

Year 8 Knowledge Organiser Term 2

2024

Knowledge Organiser - Guidance

- You must bring your Knowledge Planner to school every day in your school bag.
- You should place your Knowledge Planner on your desk at the start of every lesson so that you can refer to it when instructed by your teacher.
- If you lose your Knowledge Planner, you will need to purchase a replacement one from Student Services.
- In the Study Centre, you will use your Knowledge Planner to study the relevant subject's Knowledge Organiser and <u>learn</u> the information provided.
- Use your blue exercise book to make notes to help revise and learn the information provided in each Knowledge Organiser.

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KS3 Knowledge Organiser

Haggerston School



FRIDA KAHLO 1907 - 1954





Mexican Artist

Magdalena Carmen Frida Kahlo was a selftaught artist and created a magical realism with surreal influences.

It is estimated that she created around 150 to 200 works during her lifetime. Her earlier works were influenced by Renaissance masters but changed her style increasingly inspired by Mexican folk art with themes of fantasy, naivety and a fascination with violence and death.

Kahlo's reputation grew, and it was announced that her work is natural cultural heritage since 1984. Her life has been an inspiration for movies and ballet plays due to her painful experiences in life.

Periods

Surrealism, Modern Art, Magical Realism, Cubism

Influences

Mexican Culture and Symbolism, Sandro Botticelli, Bronzino.

Famous Works

- What the Water gave Me (1932)
- The Two Fridas (1939)
- Self-Portrait with Thorn Necklase(1940)
- The Broken Column (1944)
- The Wounded Deer (1946)

Self Quiz:

- Can write a summary of F.Kahlo's biography?
- 2. What was her work influenced by?
- 3. What are the most famous works created by F.Kahlo?
- 4. What is "Magical realism"?

She studied medicine and was going to become a doctor.

Because of a traffic accident at age 18 which badly injured her, she had periods of severe pain for the rest of her life. After this accident, Kahlo no longer continued her medical studies but took up painting. She used ideas about things that had happened to her. Her paintings are often shocking in the way they show pain and the harsh lives of women, especially her feelings about not being able to have children.

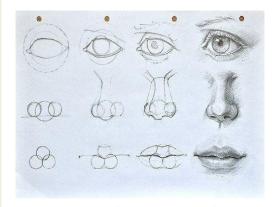
55 of her 143 paintings are of herself. She was also influenced by native Mexican culture, shown in bright colors, with a mixture of realism and symbolism.

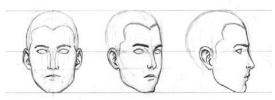
"Magical realism", perhaps the most common term, often refers to fiction and literature in particular, with magic or the supernatural presented in an otherwise real-world or mundane setting.

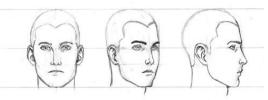
Practical application of art history:

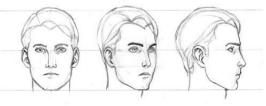
- Can you use the step by step guide to draw face features?
- 2. Using the grid method accurately recreate 3 portraits.
- 3. Create sketches of the people around you using lines only.
- 4. Create a drawing of a tonal scale. Can you use tone to create a realistic portrait?
- 5. Can you create a portrait in the style of "magical realism" (use your imagination)?
- 6. Can you create a portrait of Frida Kahlo?
- 7. Write in full sentences WWW and EBI.

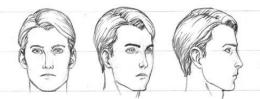
Step by step guides













Hexadecimal numbers

Hexadecimal uses the same first ten digits (0-9) as denary. It then has six more digits (A-F) to represent the numbers 10-16.

Hexadecimal numbers are often used because they're easier for humans to work with.

Hexadecimal numbers take up the same amount of storage space as binary numbers because they're stored as binary in memory.

Converting binary to hexadecimal

Converting the 8 bit binary number 10011100 into hexadecimal:

Step 1: Split the binary number into two four bit nibbles

8	4	2	1
1	0	0	1

8	4	2	1
1	1	0	0

Step 2: Calculate the value of each nibble in binary

8+1=9

8+4 = 12

Step 3: Translate these values into hexadecimal

 $9 \rightarrow 9$

12 → C

Step 4: Write down the final hexadecimal number

9C

Converting denary to hexadecimal

Step 1: Convert the denary number to binary using the method here

<u>Step 2:</u> Use the method on the left to convert the binary number to hexadecimal

Converting hexadecimal to binary

Converting 4E to binary

Step 1: Convert each hexadecimal digit to decimal

 $4 \rightarrow 4$

E → 14

Step 2: Convert each denary number to a four bit binary nibble

4 → 0100

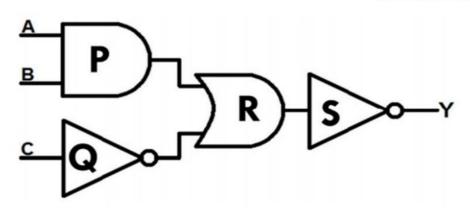
14 → 1110

Step 3: Write down the final binary number

01001110

Key vocabulary	
Logic Gate	A logic gate is an building block of a digital circuit. Most logic gates have two inputs and one output. At any given moment, every terminal is in one of the two binary conditions 0 or 1.
And	A logic gate which returns a 1 when both inputs are 1's. Else a 0 is returned.
Or	A logic gate which returns 1 when either or both of the inputs are 1.
Not	A logic gate which inverts its input.
Truth Table	A table which shows outputs from a logic gate or circuit given certain inputs.

Binary I	Logic Gate Diagrams				
		Input A	Input B	Output	Q
		0	0	0	
AND	 	0	1	0	0 - 4 + B
AND		1	0	0	$Q = A \wedge B$
		1	1	1	
		Input A	Input B	Output	Q
		0	0	0	
OB))-	0	1	1	0 - 4 V B
OR		1	0	1	$Q = A \vee B$
		1	1	1	
	N	Inpu	rt A Out	tput Q	
		0		1	10000
NOT	$-\infty$	1		0	$Q = \neg A$



A	В	C	P	Q	R	S/Y
0	0	0	0	1	1	0
0	0	1	0	0	0	1
0	1	0	0	1	1	0
0	1	1	0	0	0	1
1	0	0	0	1	1	0
1	0	1	0	0	0	1
1	1	0	1	1	1	0
1	1	1	1	0	1	0

Needed by the body in large amounts

Needed by the body in small amounts

MICRONUTRIENTS

MACRONUTRIENTS

Cooking & Nutrition

Nutrient Function Source Carbohydrates -Broken into Starch and Sugar -Starch foods are called complex carbohydrates and release energy over a long period of time. -Sugar are called simple carbohydrate. They release energy quickly. Lactose, Fructose and **Nutrients** Sucrose are all Sugars. -Prevents constipation Fibre -Absorbs poisonous waste from digestive food -Stays undigested but helps move digested food through our system -Helps repair and grow new cells (muscles Protein and body tissue) -Provides some energy -Insulates the body from the cold Fat -Cushions your bones and organs from any damage caused by knocks. -Stores energy Vitamins Unlike the other nutrients, they are only needed in small amounts. They are generally used to: -Controls chemical reactions -Keeping the body healthy and preventing some diseases linked to a poor diet -Regulate the function and repair of cells Unlike the other nutrients, they are only Minerals needed in small amounts. They are generally used to: -Turn the food we eat into energy Build strong bones and teeth Control body fluids -Our bodies are 65% water. It is vital for our Water body to stay hydrated. -Chemical reactions in our cells take place in water. -Waste products are passed out of our bodies in water.

-Our blood transports substances that are

-Water is in sweat that cools us down

dissolved in water.

Factors affecting food choice: When, how, who and what we eat can all be affected by a number of factors; health, **medical issues**, **stage of life**, personal preference, family, religion, social media, cost, availability, cultural celebrations, lifestyle, ethical and environmental implications etc.

Medical Issues

Lactose Intolerance: The inability to digest the sugar Lactose found in Dairy based foods Gluten Intolerance: The inability

to digest the protein **Gluten**found in **Wheat** based foods **Coeliac Disease:** Adverse reaction

to **gluten** causing the small intestine to become inflamed.

Obesity: The state of being overweight, having too much body fat as a result of over eating and not enough exercise. Being obese can result in High Cholesterol, this refers to the amount of fat in the veins. As the fat builds up it makes it more

fat builds up it makes it more difficult for the blood to flow, this is described as **Blood Pressure**. Having high blood pressure or cholesterol increases the risk of an **heart attack**.

The older you get it is more difficult to manage obesity.

Anaemia: Condition where the body does not have enough iron and therefore does not produce enough red blood cells. More common in females (teenage girls and pregnant women)

Osteoporosis: Condition that causes the **bones** to weaken and become fragile. More common in older people.

Type 2 Diabetes: Issues producing Insulin which controls the blood sugar levels



Stages of Life

Babies: Initially fed Milk from either their mother or formula milk which contains the essential nutrients - particularly fat and calcium. After 6 months approx., Babies are given soft pureed food to help swallowing and digestion.

Children 1-4: Meals should be small and regular to sustain energy use; high in protein, fat, complex carbohydrates but low in fibre.

Children 5- 12: Should have a healthy balanced diet (following the EWG) and be active. It is at this stage that children can become obese.

Teenagers: During the change from child to adult muscles begin to grow more rapidly, therefore plenty of protein is needed. Girls may need more Iron as they lose blood during menstruation.

Adults: Need to follow a healthy lifestyle; keeping to 2000 Cals F/2500 Cals M, avoid drinking alcohol, smoking or taking drugs. Exercise should be regular and varied.

Old People: Protein to maintain muscles, calcium to maintain bones and teeth, Vitamin D to maintain skin and absorb calcium, Iron to avoid anaemia, fibre & water to maintain a healthy digestive system.

Food Spoilage

When a food deteriorates in quality or becomes unsafe to eat it is called spoiled. This can happen through natural decay, bacterial growth or **contamination**. If the conditions are correct the rate of spoilage will increase.

Bacteria is harmful micro-organism make food dangerous to eat. To multiply (and become dangerous) bacteria needs enough food and moisture, the right temperature and enough time. To stop the multiplying of bacteria, you must limit these conditions.

You can use the 4 CS to do this:

Cross Contamination: preventing bacteria from spreading across different surfaces eg. bacteria from raw meat spreading to ready to eat food.

preventing raw foods (meat) from contacting ready to

Cooking: Kills the bacteria

Chilling: Keeps it dormant (not active)

Cleaning: Kills bacteria, but also prevents food and

moisture from being available.

As well as drying hands and surfaces effectively as this takes away the moisture.



Food (protein)

Contamination: The transfer and subsequent presence of harmful bacteria or chemicals in food or preparation area. There are 4 types of contamination:



Biological Contamination: Any transfer of bacteria from human, animal or food to food or preparation area. Including sneezing, coughing, blood, pus/transfer of bacteria from animal to their food product -meat, eggs, milk/transfer of bacteria from unclean hands

Cross contamination: is an example of biological contamination, it refers to the transfer of bacteria from raw meat to ready to eat foods

Physical Contamination: when a tangible object (you can see or feel) falls into food eg. hair, finger nails, plasters, plastic, dirt. Physical contaminants can act as vehicles to transfer of bacteria

Chemical Contamination: any transfer of chemicals eg, bleach, pesticides, cleaning product and perfume.

Food & The Wider World: Seasonal Foods

Seasonal Foods are foods that are ready to harvest and eat at certain times of the year eg. Strawberries in the UK in Summer. Seasonal foods are better in nutritional quality, taste and texture and cheaper. Buying seasonal foods reducing food miles and carbon footprint as you are using food that is naturally available within your country, rather than importing it from other countries. In the UK many foods are imported as they cannot grow in the UK climate and soil conditions.



Farmer Markets are markets that sell local

goods from local farmers and suppliers.

seasonal, sold/stored in less packaging

nutritional value. Shopping locally will

but also fresher and better in quality and

Produce is most likely to be organic,

Food Miles refers to the distance food has travelled from farm to fork. Food that has travelled further has a higher carbon footprint



reduce food miles/carbon footprint as it is Carbon Footprint refers to the amount Carbon using local suppliers. dioxide created and released into the atmosphere at each stage of processing a food.

Every time a light is turned on or a machine is used or car travels or a fridge is used, energy is used. The production of this energy creates pollution, causing CO2 to be released.



Rubbing in

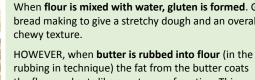
technique:



Food Science: Function of Ingredients -**FATS**



Jamaican Patties, Shortbread Biscuits, the toppings of an apple crumble and Mini Quiches are all crumbly in texture and buttery in flavour. This is because they all contain high amounts of fat - butter.

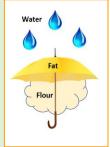


When flour is mixed with water, gluten is formed. Gluten is needed in bread making to give a stretchy dough and an overall



rubbing in technique) the fat from the butter coats the flour and acts like a waterproof coating. This means that less gluten is formed or shorter strands of gluten are formed.

Butter (or FAT) is used as a shortener when making pastry and other baked goods to create a short crumbly texture. That is why shortcrust pastry and shortbread biscuits have 'short' in their name



Summary of the play, adapted by Stephen Berkoff

Gregor Samsa awakes one morning to find himself transformed into a gigantic insect. His father and mother, Mr and Mrs Samsa and his sister, Greta, are shocked. Gregor is the main breadwinner of the house and when the chief clerks come to the house to find out why he has not been to work, the family make excuses and lie for him. When they discover Gregor's change, the clerks flee.

The family start off being sympathetic but, as time goes on, they become worried others will find out and they lose patience with him. The final straw comes when they have to take in lodgers to make money. The lodgers are disgusted when the discover Gregor who is now gigantic insect and unable to make himself understood. His family reject him and refer to him as IT. He dies of a broken heart and the family carry on with their lives as if he never existed.





Symbolism is the practice of representing an abstract idea; finding a different way to communicate an idea. An action, person, place, word, or object can all have a symbolic meaning.

Think about what Gregor changed into and how he was treated.
What could Gregor's change into an insect symbolise in our world?

Try and memorise these key quotes

Mrs. Samsa – I'm terribly sorry, but our son's not feeling well – I don't know quite what's wrong – it's very unlike him – he's very conscientious as you know – thinks of nothing but his work.

Mr. Samsa - You can't call him our son anymore - not that thing in there!

Gregor – You're turning my room into a naked den for some wild beast to roam in – leave it. If you empty my room I'll forget who I am, I'll lose all recollection of my humanity – I'll become what I am.

Greta - We must get rid of it – I won't utter my brother's name in the presence of this creature – so all I say is get rid of it.

Self-Quiz – LOOK, COVER, WRITE, CHECK & CORRECT

Make sure you understand the events in the story and remember the names of the characters.

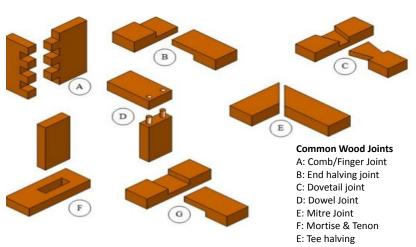
Check you know who the story was written by and who adapted it for the stage. Recall the definition of symbolism and give examples of what this play symbolises in our world.

Sentence Stem

Use the sentence stem below to describe how you would use drama to show Gregor's transformation into an insect and his family's reaction to this. Then explain what you are communicating to the audience. Words like: Difference/change/isolation/discrimination/hatred/prejudice are some suggestions When we/I/they (describe the drama).

This effectively communicates (explain meaning) to the audience.





Material Characteristics			
Hardness	resist cutting and indentations to its surface		
Toughness	Ability to withstand shock		
Strength	The ability to withstand being pulled or stretched, crushed or compressed or twisted.		
Elasticity	Ability to be stretched and return to its original size		
Flexibility	The ability to bend without breaking and then spring back to its original shape.		
Impact Resistant	Ability to resist sudden shocks		
Strength to Weight Ratio	Measure of strength to weight, for instance Aluminium is a light weight material but is strong. Therefore having a high strength-to-weight ratio		
Ductility	Ability to be stretched like the length of wire without breaking		
Malleability	The ability to be hammered, rolled or pressed into shape without breaking		
Durability	Able to last a long time		

Type of wood	Description	Usage
merican White QU's	A very strong wood Light brown in colour. Open grained Difficult to work with	High quality furniture Beams used in buildings Veneers
	An easy to work with materials, Reddish brown in colour	Indoor furniture Shop fittings Bars Veneers

Hardwoods

Difficult to work	Veneers
An easy to work with materials, Reddish brown in colour	Indoor furniture Shop fittings Bars Veneers
A straight- grained wood with a fine texture. Light in colour Very hard but easy to work with Can be steam bent	Furniture Toys Too handles
A very durable oily wood Golden brown in colour. Highly resistant to moisture	Outdoor furniture Boat building Laboratory furniture and equipment
	Difficult to work with An easy to work with materials, Reddish brown in colour A straight- grained wood with a fine texture. Light in colour Very hard but easy to work with Can be steam bent A very durable oily wood Golden brown in colour. Highly resistant to

Type of wood	Description	Usage
Spruce	Creamy-white colour Has small hard knots Not very durable	General indoor work Used mainly for kitchens and bedrooms
Scots Pine	A straight-grained wood, but knotty. Light cream/ pale brown in colour Fairly strong but easy to work with. Inexpensive	Readily available for DIY Constructional work and simple joinery work
Parana Pine	Hard and straight grained. Almost knot free. Fairly strong and durable. Expensive Pale yellow in colour with red/ brown streaks	Better quality pine furniture and fittings such as doors and staircases
Yellow cedar	A pale yellow colour with fine even texture Light in weight but stiff and stable	Furniture, amateur aeroplane building boat building, veneers

Type of wood	Description	Usage	Computer Aided Design		ea Design	
Type of Hood	Description	osage	Α	dvantages of CAD	Disadvantages of CA	D
1	Smooth even surface. Easily machined and painted or stained. Also available in water and fire-	panelling due to its machining qualities. Often veneered or		eas can be drawn d developed quickly	Expensive to set up	
MDF medium density fibre board	resistant forms			signs can be wed from all angles	Needs a skilled workforce	
	A very strong board which is constructed of layers of	Structural panelling in building construction.		d with a range of iterials		
Plywood	veneer or plies which are glued at 90degrees to each other. Interior and exterior grades available	Furniture making. Some grades used for boat building and exterior work	Some testing and consumer feedback can be done before costly production		Difficult to keep up with constantly changing and improving technology	
	Avery inexpensive particle board which sometimes has a laminated plastic surface	Furniture backs, covering curved structures. Door panels	More accurate drawings can be achieved		Files can be corrupted lost	or
Hardboard				anges can be made the drawings easily		
Chipboard	Made from chips of wood glued together. Usually veneered or covered in plastic laminate	Kitchen and bedroom furniture when veneered or plastic laminated. Shelving and general DIY work	dra file all	sier to store awings as digital s that can be sent around the world in instant		

Reading and Analysing Poetry

Romantic Poetry



Feelings expressed in poems

Passion

Conflicting feelings

Appreciation

Gratitude

Devotion

Unity

Grief and mourning

Anger

Regret

Frustration

Admiration

Nostalgia

Content / at home

Criticism of...

Sarcasm

Celebration of... (e.g. heritage or nature)

Themes	Traditional poems	Contemporary (modern) poems
Nature	Bright Star by Keats (1819) - A love poem addressed to a star and dedicated to his lover, Fanny Brawne. - Follows the structure of a Shakespearean sonnet and is punctuated as one long sentence	Rise by Jetñil-Kijiner and Niviâna (2018) - A collaboration between two poets and climate activists - The poets use their poetry to showcase the links between their island homelands in the face of climate change
Attelio	Westminster Bridge by Wordsworth (1802) - A sonnet describing London and the River Thames as seen from Westminster Bridge early in the morning - Simple, beautiful language	London Breed by Zephaniah (2009) - Rhymic poem exploring the poet's love/hate feelings towards London through contrast - Written in iambic tetrameter (4 pairs of syllables where the second is stressed)
	I Think of Thee by E. Browning (1845) - One of a larger collection of love sonnets - Celebrates her love for her husband-to-be (a poet) - Passionate and unrestrained	The Trick by Dharker (2001) - Sonnet form expressing romantic love - Dharker is a Scottish Muslim originally from Pakistan. She was also married to a poet
EGucanon	The Schoolboy by Blake (1789) - Criticises formal learning, the boy in the poem would rather be outside in nature and is compared to a bird in a cage - Regular structure - Pastoral tradition	Checkin Out Me History by Agard (2005) - Written in a dialect to give the reader an accent when read aloud - Criticises racial and colonial discriminations by questioning what we learn at school and considering who decides that
Death and Life	Song: When I am Dead my Dearest by Rossetti (1849) - The narrator speaks to their "dearest" telling them not to grieve when the narrator has died - Alliteration creates pleasant sounds - Clear rhythm and beat	Praise Song for my Mother by Nichols (1986) - Praise song is a traditional African form praising someone by listing their good qualities - Nostalgic feeling as it is written in the past tense
Social Justice	Chimney Sweeper by Blake (1789) - Criticises child labour, where young children worked as chimney sweepers in the 18th and 19th Centuries - The work was dangerous and the children were oppressed	Colour Blind by Sissay (2011) - A bittersweet poem that celebrates the beauty of life but also explores racist themes - Questions ideas around how ethnicity shapes our identity

Industrial revolution

Context DPRO3

Move to new methods of manufacturing (factories) in the period from about 1760 to sometime between 1820 and 1840.

Colonialism

One country occupying and taking power in another country.

British Empire

A name for the group of countries who Great Britain ruled (to varying degrees).

Climate emergency

The need to take environmental action to prevent irreversible damage being done to the planet.

Romanticism (capital R!)

Emerged in the late 18th and early 19th Century; characterised by a focus on emotions, imagination and nature.

Poets of this movement sought to convey intense feelings, celebrate individualism, and explore the beauty and power of the natural world.

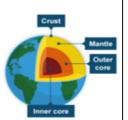
Writing Poetry		Poetry Structural Techniques (DPRO2)	Poetic Forms DPRO2	
Poetry Language Techniques (DPRO1)				
Technique:	Example:	Caesura - a piece of punctuation in the middle	Term:	Definition:
Personification - a metaphor attributing human feelings to an object	As the moon calmly watched over the landscape, silence fell.	of the line creating a pause in rhythm	Ballad	Narrative (story) poems that are often in 4 line stanzas.
Oxymoron - when two words are placed together with opposite meanings	'cruel kindness' 'deafening silence'	Enjambment - a sentence which continues, with no punctuation, into the line below	Blank Verse	Verse with no rhyme - usually 10
Onomatopoeia - a figure of speech where words are used to imitate sounds	The splash of the water echoed across the valley.	Rhyme - words that sound the same at the end of lines Dramatic		syllables (iambic pentameter). Where the speaker of the poem
Imagery - visually descriptive language	The fragrance of spring flowers filled the air.		· · · · · · · · · · · · · · · · · · ·	addresses an internal listener or
Metaphor - a descriptive technique that names a person, thing or action as something else	His mind was a prison. She had fire in her heart.	 Stanza - a group of lines that form a unit in a poem (like a paragraph) 	i	the reader.
Simile - a descriptive technique that compares one thing with another, usually using 'as' or 'like'	She held the blanket like a memory. He was as brave as a soldier.	Rhythm - the beat or flow of a poem Free Verse rhyme.		No regular pattern of meter or rhyme.
Assonance - the repetition of a vowel sound	The l <u>ig</u> ht of the f <u>ir</u> e is a s <u>i</u> ght.		Epic	Tragic/heroic story poems
Symbolism - using an object or a word to represent an abstract idea	dove; peace red rose; love	Meter - the pattern of stressed and unstressed syllables in a poem	Sonnet	14 lined love poem often written in iambic pentameter.
Sibilance - a repeated 's', 'sh' or 'z' sound.	<u>S</u> ilence <u>s</u> ang across the <u>s</u> ea.	Rhyming couplet - two lines of poetry that	Ode	Lyrical poem often addressed to
Semantic field - a group of words in the poem that are all linked to the same thing/idea/theme	trees, grass, flowers, wind, sun (semantic field of nature)	rhyme and have the same meter	Oue	one person.
Extended metaphor - a central metaphor that acts like an 'umbrella' to connect other metaphors within it	Society is a prison. Break free from the manacles.	Rhyme Scheme - the ordered pattern of rhymes at the end of lines e.g. ABAB	Pastoral	A poem about nature or simple country life.

Why write poetry? A Poet's Purpose (DPRO1,6)		Strategies for Writer's Block (DPRO1,6)	
To Protest!	For centuries, poems have been used to criticise society and politics in hope of positive change.	'Magpie' words and phrases from other poems or texts and adapt them to use in your work.	
To record and reflect on personal events	Poems are personal and tell individual stories. Writing poetry is an opportunity to share these and relate to others.	Freewrite - get all your ideas down first then revisit, redraft and correct SPaG afterwards.	
To experiment with words and ideas	Poetry is creative and experimental. There are less rules than in literature, so you can play around with language, structure and form.	Plan - create a mindmap or flow diagram of all your ideas.	
To help express emotions and feelings	Poetry is an outlet for expressing thoughts and emotions. Many famous poets use their poems to allow their feelings to be expressed.	Share and discuss your ideas with others.	
To spread joy and celebrate	Poetry should foster enjoyment and help share communal reasons to celebrate.	Read your work aloud to experiment with how it sounds.	

Year 8 Spring Term 1 - Hazards Links: BBC Bitesize

The Earth's Structure

- The inner core is 5,500°C extremely hot. It is a very dense solid made from iron and nickel.
- The outer core is 2,000km thick and is a liquid.
- · The mantle is semi-molten and about 3,000km thick.
- The crust is the rocky outer layer. It is thin compared to the other sections (5-70km thick). If the Earth was scaled to the size of an apple, the crust would be about the thickness of the apple skin. The crust is made up of pieces called plates. There are two types of crust: oceanic and continental crust.



How do plates move?

It was once believed that heat from the Earth's core caused <u>convection</u>

currents in the mantle and that these currents slowly moved the crust around.

It is now thought that plate movement is driven by a mechanism called <u>slab pull</u>. Slab pull occurs where older, denser tectonic plates sink into the mantle. As these older sections of plates sink, newer and less dense sections of plate are pulled along behind. Sinking in one place leads to plates spreading apart in other places.

Earthquakes and volcanoes are primarily found at <u>plate boundaries</u>. The plates are like giant rafts that slowly move around. At the boundaries between plates, molten magma is able to force its way to the surface and escape as <u>lava</u>.

Where are plate boundaries found?

Earthquakes and volcanoes mainly occur at plate boundaries where two or more tectonic plates meet. Some do occur at hotspots such as Hawaii. The earth's surface is made up of two types of crust:

- Oceanic crust found underneath the oceans. It is denser than continental crust and can be subducted.
- Continental crust found under land masses or continents. It is generally older than oceanic crust and is less often destroyed.

Hazard risks are increasing due to population growth, urbanisation, pressure on marginal land and changes to the natural environment.

What are the different types of plate boundaries?

Convergent boundary

Litterphere

Authencephere

magma escapes through weaknesses in the rock and rises up through a composite volcano. The volcanic eruptions are often violent, with lots of steam, gas and ash.

A divergent or constructive plate boundary occurs when plates move apart. Volcanoes are formed as magma wells up to fill the gap, and eventually new crust is formed. Earthquakes also occur. An example of a divergent plate boundary is the mid-Atlantic ridge. Iceland sits on this plate boundary.

Convergent or destructive plates move towards each other. This occurs when oceanic

subducted) the lighter continental plate. When the plate sinks into the mantle it melts

to form magma. The pressure of the magma builds up beneath the Earth's surface. The

and continental plates move together. The denser oceanic plate is forced under (or

Transform boundary

At a transform plate boundary two plates move alongside each other. When the plates get stuck pressure builds up until energy is suddenly released through a series of shockwaves. The earthquakes at a conservative plate boundary can be very destructive as they occur close to the Earth's surface. There are no volcanoes at a conservative plate margin.

Earthquakes:

Divergent

boundary

Earthquakes are the sudden violent shaking if the ground. This happens because the Earth's plates are constantly moving. Sometimes, because of friction, plates try to move and become stuck. Pressure builds up because the plates are still trying to move. When the pressure is released, it send out huge amounts of energy causing the Earth's surface to shake violently. The point inside the earth's crust where the earthquake originates from is known as the **focus**. The earthquake's energy is released in **seismic waves** and they spread out from the focus. The seismic waves are most powerful at the epicentre. The **epicentre** is the point on the earth's surface that is directly above the focus.

Effects of earthquakes

Primary effects: Those that occur as a direct result of the hazard e.g. buildings collapsing. Secondary effects: impacts that occur as a result of the primary effect e.g. homelessness

Nepal Earthquake:

Economic: Buildings destroyed at UNESCO World Heritage sites, houses destroyed. Tourism was reduced.

Social: 8,632 died and 19,009 injured, people were made homeless, harvests were lost,

Environmental: Landslides and avalanches occurred.

Responses are how countries react to an earthquake. They are categorised as follows:

Short-term or immediate - a response in the days and weeks immediately after a disaster has happened. Short-term responses mainly involve search and rescue and helping the injured.

Long-term - responses that go on for months and years after a disaster. It involves rebuilding destroyed houses, schools, hospitals, etc. It also involves kick-starting the local economy.

Climate Change

What is Climate Change? Greenhouse gases trap heat and warm Earth Some of the radiation is reflected away from Earth Pollution adds to greenhouse gases Earth absorbs and reflects radiation

- The atmosphere allows the heat from the sun (short-wave radiation to pass through to heat the Earth's surface.
- The Earth's surface then gives off heat (long-wave radiation).
- This heat is trapped by greenhouse gases (e.g. methane, carbon dioxide and nitrous oxide), which radiate the heat back towards Earth.
- · This process heats up the Earth.

Causes of climate change

Human:

- Burning fossil fuels, e.g. coal, gas and oil these release carbon dioxide into the atmosphere.
- Deforestation trees absorb carbon dioxide during photosynthesis.
 If they are cut down, there will be higher amounts of carbon dioxide in the atmosphere.
- Dumping waste in landfill when the waste decomposes it produces methane.
- Agriculture agricultural practices lead to the release of nitrogen oxides into the atmosphere.

Natural causes of long term climate change:

- Orbital changes the Earth has natural warming and cooling periods caused by <u>Milankovitch cycles</u> or variations in the tilt and/or orbit of the Earth around the Sun (Wobble, roll and stretch theory).
- Volcanic activity during a volcanic eruption carbon dioxide is released into the atmosphere.
- Solar output there can be fluctuations in the amount of radiation from the sun. If there is high amount emitted there will be an increase in Earth's temperatures

Evidence for Climate Change

Scientists have seen an average combined land and ocean surface temperature increase of 0.85°C since the end of the 19th century. In the northern hemisphere, the period between 1983 and 2012 was the warmest 30-year period of the last 1,400 years. The degree to which the climate warms in the future will depend on natural climate variability and the level of greenhouse gas emissions. If greenhouse gas emissions continue then average global temperatures will rise. However, some regions such as the Arctic will warm faster than others.

Glacier retreat

Over the past 50 to 100 years, photographic evidence has shown that the world's glaciers have been melting, which has caused them to retreat. The increase in global temperatures is causing glaciers to disappear and is increasing the melting of sea ice in the Arctic.

Ice cores

Scientists often use <u>ice cores</u> to detect changes in temperatures. When snow falls it traps air into the ice. When scientists take a sample of ice it reveals the atmospheric gas concentrations at the time the snow fell. This is used to calculate temperature at that time. The ice can reveal the temperature of each year for the past 400,000 years. Scientists that study the ice cores say there is clear evidence that there has been a rapid increase in temperature in the past decades.

Early spring

In recent years there have been signs of a seasonal shift - spring arrives earlier and winters tend to be less severe. These seasonal changes affect the nesting and migration patterns of wildlife.

Rising sea levels

Between 1901 and 2010, average global sea level rose by 0.19m.

Rising Sea Levels: Tuvalu

Tuvalu is a group of tiny islands in the South Pacific. Most islands are lowlying with the highest point being 4.5m above sea level. Population is 11,000 people and the economy relies mainly from exporting copra.

- Increased levels of

salinization affecting

soil for agriculture.

- Coastal erosion is

destroying productive

threaten by flooding.

Impacts from climate change

Social Economic

- Water supply due to droughts becoming more common.
- Wells are becoming polluted by seawater.
- High tides are starting to threaten homes and roads.

Environmental

- Ocean acidification is reducing fish stocks around the island.
- Warmer
 temperatures are
 destroying fragile
 ecosystems such as
 coral reefs.

Management

Campaigning internationally for a reduction in carbon emissions.

farmland.

- Main runway

- Migration to safer islands off the coast of New Zealand.
- Low sea walls have been constructed to prevent erosion and flooding.
- Japan supporting coral reef restoration by introducing new species to damaged reefs.

Changes to the UK climate and weather events

	Changes in intensity or frequency so far	Is this linked to climate change?	What is expected in the future?
UK warm spells	Increase	Yes	Increase
UK cold spells	Decrease	Yes	Decrease
UK heavy rain	Increase	Inconclusive	Increase
UK dry spells	No trend detected	Inconclusive	Increase (summer)
UK wind storms	No trend detected	Inconclusive	Increase*

British Empire

Summary: The British Empire was a group of countries under Britain's control from the 17th Century until the mid 20th century. The British Empire has a divided legacy; it left behind infrastructure, modernisation and traditions in the countries it conquered, but was also the source of horrific conflicts and oppression across the world. In this module we will investigate the methods of colonisation used by Britain as well as the impact of the Empire. We will do so through the lens of historical interpretations

	Key concepts
1	Government: The British Empire was run by the Civil Service. These were British people who helped to rule over colonies. Most people in Britain did not support Empire by 1850 and disagreed with the rich who used it to get jobs in the Civil Service. Many colonised people did not like the British Empire either. However, the British Empire did not rule in the same way in every part of the world.
2	 The New World - North America Attempts to colonise North America started under Queen Elizabeth I. After several attempts Jamestown was established in 1607 England were keen to have an empire to rival Spain and Portugal, to expand their trade and resources and to protect themselves from the French The British fought with indigenous groups to gain territory and established crops and plantations The indigenous population was severely impacted by European diseases and conflict Gradually England, France and Spain expanded across the majority of North America
3	 Nigeria Rule of the area was through white British people and was autocratic. The British fought local armies, burnt houses and crops to take over the land. The British made local chiefs sign treaties (agreements) to get more land, for example they signed a treaty with the Chief of Bonny Nigerian children of chiefs and those who were being trained to work in trade received a good quality of education under the British Missionaries worked in the region, their job was to make Nigerians convert to Christianity. Nigerian traditions and beliefs were not respected. The Nigerian people left the British Empire in 1960.

Key Developments
1763 – Treaty of Paris – Canada becomes part of the British Empire
1839 – Uprising against the British in Canada
1867 – Canada becomes a self-governing entity within the British
1931 - Statute of Westminster -Canada has complete legal freedom from British Empire
1960 – Nigeria becomes independent from the British Empire

Key words		
1	Indigenous	People who lived in a place originally, before colonization
2	Colony/colonisation	a colony is an area or country controlled by another more powerful country. Colonisation is the act of establishing a colony
3	The New World	The lands that now make up the Americas. English monarchs started to claim land there in 1497
4	Catholic	The historic doctrine and practice of the Western Church.
5	Revolt	armed uprising against the government
6	Independence	freedom from being governed or ruled by another country
7	settler	Someone who settles in a place different from where they are originally from.
8	conversion	Changing religion
9	Merchant sailors	Transporters of goods to trade by sea
10	chief	Ruler of a group or area
11	Self-government	the control of a country or an area by the people living there
12	autocratic	A government that people must obey completely

Brick Lane

Summary: Brick Lane is a road in East London now best known for being the centre of London's Bangladeshi-Sylheti community, but it has a long history of migration and settlement that can be traced back to before the 1700s. Through the use of sources we will investigate the different groups who have impacted the area

	Key concepts
1	Brick Lane before 1700:Before 1700, Brick Lane was at the edge of London. It was home to markets and breweries that made beer and alcohol. The Brick Lane Market was started by local farmers in the 1600s and sold fruit and vegetables.
2	Huguenots: The Huguenots were French immigrants who came to Britain for safety in the 18th Century. They had been attacked in France, because of their religion, but in Britain they were allowed to build their own church in Brick Lane. They became a hugely important part of England's economy, mainly through their skills in weaving
3	Jewish community: Eastern European Jews came to Britain in the 19thC for safety, as they had been attacked due to their religion living in the Russian Empire. However, members of the Jewish community of Brick Lane still had to defend themselves against racist marches in Britain at the Battle of Cable Street in 1936. However, the Jewish community were able to open businesses and a place of worship on 59 Brick Lane in 1897. By the 1930s, many members of the Jewish community had moved to richer areas of London.
4	Bengali community: After WWII, members of the Bangladeshi community who served in the navy decided to stay in Britain. They set up successful shops and restaurants in Brick Lane that are still used by local people today. The Bangladeshi community faced racist attacks living in Brick Lane. 24 year-old Altab Ali was killed in one of these attacks in 1978. Many people marched against the injustice of his death.
5	Gentrification: Gentrification was caused by wealthy people moving into Brick Lane in the 21st Century. They set up successful shops and art galleries. This also increased house prices in the area. Gentrification increased house prices, but was not always accepted. The Cereal Killer Cafe, run by new wealthy residents, was attacked in 2015 by Brick Lane locals. They argued that the new residents had made it too expensive to live in East London.

Key developments
1670-1710 – 13,000 Huguenots arrive in Brick Lane
1708 - the British government passed the Foreign Protestants Naturalization Act,
1730s - Irish migrants began to arrive in the Brick Lane area
1736 - serious fighting between English labourers and Irisch accused of taking English jobs
1845 -The Great Potato Famine increased Irish migration to the East End.
1882 – Jewish community arrive in Brick Lane
1936 - The Battle of Cable Street
1939-45 – Bengali community arrive in Brick Lane
1990 - present Gentrification starts on Brick Lane

impacted the area		
Key words		ey words
1	source	Objects or records that show what happened in the past
2	accuracy	How correct the information in the source is.
4	reliability	How trustworthy a historical source is.
5	Bengali	Speakers of the Bengali language from South \Asia
6	Jewish	Followers of Judaism
7	kosher	Holy or allowed actions, objects or foods
8	persecution	Bad treatment based on religion, race or political beliefs
9	Protestant	A type of Christianity
10	inference	An opinion that is formed using evidence
11	synagogue	Jewish place of worship
12	mosque	Islamic place of worship
13	persecution	When someone is attacked or targeted , usually because of their faith

Negative Number Examples		
I	Put these numbers in ascending order: 4, -5, 0, 2, -3	-5, -3, 0, 2, 4
2	-4 - 3 =	-7
3	+ 4 = 0	-4
4	43 =	+7
5	- 4 × - 3 =	+12
6	- 4×3 =	-12
7	- 20÷ - 4 =	+5
8	20÷ - 4 =	-5
9	- 4 ² =	-16
10	$(-4)^2 =$	+16
11	-34 =	-3 + 4 = +
12	-3 + - 4 =	-3 - 4 = -7
13	If $a = -3$, 10 - a =	103 = 10 + 3 = 13
14	If $a = -3$, $a^2 =$	(- 3) ² =+ 9

Percentage	Decimal	Fraction
1%	0.01	1 100
3%	0.03	3 100
10%	0.1	1 10
20%	0.2	$\frac{2}{10} = \frac{1}{5}$
50%	0.5	$\frac{5}{10} = \frac{1}{2}$
99%	0.99	99
100%	I	$\frac{1}{1} = 1$

	Fraction Skills		
1	18 of 40	40÷8 = 5	
2	3 of 40	40÷8×3 = 15	
3	To add fractions, you first need	A common denominator	
4	To subtract fractions, you first need	A common denominator	
5	$\frac{3}{5} + \frac{1}{5} =$	4 5	
6	$\frac{3}{5} - \frac{1}{5} =$	2 5	
7	$\frac{3}{5} + \frac{1}{4} =$	$\frac{12}{20} + \frac{5}{20} = \frac{17}{20}$	
8	$\frac{3}{5} - \frac{1}{4} =$	$\frac{12}{20} - \frac{5}{20} = \frac{7}{20}$	
9	$\frac{3}{5} \times \frac{1}{4} =$	$\frac{3\times1}{5\times4} = \frac{3}{20}$	
10	$3 \times \frac{1}{4} =$	$\frac{3}{1} \times \frac{1}{4} = \frac{3 \times 1}{1 \times 4} = \frac{3}{4}$	
П	$\frac{3}{5} \div \frac{1}{4} =$	$\frac{3}{5} \times \frac{4}{1} = \frac{3 \times 4}{5 \times 1} = \frac{12}{5}$	
12	3÷ 1/4 =	$\frac{3}{1} \div \frac{1}{4} = \frac{3}{1} \times \frac{4}{1} = \frac{12}{1} = 12$	

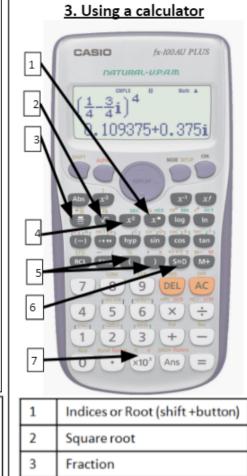
Prime Factors		
I	List the first 10 prime numbers	2, 3, 5, 7, 11, 13, 17, 19, 23, 29
2	I is not a prime because	It has only one factor: I. A prime has exactly two factors.
3	15 is not a prime because	It has four factors: 1, 3, 5, 15. A prime has exactly two factors.
4	Product means	Multiply
5	Express 30 as a product of its prime factors	30 = 2×3×5
6	Write 2×2×2×3×5×5 in index form	2 ³ ×3×5 ²

Section G: Standard Index Form		
10 ⁰ =	I	
10 ¹ =	10	
10 ² =	100	
10 ⁴ =	10,000	
10 ⁻² =	0.01	
10 ⁻⁴ =	0.0001	
5200 in standard index form	5. 2×10 ³	
0.052 in standard index form	5.2×10 ⁻²	
43×10 ² is not in standard index form because	43 is not between 1 and 10	
6.72 ×1000 is not in standard index form because	1000 should be 10 ³	
To compare numbers in standard index form	Compare the powers of 10. Higher power of 10 means higher value.	
Which is greater: 4.3×10^{7} or 3.82×10^{9} ?	3.82×10^9 because $10^9 > 10^7$	

Algebra: Simplify		
a + a	2a	
a + a + a	3 <i>a</i>	
a×a	a^2	
a×a×a	a^3	
3a + a	4a	
3a - a	2a	
3a×a	$3a^2$	
3a + 4b cannot simplify because	They are not like terms	
3a + 4b - 2a + 2b	a + 6b	
If $a = 3$ and $b = 4$, 5a - b =	5(3) - (4) = 15 - 4 = 11	

1. Angles		
	Angles on a straight line add up to 180°	
~	Angles around a point add to 360°	
>	Vertically opposite angles are equal	
\triangle	Angles in a triangle add up to 180°	
	Angles in a quadrilateral add up to 360°	
Δ	Base angles in an isosceles triangle are equal	
	Corresponding angles are equal	
\rightarrow	Alternate angles are equal	
	Co-interior angles add up to 180°	

2. Circle Definitions		
Area of a circle	πr ²	
Circumference of a circle	πd or 2πr	
\ominus	Diameter	
\bigcirc	Radius	
	Circumference	



4. Area				
w	Rectangle	1 × w		
h a Parallelogram b × h				
Triangle $\frac{b \times h}{2}$				
Trapezium $\frac{1}{2}(a+b) \times h$				
5. Angles in Polygons				

Angles in Polygons		
Sum of interior angles	(n-2) x 180	
Each interior angle in regular polygon	(n-2) x 180 n	
Sum of exterior angles	3600	
Each exterior angle in regular polygon	360° n	
Number of sides in a regular polygon	360 exterior angle	
Interior + exterior angle	180°	

× 1000
× 1000 ²
× 100
× 100 ²
× 10
× 10 ²
x 1000
x 1000
x 1000

4

Square Brackets

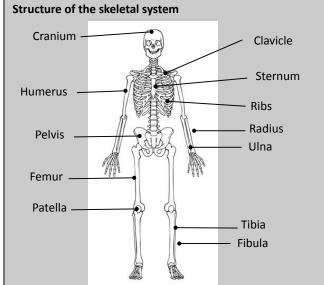
SD button (changes from decimal to fraction)

Pi (shift + button)

Music of the 60s and Theme and Variations

Element	Core knowledge [this will be in your assessment]	Music of the 60s Context
Melody	 Riff - a short repeating melody Bassline - the lowest part of a song 	Recommended Listening:
Articulation	 Accent - louder than the notes around it Sforzando - Suddenly loud for one note 	The BeatlesThe Supremes
D ynamics	Forte - LoudPiano - Soft	Nina SimoneBen E King
Texture	 Thick - many layers of sound Thin - few layers of sound 	
Structure	 Verse - repeated section with different lyrics Chorus - repeated section with the same lyrics 	Theme and variations Context
Harmony	 Chord - three or more notes together Chord sequence - a series of different chords Major/ Minor - happy/ sad chord 	Recommended Listening
Instrumentation	Double Bass - lowest member of the string family	Pachelbel's Canon in D
Rhythm	 Backbeat - kick drum on beats 1 and 3, snare drum on 2 and 4 Crotchet, Quaver, Semiquaver 	
Tempo	Fast Slow	
Time Signature	 Simple - beats divided in 2s Compound - beats divided in 3s Duple- 2 beats a bar Triple - 3 beats a bar 	

Year 8 Physical Education – The structure and functions of the skeletal system



Scapula Vertebral column

shaped bones called vertebrae. Fach vertebra is protected with cartilage to prevent friction.

Vertebral Column

The vertebral column is divided into

5 sections. It is made up of irregularly





Function of the skeleton

- · Protection of vital organs
- Muscle attachment
- Joints for movement
- Production of blood cells

Classification of joint

- Pivot (neck atlas and axis)
- Hinge (elbow and knee)
- Ball and socket (hip and shoulder)

Connective tissue

Ligaments – attaches bone to bone to add joint stability.

Tendons – attaches muscles to bone and contributes to joint movement as a result of muscle contraction.

Classification of bones

Long (leverage)	Short (weight bearing)	Flat (protection + muscle attachment)	Irregular (protection and muscle attachment)
Clear shaft region to the bone. i.e. femur, humerus & phalanges	Light, small and very strong. i.e. carpals tarsals	Broad surface area for muscle attachment. i.e. cranium	Assist the functioning of certain joints. i.e. Patella/vertebrae

Joint movements

Flexion	Adduction	Rotation	Dorsi-Flexion (ankle joint)
Decreasing the angle at a joint (bending)	Limbs moving towards the midline of the body.	A twisting/turning action around a joint.	When the toes are turned up to the body.



Year 8: Spring 1 The Life and Teachings of Jesus Christ

	roar o. Opring	THE LIE and Teachings of Jesus Office	
	Key Terms	Key Concepts	
Agape love	Selfless love for fellow human beings	Agape love – Jesus' teachings of selfless love for fellow humans . Jesus taught that everyone deserves to be loved, no matter what they have done. He taught this through the parable of 'The Good Samaritan'.	
Parable	A story used to illustrate a moral or spiritual lesson, as told by Jesus in the Gospels.	Situation ethics – at some points in a Christian's life they may face an ethical dilemma where there is no clear teachin in the Bible for them to follow. Situation Ethicists say that the only rule that should be followed is: <i>in any situation do the most loving action</i> . If you apply this to individual situations you will be able to decide what the best course of	
Ethical dilemma	A situation in which there is a choice to be made between different options and none of the options resolves the	action is. Jesus taught love above all else therefore this is the best way to make ethical decisions, according to Situation Ethicists.	
	situation in a ideal way.	The local church – the local church provides many services for it's local community or parish. For example, they offer a space to bring people together, provides spiritual services to the sick, offer moral guidance and offer counselling	
Conscience	nscience The voice inside your head that guides you. Christians believe this is the voice of	services amongst other things. These are all activities that demonstrate Jesus' teachings of selfless love.	
	God.	The Worldwide Church – the worldwide church provides services to Christians all over the world. They provide many of	
Parish	The local area served by a church	the same services that the local church does, but they do this on a much bigger scale than just the local parish. The also try to bring these services to people who have no other way of receiving these services.	
Persecution	The purposeful ill-treatment of an individual or group of people based on a particular feature, e.g. race or religion	Charity work – Many Christians believe that they should do charity work as it puts Jesus' teachings of love into practice. Christian Aid are an example of a charity who hold their Christian values to be of the utmost importance. They are against poverty and injustice and support equality and peace and try to work for a fairer world.	
Poverty	The state of being extremely poor.	The Parable of the Good Samaritan	
Injustice	A lack of fairness or justice	A traveller is stripped of clothing, beaten, and left half dead alongside the road. First a priest and then a Levite (Jewis	
Equality	the state of being equal, especially in status, rights, or opportunities.	man) comes by, but both avoid the man. Finally, a Samaritan happens upon the traveller. Samaritans and Jews dee each other, but the Samaritan helps the injured man. Jesus is described as telling the parable in response to the	
Peace	A state or period in which there is no war or a war has ended.	question from a lawyer, "And who is my neighbour?". In response, Jesus tells the parable, the conclusion of which is that the neighbour figure in the parable is the man who shows mercy to the injured man—that is, the Samaritan.	

Useful Quotations

"If anyone has material possessions and sees a brother or sister in need but has no pity on them, how can the love of God be in that person?" (1 John 3:17)

"... whatever you did for one of the least of these brothers and sisters of mine, you did for me" Matthew 25:40

"Darkness cannot drive out darkness, only light can do that. Hate cannot drive out hate, only love can do that" Martin Luther King

"But I say unto you, Love your enemies, bless them that curse you, do good to them that hate you, and pray for them which despitefully use you, and persecute you;"

Matthew, 5:44

"This is My commandment, that you love one another, just as I have loved you." John 15:12

"Thou shalt love thy neighbour as thyself." Matthew 22:39

Year 8: Spring 2 The Life and Teachings of Jesus Christ

	Key Terms	Key Concepts	
Incarnation	literally 'God made flesh'. The belief that Jesus was fully God and fully human.	The Incarnation - Christians believe that Jesus Christ is the Son of God and came down to Earth in human form. Jesus came to this world to build a relationship with humans. It shows God loves the world and everyone in it. Christians believe that Jesus understands humans and our problems – he can sympathise	
Ascension	when Jesus was taken up to	with us and understand our suffering	
Betrayal	heaven breaking your allegiance or friendship with someone with a particular act or disloyalty.	The last days of Jesus' life - Key events include, the last supper, betrayal, arrest, trial, crucifixion, resurrection and ascension. They teach of Jesus's last actions and of God's power and plan for humanity. They also show Jesus as a role model for others. Christians follow Jesus's examples in life and death – he taught them how to have a relationship with God through love and worship.	
Arrest	seize someone by legal authority and take them into custody.	Crucifixion – the method by which Jesus was executed. Jesus was executed for the crime of blasphem because the Jewish high priests did not believe he was the Messiah. He was found guilty by the	
Atonement	Jesus restored the relationship between humans and God – 'at-one-ment'.	Sanhedrin (Jewish council) and the execution was carried out by the Romans, who rules Israel at that time. Christians believe that Jesus had to die in order for Christians to achieve salvation.	
Blasphemy	the act of insulting or showing contempt (hate) or lack of respect to God.	Salvation - Salvation is the belief that Jesus died for all of humanity's sins. It means everything Jesus taught is true. Humans sins are forgiven – people can have a true relationship with God. It shows there is an afterlife – heaven. Christians believe that Jesus's death allows them to have eternal life – but they must also live a good life. Christians have a duty to follow Jesus's example and live a good life to get into	
Sanhedrin	Jesus council made up of high priests.	heaven. Resurrection – before Jesus died he promised his disciples that he would rise from the dead after three	
Repentance	being sorry for your sins	days. God recreates a new body in heaven. This is proof for Christians that Jesus was fully God as it was	
Messiah	a leader regarded as the saviour	his final miracle. It also serves as proof of the afterlife as Jesus was in heaven for those three da when he returned he told his disciples all about heaven.	

Useful Quotations

"The Word [Jesus] became flesh and made his dwelling among us" Matthew 1:23 - The Incarnation

"For God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life." John 3:16 –

The Incarnation and Salvation

"Salvation is found in no one else, for there is no other name under heaven given to mankind by which we must be saved" Acts 4:12 - Salvation

"Christ died for our sins . . . That he was buried, that he was raised on the third day" 1 Corinthians 15:3-4 – Salvation and Resurrection

"Why do you look for the living among the dead? He is not here, he has risen!" Luke 24:5-6 – The Resurrection



Science Knowledge Organiser

Year 8 - Spring

M	etals and their uses Kr	nowledge Grid			
	Question	Answer		Question	Answer
1	catalyst	A substance that speeds up a reaction, without itself being used up.	1 4	reactive	A substance that reacts with many other substances or reacts very easily is reactive.
2	chemical property	How a substance reacts with other substances.	1 5	reactivity	A description of how quickly or vigorously something reacts.
3	composite material	A material made up of two or more substances. It has significantly different properties from the substances from which it is made.	1 6	reactivity series	A list of metals that shows them in order of their reactivity, with the most reactive at the top.
4	halogen	An element in group 7 of the periodic table, such as fluorine and chlorine.	1 7	acid	A substance that reacts with alkalis, turns litmus red, and has a pH of less than seven is acidic.
5	metal	Any element that is shiny when polished, conducts heat and electricity well, is malleable and flexible and often has a high melting point.	1 8	effervescence	The production of a gas in a reaction in a liquid.
6	non-metal	Any element that is not shiny, and does not conduct heat and electricity well.	1 9	salt	Compounds (other than water or hydrogen) formed during the neutralization of an acid with a base (or the reaction of a metal with an acid).
7	physical property	A description of how a material behaves and responds to forces and energy. Hardness is a physical property.	2	alloy	A metal with one or more other elements added to improve its properties.
8	corrosion	When something, such as stone or metal, reacts with chemicals in the air or water and gets worn away.	2	boiling	When there is liquid turning into a gas in all parts of a liquid, creating bubbles of gas in the liquid.
9	formula (chemical)	A combination of symbols and numbers that shows how many atoms of different kinds are in a particular molecule. In compounds that do not form molecules, it shows the ratio of elements in the compound.	2 2	boiling point	The temperature at which a liquid boils.
1	rust	A weak, brown, crumbly solid formed when iron corrodes. (A mixture of oxides and hydroxides of iron including iron hydroxide.)	2 3	malleable	Able to be beaten and bent into shape.
1 1	rusting	The corrosion of iron or steel (water and oxygen must be present for rusting to occur).	2 4	melting point	The temperature at which a solid turns into a liquid.
1 2	symbol equation	A way of writing out what happens in a chemical reaction using symbols to represent the substances involved.	2 5	mixture	Two or more substances jumbled together but not joined to each other. The substances in mixtures can often be separated from each other.
1 3	word equation	An equation in which the names of the reactant(s) are written on the left side, there is an arrow pointing from left to right and the names of the product(s) are written on the right side.	2 6	pure	A single substance that does not have anything else in it.

Science Knowledge Organiser

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me	Periodic Table Kno				
	Question	Answer		Question	Answer
1	atom	Atoms are small particles from which all substances are made.	22	periodic table	An ordered list of all known elements.
2	chemical reaction	A change in which one or more new substances are formed.	23	boiling	When there is liquid turning into a gas in all parts of a liquid, creating bubbles of gas in the liquid.
3	compound	A substance that can be split up into simpler substances, since it contains the atoms of two or more elements joined together.	24	boiling point	The temperature at which a liquid boils.
4	element	A simple substance, made up of only one type of atom.	25	brittle	Not easily bent, not flexible, breaks under force.
5	matter	All things are made of matter. There are three states of matter: solid, liquid, gas.	26	melt	When a solid turns into a liquid.
6	oxidiser	A substance that supplies oxygen for a reaction.	27	melting point	The temperature at which a solid turns into a liquid.
7	physical change	A change in which no new substances are formed (e.g. changes of state).	28	freeze	When a liquid turns into a solid.
8	physical property	A description of how a material behaves and responds to forces and energy. Hardness is a physical property.	29	freezing point	The temperature at which a liquid turns into a solid. It is the same temperature as the melting point of the substance.
9	property	A description of how a material behaves and what it is like. Hardness is a property of some solids.	30	flexible	Can bend without breaking.
1 0	symbol (chemistry)	The letter or letters that represent an element.	31	group (chemistry)	A vertical column of elements in the periodic table. Elements in the same group generally have similar properties.
1 1	chemical change	A change that forms one or more new substances.	32	malleable	Able to be beaten and bent into shape.
1 2	chemical formula	A combination of symbols and numbers that shows how many atoms of different elements are in a particular molecule. In compounds that do not form molecules, it shows the ratio of the different elements in the compound.	ular molecule. 33 electricity well, is malleable and flexible and often has a high		electricity well, is malleable and flexible and often has a high
1 3	chemical property	How a substance reacts with other substances.	34	non-metal	Any element that is not shiny, and does not conduct heat and electricity well.
1 4	chemical reaction	A change in which one or more new substances are formed.	35	period (chemistry)	A horizontal row in the periodic table.
1 5	hypothesis	An idea about how something works that can be tested using experiments. Plural is hypotheses.	36	transition metal	One of a central group of elements in the periodic table.
1 6	prediction	What you think will happen in an experiment and why you think this.	37	acid	A substance that reacts with alkalis, turns litmus red and has a pH of less than 7 is acidic.
1 7	ratio	A way of comparing two different quantities. The two numbers are separated by a colon (:).	38	alkali	A substance that reacts with acids, turns litmus blue and has a pH of more than 7 is alkaline.
1 8	alkali metal	A group of very reactive metals. Found in group 1 of the periodic table.	39	oxide	A compound of a metal or nonmetal with oxygen, such as magnesium oxide or carbon dioxide.
1	group (chemistry)	A vertical column of elements in the periodic table. Elements in the same group generally have similar properties.		pН	A numerical scale from 1 to 14 showing how acidic or alkaline a substance is. Acids have a pH below 7, neutral substances have a

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9			40		pH of 7 and alkalis have a pH greater than 7.
2	halogen	An element in group 7 of the periodic table, such as fluorine and chlorine.	41	indicator	A substance that changes color in solutions of different acidity and alkalinity.
2	noble gas	Group of very unreactive non-metal gasses. Found in group 0 of the periodic table.	42	reactivity	A description of how quickly or vigorously something reacts.

Ele	ctricity Knowledge	Grid			
	Question	Answer		Question	Answer
1	ammeter	A piece of equipment that measures how much electricity is flowing around a circuit.	15	voltage	A way of saying how much energy is transferred by electricity.
2	amp (A)	The unit for measuring current	16	voltmeter	A piece of equipment that measures how much energy is being transferred by a current.
3	battery	Two or more cells used together.	17	volt (V)	The unit for voltage.
4	cell	A source of electricity with a low 'energy' (low voltage). Cells push electrons round a circuit.	18	cable	The wire for something that runs off mains electricity. It has three separate wires inside it.
5	component	Something in a circuit, such as a bulb, switch or motor.	19	cable grip	Part of a plug that holds the cable, and stops the wires being pulled out of the pins.
6	current	The flow of electricity around a circuit.	20	circuit breaker	A safety device that switches off the electricity supply if the current is too big.
7	filament	The thin piece of wire inside a light bulb that glows when the bulb is on.	21	earth pin	The metal pin in a plug that the earth wire is connected to.
8	power pack	A source of electricity with a low voltage that is safe to use in schools.	22	earth wire	The green and yellow wire in a cable or plug. It is there for safety.
9	charges	Tiny particles that flow around a circuit.	23	fuse	A piece of wire that melts if too much electricity flows through it
10	parallel circuit	A circuit with two or more branches that split apart and join up again.	24	fuse rating	The largest current a fuse can conduct without melting.
11	series circuit	A circuit in which there is only one loop of wire.	25	live pin	The metal pin in a plug that the live wire is connected to.
12	resistance	A way of saying how difficult it is for electricity to flow through something	26	neutral wire	The blue wire in a cable or plug.
13	resistor	A component that makes it difficult for electricity to flow – resistors are used to reduce the size of the current in a circuit	27	ring main	A type of parallel circuit used in house wiring.
14	variable resistor	A resistor whose resistance can be changed.			

				Y8 KO (free time and technology)	Cycle	2 23-24		
1. ¿Usas m	ucho el internet? (Do you us	se the internet	much?) Quizlet list			2. ¿Qué piensas de las redes sociales	? (What do you think of so	ocial media?) Quizlet list
Siempre (Always) Todos los días (Every day) De vez en cuando (From time to time) A veces (Sometimes)	uso (Twitter/ Facebook/) (I use (Twitter/ Facebook/) veo videos en TikTok (I watch videos on TikTok) subo fotos a mi cuenta de Instagram (I upload photos to my Instagram account) descargo música (I download music) hago la compra por Internet (I do online shopping)	pero nunca (but I never) pero ya no (but I no longer)	Mando mensajes (I send messages) Miro las redes sociales (I check social media) Descargo aplicaciones (I download apps) escucho música (I listen music) hago los deberes (I do online homework)	porque es una pérdida de tiempo (because it's a waste of time) porque gasta mucha batería (because it wastes a lot of battery) porque está pasado de moda (because it's old fashioned) iporque mi (padre) no me lo permite! (because my (dad) doesn't let me!) porque mi (madre) piensa que		Pienso que / Opino que (I think that) Mi (madre/padre/abuela/abuelo) piensa que (My (mum/dad/grandma/grandad) thinks that) Diría que (I would say that)	las redes sociales son (social media is) las redes sociales, por ejemplo (TikTok), son (social media, for example (TikTok), is)	útiles (useful) divertidas (fun) peligrosas (dangerous) Entretenidas (entertaining) una pérdida de tiempo (a waste of time)
3 rd person (DPR8): En mi casa, casi nadie (In my house, almost nobody) Mi madre ya no (My mum no longer)	(watches videos on TikTok) / (uploa usa Twitter / descarg (uses Twitter) / (downlo hace la compra por Internet / escu	g <mark>a música</mark> ads music)	•	pasamos demasiado tiempo en Internet (because my (mum) thinks that we spend too much time on the internet)	ļ	Desde mi punto de vista (From my point of view)	las redes sociales están (social media is) las redes sociales, por ejemplo (Facebook) están (social media, for example (Facebook), is)	de moda (on trend/ in fashion) pasadas de moda (outdated/ out of fashion)
			3. ¿Qué haces	en tu tiempo libre? (What do you do	o in yo	ur free time?) <u>Ouizlet list</u>		
En mi tiempo libre (In my free time) Los fines de semana (On the weekends) Por la tarde (In the afternoon) Cuando no estoy estudiando (When I am not studying)	suelo (I usually) me mola (I really like) mis amigos y yo solemos (my friends and I usually) Mi hermano suele (my brother usually)	bailar en clases d (dance in zumba jugar al fútbol/al (play football/bas cantar en un core (sing in a choir) hacer deportes a (do water sports) nadar en la piscii (swim in the loca ayudar con las ta (help with the ho	classes) I baloncesto sketball) oo / leer novelas / (read novels) scuáticos) na local al swimming pool) areas domésticas	porque/ dado que ya que/ visto que puesto que (because) aunque (although) y opino que (and I think that)		me permite relajarme / me permite olvidarme de it allows me to relax / it allows me to forget ever me quita el estrés / me hace reír / llorar it takes away my stress / it makes me laugh / cry me da la oportunidad de pasar tiempo con mis ami It gives me the chance to spend time with my friend es bastante barato / caro (it's quite cheap / expensive) Es relajante (it is relaxing)	ything gos/mi familia	
Cuando tengo tiempo (When I have time) Después del insti (After school)		ir al cine (go to the cinema	a)	Para ver (to watch) Ya que me gusta ver (because I like to watch))	una comedia (a comedy) una película de acción (an action film) una película de miedo (a horror film) una película de ciencia ficción (a sci-fi film) una película de ciencia ficción (a sci-fi film) una película romántica (a romantic film)		
Ç		Ir de compras (go shopping)		a la panadería (to the bakery) a la carnicería (to the butcher's) a la pescadería (to the fishmonger's) a la papelería (to the stationer's) a la frutería (to the fruit shop)		para comprar (in order to buy) pan (bread) / carne (meat) pescado (fish) / fruta (fruit) Un libro (a book) / manzanas (apples)		

PRESENT TENSE	PRESENT TENSE	PRESENT TENSE	FREQUENCY EXPRESSIONS	
IR (TO GO)	TENER (TO HAVE)	SER (TO BE)	Hoy en día – Nowadays	
Yo voy – I go /am going	Yo tengo – I have	Yo soy – I am	De momento – At the moment	
Tú vas – You(sg.) go /are going	Tú tienes – You(sg.) have	Tú eres – You(sg.) are	Normalmente – Normally	
Él / Ella va - He/She goes / is going	Él / Ella tiene – He / She has	Él / Ella es – He/She is	Generalmente – Generally	
Nosotros(as) vamos – We go/ are going	Nostros(as) tenemos – We have	Nostros(as) somos – We are	Todos los días – Every day	
Vosotros(as) vais – You(pl.) go/are going	Vosotros(as) tenéis – You(pl.) have	Vosotros(as) sois – You(pl.) are	Hoy – Today	
Ellos / Ellas van – They go/are going	Ellos / Ellas tienen – They have	Ellos / Ellas son – They are		
PRETERITE TENSE	PRETERITE TENSE	PRETERITE TENSE	FREQUENCY EXPRESSIONS	
IR (TO GO)	TENER (TO HAVE)	SER (TO BE)	Ayer – Yesterday	
Yo fui – I went	Yo tuve – I had	Yo fui – I was	Anoche – Last night	
Tú fuiste – You(sg.) went	Tú tuviste – You(sg.) had	Tú fuiste – You(sg.) were	La semana pasada – Last week	
Él / Ella fue – He/ She went	Él / Ella tuvo – He/ She had	Él / Ella fue – He/ She was	El fin de semana pasado – Last weekend	
Nosotros(as) fuimos – We went	Nostros(as) tuvimos – We had	Nosotros(as) fuimos – We were	El mes pasado – Last month	
Vosotros(as) fuisteis – You(pl.) went	Vosotros(as) tuvisteis – You(pl.) had	Vosotros(as) fuisteis – You(pl.) were	Hace tres semanas – Three weeks ago	
Ellos / Ellas fueron – They went	Ellos / Ellas tuvieron – They had	Ellos / Ellas fueron – They were	El año pasado – Last year	
NEAR FUTURE TENSE	NEAR FUTURE TENSE	NEAR FUTURE TENSE	FREQUENCY EXPRESSIONS	
IR (TO GO)	TENER (TO HAVE)	SER (TO BE)	La próxima semana – Next week	
Yo voy a ir – I am going to go	Yo voy a tener- I am going to have	Yo voy a ser- I am going to be	El fin de semana que viene – Next weekend	
Tú vas a ir – You(sg.) are going to go	Tú vas a tener – You(sg.) are going to have	Tú vas a ser – You(sg.) are going to be	En cuatro días – In four days	
ÉI / Ella va a ir – He/She is going to go	Él / Ella va a tener – He/She is going to have	ÉI / Ella va a ser – He/She is going to be	El próximo año – Next year	
Nosotros(as) vamos a ir – We are going to go	Nosotros(as) vamos a tener– We are going to have	Nosotros(as) vamos a ser – We are going to be	El próximo mes – Next month	
Vosotros(as) vais a ir – You(pl.)are going to go	Vosotros(as) vais a tener– You(pl.)are going to have	Vosotros(as) vais a ser – You(pl.)are going to be		
Ellos / Ellas van a ir – They are going to go	Ellos / Ellas van a tener – They are going to have	Ellos / Ellas van a ser – They are going to be		

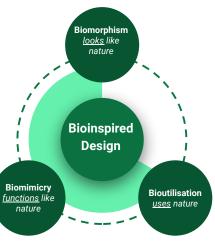
Year 8

Textiles

Bioinspired Design

Bioinspired Design is a branch of design that is concerned with the study of all things living. Within the family of bioinspired design, there are 3 sub-categories:

- **Biomorphism** which refers to designs that **visually** resemble elements from life i.e. they "look like" nature.
- Biomimicry or Biomimetics whereby designs focus on function i.e. they "work like" nature.
- **Bioutilisation** which refers to the **use** of biological material or living organisms in a design or technology.



De yes hose the laterd mound on yes yes and ye



Biomimicry

Beetle inspires Dew Bank Bottle

The onymacris unguicularis is a beetle found in the Namibian desert and has the most unique way of procuring water. Early in the morning, when the dew enriched fog is settled over the dunes, the beetle goes to the peak and positions its body in such a way that it helps in dew formation, and slurps up the water thus formed. Using this technique is the Dew Bank Bottle. It is made in such a way that the steel body helps to assimilate the morning dew and channel it into the bottle immediately. Ideal for the nomads in the desert!

Biomorphism

Stuttgart pavilion inspired by sand dollar

The humble little sand dollar served as the inspiration for this pavilion in Stuttgart, Germany. Thin sheets of plywood were laser cut and pieced together into the polygonal plywood structure. Finger joints, which are seen as the technical equivalent of a sand dollar's morphology, are used to connect the parts together, resulting in an incredible temporary pavilion located in a public square at the university.

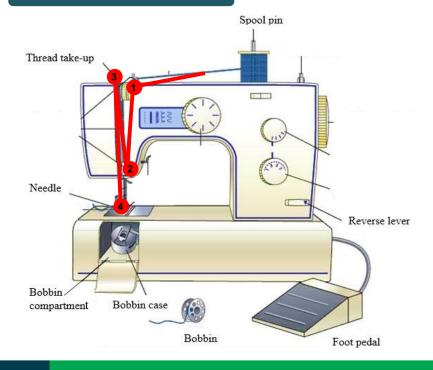


Bioutilisation

Perez Art Museum in Florida brings the outside, in An example of bioutilisation is using a living wall of plants to help clean the air in an office building. This piece is a collection of 8 groups of suspended columns that descend from each side of the Perez Art Museum in Florida. The columns are meant to create a hanging forest effect that cleans the air and brightens the space.



How to thread up a Sewing Machine





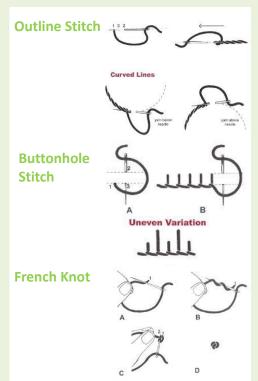
Year 8

Textiles

In Textiles Design we use a range of specialist techniques in order to decorate textiles to make them more aesthetically pleasing and interesting. The information below explains some of the techniques you will explore this year.

Embroidery Stitches

Embroidery is the act of decorating fabric or other materials using a needle to apply thread or yarn. Typically embroidery is done by hand using embroidery needles, embroidery floss/thread and an embroidery hoop, however it is becoming more popular to use sewing machines to create designs using a technique called 'free machining'. The use of CAD further enhances the possibilities with specialist sewing machines able to sew designs which have been designed on computers.



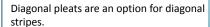
Tie -Dye

Tie-dye is a term used to describe a number of resist dyeing techniques. The process of tie-dye typically consists of folding, twisting, pleating, or crumpling fabric or a garment, before binding with string or rubber bands, followed by the application of dye or dyes. Natural fabric such as cotton, hemp and linen is best for tie-dye as they are more absorbent leading to a more vibrant outcome.



Classic Spiral: Lay the garment on a flat surface, smooth out all the wrinkles, then make a small pleat right across where you want the center to be. Grab the very center of that pleat with a clothespin, and begin to twist.

Vertical/Horizontal Stripe: Fold a piece of fabric in vertical pleats, and you'll end up with horizontal stripes. Horizontal pleats result in vertical stripes.





Bullseye: For concentric circles, grab the cloth where you want the center to be, and pull, until you've more or less made a long tube of garment, then apply rubber bands at intervals along the fabric.

Couching

Couching is the art of attaching other fibres to fabric with little stitches. Hemp yarn, ribbon, embroidery thread, cord, raffia or even beaded chains can be attached to fabric with couching stitches. Couching requires two 'threads': a 'Working Thread' which is the thread you use to stitch with and a 'Lay Thread' which is the fibre that quite literally lays down on top of the fabric. The advantage of using couching on your fabric is that you can embellish the fabric with different types of thread / fibres which otherwise would not penetrate the fabric, like thick metallic thread, beaded chains and even wire.

- 1. Draw your couching design on the fabric and thread one of your needles with your lay thread and the other with your working thread.
- 2. Bring the **lay** thread up through the back of the fabric to your starting point and then from the front to back of the fabric to your end point.
- 3. Guide the **working** thread up through the back of the fabric on one side of your **lay** thread and over and across to the other side; creating a small straight stitch.
- 4. Bring your **working** thread back up to the right side of the fabric and continue making straight stitches along the length of the **lay** thread, securing it into place until completion.





SPaG

Grammar: Write in sentences

A sentence is a group of words that make sense. Sentences start with a capital letter and end with a full stop, question mark or exclamation mark. All sentences contain **clauses.** You should try to use a range of sentences when writing. There are three main types of sentences.

Simple sentence: A sentence containing one main clause with a subject and a verb.

He reads.

Literacy is important.

<u>Compound sentence</u>: Two simple sentences joined with a <u>conjunction</u>. Both of these simple sentences would make sense on their own. Varying conjunctions makes your writing more interesting.

He read his book because it was written by his favourite author.

Literacy is important so students had an assembly about reading.

<u>Complex sentence</u>: A longer sentence containing a main clause and one or more <u>subordinate clause (s)</u> used to add more detail. The main clause makes sense on its own. However, a subordinate clause would not make sense on its own, it needs the main clause to make sense. The subordinate clause is separated by a comma (s) and/or conjunction. The clause can go at the beginning, middle

or end of the sentence.

He read his book even though it was late.

Even though it was late, he read his book.

He read his book, even though it was late, because it was written by his favourite author.

How can you develop your sentences?

1. Start sentences in different ways. For example, you can start sentences with adjectives, adverbs or verbs.

Adjective: Funny books are my favourite!

Adverb: Regularly reading helps me develop a reading habit.

Verb: Looking at the front cover is a good way to choose a reading book.

2. Use a range of punctuation.

3. Nominalisation

Nominalisation is the noun form of verbs; verbs become concepts rather than actions. Nominalisation is often used in academic writing. For example:

It is important to **read** because it helps you in lots of ways.

Becomes: Reading is beneficial in many ways.

Germany invaded Poland in 1939. This was the immediate cause of the Second World War breaking out.

Becomes: Germany's invasion of Poland in 1939 was the immediate cause of the outbreak of the Second World War.

Cause	Because
And	So
Effect	Consequently
	Therefore
	Thus
Addition	And
	Also
	In addition
	Further (more)
Comparing	Whereas
	However
	Similarly
	Yet
	As with/ equally/ Likewise
Sequencing	Firstly
	Initially
	Then
	Subsequently
	Finally
	After
Emphasis	Importantly
	Significantly
	In particular
	Indeed
Subordinate	Who, despite, until, if,
	while, as, although, even
	though, that, which

Haggerston School



Year 8 Knowledge Organiser