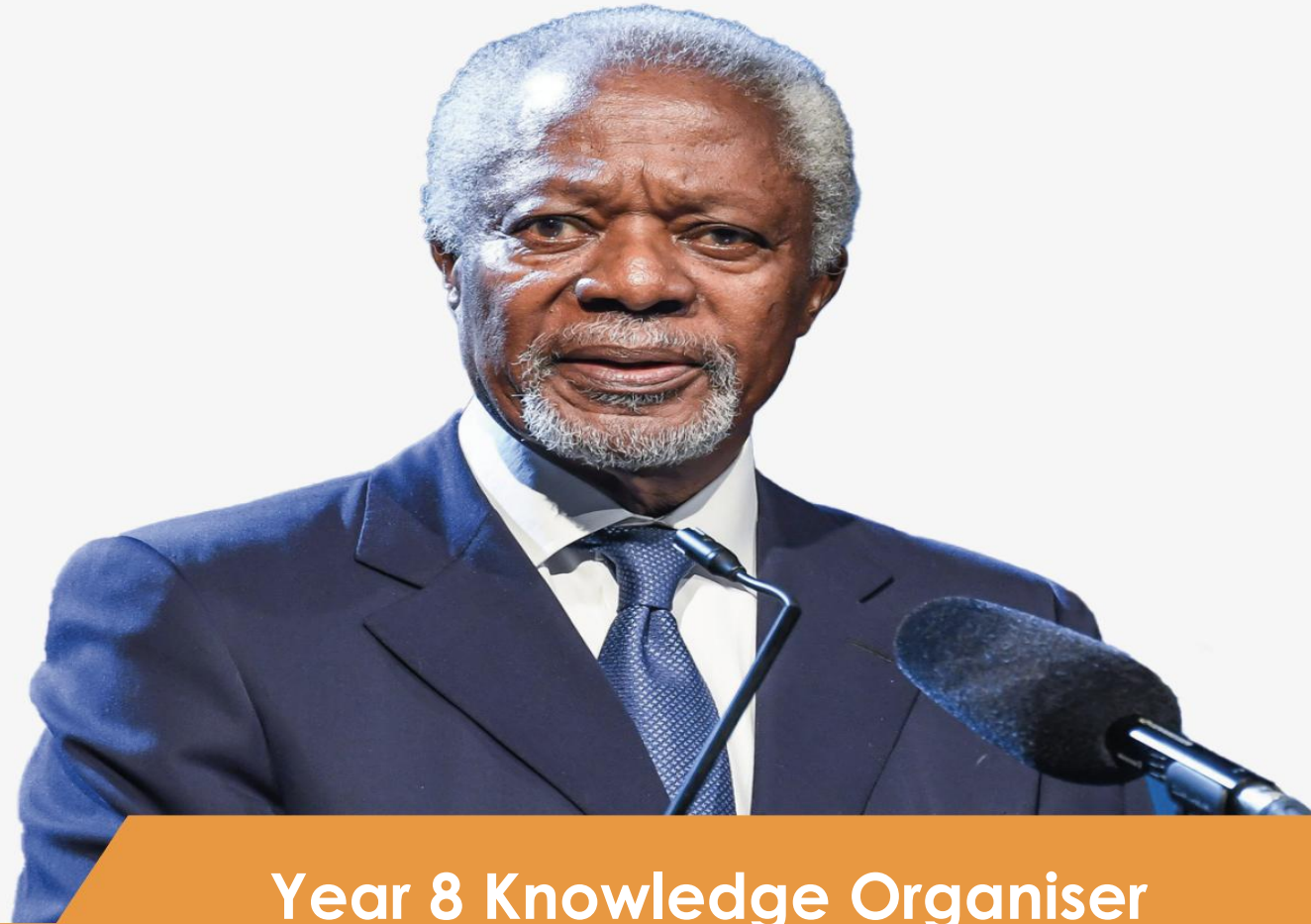




Frank Field
Education Trust

*“Knowledge is power.
Information is liberating.
Education is the premise
of progress, in every
society, in every family”*

- Kofi Annan



Year 8 Knowledge Organiser

Learning Programme 2

Pupil Name:

Form Group:

Contents page

Content	Page
Instructions to use the Knowledge Organiser	3
How do I self-quiz?	4
Homework diary	5-7
Art	8
Drama	9-10
English	11-12
Geography	13-14
History	15-16
ICT	17-18
Maths	19-20
Modern Foreign Languages	21-22
Music	23-24
Physical Education	25-26
Religious Education	27-28
Science	29-30
Technology	31
SPARX Maths	32

Instructions to use the Knowledge Organiser

Use of the Knowledge Organiser

Every school day you should be studying at least 1 section of your Knowledge Organiser (KO) for homework.

The timetable outlines the tasks you will study during that week.

Your subject teacher will set the relevant homework task from the Knowledge Organiser booklet and inform you of when the homework is to be handed in.

Your homework is to be completed in your subject exercise book, unless the instructions are different within the task.

You need to bring your Knowledge Organiser and exercise books with you EVERYDAY to the academy.

You will also be tested in your lessons on knowledge from the organisers every week to ensure that the core knowledge is retained over time.

You should also be developing your core knowledge by developing your self-testing, revision and study skills techniques alongside the homework tasks.

You can use any of the adjacent techniques on top of the core homework tasks to enhance your revision skills.

Self-testing, revision and study skills techniques

You can use your KOs and book in a number of different ways but you should not just copy from the Knowledge Organiser into your book. Use the 'How to self-test with the Knowledge Organiser' booklet to help you.

Below are some possible tasks you could do in your workbooks, no matter which task you do you should always check and correct your work in a different coloured pen.

- Ask someone to write questions for you
- Write your own challenging questions and then leave it overnight to answer them the next day
- Create mind maps
- Create flashcards
- Put the key words into new sentences
- Look, cover, write and check
- Mnemonics
- Draw a comic strip of a timeline
- Use the 'clock' template to divide the information into smaller sections. Then test yourself on different sections
- Give yourself spelling tests
- Definition tests
- Draw diagrams of processes
- Draw images and annotate/label them with extra information
- Create fact files

How do I self quiz?

How to use...Flashcards

1. On one side of the flash card, write the word or question.
2. On the other side, write the definition for the word, or answer to the question.
3. Once you have completed your set of cards, put them in a pile. Then for each card, see if you can remember the definition or answer to the question. Tick or cross when you get it right or wrong.
4. When you get the card right, place it in the 'correct' pile. When you get it wrong, place it in the 'wrong' pile. Repeat until all cards are in the 'correct' pile.

You can also use the Leitner Method: <https://www.youtube.com/watch?v=C20EvKtdJwQ>

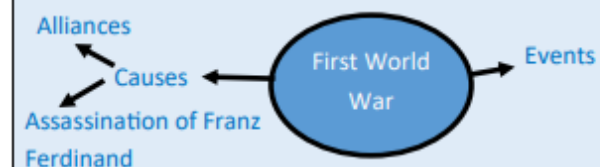
How to use... Look, Cover, Write, Check and Correct

1. Write your key words into the 'Look, Cover' column and then cover it.
2. Write out the meaning, definition or spelling in the 'Write' column.
3. Put a 'tick' or 'cross' in the 'Check' column depending on if you got the answer right.
4. If you got the answer incorrect, write the correct answer in the 'Correct' column.

Look , Cover	Write	Check	Correct
Noun	A person, place or	✓	
Algorithm	Algorithm	X	Algorithm

How to use... Mind Maps

1. Write out your topic or idea in the centre. E.g. The First World War.
2. Off of the main bubble, write out important categories to organise your ideas. E.g. causes of WWI and events in WWI
3. Then add your knowledge off of these branches. You might even be able to make connections between them.
4. Once made, then redraw as many of the connections as possible from memory. Correct any errors.



How to use... Explaining a process/ idea further

Your teacher might ask you to explain a key idea, process or event from your learning. This could be the water cycle (Geography), photosynthesis (Science) or something else. In your answer, try to use the words **because**, **but**, and **so**. These will help you to:

1. **Because:** helps to explain a reason, cause or why something works.
2. **But:** helps to explain a limitation or problem.
3. **So:** helps to explain what happens next in a sequence, process or event.

Check your sentences to see if your explanations or right or wrong. Correct any errors.

How to... Summarise a process/idea

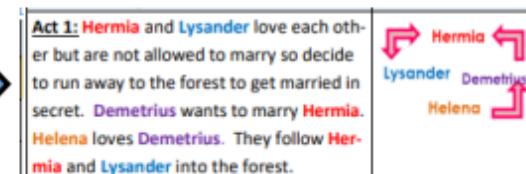
Rather than expand or explain a process, your teacher might ask you to summarise it into its key parts. E.g. summarising the plot 'A Midsummer Night's Dream' in English.

1. Read through the relevant part of your knowledge organiser as directed by your teacher.
2. Write out the (up to) 5 most important parts in your KO book, leaving a two lines in-between.
3. For each part, add **one** main idea.
4. E.g. here, the 4 key characters are picked out, and the direction of love is shown through the arrows. Check and correct any errors.

How to use... Subject Specific Tasks or Questions

Your teacher might choose to set a task that is not outlined here, and which is specific to that topic or their subject.

In this case, your teacher will outline specifically what it is you need to do, and how. This will still include you checking and correcting any errors.



Homework tasks

Week	Subject	Task
LP2.1	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	History	Create a mind map of positives and negatives of the British Empire.
	RE	Create a revision page on the Origins of Buddhism.
	Art	To create a list of artists' that look at colour theory in their work.
	Technology	Complete the 'Design challenge' set by the class teacher.
	IT	Complete the relevant task in the homework booklet.

Week	Subject	Task
LP2.2	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	Geography	Write a paragraph describing where China is located.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Read your knowledge organiser and memorise 5 pieces of information that you can use in your lessons, when devising your play.
	Music	Create a 5 question quiz with answers about the features of folk music.
	PE	Use the 'Look, cover, write, check' method to list the key training principles/key terms of your sport or activity.

Week	Subject	Task
LP2.RLW	ALL	This week is an opportunity to work on knowledge that has been identified during lessons as key areas for development. This could be additional revision and recall tasks from the knowledge organisers or it could be specific tasks set by classroom teacher.

Homework tasks

Week	Subject	Task
LP2.3	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	History	List 5 facts about the why the British Empire could be viewed as an embarrassment.
	RE	Explain why symbols are important in Buddhism.
	Art	To create a spider diagram of your favourite artist and explore their artwork, describing the features.
	Technology	Annotate your design challenge task, detailing your ideas, material use and how it links to contextual research.
	IT	Complete the relevant task in the homework booklet.

Week	Subject	Task
LP2.4	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	Geography	List communist countries around the world, past and present.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Rehearse the movement piece that you are doing. Try to exaggerate this movement when you rehearse at home.
	Music	Create a revision card about folk music from different cultures.
	PE	Make flashcards on the tactics you could use within your sport/activity to gain an advantage (e.g. how to get a head start).

Homework tasks

Week	Subject	Task
LP2.5	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	History	Look, cover, write, check what happens to slaves when they get to the Americas.
	RE	Create a spider diagram exploring all your learning about Buddhism.
	Art	To draw a full outline of a natural form.
	Technology	Compare your design task with the memphis and bauhouse design movement, explain where your inspiration came from.
	IT	Complete the relevant task in the homework booklet.

Week	Subject	Task
LP2.6	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.
	Geography	List items at home that were made in China.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Rehearse the movement piece that you are doing. Try to exaggerate this movement when you rehearse at home.
	Music	Complete the worksheet given by your teacher.
	PE	Create a mind-map of the key movements in your sport/activity.

Week	Subject	Task
LP2.7	English	Complete the English homework task set on Sparx Reader.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Science.

Natural Forms

This Learning Programme you will be focusing on refining work by exploring ideas, selecting, and experimenting with appropriate media, materials, techniques, and processes.

1. How to refine your work.
2. How to select and explore multiple materials
3. Select key media to explore specific techniques
4. Identify successful use of materials
5. Explore multiple materials
6. Evaluate your use of processes
7. Identify successful experimentation.

KEY VOCABULARY	DEFINITION
Media	The materials used
Tone	Shades, ranging from dark to light
Shape	The outside line, joined to create a shape
Texture	Representation of how something feels
Pattern	A design in which shapes, lines and colours are repeated
Line	Basic visual element, used to create shapes
Form	Three dimensional shape, height, width, and depth
Colour	Different shades and tones
Review	An evaluation of artwork
Reflect	Think carefully and make comments



AO2 Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

What does this mean?

You need to demonstrate that you are able to explore, progress and improve your ideas through a development journey of experimentation, trails, samples, working things out as you go.

Refinement means to improve. You will learn from doing something then working out how to do it better and then having another go. This may take many steps.

AO2 should be seen as an integral part of your creative journey and not a separate thing.

How does it link with AO1?

Experimenting in response to your chosen artists

How does it link with AO3?

Recording your ideas and observations as you experiment and as your ideas develop. Recording your decisions.

How does it link with AO4?

Your experimentation and refinement of ideas should lead to a skilful personal and meaningful response.

How do I show this in my work?

- Refine a dominant idea by trying various compositions
- Refined techniques in a variety of media
- Have you developed an idea and not just used your first idea?
- Clearly demonstrate purposeful trialling of materials supported by notes
- Attempts to mimic the style/technique of an artist in your own work
- Selection and rejection of ideas
- Problem solving
- Showing stages of development

Reaching for the level 8/9:

How do I show

A highly developed ability to thoughtfully refine ideas.

A highly developed ability to effectively select and purposefully experiment with appropriate media, materials, techniques and processes.

The level to which you experiment. Do you go through a number of processes refining along the way? Have you copied the artists work in a superficial way or have you really explored their technique? Have you taken risks and shown a highly developed creative journey as a result? Are your ideas unique?

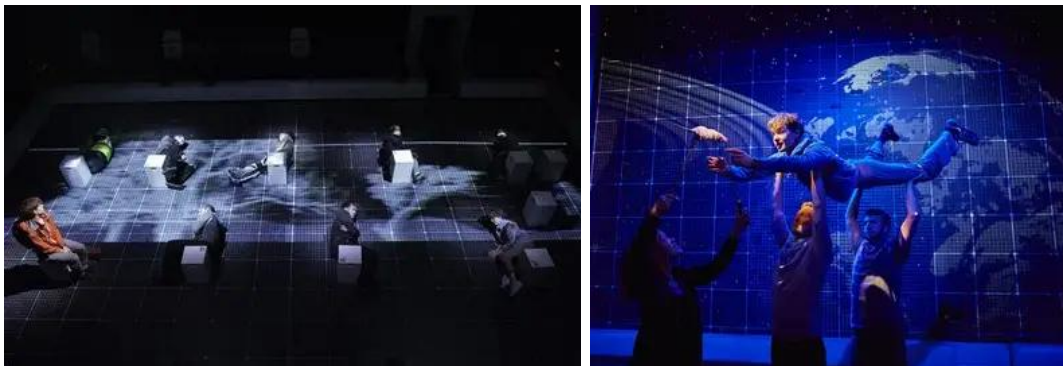
Annotate your own work

- What have you produced and why?
- How does it link to the artist you have been looking at?
- Has the technique been successful and why?
- How might your work now develop?
- What have you learnt?
- What are your decisions?

Refinement is important, not just repetition

Year 8 Drama LP2 Knowledge Organiser

This Learning Programme you will be learning about the theatre company Frantic Assembly and their approach to Physical Theatre.



Key Vocabulary

Collaboration	Working together with other individuals.
Atmosphere	Mood or feeling in a performance.
Ensemble	A group or chorus of actors.
Devising	The process of creating theatre.
Round-by-through	A building block device to create movement with a partner.
Hymn-hands	A building block device to create movement.
Chair duets	A building block device to create contact work.

LP1.1 > LP1.2 > LP1.3 > LP1.4 > LP1.5 > LP1.6 > LP1.7

- Frantic Assembly is a renowned theatre company that tells stories through movement.
- Frantic Assembly was formed in 1994 by Scott Graham, Steven Hoggett and Vicky Middleton. Despite having no formal training in drama, they were inspired to create a unique company that focussed on non-realistic pieces characterised by movement and music, whilst still ensuring the narrative maintained central to the work.
- Most notable works include 'The Curious Incident of the Dog in the Night-Time', 'Things I Know to be True' and 'Love Song'.
- Their work is inspired by Volcano Theatre Company and DV8.

Aim / Intention

- Create thrilling, energetic and unforgettable theatre.
- Entertain audiences whilst challenging audiences to engage with complex themes in new exciting ways.
- Attract new young audiences with work that reflects contemporary culture.



Style

- Frantic Assembly use a physical theatre style; combining movement, design, music and text. Their work spans over theatre, dance, television and film.
- They collaborate with playwrights to develop a text in an innovative and fun way. Typically, they begin their approach through creating movement first by using building blocks.
- The company has developed the Frantic Method, a creative approach which encouraged collaborations and exploration amongst performers.

The Frantic Method

The Frantic Method is a strategic and creative approach to theatre developed by Scott Graham and Frantic Assembly. It involves devising as a series of tasks broken down into building blocks, encouraging performers to simplify their discoveries and build from there.

Techniques

Round-by-through: 3 individual movements of 'round', 'by' and 'through' into one piece to convey emotion or theme.

Chair duet: In pairs, explore different movement patterns while sitting down.

Hymn hands: A sequence of movement only with the hands.

Lifts: Can be in pairs or larger groups.

Fluff picking: Take turns to do the gesture of 'picking' fluff off the other person.

Approaching devising as a series of tasks: Each broken down into building blocks, allowing performers to take each moment back to their basic form.

Mirror and mirror variation: Use of communication between partners. Person B has to mirror the exact movement person A does.

Demonstrative movement: As well as dance and mime, all moves are designed to convey a message.

10 touches: Involves a series of touches, embraces, flirtations and rejections.

Devising Approaches

Start with a **stimulus** (text, image, music, etc.).

Use **physical exercises** to explore ideas.

Develop **movement sequences** collaboratively.

Layer in **text, sound, and lighting**.

Focus on **storytelling through movement**

Famous Productions

"Things I Know To Be True" – A moving family drama using physical theatre to explore relationships.

"Othello" – A modern, gritty adaptation of Shakespeare's play.

"The Curious Incident of the Dog in the Night-Time" – Frantic Assembly co-directed this award-winning production, known for its innovative use of movement and design.



This Learning Programme you will be learning about how writers craft their texts, addressing the different techniques that writers use for effect, and exploring how to adapt your writing style to develop your writing skills.

Key Vocabulary

Atmosphere	The overall aesthetic effect of a work of art
Structure	Something arranged in a definite pattern of organization
Pacing	Rate of progress
Characterisation	The artistic representation (as in fiction or drama) of human character or motives
Resolution	The point in a literary work at which the chief dramatic complication is worked out

LP2.1

You will learn to use vocabulary with precision to create a character.

LP2.2

You will learn how to use structure and organisation to create effects.

LP2.3

You will learn how to use dialogue effectively.

LP2.4

You will use the skills developed in prior weeks to craft your own writing.

LP2.5

You will learn to control writing using techniques for different effects.

LP2.6

You will learn to use a variety of sentences to create effects

LP2.7

You will use skills developed in prior weeks to craft your own complete piece of writing.

WHEN TO BEGIN A NEW PARAGRAPH – Think ‘TIP TOP’:
Begin a new paragraph every time you change:
Time: *The next day...*
Person: *Introducing a new character OR speaker*
Topic – *New thought or idea*
Place – *A new setting or location*

Punctuation Power Guide

•Full Stop (.)

Ends a sentence. *Example:* I like pizza.

•Comma (,)

Breaks up ideas or lists. *Example:* I bought apples, oranges, and bananas.

•Question Mark (?)

Shows a question. *Example:* What time is it?

•Exclamation Mark (!)

Shows excitement or surprise. *Example:* Wow, that's amazing!

•Speech Marks (" ")

Show what someone is saying. *Example:* "Let's go," said Mia.

•Apostrophe (')

Shows something belongs or shortens words. *Example:* It's cold. / Sam's book.

•Colon (:)

Introduces a list or explanation. *Example:* Bring these: pen, paper, ruler.

•Dash (–)

Adds extra info or a pause. *Example:* He was late – again!

•Brackets ()

Add extra detail. *Example:* She won the race (by a mile)

.

COMMON PUNCTUATION ERRORS

- i → I
- Missing capital letters at the **start of sentences**.
- Missing **full stops** between sentences.
- Using a **comma splice**: *I was tired, I went to bed.* → *I was tired. I went to bed.*
- Missing apostrophes in contractions: *dont* → **don't**, *cant* → **can't**, *didnt* → **didn't**.
- Adding unnecessary apostrophes to plurals: *apple's* → **apples**.
- Forgetting commas after **fronted adverbials**: *Suddenly, the door opened.*
- Forgetting commas when directly **addressing someone**: *Come here, Jack.*
- Using too many exclamation marks: *It was terrifying!!!* → *It was terrifying!*

Year 8 English LP2 Knowledge Organiser

Verbs/Adjectives:

- drift
- breathe
- soothe
- murmur
- glide
- settle
- float
- unfold
- embrace
- linger
- gentle
- serene
- tranquil
- still
- restful
- dreamy
- hushed
- delicate
- balmy
- pastel
- lurk
- creep
- snarl
- slither
- stalk
- clutch
- shriek
- loom
- shudder
- choke
- ominous
- twisted
- grim
- malevolent
- shadowy
- grotesque
- rancid
- cold
- unholy
- jagged

Pathetic Fallacy:

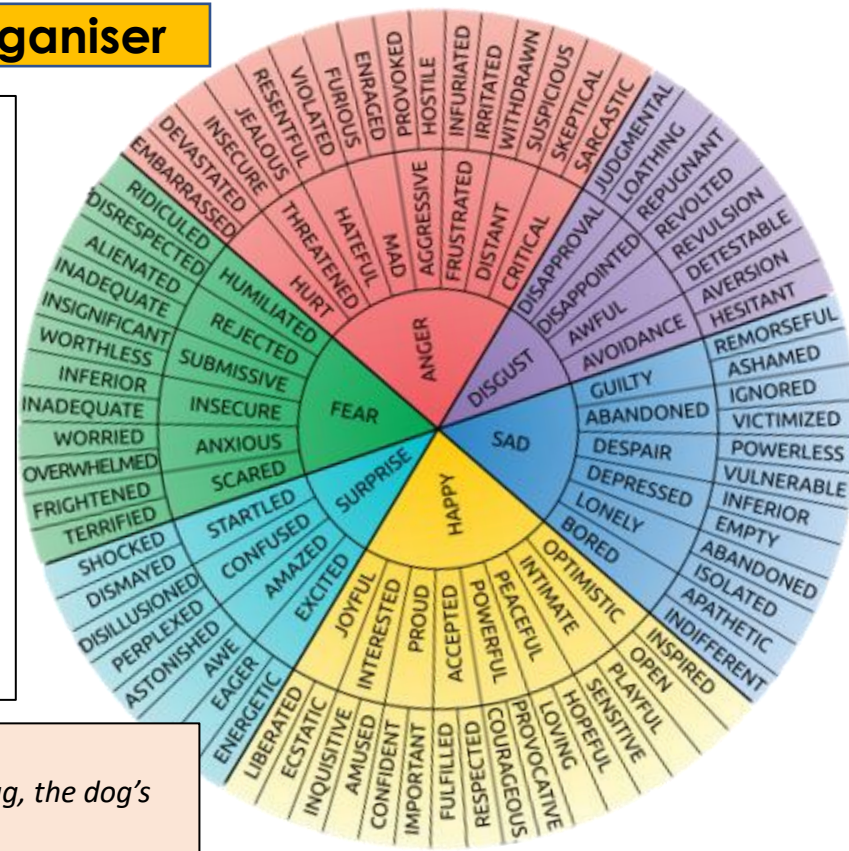
- A **clear sky** mirroring clarity of thought
- A **gentle breeze** expressing emotional ease
- **Sunlight filtering** through trees showing hope or warmth
- A **quiet stream** flowing like calm thoughts
- **Soft rain** soothing grief
- A **still lake** mirroring inner stillness
 - A **raging storm** foreshadowing chaos
 - **Thick fog** representing confusion or secrecy
 - **Withering trees** showing moral decay
 - **Howling wind** mimicking cries of anguish
 - A **blood-red sunset** signalling doom
 - **Shadows stretching** as fear creeps in
 - **Torrential rain** echoing uncontrollable grief or rage

COMMON ERRORS:

- Their means *theirs*
- There means a place
- They're means *they are*
- It's means *it is*

APOSTROPHES:

- Show belonging: *Bella's bag, the dog's ball*
- Show contractions: *Have not = haven't*



Oxymorons:

- *silent music*
- *still motion*
- *bittersweet peace*
- *deafening quiet*
- *peaceful storm*
- *gentle strength*
- *frozen warmth*
- *dark light*
- *screaming silence*
- *living death*
- *cold fire*
- *sweet poison*
- *burning chill*
- *beautiful nightmare*
- *kind cruelty*

Colours:

- | | |
|---------------|----------------|
| Soft blue | Blood red |
| Pale lavender | Midnight black |
| Mint green | Decayed brown |
| Blush pink | Charcoal grey |
| Warm sand | Toxic green |
| Cool grey | Ashen purple |

Onomatopoeia:

- *sigh*
- *murmur*
- *rustle*
- *patter*
- *hum*
- *whisper*
- *breeze*
- *lapping*
- *creak*
- *snap*
- *clang*
- *howl*
- *thud*
- *hiss*
- *crack*
- *screech*
- *slither*
- *groan*

Personality Traits:

- compassionate
- thoughtful
- patient
- soft-spoken
- optimistic
- wise
- tender
- grounded
- trusting
- content
- manipulative
- calculating
- vindictive
- obsessive
- ruthless
- secretive
- paranoid
- cold-hearted
- morbid
- unhinged

Common Spelling Errors:

- Should of → should have
- Could of → could have
- Would of → would have
- Alot → a lot
- Aswell → as well
- Your welcome → You're welcome
- Could care less → Couldn't care less
- Definately → Definitely
- Seperate → Separate
- Occured → Occurred
- I didn't do nothing → I didn't do anything

This Learning Programme you will be learning about China. This includes the location, population distribution, and urban to rural migration.

1

What is the location of China?

China is located in East Asia. It is the third largest country by land. China is bordered by the Pacific Ocean on its East Coast. There are 14 countries that border China including Mongolia to the North, Myanmar to the South, and Kazakhstan to the West.

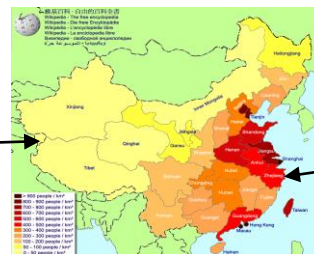


2

Population Distribution

The East coast of China is the most densely populated area (lots of people). The West of China is much more sparsely populated (not many people).

This side of China is very challenging to live in as it is mostly mountains and deserts.



This side of China is where 94% of the population live. There are lots of cities and large towns around the mouth of the rivers and the coast.

3

Political Systems

Communism

- A society with no class system (no rich and poor)
- The main factories and businesses are owned by the government not individuals.
- The Chinese Communist Party took power in 1949.

vs.

Democracy

- Everyone in a country has the right to vote for who they would like to be in charge.
- People have more rights.
- No one person has full control of the country.

Key Vocabulary

Import	Bringing items into a country from abroad.
Export	Send items to another country for sale.
Trade	The action of buying and selling goods/items.
Quality of life	The standard of health, comfort, and happiness experienced by an individual or group.
Migrant	A person who moves from one place to another, especially in order to find work or better living conditions.
Urban	A town or city.
Rural	Countryside.

4

Rural to Urban Migration

Migration – The movement of people from their usual place to a new area or country.

Rural to urban migration is when people move from the countryside to the cities or towns. There are lots of reasons for this that can be categories into push and pull factors.

Push factors – Things that **push** people away from the countryside

Pull factors – Things that **pull** people towards a city or urban area.

Push Factors

- Lack of jobs
- Poor education
- Poor healthcare
- No services/facilities

Pull Factors

- More job opportunities
- Better healthcare
- Higher wages
- More services/facilities

5

Industry



The manufacturing industry in China is the largest employer. Many of the world's items, including toys and iPhones, are made in China. There are lots of reasons for this but some include:

- Wages are lower in China so it is cheaper to pay their workers.
- There aren't as strict health and safety laws in China meaning workers can work longer hours in worse conditions.
- Trade links have improved with many large ports being built in China meaning it is easy to send items around the world.

6

Three Gorges Dam

Hydroelectric Dam – Creating electricity by running water through turbines.

Positives

- Generates a lot more electricity
- Increased trade
- Helps control flooding downstream
- Generates income from tourism
- Increases renewable energy

Negatives

- Environmental impacts such as landslides
- Relocation of over 1 million people
- They spent a lot of money (more than planned)

7

The One Child Policy

In 1979 the Chinese government decided that their country was becoming too populated (too many people). They tried to stop this by only allowing couples to have one child. This did work! The population went down.

BUT

There were lots of negatives such as girls were more likely to be put up for adoption, the amount of abortions increased, male children especially were more spoilt, and undocumented children were hidden to avoid fines.

This Learning Programme you will be learning about 'The development of the British Empire, its impact when at its height, the measure of imperialism in our modern society and how this links to the development and decline of the slave trade, including resistance, and the lasting impact of an Empire.

Key Vocabulary

T2 Words for the world

Empire	A group of countries, people or land ruled by one single country referred to as the "mother" country.
Implications	Possible effects or consequences of an action or event
Interpretation	Different ways people view or understand events from the past
Enslavement	The act of forcing people into slavery and treating them as property rather than free individuals
Resistance	Actions taken by people to oppose or fight against control, oppression or injustice
Abolition	The official ending of a law, system or practice
Decolonisation	The process by which colonies gain independence from a country that controlled them

1

LP2.1 What was the British Empire?

An empire is a group of countries, people or land ruled by one single country referred to as the "mother" country. The British Empire included countries such as India, Australia, Canada and South Africa.



By 1901, Britain ruled the largest empire the world had ever known. This included over 450 million and covered $\frac{1}{4}$ of the surface of the world.

2

LP2.2 What were the positives and negatives of the British Empire?

Positives:

Colonies gained:

- Culture, including sports like cricket and rugby.
- Clean drinking water, less people were dying of diseases such as cholera and typhoid.
- Rule of law, colonies gained the British legal system, including the right to a fair trial.
- Farming improved.

Negatives:

Colonies suffered:

- The right to trade with other countries and expand their economies.
- Freedom of religion.
- Slavery - many Africans were forced into slavery.
- Forced to fight in wars that had nothing to do with them.
- Exploitation - Britain took raw materials from colonies, who relied on these to help their economies survive.
- Gold theft - Britain stole gold from Africa.
- Native people such as the Aborigines in Australia had their land taken, 80% of their population was killed.

Positives for Britain:

Britain gained:

- Wealth, the Empire brought in exports from across the world and colonies could only trade with Britain.
- Richness of language, words such as pyjamas, bungalow and chutney.
- Were able to send their criminals abroad, so they did not cause problems in Britain.
- Spread Protestant religion.
- Gained power and influence in the world.

3

LP2.3 Was the British Empire an embarrassment?

- Racial inequality was encouraged.
- Only rich, white men held power.
- Exploitation of others was accepted, and slavery was not seen as wrong.
- Women were seen as men's property.
- Colonial natives were seen as backwards and stupid.

Point - what is your paragraph about?

Evidence - use your knowledge/quote.

Explain - why is this important?
What impact has it had?

PEE Sentence starters

P: One way _____ was important was...

E. For example...

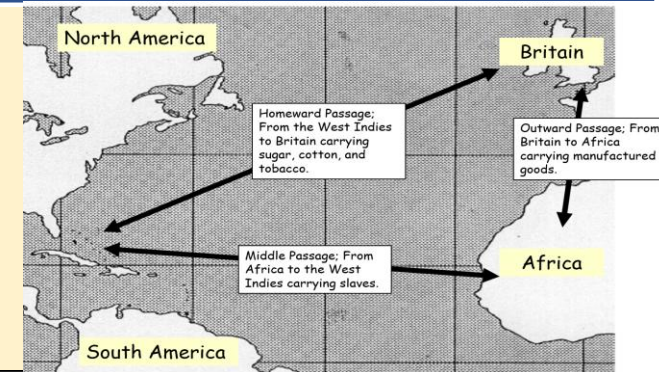
E. This means that...

LP2.4 The Middle Passage and the Transatlantic Slave Trade.

4

The Middle passage was the journey slaves took onboard ships from Africa to the Americas. The conditions were awful. Slaves were chained together by their hands and feet and forced to row. It was hard for slaves to turn or move without hurting themselves. The food was horse beans, boiled to a pulp; of boiled yams (a hard potato) and rice, and sometimes a small quantity of beef or pork. They sometimes have a sauce of palm oil, mixed with water and pepper.

The transatlantic slave trade involved transporting millions of African slaves to America in exchange for raw materials such as cotton. These materials would be taken to Britain to manufacture goods such as guns. The slave trade made Britain incredibly rich.



5

LP2.5 How enslaved people were treated.

Life for slaves was difficult; many were kidnapped from their homes in Africa and brought on ships to the Americas. Once they arrived, they would be put in cages like animals and washed so roughly a layer of skin came off. Tar and gunpowder would be rubbed into the wounds on the slave's skin to hide them. Fit, healthy males would receive the highest prices at auction, any slaves left at the end would need to go into the scramble auction.

The Scramble auction was the slaves left at the end of the auction. A set price would be agreed and owners would rush in and grab the slaves they wanted, physically dragging them away.

Punishments for slaves were extremely harsh and brutal they were could be whipped, have their lips burned and even in extreme cases be hung on a metal hook by only one rib.

LP2.6 Slave resistance and the underground railroad.

6

Slaves used different forms of active (doing something obvious) or passive (doing nothing or hidden) resistance.

Active Resistance (doing something, obvious)	Passive Resistance (to do nothing, sneaky or hidden)
Poisoning the masters Killing animals Revolt Running away	Working slowly Singing Pretending to be insane Beating a drum Feigning illness Breaking tools

The underground railroad was a chain of people that help hide slaves so that they could be free of their masters, it began in 1816. They tried to transport slaves from the South to safety in the North; many people from all backgrounds helped. The conductor (who led group helping the slaves) would show them where to hide in barns, caves and woods. Many waded through water to disguise their scent and confuse the bloodhounds chasing them. Women such as **Harriet Tubman** and **Sojourner Truth** helped hundreds of slaves escape.



7

LP2.7 The impact of British Empire and its decline.

The British Empire had a lasting impact on the countries that were colonies by creating the Commonwealth, this was a voluntary organisation, to promote friendship between 56 countries who all used to be part of the British Empire, it began in 1931 and carries on today. The Commonwealth gives its members stronger trading relationships, support for development and culture, such as the Commonwealth Games.

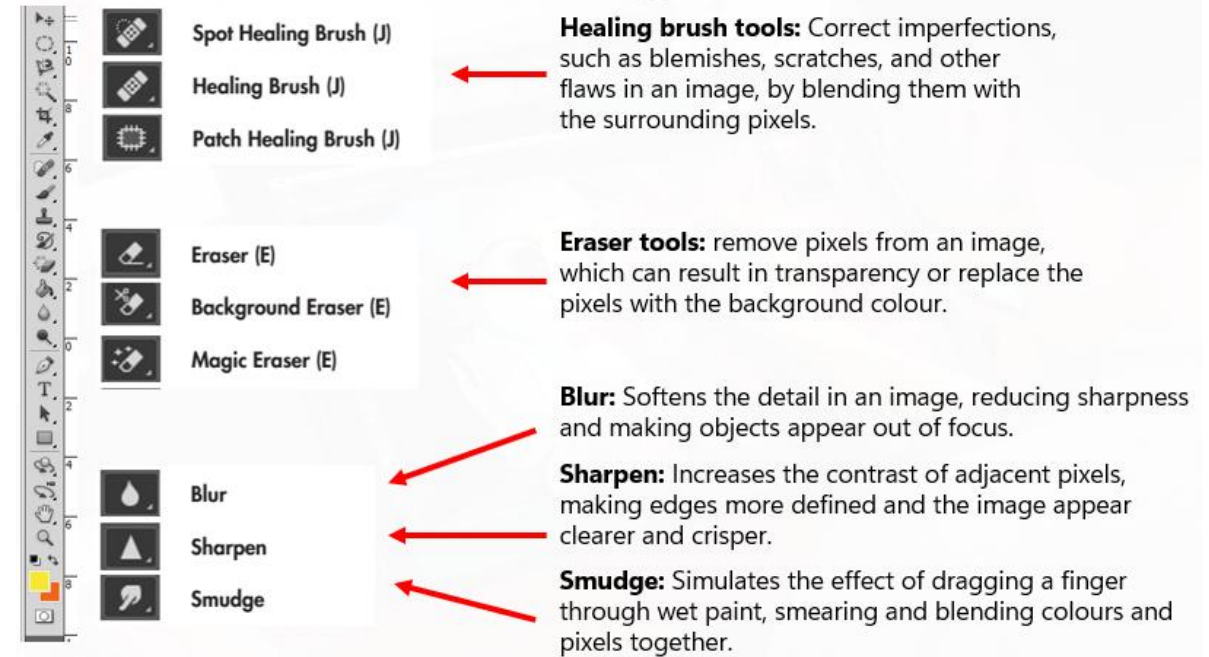
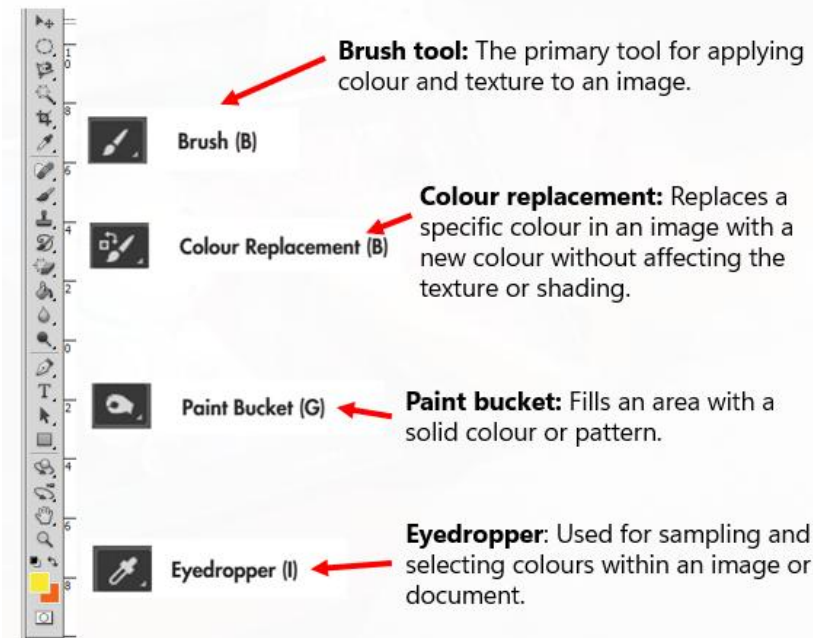
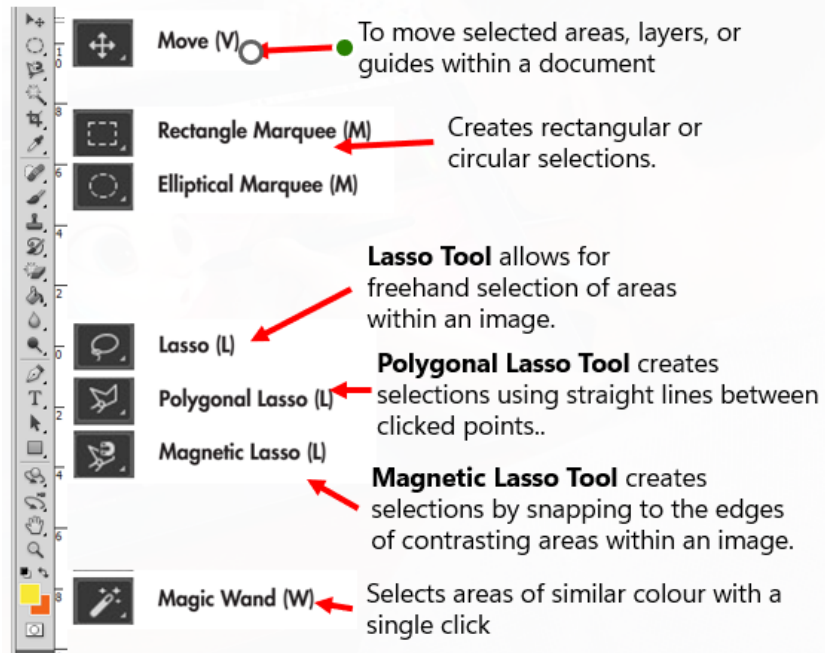
The British Empire began to decline after WW1 when it became more difficult and expensive for Britain to run all its colonies, large countries such as Australia were granted independence. The real decline came after WW2, especially in 1947 when India (the jewel in the crown) was given its independence.

1919 The Amritsar massacre. The British massacre peaceful protestors who wanted Indian independence.

1921: Southern Ireland won its independence from Britain.

1947: India gained independence from Britain's Empire

1960's most of Britain's colonies become independent countries



This Learning Programme you will be learning about Video Editing

Key Vocabulary

Static	a single, still visual elements that does not move or change over time
Raw footage	he original, unedited video material exactly as it was recorded by a camera
Canva	a cloud-based application software and graphics tool used to create digital and visual multimedia
Export	converting and saving data or a file from its current software into a different file format so it can be opened and used by a another program

Key terms

You will now **create**, **test** and **evaluate** your video advertisement.

Create the video

- Create the video advertisement using appropriate video editing software.
- Options include: Capcut, Canva, Clipchamp.

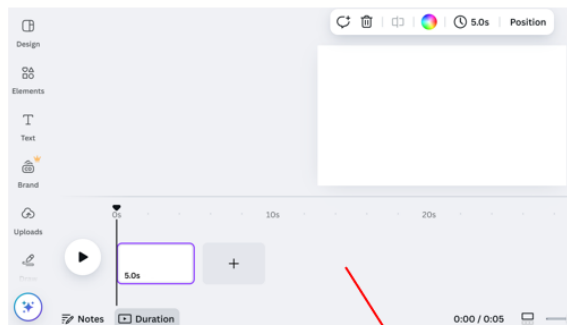
Test the video

- To test the video, you need to export it as an MP4.
- You then need to add the MP4 to your e-portfolio and test to see if the video works.

Evaluate the video

Once the video is tested and it works, you need to check includes everything that was stated in the project brief.

Video editing software



Canva is one of the possible software choices when creating the video.

Year 9 ICT LP2 Knowledge Organiser

Key terms

A **static image asset** is a digital image that does not contain any movement or animation.

How is this different to a moving image asset?

A moving image asset, on the other hand, contains motion or animation.

Which static and moving image assets should be included in your video advertisement?

- Moving image assets will include video clips are the different sports being played and/or someone lifting the victory shield.
- Static image assets will be the inclusion of the holding screen that will appear at the end of the video advertisement.

Holding screen example



A **holding screen** is a static or animated screen displayed while users wait for content to load, an event to start, or a process to complete.

Key terms

A **rush log** is a document used in film and video production to track the raw footage that has been shot.

What is meant by raw footage?

Raw footage refers to the unedited video recordings captured during a shoot.

How will I complete a rush log?

- You will be provided with a folder full of raw footage for the events that will take place at SuperTeams.
- You need to decide which raw footage you'd like to use.
- You will also need to identify whether it needs be edited. For example, if it's too long you may decide to trim it down.

Raw footage



All the raw footage will be in one folder, you need to select which footage you'd like to use.

This Learning Programme you will learn about ratio, rounding and coordinates.

Key Vocabulary

Simplify	Simplify a ratio means to express it in its simplest form, where both numbers have no common factors other than 1.
Ratio	A ratio compares two quantities, showing how many times one value contains, or is contained within the other.
Scale	In mathematics, scale refers to the relationship between the dimensions in a drawing or model and the actual dimensions. It's often used in maps, diagrams, and models.
Significant Figure	A significant figure is any non-zero digit or zero that contributes to the precision of a number. It's used to express numbers to a required degree of accuracy.
Estimate	To estimate means to find an approximate value that is close enough to the correct answer, often used when exact values are not necessary.
Coordinate	A coordinate is a pair of numbers that show the position of a point on a graph or grid, usually written as (x, y).
Quadrant	The four regions of the coordinate axis.

Year 8 Maths LP2 Knowledge Organiser

1

Simplify a ratio

Simplify 60 : 40 : 100

This could have been done in one step by dividing by 20.

÷ 10

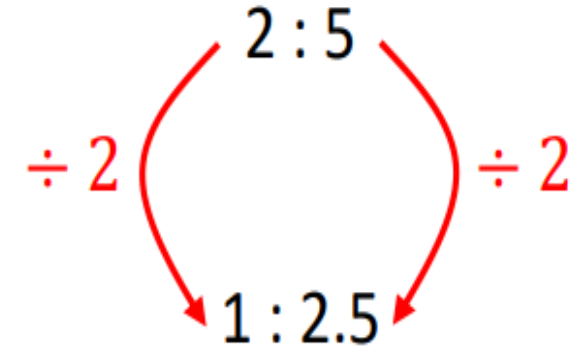
6 : 4 : 10

÷ 2

3 : 2 : 5

Write ratios in the form 1:n and n:1

Write 2: 5 in the form 1 : n



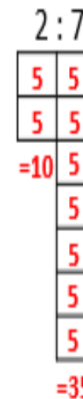
2

Sharing in a ratio: To share in a ratio we can use bar modelling to visualise the steps.

Add the parts of the ratio together. Share £45 in the ratio 2:7.
2 + 7 = 9 parts

Divide the total by the number of parts. 45 ÷ 9 = 5
2 : 7 x

Multiply each part of the ratio by the value of one part.
= £10:£35



3

Scale Drawing

Draw and interpret scale drawings

Model train length = 7 cm



Height of shuttle drawing = 28 cm

1 cm represents 2 m



Scale 1:120

Real life size
1m cm.

4

Rounding Integers to Significant Figures

Significant figures.

Significant figures (s.f) start from the first non-zero digit in a number. After that any number (including 0) is the next significant digit.

Round each of the following to one significant figure.

a) 32

3 | 2
3 | 0 to 1 s.f.

Answer: 30

b) 581

5 | 81
6 | 00 to 1 s.f.

Round each of the following to two significant figures.

a) 281

2 8 | 1
2 | 8 | 0 to 2 s.f.

Answer: 280

b) 4852

4 8 | 5 2
4 | 9 | 00 to 2 s.f.

Answer: 4900

5

Rounding Decimals to Significant Figures

a) Round 12.71 to one significant figure.

1 | 2.71
1 | 0 to 1 s.f.

Answer: 10

b) Round 0.0092015 to three significant figures.

1 2 3 4 5
0.0092015
0.00920 | 15 to 3 s.f.

Answer: 0.00920

b) Round 43.56 to two significant figures.

4 3 | 5 6
4 | 4 to 2 s.f.

Answer: 44

6

To estimate you should round each number in a calculation to 1 significant figure, then calculate.

$$\frac{348 + 692}{0.526} \approx \frac{300 + 700}{0.5} = 2000$$

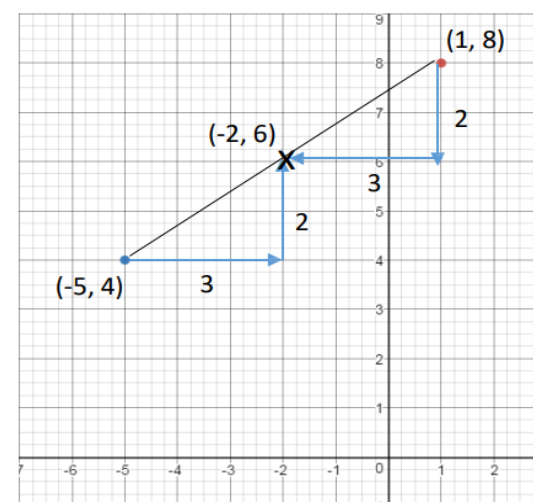
How to decide if your solution is an underestimate or overestimate.

Decide if you have made each number bigger or smaller by rounding. When dividing remember that if you divide by a number that has been rounded up, your answer will be an underestimate and vice versa.

7

Coordinates of a Midpoint

Graphically



Algebraically

Find the midpoint of (7, -2) and (3, 8).

$$x\text{-coordinate} = \frac{7+3}{2} = \frac{10}{2} = 5$$

$$y\text{-coordinate} = \frac{-2+8}{2} = \frac{6}{2} = 3$$

Midpoint = (5, 3)

Year 8 Spanish LP2 Knowledge Organiser

This Learning Programme you will be learning how to talk about what you do in your free time on your phone, what music you like to listen to and what TV shows you like.

Key Vocabulary

Noun	A word to identify a person, place or thing
Verb	A word to show an action taking place
Adjective	A word that describes a noun
Adjective agreement	Making sure that the gender of an adjective matches the gender of the noun
Present tense	Referring to an action happening now, or that happens regularly
Preterite tense	Referring to an action that has been completed in the past
Infinitive verb	A verb that tells you the action, but not who is doing it
Conjugate	To change a verbs form to indicate a tense or person
Definite article	Refers to the word 'the' when using nouns

LP2.1 – Mi vida, mi móvil

¿Qué haces con tu móvil? What do you do with your mobile?

Chateo con mis amigos.	I chat with my friends online.	Hablo por Skype.	I talk on Skype.
Comparto mis vídeos favoritos.	I share my favourite videos.	Juego.	I play.
Descargo melodías o aplicaciones.	I download ringtones or apps.	Leo mis SMS.	I read my texts.
		Mando SMS.	I send texts.
		Saco fotos.	I take photos.
		Veo vídeos o películas.	I watch videos or films.

todos los días	every day
dos o tres veces a la semana	two or three times a week
a veces	sometimes
de vez en cuando	from time to time
nunca	never

LP2.2/2.3 - ¿Qué tipo de música te gusta? – What type of music do you like?

el rap	rap
el R'n'B	R'n'B
el rock	rock
la música clásica	classical music
la música electrónica	electronic music
la música pop	pop music

¿Qué tipo de música escuchas?	What type of music do you listen to?
Escucho rap.	I listen to rap.
Escucho la música de...	I listen to ...'s music.
Escucho de todo.	I listen to everything.

Me gusta (mucho)...	I like... (very much)
Me encanta...	I love...
No me gusta (nada)...	I don't like... (at all)
la letra	the lyrics
la melodía	the tune
el ritmo	the rhythm
porque es guay/triste/horrible	because it is cool/sad/terrible
¿Te gusta la música de...?	Do you like... 's music?
Me gusta la música de...	I like... 's music.
mi canción favorita	my favourite song
mi cantante favorito/a	my favourite singer
mi grupo favorito	my favourite group
En mi opinión...	In my opinion...

LP2.4/2.5 – prefiero las comedias – I prefer comedies

un programa de deportes	a sports programme	una telenovela	a soap opera
una comedia	a comedy	más... que...	more... than...
un concurso	a game show	divertido/a	funny
un documental	a documentary	informativo/a	informative
un reality	a reality show	interesante	interesting
una serie policiaca	a police series	aburrido/a	boring
el telediario	the news	emocionante	exciting

LP2.6/2.7 - ¿Qué hiciste ayer? – What did you do yesterday?

Bailé en mi cuarto.	I danced in my room.	Vi una película.	I watched a film.
Fui al cine.	I went to the cinema.	Salí con mis amigos/as.	I went out with my friends.
Hablé por Skype.	I talked on Skype.	No hice los deberes.	I didn't do my homework.
Hice gimnasia.	I did gymnastics.	ayer	yesterday
Hice kárate.	I did karate.	luego	later, then
Jugué en línea con mis amigos/as.	I played online with my friends.	por la mañana	in the morning
Jugué tres horas.	I played for three hours.	por la tarde	in the afternoon
Monté en bici.	I rode my bike.	un poco más tarde	a bit later

SKILLS

Making everything match up
When you use the 'he'/'she'/'it' form, you often need to change other elements of the sentence:

me gusta I like →
le gusta he/she likes

mi programa favorito
my favourite programme →
su programa favorito
his/her favourite programme

mis amigos my friends →
sus amigos his/her friends

Gramática

The 'he'/'she'/'it' (third person singular) form of different verbs works like this in the present and the preterite:

type of verb	present (he/she/it)	preterite (he/she/it)
-ar	gana (wins) juega (plays)	ganó (won) jugó (played)
-er	come (eats)	comió (ate)
-ir	sale (goes out)	salió (went out)
irregular	hace (does/makes) es (is) va (goes)	hizo (did/made) fue (was) fue (went)

Helpful Info:

-ar verbs: chatear to chat (online)

(yo) chateo	I chat	(nosotros/as) chateamos	we chat
(tú) chateas	you chat	(vosotros/as) chateáis	you (plural) chat
(él/ella) chatea	he/she chats	(ellos/as) chatean	they chat

-er verbs: leer to read

leo	I read	leemos	we read
lees	you read	leéis	you (plural) read
lee	he/she reads	leen	they read

-ir verbs: escribir to write

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

When you want to compare two things, you use the comparative.
más + adjective + que... more... than...

The adjective must agree with the noun.

Los documentales son **más** informativos **que** los realitys.
Documentaries are more informative than reality shows.

Las telenovelas son **más** divertidas **que** los concursos.
Soaps are funnier than game shows.

This Learning Programme you will be learning about
Folk Music

Key Vocabulary

Folk	Folk music, type of traditional and generally rural music that originally was passed down through families and other small social groups.
Refrain	A refrain is a part of a song or poem that repeats regularly. Think of it like a catchy phrase or section that comes back repeatedly.
Aural	In music, "aural" refers to the ability to hear and understand sounds.
Pedal	a pedal refers to a pedal point or pedal tone, which is a sustained note, typically in the bass, while the harmony above it changes.
ornamentation	Ornamentation is when extra notes which decorate the music.
texture	How the tempo, melody and harmony are combined in a musical composition. We can use thick or thin to describe texture
Timbre	Timbre is the word we use to describe the particular sound quality of a musical instrument.

Year 8 Music LP2 Knowledge Organiser

What is Folk music ?

Folk music is traditional music that belongs to a particular culture or group of people. Most folk music includes singing and musical instruments.

It is music created by ordinary people within a culture, that's been played or sung to one another, for a very long time.

People would learn the music by listening to other people playing it and then copy them. This is called learning music **aurally**.

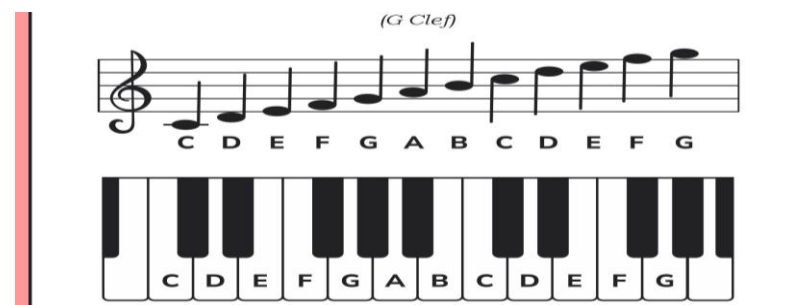
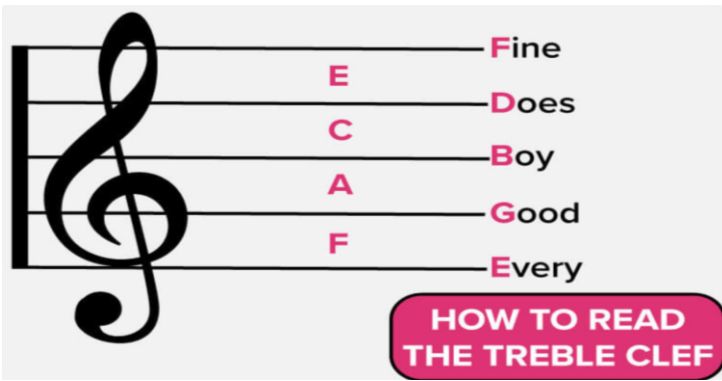
Common Musical features

Acoustic and traditional instruments

The use of traditional instruments that are often specific to a particular culture or region. Instruments such as acoustic guitars, fiddles, banjos, and various percussion instruments are commonly used. These instruments help create the distinctive sound associated with folk music.

Aural Tradition and storytelling

Folk music is primarily passed down through **Aural** tradition, meaning it is learned and shared through listening rather than written notation. This characteristic allows folk songs to evolve over time, as they are adapted and modified by different generations and communities.



During this LP, 2 of the examples we will look at are **The Wellerman** and **Drunken Sailor**. These are both Sea shanties and British Folk Music has a long-standing musical tradition linked with these sailors' work songs. There are even folk music festivals in the UK solely linked to Sea Shanties, these include: Yarmouth Sea songs Festival, Falmouth Sea Shanty Festival and Swanage Folk Festival.

4

Folk music exists all around the world. For example, there's English folk music, Scottish folk music, American folk music, Russian folk music and many others.

Each type of folk music is very different and can teach us things about a particular culture.

Ballads were a popular kind of folk music. These were folk songs which told a story of love or myths. Sometimes there was a short **refrain** after each verse so that everybody could join in.

Instrumental folk music is used to accompany traditional dances such as a céilí in Ireland.

5

Folk Instruments



celtic harp



mandolin



bagpipes



banjo



cherokee flute



ukulele



erhu



panpipes



sitar



talking drum



didgeridoo



kalimba

This Learning Programme you will be learning the fundamental movements skills and knowledge of team's games. You will know the rules and regulations of different team sports and look at more progressive skills to outwit opponents.

Key Vocabulary

Tactical Skills	The ability to make smart decisions and apply strategies during a game.
Attack	The actions taken by a player or team to try to score points or goals.
Defence	The actions and strategies used by a player or team to prevent the opponent from scoring.
Free space	An open areas on the field, court or pitch where no players are present, allowing an athlete to move, pass or shoot.
Losing an opponent	Successfully moving away from a defender to create space or gain advantage.
Coordination	The ability to use different parts of the body smoothly and efficiently together.
Agility	The ability to move quickly and easily while changing direction
Reaction Time	The speed at which an athlete responds to a stimulus
Power	The ability to perform a strong and explosive movement quickly.
Stamina	The ability to sustain physical and mental effort over a long period of time.

1

Students will know what they will be learning during the LP and organise how they will be assessed, students will know how to plan passing and moving drills that demonstrate fluency and confidence.

2

Students will know how to pivot/ turn with the ball in control and model passing and movement skills effectively and with defender pressure. Students will know how to use different dodging strategies to move into space in a conditioned game.

3

Students will know how to model dodging skills and move away from a defender within a game situation and be able to evaluate their own performance highlighting areas of strength and areas for development.

4

Students will complete PRT Task 1 and be able to demonstrate skills learnt with fluency and control. Students will also be able to review their performance in PRT Task 1.

5

Students will know how to explore positions and strategic formation used to prevent attack from opposition. Students will demonstrate strategic and tactical plays in competitive situations.

6

Students will know how to demonstrate outstanding knowledge and understanding of the rules and regulations of a team sport and demonstrate skills and tactical decision making in competitive games.

7

Students will know how to conduct how to explore set plays within a game situation to defend and attack effectively and know how to evaluate their performance against the assessment grid.

This Learning Programme you will be learning about Buddhism. You will be thinking about the way that these religions started and their core beliefs, festivals and practices.

Key Vocabulary

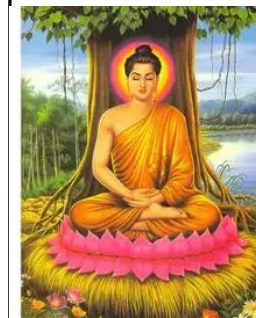
Founder	The person who starts a religion, movement or organisation
Reincarnation	The belief that after death a person is reborn into a new life
Karma	The belief that a person's actions have consequences that affect their future
Temple	A place of worship and prayer
Symbols	Objects, signs or images that represent important ideas or beliefs
Westerners	People from countries in the Western world
Enlightenment	A state of complete understanding, wisdom and freedom from suffering

1

LP1.1 – The founding of Buddhism

Siddhartha Gautama was born in Northern India around the 6th Century BCE. He was a prince who lived a life of luxury. As a result, he had never seen any pain or suffering in his life as he was sheltered from anything negative. He always had whatever he wanted. Siddhartha felt like he was missing out and wanted to see what was outside of the palace walls, so one day he left the palace to see what it was like in the city. He was horrified. He saw an old person, an ill person and a funeral, none of which he had ever experienced. He hadn't known that people get old, ill or that they die. He saw suffering and did not know why it happened or how to stop it. He also saw a holy man and realised that this man was happier than many others he had seen.

Siddhartha decided he would leave the palace and went to live as a holy man. He starved himself, but still did not get the answers he was looking for. Eventually, Siddhartha decided that he would sit under a tree and think about how to stop suffering. He meditated and eventually, after many days, came up with the answers he was looking for. These became the Four Noble Truths and the Noble Eightfold Path. Siddhartha was then known as the Buddha.



2

LP1.2 – The Four Noble Truths and the Middle Way

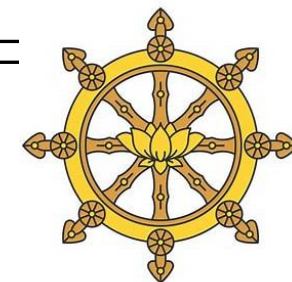
Buddha taught the Four Noble Truths as a way of explaining suffering in the world. They are:

1. Suffering exists.
2. Suffering has a cause. The cause of suffering is greed (wanting more than you have)
3. Suffering can be stopped. The way to stop suffering is to stop wanting things we can't have.
4. The way to stop wanting more than we have is to follow the steps of the Noble Eightfold Path.

3

LP1.3 – The Vihara and symbols

A Vihara is a Buddhist monastery which is used for worship. Buddhist worship includes offerings such as flowers, water, incense and candles. Buddhist people meditate in the Temple. The Buddhist symbol is a Dharma Wheel, this has eight sides which represents the eight fold path. Another Buddhist symbol is a lotus flower which represents resilience and spiritual awakening as they grow through muddy water and stay pure.



4

LP1.4 – Can anyone be enlightened?

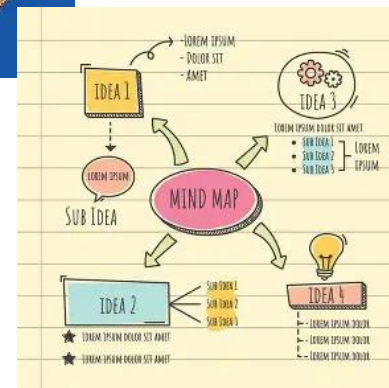
The story of Angulimala suggests to Buddhists that anyone can be enlightened, no matter how terrible the things that they have done are. Angulimala had killed many people on an awful mission and even tried to kill Buddha. However, Buddha took him to his monastery and taught him about the Buddhist way of life which caused him to completely change his mind and live in a different way. Buddhist people study the life of Buddha and how his example should be followed. Buddhism is different from many other faith traditions in that it is not centered on the relationship between humans and a high god. Buddhists do not believe in a personal creator God. In a sense then, Buddhism is more than a religion; it is a tradition that focuses on personal spiritual development. To many, it is more of a philosophy and a humanistic way of life which can be summed up as striving to lead a moral life; being aware of one's thoughts and actions; and developing wisdom, compassion and understanding.



5

LP1.5 – Mandalas

The Mandala is an important symbol in Buddhism and comes from the Sanskrit word meaning circle. They come from the Hindu tradition and represent the universe and a person's spiritual journey. They can be used by Buddhist people to help them to focus during meditation. Buddhism has become very popular in western culture as people have started to become more interested in meditation, mindfulness and yoga.



6

LP1.6 – How to improve your knowledge in RE

Developing revision skills in RE and practice different ways of reviewing your learning. Practice writing extended answers to improve your work and include different religious ideas in your writing.

7

LP1.7- Debate - whether religion should be considered to be central to criminal rehabilitation.

Look at religious ideas about rehabilitation and whether this should be central to criminal rehabilitation. Rehabilitation is the process of re-educating and preparing those who have committed a crime, to re-enter society. The goal is to address all of the underlying root causes of crime in order to ensure inmates will be able to live a crime-free lifestyle once they are released from prison.



In this learning programme, you will explore the role of nutrients and the digestive system along side learning about different chemical reactions.

Key Vocabulary

Calories	Calories are units of energy found in food and drink that the body uses for growth, movement, and carrying out life processes.
Enzymes	Enzymes are biological catalysts that speed up chemical reactions in living organisms without being used up.
Combustion	Combustion is a chemical reaction in which a substance burns in oxygen, releasing energy in the form of heat and light.
Precipitate	A precipitate is an insoluble solid that forms when two solutions react and is produced during a chemical reaction.
Force	A force is an interaction that can cause an object to accelerate, decelerate, change direction, or change shape.
Electromagnet	A magnet produced when an electric current flows through a coil of wire, usually wrapped around a soft iron core.
Thermal decomposition	Thermal decomposition is a reaction in which a compound breaks down into two or more simpler substances due to heating.

Year 8 Science LP2 Knowledge Organiser

1

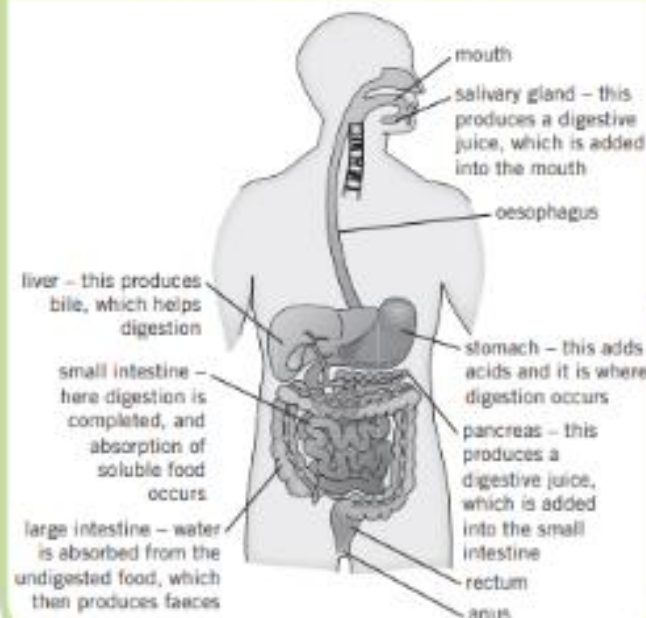
Nutrients

- A **balanced diet** involves eating the right amount of nutrients for your body to function
- Not eating enough of a nutrient means you have an unbalanced diet, and this can lead to a **deficiency**

Nutrient	Role in your body
carbohydrates	main source of energy
lipids	fats and oils provide energy
proteins	growth and repair of cells and tissues
vitamins and minerals	essential in small amounts to keep you healthy
water	needed in all cells and body fluids
fibre	provides bulk to food to keep it moving through the gut

2

The digestive system



3

Enzymes

- Enzymes** are biological **catalysts**, they speed up the digestion of **nutrients**
 - Each enzyme is specific to each nutrient
 - The way the enzyme and nutrient bind with each other is called a **lock and key model**
-
- Carbohydrases** break **carbohydrates** down into simple sugars
 - Proteases** break **proteins** down into amino acids
 - Lipase** breaks **lipids** (fats) down into fatty acids and glycerol



4

Chemical reactions

- A **chemical** reaction is a change in which atoms are rearranged to make new substances
- A **reversible** reaction is one where the products can react to get back the substances which you started with, most chemical reactions are not reversible
- You can look for signs that a chemical reaction has taken place such as flames, smells, heat change, a loud bang or gentle fizz

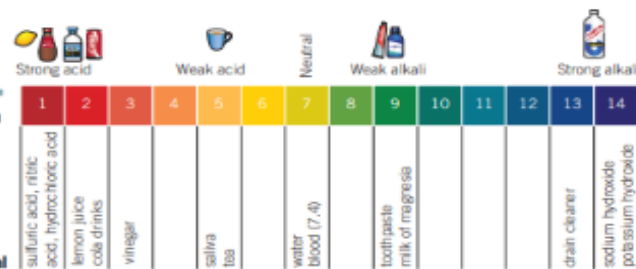
5

Acids and alkalis

- Acids** and **alkalis** are the chemical opposites of one another
- Both acids and alkalis can be **corrosive** and **irritants**

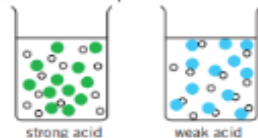
To see whether a substance is an acid or an alkali, we can use an **indicator**. Indicators show how acidic or how alkaline a solution is by showing its position on the **pH scale**, one example of this is **universal indicator**

- If the solution has a pH value of 1–6 it is **acidic**
- If the solution has a pH value of 8–14 it is **alkaline**
- If the solution has a pH value of 7 it is known as **neutral**



Acid strength

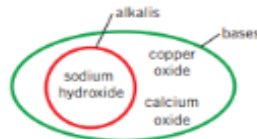
- The strength of an acid depends on how much of the acid has broken apart when it has dissolved in water
- Hydrogen chloride dissolves in water to form hydrochloric acid, this is a **strong acid** as all of the particles split up
- A **weak acid** will have particles that do not all split up



- The **concentration** of the acid is the amount of acid which has dissolved in 1 litre of water
- The more concentrated the acid, the lower the pH

Neutralisation

- Neutralisation** reactions are any reaction in which acids react with a **base** to cancel out the effect of the acid
- These reactions form a neutral solution with a pH of seven
- A **base** is any substance which neutralises an acid
- An **alkali** is a base which has been dissolved in water



Salts

Salts are substances which are formed when an acid reacts with a metal or metal compound

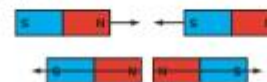
Different acids form different types of salts:

- Hydrochloric acids form chlorides
- Sulphuric acids form sulphates
- Nitric acids form nitrates

7

Magnets

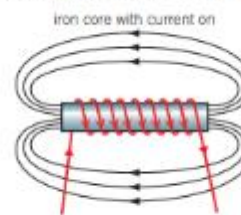
- A **magnet** has two poles, a north and a south pole
- North poles **attract** south poles
- South poles **attract** north poles
- South poles **repel** south poles
- North poles **repel** north poles



- Magnetic materials** will experience a magnetic force when placed near a magnet, this is a type of non-contact force as the materials do not have to touch for the force to be apparent
- The three magnetic metals are iron, nickel and cobalt

Electromagnets

- Electromagnets** are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet



- You can increase the strength of an electromagnet by:
 - Increasing the number of turns on the coil around the core of the electromagnet
 - Increasing the current which is flowing through the coil of wire
 - Using a more magnetic material for the core, e.g. iron rather than aluminium

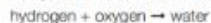
6

Combustion

- Combustion** is the burning of a **fuel** in oxygen
- A **fuel** is a substance which stores energy in a chemical store
- Examples of fuels include petrol, diesel, coal and hydrogen
- When a carbon based fuel undergoes combustion, it will produce water and carbon dioxide

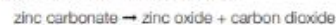


- Hydrogen can also be used as a fuel, this is much better than traditional fossil fuels as it does not produce carbon dioxide:

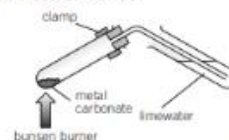


Thermal decomposition

- A **thermal decomposition** reaction is one where the reactants are broken down (decomposition) using heat (thermal energy)
- An example of this is with metal carbonates:

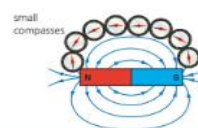


- We can test for this carbon dioxide by bubbling the gas through limewater, if the limewater turns cloudy, the gas is carbon dioxide



Magnetic fields

- A **magnetic field** is an area where a magnetic material will experience a force
- A **permanent magnet** will have its own magnetic field
- Magnetic field lines** represent the field, these always travel out of the north pole of the magnet, and into the south pole
- The closer together the magnetic field lines are, the stronger the magnetic field will be
- We can find out the shape of a magnetic field in two ways:
 - Using plotting compasses
 - Using iron filings

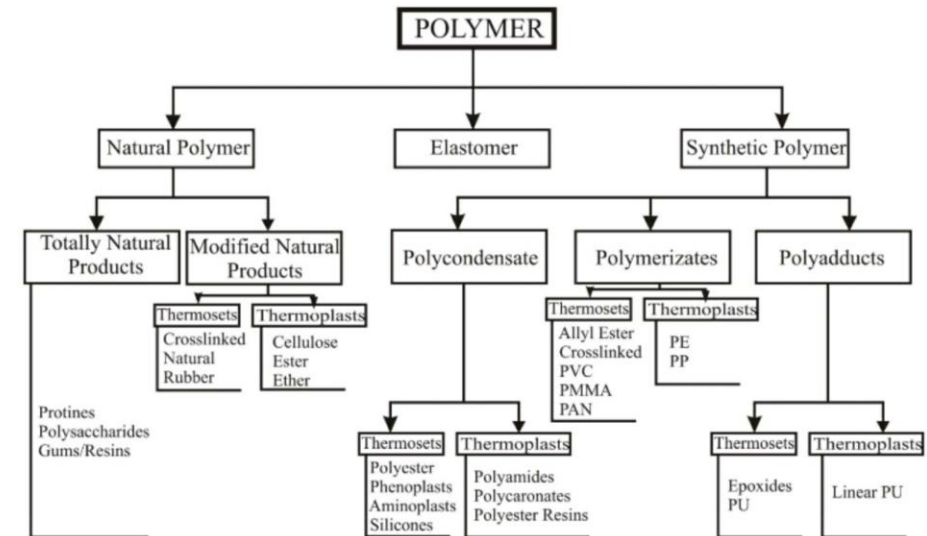


- The Earth has its own magnetic field, which acts like a giant bar magnet inside the centre of the Earth
- This magnetic field allows compasses to work when navigating around the Earth



Design Brief:

To create an analogue clock, using the Bauhaus and Memphis style. It is to be aimed at your age group +. You will be able to explore 2D and 3D design practices and create your design using acrylic plastic.



- 1: identify key features of cardboard and compare to plastics
- 2: Take inspiration from a design movement to create your own design
- 3: Begin to construct a 3D version of your design
- 4: Understand the properties of polymers and plastics





Select your school

Start typing the name of your school to begin searching.

- Birches Head Academy**
Birches Head Road, Stoke-on-Trent, ST2 8DD
- Bishop Rawstorne Church of England Academy**
Highfield Road, Croston, Leyland, PR26 9HH
- Bishop Ramsey Church of England**
Hume



You are logging into:

Birches Head Academy [Switch school](#)

Log in to Sparx Learning

 Log in to Sparx using Microsoft

or

Use your Sparx login

Username:

Password:

[Log in](#)

[New student?](#) | [Forgot login details?](#)

Create your account

Fill in your details below to create your account

Your first name:

Your last name:

Your date of birth:

[Back to login](#) [Submit](#)



Step 1. Remember your username

This is your username, you'll use this each time you log in to Sparx.

joebloggs

Make sure you remember your username – you might even want to write it down somewhere.

[Set a password >](#)

1. Go to maths.sparx-learning.com/student
2. Select your school and click 'Continue'
3. Click 'New user' underneath the login fields
4. Follow the steps to create your account:
5. Enter your name and date of birth
6. Note down your username
7. Create a password (minimum 6 characters)