

Yate Academy

A better chance of success

Year 8

Knowledge Organiser

Spring Term 2023 - 2024



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8.2.1: Core Concepts: Learning About Character

Othello (From the play 'Othello' by William Shakespeare.)

Othello is a general in the army and a 'Moor'. The word 'Moor' was used by Shakespeare's audiences to mean anyone of African or Arabic origin. This word is used to describe Othello a lot, both in a negative way and by characters who love or respect him. Othello begins the play as a respected figure in Venice, but as the play goes on someone he trusts, lago, makes him believe his wife, Desdemona, is in love with someone else and he becomes and more more unpredictable.

He eventually becomes so convinced by lago's lies that he is consumed by jealousy and driven mad and kills his wife. Othello is an outsider who is intelligent and confident in military matters but socially insecure

A picture of the actor Ira Aldridge playing Othello painted by Henry

Perronet Briggs

around 1830.



Ophelia (From the play 'Hamlet' by William Shakespeare.)

Ophelia is a character in William Shakespeare's drama Hamlet. She is a young noblewoman of Denmark, the daughter of Polonius, sister of Laertes and potential wife of Prince Hamlet. who, due to Hamlet's actions, is driven mad which ultimately leads to her drowning.

Ophelia is **innocent** and **virtuous** but is looked down upon by Hamlet, who believes that women only pretend to be pure and good. At various points in the play. Hamlet is cruel and mean to Ophelia. Following the tragic death of her father, Ophelia is driven to insanity. After a series of odd statements and behaviours, she kills herself.

John Everett Millais' famous painting of Ophelia from 1851/52.



Cordelia.

His **hubris**

judgments

daughters.

Lear cursing the (1837-1879)

King Lear (From the play 'King Lear'

The aging king of Britain and the

protagonist of the play. Lear is used to

enjoying absolute power and to being

flattered. At the beginning of the play, he

tests his daughters' love and loyalties by

asking them to say which of them loves

him most. Goneril and Regan, Lear's

older daughters, give their father

flattering answers. But Cordelia, Lear's

youngest and favourite daughter, remains

silent, saying that she has no words to

describe how much she loves her father.

Lear flies into a rage and disowns

mistakes by the end. He descends into

madness in a storm on the heath after he

people

These

is **rejected** by Goneril and Regan.

by William Shakespeare.)

A painting of King storm by George Frederick Bensell

lies in making wrong

including

become obvious

his l

Lady Macbeth (From the play 'Macbeth' by William Shakespeare.) Lady Macbeth one Shakespeare's most famous and frightening female characters. When we first see her, she is already plotting the king, Duncan's, murder; she is stronger, more ruthless, and more ambitious than her husband. She seems fully aware of this and knows that she will have to push Macbeth into committing murder. At one point, she wishes that she were not a woman so that she could do it herself. After the murder of Duncan however. Lady Macbeth begins a slow slide into madness.

By the close of the play, she is sleepwalking through the castle. desperately trying to wash away an invisible bloodstain. Significantly, she (apparently) kills herself, signalling her total inability to deal with the outcome of their crimes.

The actor Kate Fleetwood playing Lady Macbeth in a 2007 production of the play.



English: Knowledge Organiser 8.2: The Fragile Mind

8.2.1: Core Concepts: Learning about Character

Dr Frankenstein (From the novel, Frankenstein by Mary Shelley.)

Victor Frankenstein is protagonist in Mary Shelley's 1818 novel, Frankenstein. He is an Italian-Swiss scientist who, after studying chemical processes and the decay of living things, gains an insight into the creation of life and gives life to his own creature (often referred to as Frankenstein's monster.) Frankenstein is an **obsessive** character and he will stop at nothing to create his creature. After his creation, the creature wants love and affection from him but Dr Frankenstein is horrified by the creature and abandons him.

The creature eventually turns on Dr Frankenstein and causes **tragedy** and **death**. One of the central questions in the novel is who is the **real monster**, the creature or Dr Frankenstein?

Robert De Niro as Frankenstein's monster in the 1994 film of the novel. But who is the **real monster**?



The Narrator (From the poem The Laboratory by Robert Browning.)
In 'The Laboratory' Browning presents a disturbed character whose deranged behaviour is the result of her partner being unfaithful. This poem is probably based on a true story from seventeenth-century France, where the now infamous Madame de Brinvilliers, poisoned several members of her own family. She was found guilty and executed by guillotine in Paris, 1676.

The narrator in the poem is a vengeful wife who oversees an apothecary as he blends a poison; its intended use being to kill her husband's lover. Throughout the poem, the narrator does not show any signs of guilt or remorse for her crime. In fact, she is elated at the thought of killing her victims and the effect it will have the man who betrayed her.

The Duke of Ferrara (From the poem My Last Duchess by Robert Browning.)

The Duke is **cruel**, **jealous**, **proud**, and **arrogant**. He suggests that he has killed his wife because she was not grateful enough to him for marrying her. He says that she loved cherry blossoms and the setting sun as much the "gift of [the Duke's] nine-hundred-years-old name." She also did not **flatter** him as he thinks she should have. These two reasons alone suggest the Duke used them to justify his actions. He insinuates that he ordered to have her killed and reveals that he is not only **cruel** but without feeling.

The Duke commissioned a painting of his last Duchess before she died and now he is the only person who can **control** access to her image. This shows that he is **disturbed** and **controlling**.

The Protagonist (From the poem Education for Leisure by Carol Ann Duffy)

The poem Education for Leisure portrays the inner life of a disturbed teenager as s/he tortures and kills animals while telling everyone that s/he is a genius. The poem ultimately ends in the teenager stealing a kitchen knife and going on a violent rampage. The teenager in the poem does not have seem to fit into society and it is suggested that their education has not helped them to feel a connection to other people or to society. The protagonist seems bored and aimless.

Some people wanted to have the poem removed from the GCSE anthology and in 2008 firstly the picture illustrating the poem was removed and then the poem itself was removed.



Dante
Rossetti's
painting
based on the
poem The
Laboratory.



A painting of Alfonso II d'Este, the Duke of Ferrara on whom the poem is probably based, by Girolamo da Carpi

The image used to illustrate the poem, which was banned from the GCSE anthology



8.2.1 Core Concepts: Themes: The Resilient Mind

Yrsa Daley Ward: Mental Health What is it about?

The poem explores the concept of mental health in the modern age and discusses what happens when you do not feel mentally healthy. It mentions feeling trapped, feeling tired and feeling empty inside.

What does it suggest about mental health?

The poem suggests that you could:

- · Call someone you feel a connection with
- Get outside
- Listen to church bells
- Clean out your fridge
- · Get some flowers
- Celebrate small achievements



Still I Rise: Maya Angelou What is it about?

The poem is about the **resilience** of black people who have **been oppressed**. It celebrates **self-love** and **self- acceptance**. In the poem, the speaker praises **her strength**, **her body** and **her ability to rise up** above the oppression of her past.

What does it suggest about survival?

The speaker suggests that the keys to survival are:

- Perseverance
- Self acceptance
- Self empowerment
- Resistance against injustice



Perhaps the World Ends Here: Joy Harjo What is it about?

The poem uses the metaphor of a kitchen table to express the importance of having family connections and secure relationships in your life. The poem describes the different activities which happen at the table such as eating food which nurtures you and laughing with those you love. What does it suggest about family connections?

- Family connections are central to our lives
- We learn what it means to be human in our families
- Our family connections nurture us and give us hope



Rumi: The Guest House What is it about?

Rumi uses the **metaphor** of a **guest house** to describe a person. He suggests we should **welcome all feelings** as if they were guests in our guest house because **they all have something to teach us.**

What does it suggest about painful experiences?

- Painful experiences can be useful if they teach us something.
- All feelings are important
- We should welcome all feelings

Litany for Survival: Audrey Lorde What is it about?

This poem explores the experiences of people who 'were not meant to survive,' by which the poet means people who have suffered and feel insecure about their lives because they have experienced so much pain.

What does in suggest about survival? every day

- Every choice can be a difficult one
- Silence does not help these people
- We need to speak up to make changes happen



This Room: Imtiaz Dharker What is it about?

This poem uses the metaphor of a room breaking apart to express the need humans have to celebrate their own identities. It explores how we can break out of the constraints on us and be free and happy. What does it suggest about celebrating your

- identity? We can sometimes feel trapped
- We can break out of our boundaries and be ourselves
- Celebrating your identity is joyous



English: Knowledge Organiser 8.2 The Fragile Mind

8.2.2 Core Context: Key words and ideas to help you talk about the fragile minds of the characters

Word	Definition
Fatal flaw	A fault or imperfection in a character which leads to their downfall.
Hubris	Excessive pride or self-confidence.
Hamartia	Hamartia is a literary device that reflects a character's tragic or fatal flaw, or mistake in judgment, that ultimately leads to their downfall.
Divine Comedy	The Divine Comedy is a long Italian narrative poem written by the Italian poet Dante Alighieri, some time between 1308 and 1322. It tells the story of a journey into the afterlife, through Hell, Purgatory and Heaven. It is widely considered to be the most important poem of the Middle Ages.
7 Deadly sins	In the first part of the Divine Comedy, Dante refers to seven 'deadly sins': Lust, Gluttony, Greed, Sloth, Wrath, Envy, Pride.
Prometheus	The Greek myth of Prometheus, the Titan who stole fire from the Gods and gave it to humans. In the myth, Prometheus is condemned to eternal torment for his sins.
Justice	Lady Justice is based on Themis, the Greek goddess of justice (or Justitia the Roman goddess of justice.) She is often pictured with a blindfold, a balance, and a sword. The blindfold represents impartiality. The balance represents weighing up evidence. The sword represents authority—justice is swift and final.
Flower imagery	Shakespeare often draws on the 'language of flowers'. This means that different flowers have different meanings, for example daisies represent innocence and rosemary is connected to memory.
Hysteria	Originally hysteria was a medical term for a mental illness in women. The term hysteria comes from the Latin word for the womb: hystericus. It was believed that a woman's womb would wander about her body, causing different illnesses. Now it means "an uncontrollable outburst of emotion or fear which is often irrational and includes uncontrolled laughing or weeping."

Rosemary symbolises remembrance remembering someone or something, especially after death.





Justice



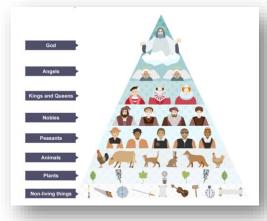
Traditionally violets represented faithfulness but for Shakespeare they were also symbolic of sorrow and death.

8.2.2 Core Context: Key words and ideas to help you talk about the fragile minds of the characters

Word	Definition	
The Scythians	The Scythian people were a tribe of nomadic people who lived to the north of the Black Sea. Both men and women were known for being fierce warriors. They relied on their horses and when they died, their horse was buried with them. There was a legend (untrue) that they ate their children.	
Hecate	Hecate was the Ancient Greek goddess of witchcraft. She was capable of both good and evil and is associated with witchcraft, the night, the moon, doorways, and creatures of the night such as hell-hounds and ghosts. She is often depicted carrying a torch to remind of her connection with the night and in sculpture with three faces, representing her role as the guardian of crossroads.	
The Great Chain of Being	Jacobeans believed that God set out an order for everything in the universe. This was known as the Great Chain of Being. On Earth, God created a social order for everybody and chose where you belonged.	
The Divine Right of Kings	The Christian kings of Europe once believed they were answerable to no- one except God.	
Witchcraft	In Jacobean England, interest in witchcraft was common. Witches were blamed for causing illness, death and disaster, and were thought to punish their enemies by giving them nightmares, making their crops fail and their animals sicken. Those who were convicted were often tortured, their trials reported in grisly detail in pamphlets that circulated in their hundreds. Often, those accused of witchcraft lived on the edges of society: they were old, poor and unprotected, and were therefore easy to blame.	
Ravens	Ravens are often considered to be symbols of bad luck. They were believed to predict death, bring disease and ill fortune.	



The Scythians



The Great Chain of Being



Hecate

8.2.3 Core Literary Techniques: You will need to learn these for this unit

Word	Definition
Protagonist	The leading character or one of the major characters in a drama, novel, or other fictional text.
Stanza	In poetry, a stanza is a group of lines. Stanzas in poetry are similar to paragraphs in prose.
Free Verse	Poetry that does not have a clear rhyme scheme or rhythm.
Dramatic monologue	A poem in the form of a narrative by fictional character which gives a sense of their thoughts and feelings.
Enjambment	Where a line of poetry flows/continues into the next line without punctuation.
Metaphor	A comparison which describes an object or action which is not literally true. "The sun in the west was a drop of burning gold that slid near and nearer the sill of the world."
Simile	A comparison using 'as' or 'like'. "In the eastern sky there was a yellow patch like a rug laid for the feet of the coming sun."
Personification	Giving something non-human human qualities. "My heart danced when he walked in the room."
Alliteration	Repetition of a letter or sound in a sentence; when the letter is 's', this is called sibilance.
Anaphora	Repetition of a word/phrase at the beginning of successive clauses. "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness"
Motif	A recurring idea in a literary work to form a pattern.
Epiphora (also called epistrophe)	Repetition of a word/ phrase at the end of successive clauses. "To the stolen generations, I say the following: as Prime Minister of Australia, I am sorry. On behalf of the government of Australia, I am sorry. On behalf of the parliament of Australia, I am sorry."
Anadiplosis	Anadiplosis is a form of repetition in which the last word of one clause or sentence is repeated as the first word of the following clause or sentence. "Fear leads to anger. Anger leads to hate. Hate leads to suffering."
Exclamatory sentence	A sentence with an exclamation mark at the end (!)
Interrogative sentence	A sentence with a question mark at the end (?)
Blank verse	Blank Verse is where lines are written using iambic pentameter, but they do not have a fixed rhyme scheme.
Prose	Prose is ordinary writing in paragraphs which doesn't have a set rhyme or set rhythm.
Allusion	Allusion where an object or circumstance from unrelated context is referred to indirectly. It is left to the audience to make the direct connection.

8.2.4 Core Grammar

Term	Definition	Example	
Noun	Person, place, object or idea; Concrete nouns can be experienced with your senses; Abstract nouns are ideas (love, fear etc.)	Lady Macbeth wore a crown . Lady Macbeth had great ambition .	
Verb	Action word or state of being (to be, to make, to have are all verbs too.)	Lady Macbeth called on evil spirits to make her less of a woman.	
Adjective	A word that describes a noun.	The castle was dark and forbidding.	
Adverb	A word that describes a verb or adjective; there are adverbs of time, place and frequency.	Lady Macbeth rubbed her hands desperately.	
Pronoun	A word used instead of a noun.	She slowly lost control of her mind.	
Conjunction	Words that connect phrases.	After the murder of Duncan, Lady Macbeth begins a slow slide into madness.	
Prepositions/ prepositional phrase	A word that tells you where or when something is in relation to something else (e.g. in/on/under/at etc) A prepositional phrase is when a group of words act as a preposition.	Lady Macbeth held the crown above her head.	
Prefix/ suffix	A group of letters placed before (prefix) or after (suffix) the root word to change its meaning.	Comfortable/ uncomfortable excite/ excitement Love/ lovely way/subway hurt/ unhurt	
Semi colon	A punctuation mark used to link independent clauses or to break up longer items in a list;	Lady Macbeth waited; Duncan's fate grew ever closer.	
Analytical verb	A verb used to analyse a text (e.g. suggests/implies/ reveals etc)	This suggests that the writer is trying to evoke a sense of fear and doom.	
Participle/ participle phrase	A participle is a verb that acts as an adjective in a sentence because it describes a noun. Participle phrases are developed when other words are added to the participle to expand it into a phrase.	Trembling, Lady Macbeth raised her hands into the air. Waiting for her husband, Lady Macbeth sat silently.	
Relative clause	Relative clauses add to the information in the main clause of a sentence.	Lady Macbeth, the fiercely ambitious wife of Macbeth, waited for her husband to arrive.	

English: Knowledge Organiser 8.2: The Fragile Mind

8.2.5 Core Tier 2 Vocabulary

Word Class	Definition
Alienated	Someone who is experiencing feelings of isolation.
Ambition (noun)	A strong desire to do or achieve something.
Antisocial	Contrary to the laws and customs of society, in a way that causes annoyance and disapproval in others.
Betrayal	Exposing or delivering someone to an enemy through treachery or disloyalty; disappointing a person's hopes, trust or expectations; revealing secret
	information or failing to keep a promise.
Conflicted	To have feelings which contradict each other.
Controversial	something which creates disagreement.
Degradation	To degrade something is to lower it.
Deterioration	A gradual decline in something; the process of becoming gradually worse.
Disaffected	Dissatisfied, especially with people in authority or a system of control.
Disempower	To take away someone or something's power
Disruptive	Causing a disturbance or a change to the way things normally are.
Distress	Extreme anxiety, sorrow or pain.
Disturbing	Causing anxiety or worrying.
Enraged	Very angry; furious.
Exploit	To use and get benefits from something; to make use of something in a way which is considered unfair.
Feign	To pretend something or to fake something.
Grief	Intense sorrow especially caused by someone's death.
Guilt	1. Responsibility for having done something wrong and especially something against the law 2. A feeling of shame or regret as a result of having done something wrong.
Humane	Having or showing compassion or benevolence.
Humanity	The quality of being human.
Idyllic	Extremely happy, peaceful or picturesque.
Jealousy	Wanting what another has, is or does.
Marginalised	Someone who is marginalised has been put into an unimportant or powerless position.
Power	Control or authority.
Prophecy	A prediction of what will happen in the future.
Rejection	Dismissing, or refusing something or someone.
Sanity	The ability to think and behave in a normal and rational manner; sound mental health.
Turmoil	A state of great disturbance, confusion, or uncertainty.
Oppression	Cruel or unfair treatment by people in a position of power.

8.2.6 Links to Prior Learning: How has what you have learnt so far prepared you for this unit?

Links to Origins (Year 7 Term 1):

In addition to thinking about the plot types and characters in this unit, you will also need to think about the **Genesis** bible story, the **Fall of Man**, where Adam and Eve were **tempted** and **expelled** from the **Garden of Eden**. It would also be interesting to think about **Milton's** epic poem **Paradise Lost** when you look at **Dante's** epic poem **The Divine Comedy**, because although it was written much earlier, it deals with some of the same themes of sin and hell. The **Greek myth** of **Prometheus**, the Titan who **stole** fire from the Gods and gave it to humans, will be revisited when you look at the extract from **Frankenstein** which has the subtitle, **The Modern Prometheus**. In the Greek myth, Prometheus is condemned to **eternal torment** for his sins— what sins does Victor Frankenstein commit and what punishment does he receive?

Links to Love (Year 7 Term 3):

You will need to draw on your knowledge of Shakespeare and his life and times for this unit. Important knowledge from Year 7, term 3 would include: the Great Chain of Being, the idea that we all have our place in the world in a social order created by God. Furthermore, in this unit you will learn about The Divine Right of Kings— the fact that Elizabethans and Jacobeans believed that God chose the person who would be king or queen and no-one could question it. Both of these ideas will be important when you study the extracts from King Lear and Macbeth. You will also look in more detail at the concept of witchcraft and the fact that in the 1600s people believed that some people had supernatural powers. This will help to explain the power of the play Macbeth, which features witches and witchcraft.

Links to Journeys (Year 7 Term 2):

You will recall your work from the start of this unit on HEROES. As you read the extracts in The Fragile Mind, you may want to think about whether any of them qualify as a hero? You will also need to think about the key characters you met in this unit from Treasure Island: Blind Pew, Billy Bones, Long John Silver and Jim. How do these characters compare to the characters you are meeting in the Fragile Mind extracts? You can ask yourself the following questions:

- 1. What can you say about the character's identity? Think about status, role, age, gender, race, class, personality traits etc.
- 2. What choices does the character make? Why?
- 3. What relationships does the character have with other characters in the text?
- 4. How does the writer use the character in the text? Is the character symbolic? A plot device? To create sympathy or antipathy?
- 5. How does the character change or develop during the story?

Links to Fear of the Unknown (Year 8 Term 1):

Gothic Fiction: Gothic fiction is a genre of writing which includes horror, death and sometimes romance. It is said to have first originated in the 17th century with the novel by Horace Walpole, The Castle of Otranto. It often used settings such as: old castles, monasteries, graveyards, labyrinths, ruins and old mansions. It includes wild natural settings such as mountains, forests and wild remote places, and it uses weather such as storms, wind and rain. The type of characters in gothic fiction are young, innocent women, evil controlling villains, vampires, monsters and handsome heroes. Gothic fiction often uses motifs such as candlelight, crows or ravens, mirrors, moonlight and strange portraits. You will see some settings and characters who seem gothic in Fragile Minds, as well as meeting characters who are outsiders and who have connections to the supernatural. Ask yourself, are they gothic? Or pre-gothic? Might the gothic writers have been inspired by the literature in this unit?















Maths: Knowledge Organiser 8

1. Number

Significant Figures: The run of digits in a number that are needed to specify the number to a required degree of accuracy.

All non-zero digits are significant.

Zeros between nonzeros are significant. Trailing zeros to the right of the decimal point are significant

7004.040200

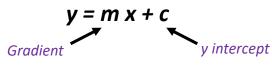
Estimation: To arrive at a rough or approximate answer by calculating with suitable approximations for terms. To estimate we round to one significant figure.

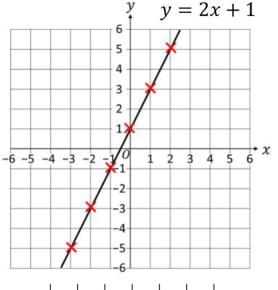
3. Algebra

Index Laws

Rule	Example
$x^n \times x^m = x^{m+n}$	$x^2 \times x^5 = x^7$
$x^n \div x^m = x^{m-n}$	$x^9 \div x^5 = x^4$
$(x^m)^n = x^{mn}$	$(x^5)^3 = x^{15}$
$x^0 = 1$	$x^0 = 1$

Linear Graphs (Straight Lines)





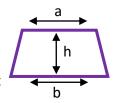
x	-3	-2	-1	0	1	2	3
у	-5	-3	-1	1	3	5	7

2. Shape

Formulae:

Trapezium

Area = $\frac{1}{2}$ (a + b) x h a and b = parallel sides h = perpendicular height



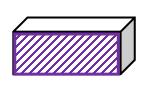
Circle

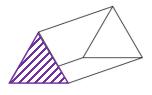
Area = πr^2 Circumference = πd r = radius



Volume of a prism: area of cross section x depth







d = diameter



Cylinder

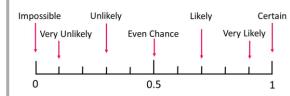
Cuboid

Triangular Prism

Cube

4. Probability

Probability Scale



Mutually exclusive events sum to one e.g. P(A) + P(B) = 1

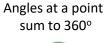
5. Angles

Corresponding Alternate Co-interior angles are angles are sum to 180° egual equal





Vertically opposite angles are equal







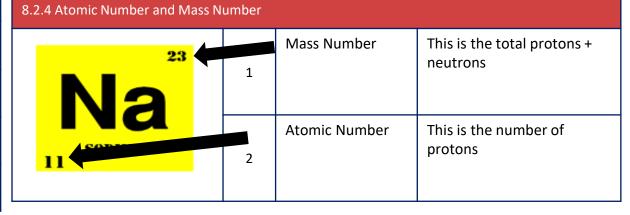


Science: 8.2: Atoms and Bonding

8.2.1	8.2.1 The Structure of the Atom			
1	Matter	All matter is made from atoms. Atoms are very small. The radius of atom is about 1x10-10 m (this is also known as 0.1 nanometres).		
2	Nucleus	The central part of the atom is known as the nucleus. It is only $1x10-14m$ across, which is $10,000$ times smaller than the total atom.		
3	Subatomic Particles	An atom is made up of three subatomic particles: protons , neutrons and electrons .		
4	Electron Location	Electrons are found orbiting the nucleus in shells (also known as energy levels).		
6	Overall charge on an atom	Atoms have no overall charge because they have the same number of positive protons as negative electrons.		

8.2.2 The Structure of the Atom				
	Particle	Location	Charge	Mass
7	Proton	Nucleus	1+	1
8	Neutron	Nucleus	No Charge	1
9	Electron	Energy Level	1-	1/2000 th Mass of proton

8.2.3	Key Terms	
1	atom	The particles that make up all substances with mass; they are made of protons, neutrons and electrons.
2	nucleus	The centre of an atom; it is made of protons and neutrons.
3	nanometre	A unit of measurement: 1x10 ⁻⁹ m
4	proton	A sub atomic particle found in the nucleus, it has an electric charge of +1 and a relative mass of 1.
5	electron	A sub atomic particle found in the shells of an atom, it has an electric charge of -1 and a negligible mass
6	subatomic	Describes particles smaller than an atom (protons, neutrons, electrons)
7	neutron	A subatomic particle found in the nucleus of an atom, it has a charge of 0 and a mass of 1
8	atomic number	The number of protons in an atom.
9	mass number	The total of protons and neutrons in an atom.



Science: 8.2: Atoms and Bonding

8.2.5 Electron Configuration/Electronic Structure Hydrogen 1 Helium 2 Lithium 2.1 Fluorine 2.7

8.2.6 k	8.2.6 Key Terms		
1	lons	An ion is formed when electrons are gained or lost by an atom, in order to gain a full outer shell.	
2	Metal Ions	Metal atoms lose electrons and form positive ions	
3	Non-Metal Ions	Non-metal atoms gain electrons and form negative ions.	

8.2.	8.2.7 Example of positive ion – Lithium ion		
1	Lithium Atomic Number		Lithium has an atomic number of 3.
2	Lithium Atom Electron Configuration	ion lithium atom Li 2,1	This means it has 3 protons and 3 electrons. There are 2 electrons on the first shell and 1 electron on the second shell.
3	Ion Formation		 To achieve a full outer shell, it is easier for lithium to lose 1 electron than to gain 7 electrons onto the second shell. After losing 1 electron, a lithium ion is formed.
4	Ion Charge		It still has 3 protons (positive charges) while it only has 2 electrons (negative charges). Therefore, the overall charge is +1.

		LI [2]	cridige is +1.		
8.2.8 Example of negative – Chloride ion					
1	Chlorine Atomic Number		Chlorine has an atomic number of 17		
2	Lithium Atom Electron Configuration	chlorine atom, Cl 2,8,7	This means it has 17 protons and 17 electrons. There are 2 electrons on the first shell, 8 on the second and 7 on the outer shell.		
3	Ion Formation		 To achieve a full outer shell, chlorine tends to gain one 1 electron onto the outer shell. After losing 1 electron, a lithium ion is formed. After gaining an electron, a chloride ion is formed. 		
4	Ion Charge	chloride ion, Cl ⁻ [2,8,8] ⁻	The chloride ion still has 17 protons (positive charges) but now it has 18 electrons (negative charges). Therefore, the overall charge is -1.		

8.2.9 Ionic Bonding- Models

There are a number of ways we can represent ionic bonding all; of these have advantages and limitations:

limitat	itations:		
1	Dot and cross diagrams	These show clearly how the electrons are transferred. It does not, however, show the 3D lattice structure of an ionic compound or that this is a giant compound. Compound	
2	2D ball and stick model of ionic bonding	These show clearly the 3D lattice structure of an ionic compound and that this is a giant compound.	

Science: 8.2: Health and Disease

8.2.10	8.2.10 Microorganisms		
1	Communicable Diseases	Communicable diseases are caused by pathogens.	
2	Pathogens	Pathogens are micro-organisms that cause diseases and they include bacteria, viruses and fungi.	
3	Microorganisms	Microorganisms are organisms that are too small to see with the naked eye.	
4	Methods of spreading pathogens	 Droplet infection (e.g. flu) Direct contact with contaminated objects (e.g. cold sores) Drinking contaminated water (e.g. cholera) Eating contaminated food (e.g. salmonella food poisoning) Sexually transmitted (e.g. chlamydia) 	

8.2.12	.2.12 Defence Against Disease		
1	Damage Bacteria cause	Bacteria produce toxins (poisons) that make us feel unwell.	
2	Damage Viruses cause	Viruses reproduce inside living cells and damage these cells.	
3	Skin	Skin is a barrier to pathogens.	
4	Stomach Acid	The stomach contains hydrochloric acid , which kills pathogens.	
5	Mucus and Cilia	Mucus and cilia lining the lung passages trap pathogens in the air we breathe in.	

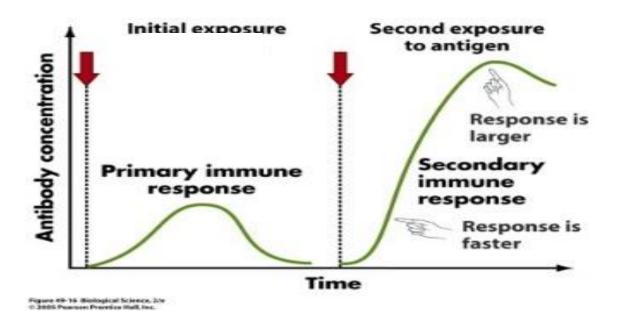
8.2.11 Spread of Disease		
1	Epidemiology	Understanding how diseases spread and how we can prevent them spreading.

8.2.13 Immune system		
1	White Blood Cells	White blood cells are part of our immune system, they defend against disease.
2	White Blood Cell Responses	 Change shape and engulf the pathogens Produce antibodies
3	Antibodies	These are chemical substances, produced by white blood cells, that are specific to a partiucular pathogen. They attach to the pathogen and destroy/kill it.
4	Immunity	Once your white blood cells have encountered a pathogen, they remember how to make the correct antibody, this means you are immune to the disease because your white blood cells make the correct antibody quickly.

Science: 8.2: Health and Disease

8.2.14	8.2.14 Key Terms		
1	Communicable disease	Infectious diseases that are caused by pathogens and spread from person to person .	
2	Non-communicable disease	Diseases that are not infectious e.g. diabetes, coronary heart disease, lung cancer	
3	Epidemiology	The study of how diseases spread.	
4	Pathogen	A micro-organism that causes disease.	
5	Antibody	A chemical substance made by white blood cells that attaches to and destroys pathogens.	
6	Immune	The white blood cells can rapidly produce the correct antibodies to destroy the pathogens before you become unwell.	
7	Vaccination	Dead or weakened pathogens that trigger the white blood cells to produce antibodies.	
8	Aseptic technique	A practical method to prevent contamination by unwanted microorganisms.	
9	Cilia	Microscopic hair-like structures that cover the cells in the trachea and bronchi	
10	Antibiotic	A drug that treats diseases caused by bacteria.	
11	Antibiotic resistant bacteria	A bacteria that has mutated genes so that an antibiotic no longer kills it.	

	8.2.15	8.2.15 Vaccination	
	1	Vaccination	Vaccinations contain dead or inactive pathogens .
	2	Bodies response to vaccination	The dead or inactive pathogens are injected into the body and trigger the white blood cells to make the correct antibody for the pathogen.
	3	Primary Response	Bodies initial response – slowly producing antibodies to fight the pathogens
	4	Secondary Response	Once the body has responded to the pathogen the first time the white blood cells will not remember the pathogen and respond quicker the second time.
	5	Herd Immunity	Having lots of people vaccinated in a population is important as it also protects people who cannot be vaccinated



Science: 8.2: Health and Disease

8.2.16	8.2.16 Antibiotics	
1	Antibiotics	Antibiotics are medicines used to treat diseases caused by bacteria by killing the bacteria.
2	Antibiotics and Viruses	Antibiotics cannot be used to treat diseases caused by viruses.
3	Penicillin	The antibiotic penicillin was discovered, by chance, by Alexander Fleming in the early 20 th Century.

8.2.17	8.2.17 Antibiotic Resistance		
1	Antibiotic Resistance	Antibiotic resistant bacteria are bacteria which cannot be killed by antibiotics.	
2	Examples of Antibiotic Resistant Bacteria	MRSA and Clostridium dificile	
3	Preventing Antibiotic Resistance	 Antibiotics should only be prescribed for bacterial infections that haven't got better on their own. Antibiotics should taken for viral infections such as colds, flu When antibiotics are prescribed, the course should be finished even if you feel better. 	

	8.2.18	8.2.18 Plant diseases		
	1	Plant ill health	Plant ill health can be caused by pathogens (bacteria, viruses and fungi) and also by mineral deficiencies.	
	2	Minerals	Plants need minerals for healthy growth and these include nitrates and magnesium.	
	3	Nitrates	Nitrates are needed for making proteins. Plants deficient in nitrates have stunted growth and yellow older leaves.	
	4	Magnesium	Magnesium is needed for making chlorophyll. If a plant is deficient in magnesium it has yellow leaves and doesn't grow well.	

8.2.19 Drugs		
1	Drug	A drug is a chemical that has an effect on the body
2	Recreational Drugs	Drugs taken casually.
3	Medicinal Drugs	Medicinal drugs are taken to help with a medical condition, medicinal drugs are closely regulated, with some being available only from a GP (e.g. statins) and others having limits as to how many people can buy, or who can take them (e.g. paracetamol).
4	Effect of Drugs	Some effects are short term, meaning they will go once the drug has left the body, and others are long term and can be more serious (depression, brain damage, death).

Science: 8.2: Energy Changes and Rates of Reaction

8.2.	8.2.20 Energy Changes		
1	Exothermic Reactions	Heat is released to the surroundings; the reactants have more chemical energy than the products.	
2	Endothermic Reactions	Heat is taken in from the surroundings; the reactants have less chemical energy than the products.	

8.2.21 Collision Theory		
1	Collision Theory	A reaction can only occur if the reactant particles collide with activation energy.
2	Activation Energy	The minimum amount of energy needed in a collision for a reaction to occur.

8.2.22 Key Terms			
1	Exothermic reaction	Reaction that releases energy to the surroundings	
2	Endothermic reaction	Reaction that takes in energy to the surroundings	
3	Energy profile diagram	Graph that shows energy changes in reactions	
4	Reaction rate	How fast or slow a chemical reaction occurs	
5	Collision theory	States that for a reaction to takes place, the reactant particles need to collide (with activation energy)	
6	Activation energy	The minimum amount of energy that a collision must occur with a reaction to occur	
7	Catalyst	A chemical that speeds up a reaction without being used up during the reaction	
8	Concentration	The amount of a chemical dissolved in a certain amount of solvent	

8.2.23 Rate of Reaction			
1	Calculating rate of reaction	Rate = amount of substance ÷ time	
2	Measuring rate of reaction	How fast a reaction takes place; the loss of reactant or the formation of product can be measured.	

Science: 8.2: Energy Changes and Rates of Reaction

The following factors affect the rate of reaction: Surface Area A powder reacts much faster than lumps as it has a larger surface area, causing more frequent collisions. A higher temperature → faster rate. The particles gain energy and move faster and so collide more frequently (and are more likely to

A higher concentration → faster reaction. More reactant particles in

the same volume of solvent so more frequent collisions.

have activation energy).

Concentration

8.2	8.2.25 Catalysts			
1	Catalyst	A chemical that speeds up a reaction without being used up during the reaction.	Energy	Activation Energy without catalyst
2	How Catalysts Work	Catalysts work by providing an alternative reaction pathway with a lower activation energy.		Progress of reaction

8.2.26 Concentration		
1	Concentration	The amount of a substance dissolved in a certain amount of solvent
2	Effect of higher concentration	Increasing concentration means there will be more particles so there will be more frequent collisions

Science: 8.2 Electricity

8.2.27 Key terms		
1	Current	The rate of flow of charge around a circuit
2	Amps	The unit for current
3	Charge	The particles (usually electrons) that flow in a circuit
4	Potential difference	The amount of energy carried by the charge
6	Volts	The unit for potential difference
7	Resistance	Slows down the flow of current
8	Ohms	The unit for resistance
9	Series circuit	There is only one route for the current to take
10	Parallel circuit	There is more than one route that the current can take
11	Cell	A single electrical energy source
12	Battery	Two or more cells put together
13	Filament bulb	→ ⊗ —
14	Voltmeter	- Weasures potential difference
15	Ammeter	———— Measures current

8.2.28 Key Terms			
1	Open switch	√ -	
2	Closed switch	———	
3	Variable resistor		
4	Insulator	Materials with a high resistance that do not let electricity pass through	
5	Static charge	An object can gain a charge if it gains or loses electrons	
6	Magnetic poles	North and south	
7	Opposite poles	Attract (pull towards)	
8	Like poles	Repel (push away)	
9	Magnetic elements	Iron, nickel, cobalt	
10	Electromagnet	A magnet made from a coil of wire wrapped around a soft iron core, with a current passing through the wire	
11	Increasing the strength of an electromagnet	Increase the current in the wire or add more turns of wire	
12	Uses of electromagnets	At scrap yards, on security doors, electric motors, bells	

Science: 8.2 Electricity

8.2.29	8.2.29 Potential difference		
1	In a series circuit	Potential difference is shared between components in a series circuit	
2	In a parallel circuit	Potential difference is the same for all components in a parallel circuit	
3	Voltmeter	Potential difference is measured using a voltmeter, connected in parallel across a component	

8.2.30 Current			
1	In a series circuit	Current is the same through every component in a series circuit	
2	In a parallel circuit	Current splits between the branches of a parallel circuit	
3	Ammeter	Current is measured using an ammeter, connected in series in a circuit	

8.2.31 Ohm's Law			
1	Definition	Potential difference across a conductor is directly proportional to the current flowing through it	
2	Equation	Potential difference (V) = Current (A) x resistance (Ω)	

Science 8.2: Working Scientifically

8.2.32	8.2.32 Hypotheses and Variables			
1	Hypothesis	A hypothesis is a prediction made about an experiment based on some previous scientific knowledge.		
2	Dependent Variable	What we measure		
3	Independent Variable	What we change		
4	Control Variable	What we keep the same		

8.2.33 Methods Contents of a method A clear sequence Information on which equipment to use Volumes and masses for reagents Scientific language

Example method:

Sequencing

Precision

- 1. 25cm³ sulphuric acid was added to a small beaker.
- 2. Using a spatula, excess insoluble base (copper oxide powder) was added to the acid. Check the base is in excess by looking for remaining powder in the beaker.
- 3. The excess base was filtered out using filter paper in a funnel. The filtrate was allowed to filter into a conical flask.
- 4. When filtration was complete, the filter paper was discarded and the filtrate solution was poured into an evaporating dish.
- 5. The solution was left for a few days or the evaporating dish heated for the dissolved salt to crystallise.

Scientific language

Equipment

8.,	8.2.34 Key Terms		
-	1	Independent variable	The variable you change to find out its effect on the dependent variable
2	2	Dependent variable	The variable you measure to see how it changes
(3	Control variable	Any variable that you must keep the same to ensure it doesn't affect the dependent variable
4	4	Mean	The total of the values divided by the number of values
į	5	Anomalous data	Data that does not fit the expected pattern

8.2.35	Results Tables	
1	Results table layout	The independent variable should always go in the first column, the dependent variable then goes in the column to the right of this.
2	Contents of a results table	 Show all repeat measurements Include the units in the headings Circle anomalies Discount these when calculating a mean

Example results table:

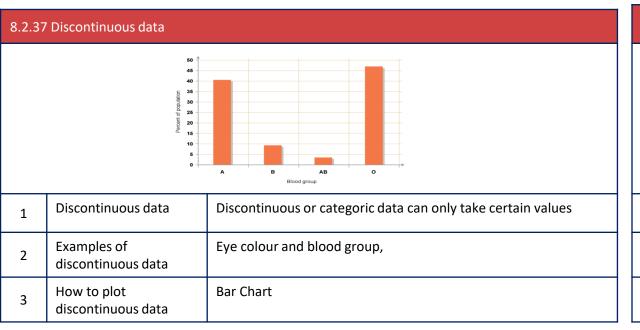
Concentration of acid (M)	Time taken for reaction to complete (s)			Mean (s)
0.1	102.1	105.6	103.4	103.7
0.2	88.8	86.5	87.2	87.5
0.3	69.1	67.3	64.2	66.9
0.4	56.2	40.1	53.3	54.8
0.5	32.1	30.1	33.2	31.8

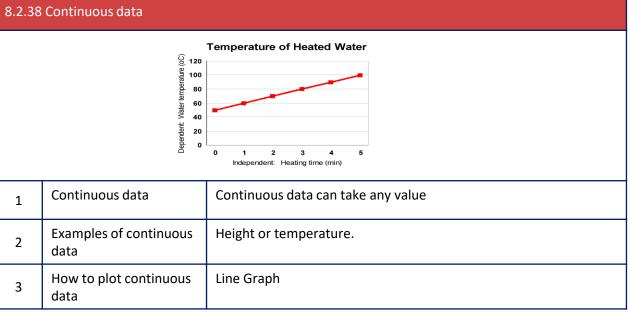
Science 8.2: Working Scientifically

8.2.3	8.2.36 Common laboratory equipment			
1	Beaker	100- 80- 60- 40- 20-	For pouring and transferring liquids and solutions.	
2	Conical Flask		For carrying out reactions	
3	Bunsen Burner		To heat substances	
4	Tripod		To support	
5	Gauze		To place an object on for example conical flask that you are going to heat.	
6	Heatproof mat		To protect the desk from the heat produced by the Bunsen Burner and any spillages from the substances which are being heated	
7	Evaporating basin		To evaporate the water from solutions. Leaving behind the solute.	

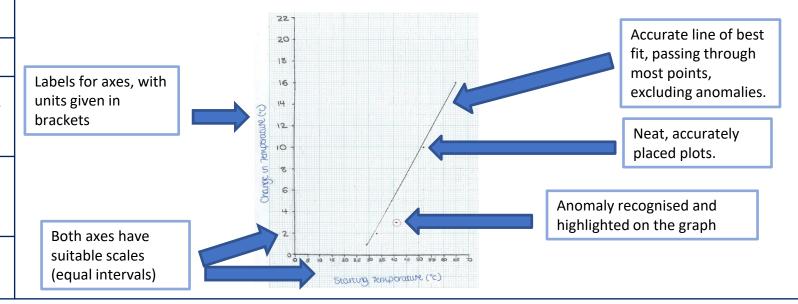
8	Test Tube		For carrying out chemical reactions with small volumes of liquid
9	Boiling Tube		A boiling tube is used to heat substances over a Bunsen Burner
10	Measuring Cylinder	2.00 2 2.00 2 2.00 2 2.00 2 2.00 2 2.00 2 2.00 2 2.00 2	To accurately measure out volumes of liquid
11	Spatula		To move small amounts of solid powders
12	Stirring Rod		To stir solutions.
13	Thermometer		To measure the temperature of a substance
14	Tongs		To hold an move hot solids for example pieces of metal

Science 8.2: Working Scientifically



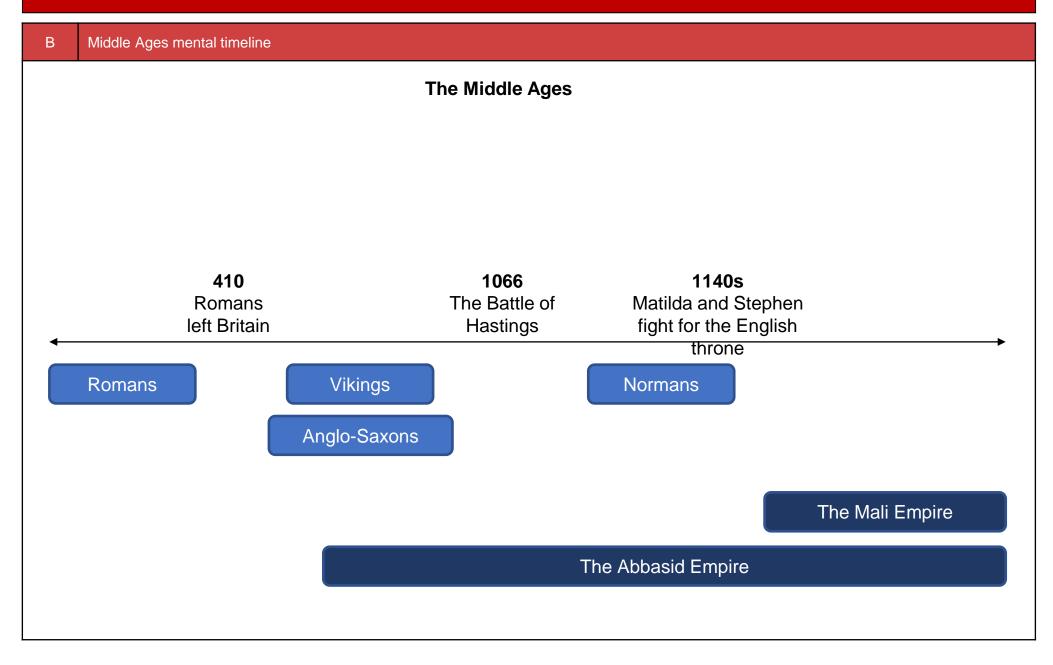


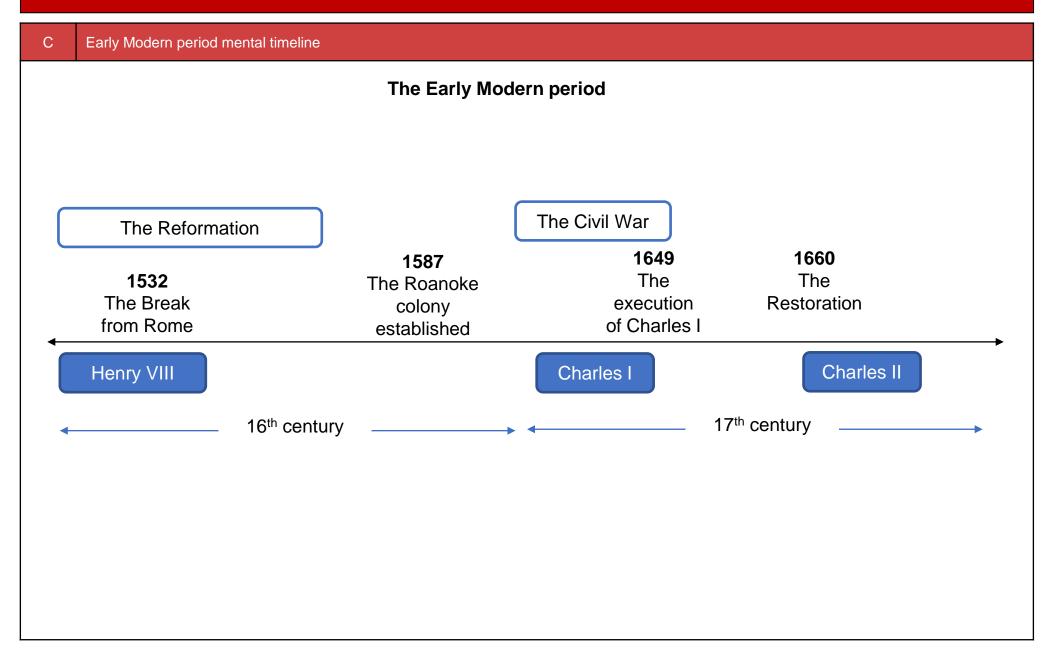
8.2	8.2.39 Drawing good line graphs		
1	1	x Axis	Plot the dependent variable
2	2	y Axis	Plot the independent variable
3	3	Drawing the graph	 Label axis and include units Use small precise crosses to mark your points
4	4	Line of best fit	Line of best fit which goes smoothly though as many points as possible (this does not have to be a straight line)
5	5	Anomalies	Circle anomalies and don't include them when drawing the line of best fit



History 8.2 Revising the Middle Ages

А	Middle Ages key vocabulary		
1	a claim to the throne	a set of reasons why someone should be the next king	
2	the Abbasid Empire	the empire that ruled the Islamic World in the Middle Ages	
3	Baghdad	the capital of the Abbasid Empire	
4	golden age	a period of success and achievement	
5	empire	one place ruling lots of other places	
6	heir	the person next in line to be king	
7	agriculture	farming	
8	noble	someone born into a powerful family	
9	harvest	the period of gathering in the crops from the field	
10	source	fragments of the past that have survived like diaries, newspapers, photographs, and physical remains	
11	monastery	a large religious building where monks lived and prayed	
12	peasant	a poor farmer who rented land from others	
13	patriarchal	ruled and dominated by men	
14	to rebel	to fight against the king / government	
15	to trade	to exchange goods	





History 8.2 Revising the Early Modern period

D	Protestant beliefs	
1	Who should be head of the church?	The monarch (the king or queen)
2	What language should the Bible be in?	English
3	How should churches be decorated?	Plain and simple: bare walls, a plain wooden table for an altar
4	What did you need to do to get to heaven?	Just believe in God
5	Were monasteries important?	No

Е	Catholic beliefs	
1	Who should be head of the church?	The Pope
2	What language should the Bible be in?	Latin
3	How should churches be decorated?	Highly decorated with stained-glass windows and images of Jesus and the saints
4	What did you need to do to get to heaven?	Good works, indulgences, pilgrimages
5	Were monasteries important?	Yes

F	The Reformation geography		
1	The Netherlands	a hotbed of Protestant belief	
2	London and the southeast	more likely to be Protestant because they were well connected to the Netherlands	
3	Towns	more likely to be Protestant because more people were literate	
4	educated and literate people	more likely to be Protestant because they wanted to read the bible in English	
5	The North and West	more likely to be Catholic because they were less connected to the Netherlands	
6	The countryside	more likely to be Catholic because fewer people were literate	
7	Uneducated and illiterate people	more likely to be Catholic because they couldn't read the bible and relied on images	
8	Wales and Cornwall	more likely to be Catholic because the English bible threatened their languages	

History 8.2 Revising the Early Modern period

J	The Civil War	
1	Parliament	the group of people called by the king to give him permission to raise taxes
2	divine right of kings	The idea that God chose kings to rule
3	Personal Rule	The period between 1629 and 1640 when Charles I ruled without Parliament
4	English Civil War	A long war between Parliament and Charles I
5	Absolute monarch	A monarch with complete power
6	Republic	A country without a monarch
7	Democracy	A country in which people vote for their leaders
8	Oliver Cromwell	The MP and army general who became Lord Protector after Charles' execution
9	The Restoration	when the monarchy returned under Charles II in 1660

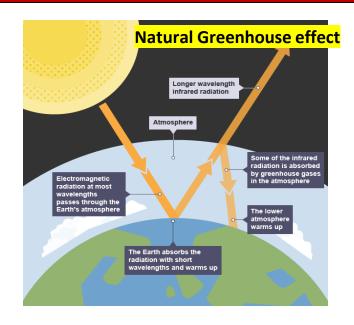
K	Early Empire	
1	colony	a place that was part of an empire
2	Native Americans	the people who lived in America before European settlement
3	empire	a group of colonies ruled by one powerful country
4	the New World	the name Europeans gave to North and South America in the Early Modern period
5	to establish to set up	
6	settlers people who moved to a colony to live there	
7	Roanoke	the place in America where the English tried to establish a colony
8	Manteo	the Native American who worked with the English
9	British Empire the colonies ruled by Britain	
10	Ireland, Virginia, Barbados	Three colonies of the British Empire in the Early Modern period

А	Key terms	
1	Adaptation	changing to better cope with the impacts of climate change
2	Agriculture	Farming practices
3	Anthropocene	Period of time in which human activity has been the main influence on climate.
4	Carbon dioxide	Greenhouse gas
5	Enhanced greenhouse effect	Human activity increasing the amount of green houses gases in the atmosphere
6	Glacial	Period of time when the earth's temperature is cooling
7	Greenhouse effect	Natural process by which gases in the atmosphere absorb radiation to keep the earth warm
8	Ice and sediment cores	Cylinders of ice or sediment that is drilled out of the ground. Each layer can help reconstruct past climate conditions
9	Interglacial	Period of time when the earth's temperature is warming.
10	International agreements	Agreements by more than one country to reduce the causes of climate change
11	Methane	Greenhouse gas
12	Mitigation	the act of reducing the severity of something by reducing the cause.
13	Orbital changes	Changes in the Earth's orbit around the sun
14	Quaternary	Most recent geological time period that we are currently in.
15	Volcanic activity	Volcanic eruptions that can cause climate change

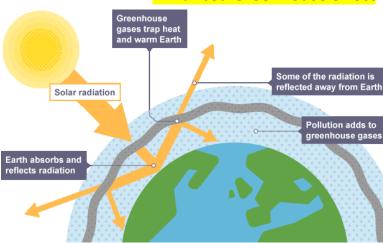
В		Classifying Countries
1	Climate change	any significant change in the Earth's climate over a long period. The climate of the earth constantly changes. Before the Quaternary period - the Earth's climate was warmer and quite stable

	С		
		Quaternary period	Quaternary period Last 200 years
1	Climate	The Quaternary period is the most recent geological time period, spanning from about 2.6 million years ago to the present day. It included the whole of human history. During the Quaternary, global temperatures shifted between cold glacial periods that lasted from 100,000 years and warmer interglacial period that lasted for 10,000 years.	Temperatures are increasing – we call this global warming
2	Evidence	Ice and sediment cores 1. Ice sheets are made up of layers. These layers form each year. 2. Gases trapped in the ice give information on temperature at that time. 3. One ice core can give 400,000 years of data. Tree Rings 1. As a tree grows a new ring is formed each year. 2. These are thicker in warm, wet conditions. 3. Tree rings can go back 10,000 years.	 Temperature record (only since 1850) Glacial retreat – Photographs of glaciers over time Cover of Artic sea-ice – There is currently around 50% less sea ice over the Artic Ocean than there was 30 years ago. Sea Level Rising

D	The Greenhouse effect		
1	The greenhouse effect is the name given to the natural process that causes the Earth to be warmer than it would be in the absence of an atmosphere. If this process did not take place then the Earth's average temperature would be -18°C which would be too cold for life to exist.		
2	Greenhouse gases present in the atmosphere include: • water vapour • carbon dioxide • Methane		
	Natural Greenhouse effect	Enhanced Greenhouse effect humans are now causing the climate to change beyond what would naturally happen. by adding more greenhouse gases to the atmosphere.	
	Solar radiation passes through Earth's atmosphere.	Greenhouse gases allow more solar radiation to pass through Earth's atmosphere	
	The Earth absorbs most of the radiation and warms up.	The Earth absorbs most of the radiation and warms up.	
	The Earth radiates heat energy.	The Earth radiates heat energy.	
3	Some heat escapes into space.	Less heat escapes into space.	
	Some heat is absorbed by greenhouse gases in the atmosphere.	More heat is absorbed by greenhouse gases in the atmosphere.	
	Greenhouse gases radiate heat in all directions	Greenhouse gases radiate heat in all directions	
	The lower atmosphere remains warm.	The lower atmosphere heats up .	



Enhanced Greenhouse effect



Е		Natural causes of the Greenhouse effect
1	Orbital Changes	 The way the Earth orbits around the sun changes. The Earth normally orbits the sun in circle but every 100,000 years they Earths orbit becomes more elliptical. This means it is pulled further away from the sun by the gravitational pull of the other planets in the solar system. When this happens the Earth is further from the sun and receives less solar radiation causing temperatures to decrease. These cycles are called Milankovitch cycles.
2	Volcanic Activity	 Large volcanic eruptions eject large quantities of ash into the atmosphere. The particles of ash reflect the suns solar radiation back out to space. This means the Earth absorbs less solar radiation and therefore cools. This is called global dimming.

F		Human causes of the Greenhouse effect	
1	Burning fossil fuels	The burning of fossil fuels (coal, gas and oil) release carbon dioxide. This is a greenhouse gas. More fossil fuels are used today than ever before. Fossil fuels are used because they are cheap and when burnt generate energy that is used to power our homes, transport and industry.	
2	Agriculture	Agriculture (farming) releases huge amounts of methane into the atmosphere through the farming of cattle and rice. As the global population increases so to does demand for food. Fossil fuels are also used in the production and transportation of food	
3	Deforestation	Trees help to absorb carbon dioxide however they are being cleared to create more space for farming. Not only does this limit the ability of trees to store carbon dioxide but when they are cleared a slash and burn technique is used which releases the stored carbon dioxide in trees adding to the enhanced greenhouse effect.	

G		Impacts of climate change	
1	Ice caps melting	As a result, habitats for animals including polar bears and emperor penguins are shrinking. This threatens the survival of these species.	
2	Tourism problems are increasing		
3	Changing weather patterns	leading to more intense heatwaves , droughts (leading to crop failure), flooding (causing the extinction of species) and extreme weather, such as hurricanes . (impacting human life)	
4	Diseases	As temperatures rise, tropical diseases like malaria are spreading to previously unaffected areas.	

Н	Impact of sea level rise Bangladesh	
1	Bangladesh is a country that is used to seasonal flooding. People in Bangladesh had worked around seasonal flooding; farming for part of the year and retreating when water levels rose, or seeking work in the cities as land became unusable.	
2	However sea levels are expected to rise along the Bangladesh coastline by up to 1.5m. This will cause more extreme flooding. Extreme flooding would normally take place once a decade but it could be as regular as 15 times a year by 2100.	
3	 This causes the following problems: Can not grow crops on the land. This causes a lack of income. People have to find a new career which is difficult as Bangladesh is an LIC Homes are destroyed by flooding and people are displaced and forced to live elsewhere up to 100,000 people migrate each year due to the damage caused by flooding 	

1	Impact of sea level UK: Thames Barrier, London	
1	The UK will also see the impacts of sea level rise. Parts of London are predicted to be completely submerged underwater by 2050 due to the rise in sea level. To deal with this rise and the risk of flooding, the UK government have installed the Thames Barrier.	
2	 The Thames barrier: The Thames barrier is only meant to be used once a year against extreme storm surges. The Thames Barrier has been used (closed) 205 times since it became operational in 1982 (as of February 2022). Of these closures, 114 were to protect against sea flooding. It is meant to protect 1.42 million people and £321 billion worth of property from tidal flood risk. The barrier was originally designed to last up to the year 2030 	
3	 This causes the following problems: The government will have to spend more money on trying to protect London from flooding. It's expected that over 200,000 homes will be impacted due to this. Homes at risk and will be difficult to sell and insure. 1.5 million people live in the floodplain of the River Thames and its tributaries The current Thames Barrier may not be able to hold back significant bodies of water from London, a new barrier will have to be made by 2050, costing an estimated £1.7 billion 	

J	Mitigation-reducing the severity of something by reducing the cause.
1	There are many ways climate change can be mitigated. As climate change is a global problem it is felt a global response is needed to tackle climate change. These are called international agreements. International agreements regarding climate change are usually made at a meeting called the Conference of the Parties (COP).
2	Costa Rica Costa Rica was a country that once cleared most of its forests, but it has now doubled the number of trees and is seen as a role model for others to follow. In the 1990s, the country had the world's highest global deforestation rates, and less than a quarter of its original forest cover remained, largely due to agricultural expansion and logging.
3	Protect and Restore Nature: In 2021, the Republic of Costa Rica won the Earthshot award and £1million for the most innovative project to deal with the impacts of climate change. The winning project is a scheme paying local citizens to restore natural ecosystems that has led to a revival of the rainforest.
4	 Benefits of the project: This provides a greater source of income for the locals; locals are being paid to restore the natural ecosystems. Provides education for locals on sustainable land-use, decreasing methods such as deforestation. The rainforest has more than doubled since 1997, this has not only increased the biodiversity of plants but has increased numbers of certain animals at risk of extinction like the jaguar. The project has led to a boom in ecotourism that has injected \$4billion into the Costa Rican economy. Since winning the 2021 Earthshot Prize, Costa Rica continues to be a leader driving the global environmental agenda, signing an agreement to increase its protected marine area from 3% of its ocean territory to a target of 30%.

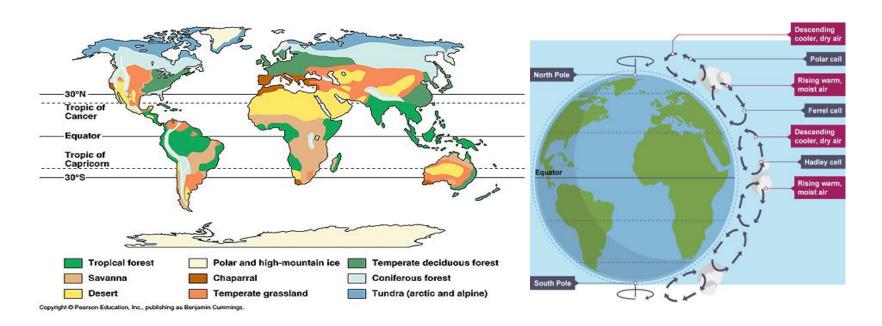
Geography: Knowledge Organiser 8.3: Climate Change

K	Adaptation - changing to better cope with the impacts of climate change	
1	There are many ways in which countries and communities can adapt to the increased risk of climate change. One strategy is to reduce the risk from sea lev rise through strategies such as building houses adapted to floods.	
	<u>Bangladesh</u>	
	Adapting to flood risk:	
2	Bangladesh's government realise the severity of the situation and due to this are investing in education and projects to help reduce the risk from sea level rise: • More than \$400 million was put into their Climate Change Trust to help finance climate adaptation and mitigation projects	
	 More than \$400 million was put into their Climate Change Trust to help finance climate adaptation and mitigation projects. The government is also investing in building projects such as submersible roads that can withstand floods. 	
	Walling off low-lying islands using permanent embankments (called polders), has been another popular intervention.	
	Natural methods are being used to help hold slopes together with grass.	
	Advantages:	
	• During the rainy season, people often use boats to travel making roads non-essential, until the dry season when the waters retreat and the roads re-	
3	 emerge. Homes are being built on elevated land to decrease the risk of flood. 	
	 Drainage systems are being improved to help drain the water from roads and pavements 	
	Slopes being held together decreases the risk of landslides	
	Disadvantages:	
4	Polders have a mixed effect on flooding, they make monsoon flooding worse but offer protection from storm surges	
	• For polders to work in the long-term they will need to be built higher and higher every year to match sea level rise	
	The grass used to hold slopes together is not a native species to Bangladesh and could lead to problems with the local ecosystems	

L	Key terms		
1	Climate	The weather in an area over a long period of time (usually 30 years).	
2	Decomposer	Organisms such as bacteria or fungi that break down dead and waste material to return nutrients of the soil.	
3	Producer	An organism that produces its own food through photosynthesis e.g. grass.	
4	Primary consumer	An animal that consumes the producer. This is the first animal in the food chain.	
5	Secondary consumer	An animal that consumes the primary consumer.	
6	Tertiary consumer	An animal that eats secondary consumers.	
7	Biodiversity	diversity How many different plants and animal species there are in an area.	
8	Nutrients	Something which plants and animals need to consume to grow and to stay alive.	
9	Adaptation	When something changes to suit an environment.	
10	Camouflage When an animal or plant disguises itself.		
11	Mineral	A natural substance in the soil, such as gold or salt.	
12	Sustainability	Doing something in a way which preserves an environment for future generations.	
13	Desertification	The expansion of deserts.	
14	Vegetation	etation Plants found in a particular ecosystem.	
15	Decompose	When waste or dead material breaks down to return nutrients to the soil.	

M	Classifying Countries	
1	An ecosystem is an environment in which plants and animals interact with each other and the climate on rocks and in soil.	
2	We can classify components or aspects of ecosystem as either biotic (alive) or abiotic (they have never been living). For example: Climate and rocks are abiotic and animals and plants are biotic.	

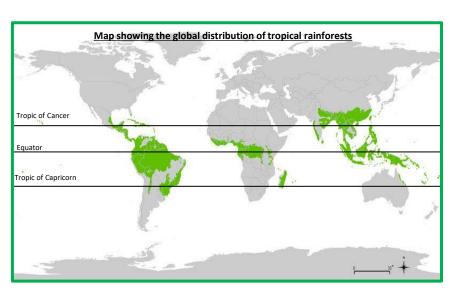
N	N Biomes and climate	
Large scale global ecosystems are called biomes Where biomes are in the world is determined by their climate .		
2	 The climate of an area is determined by the distance from the equator and global circulation patterns. These two factors determine an area's temperature and precipitation. On the equator the climate is both hot and wet, the ideal conditions for vegetation, and it is hear tropical rainforests are located. At the poles the climate is cold and dry hence why tundra is located here, where there is very little vegetation. 	



0	Food chains and food webs	
1	Food chains show the flow of energy from one organism to another.	

Arrows showing the flow of energy between each part of the food chain. Producer Primary consumer Decomposer Decomposer

Р	Rainforests:	
1	 Distribution Tropical rainforests are mainly located between the latitudes of 23.5°N, the Tropic of Cancer and 23.5°S, the Tropic of Capricorn. Tropical rainforests are found in Central and South America for example the Amazon. In western and central Africa is the Congo, western India, Southeast Asia, the island of New Guinea, and Australia 	
2	 Climate Because rainforests are found close to the equator where air is rising, they have a hot climate with a lot of rainfall. This can be called a humid climate. The humid climate provides the ideal growing conditions for vegetation. This means there is lots of biodiversity. 	



Q	Rainforest vegetation	
1	 Structure Rainforests have a lot of biodiversity and there is a lot of competition between animals and plants to survive. This competition has caused rainforests to develop a layered structure as plants compete for nutrients and sunlight. 	
	Emergi	 The emergent layer has the most sunlight. The trees in this layer have grown past the canopy. Animals in this layer are either birds or animals, like monkeys, who are well-adapted to living off the ground.
2	Canopy	 This is the main layer of forest and forms a roof, limiting the amount of sunlight which reaches the under canopy and the forest floor. There is a lot of food and there are a lot of animals in this layer.
	Under	 Only a small amount of sunlight reaches the under canopy. As a result, plants which grow in this layer usually have large leaves in order to catch as much sunlight as possible.
	Forest	 Very little sunlight reaches the forest floor. Very few small plants grow on this layer.
	Soil	 There is only a very thin layer of fertile soil. Dead plants and animals decompose quickly because of the heat and moisture. However, competition for these nutrients is high, so are quickly used by other organisms.
3	Value Tropical rainforests are important for a numb oxygen - the rainforest vegetation takes in ca medicines - a quarter of all natural medicines undiscovered species food, e.g. vanilla, chocolate, nuts, ginger and	arbon dioxide and gives out oxygen. This helps to regulate the atmosphere. s were discovered here

R	Adapting to the rainforest:		
		How it is adapted	How this makes it better suited to the environment
1	Drip tips	Some plants have waxy leaves and pointed tips, which allows rainfall to easily run off. This will also help slow down the rainfall from reaching the forest floor.	This prevents the high levels of precipitation breaking the leaves stopping photosynthesis. By slowing the rainfall this helps to prevent flooding.
Buttress roots Some trees in the rainforest grow to heights of 70 metres, Buttress roots provide stability by being large and wide. The roots are also shallow which allows them to quickly absorb nutrients in the thin layer of soil.			There is only a thin top layer of soil in the TRF, having roots close to the surface means they can get more nutrients to grow. There is lots of competition for sunlight, having a stable base means you can grow above the other vegetation.
3	Liana vines	Liana vines wrap around the trunks of other trees to reach the canopy layer for sunlight. They are a parasitic plant so absorb nutrients from the tree they have wrapped around.	Competition is high for nutrients, by taking them from other plants they will have more nutrients to grow.
Frog pr		The frog's skin secretes a dangerous poison that can paralyze and kill predators. Poison dart frogs are small around 20 mm-40 mm but only 2.5 grams of their poison is enough to kill a human. They have excellent vision to spot their prey and have a long sticky tongue to catch it.	Many other frog species camouflage themselves in the wild, but the poison dart frog uses its brightly coloured skin to warn predators it's unfit to eat. They use their excellent sense of vision to help capture prey, they use their long, sticky tongue to capture insects from a distance.
5	Sloth	They move very slowly to conserve energy and it makes it difficult for predators to spot them. They are well camouflaged and have long strong arms to support their body weight when hanging from trees in the canopy layer.	The leaves in the TRF are difficult to digest, moving slowly conserves energy that can be used for digestion. Being able to hang in the canopy layer means they are away from predators on the forest floor, giving them a better chance of survival.

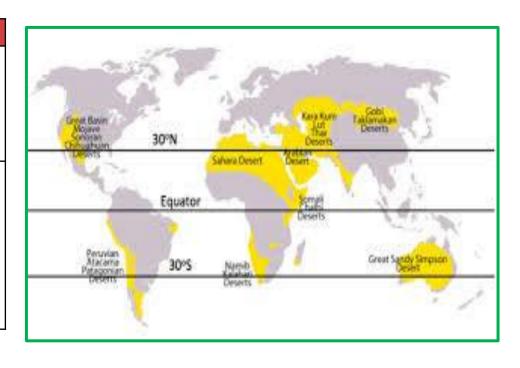
S	S Human impact on the tropical rainforest:	
1	<u>Deforestation</u> - Chopping down rainforests can provide a number of benefits to people and businesses. However, it can also have a large number of negative effects.	

Т	Causes of deforestation	
1	Population pressure – clear land for new homes to be built	
2	Mining – gold and iron are mined to make money and create jobs	
3	Creating energy – damming rivers so Hydro Electric Power can be created to provide energy to towns and cities.	
4	Logging—trees are felled to make money by turning the timber into goods such as furniture. This is made worse by the need to build larger, wider roads to transport the timber out, resulting in more deforestation. Commercial farming — rainforest is cleared for cattle grazing, palm oil and soya plantations. These are crops that are then sold world wide by large companies.	
5		
6	Subsistent farming—rainforest is cleared for farmers to grow food for themselves and their families.	

U	Impacts of deforestation	
	Advantages:	Disadvantages:
1	The wood from many trees in rainforests is valuable. This wood can be sold to other countries to help increase country's wealth. Because there are fewer trees to hold the soil in place, wind at cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion . It cause the soil to be removed, this is called soil erosion .	
2	Commercial farming can help to provide jobs and income for locals while subsistence farming will provide food.	Farming cattle produces lots of methane a greenhouse gas. This adds to climate change.
3	Dams can be built to generate hydroelectric power. This can provide a source of cheap and cleaner energy.	Dams flood large areas causing the loss of large areas of rainforest and less biodiversity.
		Mining can cause rivers to be polluted from run off from the mine, destroying habitats.

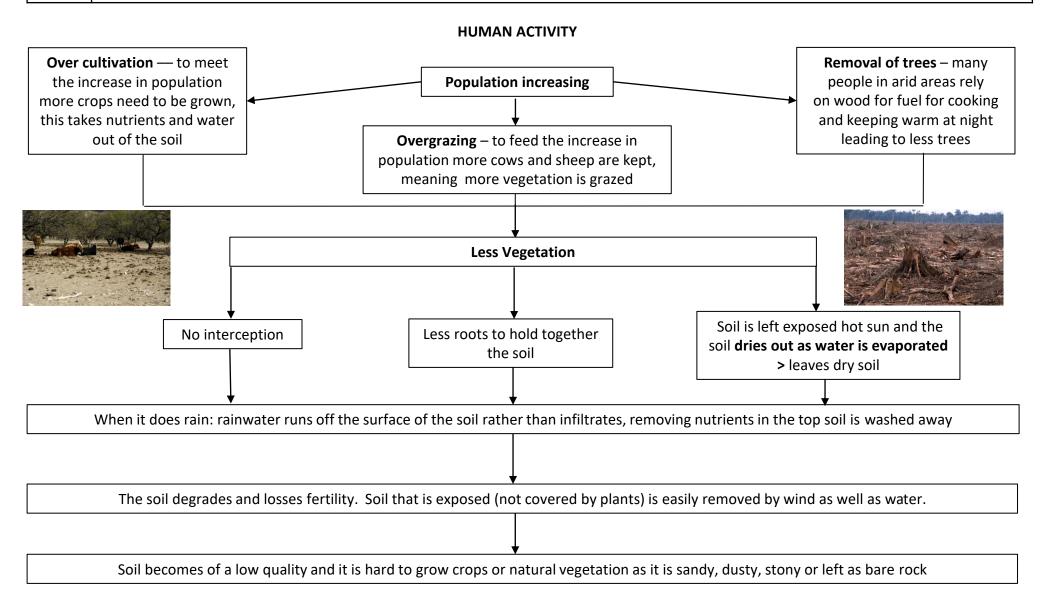
V	Managing Rainforests:	
Solution: Method:		Method:
1	Selective logging Specific trees are selected for deforestation to ensure that the ecosystem isn't damaged. Trees are usually replanted. So companies will only take trees from the TRF that have naturally fallen down. The will also use traditional methods of rem logs such as an Ox and cart. This means large machinery and roads to transport the logs are not needed that would other increase deforestation.	
education tourism. Many ecotourist resorts will only use materials sustainably sourced from the rai		Ecotourism schemes aims to educate people about the rainforest while also allowing people in the area to generate income from tourism . Many ecotourist resorts will only use materials sustainably sourced from the rainforest in the construction of the resort and use renewable sources of energy. The hotels will also be built in and around the existing trees and raised off of the ground to minimise disruption to the natural environment.

W	Hot deserts:
1	 Distribution Hot deserts are usually found within 20 and 30 degrees north and south of the equator, where air is descending at the edge of an atmospheric cell. The largest hot desert is the Sahara Desert located in northern Africa. The second largest hot desert is in Asia, the Arabian Desert located in western Asia
2	 Climate Deserts are any areas which receive less than 250mm of precipitation per year. Deserts can be hot or cold. Because hot deserts are close to the equator, they experience high temperatures during the day. However, because of the high pressure there are few clouds. As a result, temperatures drop dramatically at night. This is because there is no cloud cover to retain the heat.



X	Adapting to hot deserts:		
		How it is adapted	How this makes it better suited to the environment
1	Cacti	 Thick, waxy skin to reduce loss of water and to reflect heat. Large, fleshy stems to store water Thin, spiky leaves to reduce water loss Spikes protect cacti from animals wishing to use stored water Deep roots to tap groundwater or long shallow roots which spread over a wide area 	Low levels of precipitation means there is a lack of water by storing it they can go for long periods without the need for rainfall.
2	Acacia Tree	 Long, sharp thorns to prevent animals grazing. Leaves are located at the top of branches to prevent animals grazing on them. Long deep roots to tap groundwater. 	Due to the lack of precipitation and nutrients it can take a long time for plants to grow and repair. Keeping leaves away from animals and having thorns to protect them means they don't have to use valuable nutrients and energy repairing damaged leaves.
3	Camel	 Long eye lashes, hairy ears and closing nostrils help to keep out sand Wide feet so they don't sink in the sand Can go without water for over a week because they can drink gallons in one go They can go months without food - they store fat in their humps They are well camouflaged Thick fur helps to keep them warm at night 	Both water and food are in limited supply in a hot desert. By storing fat and going long periods without water means they can survive when there is no source of food. Temperatures drop by 20°C at night, thick fur can keep them warm.
4	Fennec Fox	 Large ears which increase heat loss and regulate their body temperature. Nocturnal, allowing to avoid high temperatures during the day. Camouflaged to hide from predators 	During the day temperatures can reach over 40°C by increasing heat loss they are at less risk of heat stroke and dehydration. Camouflage help the Fennec Fox blend with it's surroundings and avoid predators such as Jackals.

Υ	Human impact on hot deserts
1	 Desertification: Desertification is when deserts expand. The land on the edge of a desert becomes drier and less fertile.



Z	Managing Desertifications	
1	Solution: The Great Green Wall	 An African led project that began in 2007. Runs from east to west of the Sahel region on the edge of the Sahara desert (Senegal to Djibouti) Planting acacia trees in a 9mile wide line.
	Advantages	Disadvantages
	Tree planting is very effective > acacia trees have deep roots > roots bind the soil together > less soil erosion > less loss of nutrients and degrading of soil.	Only 15% complete. Senegal has planted the trees > only effective in this area > desert will continue to spread across the Sahel region.
2	Acacia trees > drop leaves / branches > decompose > nutrients in soil > more fertile.	Disagreement on what the Green Wall stands for > some experts say it is a metaphor for other projects > each country ends up doing their own projects.
	Acacia trees provide shade > reduce water evaporation > soil is less dry > more vegetation can grow > less surface run off.	Estimated to cost \$4.3billion every year > Some countries may run out of the funds to complete the project.

French: Knowledge Organiser 8.1: Mon monde

1	J'habite dans une ville	I live in a town
2	dans le sud-ouest de l'Angleterre	In the southwest of England
3	dans une petite maison.	In a small house.
4	Ma ville est moderne	My town is modern
5	et elle se trouve près de Bristol.	and it is located near Bristol.
6	Dans ma maison il y a	In my house there is
7	un salon et une cuisine.	a living room and a kitchen.
8	Ma pièce préférée est ma chambre	My favourite room is my bedroom.
9	Normalement je me lève	Normally I get up
10	à sept heures <u>du matin.</u>	in the morning at 7 o'clock.
11	Dans ma ville il y a	In my town there is
12	un cinéma et une piscine.	a cinema and a pool.
13	Mais malheureusement il n'y a pas de musée	But unfortunately there is not a museum.
14	<u>Avant</u> ma région était plus barbante.	Before my region was more boring.
15	Quand il fait beau	When it's nice weather
16	je joue au foot.	I play football.
17	<u>Parfois</u> je vais en vacances en France	Sometimes I go on holiday to France
18	avec ma famille.	with my family.
19	Nous voyageons en train <u>car</u> c'est rapide	We travel by train because it is fast.
20	Nous restons dans un hôtel <u>près de</u> la plage	We stay in a hotel <u>near to</u> the beach.
21	<u>Tous les jours</u> nous faisons du vélo	Every day we do cycling.
22	L'année dernière je suis allé(e) en vacances en Espagne	<u>Last year</u> I went on holiday to Spain.
23	J'ai voyagé en avion et nous sommes restés dans un camping.	I travelled by plane and we stayed in a campsite.
24	Chaque jour j'ai fait de la natation.	Every day I did swimming.

Spanish: Knowledge Organiser 8.1: Mi mundo

1	Vivo en un pueblo	I live in a town
2	en el suroeste de Inglaterra	In the southwest of England
3	en una casa pequeña.	In a small house.
4	Mi pueblo es moderno	My town is modern
5	y está situado en el centro.	and it is located in the centre.
6	En mi casa hay	In my house there is
7	un salón y una cocina.	a living room and a kitchen.
8	Mi habitación preferida es mi dormitorio.	My favourite room is my bedroom.
9	Normalmente me levanto	Normally I get up
10	a las siete por la mañana.	at 7 o'clock in the morning.
11	En mi pueblo hay	In my town there is
12	un cine y una piscina.	a cinema and a pool.
13	Pero por desgracia no hay museo.	But unfortunately there is not a museum.
14	Antes mi región era más aburrido.	Before my region was more boring.
15	<u>Cuando hace buen tiempo</u>	When it's nice weather
16	juego al fútbol.	I play football.
17	A veces voy de vacaciones a España	Sometimes I go on holiday to Spain
18	con mi familia.	with my family.
19	Viajamos en coche <u>porque</u> es rápido.	We travel by car because it is fast.
20	Nos alojamos en un hotel <u>cerca de</u> la playa.	We stay in a hotel <u>near to</u> the beach.
21	Todos los días hago ciclismo.	Every day we do cycling.
22	El año pasado fui de vacaciones a Francia.	<u>Last year</u> I went on holiday to France.
23	Viajé en avión y me alojé en una villa.	I travelled by plane and I stayed in a villa.
24	<u>Cada día</u> hice natación.	Every day I did swimming.

А	Sanctity of life and Quality of life	
1	<u>Worship</u>	is any practice that shows devotion to or love for God. It is an external expression of faith.

В	Christian worship
1	Liturgical worship – is led by a vicar/priest follows a set pattern includes set prayers e.g Lord's prayer and readings from the Bible. Christians often join together in church on a Sunday as a congregation to participate. Roman Catholic, Church of England (Anglican) Christians worship in this way.
2	Non liturgical worship - is worship that has no set pattern. Quakers worship together in meeting houses. There are no set hymns, prayers or sermons. Everyone sits in a circle to worship as equals – there is no leader. Quakers spend most of their meetings in silence (stillness). They give ministry when the Holy Spirit is present within them.
3	Charismatic worship Evangelists Worship with Body and mind - Speak in tongues when the Holy spirit is present within them

С	Hindu worship
1	Daily worship At home at shrine in their house. The most important type of worship is the puja ceremony,. It has to include all five senses.

C2 Object	Use in Puja worship	Sense used
A bell	To awaken the god and let them know you are ready to worship.	Hearing
Food offerings	Food, usually fruit, is given as an offering to the gods.	Taste
Murti	A image or statue of the god being worshipped.	Sight
Incense	Incense is burnt. It fills the room, which reminds worshippers that Brahman is always there. Incense is also burnt to purify the atmosphere.	Smell
Kum-kum powder	Marks the head of the worshipper and the god to show respect.	Touch

D	Sikh worship
1	Daily routine They worship in the gurdwara and the home recite prayers and meditating on the name of God.
2	Meditating on God's name – Naam Japna One of the three foundations of Sikhism is Naam Japna, which is meditating on God's name. Sikhs believe that it is important to keep Waheguru in their mind at all times. Nam Japna can be performed either silently (by repeating 'Waheguru' in the head) or aloud. Sikhs believe Naam Japna helps them to become less selfish (manmukh) and more God-centred (gurmukh).
3	Prayer in the gurdwara In the gurdwara, Sikhs pray in the Divan Hall. Before entering the prayer hall, they take off their shoes, wash their hands and cover their heads. They sit on the floor to show respect to Waheguru
4	prayer in the home Hind's may use a set of prayer beads known as a mala, which has 108 knots tied into it. They will repeat 'Waheguru' as they pass the beads through their fingers. The Akand Path is the non-stop continuous reading of the Guru Granth Sahib from beginning to end. Takes 48 hours to read The Akand Path is one way for Sikhs to perform sewa.

Е	Buddhist worship	
1	Puja - expresses how thankful they are to the Buddha for what he taught e.g the Eightfold Path.	
2	Puja is important as it is carried out both at home and in the temple. Buddhists use a variety of different methods in their devotional practice. Examples are: Mantras - chant repetitively Chanting - sing the scriptures from the Guru Granth Sahib Mala - Buddhists may use a string of beads to help them focus during worship. Meditation - open themselves up to a higher state of awareness. Bowing - sign of respect. Offerings - leave gifts as a mark of respect to the Buddha. These gifts may include flowers, which are beautiful but fade and serve as a reminder of the impermanence of things. They may also include candles, which are a mark of light and wisdom	
3	Puja helps buddhists overcome suffering by focussing on the Buddha and his teachings	

F	Buddhism - Meditation	
1	Buddhism - Meditation - is a mental and physical course of action that a person uses to separate themselves from their thoughts and feelings in order to become fully aware.	
2	The significance of meditation: 1. This is a very important part of Buddhist daily life. 2. Good meditation should lead to less suffering and more compassion 3. This in turn, should lead to enlightenment.	
3	Methods of meditation 1. Before meditation a Buddhist might chant part of the holy writings. 2. The meditator may focus for a while on the movement of the body in breathing to calm the mind. 3. Many Buddhists will focus on an object such as a shape or a candle to help settle the mind.	
4	Samatha 'concentration & tranquillity' meditation a) This type of meditation focuses on every tiny movement and sound of breathing in order to promote tranquillity or calmness. b) Samatha meditation will often involve a kasina which is something on which one focuses in great detail. This may be a bowl of water or the colour red, for example. c) The purpose of samatha meditation is to make the mind ready for vipassana meditation.	
5	Vipassana 'insight' meditation a) Vipassana meditation is different from samatha meditation because it focuses on teachings of Buddha not on an object or on breathing. b) Vipassana meditation might focus on impermanence, for example. c) This type of meditation is part of the Eightfold Path right concentration, right thought	

G	Hinduism - Yoga - An ancient mind and body practice
1	Hindus believe that yoga is an important practice that helps them to be close to Brahman .
2	There are four different types of yoga, and each one needs different qualities or skills. Hindus choose the type of yoga they want to practise depending on the stage they are at in their life, as they will require different things at different

Type of yoga	Its meaning
Jnana yoga	A disciplined type of yoga that is done by Hindus who have given up worldly possessions and want to focus on trying to be in unity with God.
Raja yoga	It is a meditation yoga that is mainly used by Hindu holy men, who complete mantras to focus on Brahman.
Karma yoga	This type of yoga is about focusing on doing good things around you and helping others.
Bhakti yoga	This type of yoga is about worship and showing God love and devotion.

Н	Christianity - Sacraments
1	A sacrament is an outward sign of an inward grace. Catholics believe that there are 7 sacraments Baptism and the Eucharist are practised by most Christians because Jesus commanded them.

- 1	
1	Baptism is an important sacrament because Jesus' last instruction before ascension , was to ' Go make disciples of all nations, baptising them in the name of the Father, Son and Holy Spirit'. This became known as the Great Commission .
	INFANT BAPTISM:
2	Use of holy water (blessed) from the font and poured three times over the forehead (outward sign) The sign of the cross made on the forehead in the name of the Father, Son and Holy Spirit. parents/godparents make promises on behalf of the child to reject evil, repent sins and turn to Christ the lighting of a paschal candle, which symbolises receiving the light of Christ
	Many believe that infant baptism is the correct way because it allows a child to be cleansed of sin from an early age If the child dies then because it is baptised, it will be welcomed into heaven Grows the church
3	BELIEVERS' BAPTISM: This is a ceremony adults. The person being baptised says a testimony – explaining the reasons how they came to believe and their reasons for seeking baptism. They also say Declaration of Penitence saying they are truly sorry for any sin and of faith in Christ and the intention of a lifelong commitment to Christianity. Walking down three steps into a pool symbolises the end of the old life of sin. Then there are three full submersions in the name of the Father, Son and Holy Spirit. The person then leaves by three other steps to start a new life as a Christian.
	Some think believers baptism is the correct way because It replicates Jesus' adult baptism when he was 30 at the River Jordan because a person should be of an age where they can choose and want to be a Christian. Also Jesus said 'Get up and be baptised and wash away your sins', which suggests he was talking to adults.

J		
1	Eucharist - The term the Eucharist comes from the Greek words 'Eu' and 'thantios' meaning thanksgiving	
2	The Eucharist is a re-enactment of the Last Supper, the final meal that Jesus Christ shared with his disciples before his arrest, and eventual crucifixion. Jesus knew he was going to die. At the meal Jesus ate bread and drank wine and instructed his disciples to do the same in memory of him. "This is my body given for you; do this in remembrance of me." Christians take part in this ritual in order to remember the sacrifice Jesus Christ made for them by being crucified on the cross to save humanity from sin and reconcile us with God.	
3	In Eucharist a priest blesses bread and wine and the congregation then receives these Catholics believe the Holy Spirit transforms the bread and wine into Jesus' body and blood – this is called transubstantiation . Protestants believe the bread and wine are symbolic – this is called memorialism .	
4	Outward sign - Being given the bread and wine to eat and drink	Inward spiritual grace - Washes away sin - gives protection from sin for the coming week

K	
1	The Five pillars are the foundations of Islam. It is expected that all Muslims practice them

L	Pillar 1 - The Shahada	
1	The Shahada is when a Muslim says "There is no God but Allah and Muhammad is the Messenger of Allah." It is recited during Salah (the 5 daily prayers) It states the belief in Tawhid (that there is only one God) It recognises Muhammad is the last prophet of Allah	
2	The Shahada is important and influences a Muslims life because Cannot become a Muslim without doing it It shows a Muslims faith in Allah It is prerequisite for all of the	

М	Pillar 2 – Salah	
1	Salah is prayer Performed five times a day at set times: dawn, just after noon, in the afternoon, at sunset and in the evening and can be performed at home or in the Mosque.	
	Before Salah Muslims perform Wudu , a cleansing ritual of washing. Pray in the direction of Mecca by facing the mihrab	
2	Muslims perform Rak'ah during praying - a sequence of actions including prostration (see picture). When a Muslim prays, the intention (niyyah) behind the prayer must be right, otherwise Allah will know and the prayer will be meaningless.	

N	Pillar 3- Sawn	
1	Sawm is during Ramadan, the ninth month of the Muslim calendar. Ramadan iis believed to be the month in which the Prophet Muhammad began to receive revelations of the Qur'an e.g the Night of Power. Ramadan is a time of thanksgiving for the Quran and it's read from beginning to end in Mosques.	
2	Muslims to fast from dawn until sunset for the entire month. By fasting Muslims it influences Muslims obedience to God and learn self discipline. Muslims believe fasting cleanses sin and influences them to have empathy for those in the world who are hungry and so motivates Muslims to give more to charity. Ramadan does not just mean giving up food it also means abstaining from drinking, smoking, music and sex. Muslims should also avoid evil thoughts and unkind speech.	
3	Sawm is instructed by Allah "Decreed upon you is fasting that you may become righteous" Qu'ran. Sawm is important as it builds the ummah as Muslim families share food together at suhur, the meal just before dawn, and iftar, the meal which breaks the fast after sundown The end of Ramadan is marked by the appearance of a new moon. Muslims pay zakat and celebrate with the festival of Id-Ul-Fitr (Eid), where they give gifts and enjoy a festive meal with friend and family.	

0	Pillar 4- <u>Zakat</u>	
1	Every Muslim must pay Zakat , a religious tax of 2.5% of their savings minus nisab ; traditionally paid at the end of Ramadan. It was commanded by Allah command of God "And be steadfast in prayer and regular in charity for Allah sees well all that ye do"	
2	Zakah means 'Purity'. Many muslims believe that money is a corrupting influence. By paying Zakat muslims believe their soul is purified of selfishness and greed. This is important as it brings muslims closer to God.	
3 fro	Muslims believe that wealth does not belong to them but is a gift from Allah as the Qur'an says: 'Spend from that which we have provided for you'.	
4	Giving Zakah strengthens the muslim community Ummah because the rich look after the poor 'He whose stomach is filled while his brother side goes hungry is not one of us"	

Р	Pillar 5 - Hajj	
1	Hajj is the fifth pillar of Islam, a pilgrimage to Mecca in Saudi Arabia 'Proclaim that the people shall observe Hajj pilgrimage.' Pilgrims wash and shave their heads and dress in white clothing. They do this to represent equality and purity.	
2	Hajj purifies a person of all sins. This is important as Muslims will be judged by Allah on their deeds. Hajj builds the Ummah as people from different backgrounds and ethnicities gather and all wear white and this helps to build the concept of Ummah which is an important duty for all Muslims. When a Muslim dies they're buried in this very same robe in preparation to face Allah on Judgement Day.	
3	What happens? Kaaba – the pilgrims must walk around the Kaaba anticlockwise 7 times (Tawaf) which reminds them of monotheism. Safa & Marwah – this is where the pilgrims walk between the two hills 7 times to represent Ibrahim's unwavering faith in Allah when he left his wife and son in the desert. Mount Arafat – this is where the pilgrims stand on a hill for the whole day praying and repenting; it is believed that this is where their sins can be forgiven Muzdalifah – Pilgrims collect 49 small stones to use the next day Mina – the location of the Stoning of the Devil and the The three Jamarat pillars. Muslims between sunrise and sunset on the final days of the Hajj throw stones at three pillars which represent the temptations of the Devil and they are not giving into these temptations. Sacrifice – this is when at the end of Hajj, each pilgrim pays for a lamb to be slaughtered and it is given to the poor. This represents Ibrahims biggest test of faith – when he was prepared to kill his son Ishmael. This is known as the festival of Eid Al Adha	

Q	
1	A pilgrimage is a journey that has religious or spiritual significance Pilgrimage is important as it deepens religious connection with God and makes people feel connected to the worldwide community of their faith

R	Pilgrimage - Christianity
1	Lourdes - France. Bernadette Soubirous , a 14 year old girl had a vision of Mother Mary 18 times. During one vision, the figure of Mary asked Bernadette to drink from a spring There was no spring, so Bernadette dug and there appeared a spring The spring is believed to have miraculous properties 69 modern day miracles have happened at Lourdes

	S	Pilgrimage - Hinduism
	1	Varanasi - It is believed to be the city where Shiva, the god of destruction, lived a long time ago. The River Ganges, which is one of the most sacred rivers in the world, runs through the city and is important as it is where Hindus bathe in the hope they can wash their sins away. A lot of Hindus believe that people who die in the city of Varanasi can achieve moksha.
	2	One of the most important pilgrimages in Hinduism is Kumbh Mela . This is the largest gathering of people in the world. Millions of people attend and bathe in the Ganges (in North India). Every 12 years and last 55 days. It started because of the story of the Garuda , which was a bird. The bird picked up a jar that contained immortality nectar, but four drops of the nectar fell into the Ganges. Hindus therefore bathe in the Ganges with the hope of having their sin washed away and their soul purified.

Bodh Gaya, iin northern India, is one of the most significant sites of pilgrimage to Buddhists. In Pali, the language of the Buddha, 'bodh' means 'enlightenment'. According to Buddhist belief, before he became the Buddha, Siddhartha Gautama attained enlightenment under a tree, now known as the Bodhi Tree, in the place now known as Bodh Gaya ('place of enlightenment'). Today the Mahabodhi Temple, stands on the spot. Pilgrims pay their respects to the Buddha, make offerings, chant and meditate

U How does being religious influence your life? Diet

U1-

Christianity has no food rules - because in Genesis ,God said, 'Fill the earth and rule over the birds in the sky and the animals on the ground' and 'Every moving thing that lives shall be food for you'. It is therefore a choice what you eat as a Christian

U2- Islam

There are certain foods which are Halal (allowed) and certain foods which are Haram (forbidden). This applies to what Muslims eat as well as the way their meat is slaughtered.





According to Islamic law, when slaughtering an animal, you should begin by saying Bismillah which means 'In the name of Allah'.

Then, the animal should be slaughtered using a fast cut to the throat using a sharp blade whilst facing Mecca.

Dhabiha should not be done around other animals to avoid frightening them.

U3- Hinduism

Because of the importance of cows, Hindus do not eat beef, and many are vegetarians because of the principle of Ahimsa and the idea of reincarnation. 'If there were nobody who ate meat there would then be nobody who kills living creatures. The person who kills living creatures kills them for the sake of the people who eat meat' Mahabharata

The cow is a sacred animal

In Hinduism, the cow is a symbol of life and of the Earth, and thought of by many as a mother, because she gives food and nourishment through her milk.

Lord Krishna is often pictured as a cow-herder and some Hindus try to follow his example by caring for cows in particular, as well as respecting other animals.

U4- Buddhism

There are not set dietary laws in Buddhism. Vegetarian is common however due to the principle of nonviolence (Precept 1 - refrain from taking life) and the avoidance of suffering. Some Buddhists also don't eat garlic, onion, chives, shallot or leek (five pungent spices – believed to increase one's sexual desire and anger). Alcohol is typically avoided because of Precept 5 - refrain from intoxicants that cloud your mind

V How does being religious influence life - How you dress

V1- Islam

In Islam, both men and women are required to dress modestly.

Prophet Muhammad instructed that women should cover their bodies except for their face and hands.

Most Muslims interpret this to require head coverings for women others full body

slam also guides that clothing must be loose



of shorts. These

are a symbol of modesty

V2- Hinduism does not dictate any dress code but many women wear a sari. For women there is an emphasis on modesty. Hindus do use facial decorations such as the Bindi. The Bindi is used to represent the third eye and 'concealed wisdom'. It keeps God in the forefront of our minds and thoughts. Red bindis symbolize marriage, so when a woman is widowed, she will often change her bindi colour to black.

V3- Judaism

A Kippah, is a small hat or head covering. In traditional Jewish communities it is only the men that wear it and they are worn at all times (except when sleeping and bathing). It is considered a sign of respect for Yaweh.

It is also felt that this separates God from humans, by wearing it you recognise that God is above all mankind.

Makes Jews recognisable as people of God



Kanga

that represents



unity, of self

of constant learning

and a process

V4 Sikhism

The most obvious reason Sikhs wear turbans is to represent their faith

The **5** K's of the Sikh identity (Kesh, Kara, Kirpan, Kanga, Kuccha).

Sikhs also believe that hair is a precious creation and gift from God. To show devotion Sikhs never cut their hair and instead let it grow free.

Sikhs believe that wrapping the head with a tight turban it helps the mind stay grounded and focused on the important things in life. During the start of the Khalsa, the Turban was only really worn by royalty and the rich. By changing the rules so that everyone, including women can wear one it promotes equality.

W- How does being religious influence life? - Festivals - Mark a special event in a religion normally through a celebration

W1- Christianity

Christian festivals help people to remember the story of Jesus' life. Festivals are also times to give thanks to God for His blessings Festivals help Christians to have a sense of tradition and history.

Christmas day on the 25th of December marks the birth of Jesus, the **incarnation** of the son of God.

- The story of Jesus' birth, called the **nativity**. Church services often include a **carol service**.
- Some Christians start Christmas Day with a midnight service, called Midnight Mass.
- Christians often celebrate Christmas by giving and receiving presents and cards. This reminds them of the gift of Jesus, beginning his earthly life.
- Christmas is important to many Christians because it reminds them that: Jesus, the Son of God, was incarnated to atome for original sin.

Easter begins with Lent, which is the name given to a period of 40 days leading up to the day of resurrection.

Holy week

- Palm Sunday Jesus was welcomed to Jerusalem
- Maundy Thursday Last Supper
- Good Friday Jesus was crucified
- Easter Monday Jesus was resurrected

W2- Islam

Eid ul-Fitr was started by the **Prophet Muhammad** himself. It is also known as 'The Feast of Breaking the Fast' and is celebrated by Muslims worldwide to mark the end of Ramadan. Muslims are not only celebrating the end of fasting, but also thanking **Allah** for the **Qur'an**, and for the strength Allah has given them to exercise self-control throughout the previous month of fasting.

What happens?

- Preparations: cards sent, houses decorated, food bought, wearing new clothes, gifts and sweets
- Consume food before the Id prayer (usually dates or a sweet dish) / the prophet consumed dates before Id prayer.
- Give **zakat ul fitr** before the ld prayer (£2-£5 approximately) this was encouraged by the prophet Muhammad.
- Attend the Eid prayer in the mosque or in an open area (park)
- Exchange gifts and welcome family and friends to share in a special meal to signify the end of Ramadan.
- Forgive friends and relatives who have fallen out with each other
- Visit the cemetery to remember loved ones.

Eid ul-Adha - it remembers the prophet <u>Ibrahim's</u> willingness to <u>sacrifice</u> his son Ishmael when ordered to by <u>Allah</u>. Allah appeared to Ibrahim in a dream and asked him to sacrifice his son Ishmael as an act of obedience. The <u>Devil</u> tempted Ibrahim by saying he should disobey Allah and spare his son. As Ibrahim was about to kill his son, Allah stopped him and gave him a **lamb** to sacrifice in his place. This shows Ibrahim's obedience to God. By taking part in this festival, Muslims show that they too are prepared to sacrifice their lives for God.

X1-Hinduism - Festivals

There are 10 major festivals in Hinduism , **Diwali** is the biggest and it last 5 days.

Diwali is known as the festival of lights. It links to the famous story of Rama and Sita and remembers the victory of good over evil.

- The festival is celebrated by cleaning the home
- Hindus also have firework displays and light diva lamps in memory of Rama's heroic rescue of his kidnapped wife and queen, Sita.
- Hindus also worship <u>Lakshmi</u>, the goddess of wealth, in the hope that they will have a prosperous new year,

Holi the festival of colours

Hindus wear brightly coloured clothes and throw coloured powders over each other, which covers them from head to toe.

The festival lasts two days At Holi, Hindus remember the victory of **Prahlad** over the demon girl **Holika**.

The festival is a celebration of **good over evil** because Holika was burnt in a fire when she tried to kill Prahlad. The festival became known as Holi to remember these events.

X2 Buddhist Festivals

Wesak is the Buddhist festival that celebrates the birth of the Buddha. Wesak also remembers the three major events in the Buddha's life, which were his birth, his enlightenment and his death. It is also known as Buddha Day.

Wesak is celebrated by releasing paper lanterns. This symbolises the light to the path of enlightenment through overcoming the darkness of ignorance.

Buddhists may also release caged birds. This symbolises the Buddha's release from the cycle of samsara.







PSHE support links

Useful telephone numbers

- NSPCC (Childline) confidential helpline for children and young people: 0800 1111 (24 hrs)
- Family Lives: 0808 800 2222
- The Mix: 0800 8084994
- CAMHS CRISIS LINE 0300 3031320
- Avon/ Wiltshire Mental Health Service Crisis Line: 0800 9531919 (This is all day every day!)
- 24hr Domestic Violence Helpline: 0808 2000 247
- National sexual health helpline: 0300 123 7123
- YoungMinds: https://youngminds.org.uk, 0808 802 5544 (Weekdays 9.30am 4pm), Parent Email: parents@youngminds.org.uk

Me and my Identity

- http://www.mind.org.uk/information-support/guides-to-support-and services/children-and-young-people/#.Wt259pWG_IU
- http://www.unicef.org.uk/what-we-do/un-convention-child-rights
- http://www.equalityhumanrights.com/en

Peer Pressure and belonging

- http://youngpeople.nyas.net/
- http://thenayj.org.uk/

Online Safety

- http://www.childline.org.uk/info-advice/bullying-abuse-safety/online-mobile-safety/sexting
- ttp://www.childline.org.uk/info-advice/bullying-abuse-safety/online-mobile-safety/staying-safe-online/
- http://www.thinkuknow.co.uk/
- www.gov.uk/report-terrorism
- www.iwf.org.uk
- www.saferinternet.org.uk
- www.ceop.police.uk/safety-centre
- https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/online-abuse/
- https://www.gloucestershire.police.uk/advice/advice-and-information/

Stereotypes, prejudice, discrimination, Hate crimes,

- http://unicefstories.org/2016/10/20/breaking-gender-stereotypes-a-young-girl-reminds-women-and-girls-of-their-rights
- http://www.amnesty.org/en/latest/education/2016/03/three-education-activitiesfor-young-people-to-challenge-discrimination
- https://www.gov.uk/guidance/equality-act-2010-guidance
- http://www.equalityhumanrights.com/en/equality-act/protected-characteristics
- https://www.stonewall.org.uk/lgbt-britain-hate-crime-and-discrimination

Human rights, Social Justice and Social Inequality

- http://unicef.org.uk/what-we-do/un-convention-child-rights
- http://www.libertyhumanrights.org.uk/
- http://www.un.org/en/sections/issues-depth/human-rights
- http://www.equalityhumanrights.com/en/human-rights/what-are-human-rights
- https://ff.hrw.org/london
- http://www.gov.uk/guidance/equality-act-2010-guidance

Support for Bullying

- https://www.nspcc.org.uk/
- https://www.kidscape.org.uk/
- https://www.childline.org.uk/
- http://unicef.org.uk/what-we-do/un-convention-child-rights
- www.anti-bullyingalliance.org.uk
- · www.disrespectnobody.co.uk

Government structure, Law and the judiciary

- https://assets-learning.parliament.uk/uploads/2019/12/KS3-Booklet-Get-to-know-your-UK-Parliament.pdf
- https://www.parliament.uk/
- https://www.judiciary.uk/

PSHE support links

Healthy and Puberty

- http://www.nhs.uk/pages/home.aspx
- https://www.nhs.uk/live-well/
- http://www.talktofrank.com/
- www.healthforteens.co.uk/growing-up/puberty
- www.nhs.uk/conditions/ivf

LGBTQ+

- https://www.stonewall.org.uk/
- www.galop.org.uk
- https://www.childline.org.uk/info-advice/your-feelings/sexual-identity/sexual-orientation/

Bereavement, grief and Loss

- http://www.sueryder.org/how-we-can-help/someone-close-to-me-has-died/advice-and-support/supporting-young-people-with-grief
- http://www.nhs.uk/conditions/stress-anxiety-depression/bereavement-and-young-people
- https://www.childbereavementuk.org/

First/Emergency Aid

- www.redcross.org.uk
- www.get-licensed.co.uk
- · www.emergency-live.com

Gambling and Finances

- www.begambleaware.org/NGTS.html
- https://www.moneyadviceservice.org.uk/en/articles/how-to-help-teenagers-manage-their-money
- www.citizensadvice.org.uk
- https://natwest.mymoneysense.com

Support for mental health and coping strategies and managing stress and anxiety

- http://www.youngminds.org.uk/
- www.kooth.com
- https://www.otrbristol.org.uk
- http://www.mentalhealth.org.uk/your-mental-health/getting-help
- http://www.nhs.uk/conditions/stress-anxiety-depression/reduce-stress
- https://www.gov.uk/government/publications/children-and-young-peoples-mentalhealth-peer-support
- http://www.youngpeopleshealth.org.uk/wp-content/uploads/2016/03/resilienceresource-15-march-version.pdf
- www.themix.org.uk
- http://www.mind.org.uk/
- http://www.mentalhealth.org.uk/
- http://www.centreformentalhealth.org.uk/
- http://www.childrenssociety.org.uk/
- www.getselfhelp.co.uk

PSHE support links

Support for unhealthy/abusive relationships:

Child Sexual Exploitation, Child Criminal Exploitation, Coercive control, Grooming, Radicalisation, and FGM

- https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/grooming/
- https://www.nspcc.org.uk/what-you-can-do/report-abuse/dedicatedhelplines/protecting-children-from-radicalisation/
- https://www.childrenssociety.org.uk/what-we-do/our-work/help-us-stop-child-sexualexploitation-cse
- https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/child-sexual-abuse
- http://www.womensaid.org.uk/information-support/what-is-domestic-abuse/coercivecontrol
- https://www.nspcc.org.uk/preventing-abuse/keeping-children-safe/staying-safe-away-from-home/gangs-young-people/
- https://karmanirvana.org.uk/
- www.nationaldomesticbiolencehelpline.org.uk
- http://www.actionaid.org.uk/about-us/what-we-do/violence-against-women-and-girls vawg
- www.childline.org.uk/info-advice/bullying-abuse-safety/abuse-safety/femalecircumcision-fgm-cutting

Consent, law and sexual Health

- http://www.consentiseverything.com/
- https://www.healthforteens.co.uk/sexual-health
- https://www.nhs.uk/live-well/sexual-health/where-can-i-get-sexual-health-advice-now/
- www.nhs.uk/live-well/sexual-health
- https://www.nhs.uk/conditions/sexually-transmitted-infections-stis
- http://www.eufic.org/en/healthy-living/article/tips-for-a-healthier-you-video
- http://www.nspcc.org.uk/
- www.nhs/conditions/contraception
- https://www.thinkuknow.co.uk/
- https://lawstuff.org.uk/at-what-age-can-i/
- https://parentzone.org.uk/article/how-old-does-your-child-have-be
- https://fullfact.org/law/legal-age-limits
- https://www.brook.org.uk/
- https://www.nhs.uk/live-well/sexual-health/are-you-ready-forsex/https://www.childline.org.uk/info-advice/friends-relationships-sex/sexrelationships/healthy-unhealthy-relationships/
- https://www.familylives.org.uk/advice/teenagers/sex/healthy-relationships/
- https://www.relate.org.uk/relationship-help/help-young-adults

Drugs, substances and the law

www.talktofrank.com

http://www.nhs.uk/pages/home.aspx

https://www.nhs.uk/live-well/

http://www.drinkaware.co.uk/

http://www.askthe.police.uk/content/@1.htm