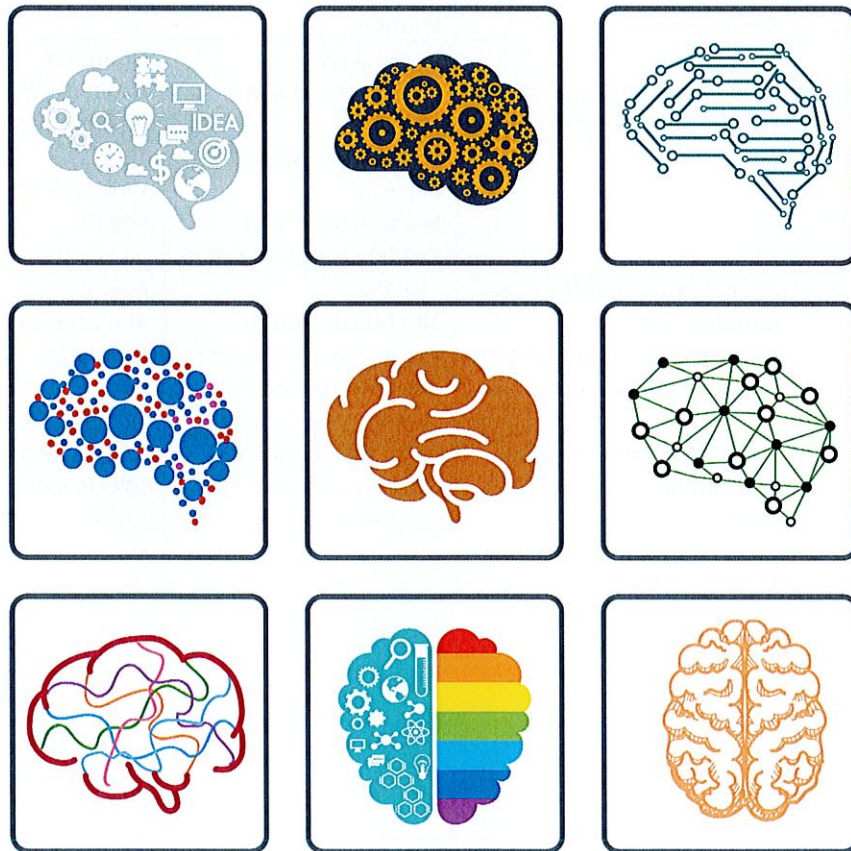


Waseley Hills High School

Y7 EBACC ASSESSMENT PREPARATION

REVISION MATERIALS



Our Topic Lists			
Subject	YR7	YR8	YR9
English	Reading - fiction text Writing - creative writing	Reading - nonfiction text Writing - transactional writing	Reading - fiction text Writing - transactional writing
Maths	Algebraic Thinking Place, Value & Proportion Applications of number Directed number. Fractional Thinking Lines & Angles Reasoning with number	Proportional Reasoning Representations Algebraic techniques Developing number Developing Geometry Reasoning with data	Reasoning with algebra Constructing in 2 & 3 dimensions Reasoning with number Reasoning with geometry Reasoning with proportion Statistical Representations
Science	Introduction to science Interdependence Cells Acids and alkalis Energy	Electricity Metals and non-metals Separating mixtures Elements and the Periodic Table Breathing Work and energy Sound and light	Photosynthesis Earth's resources Speed and motion Magnets Energy changes
Spanish	Descriptions of people and places Having, Doing, Being & Going Question words Family Sports	Having & Being Present & Past Tenses Jobs & School Negatives Partitive Article Comparisons Routines	Past & Future Tenses Injuries Holidays, Routines & Food Identity & Nationality Imperfect Tense School
	Phonics Listening phonics gap-fill Listening/Writing dictation	Vocabulary Written translation English-TL Written translation TL-English Reading true/false Reading comprehension	Grammar Listening/Writing dictation Written translation English-TL Written translation TL-English
History	Anglo-Saxons and Normans Medieval Life Local History (Dependent on the topic taught in school)	Civil War The British Empire World War One/World War Two (Either of these)	Migration Riots and Unrest Holocaust
Geography	Place knowledge: Physical and human Local place Urban regeneration / China Raging rivers	India: Development Extreme weather Ecosystems	Coasts (Global/UK) Risky Places Russia

What are knowledge organisers?

Knowledge organisers contain essential, fundamental knowledge that you **MUST** know in order to be successful in Year 7 and subsequent years. Knowledge organisers will help you to recap, revisit and revise what you have learnt in lessons, enabling you to move the knowledge from your short-term memory to your long-term memory.

Knowledge organisers are also designed to help you learn a wide range of knowledge which in turn will mean you are more prepared for your lessons as well as your GCSEs that you will sit in the future.

How can I access the knowledge organisers?

Each subject area has created a knowledge organiser for the topics you will cover over the year. This booklet contains the knowledge organisers for English, Geography, History, Maths, RPE, Science and Spanish. It is important that you keep all of your knowledge organisers somewhere safe, because the knowledge required in Year 7 will also be needed in Years 8-11.

How will the knowledge organisers be used?

You will use your knowledge organisers at times in class, but you will mainly use them to support you with your homework. Most of the time, your teachers will give you specific tasks focused on using your knowledge organiser for your homework, but sometimes they may allow you to pick a way of using them to help revise for a topic.

Knowledge Organisers are very useful in developing your confidence at home with topics you have covered in class. Your teacher will test your understanding of the key knowledge through the Do Now activity in your lessons.

Knowledge Organiser

English

KNOWLEDGE ORGANISER

End of Year exams – Year 7

READING SKILLS - FICTION

Key Skills	
Knowledge:	
Fiction: literature in the form of prose that describes imaginary events and people.	Retrieval: finding relevant evidence from the text.
Narrative voice: the perspective the story is told from. Stories can be told from different perspectives for a specific effect	Inference: drawing conclusions or making judgments based on hints or clues within a text.
Characterisation: the way authors create characters and make them believable through how they look, what they say, think, want and do.	Analysis: zooming in on evidence to consider the literal, suggested and symbolic meanings in detail. <i>Analytical verbs include: This implies/ suggests/ conveys/ emphasises/ reveals/ symbolises...</i>
Setting: The time, location, and environment in which a narrative takes place.	Evaluation: the process of judging or calculating the quality, importance, amount, or value of something. <i>I partially/wholly agree/disagree..., to an extent...</i>
Tropes and archetypes: A type of character commonly seen in stories, e.g the bad guy, the damsel in distress etc. Tropes are more basic, whereas archetypes reveal something deeper about human nature.	Writer's intent: A writer's purpose is why they write a specific text. They may write to inform, entertain, persuade, or express ideas and feelings about a topic or event. <i>The writer highlights/praises/warns/criticises/argues...</i>
Writer's Methods: The ways in which an author tells their story, including sophisticated language, a sense of purpose and audience, varied sentence structures and a consideration of narrative perspective.	Topic sentences: A topic sentence is the WHAT part of our analytical paragraphs- it outlines what we are going to talk about in that paragraph. A successful topic sentence will: ➢ Be short and concise, linking to the key word in the question. ➢ Have one clear focus to explore and a where in the play. ➢ Include a writer's method.

WHAT?

HOW?

WHY?

- WHAT: Topic sentence**
- Links to the focus of the question, where in the text and the method the writer is using to create meaning.
- HOW: Evidence**
- 2-3 short, snappy quotations, embedded in a sentence
- WHY: Analysis**
- zoom in at word level
 - explain literal, infer suggested meanings and images created, then what this might represent.
- Why: Evaluation of effect**
- What might this moment make the reader think/feel/imagine?
 - What is the writer trying to warn/praise/criticise/highlight to the audience?

Structuring my paragraphs in English

KNOWLEDGE ORGANISER

WRITING SKILLS - CREATIVE	
Creative Writing: Writing, usually fiction, which shows imagination. Creative writing can be entirely unique, or it can be inspired by something.	Show not tell: Where an author tells a story through actions, senses, thoughts etc instead of directly telling the reader what is happening. E.g. 'Jane was kind' (tell) to 'Jane shared her sweets with everyone' (show).
Narrative voice: the perspective the story is told from. Stories can be told from different perspectives for a specific effect	Figurative language: language that contains figures of speech. This includes: Metaphor: one thing is described as though it is something else. Simile: on this is described as though it is as or like something else Personification: an object is given human qualities
First person narrative: A narrator who is a character in the story and tells the tale from their point of view.	Simile: on this is described as though it is as or like something else Personification: an object is given human qualities
Third person narrative: Point of view in which the narrator is outside of the story - an observer.	Foreshadowing: a hint or clue of what will happen later in the text.
Symbolism: is the use of symbols (images, sometimes with reference to certain objects) to represent ideas or qualities. For example, roses are typically seen as a symbol of love.	Sensory language: using words or phrases to appeal to a reader's senses (sight, smell, hearing, taste, touch).
How could I structure my narrative?	
Setting	What details could you describe? Remember to use 'big' images: sky, weather, buildings And 'small' details: flowers, shadows. Use sensory language to immerse your reader
Character	Who are you? What are your thoughts and feelings? Why are you there? What is your perspective? Try to think outside the box. Remember to show and not tell.
Flashback	Describe a flashback that your character has. What brings on the flashback? Why is it significant? What do we learn from the flashback? How are you brought back to the present?
Change	Go back to your setting, the here and now, but with a change or twist. Has someone now done something? Is there something missing? What is different?

I **ing** - Smiling sweetly, she turned and walked away.

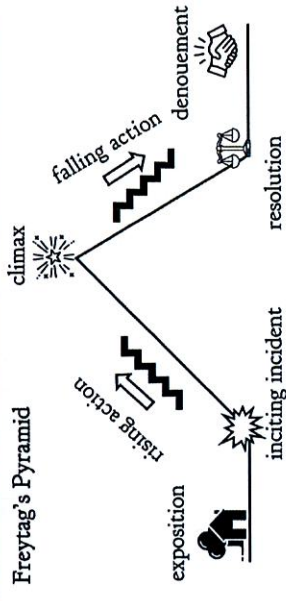
S **simile** - Like the chocolates in the box, she vanished quickly.

P **preposition** - On top of the hill, the wolf stood and watched.

A **adverb** - Hurriedly, he scratched the tickle.

C **conjunction** - When he found his bone, the dog settled at the bottom of the stairs.

E **ed** - Pleased with what he had done, he stood back and admired his work.



Punctuation

Period ● My name's Beth and I was 18 in July.	Question Mark ? Where are you from?	Quotation Marks " " " " "I work in Italy", said Jimmy.	Exclamation Mark ! Sit down!
Comma , She is your sister, isn't she?	Hyphen - My eight-year-old boy loves reading.	Apostrophe ' They're going to the movies tonight.	Semicolon ; My daughter is a teacher; my son is a doctor.
Colon : You have two choices: finish the work today or lose the contract.	Parentheses () The two brothers (Richard and Sean) were learning how to play guitar.		

Knowledge Organiser

Geography

Remember, your primary source of revision should be your book!

Year 7 revision keyword list:

Term 1: The Geography Detective

Keyword	Definition
Physical	Natural geography, would happen without humans
Human	Any geography related to people
Environmental	Impacts on the natural world, pollution and climate change
Grid reference	A point found on a map
OS Map	Ordnance Survey map
GIS	Geographic Information Systems – used to layer up information to enable decisions to be made
Climate change	The long term difference in the temperature over at least 30 years (but often thousands)
Greenhouse effect	The process of gases in the atmosphere trapping some of the sun's energy.
Global heating (warming)	When the planet is increasing in temperature too quickly.
Urban	A built up area like a town or city
Rural	The countryside
CBD	Central Business District (city centre)
Inner city	The areas outside of the city centre.
Suburbs	The areas between the inner city and rural-urban fringe
Rural-urban fringe	The edge of the city, with countryside on one side and built up on the other. Think Waseley!
Urbanisation	Cities growing bigger.
Development	How well countries are doing in terms of economy, health and education.
HIC	High Income Country
LIC	Low Income Country
NEE	Newly Emerging Economy
Life expectancy	Average age of death in a place
GNI per capita	Gross National Income per person – how much money people have on average per year
Demographic transition model	How countries change over time to become more developed through changing birth and death rates.

Term 2: China.

Keyword	Definition
Physical	Natural geography, would happen without humans
Political System	How a country is run
Government	The group of people that run a country
Political Party	A "team" of people that compete to win an election and become the government
Election	An event where people of a country vote to choose which political party they want to be the government

One-party system	China's political system. One party runs the country and cannot be voted out.
Democracy	UK's political system. Everybody can vote at elections to decide their government. This means the government has to make mostly popular decisions to remain in power.
One-child policy	The rule in China from 1980-2016 that put restrictions on how many children families could have
Famine	A lack of food
Earthquake	When two tectonic plates collide or rub together and produce a powerful shaking of the ground
Prediction	Being able to know when something will happen
Rebar	A type of steel used in buildings to make them greenfield resistant
NEE	Newly Emerging Economy
Air Pollution	Chemicals and particles in the air that negatively affect the health of animals, humans and plants
Inequality	When there is an unfair difference in the wealth of people in a country
Gender Imbalance	An uneven number of men or women in a country

Term 3: Raging Rivers

Keyword	Definition
Hydrological cycle	The hydrological cycle describes how water is transported through a drainage basin. It is an open system with inputs, outputs, stores and transfers. Precipitation is water falling from the sky, interception is when trees act as a barrier and absorb water, infiltration is water soaking through soil, percolation is water dripping through rock, surface run-off is water flowing over land, groundwater flow is water flowing through rock, evaporation is water heating up and travelling back to the atmosphere, and transpiration is water leaving trees through leaves.
Drainage basin	A drainage basin is an area surrounded by high land, known as a watershed. Water travels downhill from the highest point before reaching the end of the drainage basin, usually in the sea. A small river that joins the main river is called a tributary, a confluence is when two rivers meet. The source is the start of the river and the mouth is the end of the river. A channel is where the river flows and a valley is a low area of land between hills and mountains.
Long and cross profile	The river has the upper course, which has steep sided valleys and is often rocky and without many trees. The middle course becomes flatter, with the river becoming wider and extending out towards a flood plain. The lower course is much flatter, with a wider river and is more likely to be used for settlements.
Erosion	Erosion is the wearing away and taking away of material. In a river hydraulic action is the force of the water, abrasion is bedload banging into the banks and scraping along the bed. Solution is the chemical action in the water and attrition is bedload knocking into one another. Vertical erosion moves downwards and lateral erosion is side-to-side.
Waterfalls	Waterfalls are formed when a hard rock cap lies over soft rock in the course of a river. The river erodes the soft rock at a faster rate than the hard rock, meaning there is a gap underneath the hard rock. The river then flows over the hard rock cap, forming a plunge pool by the backwards erosion into the hillside. This is then a waterfall. The process happens over time.

Knowledge Organiser

History



Edward died Jan 1066



Harold becomes King Jan 1066



William becomes King Sept. 1066

Year 7 Autumn Term 1: 1066 The Norman Conquest

1069 Harrying of the North
1086 Domesday Book & over a 100 castles have been built by William



1087 William Dies

c.1100

Battle of Stamford Bridge 25th September 1066
Harold expected the Normans to arrive first so his army waited on the South coast. To his surprise Hadrada arrived first. Harold had to send his men 200 miles North to York where Hadrada had taken over.

- King Harold's men travelled 40 miles a day for 5 days and were able to catch the Vikings by surprise at a place called Stamford Bridge
- The Vikings had left armour on their ship. A Viking **Bezeker** held the Saxons on a small bridge as the Vikings tried to ready themselves for battle. He is said to have killed 40 before being killed himself.
- Hadrada's men fought hard but without their armour many were cut down easily, eventually Hadrada was killed with an arrow to the neck.
- Tostig who supported Hadrada rather than his brother was killed and the Vikings surrendered. **Only 24 ships** were needed to carry the Vikings back to Norway.
- King Harold had no time to celebrate as he receives news that William of Normandy has arrived in the South of England.

England in 1065
The English were known as the **Anglo Saxons**. The Kings of England used powerful Lords called **Earls** to run parts of the country for them.
Population was about 1.5 million
Most people were very poor, England's wealth mainly came from wheat wool and metals.
England was a Christian country.
Edward the Confessor was King of England and he was known for being very religious.

Harold Godwinson - English Strengths

- ✓ the most powerful earl in England.
- ✓ supported by the Witan
- ✓ related to Edward the Confessor through marriage.

Weaknesses

- His family argued a lot with Edward and were even banished once.
- was not related by blood to Edward.
- had made a promise to William of Normandy that William could be the next king.

When Godwinson became king, this angered the other two greatly who began plans to invade England

Who will be King?
In January 1066 Edward the Confessor died with no children meaning no clear heir to the throne. There 3 main contenders people who believed they should be the next king:

- Harold Hadrada - Viking Strengths
- ✓ Already King of Norway so experienced.
- ✓ Vikings had ruled England before Edward the Confessor.
- Weaknesses
- No real claim to the throne other than being powerful

William of Normandy - French-Norman Strengths

- ✓ promised the throne by Edward in 1051.
- ✓ Godwinson said William could be the next King.
- ✓ Had experience from ruling Normandy.

Weaknesses

- was not English
- had a reputation for being cruel

How did William keep control?

Crushed Rebellions
As a foreign king he was not very popular amongst the English. William dealt very harshly with rebels. When William made a friend an Earl in the North of England he was killed along with 900 of his men. William was furious and marched his army North and they set about burning villages, destroying crops and murdering the locals. This event was called the **Harrying of the North**.

Built castles
To protect his men from rebellions and to show his power. The design were known as **motte and bailey** they were quick and easy to build

Domesday Book
William sent officials all across England to all towns and villages. Their job was to see how rich each town was. They did this by asking a series of questions such as "how many cows? How much woodland is there here? How many mills are there? From this they could work out how rich a place was and how much they could be taxed. The taxes then went to William. Soldiers accompanied the officials and would kill people who did not tell the truth

The Feudal System
A system for sharing the land. William gave land to his earls/barons to keep them happy, they then gave parts to their Knights and they lent land to the Villains (peasants) who grew crops. The crops went to the knights who paid the barons with the money it made and fighting for the baron when needed. The barons provided knights for the king and paid for the land with the money they made from the crops.

Battle of Hastings 14th October 1066

- Harold's men were in a defensive position on top of a hill. They were tired from the journey South and were in a shield wall formation.
- William's men were at the bottom of the hill, William had many archers who fired their arrows.
- The shield wall held. William then sent his mounted knights they were unable to break the shield wall. A rumour began to circulate that William had been killed.
- William took of his helmet to show his men he was still alive, this gave the Normans fresh hope
- William's men were ordered to run down the hill as if retreating
- The English broke their shield wall and chased after them thinking they had won
- The knights on horseback cut the Saxons to pieces now they were not in a shield wall
- William saw his chance to win the battle his archers kept firing and some say **King Harold was hit with an arrow to the eye others that he was cut to pieces.**
- William was the new King of England- he needed a new title and became known as **William the Conqueror**

Armies
William had foot soldiers - metre long swords and kite shaped shields, lots of archers, knights on horseback (mounted knights).
King Harold had Housecarls - professional soldiers with battle axes and chainmail. He also had the Fyrd - a force made up of inexperienced soldiers some with javelins and swords but some with only farm tools.

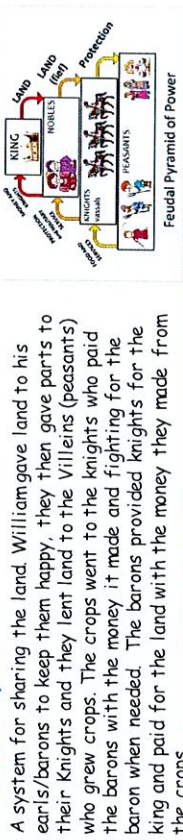
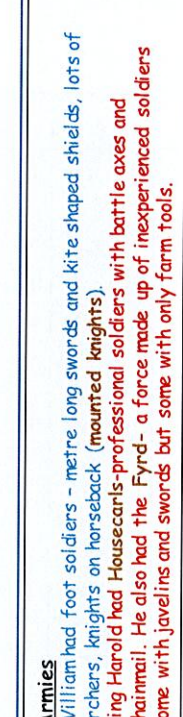
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Word Rich	Definition
BC	Before Christ, used to define dates before the birth of Jesus.
AD	Anno Domini meaning in the year of our Lord (dates after the birth of Jesus)
Century	A period of 100 years
Bias	To be one-sided
Primary source	A source created at the time we are studying.
Secondary source	A source created after the time we are studying.
Chronology	Putting dates into the correct time order.
Heir	The person who is next in line to be king or queen.
Successor	The person that follows on from someone in power.
Confessor	A very religious person (who might even hear people's confessions)
Invasion	Coming into another country, normally with an army, with the intention of taking over.
Rebellion	A violent protest.
Monarch	A king or queen.
Claim	To have a right to something.
Witan	The leading advisors and nobles to help the king rule the country.
Conqueror	A person who takes over a place or person, often by invasion.

Fold and glue here to place in book

Year 7, Autumn Term 2: Medieval Times; The development of castles

1066
Battle of Hastings



1066
Motte & Bailey Castles

William was a foreign invader who needed to gain control of England as quickly as possible. Between **1067 and 1071** William built many castles across England and he brought many Normans over to England to live in them.

The first castles: **Motte & Bailey**
Quick to build (7 to 14 days), made from local resources of wood and earth and gave soldiers a base to control the local area.

Motte - an earth mound



Bailey- courtyard

These castles could be easily destroyed by fire/weather.

The development of castles.

Due to the weakness of M&B castles so some lords started to build their castles in stone.

Keep- the tower and housed the most important rooms

Moat- a wide ditch around the outside of the castle
Drawbridge- to cross the moat

Curtain wall -outside wall

Battlements- the top of the wall with regular spaced square gaps to fire from

Barbican- entrance to the castle



1080s
Square keep castles

Attacking a castle

Siege- to surround a castle to force them to surrender

Battering ram- a tree trunk used to batter a wall or door



Trebuchet- a large catapult to large stones/dead animals into the castle



Mangonel- a smaller catapult to throw stones



Siege tower- a large wooden tower used to climb over the walls

Mining- digging a tunnel under the wall



In **1348** the Black Death arrived in Britain. It would end up killing 1 in every 3 people.

Bubonic plague- caught by being bitten by a flea from the black rat. Victims would have a fever, large buboes would grow in their armpits, groin and neck, develop a rash and 7/10 would die



1348
The Black Death

Pneumonic Plague- caught by breathing in infected air. It attacked the lungs causing victims to cough up blood. Pneumonic plague was fatal.

What did people think caused it?

Punishment from God

Jews



Bad air

Over-eating and hot baths opened pores to let in the bad air



Position of the planets

How did people try to cure the plague?

Drink mercury and vinegar

Kill all cats and dogs

Pop your buboes

Shave a chicken's bottom and strap it to your buboe.

Flagellants were people who believed in whipping themselves hoping God would forgive them and not punish them with the plague.

How religious were people?

Almost everyone believed in God and were

Christians. The head of the Church was the **Pope** who lived in Rome. Religion was used to explain everything. People believed in heaven and hell and the importance of living a good life. When things were bad for example a bad harvest the people believed it was a punishment for sins that had been committed.

Word Rich Vocabulary	Definition
Feudal	A way of organising society in medieval Europe. King lent land to nobles in return for loyalty. Nobles lent land to knights in exchange for military service. Knights divided land among peasants to farm it who would donate a share of the crops.
Foreign	Someone/something from a different country
Domesday Book	Created by William the Conqueror to assess the wealth of England. Contained details about all people, property, possessions in the country.
Palisade	A fence of wooden stakes stuck into the ground. Often seen around M&B castles.
Portcullis	A strong, heavy metal gate used to protect a castle entrance.
Pope	The head of the global Catholic religion.
Monk	A man who is part of a religious order that dedicate their lives to God.
Nun	A woman who is part of a religious order that dedicate their lives to God.
Contagious	A disease that is able to spread from person to person, usually through close contact.
Symptom	A sign that you have an illness e.g. a snotty nose is a symptom of the common cold.
Bubo	A swelling in the neck/armpit/groin full of bacteria.

Year 7, Spring Term 1: The Tudors, Henry VIII and the Reformation

1066
Battle of Hastings

1485
Henry VII becomes King

1509
Henry VIII becomes King

1558
Elizabeth becomes Queen

The Tudor Family Tree:

The Tudor reign started with Henry VII after he won the Battle of Bosworth in 1485 and married Elizabeth of York. Both of their families had previously been at war.

Henry VII and Elizabeth had 4 children: Arthur, Henry VIII, Margaret and Mary.

Arthur being the oldest male child was intended to be King and he married Catherine of Aragon in 1501 but died in 1502. Henry was raised to be Archbishop of Canterbury until he became the heir to the Tudor throne.

What was Henry like?:

- Tall, athletic, red haired and had famous legs
- Deeply religious (Catholic) as he was raised to have a role in the Church
- Was friends with intellectuals such as Thomas More
- Wrote books and pamphlets
- Well educated: spoke Latin, French and Spanish
- Enjoyed hunting, jousting, dancing, hawking, writing poetry and music
- Was given the title 'Defender of the Faith' by the Pope in 1521. This was a great honour and showed his importance and loyalty to the Pope. Catherine of Aragon also carried this title.

Henry's Problems:

- Arthur died in 1502 and this meant Henry suddenly became heir to the throne, a role he was unprepared for.
- Henry VIII married Catherine of Aragon. They were in love but after multiple stillborn children or miscarriages Henry began to worry that God was punishing him for marrying his brother's widow by not giving him a living son. They had 1 surviving child: Mary I.

3. Henry had started courting Anne Boleyn and wanted to marry her because she promised him a male heir. However, as a Catholic he was not allowed a divorce from his wife.

4. Pope Clement VII was very vocal about Henry being a Catholic representative (defender of the faith) so he was not allowed a divorce.

5. Charles V was Holy Roman Emperor and Catherine of Aragon's nephew and threatened to invade the Pope's land if he gave Henry a divorce.

6. Henry was in a lot of debt so breaking with the Rome would mean Henry had control over the churches land and goods, which he could sell to pay off his debts.

7. More people were starting to feel that the Catholic Church were starting to abuse their power and not being as religious as they ought to be.

Wife for Life

Henry VIII's Wives:

1.	Catherine of Aragon	2.	Anne Boleyn	3.	Jane Seymour
1509-1533		1533-1536		1536-1537	
Mary I		Elizabeth I		Edward VI	
Katherine Parr		Catherine Howard		Anne of Cleves	
1543-1547		1540-1542		1540	
6	6	5	5	4	4
1543-1547	1543-1547	1540-1542	1540-1542	1540	1540
(6 months)	(6 months)	(6 months)	(6 months)	(6 months)	(6 months)

The Church:

- When Henry became King in 1509 England was a Catholic country and had been so for hundreds of years.
- As the Catholic Church wouldn't grant Henry a divorce from Catherine of Aragon he started to look towards Protestantism.

Catholicism and Protestantism are BOTH forms of Christianity, they just worship God in DIFFERENT ways.

Catholic	Protestant
- Bright and colourful churches	- Plain churches so that you won't be distracted when praying
- Stained glass windows	- Priests are not special and wear plain robes
- Lots of statues	- Priests can marry
- Priests are special and wear bright, colourful robes	- Bible and services are in English
- Priests must be celibate	- Believe that the bread and wine transform into the body and blood of Christ
- Bible and services are in Latin	- You can buy an indulgence
- Believe that the bread and wine transform into the body and blood of Christ	- Believe in purgatory
- Wine are symbolic only	- The Pope is the Head of the Church
- All churches have the royal coat of arms displayed	- Supreme Governor of the Church
- The King/Queen is the Supreme Governor of the Church	

Why did the Protestants protest?

Protestants got their name because they protested about the Catholic church, led by Martin Luther:

- They felt the Catholic church was too rich because of the land that they owned and the tithes (10%) they collected.
- Some felt that the monks lived in luxury whilst the poor suffered.
- Priests weren't always following their Christian vows to be celibate, not drink, not spread confessional gossip, gamble etc.
- A lot of people could not speak Latin so found it hard to connect to God during the services.
- A lot of people could not afford indulgences and felt like they were being punished for being poor.

Knowledge organiser: How did the Tudors change the monarchy of England?

Overview. The Tudor monarchy is one of the best known in history, filled with historical heavyweights such Henry VIII and Elizabeth I.

Henry VIII and his obsession with gaining a male heir led to a drastic change in England's religious beliefs. The Reformation changed both the monarchy and the country.

The daughter of Henry VIII would also change England forever. Queen Elizabeth I is one of the most influential and famous monarchs. Her reign saw her deal with religious divides, plots and rebellions and poverty within the country.

Historical Skills and Concepts:

Chronology – The events of the Spanish Armada

Change and continuity– The role of the Church and religion during the Tudor period

Cause and Consequence – The cause and consequence of the Reformation

Significance – The significance of Elizabeth's reign

Interpretation – Differing interpretations of Mary Tudor

Sources

▼ **SOURCE** Part of Elizabeth's speech to her soldiers at Tilbury, Essex, on 9 August 1588. By this point the Armada was on its way home but the message that the threat was over was only just getting through and the troops were still ready for action.

I am come amongst you, as you see, at this time, not for my recreation, but being resolved, in the midst and heat of the battle, to live or die amongst you all, to lay down my life for my God and for my kingdom and for my people, my honour, and my blood, even in the dust. I know I have the body of a weak and feeble woman, but I have the heart and stomach of a king, and a king of England too, and think foul scorn that Parma or Spain, or any prince of Europe should dare to invade the borders of my realm: the which, rather than any dishonour shall grow by me, I myself will take up arms, I myself will be your general, judge, and rewarder of every one of your virtues in the field.

KEY WORDS

- **Reformation**
- **Succession**
- **Catholic**
- **Protestant**
- **Extreme**
- **Marriage Contest**
- **The Middle Way**
- **Puritans**
- **Heresy**
- **Rebellions**
- **Plot**

Exam style questions:

Write an account of the Spanish Armada

How useful is Source C to historians studying the consequences of the defeat of the Spanish?

Explain what was important about the reformation

Was religion the main factor for the changing role of the monarchy during the Tudor period?

Compare the reign of Henry VIII to Elizabeth I

What problems did Henry VIII have and how did he solve them?

When Henry became King in 1509, he inherited all of his father's wealth. He was power hungry and greedy. However he is most infamous for his marriages.

Henry first married Catherine of Aragon and had one daughter. Henry though was not happy that he could not have a son with Catherine; he needed a male heir. The King decided that he must marry again but there was one



English Reformation

Henry travelled to see the Pope to ask him to grant a divorce however the Pope refused. Henry was already desperate for more power and did not want to share authority with the Catholic Church. Henry then made a bold choice; he decided to break away from Catholicism.

Protestants helped King Henry with this split however Henry never became a Protestant himself.

Protestantism grew quickly under Henry's reign which would eventually cause problems for his children during their time on the throne.



Rising prices
Prices normally stayed the same every year, but they continued to rise under Henry. People blamed his advisers.

Why were people unhappy about Henry's changes?

Changes to religion
Many people disliked the changes made to the Church. They wanted the monasteries back and the Pope as head of the Church.



Landowners lost influence
Many landowners who had been advisers to the king fell out of favour after the divorce. They had been supporters of Catherine and felt pushed out. They blamed Cromwell.



Cromwell's power
Cromwell was seen as the creator of the new religious policies and he had helped Henry get a divorce from Catherine. Many of the landowners disliked him, as he was the son of a blacksmith and therefore seen as not good enough to advise the king.

Who was Mary Tudor?

Mary I was daughter of Henry VIII and half-sister to Queen Elizabeth, the future Queen. Mary took the throne in 1553 but did not lead a happy life

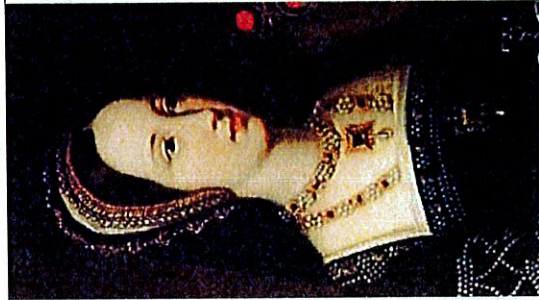
Facts about Mary Tudor

Early Life

Mary was the daughter of Catherine of Aragon, Henry VIII's first wife however Henry forbade Mary from seeing her mother whilst the parents were divorcing. For a small period of time she was also removed from being in line for the throne.

Marriage and children

Mary was a 37 year old unmarried woman with no children when she became Queen. Her advisors quickly set her up to marry King Philip of Spain. Mary struggled to get pregnant and never produced an heir which caused her great pain.



Religion

Once Mary was in power, she worked to return the country to Catholicism and undoing the reforms her brother made. This caused great unrest in England and Mary burned nearly 300 Protestants at the stake for heresy. This earned her the nickname of Bloody Mary.

Ultimately, Mary did not succeed in making England Catholic. When Elizabeth I took the throne after Mary died, the country was taken back to Protestantism.

Military

Mary is remembered for losing the last of England's territory in France. The French captured Calais, the famous port town, in 1558 which was a huge loss for England however Mary did also achieve military successes

Does 'Bloody Mary' deserve her reputation?

Historical opinions differ on Queen Mary Tudor with some historians believing she was misunderstood and others that she deserved her title as 'Bloody Mary'. Which interpretation do you find most convincing and why?

Misunderstood

Mary's life was troubled from the start. Her father's relationship with her mother and step-mothers was complicated and she was kept away from her mother for a number of years.

Becoming Queen was also difficult for Mary as she was the first ever female ruler; the male nobles felt extremely uneasy about a woman being in charge. Elizabeth I is by far the more famous Queen however many historians believed that Mary's reign 'changed the rules of the game' which allowed Elizabeth to become successful.

Mary was actually successful in her military pursuits in both France and Spain however people remember her losses. During her reign Mary faced a number of rebellions however Mary's strength, intelligence and popularity allowed her to resist being overthrown.

Bloody Mary

One of Mary's first acts as Queen was to reverse the Reformation and to stop the Protestant religion. Hundreds of people of all ages were burned at the stake for being Protestant. The Archbishop of Canterbury was also a victim of Mary. The Archbishop had lost favour with Mary after he declared the marriage between her mother and father unlawful. He also promoted Protestantism.

Losing the last of England's French territory was a huge blow to the power of the nation. Calais was known as 'the brightest jewel in the English Crown' and Mary's inexperience lost that jewel.

Mary's marriage to King Philip caused a rebellion as many were worried that marriage to a foreign King would leave England open to invasion.

How did England's religion change under Elizabeth?

When Elizabeth I took the throne in 1558 she faced a number of problems within England. One of the most significant issues was religion. Mary and Edward had between them left a scarred and religiously divided country which Elizabeth now had to unite. Elizabeth herself was a Protestant but she was also very practical and decided she needed a compromise.

The Middle Way

Elizabeth's compromise allowed priests to marry, services were held in English and she brought back the 'Book of Common Prayer'. However the Queen did not declare herself 'Head' of the Church but the 'governor' instead. Importantly, Elizabeth allowed Catholics to worship in their own way in private. All Church services were designed to allow any faith to join in and understand.

Catholic beliefs and practices

The Pope is the head of the Church and has final say on all religious matters.

The Bible and Church services should be in Latin. Priests should not marry. Churches should be decorated with paintings, statues and stained glass windows.

Priests are ordinary people's link with God. The bread and wine taken in services literally transforms into the body and blood of Jesus. This is called transubstantiation.

Protestant beliefs and practices

The monarch should be head of the Church and have final say on all religious matters.

Priests are ordinary people's link with God. God created the world and everything in it. Jesus was God's son. Those who challenge the true faith must admit their error or be punished by the true believers.

Ordinary people can connect to God through personal prayer.

When the bread and wine is taken in services it represents the body and blood of Jesus.

The Bible and church services should be in the language of ordinary people - English. Priests are allowed to marry. Churches should be kept plain and simple with little decoration.

Extreme threats

Puritans: This group were extreme Protestants and they would not compromise on their religion. Powerful Puritans began to meet to discuss how they could abolish Catholicism from the country. This was very dangerous for Elizabeth.

Catholics: Both nationally and internationally, the Catholic Church was not willing to share the stage with Protestants. The Pope excommunicated Elizabeth and extreme Catholics plotted against Elizabeth.

Why was Mary, Queen of Scots, seen as such a threat?

Mary, Queen of Scots was Queen Elizabeth's cousin and she had become Queen of Scotland at just eight days old. She married the heir to the throne of France so was briefly Queen of two countries. Mary also believed that she was the rightful heir to the English throne as well. Mary would become Elizabeth's biggest threat as she was also Catholic.

Elizabeth's closest advisors called immediately for Mary to be executed however Elizabeth thought this was not sensible. Instead she was arrested and kept as a prisoner although she was kept very well.

The plot to overthrow Elizabeth

In 1586 there was a final plot to overthrow Elizabeth. A rich Catholic named Andrew Babington planned to kill Elizabeth, rescue Mary and then place her on the throne; Mary agreed to be part of the plan. However the plot was found out by Elizabeth's chief spy and Mary was placed on trial for her life.

The trial

In October 1589, Mary was put on trial before a court of 36 noblemen. Mary fought hard at the trial and talked on behalf of herself. However despite her impressive defence she was found guilty and sentenced to death.

Queen Elizabeth was very upset at the thought of having to execute her own cousin. She was also worried that her actions may have terrible consequences and Scotland may seek revenge.

Mary was executed on the 8th February however the execution was not held publicly as it usually would. As a sign of respect, the execution was done in private.

▼ **INTERPRETING** *From History of the Life of Mary Queen of Scots, published in 1681, from the papers of a secretary of Sir Francis Walsingham:*

Then lay she down and stretched out her body and her neck upon the block. She cried: 'Lord, into thy hands', and so she received two strokes. The people cried: God save the queen, and so perish all papists and Her Majesty's enemies.

Why did the Spanish Armada fail?

Relationship between England and Spain

For many years, there had been tension between England and Spain. English soldiers had been helping Protestants in the Netherlands to fight the Spanish and English sailors had been stealing Spanish gold. King Philip was not happy with this so decided he was going to send a fleet (armada) of Spanish ships.

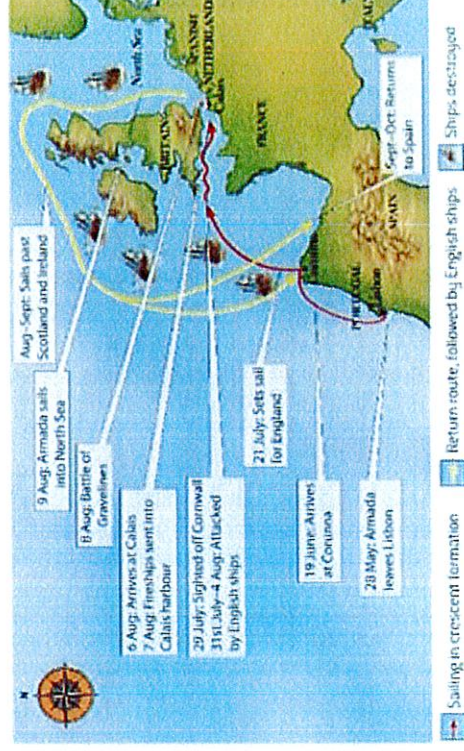
The events

The Spanish Armada had 151 ships and sailed towards England. The Spanish believed that there would be no English opposition as it was a surprise attack however the English launched a surprise attack led by Sir Francis Drake. The Spanish panicked and cut their anchors to get away quickly which broke the Spanish formation.

The English fired constantly and the Spanish were not prepared for a sea battle or the English chasing them. Eventually a storm finally destroyed the Spanish Armada and the Spanish were defeated.

Consequences

Philip was humiliated and Elizabeth was celebrated as a strong Queen. Elizabeth continued to build up the navy during her reign to ensure that England could always see off invaders. England had proved to the world that they could be a strong naval power and Elizabeth ensured that this was the case.



KNOWLEDGE ORGANISER

Title: Historical Skills and The Romans

Year: 7

AC: 1

Number	Code	Number	Code
1		20	
2		21	
3		22	
4		23	
5		24	
6		25	
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8		27	
9		27	
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Chronology: the time in order in which events happened
Cause: the reasons why something happened
Consequence: the effects of something happening
Significance: why something is important; how it affected peoples' lives
Interpretations: different ways of seeing the same event
Source work: using information as evidence to find out about the past

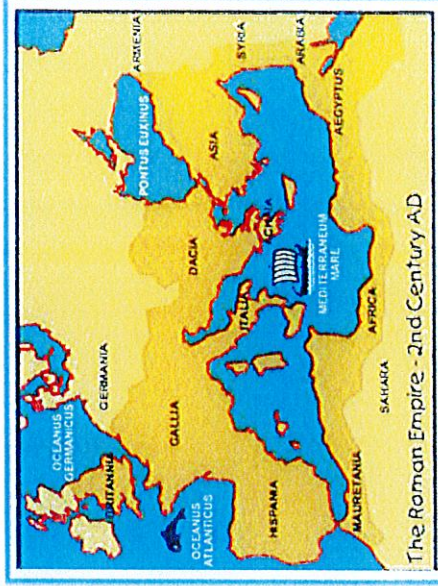
Decade – ten years
Century – one hundred years
Millennium – one thousand years
BC: Before Christ, the time before the year that Jesus was born
AD: Anno Domini, time since Jesus was born
Continuity: things stayed the same
Change: things were different
Infer: to work something out from a piece of evidence

Sources
 These are pieces of evidence that historians use to find out about the past
Primary source: something from the time (diary, newspaper, castle)
Secondary source: something produced after the time (school textbook, TV documentary, film)
 To decide if a source is *reliable*, we must decide if it is reliable:
Who made the source? **When** did they make it? **Why** did they make it? Who did they **make it for**?
 Does it **agree** with other sources?
 Do we **trust** the author (the person who made the source)?



Legend/Myth: A story based in fact but with fictional features.
Expansion: How a state or country grows by taking over other states or countries.
Invasion: Attacking another state or country and its people on their own land or country.
Legionary: A soldier from a Roman tribe (a citizen of Rome).
Auxiliary: A soldier from a non-Roman tribe (not a citizen of Rome)

753 BC: Legend says Rome began (Romulus and Remus)
265 BC: Roman Empire begins and starts to expand
55 BC: Julius Caesar attempted to invade Britain, but the weather meant he and the Romans had to leave.
54 BC - 43 AD: Caesar successfully invaded England but had to leave. Rome control England through trade.
43 - 50 AD: General Plautius invades England. London was founded and roads were built.





Waseley Hills
High School

Knowledge Organiser

Mathematics

Maths

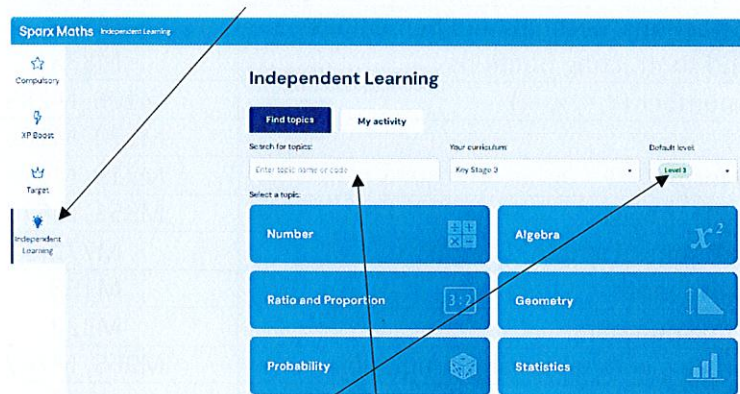
Pupils will be completing their revision for Maths on their homework platform, Sparx Maths. Every topic in the content list (below) for the Year 7 assessments contain at least one Sparx Maths Code to direct pupils to the correct questions and video. All pupils should know their login for Sparx Maths, if they have forgotten, they need to speak to their Maths teacher.

For the KS3 assessments, pupils will be completing two papers in Maths. One non-calculator and the other calculator.

For revision, they should be practicing questions with and without a calculator. Sparx Maths will state whether a calculator can be used.

A step-by-step tutorial on how to search the Sparx Maths Code can be seen below.

1. Login to Sparx Maths (need username and password)
2. Click on independent learning on the left tab.



3. Select your level of difficulty.
4. Type the code into the "search for topics" bar.
5. Click the topic you would like to revise and questions will appear.
6. Click on a question you would like to answer. To answer the question, you will need to click answer in the bottom right.

If you are unsure on how to work out a question, there is a button (picture below) at the bottom of the screen which allows you to watch a video.

 Watch video

Yr7	Sparx Maths Code
Multiplying and dividing by 10, 100, 1000, etc...	M113
Place value columns	M704, M522
Number lines	M763
Adding and subtracting whole numbers	M928, M347
Multiplying and dividing whole numbers	M187, M354
Rounding numbers	M111, M431
Bar models for operations	M952, M409, M637
Substitution	M417, M327
Writing sequences	M381, M241
Factors and multiples	M823
Highest Common Factor (HCF)	M698
Lowest Common Multiple (LCM)	M227
Order of operations (BIDMAS)	M521
Function machines	M175, M428
Converting fractions, decimals and percentages	M958, M264
Ordering fractions, decimals and percentages	M553
Adding and subtracting fractions	M835
Directed number (+, -, x, ÷)	M106, M288
Pie charts	M574, M165
Standard form	M719, M678
Angles in 2D shapes	M351, M679
Converting units of length	M772
Fractions of shapes	M158
Listing Prime numbers	M322
Solve problems with tables and timetables	M963, M747
Frequency trees	U280
Probability from a table	M938
Area of 2D shapes	M390, M610, M291
Venn Diagrams	M829

A useful website to revise from alongside Sparx Maths is CorbettMaths.

The link for CorbettMaths is www.corbettmaths/content

You will just need to find the topic and a video, worksheet and answers will be accessible to use.

Knowledge Organiser

R.P.E.

Day	Subject : RPE
Date	Period
Class YEAR 7	Code RPE7

TITLE – FAITH & BELIEF

Students will remember the variety of faiths and beliefs
Students will be able to demonstrate understanding of chosen faiths and beliefs
Key Concepts to check back for: faith, belief, experience, society

Knowledge	Codes	Key information to recall		
		Origin of scientology, paganism, humanism and rastafarianism		
Word	Definition	Synonym	Antonym	Etymology
FAITH	complete trust or confidence in someone or something	Trust, belief, confidence	Mistrust	In Greek, the root word from which we get 'faith, the noun is PISTIS, and 'believe', the verb is PISTUEO
BELIEF	an acceptance that something exists or is true, especially one without proof	Faith, trust, reliance	Disbelief, doubt	late 12c., <i>bileave</i> , "confidence reposed in a person or thing; faith in a religion," replacing Old English <i>geleafa</i> "belief, faith," from West Germanic <i>*ga-laubon</i> "to hold dear, esteem, trust"

Scientology



'A religious system based on the seeking of **self-knowledge and spiritual fulfilment** through graded courses of study and training'.

Paganism

Paganism covers a diverse community with some groups concentrating on specific traditions or practices such as ecology, witchcraft, Celtic traditions or certain gods.



Humanism

Humanists take responsibility for their actions and decisions and suggest we can lead good lives without recourse to gods, sacred texts and other beliefs



Rastafarianism

Red signifies the blood of those killed for the cause of the black community, throughout Jamaican history. **Green** represents Jamaica's vegetation and hope for the eradication of suppression. **Gold** symbolises the wealth of Ethiopia. **Black** signifies the colour of the Africans who initiated Rastafari.

THE SIX WORLD FAITHS & FAITH & BELIEFS

KEY KNOWLEDGE

CODE

3.1	SIKHISM	The Guru Granth Sahib – treated as the 11th Guru. Kept in it's own room, respected, held above the head, always kept above the height of humans (apart from reader)
3.2	SIKHISM	The 5 Ks - They are: kesh (unshorn hair and beard since the Sikh decided to keep it), kangha (a comb for the kesh, usually wooden), kara (a bracelet, usually made of iron or steel), kachera (an undergarment), and kirpan (a small curved sword or knife made of iron or steel)
3.3	SIKHISM	Why do Sikh celebrate Vaisakhi? Vaisakhi is one of the most important dates in the Sikh calendar. Vaisakhi is a spring festival which happens on the 13 or 14 April every year. It is a day to celebrate 1699 - the year when Sikhism was born as a collective faith.
3.4	RELIGION & FAITH	Why do people have beliefs? Why are beliefs important? What different things to people believe? Looking at diversity and the need to have something to believe in.
3.5	CELEBRITIES AND RELIGION	Why do celebrities turn to religion? Is material wealth the path to happiness? People need more than status and wealth. People look to God for the true meaning of life.
3.6	SCIENTOLOGY	Scientology is a set of beliefs and practices invented by the American author L. Ron Hubbard , and an associated movement. It is variously defined as a cult , a business , a religion , a scam , or a new religious movement . ^[11] Hubbard initially developed a set of ideas that he called Dianetics , which he represented as a form of therapy.
3.7	PAGANISM	Paganism is a quickly growing spiritual movement, consisting of various groups practicing nature-based polytheistic religions, loosely based on the religions of the ancient world.
3.8	HUMANISM	Humanism is a democratic and ethical life stance, which affirms that human beings have the right and responsibility to give meaning and shape to their own lives.
3.9	RASTAFARIANISM	Rastafarians believe that they are being tested by Jah (God) through slavery and the existence of economic injustice and racial "downpression" (rather than oppression). They await their deliverance from captivity and their return to Zion, the symbolic name for Africa drawn from the biblical tradition.

Title THE SIX WORLD FAITHS & FAITH & BELIEFS					
Year: 7 AC: 3					
Word	Definition	Synonyms	Antonyms	Etymology	
FAITH	Strong belief in the doctrines of a religion, based on spiritual conviction rather than proof	Trust, confidence, reliance	False, inconstant	Middle English: from Old French <i>feid</i> , from Latin <i>fides</i>	
BELIEF	An acceptance that something exists or is true, especially one without proof.	Hope, reliance, credence	Disbelief, doubt	Middle English: alteration of Old English <i>gelaefa</i> ; compare with believe	
PAGAN	Someone who follows Paganism	Heathen	Believer	late Middle English: from Latin <i>paganus</i> 'villager, rustic'; from <i>pagus</i> 'country district'. Latin <i>paganus</i> also meant 'civilian', becoming, in Christian Latin, 'heathen' (i.e. one not enrolled in the army of Christ).	
HUMANIST	Someone who follows Humanism	Human centred, humane	Indifferent, cold, cruel	In 1755, in Samuel Johnson's influential A Dictionary of the English Language, the word <i>humanist</i> is defined as a <i>philologist</i> or <i>grammarian</i> , derived from the French word <i>humaniste</i>	
RASTAFARIAN	Someone who follows Rastafarianism	Rastafari, Rasta		derives from "Ras Tafari Makonnen", the pre-regnal title of Haile Selassie, the former Ethiopian emperor who	

Knowledge Organiser

Science

KNOWLEDGE ORGANISER

Title: Introduction, The particle model, Energy, Cells Year: 7 AC: 1

Number	Code	Introduction to Science	Number	Code	Cells
1	S7.1.1	A measuring cylinder is used to measure the volume of liquids.	14	S7.1.8	The nucleus controls everything the cell does. It contains DNA.
2	S7.1.1	A balance is used to measure mass.	15	S7.1.8	The cell membrane controls what goes in and out of the cell.
3	S7.1.2	The independent variable is what you change in an experiment.	16	S7.1.8	The cytoplasm is where chemical reactions take place.
4	S7.1.2	The dependent variable is what you measure in an experiment.	17	S7.1.8	Plant cells have a cell wall, a vacuole and chloroplasts. Animal cells do not have these.
5	S7.1.2	Control variables should be kept the same in an experiment, to keep it a fair test.	18	S7.1.10	A tissue is a group of cells working together to do a job.
6	S7.1.2	Continuous data can take any value. Draw a line graph to represent continuous data.	19	S7.1.7	Magnification is how many times larger an image is compared to the actual size of the object.
7	S7.1.2	Discrete data can be one value or the other. Draw a bar chart to represent this type of data.	20	S7.1.7	Resolution is how clear an image is. Blurry images have a low resolution.

Number	Code	The particle model
8	S7.1.3	In a solid, particles are packed tightly together in a pattern. They vibrate about a fixed position.
9	S7.1.3	In a liquid particles are close together but in a random order. Particles can move round each other.
10	S7.1.3	In a gas particles are far apart and can move freely. Gas particles have the most energy.
11	S7.1.5	Diffusion is the movement of particles from an area of high to low concentration.
12	S7.1.4	When a liquid boils and becomes a gas it evaporates.
13	S7.1.4	Condensation is when a gas cools and becomes a liquid.

VOCABULARY

Title: Science		Year: 7	AC: 1	
Word	Definition	Synonyms	Antonyms	Etymology
Variable	A condition that can be changed, kept the same or measured during an experiment.	Varied, changeable, inconsistent, fluctuating	Fixed	From the Latin word <i>variabilis</i> meaning changing
Particle	The smallest unit of matter that all materials are made up of.	Piece, atom,	Whole, all, complete	From the Latin word <i>particular</i> meaning 'little part'
State	The condition of a substance at a particular time, either solid, liquid or gas.	Condition, position, situation		From Anglo-French <i>astat</i> , meaning "state, position, condition, health, status"
Energy	Energy can be in different "stores", it cannot be created or destroyed. It can be transferred from one store to another.		Power, weakness	From the French word <i>énergie</i>
Cell	The smallest unit that can live on its own and that makes up all living organisms and the tissues of the body.	Unit, section	Tissue, organ, organ system	When Robert Hooke first observed cells under the microscope he noticed that they looked like prison cells.
Mineral	Minerals make up Earth's rocks, sands, and soils. Minerals are inorganic substances, meaning that they do not come from an animal or a plant	Rock, element, raw material		From the medieval Latin word <i>mineral</i>

KNOWLEDGE ORGANISER

Title: Year: 7 AC: 2

Number	Code	Movement	Number	Code	Interdependence
7	S7.2.6	The skeleton allows movement, provides support, protection	21	S7.2.15	The adaptations of organisms allow them to thrive in different habitats, including extreme environments.
8	S7.2.6	The skeleton is made up of a collection of bones from the cranium (skull) to the pelvis to the patella (knee cap).	22	S7.2.16	The classification of species allows the subdivision of living organisms into smaller and more specialised groups.
9	S7.2.7	Cardiac muscle cells contract and relax to pump blood around our bodies.	23	S7.2.17	Energy is transferred through food chains and food webs via producers , primary and secondary consumers , predator , prey and decomposers .
10	S7.2.7	Smooth muscle cells make up thin sheets of muscle, such as the stomach lining.	24	S7.2.18	Changes in predator and prey numbers will affect numbers of the species within a habitat.
11	S7.2.7	Skeletal muscle is joined to bones. Its cells contract to make bones move and joints bend.			
12	S7.2.7	In an antagonistic muscle pair as one muscle contracts the other muscle relaxes or lengthens.			

VOCABULARY



Waseley Hills High School
Aspire, Invest, Respect

Title		Year: 7	AC: 2	
Word	Definition	Synonyms	Antonyms	Etymology
Eclipse	When one object in space blocks an observer from seeing another object in space.	Block, hide, darken	Reappearance	From ancient Greek <i>ἐκλειψις</i> (<i>ékleipsis</i>), which means "the darkening of a heavenly body".
Satellite	Any object that is in orbit around a planet.	Moon, Sputnik, attendant		From Latin <i>satellitem</i> "an attendant" upon a distinguished person.
Conductor	A material which allows electrical current to flow through it easily.	Transmitter, escort	Insulator	From Latin "a carrier," from <i>conductus</i> "to lead".
Insulator	A material that does not allow electrical charge to flow freely through it.	Nonconductor, protector	Conductor	From Latin <i>insulatus</i> "made like an island".
Antagonistic	To work against each other.	Hostile, opposed, against	Friendly, agreeable	From the Greek word <i>antagonistēs</i> , which means "opponent, competitor, rival".
Adaptation	A feature of a living organism which helps it survive.	Adjustment, transformation	Incompatibility, inconformity	From Late Latin "adaptare" "to adjust"
Predator	An animal that hunts, kills and eats other animals for food.	Hunter, killer	Prey	From Latin <i>praedator</i> "plunderer".
Decompose	To break down dead organisms into smaller pieces by the process of decay.	Rot, decay, ferment	Freshen, rebuild	From Latin prefix <i>de-</i> , meaning "the opposite of", and the verb <i>componere</i> , meaning "to put together".

Knowledge Organiser

Science

Revision Sheets

Y7 - Particle model

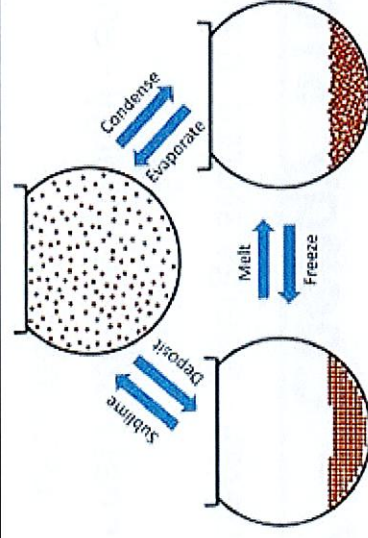
Particle – a very tiny object such as an atom or molecule, too small to be seen by a microscope.

Particle Model – a way to think about how substances behave in terms of the movement of small particles.

Compression – a force that decreases the volume of a substance.

Flow – the movement of particles relative to each other in response to a force.

Solid	Particles are packed closely together. The particles vibrate, but do not move past each other. Keep their shape. Can not be compressed
Liquid	Particles are packed closely together. The particles can move past each other. Take the shape of the container. Can not be compressed
Gas	Particles are spaced far apart. The particles can move past each other. The particles move faster than those in a liquid. Spread out and fill the shape the container. Can be compressed



Soluble – a substance that dissolves in a liquid.

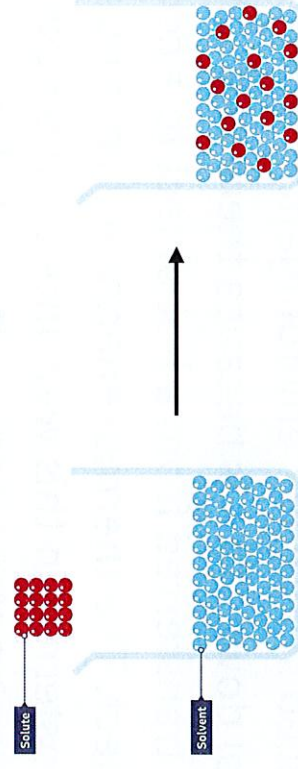
Insoluble – a substance that does not dissolve in a liquid.

Solubility – a measure of the amount of solute that can dissolve in a volume of solvent.

Solute – a solid which dissolves in a liquid.

Solvent – a liquid that can dissolve something.

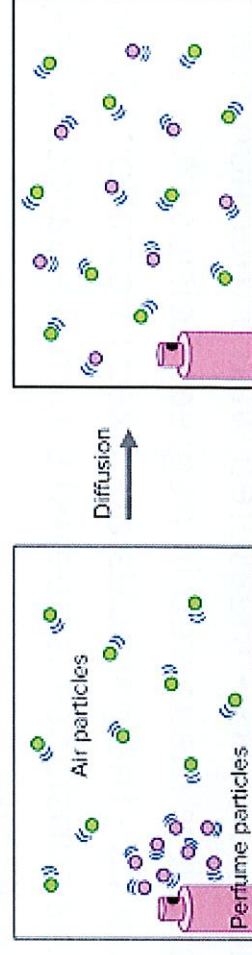
Solution – a mixture of a solute and solvent.



Diffusion occurs because the particles of liquid or gas are moving randomly.

Diffusion is completed when the distribution of particles is even, because there is no longer a concentration gradient.

Diffusion is faster if the particles have more kinetic energy, because they are moving faster.



Y7 - Energy stores 1

Kinetic Energy - energy stored in moving objects.

Gravitational Potential Energy - energy is stored in raised objects.

Thermal Energy - is a measure of the temperature of an object.

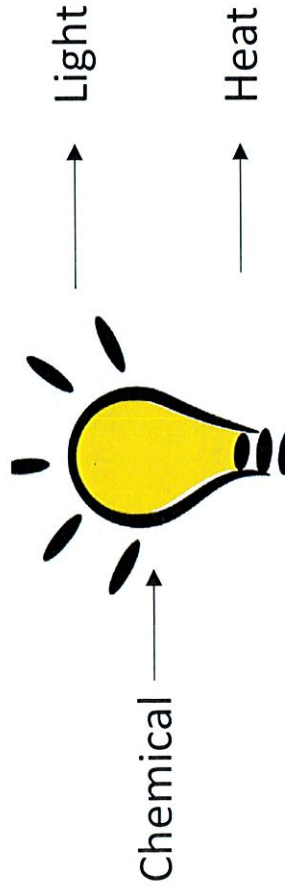
Chemical Energy - energy that is stored in substances between their atoms.

Elastic Potential Energy - energy stored in objects that have been squashed or stretched from their original shape.

Other types of energy - Light, Magnetic, Nuclear and Sound

Principle of conservation of energy

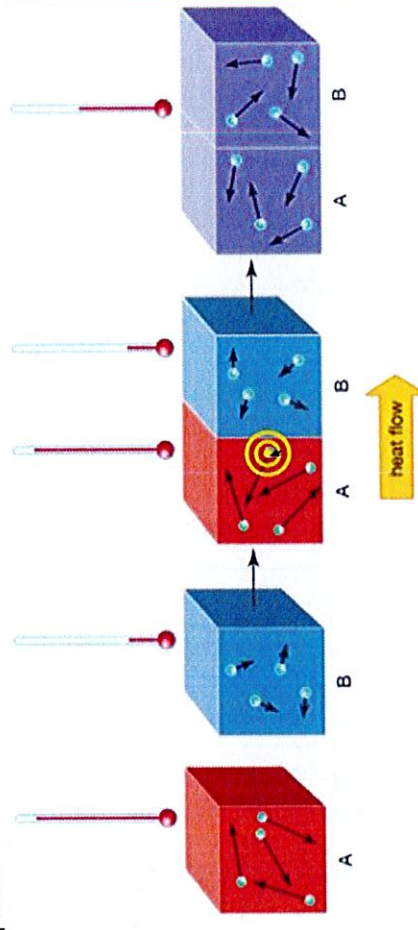
Energy cannot be created or destroyed but can be transferred from one store to another



Temperature - measured with a thermometer and it is measured in degrees Celsius ($^{\circ}\text{C}$)
Solids - the particles are fixed in position. When the substance is heated up, these particles begin to vibrate.

Liquids and Gases - the particles are not fixed in position, so when they are heated the particles move faster (gain kinetic energy). This causes the particles to move further away from one another, especially in a gas.

Equilibrium - When a substance is hot, and placed in a cooler environment it will start to cool down. This is because thermal energy will be transferred from a hot object to a cooler object. The thermal energy will continue to be transferred in this way until both objects are at the same temperature. We call this point 'equilibrium'.



Y7 - Energy stores 2

Renewable - energy collected from resources which are replaced faster than they are used or can be reused.

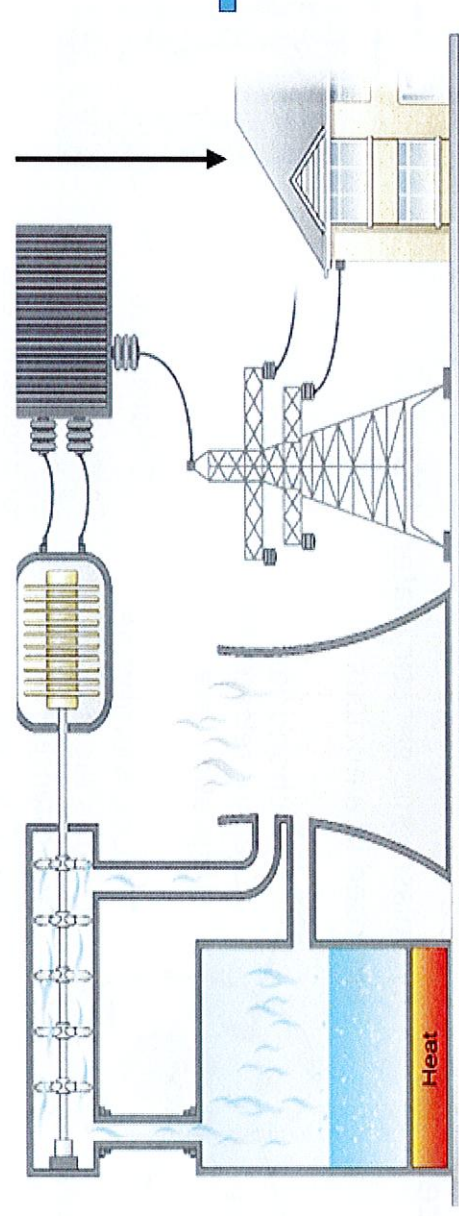
- Wind power
- Solar power
- Hydroelectric power
- Wave power
- Tidal energy
- Geothermal energy

Non-renewable - an energy resource that there is a limited supply of.

- Fossil fuels (coal, oil and natural gas)
- Nuclear energy

Generating electricity

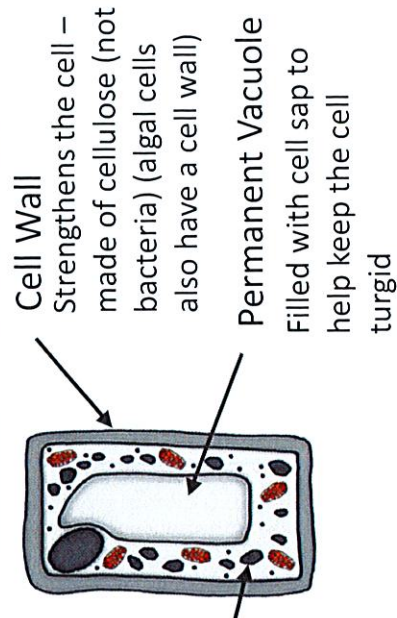
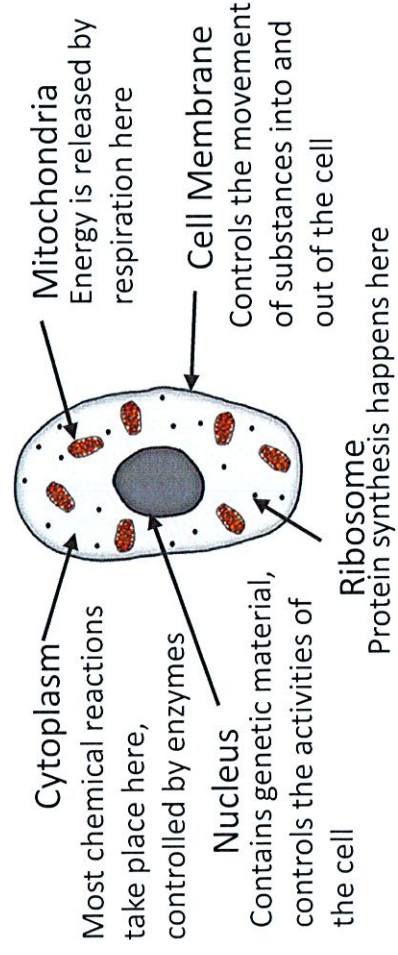
- Fossil fuels are placed in a furnace where it is burnt. This releases heat energy which is used to heat water and turn it into steam.
- The high-pressure steam escapes from the top of the furnace and is used to turn a turbine.
- Power stations also have cooling towers. These cool and condense the steam that flows through the turbine so the water can be used again.
- The turbine is attached to a generator. Inside the generator are magnets and coils of wire. These convert kinetic energy from the turbine into electrical energy which can be sent off to the national grid.
- The national grid then distributes power across the country to homes and industry.



Y7 - Cells 1

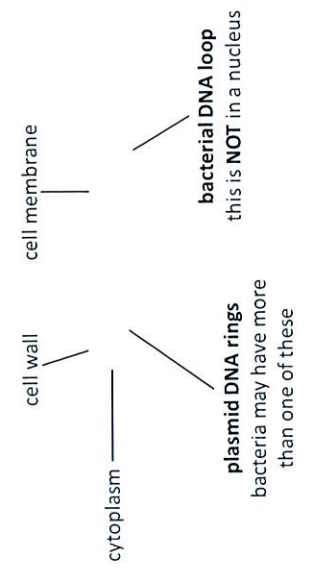
Have a cell membrane, cytoplasm and genetic material (DNA) enclosed in a nucleus.

Animal and plant cells are eukaryotic cells



Bacterial cells are prokaryotic cells

These are **smaller** than eukaryotic cells. The genetic material is not enclosed in a nucleus. The DNA is a single loop and there may be one or more rings of DNA called plasmids.



Cell	Diagram	Structure and function
Sperm (Animal)		<p>Function is to fertilise an egg.</p> <ul style="list-style-type: none"> Streamlined with a long tail to swim to the egg. Enzymes in the head to digest the egg cell membrane. Large number of mitochondria to release energy for movement.
Nerve (Animal)		<p>Function is to carry electrical signals.</p> <ul style="list-style-type: none"> Long to carry signals long distances. Branched connections to connect to other nerve cells around the body. Insulating sheath to enhance transmission of electrical signals.
Root hair (Plant)		<p>Function is to absorb water and nutrients from the soil</p> <ul style="list-style-type: none"> Large surface area for diffusion to take place

Y7 - Cells 2

Diffusion in the small intestine:

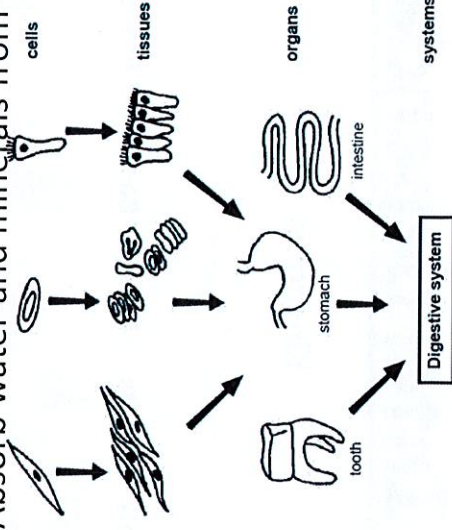
- Internal surface is covered in millions of folds called villi.
- Villi increase the surface area.
- Villi have a very good blood supply. This maintains the concentration gradient.

Diffusion in the lungs:

- Lungs contain millions of tiny air sacs called alveoli.
- Alveoli increase the surface area.
- Alveoli have a very good blood supply. This maintains the concentration gradient.
- Membranes of the alveoli are very thin to allow for a short diffusion distance.

Diffusion in the roots:

- The root surface is covered in millions of root hair cells.
- Root hair cells increase the surface area.
- Present on the mature parts of the roots.
- Absorb water and minerals from the soil.



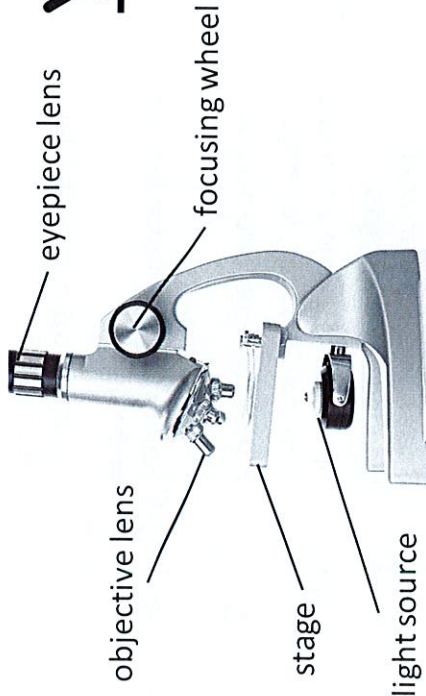
Magnification - the degree to which the size of an image is larger than the image itself.

Resolution - The shortest distance between two objects that can be seen clearly.

Electron microscopes have a **higher** magnification and resolution than **light microscopes**.

Total magnification = Eyepiece lens mag x Objective lens mag

organism	A group of organ systems working together.	e.g. human, frog, oak tree, orchid
organ system	A group of organs working together to perform a specific function.	e.g. digestive system, respiratory system, root system, shoot system
organ	A group of tissues working together to perform a specific function.	e.g. heart, stomach, leaf, flower
tissue	A group of similar cells with a similar structure and function.	e.g. muscle tissue, blood, xylem, phloem
cell	The smallest structural and functional unit of an organism.	e.g. nerve, muscle, palisade, root hair



Y7 - Interdependence

Adaptation - a feature that helps an organism survive in its habitat.

Habitat - the area in which an organism lives.

Competition - Organisms compete for food, light, space and mates. This is known as

Population - a group of the same species living in an area.

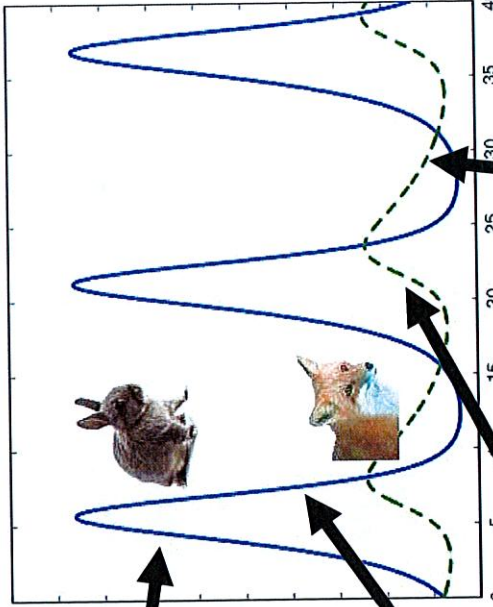
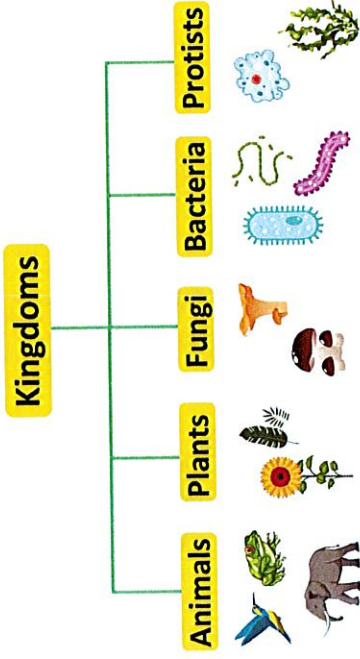
Food chain - a diagram that shows the transfer of energy between organisms.

Herbivores - An animal that only eats plants

Carnivore - An animal that eats other animals

Omnivore - An animal that eats both plants and meat

Food web - a set of linked food chains

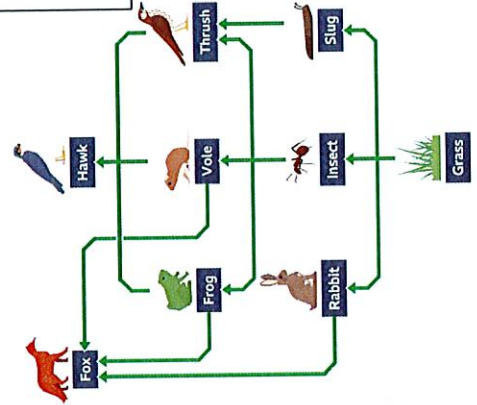


Rabbit population **rises** - few predators to eat them.

The rabbit population **falls** - less food to eat. More predator foxes to eat them.

Fox population **rises** - lots of rabbit prey to eat.

Fox population **falls** - fewer rabbit prey to eat.



Vertebrate	Characteristics
Fish	Scales, live in water, cold-blooded, lay eggs, gills
Amphibians	Smooth skin, live in water and land, cold-blooded, lay eggs
Reptiles	Scales, lay eggs, cold-blooded, lungs
Mammals	Hair or fur, warm-blooded, live births, lungs
Birds	Feathers, warm-blooded, lay eggs, lungs

Interdependence - the way in which living organisms depend on each other to survive, grow and reproduce.

Y7 - Acids and Alkalis

Acids

- A dilute acid has a sour or sharp taste
- Acids can be harmful and corrosive
- pH 0-6

Neutral solutions

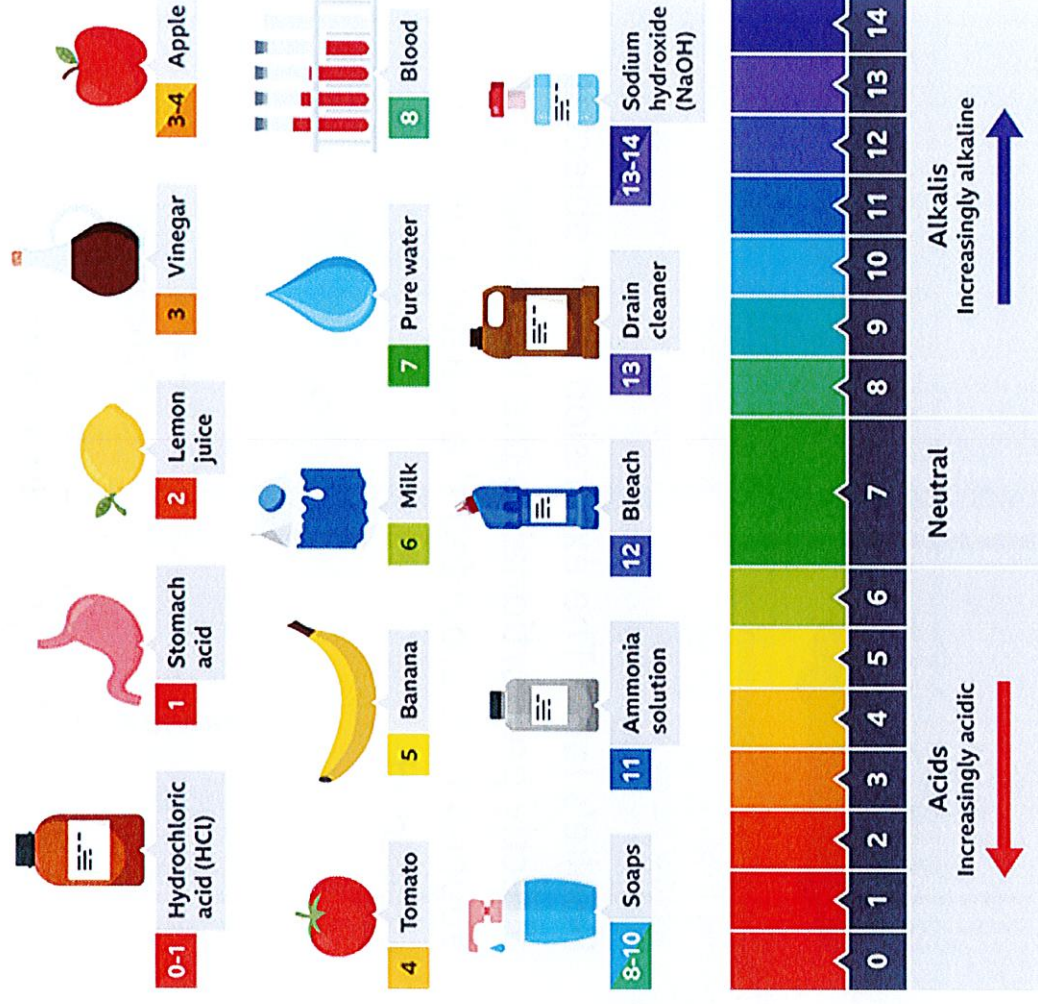
- pH 7 exactly

Alkalis

- A base is a substance that can react with acids and neutralise them
- If a base dissolves in water, we call it an alkali
- Dilute alkalis have a soapy feel to them
- Alkalis can be harmful and corrosive
- pH 8-14

Neutralisation reactions

A chemical reaction happens if you react an acid and a base.



Y7 - Forces

Weight (N) = mass (kg) x gravitational field strength (N/kg)

Mass - amount of something there is. Mass is measured in kg.

Weight - a force due to gravity, and is measured in N.

Drag force - an object moving through a fluid such as air or water experiences this

Air resistance – something moving through the air experiences this

Water resistance - something moving through water experiences this

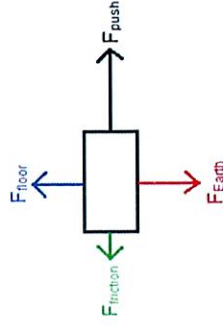
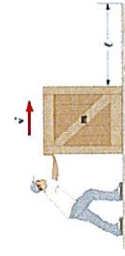
How can you reduce drag forces and friction?

Streamlining reduces air resistance

Lubrication by using oil or grease reduces friction



Upthrust - upward force that a liquid or gas exerts on a body floating in it.

Buoyancy - the ability for an object to float in water or other fluid.

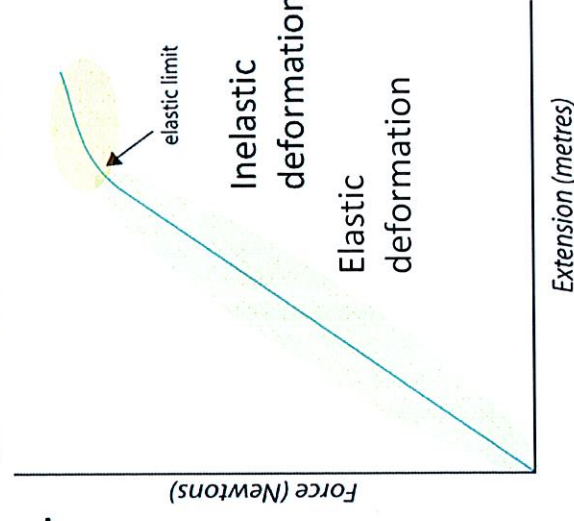


$$\rho = \frac{m}{V}$$

density ρ = mass m / volume V

	
The driving force is bigger than the resistive forces acting on the car. The speed of the car increases.	The only forces acting on the car are resistive forces. The speed of the car decreases.

Hooke's law - The extension of an object is directly proportional to the force that is applied to it provided the elastic limit is not exceeded.



Knowledge Organiser

Spanish

AC2 Hermanos – Siblings and numbers

Uno	One
Dos	Two
Tres	Three
Cuatro	Four
Cinco	Five
Seis	Six
Siete	Seven
Ocho	Eight
Nueve	Nine
Diez	Ten
Once	Eleven
Doce	Twelve
Trece	Thirteen
Catorce	Fourteen
Quince	Fifteen
Un hermano	A Brother
Una hermana	A sister
Un/a hermanastro/a	A Step-brother/sister
Hijo/a único/a	Only child (m/f)
Tengo xx años	I am xx years old

El pelo y los ojos – hair and eye colours

Tengo el pelo....	I have hair
Rubio	Blonde
Negro	Black
Castaño	Brown
Soy pelirrojo/a	I am a redhead (m/f)
Tengo los ojos.....	I haveeyes
Azules	Blue (eyes)
Verdes	Green (eyes)
Grises	Grey (eyes)
Marrones	Brown (eyes)
¿De qué color tienes el pelo?	What colour hair do you have?
¿De qué color tienes los ojos?	What colour eyes do you have?

In Spanish, adjectives go AFTER the noun and need to agree in gender and number

¿Cómo es tu pelo? Hair styles

Llevar	To wear
Llevo	I wear
Llevas	You wear
Lleva	S/he wears
Gafas	Glasses
Un bigote	A moustache
Una barba	A beard
El pelo	Hair
Ondulado	Wavy
Rizado	Curly
Liso	Straight
Corto	Short
Largo	Long
¿Cómo es tu pelo?	What's your hair like?

Verb TENER (to have, having)	
Tengo	I have
Tienes	You have
Tiene	S/he has, it has
Tengo un libro – I have a book Tienes una cámara – You have a camera Miguel tiene un barco – Miguel (he) has a boat.	

AC2 La familia – family members

El padre	Father
La madre	Mother
El hermano	Brother
La hermana	Sister
El abuelo	Granddad
La abuela	Grandmother
El tío	Uncle
La tía	Aunt
El sobrino	Nephew
La sobrina	Niece
El primo	Male cousin
La prima	Female cousin
El padrastro	Step-dad
La madrastra	Step-mum
Hermanastro	Step-brother
Hermanastra	Step-sister
Hijo	Son
Hija	Daughter
Mi/Mis	My
Tu/Tus	Your
Su/sus	His/her

¿Tienes mascotas? Saying what pets you have

Un gato	A cat
Un perro	A dog
Un caballo	A horse
Una serpiente	A snake
Un conejo	A rabbit
Un ratón	A mouse
Un pez	A fish
Una cobaya	A guinea pig
¿Tienes mascotas?	Do you have pets?
No tengo mascotas	I don't have pets

Colores – colours

Rojo/a	Red
Amarillo/a	Yellow
Rosa	Pink
Verde	Green
Morado/a	Purple
Naranja	Orange
Azul	Blue
Marrón	Brown
Blanco	White
Negro	Black
Gris	Grey
¿De qué color es?	What colour is it?

Forming plural nouns

If a noun ends in a vowel (a, e, i, o, u) you simply add an 's' to make it plural.

E.g.

Gato (Cat) GatOS (cats)

Hermana (sister) HermanAS (sisters)

If the noun ends in a consonant (not a vowel) then you need to add 'ES' to make it plural

Ratón = Mouse

RatónES = Mice

Profesor = Teacher

ProfesorES = Teachers

