



KNOWLEDGE ORGANISER

NAME & FORM

YEAR 7
AUTUMN TERM



Key features of Autobiography Writing:

- Non-fiction
- Written in first person (I, we, our, my)
- Describes 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

Autobiography

Writing your own account of your life.

Spelling BEE

1. Autobiography
2. Adjectives
3. Imagery
4. Creative
5. Visualise
6. Simile
7. Adverbs
8. Independent
9. Personal
10. Non Fiction



Tips for learning spellings:

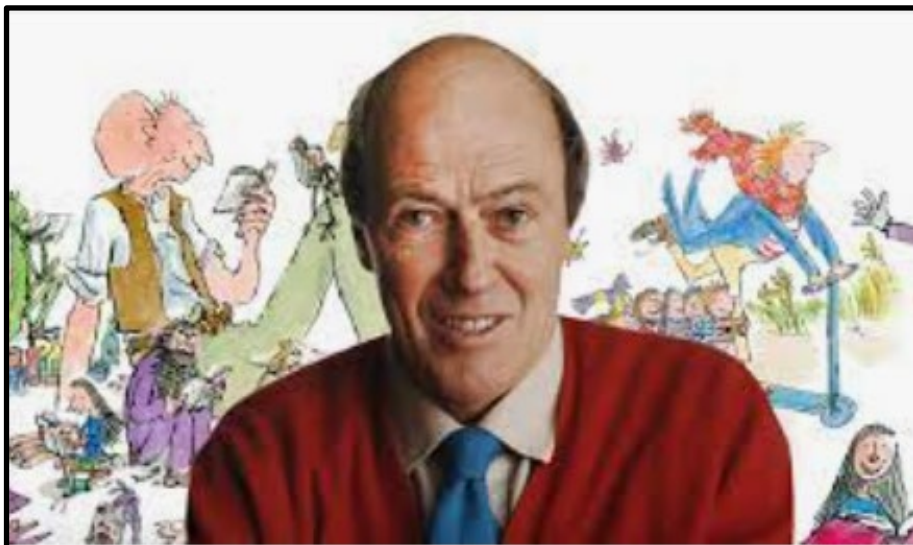
1. Look – Say – Cover – Write – Check
2. Practise by writing out the full word and saying the letters aloud. Then in turn take one letter off the end until you are only writing one letter but saying the others aloud.

Author → Autho_

→ Auth__ →

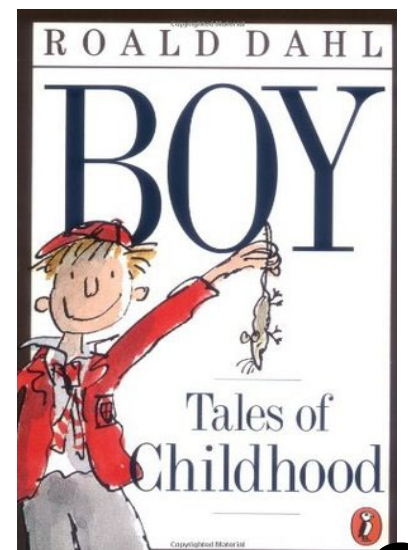
Aut___ → Au_____ →

A_____



Roald Dahl

Roald Dahl was a British popular author of children's literature and short stories, a poet. 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, macabre, often darkly comic mood, featuring villainous adult enemies of the child characters. 'Boy' is his autobiography.





English Knowledge Organiser



Key Skills to use in our own writing, or to analyse in a text:

Adjectives: describe a noun

Synonyms: alternative words with the same meaning

Adverbs: describe how an action is completed

Similes: when one thing is compared to another using the words 'like', or 'as'

Metaphors: when you make a comparison but it is not literally true.

Can you think of your own examples for each of the above?

Adjectives:

Synonyms:

Adverbs:

Similes:

Metaphors:

PEAR Analysis Sentence Starters:

POINT:

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

EXAMPLE:

For example "..."

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

ANALYSIS:

This suggests/this shows...

It could also suggest that...

The word _____ could highlight...

Another word that supports this is _____ because...

READER:

As a reader I understand...

TIF – Phrases for analysis

This (technique) exemplifies...

One interpretation could be... whilst another interpretation is...

This example proves...

This demonstrates...

The technique illustrates...



Key themes in Fantasy Literature:

- Good vs Evil
- Change
- Heroes/ Villains
- Magic
- Identity
- Conflict
- Quest for power/Knowledge



Key purposes of Fantasy Literature:

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

Tier 2 Vocabulary

- **Enchanted** = filled with delight or charmed
- **Conflict** = a battle or war between two sides
- **Disastrous** = highly damaged, ruined or destroyed
- **Villainous** = done with an evil intent

Tier 3 Vocabulary

- **Analysis** = the examination of the meaning of words or techniques
- **Adjective** = a word used to describe a noun. E.G. 'scarlet', 'magnificent' or 'disastrous'
- **Imagery** = the use of words to create a picture in the reader's mind
- **Figurative Language** = metaphorical language used to create an image

Good Vs Evil: The battle between good and evil is very important in the world of fantasy – how will the hero save the day? What monsters or villains will they cross on their journey?

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 creatures created and much magic to be seen.



English Knowledge Organiser



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

Fantasy Recommendations:

Why not look for these in the library for your Accelerated Reader book this term?

- ✚ *A Monster Calls by Patrick Ness*
- ✚ *Percy Jackson and the Lightning Thief by Rick Riordan*
- ✚ *The Hobbit by J.R.R. Tolkien*
- ✚ *The School of Good and Evil by Soman Chainani*
- ✚ *All Souls (A Discovery of Witches) by Deborah Harkness*
- ✚ *Twilight by Stephenie Meyer*
- ✚ *The Time Traveller's Wife by Audrey Niffenegger*
- ✚ *Children of Blood and Bone by Tomi Adeyemi*
- ✚ *Stardust by Neil Gaiman*
- ✚ *Mythos by Stephen Fry (Fiction)*
- ✚ *Who Let the Gods Out by Maz Evans*

PEA Sentence Structures:

POINT:

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

EXAMPLE:

For example "..."

OR

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

ANALYSIS:

This suggests/this shows...

It could also suggest that...

The word _____ could highlight...

Another word that supports this is _____ because...

As a reader I understand...

TIF – Phrases for analysis

This (technique) exemplifies...

One interpretation could be... whilst another interpretation is...

This example proves...

This demonstrates...

The technique illustrates...

Spelling BEE



1. Convention
2. Genre
3. Fantasy
4. Analysis
5. Author
6. Magic
7. Character
8. Heroic
9. Villainous
10. Adventure

Tips for learning spellings:

1. Look – Say – Cover – Write – Check
2. Practise by writing out the full word and saying the letters aloud. Then in turn take one letter off the end until you are only writing one letter but saying the others aloud.

Author → Autho_ → Auth__ →
Aut___ → Au_____ → A_____

Florian Nicolle

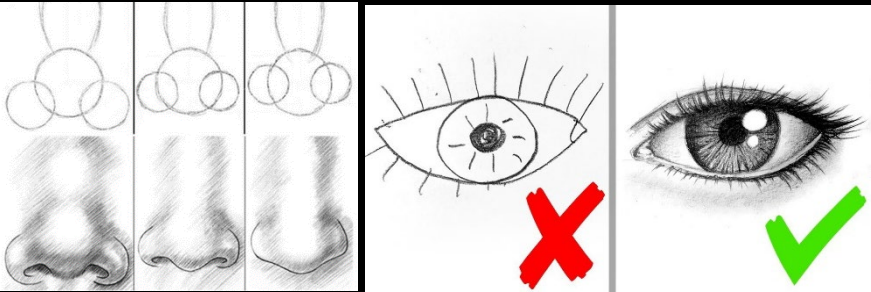


Key features:

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.

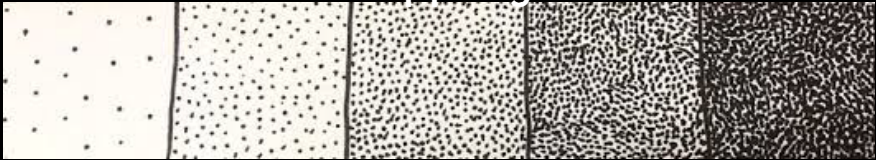
KEY WORDS – test yourself! (definitions on the next page)
 Mark making- Hatching- Crosshatching- Stippling- Scumbling- Blending- Layering – Texture- Accuracy- Proportion- Neutral colours.



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.

Physical Skills and Techniques

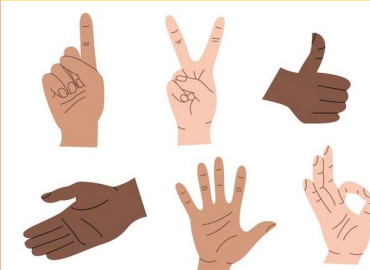


Body Language

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

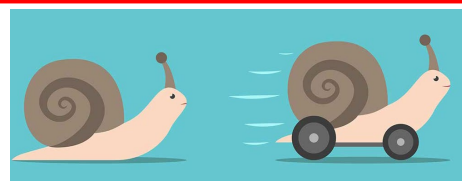



 **Volume**

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 through 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



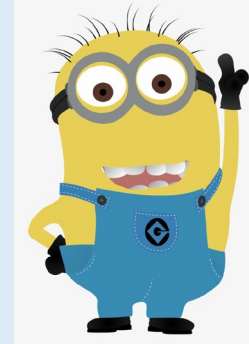
HERO – Moral, strong, handsome



DAMSEL – Moral, innocent



VILLAIN – Evil, manipulative



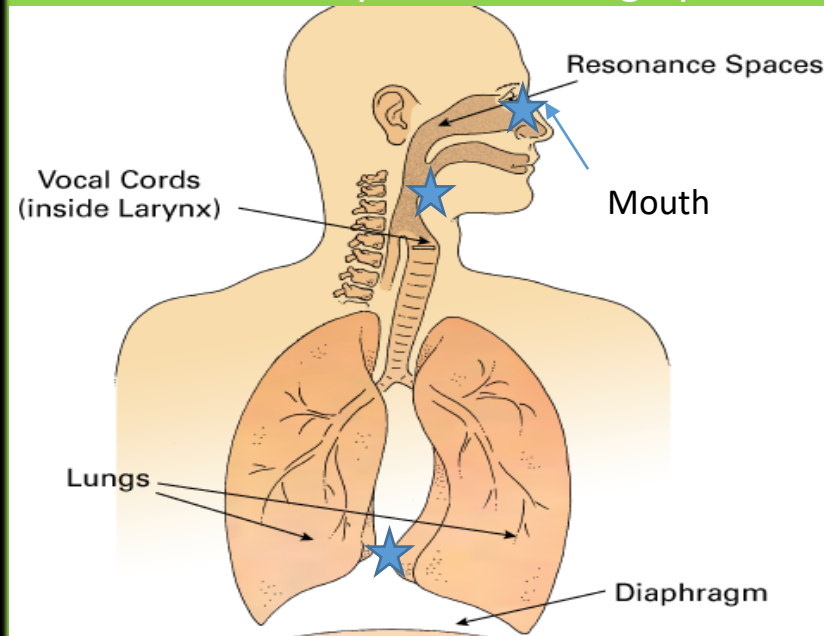
FOOL – Villains accomplice, idiotic, funny



FAITHFUL SIDEKICK – Helps the hero, brave



The Anatomy and warming up



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



SINGING SKILLS

Year 7 Autumn Term

DYNAMIC MARKINGS

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

How to warm up the three areas

Mouth:

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

Vocal cords/ Larynx:

- Rollercoaster
- Humming/ Singing exercises

Diaphragm and Lungs:

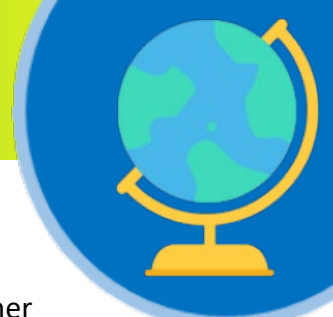
- Controlled breathing exercises/square breathing

KEY WORDS AND MEANINGS:

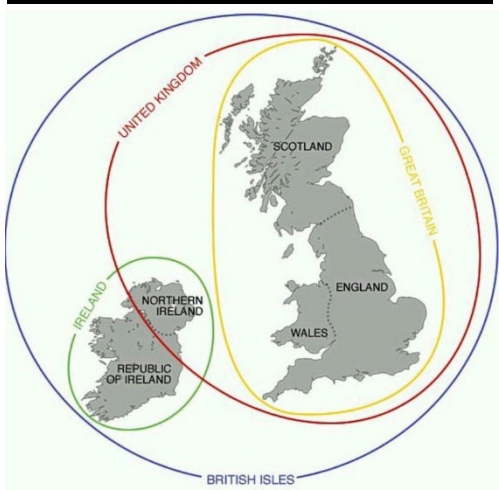
Vocal Range	The range of pitches that each individual human voice can reach.
Intonation	The variation in the pitch level of the voice (the ups and downs), but in such languages as English, stress and rhythm are also involved. Intonation conveys differences of expressive meaning (e.g., surprise, anger,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



Geography Knowledge Organiser



Year 7: Foundations of Geography

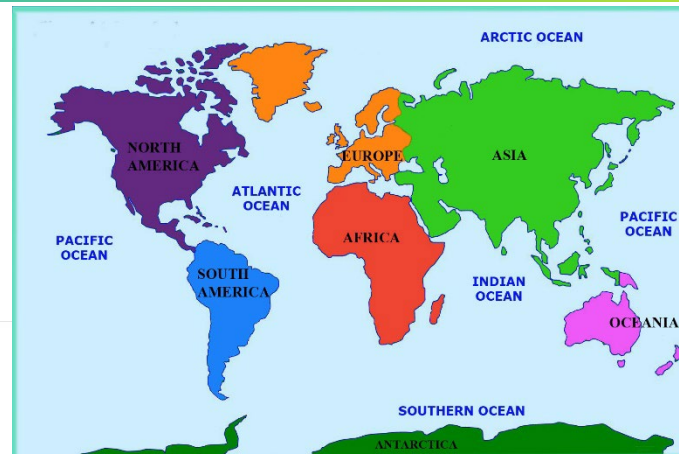


The UK includes the countries of Northern Ireland, Wales, England and Scotland. It is in the continent of Europe.

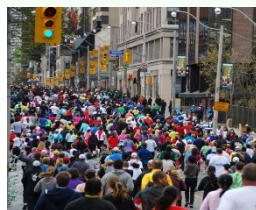
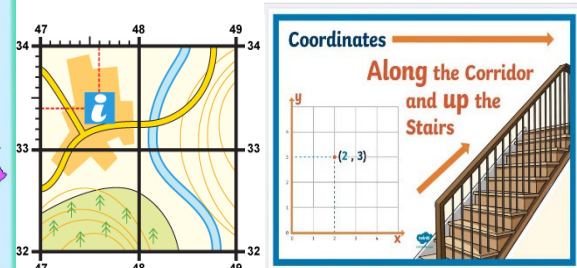


A continent is a large landmass that is split up into countries. There are seven continents. These are: North America, South America, Europe, Africa, Asia, Oceania and Antarctica.

Map of Major UK cities



When reading grid references always read the bottom left corner



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

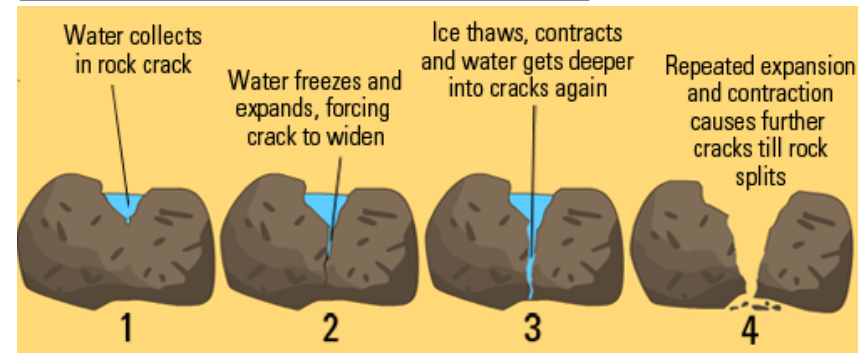


Physical geography- this is geography that relates to the nature

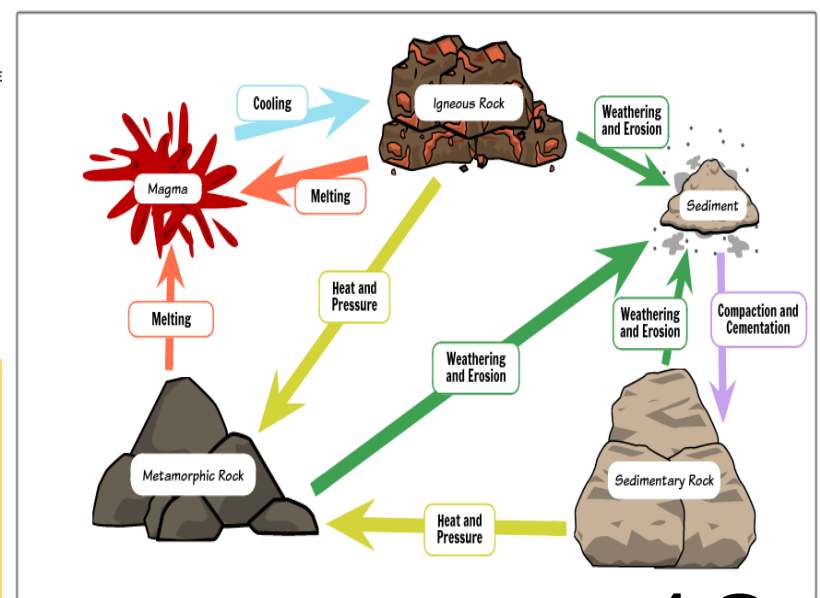


Population is all people living within a particular place. In geography, when we refer to population, we simply mean people.

Freeze-Thaw Weathering



The Rock Cycle





Geography Knowledge Organiser



What did early settlers look for in a site?

A defensible site, e.g. a hilltop or river bend, to protect from attackers

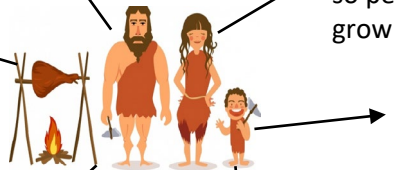
Good farm land with fertile soils, so people could grow crops

Flat land, to make building easier and safer

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

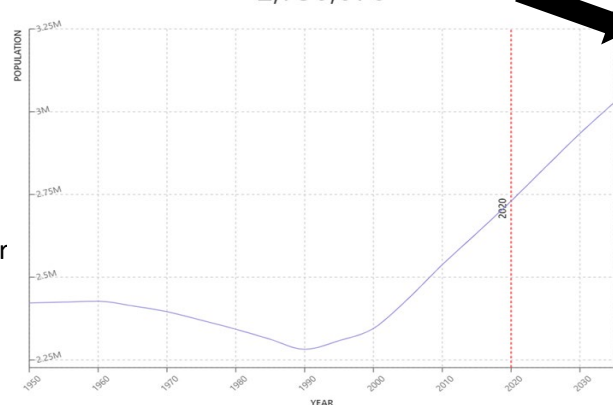
A local water supply for drinking, washing, cooking and transport

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



Manchester Population 2020

2,730,076



Describing and explaining Manchester's population:

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

What are urban areas?

An urban area can be described as a built up area e.g. towns and cities



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

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.



A Megacity is a very large city, typically one with a population of over ten million people, for example, Mumbai and Tokyo

Lagos, Nigeria

Mumbai, India

	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 CO2 emissions, enhance air quality, and protect natural resources.



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 keep 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.



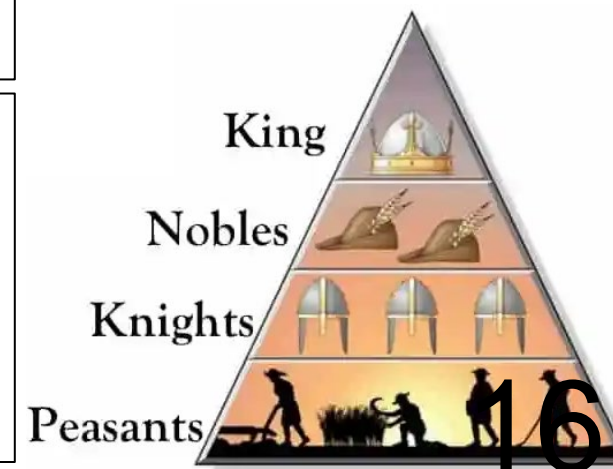
Luck

- 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

Does God Exist?

Atheist- someone who does not believe in God
Agnostic- when you're not sure if God exists.
Theist- believer in God.
Monotheism- belief in one God.

What is God like?

Eternal - without beginning or end, timeless.
Creator- start point of the Universe and life on Earth.
Transcendent – beyond this world, God cannot fit into our categories.
Omnipotent- all powerful
Omniscient- all knowing.
Omnibenevolent- all loving/all good.

Cosmological/First Cause Argument for the Existence of God

St Thomas Aquinas

St Thomas Aquinas (1225-1274 CE) argued that **all things that happen have a cause**, for example when a football travels through the air we know it is because a player kicked it but if we were to go further back we might say that player kicked the ball because the last player passed it to them and the player before passed it to them and so on. **Aquinas argued all the causation and motion we observe can be traced back to God**, who is an uncaused cause or unmoved mover.

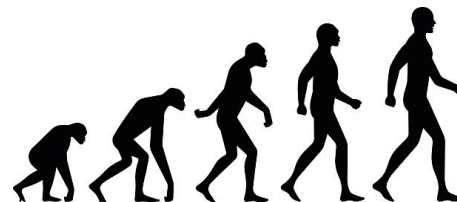
YEAR 7 AUT 1 - DOES GOD EXIST?

What is Humanism?

Humanism is the **rejection** of **Religious teaching** in favour of **reason**. Humanists may have a variety of different beliefs but they are united by the belief that it is possible to **live an ethical life without Religion**. They base ethical decisions on **Empathy & Reason**. They also believe that this is the only life that we have and therefore we should focus on being happy in this life rather than in an afterlife.

Richard Dawkins

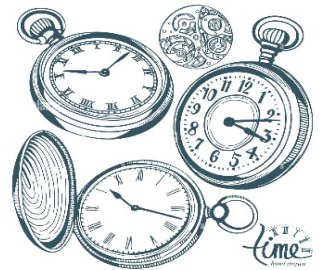
Richard Dawkins argues that science explains and proves the big bang theory and that humans and life evolved on Earth. This contradicts religious stories about creation.



Teleological/Design Argument for the Existence of God

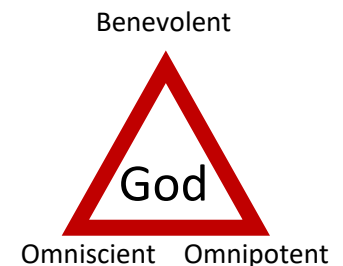
William Paley

William Paley (1743-1805) **compared the design of the universe to finding a watch**. He argued that if you were walking and found a watch lying on the grass and saw how complicated it was you would have to assume someone made it. Even if you had never seen a watch before as each part works together to tell the time you would still assume that someone had designed it. Paley compared this to the design of the world. **Someone who looks at the universe must conclude that there is a designer because of how perfectly the universe fulfils its function of sustaining life.**



David Hume

David Hume argues that God cannot be both omnipotent and omnibenevolent while evil exists.





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.

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.

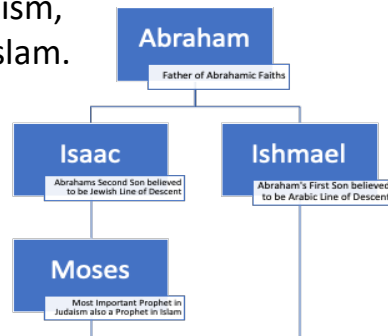
Shabbat

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**.

YEAR 7 AUT 2 -What is Judaism?

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.







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

$$48 + 36 = 84$$



$$74 - 27 = 47 \text{ worked by counting back:}$$



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

$$\begin{array}{r} 345 \\ - 28 \\ \hline 17 \end{array}$$

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

$$56 \times 27$$

\times	20	7	
50	1000	350	1350
6	120	42	162
			1512
			1

$$\begin{array}{r} 97 \\ 3 \overline{) 2921} \end{array}$$

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

- a) $49 + 37$ b) $125 + 69$ c) $5.6 + 24.8$
- a) $64 - 28$ b) $134 - 57$ c) $16.2 - 9.5$
- a) 7×146 b) 34×67 c) 2.9×7.2 4) a) $294 \div 7$ b) $192 \div 6$

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

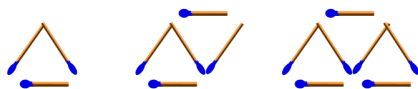


SEQUENCES

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.

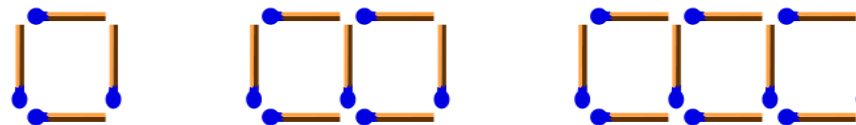
Tip

To find the square numbers work out 1×1 , 2×2 , 3×3 , 4×4 etc

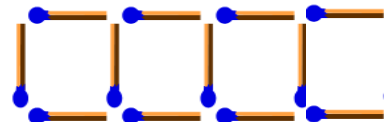
To find the triangle numbers

1, $1+2$, $1+2+3$, $1+2+3+4$

Examples



Next pattern is:



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

Next two terms are 16 and 19

Term to term rule = + 3

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

Year 7

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



METRIC UNITS

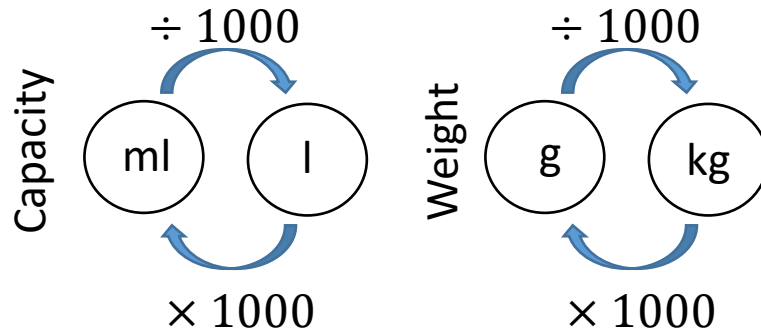
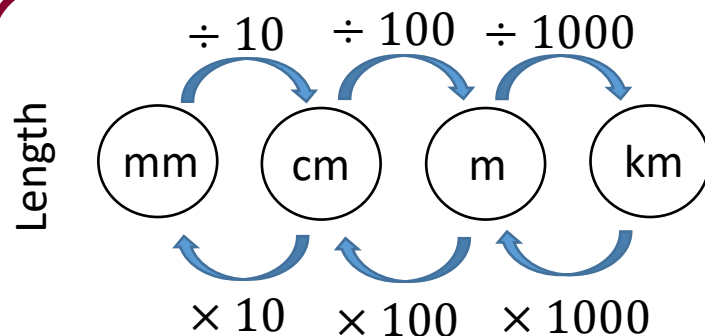
Key Concept

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
 $600 \div 100 = 6\text{m}$

Convert 6.7 litres to ml

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

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



Maths Knowledge Organiser

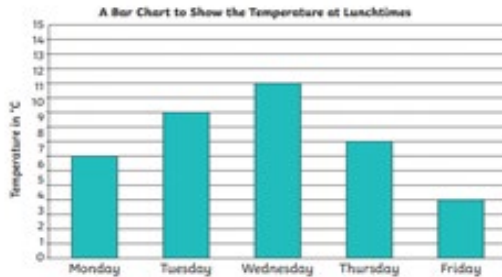
Statistical Diagrams



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.

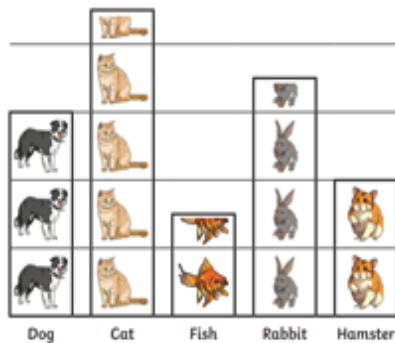


Pictogram

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

Class 10's Pets

□ = 4 Children



Tips

Bar charts have gaps between the bars.

Pictograms must have a key

Examples

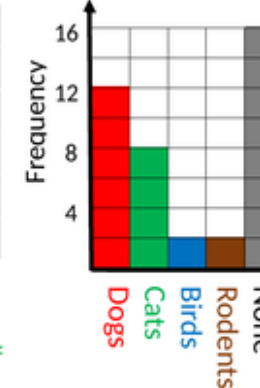
Pictogram

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:

$$40 \div 10 = 4$$

Key Words

Frequency: Number of times something happens

Bar chart: Used to display data as series of bars

Pictogram: Symbols used to represent data

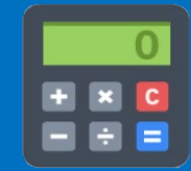
Pie chart: Circle where each section represents a proportion of the data

Year 7



Maths Knowledge Organiser

MULTIPLES, FACTORS, PRIMES AND SQUARES



Key Concept

Factors:

Find these in pairs

12: 1 & 12, 2 & 6, 3 & 4

Multiples:

Start with the number itself

7: 7, 14, 21, 28, ...

Square Numbers

$$\begin{array}{|c|} \hline 1 \\ \hline \end{array}$$

$$1^2 = 1$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array}$$

$$2^2 = 4$$

$$\begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array}$$

$$3^2 = 9$$

Primes

2, 3, 5, 7, 11, ...

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

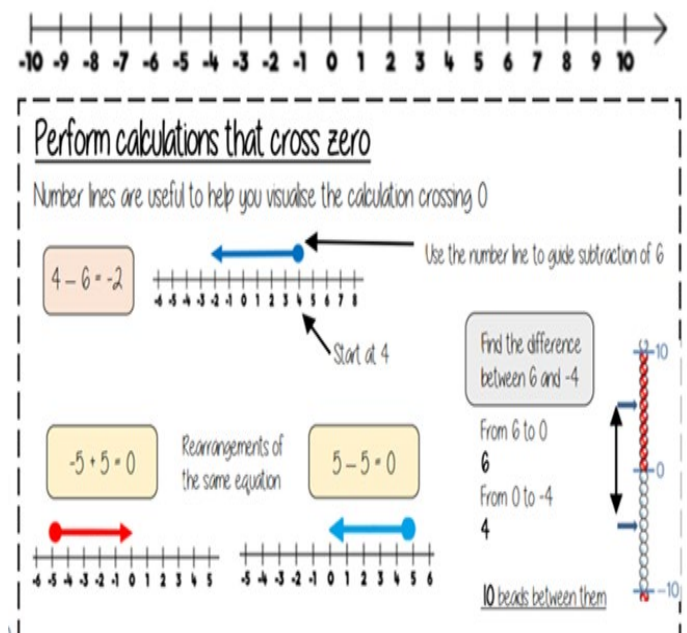


Maths Knowledge Organiser

NEGATIVE NUMBERS



Key Concept



Key Words

Subtract:
taking away one number from another.

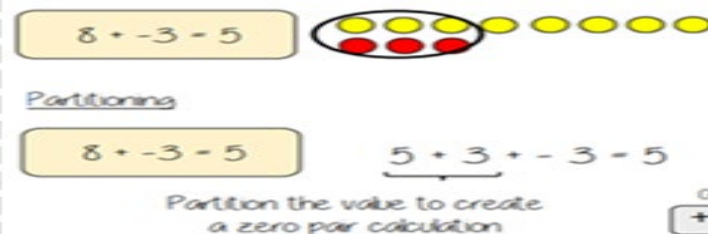
Negative: a value less than zero.

Tip

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

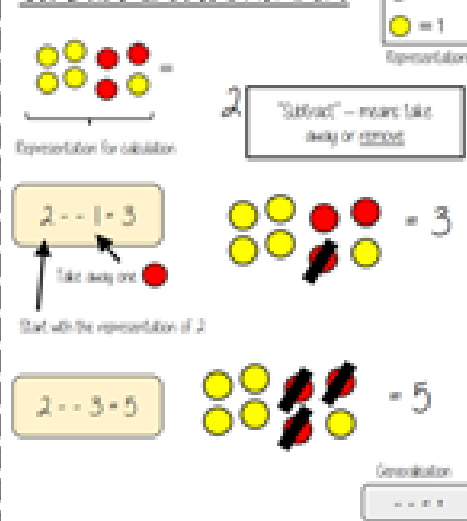
Year 7

Add directed numbers

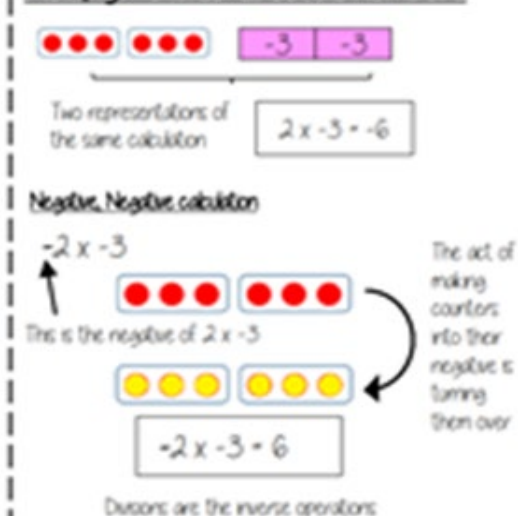


Examples

Subtract directed numbers



Multiply/Divide directed numbers



Questions

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

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



MFL Knowledge Organiser

¡Bienvenidos! Listos 1 Mod 1 Aut 1



6 KEY Questions

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

ME llamo I m called

SE llama He or she is called

Estoy I am

Tengo I HAVE + age

Tiene he/ she has

Es It is / is

Llamar-se

To call-oneself

tener

To have

Me llamo...

I am called ...

tengo ...

I have ...

te llamas

You are called...

tienes

You have ...

Se llama

He/She is called...

tiene ...

He/She has ...

Nos llamamos

We al called

Tenemos ...

We have ...

Os llamaís

You all are called

Teneis ...

You all have ...

Se llaman

They are called

Tienen ..

They have

Connectives:

pero

but

y también

and also

que (es)

which (is)

¿Cuántos años **tienes**?

Tengo ... años.

I'm ... (years old).

Tiene ... años.

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

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



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

Mi my

tu your

Su his/her/its/your(formal)

el primero (uno) de ...

the first of ...

¡Feliz cumpleaños!

Happy birthday!

GIVING AGES OF FAMILY MEMBERS

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

PLURAL

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

Giving an answer!

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

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

Phonic focus:

h – silent - hasta

ll – y – llamo

ñ – ny – España

ce – thay – lapices

v – bey – veinte

accents – syllable

stress - sábado

KO. Yr7 mod 1 ¡BIENVENIDOS!

TOPIC VOCABULARY TRANSLATED

LOS SALUDOS [GREETINGS]



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

En mi mochilla

In my school bag



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

Los meses

The months

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



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

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

LOS NÚMEROS

NUMBERS

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



MFL Knowledge Organiser

AUT 2 ¡tu y yo!



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



Me llamo – I'm called
 Se llama – is called
 Se llaman – are called
 Tengo ____ años – I'm ____ years old
 Tiene ____ años – He/she is ____ years old
 Tienen ____ años – He/she is ____ years old

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

Opinions & Pronouns

me gusta (mucho)

no me gusta (nada)

me encanta

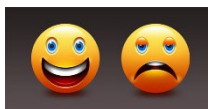
odio

me chifla

detesto

me interesa

me irrita



Connectives

también

also

pero

but

sin embargo

however

que

which

donde

where

porque

because

Complexity

necesito – I need

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

me gustaría tener – I would love to have



grande / s

big

pequeño/a /os/as

small

amarillo/a /os/as

yellow

atigrado/a /os/as

tabby

azul/ es

blue

blanco/a /os/as

white

dorado/a /os/as

gold

gris /es

grey

marrón/es

brown

negro/a /os/as

black

rojo/a /os/as

red

verde / s

green

atigrados/as

tabby

genial

great

fantástico/a /os/as

fantastic

aburrido/a /os/as

boring

divertido/a /os/as

fun(ny)

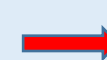
Un bolígrafo blancO

Una reglas blanca

Unos libros blanOS

Unas gomas blancAS

Lápiz



lápices

Phonic focus:

j - conejo

z – theh - pez

KO. Yr7 mod 2 tu y yo

**¿tienes
animales
en casa?**



Sí tengo...

un caballo
un cobayo
un conejo
un gato
un pájaro
un perro
un pez
un ratón
una tortuga

Yes, I have...

a horse
a guinea pig
a rabbit
a cat
a bird
a dog
a fish
a mouse
a tortoise

dos gatos
dos pájaros
dos ratones

two cats
two birds
two mice

dos peces

two fishes

Tiene ... años.
No tengo un animal.

It is ... (years old).
I haven't got a pet

**¿De qué color es
tu animal?**

Mi animal es ...+ colour

**What colour is your
pet?**

My pet is ... + colour

MI FAMILIA

Un hermano
Un hermanastro
Una hermana
Una hermanastra
Dos hermanos

Un padre
Un padrastro
Una madre
Una madrastra
Mis padres

Un abuelo
Una abuela
Un tío
Una tía
Un primo
Una prima

SOY hijo único
SOY hija única

MY FAMILY

a brother
a step brother
a sister
a step sister
2 brothers

a dad
a step dad
a mum
a step mum
my parents

a grandad
a grandmother
an uncle
an aunt
a cousin (m)
a cousin (f)

I AM only child(m)
I AM only child(f)



TOPIC VOCABULARY TRANSLATED



¿De qué color es tu pelo?

Tengo...

el pelo castaño
el pelo negro
el pelo pelirrojo
el pelo rubio
el pelo corto
el pelo largo
el pelo liso
el pelo ondulado
el pelo rizado

What colour is your hair?

I have...

brown hair
black hair
red hair
fair hair
short hair
long hair
straight hair
wavy hair
curly hair

**¿De qué color son
tus ojos?**

Tengo ...

los ojos azules
los ojos marrones
los ojos negros
los ojos verdes

**What colour are
your eyes?**

I've got ...

blue eyes
brown eyes
black eyes
green eyes

Tengo pecas
Llevo barba
Llevo bigote
Llevo gafas
Lleva ...

I've got freckles.
I've got a beard.
I've got a moustache.
I wear glasses.
He/She wears ...



and Systems

1. Life Processes

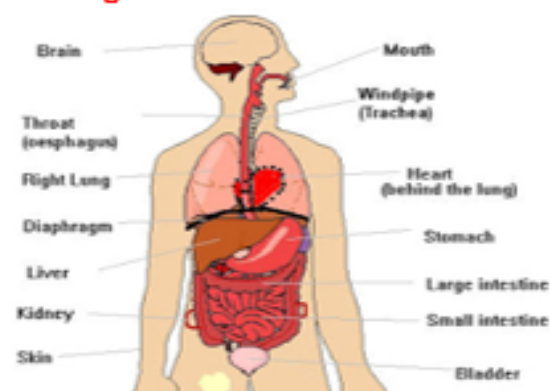
Life Processes	If something can do all 7 life processes it is considered a 'living thing' They are; movement, reproduction, sensitivity, growth, respiration, excretion and nutrition.
Organism	A living thing.
Movement	Being able to move from place to place or move part of themselves.
Reproduction	Being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

2. Organs

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

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

Human Organs



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

3. Tissues

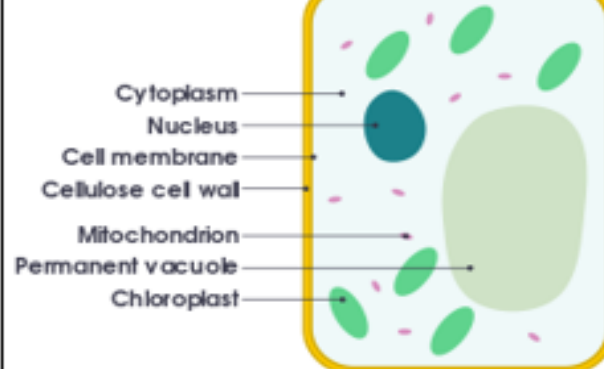
Tissues	Groups of the same cells doing the same job- make up organs.
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The Heart	Made up of muscle tissue so it can move and pump the blood as well as fat tissue to protect it.
Root Hair Tissue	Small hairs on the outside of roots which help to take in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

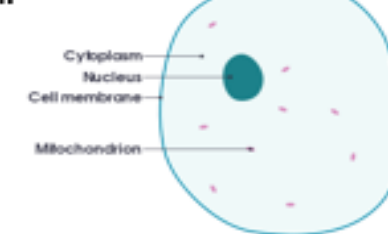
4. Cells

Cells	The basic units from which all tissues and living things are made from.
Specialised	When something has features that allow it to do a particular job.
Cell Surface Membrane	Controls what enters and leaves the cell.
Nucleus	Controls the cell.
Cytoplasm	Jelly like substance where chemical reactions happen.
Mitochondria	(<i>mitochondrion</i> - 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	<i>Heart, blood vessels</i> Carries oxygen and nutrients around the body.
Digestive System	<i>Gullet, stomach, intestines</i> Breaks down food and takes nutrients into the blood.
Locomotor System	<i>Muscles, bones</i> Enables the body to move.
Urinary System	<i>Kidneys, bladder</i> Gets rid of waste materials produced in the body.
Breathing System	<i>Lungs, trachea</i> Allows exchange of gases between blood and lungs.
Nervous System	<i>Brain, nerves, spinal cord</i> Allows the body to sense things and react to them.
Water Transport System	<i>Roots, stem, leaves</i> 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.




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.

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

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	 <p>The diagram shows a full-body view of the human skeleton. Labels include: SKULL, NECK VERTEBRA, HUMERUS, VERTEBRA, HIP JOINT (PELVIS), FINGERS, COLLAR BONE (CLAVICLE), RIB, RADIUS, ULNA, FEMUR, KNEE CAP, TIBIA, and FOOT BONES.</p>

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.

The diagram consists of two anatomical illustrations of the human arm and shoulder region, showing the state of the biceps and triceps muscles during different arm positions.

Left Illustration (Arm Up): The arm is raised, and the elbow is bent. An arrow indicates the arm is moving upwards. The biceps muscle is shown in a contracted state. Labels include "shoulder blade", "biceps muscle", and "triceps muscle".

Right Illustration (Arm Down): The arm is lowered, and the elbow is bent. An arrow indicates the arm is moving downwards. The triceps muscle is shown in a contracted state. Labels include "tendons", "upper arm bone", and "tendons".

Text Labels:

- When you lift your arm, the biceps muscle contracts.
- When you put your arm down, the biceps muscle is stretched.
- When you lift your arm, the triceps muscle is stretched.
- When you put your arm down, the triceps muscle contracts.

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

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

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



Science Knowledge Organiser



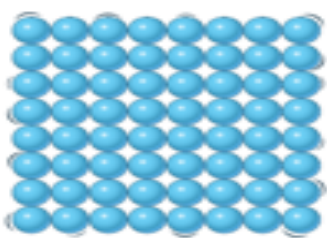
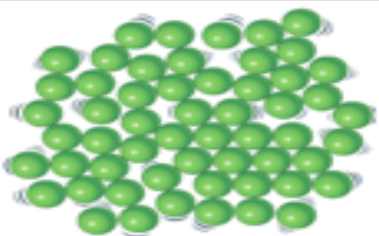
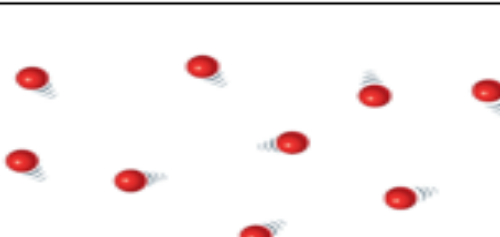
7G The Particle Model

1. Solids, Liquids and Gases

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

2. Particles

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

Liquid Particle Properties	Held closely together but not in a fixed arrangement and can move over each other.
Gas Particle Properties	Far apart from each other and free to move about in all directions.
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)
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4. Diffusion

Diffusion	The movement of particles spreading out and mixing with each other without anything moving them.
Particle Theory and Diffusion	Occurs quickly in gases because they are able to move freely in all directions. Diffusion is slower in liquids because the particles are still moving but not as freely as in a gas. Diffusion cannot occur in solids because the particles are in a fixed position.
Small Intestine	Diffusion of particles of essential substances in our food pass through the wall of the small intestine.

5. Air Pressure

Air Pressure	The force on a certain area caused by air molecules hitting it.
High Air Pressure	Makes sure tyres are inflated. Can also affect the weather making it dry and settled.
Vacuum	A completely empty space containing no particles (not even air).
Straws	Straws work because when you suck, you reduce the pressure inside the straw so the air pressure outside the straw is greater and the liquid is pushed up.



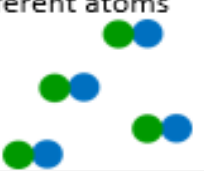



Science Knowledge Organiser



7H Atoms, Elements and Molecules

1. The Air We Breathe

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

2. Earth's Elements

Chemical Symbols	The 1 or 2 letters given to each element
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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.
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4. Making Compounds

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

5. Chemical Reactions

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

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

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



1. Energy from Food

2. Energy Stores and Transfers

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

4. Other Energy Resources

5. Using Resources

Renewable Disadvantages

Most not available all the time and only available in specific locations.

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



Science Knowledge Organiser

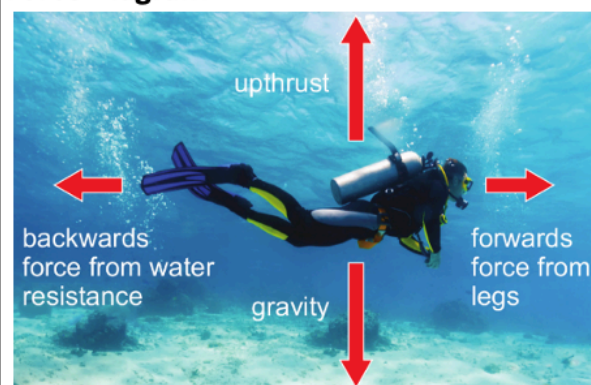


7K Forces

1. Different Forces

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

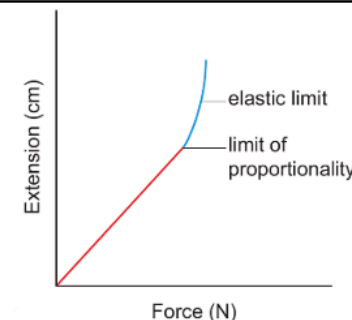
Force Diagram



2. Springs

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

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	$\text{pressure} = \frac{\text{force}}{\text{area}}$

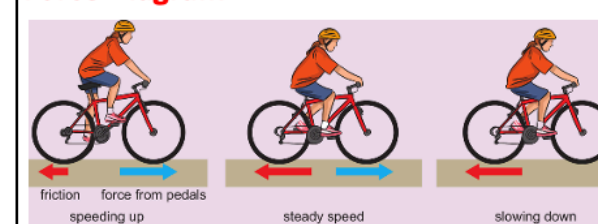
Pascal (Pa)

The units for measuring pressure.
 $1\text{Pa} = 1\text{N/m}^2$

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



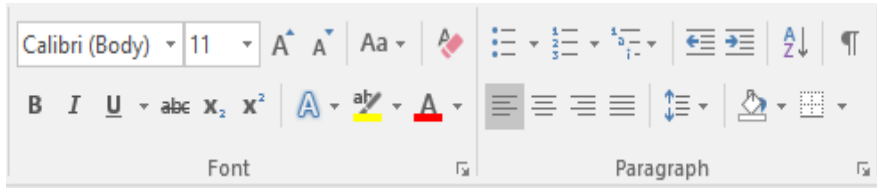
Work through memorising the information – highlight each definition once you know it. When you have completed your highlighting completed the gap fill and activities on the second sheet to support your retrieval practice.



Computer Science Knowledge Organiser



Year 7 Using media



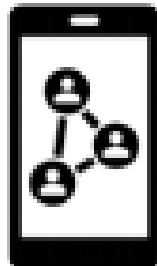
Formatting can be using tools like **bold**, *italic*, underline, changing colour, font style and size, alignment and many more.

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.

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

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.



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



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

Keywords

Format

Source

Licensing

Audience

Plagiarism

Copyright

Citation

Blog

Credibility

Referencing

Appropriate



Computer Science Knowledge Organiser

YEAR 7 MODELLING DATA

SPREADSHEETS

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

Data and information are not the same.

- **Data:** facts and figures in their raw form
- **Information:** data that has been given structure or meaning

For example:

Data—10, 2107, 18

Information—Time 10am, date 21st July, temperature 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

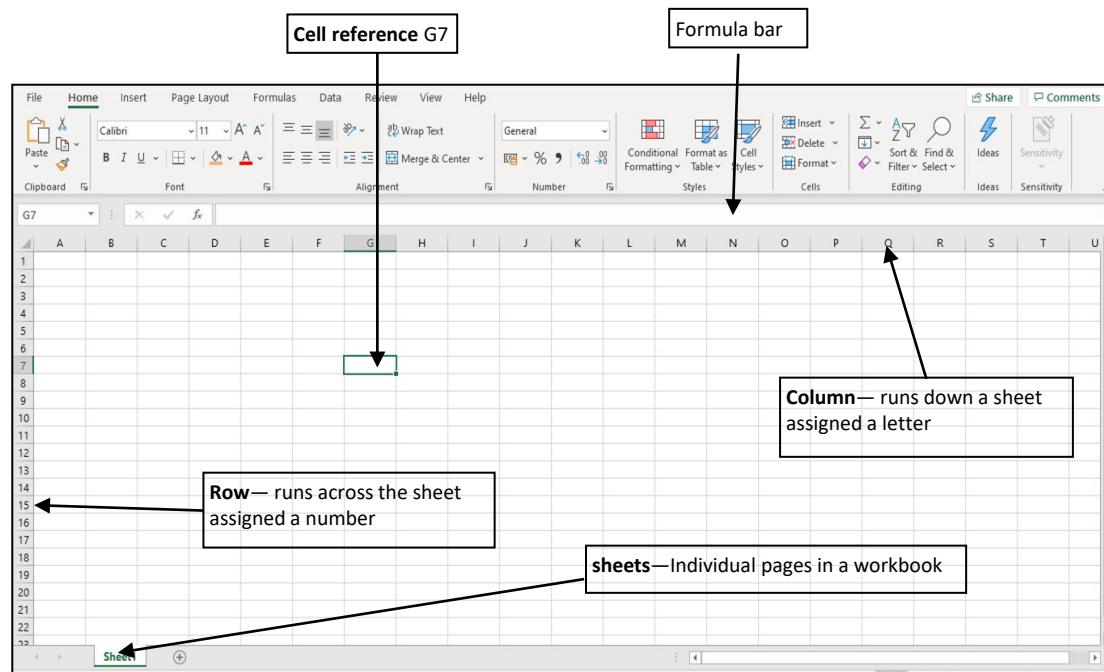
The + symbol is used for addition

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

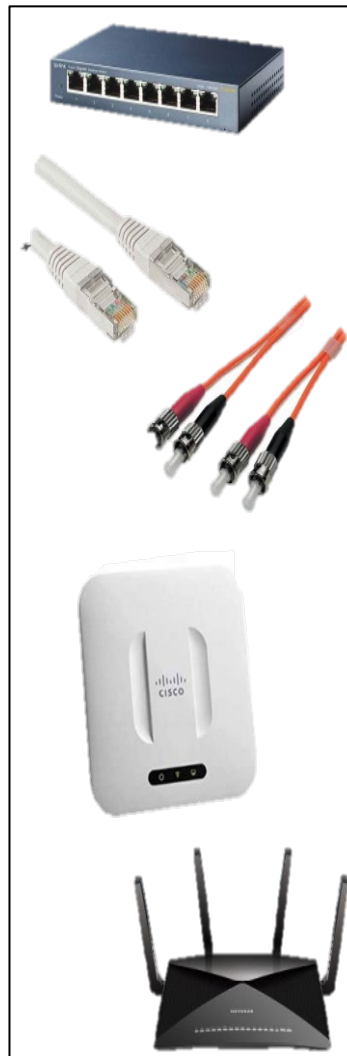




Computer Science Knowledge Organiser

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



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

Wired and Wireless data transmission

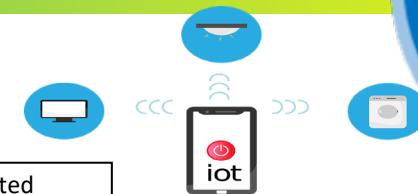
A computer network can be either wired or wireless.

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



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

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



Internet services

There are a range of services provided by the internet. These include:

- World Wide Web
- Email
- Online gaming
- Instant messaging
- Voice over IP (VoIP) – audio calls
- Internet of Things (IoT)
- Media streaming (e.g. watching Netflix online)

The rules for each service are different. As a result, a different protocol is used.

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

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



Computer Science Knowledge Organiser



PROGRAMMING 1 - SCRATCH

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

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

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

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

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.

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.



SCRATCH





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



Social media settings

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

STOP cyberbullying

PASSWORDS are like underpants



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.

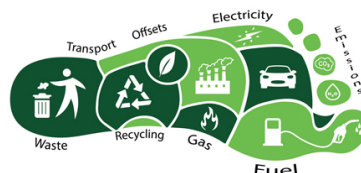
Secure passwords
No one should be able to guess/work out your password.
Current government advice is to use 3 random words

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



Key Words and Definitions

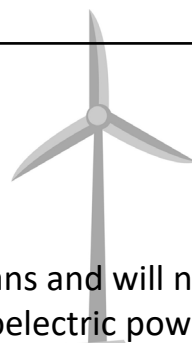
Refuse	Is the product necessary?
Rethink	Are there alternative materials or design options that are more sustainable?
Reduce	Can the product be made from fewer materials? Can the amount of unsustainable materials be reduced?
Reuse	Can parts of the product be reused in a different product?
Recycle	Can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

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



Design Process

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



Renewable Energy Sources

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

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


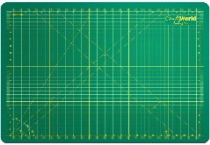

How can we reduce our impact on the environment?

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





Tools and Equipment

	Name	<ul style="list-style-type: none">• Use• Safety point
	Craft Knife	To cut paper, card and boards Safety Rules when using it Lock must be on Point downwards Use a cutting mat and safety ruler
	Cutting Mat	Placed under the material Safety It stops the knife from slipping
	Metal Safety Ruler	Used when cutting the material with a craft knife. Safety Fingers stay in the indent so protected from the blade
	Glue Gun	Used to join card and boards together Safety The glue and nozzle is hot Be careful not to use too much glue



Health & Safety

Follow all verbal and written safety instructions, safety signs and floor markings.

Wear an apron and remove any loose clothing or jewellery. Tie back long hair.

Always walk – never run

Do not crowd other people

Report any accidents that occur immediately to the teacher.

Do not leave anything on the floor

Leave the workspace clean and tidy when you have finished.





Sources of Timber

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

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



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 wood.

Hardwoods

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

Softwoods

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

Manufactured Boards

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





Food Technology Knowledge Organiser



Hygiene and Safety



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

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

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

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

Preparing food safely:

Cleaning

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



Cooking

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



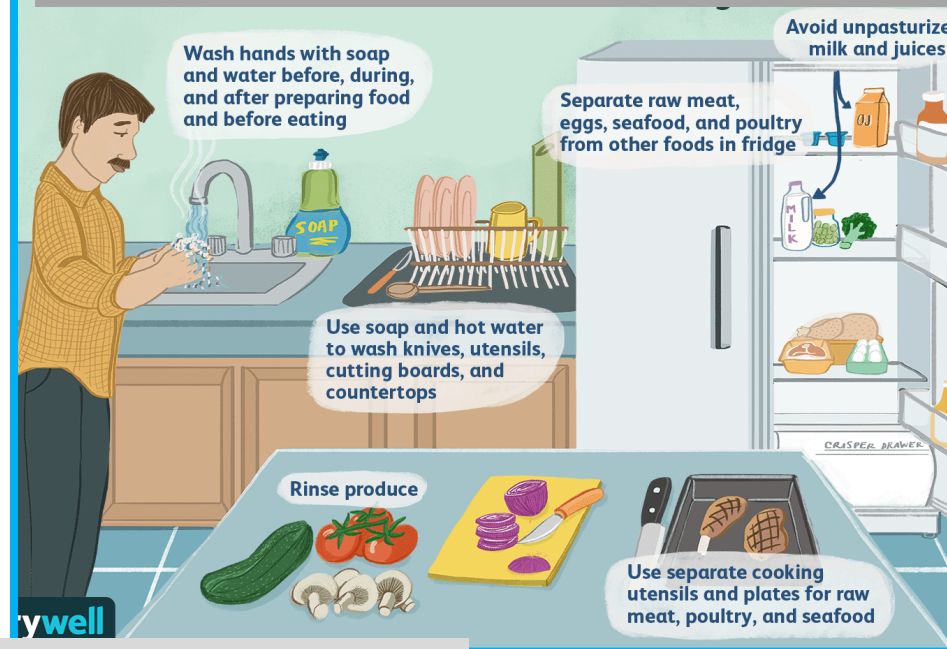
Chilling

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



Cross Contamination

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



Preventing cross contamination



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

Cooked meat, fish and poultry

Dairy

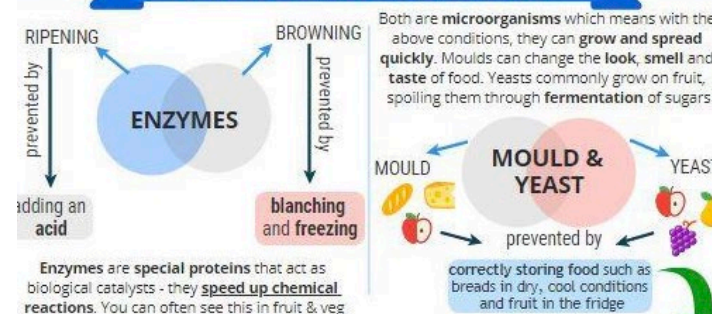
Shellfish

HIGH RISK FOODS

Gravies, Stocks, Sauces

Cooked Rice

CAN CAUSE FOOD SPOILAGE:



Storing and Preparing Food Safely

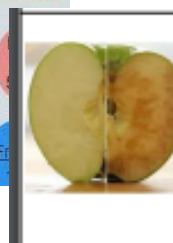


Alkali

Alkali+Acid

Acid

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

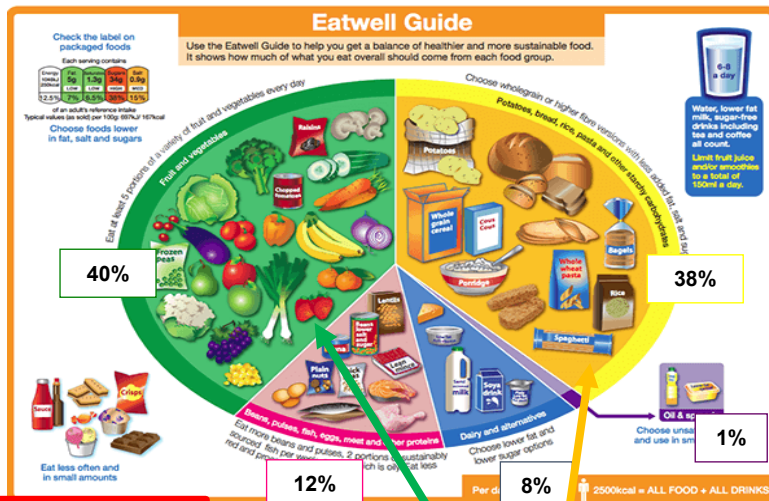


7. Enzymic browning: the process where fruit and vegetables turn brown due to them being exposed to oxygen (oxidisation).



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.

Food Technology Knowledge Organiser



Occasional treats: Foods high in fat and sugar

Eat plenty of these because:

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

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



Nutrient	How	Why
Cutting Fat	<ul style="list-style-type: none"> *Eat more chicken and fish and less red meat *Use skimmed or semi-skimmed milk instead of full fat milk *Grill food instead of frying *Cut fat off meat before cooking 	<ul style="list-style-type: none"> *Overweight *Obesity *Increase in Cholesterol in the blood *Heart attack. *Type 2 diabetes
Cutting down on Sugar	<ul style="list-style-type: none"> *Avoid fizzy drinks and high calorie drinks. Have fruit juice or water instead. *Eat fewer cakes, biscuits and sweets *Eat more fruit as an alternative *Try the natural sweetness of fresh fruit in puddings instead of sugar 	<ul style="list-style-type: none"> *Overweight *Obesity * *Heart attack. *Type 2 diabetes
Have more Fibre	<ul style="list-style-type: none"> •Eat lots of fresh fruit and vegetables •Eat more wholemeal flour, bread, pasta, rice •Use more canned beans, peas and lentils - eat more •Try jacket potatoes with a variety of fillings 	<ul style="list-style-type: none"> *Helps to protect against diseases of the bowel. *Gives you a feeling of fullness and so can help in diets.
Eat less salt	<ul style="list-style-type: none"> •Use herbs and spices as an alternative to salt 	<ul style="list-style-type: none"> * Too much salt can lead to high blood pressure. This will increase the risk of suffering heart problems and strokes



Food miles and the environment



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



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