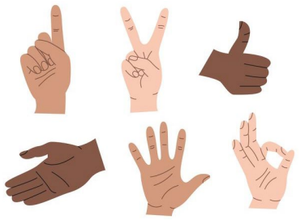
Physical Skills and Techniques

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

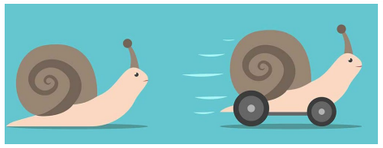
High or low

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

SILENT MOVIES

KEYWORDS	
Mime	Silent art of portraying a character/mood/story though bodily movements
Exaggeration	Is essential when performing in without the use of your voice
Melodrama	A genre of theatre that is exaggerated and dramatic
Gesture	Exaggerated hand and arm actions to communicate
Tension	Tension of limbs/body when moving helps communicate weight/density
Stereotype Characters	Characters in their most general form, narrowly defined, often by one exaggerated trait e.g. 'Baddie'
Slapstick Comedy	A physical kind of comedy based around mild comic violence — smacks in
Intertitle	Title cards with captions used in silent film

SUCCESS CRITERIA FOR MIME:

BODY LANGUAGE

EXAGGERATION

GESTURES

FACIAL EXPRESSIONS

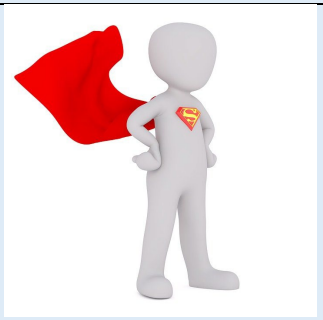
FAMOUS SILENT MOVIE ACTORS:

Charlie Chaplin

Lilian Gish

Buster Keaton

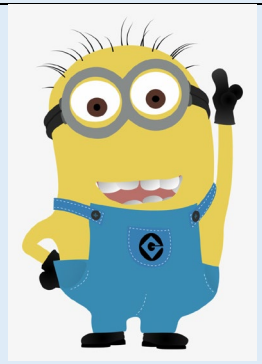
STOCK CHARACTERS



HERO – Moral, strong, handsome

DAMSEL – Moral, innocent

VILLAIN – Evil, manipulative

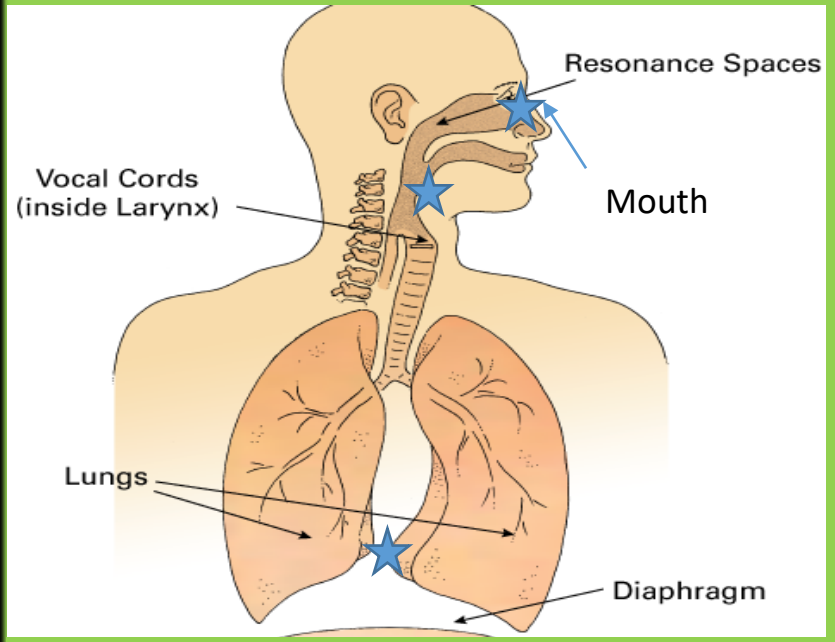


FOOL – Villains accomplice, idiotic, funny

FAITHFUL SIDEKICK – Helps the hero, brav

Music Knowledge Organiser

The Anatomy and warming up



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 – test yourself! (definitions on the next page)

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


Mouth

SINGING SKILLS

Year 7 Autumn Term

DYNAMIC MARKINGS

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

Stage Presence:

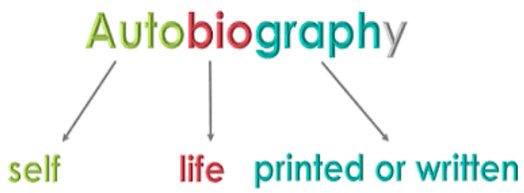
When performing a piece of music to an audience it is very important you sound good and present yourself well.
Besides knowing your words and singing in tune there are some basic elements you need to consider:

- 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

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

English Knowledge Organiser — Autumn 1

Autobiography- Writing your own account of your life.



Key features of Autobiography Writing:

- Non-fiction
- Written in first person (I, we, our, my)
- Describes real life experiences
- Usually in chronological order
- Can be in the form of a memoir or diary
- Gives details about thoughts and feelings about life experiences

Key purposes of Autobiographies:

- To Entertain – Provide entertainment and enjoyment to readers
- To Inspire – Provide thought-provoking ideas and imagery
- To Describe – Provide detailed recounts of real-life events

PEAR Analysis Sentence Starters:

POINT: In the extract, one way the writer portrays _____ is…

EVIDENCE: This can be seen in the example "…."

***(OR)* This is shown through the use of (name a technique here) in "…"**

ANALYSIS: This suggests/this shows…

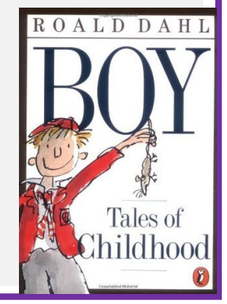
(A+) It could also suggest that…

In particular, the (word type) '_____' makes me think of…

(A+) Another word that supports this is '_____' because…

READER:

As a reader, I understand/feel/think…



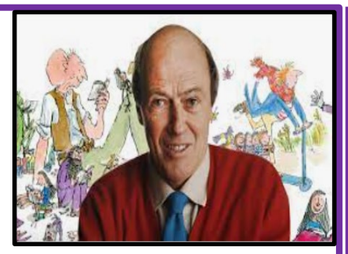
TIF – Phrases for analysis

This (technique) exemplifies…

One interpretation could be… whilst another interpretation is…

This example proves/demonstrates/illustrates…

Roald Dahl



Roald Dahl was a British popular author of children's Literature, poetry and short stories. His books have sold more than 300 million copies worldwide. Dahl has been called "*one of the greatest storytellers for children of the 20th century*." Dahl's short stories are known for their unexpected endings, and his children's books for their unsentimental, gruesome and often darkly comic mood, featuring villainous adult enemies of child characters. '*Boy*' is his autobiography.

WAGOLL- How does Dahl portray Captain Hardcastle?

In this extract, one way Dahl portrays Captain Hardcastle is horrifying. This can be seen in the example "an inflamed and savage face". This shows us that Hardcastle is a very angry man and may even be wild and cruel. In particular, the adjective 'savage' makes me think of someone wild and unpredictable, which are terrifying things for a schoolteacher to be. As a reader, I understand that Dahl might be terrified of Hardcastle and might get in trouble with him. It also makes me worry about Dahl at the school if his teachers are scary like Captain Hardcastle.

English Knowledge Organiser

Word Classes

Noun- A person, place or thing, *e.g. class, teacher, canteen.*
Proper Noun- The name of a specific person, place or thing. These need a capital letter at the start! *E.g. Mr Rogers, Sale High School, Manchester.*
Pronoun- A word that replaces a noun, *e.g. they, it, her, us.*
Verb- An action or 'doing' word, *e.g. studied, learning, enjoy.*
Adjective- A word that describes a noun, *e.g. triumphant, courageous, tenacious.*
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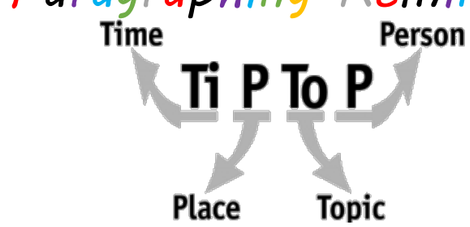
Preposition- A word that shows time, place, location etc, *e.g. in, at, beneath.*
Conjunction- A word used to connect two clauses or ideas, *e.g. and, but, yet.*
Superlative- A word or group of words used to describe something being more than something else in some way, *e.g. biggest, hottest, most serene.*

Language Techniques (Descriptive)

Simile– A phrase comparing one thing to another, using as or like, *e.g. He felt as light as a feather.*
Metaphor– A phrase comparing one thing to another, without using as or like, instead saying it **is** something else, *e.g. He was a feather, floating through space.*
Personification– A phrase giving human characteristics to a non-human object, *e.g. He blew on the dandelion and the petals danced through the air towards her.*
Imagery– Words or phrases that create visual images, *e.g. The glorious, golden sunset seemed to consume the world, bathing it in a celestial glow.*
Repetition– A word or phrase that is repeated for emphasis, *e.g. The garden was magnificent. The castle was magnificent. Everything was magnificent.*

Paragraphing Reminder



Punctuation Reminder

Commas ,- Separate clauses or indicate a pause.
Apostrophes '- Indicate possession or ownership or to show omission in contractions.
Quotation (speech) marks " "- Used to quote from texts or mark out speech.
Semicolon ;- Used to separate two main clauses that are closely related, often replacing a connective.
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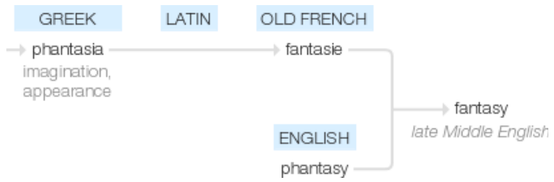
Emotive language– Words that create feeling and emotion, *e.g. These vulnerable, innocent animals are being cruelly ejected from their homes.*
Rule of Three- Using three words to describe something or making three statements about something *e.g. Sale High School is an enriching, entertaining and motivating place to learn!*

Key Vocabulary- Autobiographical Writing

Autobiography- Writing your own account of your life.
Analysis- Looking at writing very closely to find (sometimes hidden) meanings.
Experience- Something that has happened to you or you have been a part of.
Memoir- A historical account written from personal knowledge.
Non-Fiction- Informative or factual writing.

English Knowledge Organiser — Autumn 2

Fantasy: An unrealistic, impossible or improbable action, event or setting.



Key themes in Fantasy:

- Change
- Heroes/Villains & Good vs Evil
- Magic
- Identity
- Conflict
- Quests for power/knowledge

Key purposes of Fantasy:

- To Entertain – Provide entertainment/enjoyment to readers
- To Inspire – Provide thought-provoking ideas and imagery
- To Describe – Provide detailed images of imaginary and unrealistic worlds or concepts.

History of Fantasy:

The origins of fantasy can be traced all the way back to Greek Mythology with Gods and Legends fighting mythical creatures such as The Minotaur.

Authors like The Brother's Grimm took fantasy storytelling to a very gory place and wrote the originals of many of our well-known Disney stories today.

Fantasy has since been taken to all corners of both the real and imaginative worlds such as The Shire in The Hobbit or Hogwarts in Harry Potter or even The Endless Woods of the School of Good and Evil, with thousands of fantastical creatures created and magical worlds explored!

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One interpretation could be… whilst another interpretation is…

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WAGOLL- How does Rowling describe the Castle?

In this extract, one way the writer portrays the castle is as a majestic, grand castle in order to reveal that the students are very lucky. This is shown through the use of alliteration in "sparkling in the starry sky", which suggests the castle stands out and looks fantastical against the night's sky. In particular, the verb 'sparkling' has connotations of being precious and majestic. Another phrase that supports this is "perched atop a high mountain" which shows it is very special as it is high up and easy to see, so everyone can see its power and it comes across as imposing. It also shows how lucky the students are to be attending such a magical place. This makes the reader feel envious as we realise how special Harry's life is now, but also happy for the students, as they have been given a great opportunity and it has opened up their life.

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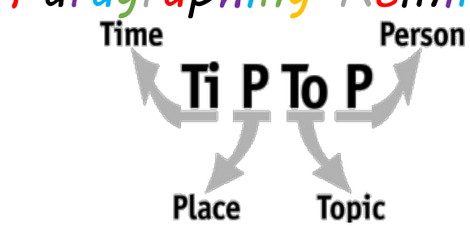

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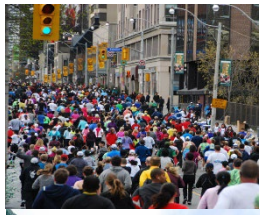
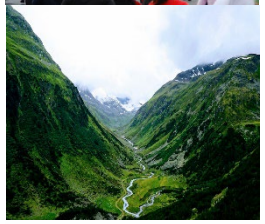
Key Vocabulary- Fantasy Genre

Enchanted- Filled with delight or charmed.
Conventions- Things you often find in a certain genre, e.g. magic in Fantasy.
Conflict- A battle, argument or war between two sides.
Genre- A type of story characterised by certain conventions (see above).
Villainous – Evil or malicious.

Geography Knowledge Organiser

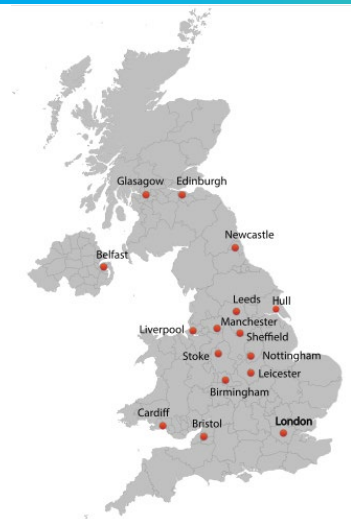
Year 7: Foundations of Geography

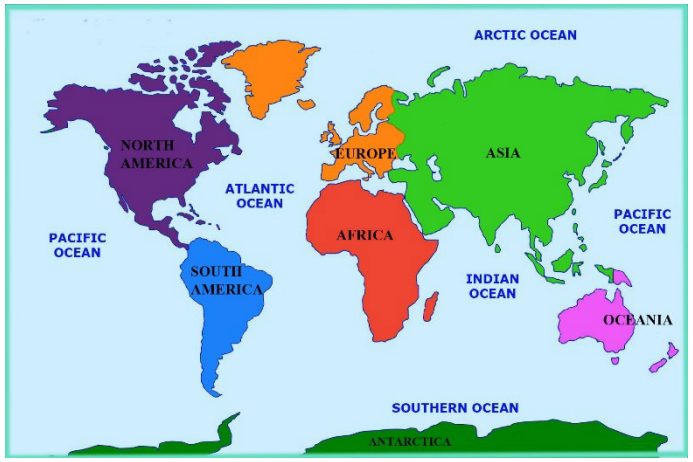




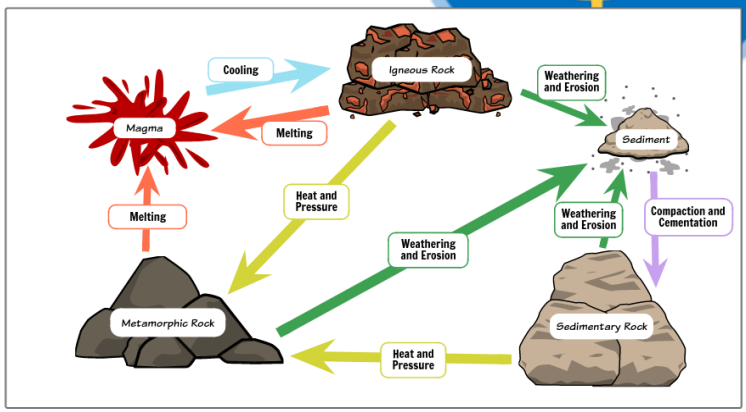
Human Geography- this is geography that relates to people (manmade)

Physical geography- this is geography that relates to the nature

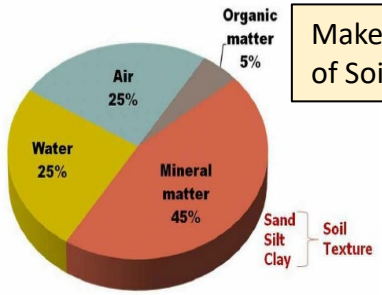


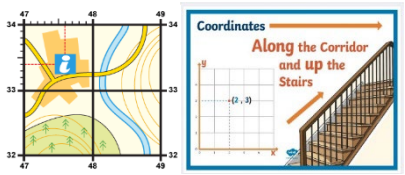


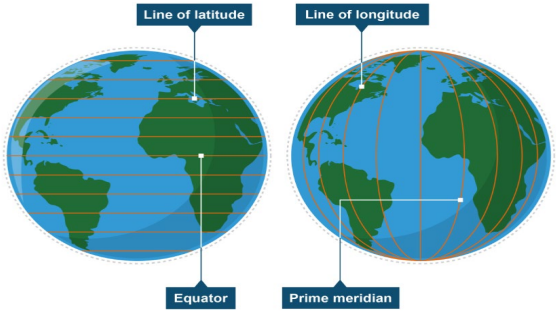
The Rock Cycle



Make-up of Soil



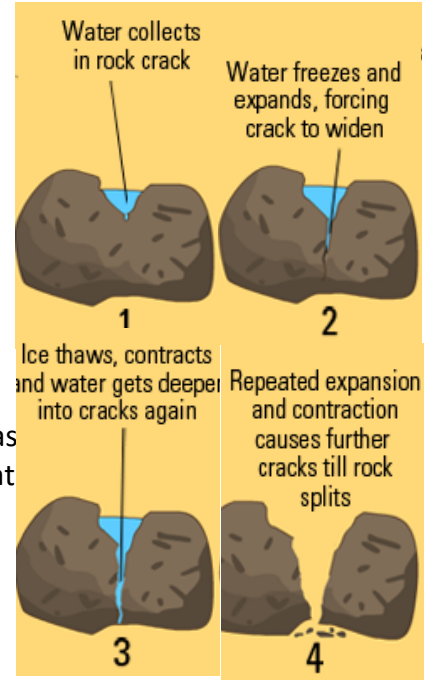




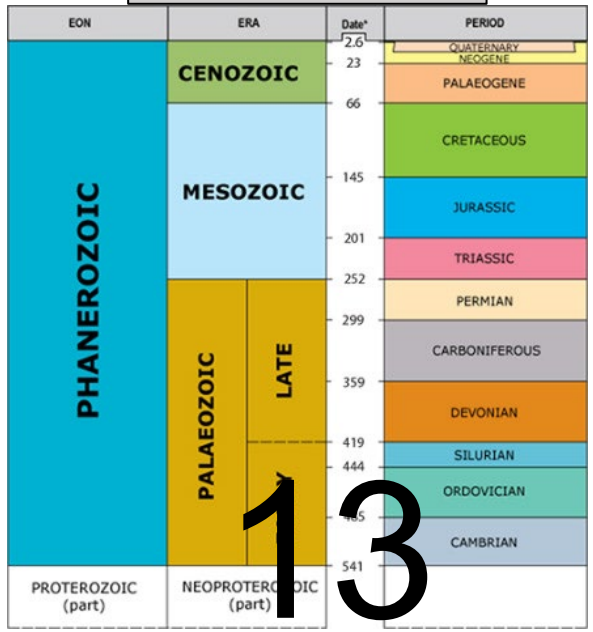
Lines of latitude circle the Earth in an east-west direction. They are parallel.

Lines of longitude run from the top of the Earth to the bottom. They are not parallel as lines of latitude are - they meet at a point at the north and south poles and are called meridians

Freeze-Thaw Weathering



Geological Time



Regent, Sierra Leone Landslide 2017	
Causes	Impacts
• 1,000mm of rainfall in a month • Residents building home unrestricted on the side of the mountain • Deforestation and soil erosion from unrestricted building	• 1141 dead or missing • 3000 homeless • 8 major roads and bridges destroyed • Damage to property in an area of 116,000m² • Power outages to several communities

Geography Knowledge Organiser

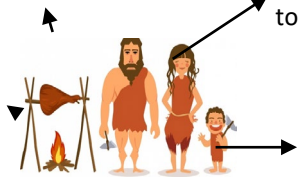
Year 7: Urban Environments

What did early settlers look for in a site?

A local water supply for drinking, washing, cooking and transport

Local raw materials, e.g. wood and stone, to build homes

Dry land, so that people could build on areas that don't flood



Opportunities and challenges in Squatter Settlements	
Opportunities	Challenges
• Strong sense of community helps to reduce crime in the area • Offer the opportunity to escape rural poverty • High levels of employment • Huge recycling zones helping to improve sustainability	• Unsanitary conditions means they may have poor drinking water • Very cramped conditions, can be 5 people living per room. • No piped water so there is a limited source of water • Lack of planning means electricity collections are illegal and dangerous

Lagos, Nigeria

Mumbai, India

Keywords and definitions	
Population	all the inhabitants of a particular place
Urban	The characteristic of a town or city
Rural	The characteristic of the countryside rather than the town.
Migration	Movement of people from one area to another
Push factors	forceful reasons that cause people to leave their residence
Pull factors	something that attracts people to a place
Megacity	A city with a population of over 10 million people

	Mumbai	Lagos
Population	20 million	21 million
Life expectancy	55 years	53 years
Literacy Rates	89%	90%
No. of people living in slums	6.5 million	12.6 million

What makes a city sustainable?

A sustainable city concept incorporates eco-friendly practices, green spaces and supporting technology into the urban environment to reduce air pollution and CO_2 emissions, enhance air quality, and protect natural resources.

Sustainability: is meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Manchester as a sustainable city?

Manchester wants to become a better place for people and nature, by increasing and improving the blue and green spaces in the city. Already 12km of waterways have been enhanced and 12,500 trees have been planted. Parks and green spaces have been upgraded and any new housing developments must look at ways to incorporate green spaces into the plans.

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.*

Pre-1066 Timeline:

43 AD - Romans invade and rule England

50 AD - The town of Londinium is built (modern London)

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 in a raid on the monastery

829 AD – England stops being seven kingdoms as Anglo-Saxons war against Vikings

865 AD – The Vikings invade with a large army called the Great Heathen Army

878 AD – England ruled by both the Vikings and the Anglo-Saxons – Danelaw established

Romans

43 – 410

Anglo-Saxons

459 – 1066

Vikings

793 - 954

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*
- *Split England into **7 kingdoms (Heptarchy)***
- *Expanded Roman churches. **These were called Monasteries.** An example would be Lindisfarne. They acted as hospitals where monks would train and also record history.*
- ***Developed the English language**. The Anglo-Saxons spoke Old English and so many of our words come from the language they spoke.*

How did the Romans Change England?

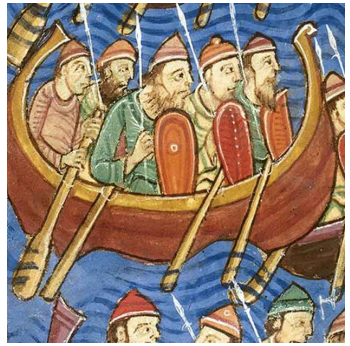
The Romans were master builders and statesmen who changed England by:

- *Introducing **running water** by creating aqueducts to major towns and cities in England*
- *Building **paved roads** to and from major cities to improve travel*
- *Providing a **written language (Latin)** to the people of England to record laws*
- ***Christian worship** was introduced*
- ***Coinage** was used to trade goods*

How did the Vikings change England?

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

- ***Raiding and pillaging** the monasteries (like Lindisfarne) and taking loot back to Scandinavia*
- *Introducing the **Danelaw** in England (split it in two)*
- *Further developing the English language. Norse words mixed with Old English words to change our language.*



What is Bias?

Bias is where a one-sided opinion is formed by only using selective evidence to support your point of view. A biased historical account might only reveal some information and not include other important parts.

History Knowledge Organiser

Topic 2: The Norman Conquest

Why was there a succession crisis?

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:

Who was Harold Godwinson and what was his claim?

- *He was an Anglo-Saxon.*
- *The son of a powerful Earl.*
- *Edward's brother in law.*
- *Helped Edward to govern.*
- *The Witan supported him.*
- *Claimed that Edward had promised him.*

Who was William and what was his claim?

- *He was a Norman.*
- *He was powerful and was the Duke of Normandy.*
- *Edward's cousin.*
- *Claimed both Harold and Edward had promised him.*
- *Had the Pope's support.*

Who was Harald Hardrada and what was his claim?

- *He was a Viking.*
- *He was powerful and was King of Norway*
- *His father Harthacnut had been promised*
- *He was a fierce warrior*

The Battle of Stamford Bridge – 25th September 1066 – Harold vs Harald

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 an arrow to the throat and the Viking army was defeated.

From Stamford Bridge to Hastings

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.

This was during the time that Harold was away fighting Harald at the Battle of Stamford Bridge. Harold Godwinson had to march his men all the way from Stamford Bridge, in the north of England, back down south to Hastings! He did not even have time to reinforce his army with new soldiers!

History Knowledge Organiser

Topic 2: The Norman Conquest

The Battle of Hastings – 14th October 1066 – Harold vs William

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 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. 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! They won because of:

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 smart military leader. He prepared multiple loyal men and knew how to set them up. He even risked his life in the fighting, but by proving he was not dead mid-battle he could keeping his men fighting.*
- *Troops – The Norman army was made up of Infantry, Cavalry and Archers. They had Crossbowmen, who used deadly Crossbows to punch through shields.*

Godwinson's Mistakes

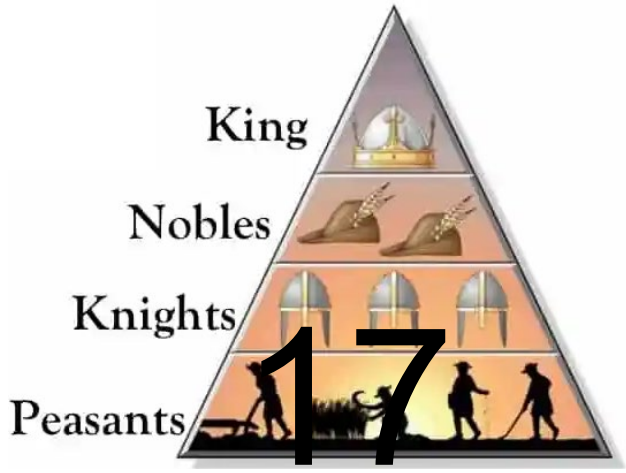
- *Morale – Godwinson's troops had to march 185 miles from Stamford Bridge to Hastings to fight again! This left them tired, hungry and with low morale.*
- *Troops – Most of Godwinson's experienced troops, the Housecarls, had died at Stamford Bridge. To face the Normans he had the Fyrd who were poorly trained.*
- *Death – Godwinson died after the shield wall broke. As a result the Anglo-Saxons stopped fighting.*

Luck

- *The Wind – William had been waiting for the wind to change. By luck it changed just 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 which was very lucky!*

How did William Control England after Hastings?

- *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. Under his orders 100,000 Anglo-Saxons were killed, villages were burnt down and the soil was "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 in which people worked in return for land from their lords.*
- *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 from them.*



Religion and Ethics Knowledge Organiser

Keywords

Monotheism- belief in one God.

Covenant – A promise between Humans and God.

Prophet – A messenger of God.

Torah – Holy Book of Judaism.

Mitzvah/Mitzvot – Hebrew word meaning commandment also used to mean good deed.

Kosher – Fit or Correct, food that is fit to eat.

Shabbat – Jewish day of rest.

Transcendent – beyond this world, God cannot fit into our categories.

Omnipotent- all powerful

Omniscient- all knowing.

Omnibenevolent- all loving/all good.

Kosher

Kosher is the set of **dietary requirements followed by many Jewish people**. They dictate; what foods can be eaten; how animals need to be prepared; what foods can be eaten together. Whilst it is an individual decision whether to follow all of the rules of Kosher there is specific guidance to say that if something is needed to save a person's life (for example medicine or if a person faces starvation) then it is okay to break the rules.

YEAR 7 What is Judaism?

The Ten Commandments

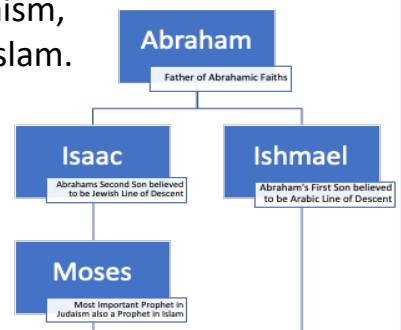
1) I am your G-d.
2) You shall have no other G-d.
3) You shall not take G-d's name in vain.
4) Remember Shabbat and keep it holy.
5) Honour your parents.
6) Do not Murder.
7) Do not commit Adultery.
8) Do not Steal.
9) Do not lie.
10) Do not be jealous.

Shabbat

Shabbat is the **Jewish day of rest**, it runs from sunset on Friday until sunset on Saturday. If the rules of shabbat are followed strictly then people do not touch money or go to the shop or do any work, cleaning, cooking, not even switching on a light! Every Jewish family will decide for themselves how they want to celebrate shabbat. Traditional shabbat celebrations include lighting candles (before Friday sunset), blessing wine, eating together and attending synagogue, and it finishes with a **blessing called Havdalah**.

Who is Abraham?

Abraham was the First Patriarch (the father of the Jewish people). Abraham is important in Judaism, Christianity and Islam. Abraham made a **covenant** with God, for obeying God he would be given Land Blessings and Descendants. The sign of the covenant would be circumcision.



Who is Moses?

Moses was born into a Jewish family when the Jews were slaves in Egypt and he led them to freedom. He is the most important **Prophet** in Judaism, as he is believed to be the only person to have seen God face-to-face. He also received the **Torah** and all **613 mitzvot** from God.

Who is a Jew?

Judaism is not only a religion, it is based on family and community. Many people who do not believe in God still consider themselves Jewish as they were born into a Jewish family. There is also a lot of **diversity in Judaism**. Progressive Jews generally favour following the ethics of Judaism and emphasise the importance of equality whilst Orthodox Judaism also values Jewish ethics but is strict in following the rules.

Religion and Ethics Knowledge Organiser

Keywords

Trinity – three persons of God: the Father, Son and Holy Spirit.

Incarnation – God made flesh, Christianity teaches that Jesus is God in human form.

Messiah – 'anointed one' a title given to a saviour king. A title given to Jesus.

Salvation – freed from sin and punishment through Jesus' sacrifice.

Grace – A gift from God that you did not earn and do not deserve.

Denomination – a recognised branch of the Christian Church.

Catholic – The largest Christian denomination: Catholics follow the Authority of the Pope.

Protestant – a type of Christianity that originated in the protest of Martin Luther.

Parable – a simple story with a moral message.

Miracle – something that cannot be explained by science.

Resurrection – rise again after death.

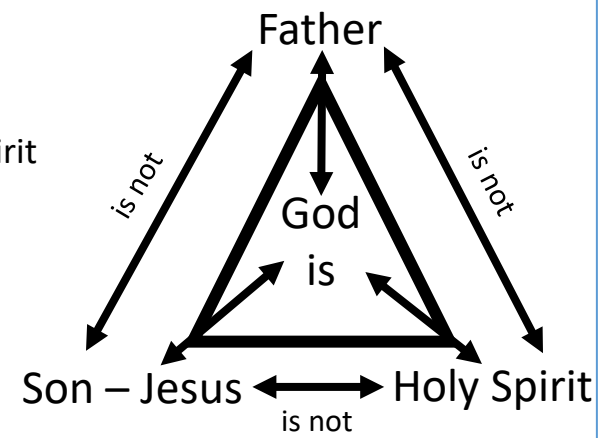
Sacrament - an outward sign of inward grace.

Jesus

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

Trinity Christianity teaches that there are three persons of God:

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



Sacraments

There are seven sacraments: Baptism, Confirmation, Eucharist, Reconciliation, Sacrament of the Sick, Marriage and Holy Orders.

Sacraments are an outward sign of inward grace, taking place at key times in a person's life they include receiving the gift of grace.

Parables

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

Denominations

Catholic the **Pope** is the head of the Catholic Church, through Apostolic Succession. Bishops and Priests lead the Church.

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

YEAR 7 What is Christianity?

Miracles

Miracles are things which cannot be explained or seem to defy the laws of science.

The Wedding at Cana The first miracle Jesus performed was turning water into wine at the wedding at Cana.

The Resurrection The most important of Jesus' miracles is the resurrection. Three days after his death Jesus followers go to his tomb and he has risen from the dead.

Christianity teaches that through Jesus' resurrection he:

Defeated Death

Secures our Salvation

gives us **Hope for Heaven**

Maths Knowledge Organiser

Place Value and Calculations

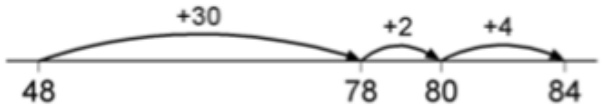
Key Words

Place Value: The value a digit takes when placed in a particular position of a number.

Add Sum Total All together Plus In all	Multiply Product Times Twice Total Multiplied by
Subtract Remain Difference Less than Fewer How many more Minus	Divide Quotient Goes into Split Equally Each

Examples

48 + 36 = 84



74 – 27 = 47 worked by counting back:

$$3\overline{)29^{2}1} \quad 97$$

$$\begin{array}{r} 258 \\ +\ 87 \\ \hline 345 \\ 11 \end{array}$$

$$\begin{array}{r} 3\ 1 \\ 4\ \cancel{5} - \\ 2\ 8 \\ \hline 1\ 7 \end{array}$$

$$\begin{array}{r} 38 \\ \times\ 7 \\ \hline 56 \\ 210 \\ \hline 266 \end{array}$$

56 × 27

×	20	7	
50	1000	350	1350
6	120	42	162
			1512

1

Year 7

Tip

Multiplication and addition are associative, so you can work them out in any order.
So 3 × 4 is the same as 4 × 3.
4 + 3 is the same as 3 + 4

Questions

1) a) 49 + 37 b) 125 + 69 c) 5.6 + 24.8
2) a) 64 – 28 b) 134 – 57 c) 16.2 – 9.5
3) a) 7 × 146 b) 34 × 67 c) 2.9 × 7.2 4) a) 294 ÷ 7 b) 192 ÷ 6

ANSWERS : 1) a) 86 b) 194 c) 30.4 2) a) 36 b) 77 c) 6.7
3) a) 1022 b) 2278 c) 20.88 4) a) 42 b) 32

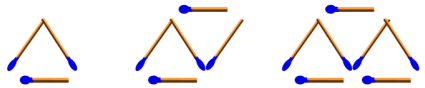
Maths Knowledge Organiser

SEQUENCES

Key Concept

Types of Sequence

Sequence as pictures:



Linear sequence:

4, 7, 10, 13, 16, …

+3 +3 +3 +3

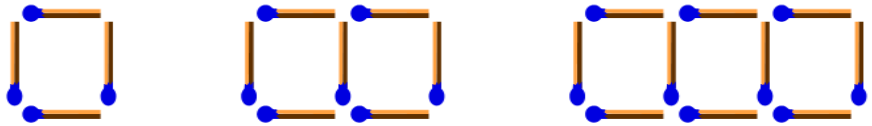
Square Numbers:
1, 4, 9, 16, 25, 36,…

Triangle Numbers:
1, 3, 6, 10, 15, 21

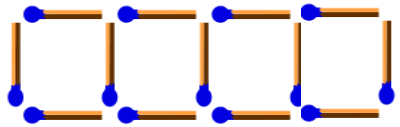
Key Words

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, ….
Next two terms are 16 and 19
Term to term rule = + 3

Tip

To find the square numbers work out 1x1, 2x2, 3x3, 4x4 etc

To find the triangle numbers
1, 1+2, 1+2+3, 1+2+3+4

Questions

1) 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

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

Year 7

METRIC UNITS

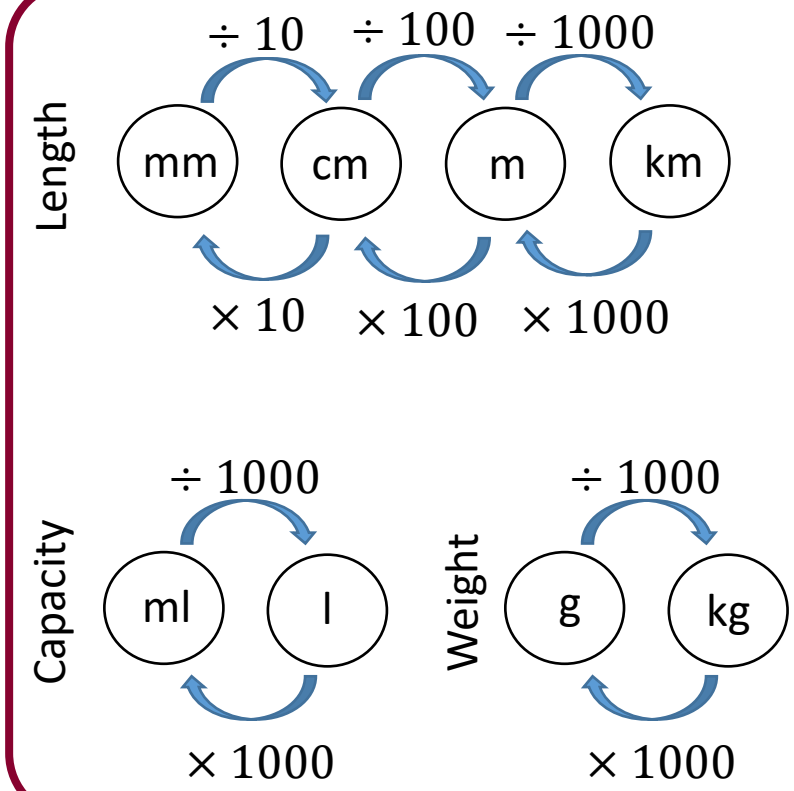
Key Concept

Metric units of **length**:
mm, cm, m, km

Metric units of **weight**:
Mg, g, kg

Metric units of **capacity**:
ml, l

All of these units are **metric** units. They will always use conversions of multiples of 10, eg.10, 100, 1000 etc.



Examples

Convert 600cm to m

Using the chart, to go from cm to m you divide by 100
600 ÷ 100 = 6m

Convert 6.7 litres to ml

Using the chart, to go from litres to ml you multiply by 1000
6.7 x 1000 = 6700

Year 7

Key Words
Length
Weight
Capacity
Metric

Convert each of the following:
a) 12cm into mm
b) 1783g into kg
c) 2.5 litres into ml
d) 6.8m into mm

ANSWERS: a) 120mm b) 1.783kg c) 2500ml d) 6800mm

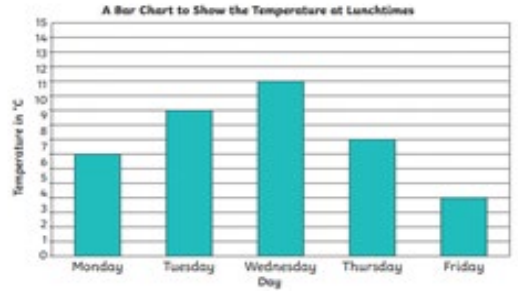
Maths Knowledge Organiser

Statistical Diagrams

Key Concept

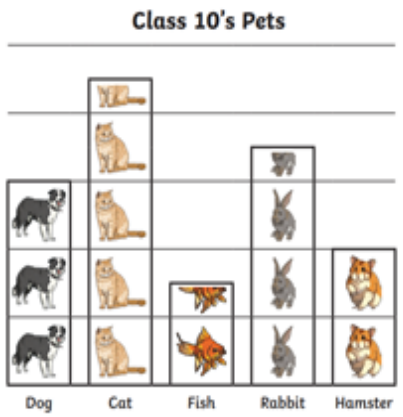
Bar Chart

A bar chart has a horizontal axis and a vertical axis. Bars show the data value of each category. There must be a gap between each bar. The scale of the bar chart is chosen based on the data range.



Pictogram

This graph uses pictures or symbols to represent the data. The pictogram uses one picture or symbol to represent a value.



Tips

Bar charts have gaps between the bars.

Pictograms must have a key

Examples

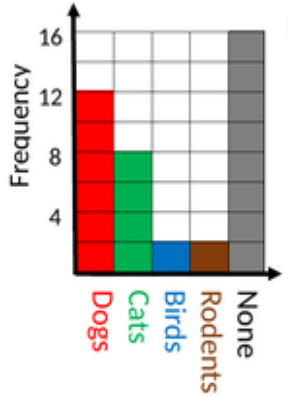
Pictogram

Dogs	😊😊😊
Cats	😊😊
Birds	😊
Rodents	😊
None	😊😊😊😊
Total	

Key 😊 = 4 students

Draw the correct number of symbols to represent the number of students who have cats.

Bar Chart



Pie Chart

Number of students represented by each of the ten sections of the Pie Chart equals:

$40 \div 10 = \frac{4}{}$

Key Words

Frequency: Number of times something happens
Bar chart: Used to display data as series of bars
Pictogram: Symbols used to represent data
Pie chart: Circle where each section represents a proportion of the data

Year 7

Maths Knowledge Organiser

MULTIPLES, FACTORS, PRIMES AND SQUARES

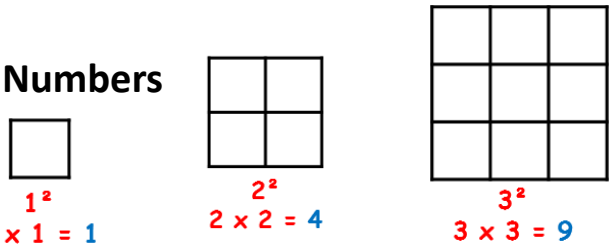
Key Concept

Factors:
Find these in pairs
12: 1 & 12, 2 & 6, 3 & 4

Primes
2, 3, 5, 7, 11,…

Multiples:
Start with the number itself
7: 7, 14, 21, 28, …

Square Numbers



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.
Square: A square number is the result of multiplying a number by itself.

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

Year 7

Tip

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

Questions

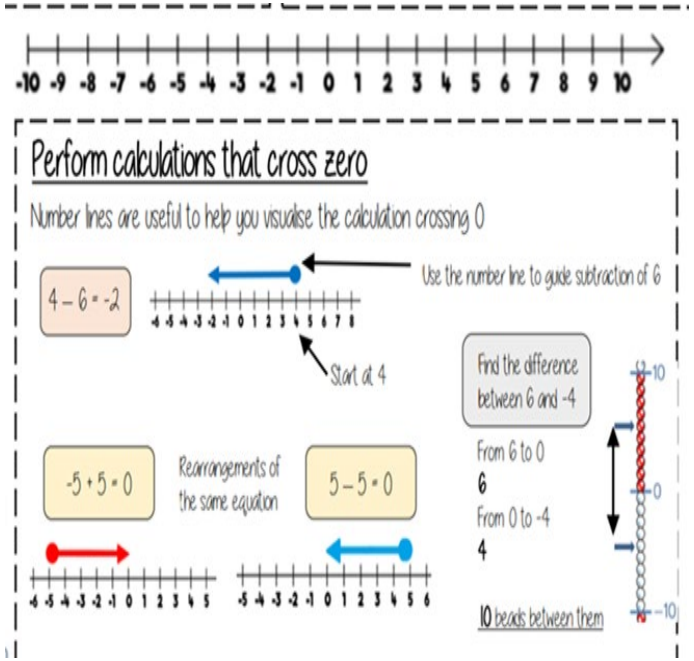
1) List the first 5 multiples of: a) 7 b) 12 c) 50
2) List the factors of: a) 12 b) 15 c) 16
3) a) Find the LCM of 5 and 7 b) Find the HCF of 20 and 16

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

NEGATIVE NUMBERS

Key Concept

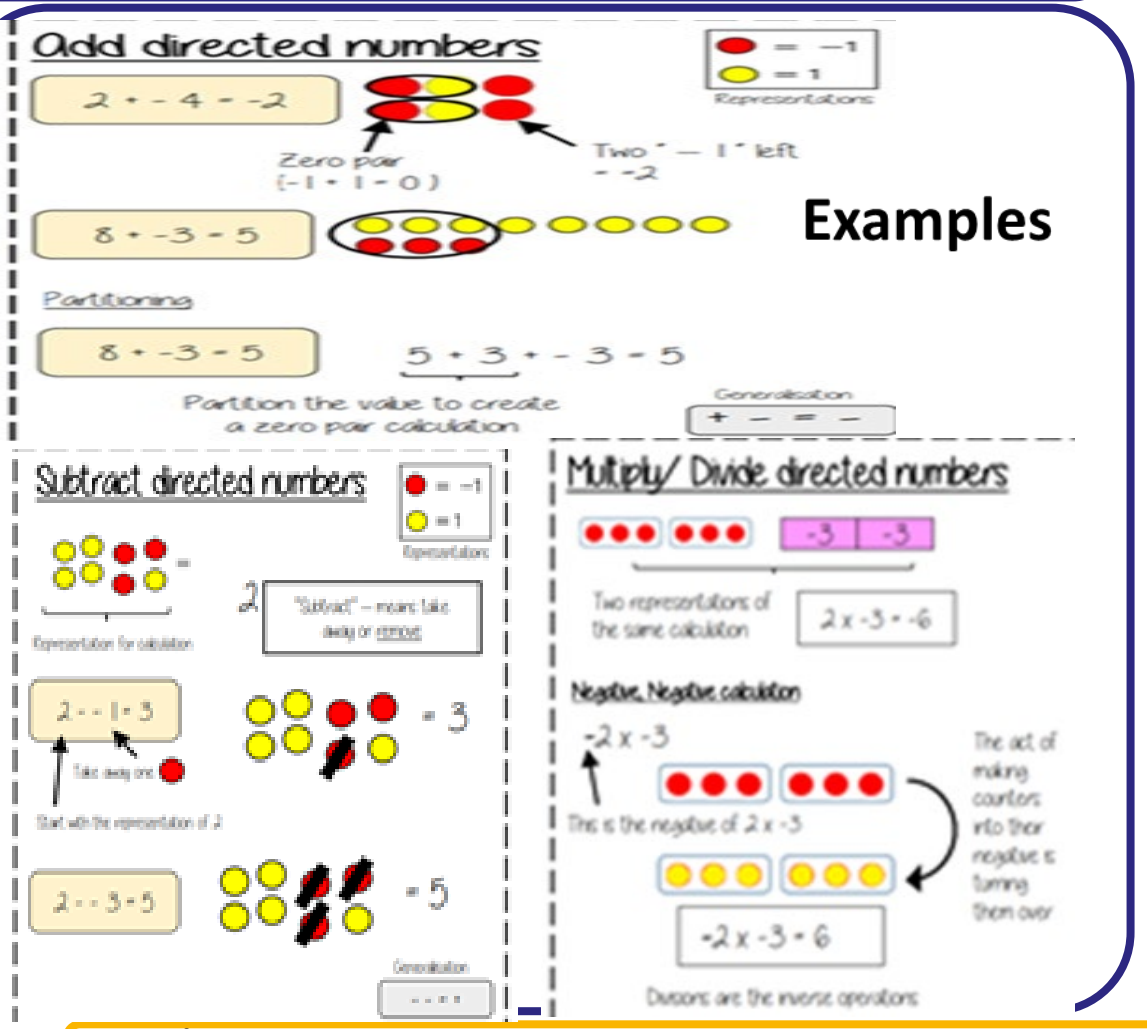


Key Words

Subtract: taking away one number from another.

Negative: a value less than zero.

Examples



Year 7

Tip

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

Questions

1) 3 -7 2) -5 – 6 3) 6 - - 3 4) -7 - -4 5) 5 x -4 6) -6 x – 7 7) -24 ÷ 8

ANSWERS: 1) -4 2) -11 3) 9 4) -3 5) -20 6) 42 7) -3

MFL Knowledge Organiser

Aut 1 yr7 French. Introductions

A KEY Questions

1. Comment t'appelles tu? — What' are you called?
2. Comment s'appelle-il/elle? — What is he/she called?
3. ça va? — How are you?
4. Quel âge as-tu? — How old are you?
5. Où habites-tu ? — Where do you live?
6. Quelle est la date de ton anniversaire? When is your birthday?
8. Et toi? — And you?
9. **Aimes-tu…. ?** — Do you like?

C

s'appeller		To call-oneself
je	m'appelle	I am called …
tu	t'appelles	You are called…
il/elle	s'appelle	He/She is called…
nous	Nous nous appelons	We al called
vous	Vous appelez	You all are called
Ils/elles	s'appellent	They are called

D

AVOIR		
J'	ai	I have
Tu	as	You have
il/elle	a	He/she has
nous	avons	We have
vous	avez	You all have
Ils/elles	ont	They have

B Quel âge as-tu?

J'ai ….ans — **I'm … (years old).**
Il / elle a … ans — **He/She is … (years old).**

Quelle est la date de ton anniversaire? When is **your** birthday?
Mon anniversaire est le __ de … My birthday is THE… OF…

Mon *my*
ton *your*
Son *his/her*

E OPINION VERBS

Aimes-tu…..?

♥♥ **J'adore-** *I love*
♥ **J'aime-** *I like*
✖ **Je n'aime pas-** *I don't like*
✖✖ **Je déteste-** *I hate*
↗ **Je préfère-** *I prefer*
Je pense que- I think that

F

Comment t'appelles-tu?
Je m'appelle _____

Quel âge as-tu?
J'ai _____ ans *(on)*

Quelle est la date de ton anniversaire?
Mon anniversaire est le __ de …

Où habites-tu?
J'habite à _____

Aimes-tu le football?
J'aime _____
mais je n'aime pas _____

G Connectives

Et = and **aussi** - also **mais** = but **parce que** = because

H

1. Bonjour! – hello
2. Au revoir! – goodbye
3. Salut! - Hi
4. Bon soir! – good evening
5. Ça va? – How are you?
6. (très) bien – (very) good
7. Comme ci comme ça – so, so
8. Ça va mal – I'm bad
9. Terrible – awful
10. Je vais – I am going..

J

K

LES NOMBRES 0-31 EN FRANÇAIS

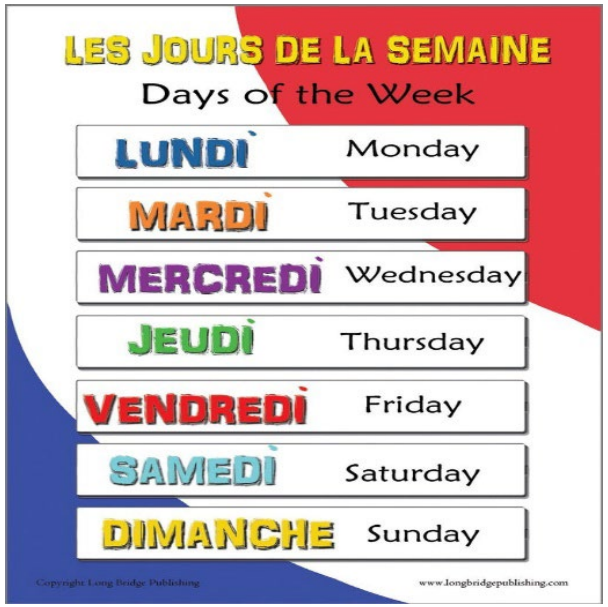
0	zéro	16	seize
1	un	17	dix-sept
2	deux	18	dix-huit
3	trois	19	dix-neuf
4	quatre	20	vingt
5	cinq	21	vingt et un
6	six	22	vingt-deux
7	sept	23	vingt-trois
8	huit	24	vingt-quatre
9	neuf	25	vingt-cinq
10	dix	26	vingt-six
11	onze	27	vingt-sept
12	douze	28	vingt-huit
13	treize	29	vingt-neuf
14	quatorze	30	trente
15	quinze	31	trente et un

L

COGNATES

Le football	La danse
Le tennis	la télé
Le judo	la guitare
Le badminton	la trompette
Le chocolat	la pizza
Le docteur	la dentiste
Le crocodile	la banane
Le girafe	la tomate

I



M

WAGOLL

T O P C A T

Bonjour! Ça va?
Je m'appelle Jean-Luc, j'ai onze ans et j'habite à Paris. Mon anniversaire c'est le quatorze juillet. Quelle-est la date de ton anniversaire? Quel âge as-tu?
Je suis sportif. J'adore le foot et aussi j'aime le rugby, mais je n'aime pas la danse.
Au revoir
Jean-Luc

Mots extras

MFL Knowledge Organiser
AUT 2 la famille/ dans mon sac

A

AVOIR		
J'	ai	I have
Tu	as	You have
il/elle	a	He/she has
nous	avons	We have
vous	avez	You all have
Ils/elles	ont	They have

B

être		
Je	suis	I am
Tu	es	You are
il/elle	est	He/she is
nous	sommes	We are
vous	êtes	You all are
Ils/elles	sont	They are

C Opinions & Pronouns

♥♥	J'adore	☺
♥	J'aime	Ça m'intéresse (it interests me)
✖	Je n'aime pas	Ça m'amuse (it amuses me)
✖✖	Je déteste	☹
↗	Je préfère	Ça m'énerve (it annoys me)
	Je pense que	Ça m'ennuie (it bores me)

E Conncetives

aussi	also
mais	but
Cependant	however
que / qui	which
où	where
Parce que /car	because

F Complexity

Je n'ai pas de.. - I do not have
J'ai besoin de – I need

Je veux avoir _ I want to have
Je voudrais avoir – I would love to have

D Adjectives

English	Fr
Exciting	Passionnant (e)
Great	Génial (e)
Boring	Ennuyeux / se
Annoying	Barbant (e)
Creative	Créatif /ve
Grumpy	Grincheux /se
Relaxing	Relaxant (e)
Active	Actif /ve
Interesting	Intéressant (e)
Fun	Amusant (e)
Shy	Timide
Noisy	Bruyant (e)
Chatty	Bavard (e)

G

Mon frère est barbant

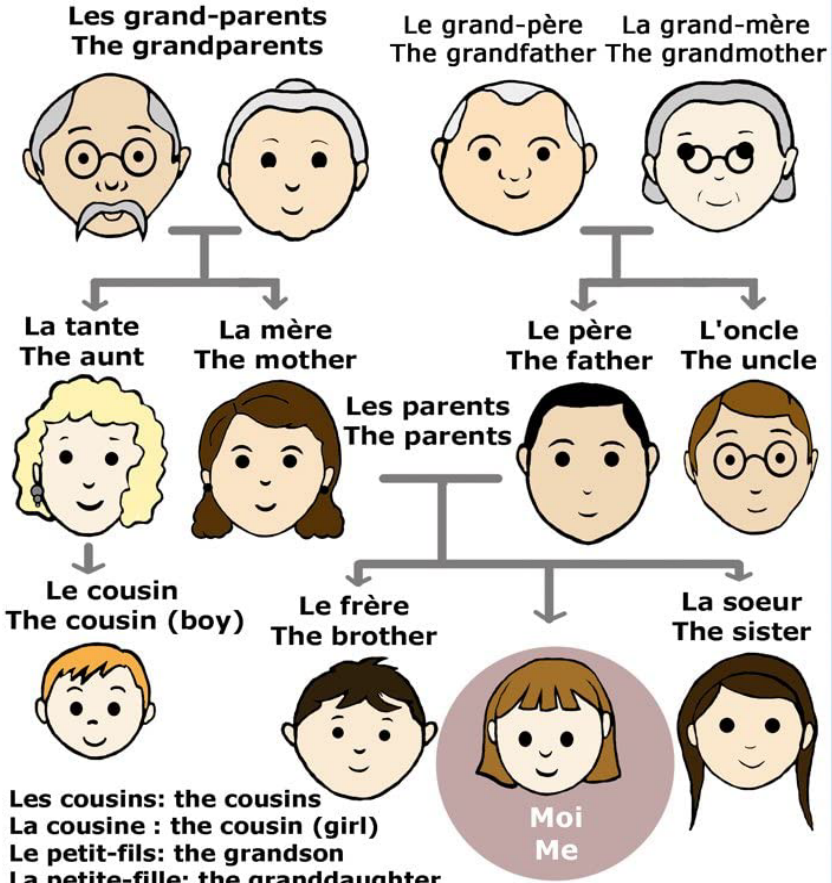
Ma sœur est barbante

Mes frères sont barbants

Mes sœurs sont barbantes

H

La Famille
The Family



Les cousins: the cousins
La cousine : the cousin (girl)
Le petit-fils: the grandson
La petite-fille: the granddaughter
Le neveu: the nephew
La nièce: the niece
L'enfant: the child
Les enfants: the children
Le bébé: the baby
Le garçon: the boy
La fille: the girl
Le mari: the husband
La femme: the wife

Le papa: the dad
La maman: the mom
Le beau-père: the stepfather
La belle-mère: the stepmother
Le fils: the son
La fille: the daughter
Le beau-fils: the stepson
La belle-fille: the stepdaughter

I

Dans mon sac j'ai..

J

K

WAGOLL

T O P C A T

Dans mon sac j'ai deux stylos noirs mais je n'ai pas de gomme. *J'ai besoin* d'une gomme.

Dans ma famille, j'ai une mère et un beau-père. Je n'ai pas de frères mais j'ai une grande sœur qui s'appelle Monica et elle a douze ans. J'aime ma sœur parce qu'elle est active et elle m'amuse. *Je voudrais avoir* un petit frère.

Mots extras

.....
.....
.....
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7A Cells, Tissues, Organs and Systems

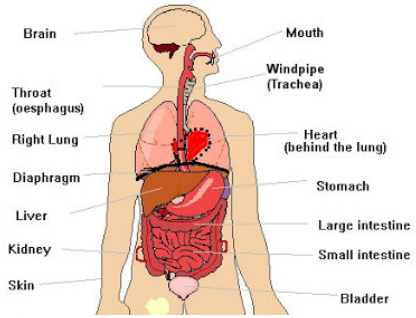
1. Life Processes

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.

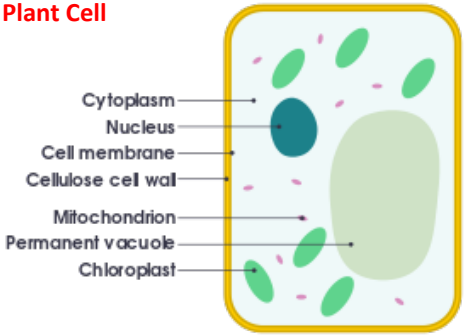
3. Tissues

Tissues	Groups of the same cells doing the same job- make up organs.
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.

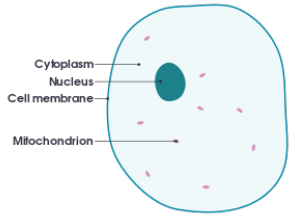
4. Cells

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.

7A Cells, Tissues, Organs and Systems

1. Life Processes – complete the gaps	
L……. P……	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 ……
M……	Being able to move from place to place or move part of themselves.
R……	Being able to make more living things like themselves.
……	Being able to sense and react to things around them.
G……	Being able to increase in s……
R……	Being able to release energy through respiration.
E……	Being able to get rid of waste materials.
N……	Taking in substances (such as food) to help carry out the other processes.

2. Organs – complete the missing gaps	
O……	A part of animals or plants that does an important job- made up of different tissues.
F……	The job or role something has.
B……	Controls the body.
S……	The bodies biggest organ- used for protection and sensing things.

L……	Take in oxygen for respiration and excrete carbon dioxide.
H……	Pumps blood around the body.
L……	Makes and destroys substances.
K……	Clean the blood and produce urine to excrete waste.
……	Stores urine.
……	Breaks up food.
……	Breaks up food and absorbs it.
……	Removes water from unwanted food.
R……	Stores faeces (waste material)

Human Organs – name as many as you can in this box

Fill in the definition	
Leaf	
Stem	
Root	
Photosynthesis	

3. Tissues – use the information for your mind map	
Tissues	Groups of the same cells doing the same job- make up organs.
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.
Create a mini mind map of key facts from section 3 tissues	

4. Cells – complete the gaps and definitions	
Cells	
S……	When something has features that allow it to do a particular job.
Cell Surface Membrane	
N……	Controls the cell.
Cytoplasm	Jelly like substance where chemical reactions happen.
Mitochondria	Where r…… happens.
C……	Make food for the plant using photosynthesis- contains chlorophyll.
Cell W……	Strengthens and supports the cell- made of cellulose.
Vacuole	Storage space filled with cell sap.

lant Cell – draw and label the parts

Animal Cell – draw and label the parts

5. Organ Systems Say the definitions out loud to a partner	
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.

7C Muscles and Bones

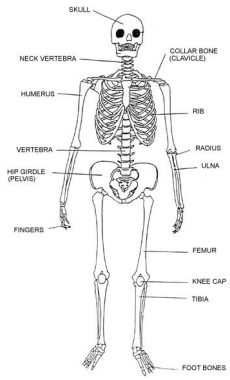
1. Muscles and Breathing

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.

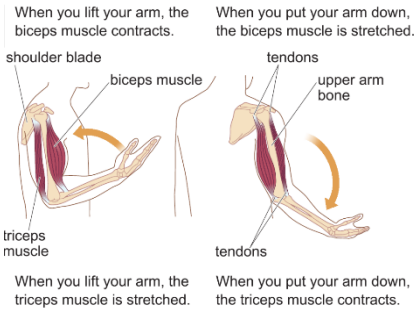
2. Muscles and Blood

Pulse	The feeling of the heart beating that can be felt.
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.
The Human Skeleton	

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.

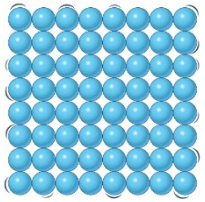
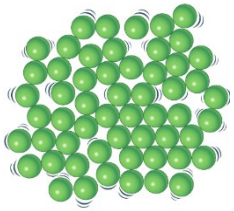
5. Drugs

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.

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.
Solid Particle Diagram	
Liquid Particle Diagram	
Gas Particle Diagram	
Vibrate	To move backwards and forwards.

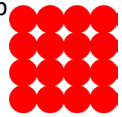
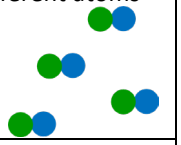
3. Brownian Motion	
Brownian Motion	An erratic movement of small specks of matter caused by being hit by the moving particles that make up liquids or gases.
Trace	Used to plot the movement of a particle and used as evidence for Brownian motion.
Molecule	Two or more atoms joined together in a group.
Nanometre	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 positon.
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 grater and the liquid is pushed up.

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.

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 sends 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.

7I Energy

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

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

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

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

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

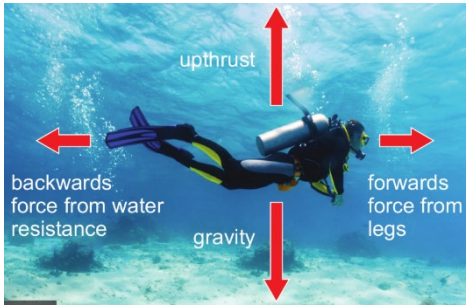
Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.

7K Forces

1. Different Forces

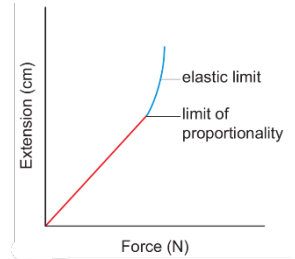
Force	A push or a pull.
Contact Forces	The thing providing the force needs to touch an object to affect it. *Friction, air resistance, water resistance, upthrust*
Upthrust	The force that makes things float.
Air Resistance	A force acting on objects moving through the air.
Water Resistance	A force acting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

Force Diagram



2. Springs

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

How Extension Depends on Force	

3. Friction

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

4. Pressure

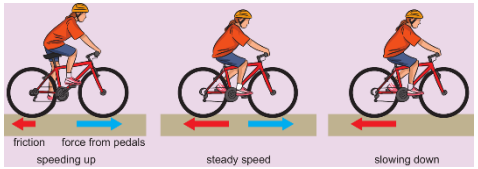
Pressure	The amount of force pushing on a certain area.
The Size of Pressure	Depends upon the size of the force and the size of the area it is pushing on.
Pressure in Sport	Snowshoes spread out weight, reduce pressure and stop people sinking into soft snow.
Pressure in Everyday Life	It is easier to cut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

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

5. Balanced and Unbalanced Forces

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

Force Diagram



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

7K Forces

1. Different Forces – fill in the gaps or blanks	
F……	A push or a pull.
C……. Forces	The thing providing the force needs to touch an object to affect it. *Friction, air resistance, water resistance, upthrust*
U……..	The force that makes things float.
Air R……	A force acting on objects moving through the air.
W……. Resistance	A force acting on objects moving through water.
Non-Contact F……	Forces that can affect an object from a distance. *Gravity, static electricity, magnetism*
	A force that pulls objects downwards.
S…… Electricity	A force that attracts things.
Magnetism	
Newton (N)	
W……	The force of gravity pulling on something- measured in Newtons (N)
M……	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 – complete a balanced force diagram

2. Springs	
S……	Made longer
C……	Made shorter
S……	Made from coils of wire,
E……	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 E……	Hang a spring from a clamp and measure its length. Add increasing numbers of masses and measure the extension each time.
	Extension is proportional to the force applied.
Proportional	
Limit of Proportionality	The point at which the extension and force are no longer proportional.
Elastic L……	The point at which the spring cannot return to its original length.
Force Meter	

How Extension Depends on Force Draw and label a graph	

3. Friction	
Friction	
I…… Friction	Using certain materials like rubber (used on racing cars to stop them from sliding off the road).
R…… Friction	Make surfaces smooth or by using lubricants such as oil or grease.
Lubrication	
Friction D……	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 Size of Pressure	
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	

P……	The units for measuring pressure. 1Pa = 1N/m^3

5. Balanced and Unbalanced Forces	
B…… F……	Two forces of the same size acting upon an object in opposite directions. Balanced forces will not change the speed of a moving object.
U…… 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.
S……	Not moving- stationary objects have balanced forces acting on them.

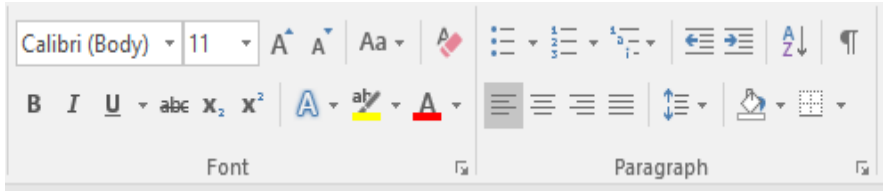
Force Diagram – complete a balanced and unbalanced force diagram

Balanced

Unbalanced

Computer Science Knowledge Organiser

Year 7 Using media



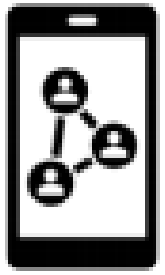
Formatting can be using tools like **bold**, *italic*, underline, changing colour, font style and size, alignment and many more.

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

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

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

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



Is it real? Is it true?

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

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

· Check whether other sites are saying the same thing,

· Don't trust all the stories and all pictures

· Check for facts not rumours

· Check any citations or references

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

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

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

It is the law

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

©opyright

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

creative commons

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

Keywords

Format
Source
Licensing
Audience
Plagiarism
Copyright
Citation
Blog
Credibility
Referencing
Appropriat

Computer Science Knowledge Organiser

Year 7 Modelling Data

Spreadsheets

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

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

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

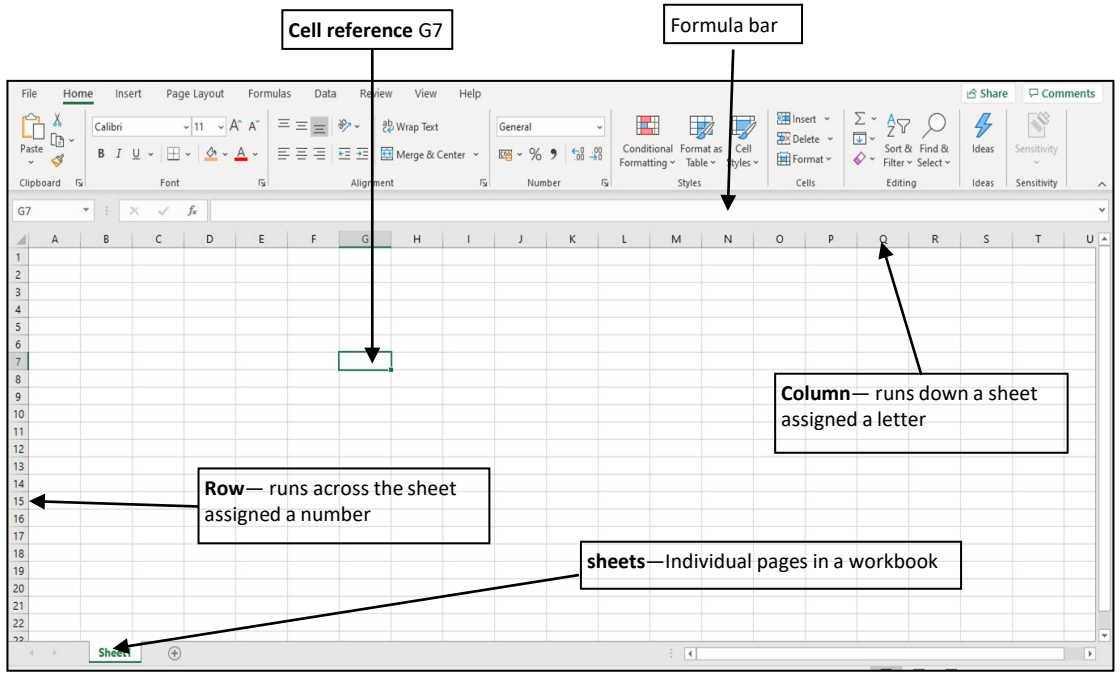
The tool bar ribbon at the top allows for **formatting** of the data. Changing colour, size, style etc

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

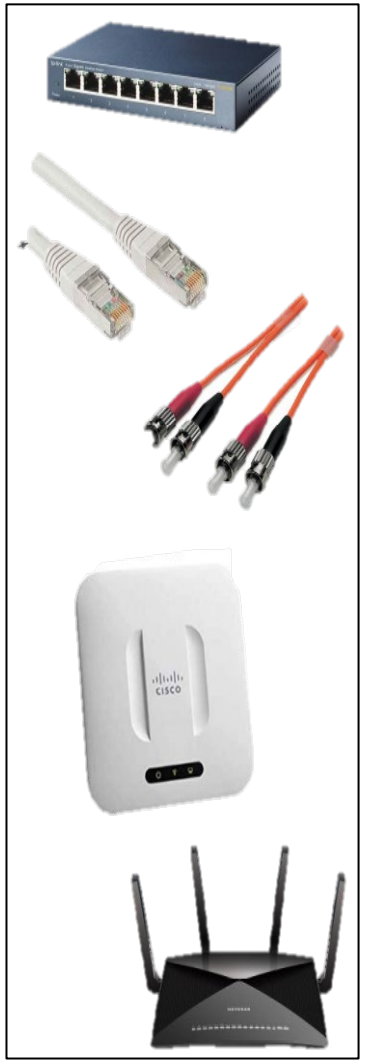
Each box on a spreadsheet is called a **cell** and they hold data.
Each **cell** has a unique **cell reference** to identify its location.
You can fill data automatically by using AutoFill

Computer Science Knowledge Organiser

Year 7

Networks

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



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

Wired and **Wireless** data transmission

A computer network can be either wired or wireless.

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

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

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

Internet services

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

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

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

Computer Science Knowledge Organiser

PROGRAMMING 1 - SCRATCH

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

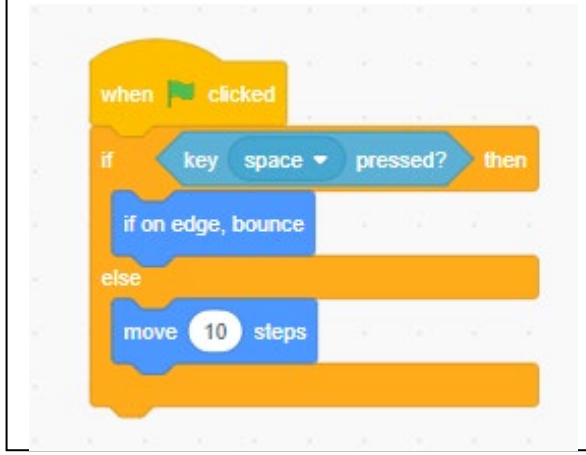
Key Words	
Abstraction	Identify the important aspects to start with
Algorithm	Precise sequence of instructions
Computational thinking	Solving problems with or without a computer
Debugging	Looking at where a program might have errors or can be improved
Blocks	Scratch bricks that we can use to code algorithms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

SCRATCH

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

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

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



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

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

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

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

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

Computer Science Knowledge Organiser

DIGITAL SKILLS

IMPACT OF TECHNOLOGY

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

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

STOP cyberbullying

PASSWORDS are like underpants

Never share them | Change them often | Keep them Private

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

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

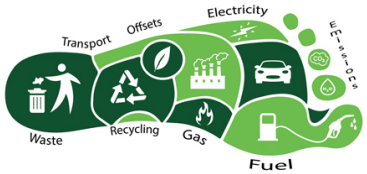
Using technology appropriately, carefully and positively leads to positive digital citizens.
Digital citizenship to the responsible use of technology by anyone who uses computers, the Internet and digital devices to engage with society on any level.

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

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

Design Specification – Key Questions

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



Key Words and Definitions

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

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

Design Process

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

Renewable Energy Sources

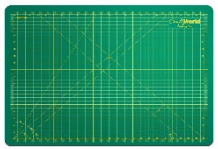
A renewable energy source is quickly replaced by natural means and will not run out. Examples include wind power, solar power and hydroelectric power

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

How can we reduce our impact on the environment?

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

Tools and Equipment

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

Health & Safety

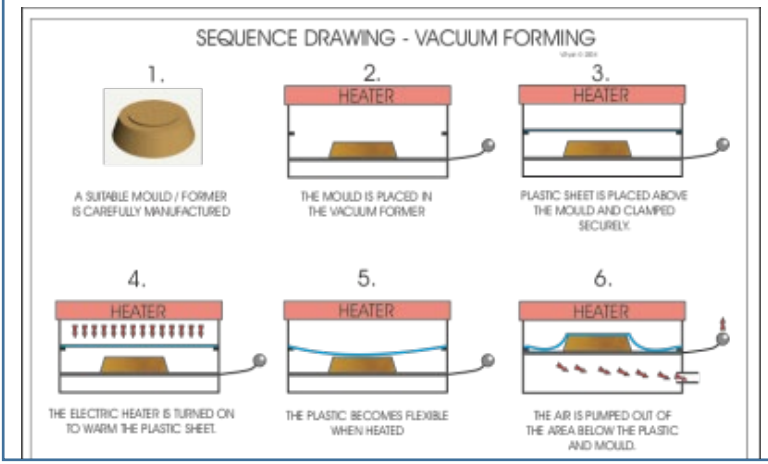
Follow all verbal and written safety instructions, safety signs and floor markings.
Wear an apron and remove any loose clothing or jewellery. Tie back long hair.
Always walk – never run
Do not crowd other people
Reports any accidents that occur immediately to the teacher.
Do not leave anything on the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

Most polymers are synthetic. This means they are man-made. They are usually made from crude oil which can be obtained by drilling underground or under sea level. Crude oil is a non-renewable resource- this means that it is not replaced as it is used.

Thermoplastic polymers can be reshaped when heated. They can also be recycled.

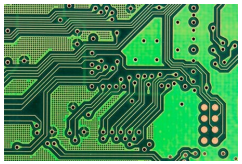
Thermosetting polymers cannot change shape when reheated and cannot be recycled. They have extra links between the individual chains of polymer. These links stop the chains being able to move, meaning that thermosetting polymers are typically stronger and more rigid than thermoplastics polymers.

Vacuum Forming is a process that uses heat and air pressure to shape a thermoplastic. It can be used to manufacture **blister packaging.**



Thermoplastic Polymers

Type	Properties	Uses
HDPE *High Density Polyethylene*	Strong and stiff	Pipes, buckets, bowls
PET *Polyethylene Terephthalate*	High strength and good toughness. Heat resistant	Drinks bottles and food packaging
HIPS *High Impact Polystyrene*	Reasonable strength and good toughness	Packaging
Acrylic	Can be transparent Hard wearing and tough	Plastic windows, bath tubs



Thermosetting Polymers

Type	Properties	Uses
Epoxy Resin	High strength, stiff and brittle Excellent temperature resistance	Printed circuit boards, cast electrical insulators
Melamine Formaldehyde	Strong, stiff and hard Resistant to many chemicals and stains	Laminate coverings for kitchen worktops
Urea Formaldehyde	Good strength, rigid and hard Warm to the touch	Plugs and plug sockets

Sources of Timber

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

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

FSC FORESTS FOR ALL FOREVER
Forest Stewardship Council®

Types of Timber

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

Hardwoods

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

Softwoods

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

Manufactured Boards

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

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Hygiene and Safety

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

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

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

Preparing food safely:

Cleaning

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

Cooking

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

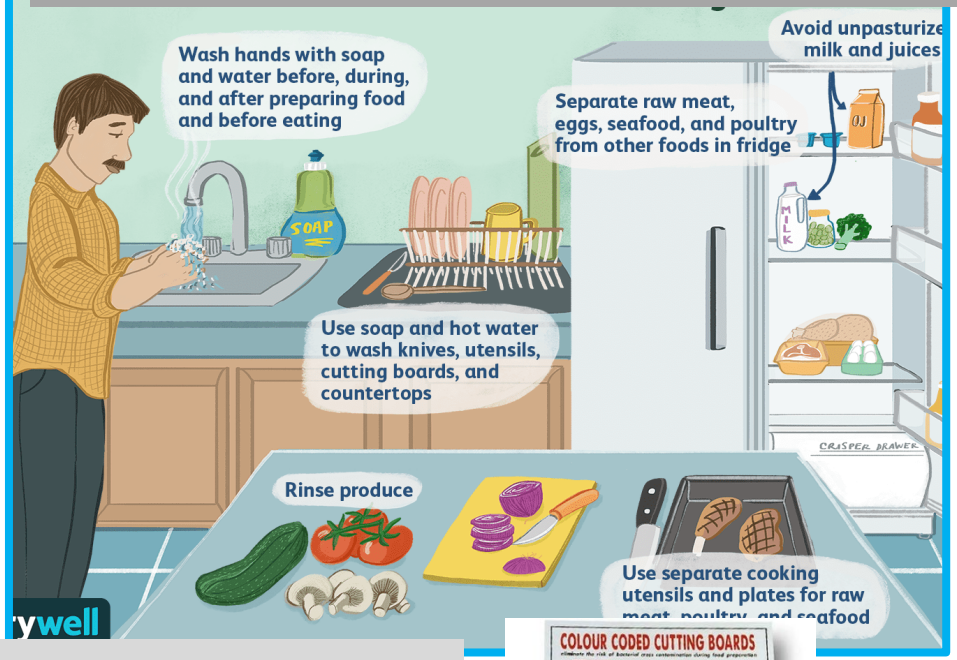
Chilling

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

Cross Contamination

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

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



Preventing cross contamination

Types of Hazards

Physical: fly, hair, broken glass, fingernails, plaster
Biological: bacteria such as E. coli, Salmonella, Staphylococcus aureus. Bacillus cereus, Campylobacter.
Chemical: pesticides, herbicides, cleaning chemicals

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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**

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

CAN CAUSE FOOD SPOILAGE:

ENZYMES: RIPENING; BROWNING; prevented by adding an acid; prevented by blanching and freezing

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

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

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

Storing and Preparing Food Safely

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

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

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

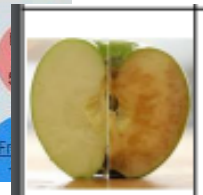
Prevent Cross-Contamination
- Clean utensils and surfaces
- Clean hands thoroughly
- Watch out for pests
- Keep high risk food away from other food
- Follow safety & hygiene rules

LOOK COVER WRITE CHECK

LOVE FOOD LOVE SCIENCE

Alkali | Alkali+Acid | Acid

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



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

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

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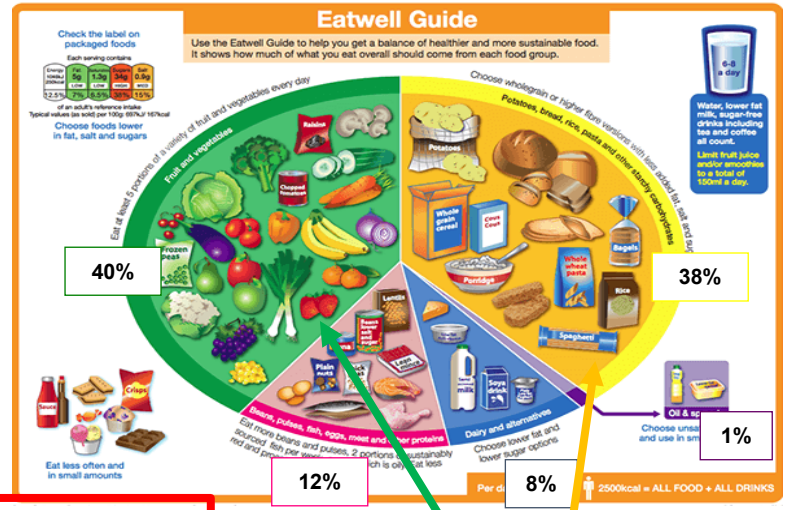


Occasional treats: Foods high in fat and sugar

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.

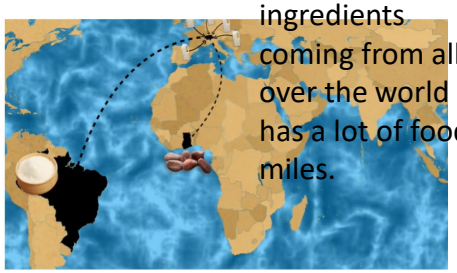
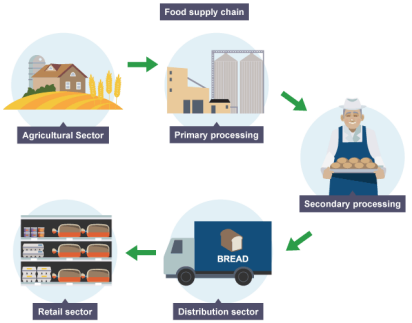
LOOK COVER WRITE CHECK

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

Food Technology Knowledge Organiser

Food miles and the environment

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

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

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

Food Technology Knowledge Organiser

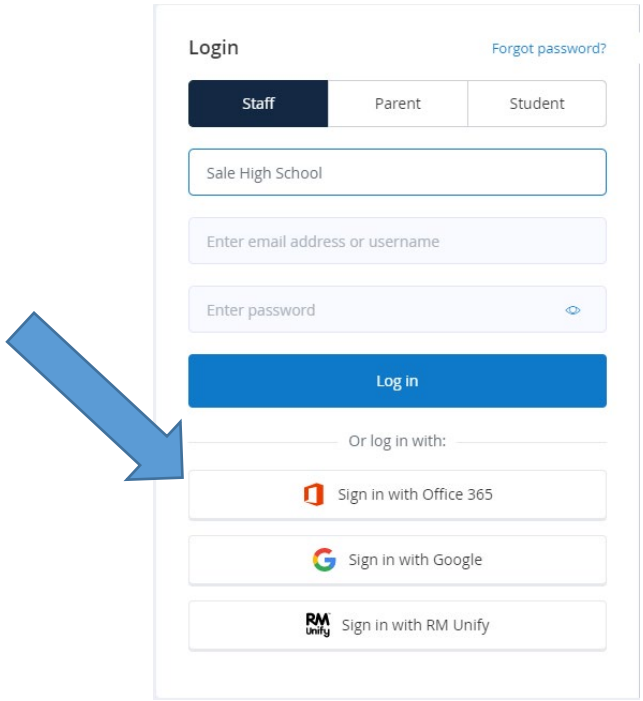
Vitamin facts

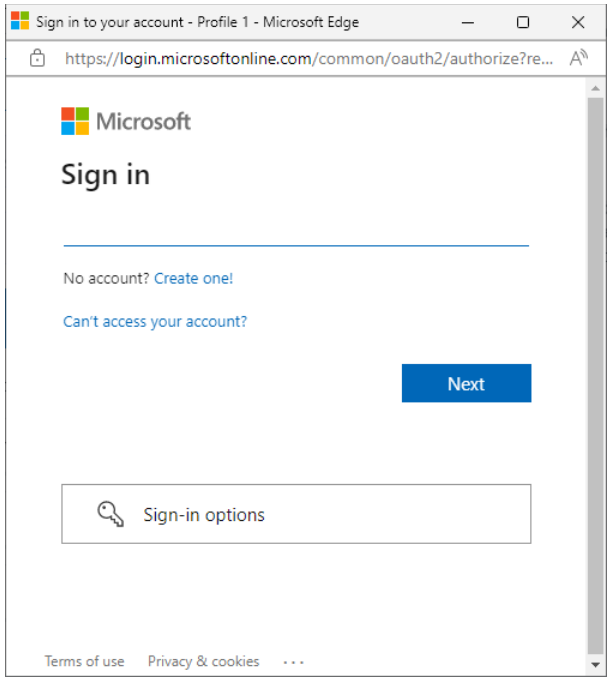
Vitamin	Foods	Functions	Deficiency
Vitamin A	Cheese, milk, yoghurt eggs, oily fish, yellow, red and green (leafy) vegetables, such as spinach, carrots, sweet potatoes and red peppers yellow fruit, such as mango, papaya and apricots	Fighting infection, better vision, keeping skin healthy	Night blindness
Vitamin D	Our body creates this from direct sunlight but it is in: oily fish, red meat and egg yolks, liver	Helps keep bones, teeth and muscles healthy	bone deformities such as rickets in children, and osteomalacia in adults.
Vitamin E	Vegetable oil, olive oil, nuts, seeds, cereals	Healthy skin, eyes and immune system	rare
Vitamin K	Green vegetables, vegetable oil, cereals	Healing wounds	Rare. Problems with blood clotting

Satchel:one log in guide

How to Log into satchel:one

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





2. Type in your school email address.

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

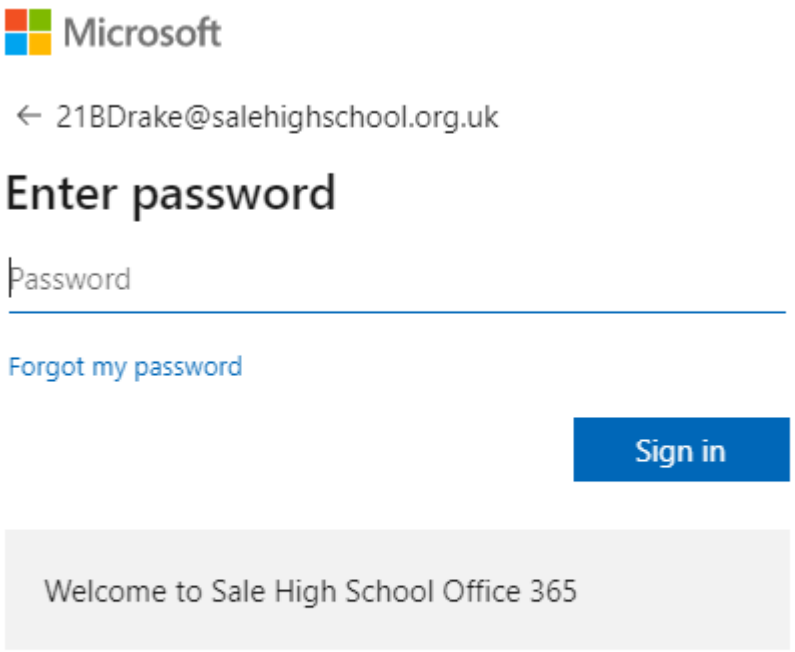
Year Started	School Year
23	7
22	8
21	9
20	10
19	11

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

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

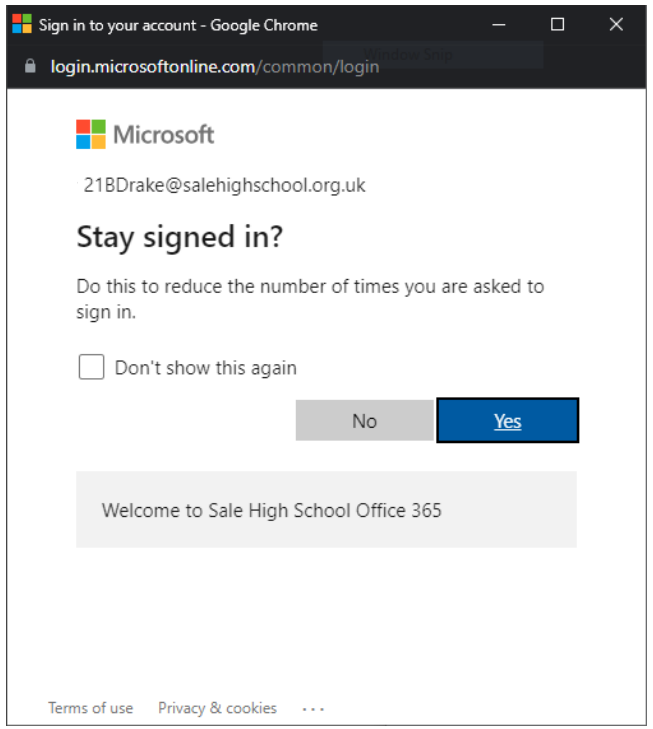
Satchel:one log in guide

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

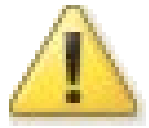


4. Finally, Office 365 asks about signing in.

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



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



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