Year 9

Knowledge Organiser

April - July 2026

AMBITION, CONFIDENCE, CREATIVITY,
RESPECT, DETERMINATION

Proud to be part of the GREENSHAW LEARNING TRUST

FIVE ACRES HIGH SCHOOL

Why do we have knowledge organisers?
Knowledge organisers are a collation of the basic essential knowledge for success in each subject area that will underpin your learning for the term.

They are designed to provide the information you will need to be committing to your long term memory through recall exercises in Low Stakes Quizzing.

How do we use knowledge organisers?
You should be using these KOs to create your homework quizzes so that you are practising retrieving information.

1. You can do this by testing yourself on the definition of key terms (both recalling the key term and then swapping to recall the definition), practice labelling diagrams, retrieves reasons and justifications for the main learning points.
2. They can also be used for 'memory dumps' where you try to recall as much of the information about a topic as possible and then use the KP to fill in the gaps.
3. They can also be used in class to assist with retrieval of the core knowledge needed for each subject.

You should have these with you at all times in school and out on your desk in all lessons.

If you lose your KO or it becomes too dishevelled, please purchase a new one from the Head of Year or the School Office.

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Year 9 English Rhetoric and Revolution KO 2

Persuasive techniques/ rhetorical devices:

- Repetition
- Tripling
- Anaphora
- Epistophe
- Personal pronouns
- Collective pronouns
- Direct address
- Hyperbole (exaggeration)
- Emotive language
- Rhetorical questions
- Statistics
- Facts
- Anecdotal evidence
- Expert opinion
- Logos, pathos and ethos

Checklist for success

- Varied ambitious vocabulary
- Varied range of rhetorical devices
- Appropriate genre conventions
- Use of language and structural techniques
- Accurate SPAG
- Control range of punctuation

Useful discourse markers (to link clauses, sentences and paragraphs).

Meanwhile
Above all
Significantly
Equally
For instance
Consequently
Thus
Alternatively
Moreover
Likewise
Similarly
Therefore
Such as
Ultimately
In addition
In contrast
Conversely,
Contrary to,
Despite this,
Nonetheless,
However,
This proves that
Clearly
Correspondingly

Non fiction Genre Conventions

Speech: Directly addresses the audience with use of personal pronouns. It may start 'ladies and gentlemen' or similar, making use of a range of rhetorical techniques and structured to include problems, solutions, future benefits

Magazine Article: Needs a title or headline and may use sub-headings. Make sure language choices are entertaining and descriptive. May include direct speech/quotes from interviews, as well as a range of rhetorical techniques

Leaflet: Needs a header to explain what the report or leaflet is about and who it is written for. Must make use of sub-headings. First will be the rationale – why the report has been written. Next is the current situation/issues and then finally the recommendations; use a formal tone.

Newspaper Article Needs a headline, structured to report the problems solutions and future benefits. Needs to include a range of rhetorical techniques and sentence structures, a range of academic vocabulary with a formal tone.

Blog: Blogs tend to be quite formal but it depends on the audience. The blogger gives their views/ideas on a topic of their choice. They will often support their ideas with references to other 'experts', to give more authority to what they write.

Key vocabulary

Colloquial
Language used in ordinary and familiar conversations; informal expression, dialogue and tone which can often ignore grammar 'rules'

Standard English
Formal language used in formal situations, which follows correct grammatical rules

Key terminology

Noun - name of a thing, person, place or object
Concrete noun – something you can touch
Abstract noun – a concept or idea (can't touch!)
Common noun – any noun that isn't 'proper'.
Proper noun – the name of a person or place, needs a capital letter
Adjective – describes a noun
Adverb – describes a verb
Verb – describes an action
Tense – shows when a verb is done, past, present or future
Simile- compares something using like or as
Metaphor – describes in terms other than what it is
Pathetic fallacy –weather or nature to describe human emotions

Year 9 Term 3 Rhetoric and Revolution

Key Vocabulary

Race and Nation

Abolition: the ending of something (The abolition of slavery is what Wilberforce and Douglass campaigned for.)
Colonialism: the act of acquiring full or partial political control over a country and exploiting it economically. This includes the natural resources of a country and may also include the exploitation or citizens of that country.
Slavery: the forced labour of someone without consent and proper payment.
Exploitation: the act of taking advantage of someone unfairly.
Pacifist: someone who seeks change through peaceful means.
Democracy: everyone is able to have a say and have voting rights
Civil Rights Movement: political movement which advocated for equal rights for black American citizens.
Monarchy: a country which has a reigning monarch, usually non political
Republic: a country which has an elected head of state.

Gender

Equality: ensuring that all individuals are treated equally and without discrimination due to gender.
Equal Opportunities Act protected characteristics: the thing which are illegal to discriminate against. It is illegal to discriminate against somebody based on age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, gender and sexual orientation.

Environment

Activist: a person who campaigns to bring about political or social change.
Environmentalist: somebody who promotes the importance of 'green issues' over capitalism and seeks to change policies and public thinking.
Global Warming: a gradual increase in the temperature of the earth's atmosphere, generally attributed to the greenhouse effect.
The Green House Effect: global warming caused by increased levels of carbon dioxide, CFCs and other pollutants.
Environmental issues: issues affecting the environment and are a result of man's actions rather than the act of natural disaster. These include pollution, overpopulation, waste disposal, climate change (see global warming.)

Race Context

William Wilberforce: a key abolitionist who was instrumental in the abolition of slavery. An MP in England, he successfully lobbied parliament and the laws surrounding the legality of slavery were overturned in 1833.

Frederick Douglass: a USA abolitionist who fled for slavery in the Southern States of America and campaigned in the North for the abolition of slavery.

Martin Luther King: Black American Baptist minister and prominent member of the civil rights movement which took place in America in the 1960s.

Malcolm X : Black Civil rights movement leader who advocated for black rights by 'any means necessary.' His pursuit of black empowerment was at odds with non- violent teaching of Martin Luther King.

Nation Context

Winston Churchill: Conservative Prime Minister for the UK for the duration of World War 2

Elizabeth 1: Tudor monarch who successfully ensured the defence of England and the realm for the Spanish Armada in 1588

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Gender rights Context

Emmeline Pankhurst: Suffragette who campaigned for the right for votes for women in 1918

Emma Watson: 21st century actress who advocates for gender equality in society.

Environment Context

Greta Thunberg: 21st century environmentalist whose one girl protest when viral on the internet in 2018 and inspired a new generation to fight for green issues.

David Attenborough; 20th and 21st century broadcaster who is widely respected due to his numerous TV series which document the effect of mankind on the planet and hugely influential in environmental matters.

Sentence Starters for non-fiction writing

Imagine a world...
Experts have claimed...
After some consideration...
The evidence overwhelmingly suggests that...
Another essential point...
Whilst this is the case...
The traditional interpretation is...
Most importantly...
There is limited evidence for...
These factors contribute to...
Studies have shown...
It has become increasingly clear that...
Common sense dictates that...
Indeed, the best solution would be...

Y9 Summer Knowledge Organiser Search sparx codes in KS3 if starting with M and GCSE if starting with U at sparxmaths.uk/student/independentlearning

A: Plotting and interpreting quadratic graphs

Topics

- Plotting graphs of quadratic functions (U989)
- Interpreting graphs of quadratic functions (U667)
- Solving quadratic equations graphically (U601)

Building Blocks

- Substituting into algebraic formulae(U585)
- Plotting straight line graphs(U741)

Keywords

Intersection - crossing point of a graph and another graph or axis.
Turning point - Minimum or maximum of the graph
Roots - intersections of the quadratic graph and the x-axis.

G: Angles

Topics

- Combining angle facts(U655)
- Angles on parallel lines(U826)
- Using quadrilateral properties to find angles(U329)
- Angles in polygons(U427)

Building Blocks

- Angles on a line and about a point(U390)
- Vertically opposite angles(U730)
- Angles in triangles(U628)
- Angles in quadrilaterals(U732)
- Line and shape properties(U121)

Keywords

Alternate angles - angles that occur on opposite sides of the transversal line and have the same size.
Corresponding angles - angles that occur on the same side of the transversal line and are equal in size.
Co-interior angles - angles that occur on the same side of the transversal always add up to 180 degrees.
Regular - all sides and angles are equal.
Exterior angle - angle between the side in a polygon and an extended neighbouring side, they all add to 180°.

G: Bearings

Topics

- Measuring and drawing bearings(U525)
- Calculating bearings(U107)

Building Blocks

- Understanding, measuring and drawing angles(U447)
- Combining angle facts(U665)
- Angles on parallel lines(U826)

Keywords

Bearing - an angle measured clockwise, from the Northline given to 3 digits.

Y9 Summer Knowledge Organiser Search sparx codes in KS3 if starting with M and GCSE if starting with U at sparxmaths.uk/student/independentlearning

G: Transformations

Topics

- Translation(U196)
- Reflection(U799)
- Rotation(U696)
- Enlargement by a positive scale factor(U519)
- Mixed transformations(M88

Building Blocks

- Translation(M139)
- Reflection(M290)

Keywords

Translation - shifting of a shape by a vector.
Reflection - flipping of a shape in a mirror line or axis.
Rotation - turning of a shape around a centre of rotation in a direction by 90/180/270 or 360°.
Origin - point (0,0).
Enlargement - changing the size and/or position of a shape by a scale factor and a centre of enlargement.

G: Similarity

Topics

- Understanding similarity(U551)
- Finding unknown sides in similar shapes(U578)

Building Blocks

- Solving direct proportion word problems(U721)

Keywords

Scale factor - a number or fraction we multiply by to show the relation between sides in a shape.
Similarity - shapes that have the same shape, this means equal angles and sides that are in relation to each other given the scale factor.

G: Congruence

Topics

- Understanding congruence(U790)
- Congruent triangles(U866)
- Constructing triangles(U187)

Keywords

Congruence - Shapes that are identical to each other. They have the same angles and side lengths.

P & S: Collecting and presenting data

Topics

- Types of data(U322)
- Presenting data and making conclusions(U571)
- Comparing populations using diagrams(U520)
- Choosing suitable averages and solving problems(U717)

Building Blocks

- Averages and range(U526, U456, U260, U291)
- Interpreting graphs and charts(U557, U193, U172, U909)

Keywords

Continuous data - can take any value within a range, you can measure it, e.g. time in a race, weight, lengths.
Discrete data - can only take certain values, is countable, can be a category, e.g. shoe size.

P & S: Scatter graphs

Topics

- Plotting scatter graphs(U199)
- Interpreting scatter graphs(U277)
- Using lines of best fit(U128)

Building Blocks

- Reading and plotting coordinates(U789)
- Finding equations of straight line graphs(U315)

Keywords

Scatter graphs - points that show the relationship between two sets of data.
Line of best fit - a straight line that represents the plotted data in a scatter graph best.
Positive correlation - two sets of data are strongly linked together, 1 is a perfect positive correlation.
No correlation - values of two sets of data do not link at all, 0 is no correlation.
Negative correlation - two sets of data are oppositely linked together (as one increases the other decreases), -1 is the perfect negative correlation.

P & S: Grouped data

Topics

- Interpreting frequency tables with grouped data(U312)
- Finding averages from grouped data(U877)
- Drawing and interpreting frequency polygons(U840)

Building Blocks

- Interpreting frequency tables and two-way tables(U981)
- Finding averages from frequency tables(U569)

Keywords

Midpoint of a group - middle value of an inequality, add the lowest and highest value and then divide by two.
Estimated Mean - use the midpoints of each group before multiplying by the frequencies.
Median and modal group - group in table that consists the median or mode.
Frequency polygon - A graph made by joining the middle-top points of the columns of a bar chart.

G: Column vectors

Topics

- Understanding column vectors(U632)
- Adding and subtracting column vectors(U903)
- Multiplying column vectors by a scalar(U564)
- Identifying parallel vectors(U660)

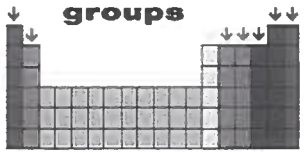
Keywords

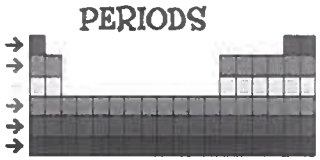
Vertical - going up or down.
Horizontal - going left or right.
Vector - line that is defined by its length and direction, you write it in lower case letters and underline it.
Scalar - a number, when using it in vector multiplications each number in the vector must be multiplied by the scalar.
Parallel vectors - one vector is parallel to another if they are scalar multiples of each other.

Yr9 Chemistry Knowledge Organiser Topic: Atomic Structure and the Periodic Table 2

Box 1 – The periodic table

- The periodic table displays **elements** in order of their **atomic number**.
- Rows in the periodic table are called **periods**. Elements in the same period have the same number of **electron shells**.





- Columns in the periodic table are called **groups**. Elements in the same group have the same number of electrons on their outer shell and similar chemical properties. As elements progress further down a group they have more electron shells.

Box 2 – The history of the periodic table

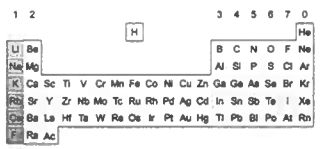
- Early versions of the periodic table elements were ordered by their **atomic weight**, so some atoms were placed in the wrong group where their properties didn't match other elements in that group.
- The first successful periodic table was created by Dimitri **Mendeleev**. He did two things differently:

1. He arranged elements by atomic weight, but changed the order (swapped) of elements so that elements with similar properties were grouped together.
2. He left **gaps** where he predicted there should be elements that were not yet discovered.

→ Elements with the properties Mendeleev predicted were later discovered and fitted in the gaps he left.

→ Mendeleev's periodic table is different to the modern one. Elements are now arranged by atomic number (the number of protons in the nucleus).

Box 3 – Group 1 – The Alkali Metals – 1 electron on outer shell



- Soft, low density and very reactive metals.
- **Melting point and boiling point decreases** as you go down the group.
- **Reactivity increases as you go down the group** because the outer electron is further from the nucleus, so there is less force of attraction on the outer electron and it is lost more easily.

Box 4 – Group 1 – The Alkali Metals continued

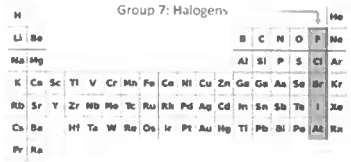
- **Chemical properties** – Form ionic compounds in reactions with non-metals and form ions with a '+1' charge.
- React vigorously with water to produce hydrogen gas.

  Sodium + Water → Sodium Hydroxide + Hydrogen
- React with chlorine to produce a chloride.

  Potassium + Chlorine → Potassium Chloride
- React with oxygen to form a metal oxide

  Lithium + oxygen → Lithium oxide

Box 5 – The Halogens – 7 electrons on the outer shell

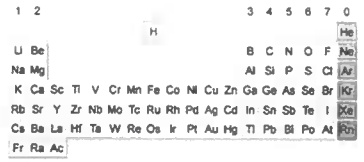


- Non-metals with **coloured vapours**.
- Diatomic - Atoms exist in pairs.

  e.g. Cl_2, Br_2.
- **Melting points and boiling points increase** as you go down the group.
- Form molecular compounds when they react with other non-metals.
- Form for ionic compounds with metals.
- **Reactivity decreases as you go down the group** as the outer electron shell gets further away from the nucleus, so there is less force of attraction and electrons are gained less easily.
- **More reactive halogens with displace less reactive halogens** from an aqueous solution of its salt.

  Sodium **bromide + chloride** → sodium **chloride + bromine**

Box 6 – Group 0 – The Noble Gases – Full outer shell of electrons



- Low melting point – all gases.
- Melting point and boiling point increase as you go down the group.
- Unreactive as they have a stable electron arrangement due to the full outer shell.

Year 9 Physics Knowledge Organiser – Energy 2

Box 1 - Energy Resources

Energy resources are used for generating electricity, heating and transport. Demand for energy is increasing.

Renewable energy resources are ones that are being (or can be) replenished (replaced) as they are used.

Non-renewable energy resources are being used at a faster rate than they can be replenished.

The resources we use need to change over time. There needs to be less reliance on fossil fuels and we need to use more renewable resources. Factors such as reliability and cost mean this is not always easy.

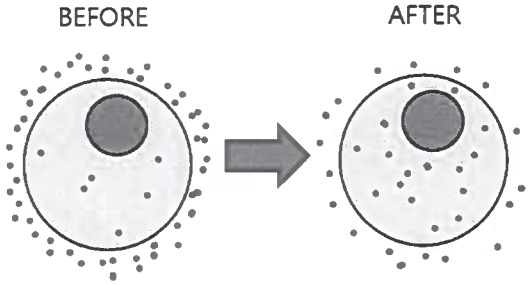
Energy resource	*How it works to generate electricity*	Uses	Positive	Negative
Fossil Fuels (coal, oil and natural gas)	Burnt to release thermal energy used to turn water into steam to turn turbines	Generate electricity, heating and transport	Cheap to extract and reliable	Non-renewable. Burning fossil fuels releases carbon dioxide which contributes to global warming. Burning coal and oil releases sulfur dioxide, which contributes to acid rain.
Nuclear	Nuclear fission process releases thermal energy, then as above (water>steam>turbine>electricity)	Generate electricity	No greenhouse gases produced. Lots of energy transferred from small amounts of fuel. Reliable	Non-renewable. Dangers of radioactive materials being released. Start up costs, running costs and decommission costs very expensive. Toxic waste difficult to dispose of.
Biofuel	Plant matter burnt to release thermal energy, then as above (water>steam>turbine>electricity)	Transport and generate electricity	Renewable. They are 'carbon neutral'.	Large areas of land needed to grow fuel crops. Habitats destroyed and food not grown.
Tides	Every day tides rise and fall, so water turns turbine as it moves through a barrage.	Generate electricity	Renewable. Predictable due to consistency of tides. No greenhouse gases produced.	Expensive to set up. A dam like structure is built across an estuary, altering habitats.
Waves	Up and down motion turns turbines	Generate electricity	Renewable. No waste products.	Can be unreliable and not currently large scale
Hydroelectric	Falling water spins a turbine	Generate electricity	Renewable. No waste products. Reliable	Habitats destroyed when dam is built.
Wind	Movement causes turbine to spin which turns a generator	Generate electricity	Renewable. No waste products.	Unreliable – wind speed varies. Visual and noise pollution.
Solar	Sunlight absorbed by photovoltaic cells creates electricity or directly heats liquid in solar panels	Generate electricity and sometimes heating	Renewable. No waste products.	Making and installing solar panels expensive. Unreliable in the UK
Geothermal	Hot rocks under the ground heats water to produce steam to turn turbine	Generate electricity and heating	Renewable. Clean. No greenhouse gases produced.	Limited to a small number of countries. Geothermal power stations can cause earthquake tremors.

Year 9 Biology Knowledge Organiser Cell Biology 2 - Exchange and Transport

Box 1 – Exchange and Transport

All organisms **exchange** substances with their environment to stay alive. This means they must **transport useful substances into cells and waste substances out of cells**.

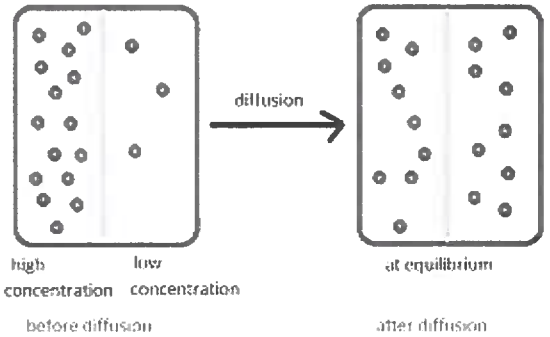
Substances can be transported into or out of cells by: **diffusion, osmosis** or **active transport**.



Box 2 – Diffusion

Diffusion is the spreading out of particles from an area of higher concentration to an area of lower concentration.

The random motion of particles in liquids and gases means that particles will spread out until the concentration is equal throughout. Overall, the **net movement** of the substance will be from higher to lower concentration.



The **rate** of diffusion is affected by:

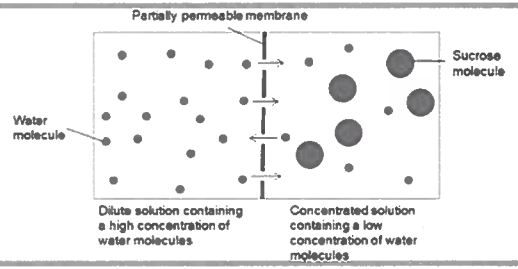
- the **concentration gradient** (the difference in concentration between two places)– the bigger the difference in concentration, the faster diffusion is.
- the **temperature** (a higher temperature increases the rate of diffusion as particles have more energy in their kinetic stores)
- The **surface area** of the membrane (a larger surface area of cell membrane increases the rate of diffusion into/out of a cell).

Diffusion is the process the transports oxygen into the bloodstream and into cells, and transports carbon dioxide out (in the lungs, or gills of fish). It is also how the waste product **urea** moves from cells into the bloodstream, before removal in urine.

Box 3 – Osmosis

Osmosis is the **movement of water** from **a more dilute solution to a more concentrated solution across a partially permeable membrane.**

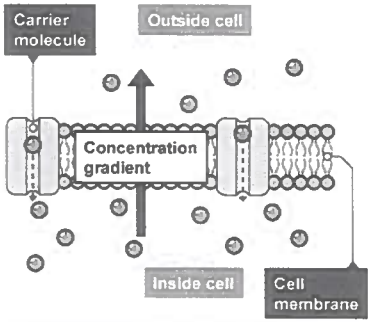
Osmosis stops once the solution concentration is equal either side of the partially permeable membrane.



Key Terms	Definitions
diffusion	The spreading out of particles from an area of higher concentration to an area of lower concentration.
concentration gradient	The difference in concentration of a substance between two places. A 'steeper' concentration gradient means there is a bigger difference in concentration and diffusion happens faster.
osmosis	Osmosis only describes the movement of water. It is the movement of **water molecules** from a dilute solution to a more concentrated solution across a partially permeable membrane.
partially permeable membrane	A membrane that only allows some substances through – others are prevented from travelling through. (e.g. a cell membrane). Small molecules pass through easily.
active transport	The movement of substances **against** the concentration gradient from lower to higher concentration using energy from respiration.

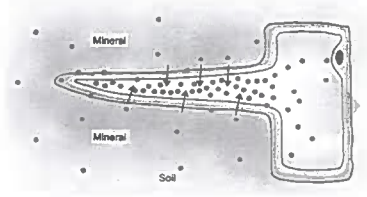
Box 4 – Active transport

Active transport is the movement of substances from **a lower concentration to a higher concentration and requires energy from respiration.**



Active transport happens in:

- **Root hair cells** to allow the cells to absorb mineral ions (like magnesium ions and nitrate ions) from the very dilute solution in the soil. They need ions like these for healthy growth.



- The **cells in the small intestine** to allow them to absorb all of the sugar (e.g. glucose) that is in the intestine. The sugar is needed by all cells in the body for respiration.

Cells that are carrying out active transport have a lot of mitochondria.

Year 9 Biology Knowledge Organiser Cell Biology 2 - Exchange and Transport

Box 5 – Adaptations for efficient exchange and transport

Unicellular organisms have a very large surface area to volume ratio (SA:V ratio) compared to multicellular organisms. They are small enough that diffusion straight into their cells is enough to meet their needs.

As multicellular organisms increase in size, their SA:V ratio decreases. They need organs with specialised exchange surfaces with a high SA:V ratio.

Without exchange surfaces (eg lungs, gills, leaves), multicellular organisms wouldn't be able to obtain enough of the substances they need to survive, or be able to get rid of waste products efficiently.

Box 6 – Specialised exchange surfaces

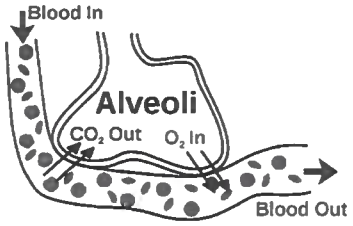
The following features make exchange surfaces effective:

- A **large surface area: volume** – to give a larger space for exchange
- Be **thin** (often just one cell thick) – for a short diffusion pathway
- Have an **excellent blood supply** (animals) – to maintain the concentration gradient
- Be **ventilated** (animals with lungs) – ventilation (breathing in and out) increases effectiveness by maintaining the concentration gradient with each breath.

Box 7a – Exchange surfaces and their adaptations in animals and plants

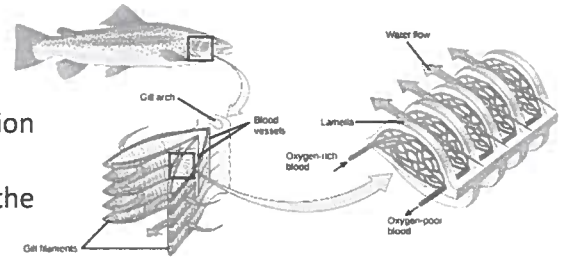
Alveoli (air sacs) in the lungs

- There are **millions of tiny alveoli**, giving a large surface area
- They are **one cell thick**, giving a short diffusion pathway
- They have an **excellent blood supply**, maintaining concentration gradient.
- They are **ventilated**, maintaining concentration gradient



Fish gills

- The **branching gill filaments**, giving a large surface area
- They are **one cell thick**, giving a short diffusion pathway
- They have **good blood supply,** maintaining the concentration gradient

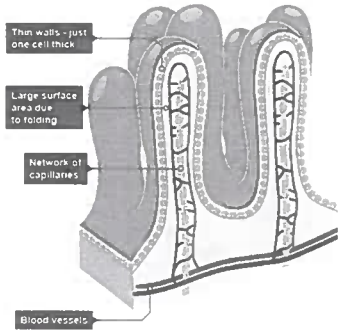


Key Terms	Definitions
surface area to volume (SA:V) ratio	Indicates how effective a surface is at exchange. A higher SA:V ratio is better. Generally, the smaller an organism is, the larger the surface area to volume ratio.
small intestine	The organ in the digestive system where products of digestion are absorbed into the bloodstream.
lungs	The organ where gas exchange takes place. Oxygen is absorbed from the air and carbon dioxide is transferred into the air. The air sacs where gases are actually exchanged are called **alveoli**.
gills	The organ in fish where gas exchange takes place. Oxygen is absorbed from the water into the blood, and carbon dioxide is transferred to the water.
leaves	The plant organ responsible for gas exchange. Carbon dioxide is absorbed from the air and oxygen and water is released into the air.
ventilation	Technical term for breathing in and out.

Box 7b – Exchange surfaces and their adaptations in animals and plants

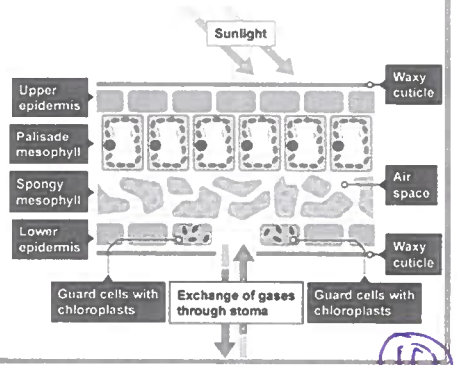
Small intestine

- The small intestine has **millions of villi,** giving a large surface area
- The surface of the villi is **one cell thick,** giving a short the diffusion pathway
- Every villus has a **good blood supply,** maintaining the concentration gradient.
- The outer cells of the villi are **packed with mitochondria** to provide the **energy** needed for **active transport**



Leaves

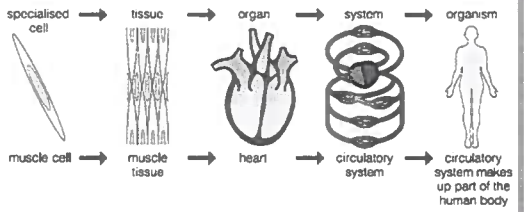
- **Flat and broad,** giving a large surface area
- **Air spaces** inside the leaf, giving a large surface area
- **Thin and flat,** shortens the diffusion pathway.



10

Year 9 Biology Knowledge Organiser – Organisation 1

Box 1 - Cells, tissues, organs and organ systems



Cells are the smallest units of life; all living things are made from cells.

Tissues are groups of similar cells working together to perform a particular function.

Organs are structures made of different types of tissue. The tissues within the organ work together to allow the organ to perform specific functions.

Organ systems are made of several organs that work together.

Multicellular organisms are living things that contain multiple organ systems working together to perform the functions of life.

Box 2 - The Digestive System

The food that is eaten passes through the digestive system and is gradually **digested** (broken down) and **absorbed** into the bloodstream. Each organ performs a different function on the food that passes through it.

Mouth –Chewing food increases the surface area of food so digestive enzymes break down food more quickly, and the digestive enzyme amylase in saliva breaks down the starch in food.

Oesophagus – carries food from the mouth to the stomach.

Stomach – contains hydrochloric acid and the digestive enzyme protease, the muscular walls of the stomach churn food to mix it with the acid and protease. The acid kills any bacteria present and the protease breaks down protein.

Small intestine – the main place food is broken down by digestive enzymes and absorbed into the bloodstream.

Large intestine – where water is absorbed from food.

Rectum/Anus – the remains of food is stored before being removed from the body as faeces.

Other organs that food does not pass through but are involved include:

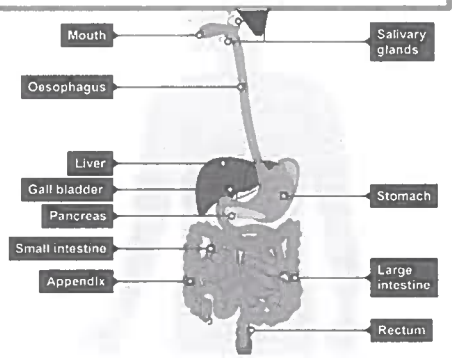
Liver and **Gall bladder** – the liver makes bile and the gall bladder stores the bile until it is needed.

Pancreas –The pancreas makes amylase, protease and lipase enzymes that break down food molecules in the small intestine.

Box 3 - Digestion

The food we eat is mainly made of **starch** (a type of **carbohydrate**), **protein** and **fat**. These molecules are **too large to be absorbed**.

The digestive system (shown right) is where these large molecules are **broken down into smaller, soluble molecules** that can be **absorbed**.



Key Terms	Definitions
Digestion	During digestion, large food molecules are broken down into smaller, soluble molecules. These smaller molecules can be absorbed.
Carbohydrate	Carbohydrates are a type of molecule used by all living things to **release energy**. There are two main types of carbohydrate: **starch** and **glucose**.
Starch	Starch is a large carbohydrate molecule made of many glucose molecules joined together.
Glucose	Glucose is a small carbohydrate molecule; it is also known as a sugar. Glucose is small enough to be absorbed.
Protein	Protein is a large molecule made of many amino acid molecules joined together. It is used in the **growth of cells and repair of tissues** in the body.
Amino Acids	Amino acids are small molecules used to make proteins
Fat	Fats are a type of molecule used by living things to **store energy** and made from one fat molecule is made of one glycerol joined to three fatty acids. Fat molecules are too large to absorb without being broken down first.
Fatty acid and glycerol	Fatty acids and glycerol are small molecules that join together to make fat molecules.
Digestive Enzymes	Digestive enzymes are molecules that work in the digestive system and break down large food molecules into smaller molecules that can be absorbed into the bloodstream.
Bile	Bile is made in the liver and stored in the gall bladder until it is needed. It is released into the small intestine as food arrives from the stomach and helps digestion in two ways: 1. It neutralises the acid from the stomach and provides the correct conditions for digestive enzymes to work. 2. It emulsifies fats into smaller fat droplets, which increases the surface area of fat to make it easier for lipase the break fat down.

Year 9 Biology Knowledge Organiser – Organisation 1

Box 4 - Enzymes and digestion

Enzymes are **biological catalysts** made of **protein**. They increase the rate of reactions. All organisms make many different types of enzyme to control the chemical reactions that take place inside cells (Topic link to **Metabolism**).

Enzymes in the digestive system increase the rate that large food molecules are broken down into smaller, soluble food molecules that can be absorbed.

There are three main digestive enzymes to know about, see the table below:

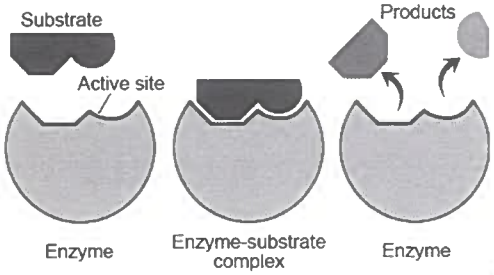
Digestive enzyme	Place of production	Place of action	Substrate	Product
Amylase (also called carbohydrase)	Salivary glands (in the mouth), pancreas, small intestine	Mouth, small intestine	Starch	Glucose
Protease	Stomach, pancreas, small intestine	Stomach, small intestine	Proteins	Amino acids
Lipase	Pancreas, small intestine	Small intestine	Lipids	Glycerol and fatty acids

Place of production means where the enzyme is made.

Place of action means where the enzyme breaking down food.

Box 5 - Lock and Key Theory

Enzymes are highly **specific**, because of the unique shape of the **active site** of each type of enzyme: only one type of substrate molecule will fit into the active site of each enzyme.



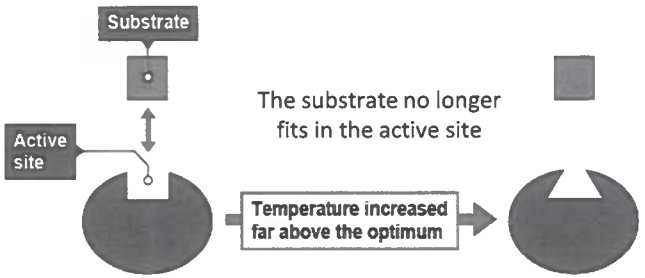
The diagram above shows the **lock and key theory** of enzyme action:

The enzyme and substrate come together and the substrate fits into the active site. The enzyme and substrate form the enzyme substrate complex and a reaction occurs. The products that have been made are released. The enzyme is unchanged by the process and can break down another substrate molecule.

Box 6 - Factors that affect enzymes

Enzymes are affected by the temperature and pH of their environment. Each enzyme has conditions that are needed for them to work best – these conditions are called their **optimum** conditions.

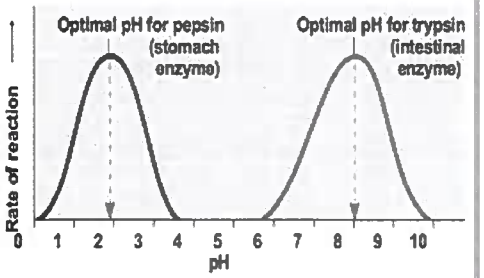
If the conditions of an enzyme are not optimum the enzyme will work more slowly. If the conditions are too different to the optimum conditions the enzyme will **denature – which changes the shape of the active site**. When an enzyme has denatured it no longer works at all. See the diagram below:



Key Terms	Definitions
Enzyme	Enzymes are protein molecules that act as biological catalysts. **Catalysts** increase the rate of chemical reactions.
Metabolism	All the chemical reactions that take place in the body, some absorb energy (endothermic) and some release energy (exothermic).
Specific	When referring to enzymes and **substrates**, specific means that each enzyme only works with one substrate, and each substrate is only broken down by one enzyme.
Substrate	The molecule an enzyme reacts with to make the **product**.
Product	The molecule made when a substrate is broken down by an enzyme.
Active site	The part of an enzyme where the substrate fits. The active site has a specific shape that is complementary to the substrate.
Complementary	When two things fit together, like the pieces of a jigsaw puzzle.
Optimum	The ideal or perfect condition for an enzyme. Enzymes are affected by temperature and pH.
Denature	This occurs when an enzyme is in conditions that are not optimal – the shape of the active site changes and will no longer fit the substrate.

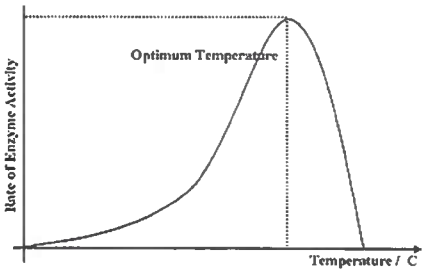
Box 7 The effect of pH

The enzyme from the stomach (acidic) works best in acidic conditions - pH 2 is the optimum. The one from the intestine (alkaline) works best in alkaline conditions - pH 8 is the optimum. The graph shows that the rate of activity decreases quickly when the conditions change from the optimum – the enzyme is **denatured**.



Box 8 The effect of temperature

The rate of reaction increases as the temperature increases until the optimum temperature is reached – here the enzyme works at the highest possible rate. If the temperature is too high (for most enzymes, above about 45°C), the enzyme **denatures**.



Year 9 Biology Knowledge Organiser – Organisation 1

Box 9 – Required practical: food tests

Aim: To use **qualitative** reagents to test for a range of carbohydrates, lipids and proteins. To include: Benedict's test for sugars, Iodine test for starch, the emulsion test for lipids and the Biuret reagent for protein

A **qualitative** test indicates if a substance is present or absent in a sample - but it doesn't tell you how much is present (you cannot quantify it).

Observations are essential in this practical; you are looking for colour changes in particular which can indicate if a substance is present or absent:

Food Test	Colour of reagent	Positive test result	Negative test result
Iodine for starch	orange–brown	blue–black	orange–brown (no change)
Benedict's for sugar	light blue	green to brick–red	light blue (no change)
Ethanol for lipid	colourless	cloudy emulsion	colourless (no change)
Biuret for protein	blue	lilac–purple	blue (no change)

Important hazards

- Biuret solution contains copper (II) sulphate which is dangerous and iodine is an irritant - wear goggles
- Sodium hydroxide in biuret solution is corrosive, if any chemicals get onto your skin wash hands immediately
- Ethanol is highly flammable; keep it away from the Bunsen burner used in the Benedict's test (you should turn the Bunsen off completely)

Box 10 – Required practical: Enzymes and pH

Aim: To investigate the effect of pH on the rate of reaction of amylase

Amylase is an enzyme that digests **starch** (a polysaccharide of glucose) **into maltose** (a disaccharide of glucose)

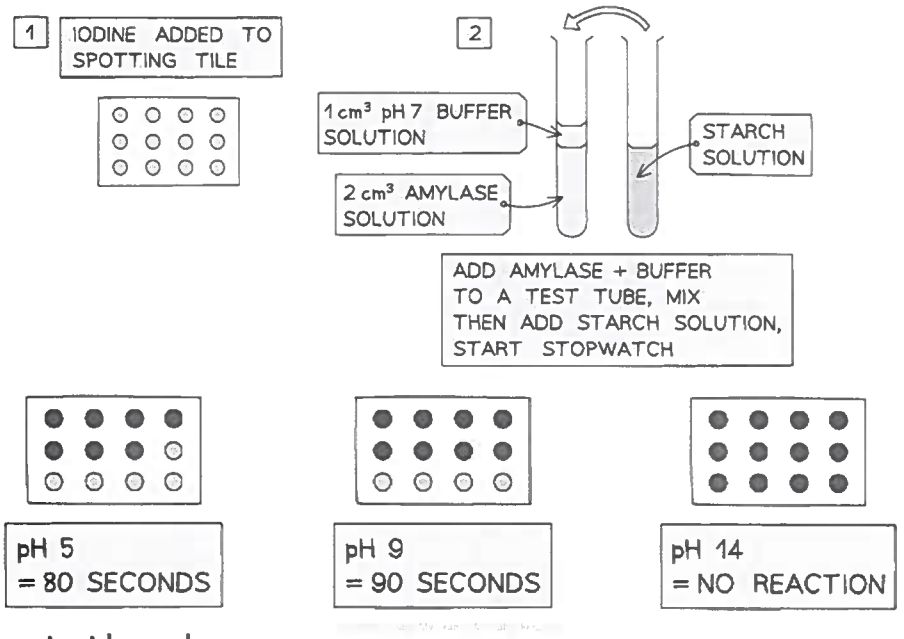
Starch can be tested for easily using **iodine solution**. If starch is present then the iodine will turn **blue-black**.

To investigate the breakdown of **starch** by amylase at different pHs you need **iodine solution, starch solution, amylase solution (containing the enzyme) and pH buffer solutions** of a range of different pHs.

Buffer solutions produce a particular pH, and will maintain it if other substances are added.

In a series of series of test tubes the pH buffer and the amylase solution are mixed. After 1min the starch solution is added.

A sample is removed from the test tubes every 10 seconds to test for the presence of starch. **Iodine solution** will turn a blue-black colour when starch is present, so **when all the starch is broken down the iodine solution will remain orange-brown.**



Important hazards

- Amylase solution may cause allergic reactions.
- Iodine solution is irritant. Avoid contact with skin and eyes. Wear safety goggles.

Physics Knowledge Organiser – Electricity I

Box 1 - Electric charge and current

Electric current is the flow of electrical charge.

Electric charge comes from the particles inside atoms: protons and electrons. The electrical charges that move through electrical circuits are normally electrons, but in some situations are ions.

When electrical charges flow, work can be done (energy is transferred)

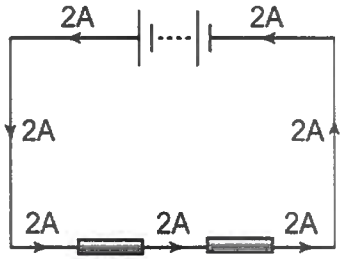
To make charges flow, a **closed**, or complete circuit is needed and a source of **potential difference: cells, batteries and mains**

Potential difference provides the force to make the **electric charges** in conductors **flow**.

The size of an electric current is the **rate** of flow of electric charge: current $(I) = \frac{Q}{t}$

In a circuit**, in any closed loop** of the circuit, the size of the **current** is the **same throughout** the loop (see diagram to the right).

Key Terms	Definitions
Charge (Q)	The particles that carry energy in a circuit. Also called charge flow. Charges can be positive or negative – in electrical circuits the charges are usually electrons. Measured in coulombs (C).
Current (I)	The rate of flow of charge. Measured in amps (A).
potential difference (V)	The potential difference is a measure of how much work is done per coulomb of charge. Measured in volts (V).
Resistance (R)	Resistance is the opposition to the flow of current. Measured in ohms (Ω).



Equation	Meanings of terms in equation
$Q = I\,t$	***Charge flow = current x time*** *Q = charge flow (coulombs, C)* *I = current (amps, A)* *t = time (seconds, s)*
$V = I\,R$	***Potential difference = Current x resistance*** *V = potential difference (volts, V)* *I = current (amperes, A)* *R = resistance (ohms, Ω)*

Box 2 - Current, resistance and potential difference

A component is any part of a circuit (e.g. a resistor, a bulb a motor etc. – see box 4).

The **current** through a component depends on the **potential difference** across the component and the **resistance** of the component.

The greater the resistance the smaller the current for a given potential difference.

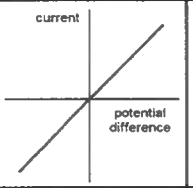
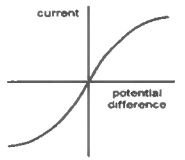
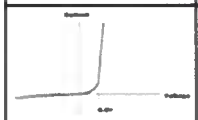
The smaller the resistance, the greater the current for a given potential difference.

When potential difference increases the current in the circuit also increases. The change in current depends on the type of component – see box 3.

Current, potential difference and resistance can be calculated using the equation below.

Potential difference = Current x Resistance

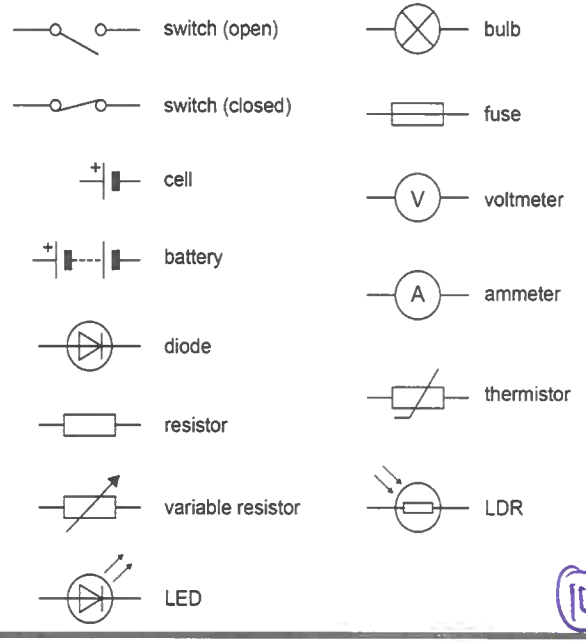
Box 3 Resistors - I-V graphs

	**Ohmic conductor**	*At a constant temperature, current is **directly proportional** to the* potential difference *across the resistor. **Resistance is constant**.*
	**Filament lamp**	*As the potential difference increases the current increases.* *As **current increases, the resistance increases**. The temperature increases as current flows.*
	**Diode**	*Current flows in one direction only (forward.) Very high resistance in reverse.*

Thermistor - *Resistance of a thermistor decreases as temperature increases. Used in thermostats (e.g. ovens or central heating)*

LDR - *Resistance of a thermistor decreases as light intensity increases. Used to turn on night lights when it gets dark.*

Box 4 – Circuit components and symbols



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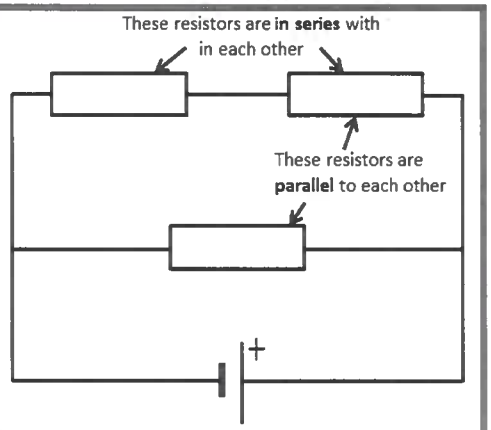
Physics Knowledge Organiser – Electricity I

Box 5 - Series and parallel circuits

There are two types of electrical circuit: series circuits and parallel circuits. In some circuits there are components connected in a series arrangement AND in a parallel arrangement. See the diagram to the right.

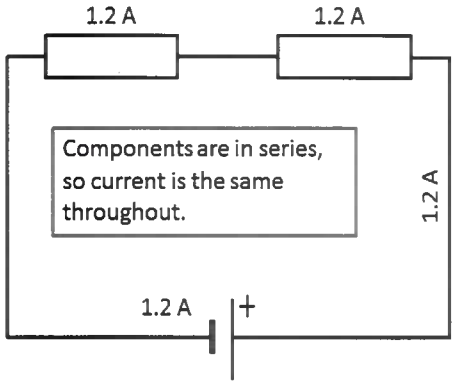


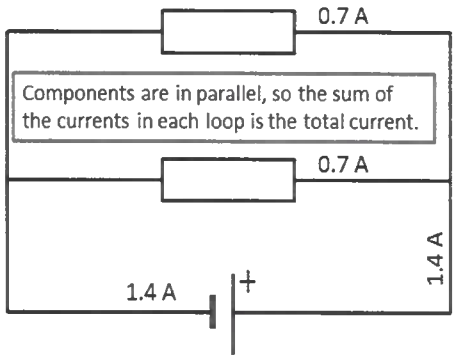
Key Terms	Definitions
series circuit	Components are connected one after another in a closed loop. There is only one route for the current to travel through.
parallel circuit	Components connected in different loops of a circuit. There are branches in the circuit with more than one way for the current to travel.
resistor	An electrical component that regulates current in a circuit.

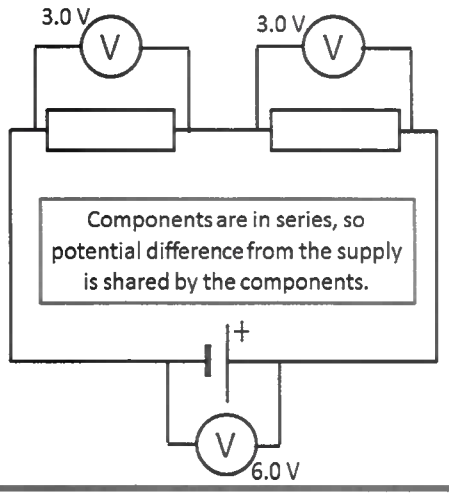
Equation	Meanings of terms in equation
For series circuits: $R_{total} = R_1 + R_2$	R_{total} = *total resistance (ohms, Ω)* R_1 = *resistance of first component (Ω)* R_2 = *resistance of next component (Ω) – and so on*

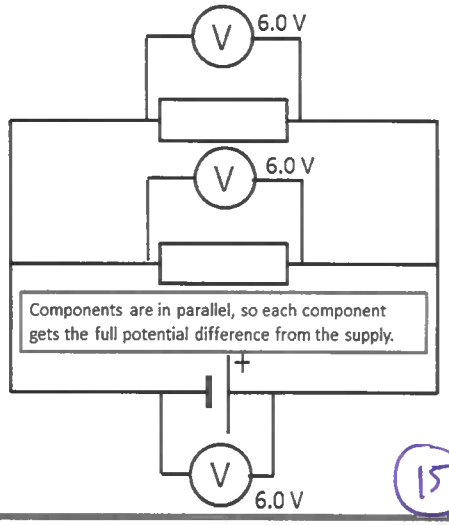
Box 6 – Current, potential difference and resistance in series and parallel circuits

Quantity	Components connected in series…	Components connected in parallel…
Current	The **current** through each component is the **same**.	Shared between the loops. The total current through the whole circuit is the **sum** of the currents through each loop of the circuit.
Potential difference	The **potential difference** provided by the power supply is **shared** between the components in series (not necessarily equally shared out – it depends on the resistance of each component).	The **potential difference** across **loop** is the **same**, and the same as the potential difference provided by the power supply.
Resistance	The **total resistance** of two components is the **sum** of the resistance of each component (see equation).	The total resistance of two components in parallel is always **less than** the resistance of the **smallest** individual **resistor**.









Year 10 Biology Knowledge Organiser – Infection and Response

Box 1 - Communicable (infectious) diseases and pathogens

Communicable diseases, also called infectious disease, can be spread between individuals and are caused by **pathogens**.

- **Bacteria** are very small cells (1/100th size of cells in the human body) which can **reproduce** rapidly once inside the body. They can make you feel ill by producing **toxins (poisons)** which can damage cells and tissues.
- **Viruses** are 1/100th size of a bacterium and can reproduce rapidly inside cells by using the cell machinery to make many copies of themselves. The host cell eventually bursts open releasing the new virus particles which can infect other nearby cells or be passed onto other people (e.g. by coughing or sneezing out mucus that contains the viruses). The cell damage causes the symptoms of the disease.
- **Protists** are eukaryotes, mostly single-celled, that can cause disease. Some are parasites, living in or on other organisms. They are often transferred by a **vector**.
- **Fungi** can also cause disease.

Box 2 - Spread of communicable diseases is caused by the transmission of pathogens

The passing of a pathogen from one organism to another is called transmission and results in the spread of the disease. Pathogens can be spread by:

1. Water – drinking or bathing in dirty water e.g. Cholera is a bacterial infection spread by drinking water contaminated with faeces of other sufferers.

2. Air – Pathogens can be carried in droplets in the air. Droplets are caused by an infected person coughing or sneezing and ejecting mucus containing the pathogens.
E.g. Influenza virus is spread this way.

3. Direct contact – Some pathogens can be picked up by touching contaminated surfaces, including the skin. E.g. gonorrhoea (spread by sexual contact), Salmonella food poisoning (contaminated food preparation surfaces)

4. Vector – Often an insect which carries the pathogen (e.g. protist) from one host to another. E.g. The protist that causes malaria is transmitted by a mosquito.

Key Terms	Definitions
Communicable disease	A disease that can spread between individuals. Also known as infectious diseases. They are caused by pathogens.
Pathogen	A microorganism that causes disease. E.g. bacteria, virus, fungi and protists
Toxin	A chemical that is a poison. Often produced by bacteria, making the host feel ill.
Host	The organism that a pathogen lives in or on. When you have a cold, you are the host for the cold virus.
Protist	Often single-celled eukaryotes. Some can cause disease and are transmitted between hosts by a vector organism, which is unaffected by the protist.
Transmission	The passing of a pathogen from one organism to another resulting in the spread of infectious disease.
Vector	An organism that transfers a pathogen between hosts

Box 3 - Reducing the Transmission of Infectious Disease

We can attempt to reduce the transmission of pathogens by:

- Good standard of hygiene – frequent effective hand washing with soap and water
- Isolating infected people/plants from healthy people/plants in specific hospital wards/rooms
- Destroying vectors (e.g. killing mosquitos with pesticides) or the habitat that they breed in
- Using mosquito nets and insect repellent in malaria affected areas
- Sneezing and coughing into tissues and then disposing of them safely
- Vaccinating people and animals against communicable diseases.

History: Knowledge Organiser Year 9 Rosa Parks

9.6.1 Popular Memory

Popular memory: the way in which the past is interpreted and remembered by people who aren't historians

The **popular memory** of an event or individual could be created through:

- speeches by politicians
- films and TV programmes
- social media posts
- children's books
- statues and memorials
- newspapers

How is **popular memory** different to **academic history**?

Popular Memory	Academic History
• Produced by non-historians • Not necessarily based on **sources** • Easy to access for everyone	• Produced by professional historians • Based on **evidence** from **sources** • **Peer-reviewed** by other historians • Sometimes difficult to access

9.6.2 The Popular Memory of Rosa Parks

In **popular memory**, Rosa Parks' life is just a **fable**. The Rosa Parks **fable** is made up of the following key elements:

Element 1: Parks was a **meek**, respectable and **demure** woman

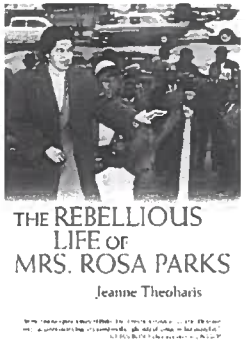
Element 2: She refused to move from her seat on the bus to protest against **segregation**

Element 3: She was an accidental heroine who refused to move because she was tired

Element 4: Her actions helped to end racism in America

9.6.3 The Rebellious Life of Mrs Rosa Parks

The historian **Jeanne Theoharis** wrote a **biography** of Rosa Parks that told a different story of her life:



Element 1: Parks lived a **rebellious** life and supported the use of violence in **self-defence**

Element 2: Parks was heavily involved in the struggle against racism with the **Montgomery NAACP** before her arrest

Element 3: Parks played a very important role in the **boycott** that followed her arrest

Element 4: Parks moved to **Detroit** and campaigned against housing **segregation** and **police violence** for the rest of her life

Element 5: Parks inspired protests against racial injustice in other parts of the world, such as the **Bristol Bus Boycott**

History: Knowledge Organiser Year 9 Rosa Parks

9.6.4 The Montgomery Bus Boycott

What was the Montgomery Bus Boycott?

- **Montgomery** was a city in **Alabama**
- In 1955, Parks was arrested for not moving from her seat on a **segregated** bus
- Following her arrest, the **NAACP** led a **boycott** of the city's buses which lasted for one year
- The **boycott** forced the bus companies to **integrate** buses and led to bus **segregation** becoming illegal

The popular memory of Rosa Parks' role in the boycott

- Parks is primarily remembered for not moving from her seat in 1955
- She is remembered as a **respectable** but ordinary woman who refused to move because she was tired

Theoharis' view of Rosa Parks' role in the boycott

- By 1955 Parks had been actively involved in the **Montgomery NAACP** for over a decade
- A few months before her arrest, she had attended a training camp for **activists**
- During the boycott, Parks toured the country giving speeches and helped organise the **car pool** scheme

Why did the popular memory form in this way?

- During the **boycott**, the **NAACP downplayed** Parks' long history as an **activist** to gain support for their protest

9.6.5 Black Power

What was Black Power?

- Some African Americans were frustrated by the peaceful protests of the **NAACP** and **Martin Luther King**
- **Malcolm X** inspired the **Black Power** movement which advocated the use of violence in **self-defence**

The popular memory of Rosa Parks

- Rosa Parks has been remembered as a **meek** and **demure** follower of King
- Her arrest has been seen as a perfect example of **peaceful protest** – the opposite of the **Black Power** approach

Theoharis' view of Rosa Parks

- From a young age, Parks advocated the use of violence in **self-defence**
- Parks described **Malcolm X** as her personal hero

Why did the popular memory form in this way?

- Opponents of the **Black Power** movement contrasted Parks' actions with the more radical methods of the Black Panthers and the Black Power Movement to **delegitimise** these methods
- Conservative politicians **emphasised** Parks' peaceful protest to **delegitimize** contemporary protests, such as the **Black Lives Matter** marches in 2020

9.6.6 American Politicians

Race and Racism in America

- During the 1950s and 1960s, the **Jim Crow laws** were overturned thanks to protests such as the bus **boycott**
- However, African Americans continue to face problems in the 21st Century, including **wealth inequality** and **police violence**

The popular memory of Rosa Parks' role

- American politicians have claimed that the work of Parks and others ended racial injustice in America

Theoharis' view of Rosa Parks' role

- Parks lived for another 50 years after the **boycott** and continued to battle against racism
- She moved to **Detroit**, a large city in the North, and campaigned against **housing segregation** and **police violence** for the rest of her life
- In 1985 she planned a **boycott** of the entire city of **Dearborn** after the mayor effectively banned African Americans from using the city's parks

Why did the popular memory form in this way?

- Politicians wanted to present a positive image of America and tell comforting stories about the past
- Conservative politicians wanted to use Parks' achievements to **delegitimize** contemporary protests, such as the **Black Lives Matter** marches in 2020

History: Knowledge Organiser Year 9 Rosa Parks

9.6.7 The Bristol Bus Boycott

What was the Bristol Bus Boycott?

- In 1963, a group of Black Bristolians led by **Paul Stephenson** organised a **boycott** of the city's buses
- The **boycott** protested against a **colour bar** that prevented bus companies from hiring Black workers
- The protest was successful and the **colour bar** was removed

The popular memory of Rosa Parks' role

- Parks fought against racism in the American **South**

Theoharis' view of Rosa Parks' role

- Parks had a **global** vision of racial justice
- In her later life, Parks joined protests against **apartheid** in South Africa and America's war in **Vietnam**
- **Paul Stephenson** was inspired by Rosa Parks' actions

Why did the popular memory form in this way?

- The designers of school **curriculums emphasised** Parks' actions in Montgomery to **downplay** her influence on protest in Britain
- They wanted to present racism as an American problem, not a British one

9.6.8 Rosa Parks the role model

The popular memory of Rosa Parks

- Rosa Parks is often featured in children's books
- Parks' has been seen as an ideal **role model** for young people because:
  - ...she inspired change in one single act
  - ...she was an ordinary person who became a hero by accident
  - ...she **personified** a view of women as strong but quiet
- Her story is popular because it has a happy ending: the end of American racism

Theoharis' view of Rosa Parks

- Rosa Parks, in her own words, had 'a life history of being **rebellious**'
- Her arrest in 1955 was not an accident, but part of a lifetime of struggle against racism
- Parks' life shows that the struggle against racism continues to this day

Why did the popular memory form in this way?

- The **publishers** of children's books presented Parks as a quiet, brave but accidental hero to present a positive **role model** to children
- They focused on Parks' arrest in 1955 because it allowed their books to have happy endings

Keywords

Academic history	The past interpreted by historians
Activist	Someone who works for a cause
Alabama	A state in the Jim Crow South
Apartheid	Segregation laws in South Africa
Black Lives Matter	21st Century anti-racist protests
Boycott	A protest by stopping doing something
Car pool	A system of sharing cars
Colour Bar	A ban on Black people doing something
Curriculum	What you learn in school
Delegitimise	Make something seem wrong
Downplay	Make less important
Emphasise	Make more important
Fable	A simple story with a message
Global	Across the world
Integrate	End segregation
Meek / demure	Quiet and shy
NAACP	Organisation that supported Black rights
Peaceful protest	A protest without violence
Peer-reviewed	Checked by other historians
Personified	Represented
Police violence	Violence by police against ordinary people
Popular memory	The past interpreted by non-historians
Publishers	Companies that print and sell books
Rebellious	Always wanting to fight back
Role model	Someone you should be like
Segregation	The separation of Black and white people
Self-defence	Defending yourself from attack
The South	Part of the US with Jim Crow laws
Vietnam	Asian country, invaded by US forces in 1960s
Wealth inequality	Difference between rich and poor

History: Knowledge Organiser Year 9: How did Britain change in the postwar period?

2 The Suez Crisis

In 1956, Britain's embarrassing attempts to keep hold of the Suez Canal in Egypt led to rapid decolonisation

1. The Suez Canal

- The **Suez Canal** in Egypt was vital to the British because it allowed easy access to India
- It also helped Britain protect **oil** supplies in the **Middle East**

2. Nasser

- The Egyptian president, **Nasser**, opposed the British Empire
- In 1956, Nasser took control of the **Suez Canal**

3. Invasion of Egypt

- The British prime minister, **Anthony Eden**, made a secret plan with **France** and **Israel**
- The three countries invaded **Egypt** and planned to remove **Nasser**

4. The World's Response

- The **USA** threatened to stop loans to **Britain** unless they left **Egypt**
- The **Soviet Union** threatened to launch **nuclear weapons**
- The British public protested against the war

5. Consequences of Suez

- **Anthony Eden** was forced to resign
- The crisis revealed that Britain could not stop colonies demanding **independence**
- After **Suez**, most British colonies became **independent**, including
    - **Nigeria** (1960)
    - **Jamaica** (1962)
    - **Kenya** (1963)
- This was called **decolonisation**

3 Social change in the 1960s

The 1960s witnessed a variety of law changes that made Britain a more liberal and equal society

Liberal means *accepting of different ideas and ways of living*

Gay Rights

- Same-sex relationships had been illegal in the UK since 1533
- In 1967, homosexual relationships were **legalised**
- However, same-sex couples only gained equal rights to marriage in 2014

Abortion Act

- Before the 1960s, **contraception** was unreliable and **abortions** were illegal and dangerous
- The **1967 Abortion Act legalised abortion** with permission from two doctors
- The **1967 Family Planning Act** made **contraception** widely available through the **NHS**

Equal Pay Act

- Women were usually paid less than men, even for the same work
- **Strikes** by female workers put pressure on the Minister for Employment, **Barbara Castle**
- She passed the **1970 Equal Pay Act**, making it illegal to pay women less for the same work
- However, a **gender pay gap** still exists today

History: Knowledge Organiser Year 9: How did Britain change in the postwar period?

4 The Bristol Bus Boycott

In the 1960s, Black British people protested for equal rights

Bristol's Caribbean Community

- By the 1960s, **Bristol** had a growing population of **migrants** from the **Caribbean**
- **Caribbean migrants** opened shops, cricket clubs, music venues, and churches
- In 1968, the first **St Paul's Carnival** was held to celebrate **Caribbean** culture and history

The Bristol Bus Boycott

- However, Black people in **Bristol** continued to face racist attitudes
- For example, the **Bristol Bus Company** refused to employ Black bus drivers
- In 1963, Black residents in **Bristol** organised a **boycott** of the city's buses to protest against this
- This put pressure on the government to pass the **1968 Race Relations Act** which made it illegal **to discriminate** on the grounds of a person's race

5 Europe : *In 1973, Britain voted to join the European Union*

The European Union

- The European Union (EU) was set up after the Second World War to try to prevent further wars in Europe.
- Members agreed to:
  - Open their borders to allow easy trade, especially in goods like iron and coal
  - Allow people to migrate between countries to live and work
  - Share new scientific and technological discoveries

1975: Referendum

- The British government was eager to join the **EU** because:
  - As a result of decolonisation, **Britain** had lost it's empire and needed another way **to influence** world affairs
  - **EU** members like **France** and **Germany** had enjoyed **economic booms** and **Britain** wanted to share in their wealth
- In 1975, the British people voted in a **referendum** to join the **European Union**

Impact of EU Membership

- **Migration**: British people migrated to warm countries like **Spain** and people from poorer **EU** nations such as **Poland** migrated to Britain to find work
- **The Economy**: Membership of the **EU** allowed Britain to trade freely with Europe and the **EU** funded the development of poorer areas such as **South Wales** and **Cornwall**
- **Laws**: Britain had to obey laws and standards agreed in the **European Parliament**

History: Knowledge Organiser Year 9: How did Britain change in the postwar period?

6 Thatcher

During the 1980s, Margaret Thatcher's Conservative government cut back the welfare state and attempted to improve Britain's position in the world

Margaret Thatcher

- **Margaret Thatcher** became Britain's first female prime minister when she was elected in 1979
- However, during her 13 years as **prime minister** she only appointed one other woman to a government role

Return to Laissez-faire

- Thatcher emphasised **individual responsibility** and **laissez-faire** over government support
- Her government cut back the **welfare state** and sold off **council houses** without building new ones
- **Poverty** and **inequality** increased rapidly

The Falklands War

- In 1982, **Argentina** invaded the **Falklands Islands**, one of the last remaining British colonies
- **British** forces defeated the **Argentinians** in 2 months
- The victory seemed to show that **Britain** was still a powerful country

Key Vocabulary

decolonisation	being similar to everything else
liberal	accepting of different ideas and ways of living
contraception	methods of preventing pregnancy
to legalise	to make something allowed by law
abortion	ending a pregnancy
to discriminate	to treat someone differently
economic boom	a period of wealth and economic growth
referendum	a vote on a single question
to influence	to change what someone else is doing
laissez-faire	not interfering in people's lives
poverty	the state of being very poor

Y9 History Knowledge Organiser: The Miners' Strike

1.1 Coal Mining in Britain

'King Coal'

Britain's main natural resource is **coal**. **Coal** is found under the ground in **coalfields** and must be mined. The largest UK coalfields are in **South Wales**, **Yorkshire**, and **Northumberland**.

Coal became important after the **Industrial Revolution** because it could be used to power steam ships and trains, fuel power stations, and produce **coke**, which was used to make steel. It became known as **'King Coal'** because it was so important to the economy.

By 1913, British **coal mines** produced 300 million tonnes each year. Britain **exported** more coal than the rest of the world.

Mining Villages

Before World War I, 1.2 million people were employed in **coal** mining.

Small communities - known as **pit villages** - developed around coal mines for the families of miners.

Mining was dangerous and demanding work. Miners spent long days deep underground where they faced the risk of **mine shafts** collapsing. Miners often suffered from **black lung** - a disease caused by coal dust. Explosions were also common: in 1913 a gas explosion killed 493 men in Senghenydd, South Wales.

These dangers were made worse by **mine owners** who cared only about **profit**, not the safety of miners.

Trade Unions

Miners formed **trade unions** to protect themselves against health risks, wage cuts, and unemployment. Unions used the threat of **strike action** to win demands from **mine owners**. They became powerful because of the idea of **solidarity** - all miners taking responsibility for each other.

The **National Union of Mineworkers (NUM)** was the most powerful **trade union** in Britain. By World War II, the **NUM** - along with other unions - **had** won important victories, including the weekend, the 8-hour work day, and wage increases.

The biggest victory came in 1947 when coal was **nationalised**. This meant the miners now worked for the government, not **mine owners**, and would be treated better. A government organisation called the **National Coal Board** was placed in charge of coal mining and miners.

1. 2 The 1970s

Trade Union Militancy: Trade unions reached the peak of their powers in the 1970s. Miners went **on strike** in 1969, 1972, and 1974 to demand higher wages. The NUM usually called **strikes** during the winter when coal was needed the most. They aimed to force the government to give in by completely stopping the supply of energy. In the 1972 **Battle of Saltley Gate**, 15,000 miners successfully closed a fuel storage depot in Birmingham and forced the government to give in to their demands.

Three Day Week: As the **NUM** prepared for another strike during the winter of 1973-4, the **Conservative** Prime Minister **Edward Heath** introduced a **Three Day Week**. For 6 weeks, businesses were only allowed to open for 3 days a week to reduce energy use and save up coal. TV stopped at 10.30pm and football matches had to be rearranged to avoid using floodlights. **Blackouts** and **power cuts** were common.

Heath called a general election and used the **slogan**: "Who governs Britain?" He was defeated.

1.3 Causes of the 1984-5 Miners' Strike

In March 1984, **NUM** members across the country began **strike action** against the **Conservative** government's plans to close coal mines. The miners spent over a year on strike.

Arthur Scargill

Scargill was the leader of the **NUM**. He believed the government wanted to destroy the **miners**.

Scargill was a **militant**. He argued that **strike action** was the only way to save jobs. His experience in the **Battle of Saltley Gate** convinced him that the **NUM** could win.

Margaret Thatcher

Thatcher was elected **prime minister** in 1979. She was a **conservative** and wanted revenge for **Heath's** defeat.

Thatcher opposed the power of the **trade unions** and called the **NUM 'the enemy within'**. She believed in **laissez-faire** and wanted to reduce the size of the **welfare state** and **privatise** coal.

Pit Closures:

In 1984, the government announced that 20 **pits** would close and 20,000 jobs would be lost. There were secret plans to close 75 more **pits**. The government claimed these **pits** were **'uneconomic'** because they did not make **profit**.

The NUM responded by arguing for 'coal not **dole**' and threatened to call a **strike** if the closures were not stopped. When the closures continued, **NUM** members went on **strike**.

1.4 Miner's Tactics

Pickets

The **NUM's** goal was to stop the supply of energy to the country and force the government to give in. To do this, the miners needed to shut mines across the country.

Striking miners - known as **pickets** - formed a **picket line** outside their mines to stop other miners from going to work or coal being taken out. Miners who continued to work were known as **scabs** and they were often abused and intimidated. **Pickets** often clashed with police who were sent to protect working miners and keep the mines open.

Flying Pickets

Although almost all miners in **South Wales**, **Yorkshire**, and **Scotland** came out on **strike**, there was less support in other areas, such as **Nottinghamshire**.

Scargill sent **flying pickets** - bus loads of **miners** from areas that strongly supported the strike - to areas such as **Nottinghamshire**. The **flying pickets tried** to stop miners going to work and to prevent coal being moved.

Miners' Support Groups

During the **strike**, the miners - who were all men - did not get paid. In response, miners' wives set up **support groups** such as **Women Against Pit Closures** to raise funds. The support groups ran soup kitchens, organised jumble sales, and wrote leaflets supporting the strike. This allowed the miners to stay **on strike** for longer and put extra pressure on the government.

Other groups showed **solidarity** with the miners by raising funds. For example, an **LGBT** group called **Lesbian and Gays Support the Miners (LGSM)** raised thousands of pounds.

Y9 History Knowledge Organiser: The Miners' Strike

2.5 Failure of the Miners' Strike

The 1984-5 Miners' Strike was a failure for the **NUM** and a significant victory for **Thatcher's** government. Miners returned to work in 1985 and the mines were **privatised**. From over 1000 pits in 1913, there are now just 3, employing just 4,000 people. Britain **imports** almost all it's coal. Former **pit villages** have become areas of high **unemployment**. There were several reasons for the failure of the strike:

1. Government Preparation

The **Conservative government** spent years preparing for the strike. The government

a) **stockpiled** enough coal to fuel the country for 6 months

b) switched power stations to gas

c) **recruited** extra police officers

2. Police Tactics

The government trained the police in new **military-style** techniques to deal with striking miners, this included using **mounted officers**, **riot shields**, and **baton charges**.

Using these tactics police were able to stop **pickets** closing mines and power stations.

3. Economic Pressure

The strike was technically illegal - because the **NUM** had not held a **ballot** - this allowed the government to stop benefits for striking miners. The government **bribed** miners to return to work.

Many miners were forced to return to work in 1985 because their families were starving.

4. The Role of the Media

All the major newspapers supported the government. **Tabloids portrayed** the miners as selfish and violent. The **BBC** publicised the number of miners returning to work.

Thatcher called the **NUM** 'the enemy within' and used her speeches to turn **public opinion** against the miners.

5. Divide and Conquer

Some areas did not support the strike. In **Nottinghamshire**, which produced 25% of the country's coal, miners did not **strike**. This was partly because the government promised to protect their jobs. **Nottinghamshire** miners were also already well-paid and worked in good conditions.

6. No National Ballot

The law said that unions had to have a **national ballot** before taking **strike action**.

The **NUM** did not do this. The NUM's failure to hold a **national ballot** allowed the government to **portray** them as **undemocratic** and caused some miners - such as those in **Nottinghamshire** - to not support the strike.

2.6 The Battle of Orgreave

Events

On 18th June 1984, the **NUM** sent 5,000 **flying pickets** - led by **Scargill** - to **Orgreave** to stop lorries carrying **coke** leaving the plant. The police arrived with 6,000 officers in **riot gear**, dogs, and 42 **mounted officers**.

When the first lorries arrived, the **pickets** tried to push their way through the police lines, but they failed. In response, the **mounted police** charged. They were followed by police with **batons** who hit the unarmed **miners**. After this, some miners threw stones back at the police.

After a two hour break, in which **miners** sunbathed and played football, the police charged again, forcing the **miners** to flee.

95 **miners** were arrested and charged with **rioting**, which meant they could face years in prison. However, all these charges were dropped as no evidence could be found. The police were forced to pay £425,000 in **compensation**.

Role of the Media

The **media** presented the miners as responsible for the violence at **Orgreave**.

On the news later that evening, the **BBC edited** the video **footage** to show the miners throwing missiles before the police charged. They also deleted **footage** which showed police chasing and beating miners. The report also highlighted the use of weapons by the miners. Later, the BBC was forced to admit that it had **edited** the **footage** and given a **misleading account**. Nevertheless, the public got the impression that miners were violent.

The **tabloid newspapers** also supported the police. The next day **The Sun** described 'rock-hurling' miners and suggested that **Scargill** should feel 'shame' for encouraging violence.

The pro-government **media** coverage had a significant impact of **public opinion**. By December 1984, a poll found that 88% of the public disapproved of the **miners'** methods.

VOCABULARY

Ballot	A vote
BBC	The British government-owned media organisation
Baton	A stick used to hit people
Black lung	A lung disease cause by inhaling coal dust
Coalfields	Areas where coal can be mined
Coke	A substance that can be produced from coal and makes steel
Conservative	Political party
Compensation	Money to make up for a mistake
Dole	Slang for unemployment benefit
Edited	Changed
Export	Sell goods to other countries
Flying Pickets	Miners bused to other places to close mines
Footage	Video
Import	Buy goods from other countries
Laissez-Faire	Political idea of opposing government intervention
Media	TV / radio / newspapers
Militant	Wanting confrontation, especially strikes
Mine owners	Businessmen who own mines
Misleading account	A story that exaggerates or changes details
Mounted	On horseback
Nationalise	Bring under government control
NUM	The National Union of Mineworkers (the miners' trade union)
Nottinghamshire	A county in central England
Picket	A miner who is on strike and trying to close his mine
Picket line	A group of pickets trying to close a mine
Pit Villages	Communities that depended on a mine
Privatise	Remove from government control and sell to businessmen
Profit	Money
Public opinion	The ideas that ordinary people have
Recruited	Hired
Riot gear	Shields / helmets / etc
Scabs	Miners who did not go on strike
Seized	Took control of
Solidarity	Showing support for others
Stockpile	Build up a supply
Strike	Stopping work in protest
Support groups	Groups who raised money to support the NUM
Tabloid newspapers	Cheap and popular newspapers
Tactics	Plans / methods
Trade unions	Organisations of workers
Undemocratic	Not based on voting
Uneconomic	Not making profit

PCSHE – Year 9 Topic 3 – Respectful and Intimate Relationships

KPI1: Key definitions:

- **Healthy Relationships:** Healthy relationships involve honesty, trust, respect and open communication between partners, and they take effort and compromise from both people. There is no imbalance of power.
- **Unhealthy Relationships:** An unhealthy relationship can be defined as one that is characterised by an ongoing pattern of behavior, such as lack of communication, power imbalances, lack of mutual respect, lack of boundaries, physical abuse, verbal abuse, emotional abuse, etc.
- **Marriage**: a legally accepted relationship between two people in which they lived together, or the official ceremony.
- **Cohabitation**: another way of saying a couple are living together.
- **Civil partnership:** A civil partnership is a legal relationship which can be registered by two people who aren't related to each other. They are available to both same sex couples and opposite sex couples.
- **Sexual consent**: The giving of permission by a person to engage in any form of sexual activity.
- **Coercion**: The action or practice of persuading someone to do something they wouldn't normally do or something they don't want to do by using force or threats.
- **A person who is minor**: A person who is under the age of 18 and legally considered a child.
- **Contraception**: Methods that are used to prevent pregnancy from occurring during sexual activity.
- **Hormonal methods**: Contraceptive methods with the use of hormones to prevent pregnancy, usually used by women only.
- **Barrier methods**: contraceptive methods which prevent pregnancy by stopping the sperm from reaching the egg.
- **Combination methods**: Contraceptive methods which use both hormonal and barrier methods to prevent pregnancy.
- **Natural Methods**: contraceptive methods which do not use hormones or barriers, mostly focused on fertility awareness.
- **Pornography**: Printed or visual material containing the explicit description or display of sexual organs or activity, intended to stimulate sexual excitement.
- **Child Pornography**: Sexually explicit material depicting anyone under the age of 18.
- **Revenge Porn**: Revealing or sexually explicit images or videos of a person posted on the Internet, typically by a former sexual partner, without the consent of the subject and in order to cause them distress or embarrassment.
- **Sexting**: Sending sexually explicit messages or pictures via mobile phones, instant messaging or email.

KP2: Healthy and Unhealthy Relationships

Healthy Relationships

- You know when you're in a healthy relationship because you feel happy to see and spend time with certain people
- they could be members of your family, your friends, your work mates or even a romantic partner.
- No relationship is ever perfect, and you will have moments when mine disagreements will rise to the surface causing frustrations with others
- there are many factors that contribute to the development and maintenance of have your relationships including commitment, trust, respect and responsibility,

What is needed to keep a relationship strong?

- Building a relationship on friendship and being a good team.
- Being realistic in your expectations and putting in effort.
- Communicating well
- Talking constructively about any issues when they first arise so that bigger problems don't develop.
- Having good support networks
- Having friends and family around you to help when life is tough.

Unhealthy Relationships

The signs of an unhealthy relationship are easy to spot.

- People stop communicating, become less close, argument frequently and show less love and respect for each other.
- There are many reasons that a relationship might breakdown. Often it has to do with the personalities, attitudes and behaviours of the individual. Other causes come from outside the relationship.

There are many ways to deal with or improve an unhealthy relationship – we could try listening more to others and become more aware of their needs.

We could examine our own behaviour honestly and try to identify aspects of it which is causing conflict with others. However, the best way to improve an unhealthy relationship between partners is by getting advice.

KPI3: Relationships, marriage and family

- **Marriage**: a legally accepted relationship between two people in which they lived together, or the official ceremony.
- **Cohabitation**: another way of saying a couple are living together. This can be formalised with a legal agreement called a cohabitation contract. This outlines the rights and obligations of each partner towards each other e.g. About how you share your property.
- **Civil partnership:** A civil partnership is a legal relationship which can be registered by two people who aren't related to each other. They are available to both same sex couples and opposite sex couples. Registering the civil partnership will give you relationship legal recognition. This will give you legal rights, as well as responsibilities.

Attitudes towards marriage/civil partnerships

Why might people choose a marriage/civil partnership?

- To make a lifelong commitment
- *Love*
- *Societal expectations*
- *Family expectations*

Why might people choose not to marry/form a civil partnership?

- *Independence*
- *Divorce rates*
- *Potential cost*
- *Religious connotations*

PCSHE – Year 9 Topic 3– Respectful and Intimate Relationships

KPI4: On-Screen Relationships

Why aren't there many examples of healthy and realistic relationships in TV, film and online?

- Romantic relationships in the media tend to be over dramatised to make them interesting and more exciting to watch
- They often portray a relationship in a very short amount of time, so things move very quickly.
- People on reality TV possibly have other motives and will act differently because they know they're being watched
- Casting can often be limited
- There are limits to what can be shown on TV and film
- They're usually designed for entertainment rather than to provide a public health message or education.

What impact might this have on how young people think about their own relationships?

- It may cause inaccurate expectations about how quickly relationships should develop
- It may lead to people accepting arguments/breakups as a typical part of relationships
- It could possibly desensitise to issues such as cheating
- It could lead to lowered self-esteem and concerns about body image compared to celebrity culture
- It may lead to individuals believing they are only worthwhile if in a relationship
- There are very few models of what healthy relationships look like.

Who are these representations of relationships appropriate for?

Film, DVD and online classifications can help identify what viewing is appropriate for your age range. Some films, TV programmes shown after 9:00 PM, or online content aimed at older viewers are more likely to have more graphic representations of relationships and may focus on 'grittier' storylines which represent unhealthy relationships.

KPI5: Types of Contraception

Birth control	What is it?	How to use	Prescription Needed	Protects against STIs
Oral Contraceptive	Most contraceptive pills stop ovulation by preventing the ovaries from releasing an egg each month. Oral contraception needs to be taken around the same time each day.	Take one pill every day as directed	Yes	No
Injection	Each injection is more than 99% effective at preventing pregnancy. This method stops ovulation and makes the fluid at the opening to the uterus (womb) thicker, stopping sperm from getting through. The injection lasts 12-14 weeks.	Get injections every three months	Yes, injection given in health care providers office	No
Female condom	It is a loose non-latex pouch with a flexible ring at each end that sits in the vagina, to stop sperm from getting into the uterus.	Insert every time before sex	No	Yes
Male condom	It is a is a strong latex (rubber) pouch that is put over the erect penis to stop sperm from getting into the vagina.	Partner must wear every time during sex	No	Yes

KPI6: What is consent?

Consent is:

1. Freely given. It's not okay to pressure, trick, or threaten someone into saying yes.
2. Reversible. It's okay to say yes and then change your mind — at any time!
3. Informed. You can only consent to something if you have all the facts.
4. Enthusiastic. You should do stuff you WANT to do, not things people expect you to do. If someone doesn't seem enthusiastic stop and check in.
5. Specific. Saying yes to one thing (like going to the bedroom to make out) doesn't mean you're saying yes to other things (like having sex).

Consent cannot be given when:

1. When a person is drunk or high, to the point that they are unable to speak or look after themselves.
2. Asleep or Passed Out – if they are not conscious, they are unable to agree to any sexual activity. If someone passes out whilst engaging in sexual activity – STOP!
3. They are Underage – Legally a person under the age of 16 cannot give consent to any sexual activity.
4. Mental disability or learning difficulties which mean they are unable to fully understand what they are consenting to.

PKI6: Pornography

Pornography Laws in the UK:

- The legal age to buy/access pornographic material is 18, be this magazine, DVD's or internet access.
- It is legal to watch pornography in the UK if it doesn't feature under 18's, sex with animals, torture, scenes of rape or sexual assault, scenes which are violent to the point of life threatening or likely to cause serious harm.
- Under 18's who film or take sexual pictures of themselves or others can be charged with child pornography offences which can lead to prison sentences of up to 10 years. Even if all involved agreed.
- It is illegal to watch pornography with an under 18, this is considered a form of abuse.
- It is illegal to make and/or distribute pornographic photographs or films without all participants knowledge and consent. This can lead to up to 2 years in prison.

Ways in which pornography can distort views of relationships and sex include...

- Sex ends when the man ejaculates and orgasms.
- Women orgasm every time they have sex.
- People use insults and abusive language when having sex.
- Everyone wants to have sex all the time.
- Sex is an aggressive act of dominance of one partner over another.
- Women are portrayed as bored and sexually frustrated.
- People want to have sex with more than one person at a time.
- External ejaculation is expected and common.
- Anal Sex is common and popular amongst heterosexual couples.
- Sex is good every time.
- Penises are large (over 6inches)
- Sex is all about what men want and men are in control.
- Women are expected to dress up and wear make up for sex.
- Sex is loud.
- Consent to sex means all sex acts.
- You must look and dress a certain way to be considered sexy

PCSHE – Year 9 Topic 4 – Healthy Lifestyles

KPI1: Key Terms:

1. **NHS (National Health Service):** The NHS is the public healthcare system in the United Kingdom. It provides medical services, including doctors, hospitals, and prescriptions, to residents for free or at a reduced cost.
2. **Decay:** Decay refers to the gradual damage or deterioration of something, such as a tooth, due to the action of bacteria or other factors.
3. **Wisdom Teeth**: Wisdom teeth are the third set of molars that typically emerge in a person's late teens or early twenties. They can sometimes cause dental issues and may need to be removed.
4. **Root Canal Treatments:** A root canal treatment is a dental procedure used to repair and save a badly damaged or infected tooth by removing the pulp and cleaning and sealing the inside of the tooth.
5. **Veneers:** Veneers are thin shells made of porcelain or composite material that are placed over the front surface of a tooth to improve its appearance, such as covering stains or chips.
6. **Crowns:** A dental crown is a cap that is placed over a damaged or weakened tooth to protect it and restore its shape and function.
7. **Braces:** Braces are orthodontic devices used to straighten and align teeth. They consist of brackets and wires that gradually move teeth into their desired positions.
8. **Teeth Whitening:** Teeth whitening is a cosmetic dental procedure that involves the use of bleaching agents or other methods to lighten the color of teeth and make them appear whiter.
9. **Cosmetic Dentistry:** Cosmetic dentistry is a branch of dentistry focused on improving the appearance of teeth and smiles through various treatments and procedures.
10. **Consensus:** Consensus means general agreement or the collective opinion of a group of people on a particular matter or issue.
11. **Vigorous:** Vigorous means doing something with a lot of energy, force, or intensity. It's often associated with activities that require physical effort.
12. **Processed Meat:** Processed meat is meat that has been modified through various methods, such as smoking, curing, or adding preservatives. Common examples include sausages and bacon.
13. **Bowel Cancer:** Bowel cancer, also known as colorectal cancer, is a type of cancer that begins in the colon or rectum. It can be serious and requires medical treatment.
14. **Allergies:** Allergies are the body's adverse reactions to substances like pollen, certain foods, or pet dander. Allergies can lead to symptoms such as sneezing, itching, or hives.
15. **Influences:** Influences are factors or people that have an effect on your thoughts, behavior, or decisions. They can come from various sources, like friends, family, or the media.
16. **Depression:** Depression is a mental health condition characterized by persistent feelings of sadness, hopelessness, and a lack of interest in activities. It can affect a person's overall well-being.
17. **Fatigue:** Fatigue is a state of extreme tiredness or exhaustion, often resulting from physical or mental exertion.
18. **Immune System:** The immune system is the body's natural defense mechanism that helps protect against infections and diseases. It consists of various cells and organs that work together to keep the body healthy.
19. **Stimulant:** A stimulant is a substance that increases alertness, energy, and attention. Some common stimulants include caffeine and certain medications.

KPI2; Healthy Sleep

What can cause problems with our sleep?

Medical issues, technology, hunger, stress, mental health issues, your bed, clutter and messy rooms, napping and lie ins

Consequences of sleep deprivation:

- **Emotional Affects**: Irritability, mood swings, fatigue / tiredness, lack of motivation, depression
- **Physical Affects:** High Blood Pressure, Reduced Sex Drive, Lower Immune system, Disrupt hormone regulation, Higher risk of type 2 diabetes
- **Cognitive effects:** Forgetfulness, Clumsiness, Difficulty focusing

KPI3: Tips for a good night's sleep:

- Routines – set a routine which your body can recognize is a wind down for sleep.
- Tech free bedrooms – stop using technology such as tablets and phones 2 hours before bed or use a blue light filter.
- Clutter free bedrooms – Keeping your bedroom clutter free and tidy and help make the room feel calmer and more relaxing.
- Reduce stimulant food intake – foods and drinks which contain a lot of sugar and caffeine can impact your sleep so try not to consume too much after 3pm.

PCSHE – Year 9 Topic 4 – Healthy Lifestyles

KPI3: Choices about Diet and Exercise

What influences choice about diet and exercise:

Family, friends, celebrities, media, social media, NHS guidelines, advertising campaigns.

Facts:

- The NHS recommends five portions of fruit and vegetables a day.
- Eating too much of anything can be bad for health and highly processed meats can have a negative health effect, for example the Department of Health and Social Care suggest that there is a chance that consuming processed red meat can increase the risk of bowel cancer
- Children and young people (aged 5-18) should engage in moderate-to-vigorous intensity physical activity for an average of at least 60 minutes per day across the week. This can include all forms of activity such as physical education, active travel, after-school activities, play and sports

Diet:

There is a general consensus that there are some foods people should eat more of/choose more often:

- Fruit, Vegetables, Beans, Pulses, Eggs, Fish, Other protein

There is a general consensus that there are some foods people should eat less of/choose less often:

- Foods high in salt
- Foods high in sugar
- Highly processed food

Some people might also follow very specific diets for medical reasons, under the guidance of a health of a professional. For example, some people are unable to eat certain foods due to allergies, such as to gluten, or peanuts.

KPI 4: Dental Health

Cosmetic versus dentistry for health

1. Dental check-ups, fillings to treat decay, the removal of decayed teeth or wisdom teeth and root canal treatments are all examples of dentistry for health.
2. Veneers and the replacement of existing amalgam fillings with white fillings are usually cosmetic treatments. Amalgam fillings do sometimes need replacing if there is decay underneath them or if they are defective, however if amalgam fillings that are in good condition are replaced this may provide unnecessary risk to the tooth as additional healthy tooth will be drilled away in the process. Similarly, veneers require the filing down or cutting away of part of the tooth in order to be applied, it is an irreversible process and veneers can require replacement due to cracking, wearing down or loosening.
3. Braces, crowns, scale and polish treatments and whitening treatments are sometimes cosmetic procedures but are also sometimes treatments covered by the NHS as part of dentistry for health.

Treatment:

- You are entitled to free NHS dental care until 19 and in full-time education. However, cosmetic procedures will incur a cost that is not covered by the NHS.
- The only safe place to receive cosmetic treatments is from a qualified dental professional. Tooth whitening from beauty therapists, for example in spas or clinics, is illegal and can cause major damage to the mouth.

If you need further support...

- Safeguarding team – Mr Ogden, Mrs Jones, Mrs Loveridge, Mr Robbins
- Parents/Friends
- Tutor/Teachers
- Outside organisations:
- NHS Eat Well: https://www.nhs.uk/live-well/eat-well/
- British Nutrition Foundation: https://www.nutrition.org.uk/healthyliving/lifestages/teenagers.html
- The Oral Health Foundation www.dentalhealth.org 01788 539780
- NHS Choices: www.nhs.uk
- NHS Change4Life Sugar Smart: www.nhs.uk/change4life/food-facts/sugar
- NHS Under-18s guide to quitting smoking: www.nhs.uk/live-well/quit-smoking/quitting-smoking-under18s-guide
- Dental Trauma UK: www.dentaltrauma.co.uk (for further information on knocked out teeth)

Geography Topic 4 – What happens where the land meets the sea? (Coasts)

KPI1: Key words

1. **Coastline**: The area of land where the sea meets the shore.
2. **Erosion**: The wearing down or breaking down of materials like rocks
3. **Geomorphology**: The study of how the coastline changes.
4. **Weathering**: The process that changes the structure and appearance of materials like cliffs, by how they are exposed to the atmosphere
5. **Geology**: The study of rocks
6. **Glacial Till:** Soft material dumped in an area by glaciers.
7. **Subaerial erosion:** The weathering and movement of the top of a cliff
8. **Hydraulic Action**: the power of the wave forces water and air into cracks in the rock to split it apart. Over time this creates faults and notches which get bigger.
9. **Abrasion**: The waves pick up rocks from the sea and throws them against other rocks or the cliff faces. Over time this rubs and smooths the rock, like using sandpaper.
10. **Solution**: Salts or chemicals in the water act to dissolve the rocks they touch.
11. **Attrition**: The sea picks up angular rocks and knocks them into each other. This chips away the corners to make them rounder.
12. **Traction** - large, heavy pebbles are rolled along the seabed.
13. **Saltation** - pebbles are bounced along the seabed.
14. **Suspension** – lighter sediment is suspended (carried) within the water.
15. **Solution** - the transport of dissolved chemicals.
16. **Longshore drift:** The movement of material down the coastline in the direction of the prevailing wind.
17. **Prevailing wind**: Strongest wind
18. **Swash**: Waves that move up the beach.
19. **Backwash**: Waves that move down the beach
20. **Constructive waves**: More gentle waves that deposit more material.
21. **Destructive waves**: More violent waves that erode material.
22. **Faults**: a crack or fracture in the rock.
23. **Lithosphere** - The lithosphere is the solid, outer part of Earth. The lithosphere includes the brittle upper portion of the mantle and the crust, the outermost layers of Earth's structure.

KPI2 – Geology and Weathering

Types of <u>geology</u> (rocks):

Igneous rocks:

- Formed from molten rock
- The molten rock cools slowly allowing minerals to form large crystals which lock together
- Very hard and durable
- Examples: Granite and basalt. Used to Construct some buildings, surface roads etc.

Sedimentary rocks:

- Formed under the sea under pressure when rock particles were squeezed and cemented together to form rock.
- Examples: Chalk, limestone, clay. Used to make concrete and clay is used to make house bricks.

Metamorphic rocks:

- Form from existing rocks that are transformed by heat or pressure – existing minerals melt and form new minerals.
- Mudstone (sedimentary) is transformed into slate. Limestone into marble.
- Examples: Marble, slate. Used for Slate can be used for roof tiles, marble is a building stone that is used to make statues.

<u>Weathering</u>:

1. Freeze-thaw weathering: the disintegration (break-up) of rocks by physical forces. Water freezes in faults in the rocks and expands, widening cracks overtime.
2. Chemical weathering: occurs when rainwater, which is slightly acidic comes into contact with rock. The acid attacks the rock, causing it to rot and accumulate.
3. Biological weathering: occurs when plants and animals break down rock. The roots or vegetation can get into cracks in the rock, causing them to split.

KPI3: Erosion and Transportation

Processes of Erosion:

- **<u>Hydraulic Action</u>**: the power of the wave forces water and air into cracks in the rock to split it apart. Over time this creates faults and notches which get bigger.
- **<u>Abrasion</u>**: The waves pick up rocks from the sea and throws them against other rocks or the cliff faces. Over time this rubs and smooths the rock, like using sandpaper.
- **<u>Solution</u>**: Salts or chemicals in the water act to dissolve the rocks they touch
- **<u>Attrition</u>**: The sea picks up angular rocks and knocks them into each other. This chips away the corners to make them rounder

Processes of Transportation

- **<u>Traction</u>** - large, heavy pebbles are rolled along the seabed.
- **<u>Saltation</u>** - pebbles are bounced along the sea bed.
- **<u>Suspension</u>** - lighter sediment is suspended (carried) within the water.
- **<u>Solution</u>** - the transport of dissolved chemicals.

KPI4: Landforms created by processes of erosion.

Cave, arches, stacks and stumps.

1. A **<u>fault</u>** opens in the rocks
2. Due to **<u>hydraulic action</u>** the fault becomes bigger to form a notch
3. **<u>Abrasion</u>** and **<u>hydraulic action</u>** widen the notch into a cave that keeps getting bigger
4. Due to waves and erosion, the cave opens through and forms an arch
5. The arch keeps widening and the roof becomes too heavy and collapses.
6. This leads to a stack standing but still being undercut.
7. The stack will eventually collapse, leaving a stump.

Wave cut platforms

1. Erosion at the base of the cliff at high tide creates a notch
2. Over time the notch is enlarged by attrition and hydraulic action
3. The notch makes the cliff unstable and gravity causes it to collapse over time.
4. The process retreats and the cliff retreats inland.

Geography Topic 4 – What happens where the land meets the sea? (Coasts)

KPI5: Processes of transportation

Constructive and Destructive waves:

Formation of waves:

1. Waves are caused by the movement of the wind.
2. As wind blows over the surface of the sea, it creates friction on the surface which pushes the water along to build up a wave.
3. Water within a wave moves in circular patterns getting bigger as the waves gets taller and then when the wave meets the shore, it becomes unstable and is forced to break.

Constructive waves lead to gently sloping beaches.

Destructive waves lead to steep beaches.

Longshore drift:

1. Waves approach at an angle due to the direction of the **prevailing wind.**
2. The **prevailing wind** pushes a wave up the beach, picking up beach material in the swash
3. Another wave then picks up beach material and moves it down the beach.
4. The whole process keeps on repeating, moving the material back up and down the beach over and over until it meets a barrier.

KPI7: How does deposition change the coastline?

Deposition: When waves no longer have the energy to carry the material that has been eroded and transported along the coastline, it is deposited (put down).

KPI8: How has life on the Holderness Coast changed?

It is the fastest eroding coastline in Europe. It is estimated that 32 villages since the Roman times have been lost.

Erosion is occurring because...

- Rock type
- Prevailing wind direction
- Winter storms

Impacts:

- In Skipsea, more than 200 homes are predicted to be lost in the next 100 years.
- More than 600 people are expected to be moved within the next 5 years.
- Spurn Point a conservation site is under threat from erosion.
- A gas terminal that provides 25% of Britain's gas supply is 25m from the cliff edge.

KPI9: What defences can be used to protect the coast?

- Hard engineering: Involves more expensive and dramatic physical structures and changes.
- Soft engineering: Involves trying to work more closely with nature and usually cheaper.

Types of hard engineering

Type	+ives	-ives
Groynes	Reduces longshore drift	Wood groynes have a short life span
Sea Wall	Protect the land behind	Unattractive and expensive option
Rock Armour	Often considered natural looking	Can be expensive if large scale
Gabions	Absorb wave energy against cliffs	Considered unattractive

Types of soft engineering

Type	+ives	-ives
Beach replenishment	Maintains the size of the beach to absorb wave energy	Has to be frequently replaced due to storms
Managed retreat	Creates salt marshes	Often lose farmland and money must be paid to land owner.

KPI 6: Formation of Spits and Bars

Formation of a spit:

1. Sediment is carried by longshore drift
2. When there is a change in the shape of the coastline, deposition occurs. A long thin ridge of material is deposited. This is the spit.
3. A hooked end can form if there is a change in wind direction.
4. Waves cannot get past a spit, therefore the water behind a spit is very sheltered. Silts are deposited here to form salt marshes or mud flats.

Formation of a bar:

1. Sediment is carried by longshore drift
2. When there is a change in the shape of the coastline, deposition occurs. A long thin ridge of material is deposited.
3. A spit can grow across a bay, joining two headlands together. This landform is known as a bar.
4. They can trap shallow lakes behind the bar, these are known as lagoons. Lagoons do not last forever and may be filled up with sediment.

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Geography Year 9 Topic 5 How sustainable is ecosystem exploitation?

KPI1: Key words

- **Ecosystem**: A community made up of biotic and abiotic elements.
- **Biotic**: Living organisms (e.g. plants and animals)
- **Abiotic**: Non-living things (e.g., rock and soil)
- **Producer:** converts energy from the sunlight into sugars by photosynthesis to produce their own food e.g. plants.
- **Consumer:** animals who feed on the plants, getting the energy from the producer.
- **Decomposer:** break down dead organisms/material and then the nutrients are recycled back into the soil e.g., fungi/bacteria.
- **Biomes:** A biome is a large-scale ecosystem defined by abiotic factors: Climate, relief, geology, soils, and vegetation.
- **Latitude:** The distance of a place north or south of the earth's equator.
- **Exploitation:** when the natural resources for an ecosystem are used for economic benefit.
- **Deforestation:** Cutting down trees
- **Pastoral farming:** is aimed at producing livestock, rather than growing crops.
- **Arable farming:** involves growing crops such as wheat and barley.
- **Hydroelectric Power:** electricity produced from generators driven by turbines that convert the potential energy of moving water into mechanical energy.
- **Infrastructure**: the things that makes a country work. It is the basic equipment and structures (such as roads and bridges) that are needed for a country, region, or organisation to function properly.
- **Food Chains**: A food chain refers to the order of events in an ecosystem, where one living organism eats another organism, and later that organism is consumed by another larger organism.
- **Food Webs**: A food web consists of all the food chains in a single ecosystem

KPI 1 What is an ecosystem?

Ecosystem: an environment in which plants and animals interact with each other and the climate on rocks and in soil

Parts of an ecosystem: animals, plants, rocks and soil and the climate.

We can classify parts of an ecosystem as either:

- **Biotic** (alive) – plants and animals.
- **Abiotic** (they have never been living) – climate and rocks.

Transfer of energy in an ecosystem:

Energy transfers can be shown in two different ways for ecosystems:

- A **food chain** outlines who eats whom e.g. insects eat plants, birds eat insects.
- A **food web** is all of the food chains in an ecosystem.

Ecosystems are very sensitive to change. The **biotic and abiotic** parts of the ecosystem can be altered by either natural factors or human management.

Changes to the ecosystem caused by natural factors include:

- drought (*lack of rain)*
- flood

KPI3 How does latitude affect the location of biomes?

Biome: A large-scale ecosystem.

Location of Biomes:

- **Deserts** are located along the Tropic of Cancer and Capricorn. They are located between 15-35°North and South of the Equator. Deserts are in the North of Africa, Eastern parts of the USA & central Australia.
- **Grasslands** are located above the Tropic of cancer and Capricorn. They are located between 23.5°- 60° north and south of the equator. Grasslands are in North America, Asia and South America.
- **Tundra's** are located between 60°- 90° north of the equator. They are in the north of North America, Europe and Asia.

There are TWO reasons why the latitude affects the temperature of biomes.

- Reason 1: Distance from the sun. Places located at higher latitudes (further away from the equator) are colder because of the shape of the earth, the sun's rays have a longer distance to travel.

KPI 4 How are tropical rainforests exploited?

Example country: The Amazon rainforest is located on the continent of South America. Most of the Amazon is in the country of Brazil.

Causes of **deforestation**:

- **Logging**: The removal of trees in order to use their wood. This has caused an area of 589,000 km², larger than France, has disappeared in the last 30 years.
- **Cattle farming**: Farmers clear the forest and then use the land to graze (feed their cattle)
- **Road building**: Land is cleared to build roads to bring equipment and transport products to be sold. For example, the Trans-Amazonian Highway began construction in 1972 and is 4,000 kilometres long.
- **Settlement and population growth**: Clearing the forest to build settlements (housing) for workers. For example, Manaus, a city in the Amazon has a population of over 2 million showing the population growth.
- **Mineral extraction**: Vast areas of tropical rainforests to allow mining to occur. It has caused 50,000 hectares of land deforested.
- **Hydroelectric Power:** HEP in the Amazon Basin has caused areas of forest being flooded to create the reservoirs and dams. The flooding of the Balbina dam in Brazil resulted in the loss of 920 square miles of tropical rainforest.

Geography - Year 9 Topic 5 How sustainable is ecosystem exploitation?

KPI 5 What is coltan and where is it mined?

What is coltan? - Coltan is a mineral which is used in the making of mobile phones, laptops, and computers.

Example - The Democratic Republic of the Congo (DRC) is rich in mineral wealth and contains 80% of the world's coltan. Many coltan mines are in the DRC's Kahuzi-Biega National Park.

Why is coltan mining so damaging?

Coltan mining often takes place in areas where there are tropical rainforests. Before mining, a large amount of tropical rainforest needs to be cleared.

Benefits of coltan mining:

- Coltan is worth $100 per kilo.
- Miners earn between $10-$50 a week. This is 5 times more than most other people in the DRC.
- Coltan is one of the world's most vital (*important)* minerals, and 60% of coltan globally is found in the Democratic Republic of the Congo's (DRC) Kivu province. In 2019, 40% of the global coltan supply was produced in the DRC.

Problems of coltan mining:

- The Kahuzi-Biega national park is the largest national park in the DRC. It is a vast area of tropical rainforest and is home to the Eastern Lowland Gorilla. The population of the Eastern Lowland Gorilla has declined by 90% since 1990 from 5000 to 500. This is due to a loss of habitat and miners selling their meat as bush meat.
- The Park is a UNESCO world heritage site due to its amount of biodiversity (*range of plants and animals)* and vast areas of tropical rainforest have been cleared to make way for the mines.
- 30% of children have abandoned school to work in the mines.
- Surrounding countries are also starting to mine Coltan. The Rwandan army are making £20 million a month.
- Competition for the mines is fierce and often very violent.
- Gangs and rebel troops have taxed miners for access to the mines. The money from the tax is used in the illegal buying and selling of weapons.
- Occupational hazards include daily exposure to Radon, a radioactive substance associated with coltan, which has been linked to lung cancer.

KPI 5 How are oceans being exploited?

Oceans are an important **ecosystem** as they are a huge source of food for the world's population. Over 1 billion people rely on fish as their main source of protein. This means many of the world's oceans are used for fishing. The global fishing industry employs over 38 million people. However due to the high demand for fish and continued employment of people it is causing some areas to be over fished resulting in ocean ecosystems being exploited and damaged.

Trawling:

A dredge is towed along the bottom of the sea by a fishing boat in order to collect edible (able to eat) bottom-dwelling species (animals that live at the bottom of the ocean).

- ***Problems:*** The nets or dredges both scoop up all kinds of fish, even the ones that they may not be trying to catch. The nets and dredges stir up and disturb all the bottom dwelling fish's habitat. In other words, all the living plants that grow on the lakes floor would be damaged.
- ***Advantages:*** You can catch a bunch of fish at once. In other words, it is fast and efficient. You can keep up with the demands of the stores that sell fish. So, fishing businesses can also make more money.

KPI 6 What is sustainable fishing?

Sustainable fishing -protects ocean environments and ensures fish stocks are not depleted (*run-out)* so they are there for future generations.

- Higher labour costs due to more time intensive fishing practices
- Lower profits due to not being able to catch at larger scales due to quotas
- Fish stocks remain healthy so will be there for future generations
- Can help to ensure food security as supplies won't run out.
- Protects endangered species

KPI 5 How is the savanna being exploited?

Safaris are popular holidays that people from higher income countries like the UK, USA and France go on. One of the most popular is the Masai Mara which is located in the Serengeti National Park. The Masai Mara is home to huge herds of wilder beast, lions, elephants, rhinos and many more. This attracts between 150,000 – 200,000 visitors each year.

Benefits of safari holidays

- Tourists can be educated about the dangers to the ecosystem and ways to help conserve it
- 15% of Kenya's income is from tourism.

Problems of safari holidays:

- Wildlife can be disrupted by tourism in the area.
- Locals only do the low-skilled jobs as companies will bring in foreign workers for the high-skilled jobs.

Knowledge Organiser - Year 9, Summer 1 - When does life begin?

Key words	Definition
Abortion	The deliberate ending of a pregnancy
Sanctity of Life	The belief that human life is given by God and special, so only God should be able to take it away.
Quality of Life	How good someone's life is, not in terms of money, but in terms of their ability to access all aspects of life and act independently
Conception	The point when the egg and the sperm join together
Embryo	An unborn baby between 0-8 weeks
Foetus	An unborn baby past the point of 8 weeks
Adoption	To legally take another persons child and raise it as your own.
Viable	The point at which a baby is able to survive outside the womb. Roughly 24 weeks.
Pro-Life	A group who campaign the criminalise abortion
Pro-Choice	A group who campaign for women's rights to have an abortion if she wants to.

KPI1: Sanctity of Life vs. Quality of Life
Sanctity of life is a key Christian teaching. Christians believe life is God given and is therefore special. Especially because we are all made 'Imago Dei' - In the image of God. Because of this belief, many Christians hold the view that only God can take life away and are therefore opposed to abortion as it ends the pregnancy and kills the embryo/foetus.

Quality of Life is often used by the pro-choice campaign. Many things can impact someone's quality of life including mental and physical disabilities, as well as mental health. If having a baby is going to impact the mother or child in any of these ways, some view it as more moral to allow the woman to end the pregnancy.

KPI2: When does life begin?
There is no clear scientific answer for when life begins. Due to this, religious and non-religious groups have debated the answer for many years.
Some believe it begins at conception, as soon as the egg and sperm join.
Others believe it is when the heart pumps blood at around 5 weeks, or when the brain develops at 6 weeks.
Some think it is at 24 weeks when the baby is viable and is able to survive outside of the womb if born early.
Finally, others think it is at birth, when you can breath and act more independently.

KPI3: Abortion and the Law vs. Abortion and Religion
In the UK there are strict laws about when and how a woman can have an abortion.
Abortion is legal in the UK up to 24 weeks and has to be agreed upon by two separate doctors to ensure the woman is fully aware of what she is doing and not being pressured into any particular decision.

However, religious and non-religious people often campaign against these laws in the pro-life movement. They follow teachings such as "before I formed you in the womb I knew you." as evidence that God wants us all to have life and chose us to live.

KPI4: Alternatives to abortion
One reason why many are against abortion is because there are alternatives out there.
Adoption is a common alternative where a mother who does not want a child is able to place it into an orphanage or organise for another couple to become the legal parents of their child after birth. This not only avoids killing the foetus but can give couples who struggle with infertility the child they so desperately want.

However, many have argued against this as an alternative as the mother's mental health could be greatly impacted by having to carry the baby for 40 weeks and then give it up.

Knowledge Organiser - Year 9, Summer 2 - What are alternative religions?

Key words	Definition
Alternative Religion	Smaller and less well known religions that exist around the world beyond the main six.
Scientology	Religion focused on reducing mental suffering and freeing our souls
Thetan	Word for soul in Scientology
Auditing	A form of therapy/ counselling given in Scientology
Paganism	A pre-Christian religion that focused on nature
Polytheism	Belief in multiple Gods/Goddesses
Mormonism	A group who formed from Christianity who place a lot of importance in their founder Joseph Smith
Rastafarianism	A religion with some Christian links which focuses on black people being led back to the promised lands of Africa by the second coming of Christ
Jehovah's Witnesses	Originating from Christianity, this is a religion that focuses on evangelism.
Evangelism	Spreading your religion to other people.

KPI1: Scientology

Scientology was founded in 1954 by a man called L.Ron Hubbard. It was originally meant to be focused on mental health with practices such as auditing therapy.
However, it has had accusations of not allowing people to leave the faith and of taking large sums of money from people which have led some to view it as a dangerous group.

KPI2: Paganism

A religion that dates back from before the creation of Christianity, Paganism was a popular religion in countries such as Egypt, Britain, Greece, Rome and Scandinavian cultures. This religion was polytheistic and believed in a mixture of the Norse, Greek and Roman Gods.
It forms the basis of some modern Christian beliefs as well such as Christmas.

KPI3: Mormonism

Also known as the Church of the Latter Day Saints, Mormonism is a controversial religion that was formed from Christian beliefs. They have a large Mission culture, where followers travel to other countries trying to spread their religion. They are not allowed to drink alcohol or caffeine.

KPI4: Rastafarianism

Also founded from Christian beliefs, Rastafarianism began in 1930s when a black political leader named Marcus Garvey prophesied that a black king would be crowned in Africa. This black king would be the 'Redeemer' of African people. Shortly after this, a man named Ras Tafari Makonnen (which means Prince Tafari Makonnen) was crowned Emperor in Ethiopia. This was seen by some as the prophecy coming true. People who believed this started calling their religion *Ras Tafari*.

KPI5: Jehovah's Witnesses

Another group founded from Christian belief, Jehovah's Witnesses get their name from the Hebrew term for God. Jehovah's Witnesses do not believe Jesus was God in human form and so do not worship him as a God. They also do not celebrate Christmas for this same reason.

Year 9 French Term 3 – Ma vie scolaire (My school life)

SB 3.1	My favourite subject is drama	Ma matière préférée c'est le théâtre.
	I love to sing and I am good at it.	J'adore chanter et je suis fort(e) en ça.
	I study Maths but we have too much homework	J'étudie les maths mais on a trop de devoirs
	I think that Music is more important than dance	Je pense que la musique est plus importante que la danse
SB 3.2	You must not use your mobile in class.	Il ne faut pas utiliser son portable en classe.
	It's unfair because it is useful for schoolwork.	C'est injuste parce que c'est utile pour le travail scolaire.
	You must do your homework and respect the teachers	Il faut faire ses devoirs et respecter les profs
	You must not eat in class	On ne doit pas manger son portable en classe
SB 3.3	It is forbidden to skip lessons	Il est interdit de manquer les cours
	I've learnt a lot of things	J'ai appris beaucoup de choses.
	He never forgot his homework.	Il n'a jamais oublié ses devoirs
	I've made lots of progress	J'ai fait beaucoup de progrès
SB 3.4	My primary school was called Saint Theresa.	Mon école primaire s'appelait Saint Thérèse.
	When I was little, I used to like English.	Quand j'étais petit(e), j'aimais l'anglais.
	Before, I used to study two languages in the north of Scotland.	Avant, j'étudiais deux langues
	When I was little I used to go to school by foot	Quand j'étais petit, j'allais à l'école à pied
SB 3.5	Next year I am going to continue to improve my French.	L'année prochaine je vais continuer à améliorer mon français.
	At the moment I'm learning French	En ce moment j'apprends le français

	Learning foreign languages is really important	Apprendre les langues étrangères est vraiment important
	because you can discover new cultures	car on peut découvrir de nouvelles cultures

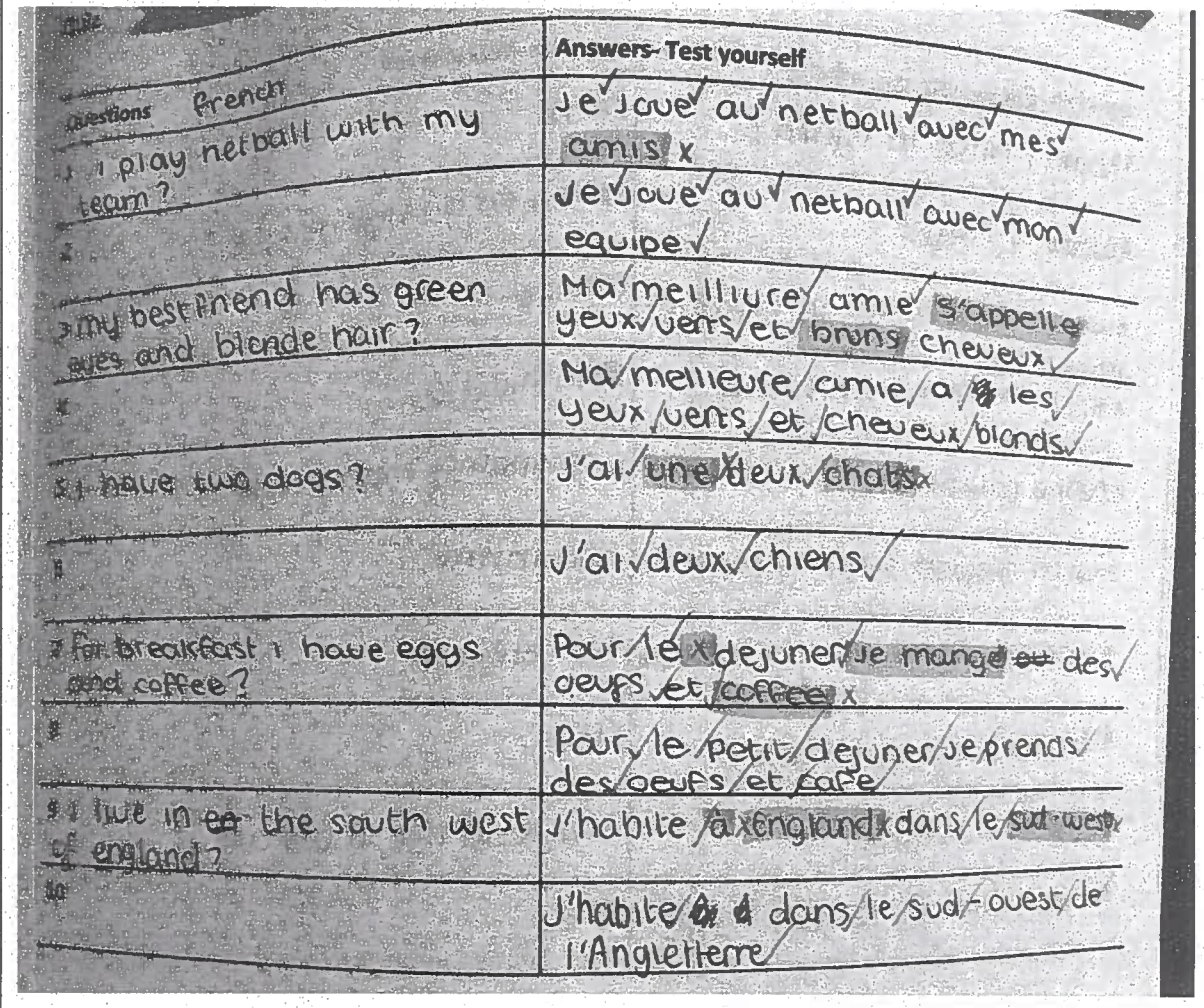
MFL key classroom language:

Term 3 Ma vie scolaire (My school life)

Key term: Conditional

Definition: The 'would' form of the verb.

Example: J'irais à l'université (I would go to university)



Questions French	Answers- Test yourself
1 I play netball with my team?	Je joue au netball avec mes amis x
	Je joue au netball avec mon equipe
2 My best friend has green eyes and blonde hair?	Ma meilleure amie s'appelle yeux verts et bruns cheveux
	Ma meilleure amie a les yeux verts et cheveux blonds
3 I have two dogs?	J'ai une deux chats x
	J'ai deux chiens
4 For breakfast I have eggs and coffee?	Pour le x dejuner je mange ~~et~~ des oeufs et coffee x
	Pour le petit dejuner je prends des oeufs et cafe
5 I live in ~~en~~ the south west of england?	J'habite à x england x dans le sud-west
	J'habite ~~à~~ dans le sud-ouest de l'Angleterre

Year 9 Spanish Term 3 – Mi gente, mi mundo (My People, My World)

SB 3.1	In my family there is my dad and my mum and I.	En mi familia hay mi padre, mi madre y yo.
	My brother is tall and funny.	Mi hermano es alto y cómico.
	He has short blonde hair.	Tiene el pelo corto y rubio.
	My parents are quite serious.	Mis padres son bastante serios.
SB 3.2	In general I get on well with my best friend.	Por lo general me llevo bien con mi mejor amigo.
	because he makes me laugh.	porque me hace reír.
	Sometimes I argue with my sister.	A veces me peleo con mi hermana.
	because we don't have a lot in common.	porque no tenemos mucho en común.
SB 3.3	I would say that I am kind and hardworking.	Diría que soy simpatico y trabajador.
	For me the most important thing is my education.	Para mi lo más importante es mi educación.
	What worries me is animal rights.	Lo que me preocupa son los derechos de los animales.
	My dream is to be successful.	Mi sueño es tener éxito.
SB 3.4	My role model is a sports person.	Mi modelo a seguir es un deportista.
	because he fights against discrimination.	porque lucha contra la discriminación.
	I have been following streamers for a year.	Sigo a streamers desde hace un año.
	I am a fan of cooking channels.	Soy fanatico de los canales de cocina.
SB 3.5	I use my mobile in order to chat online.	Uso mi móvil para chatear en línea.
	We use social media in order to publish photos.	Usamos las redes sociales para publicar fotos.

	Unfortunately they can be a waste of time.	Desafortunadamente puede ser una pérdida de tiempo.
	I think that social media is necessary in my life.	Pienso que las redes sociales son necesarias en mi vida.

MFL key classroom language:

Term 3 - Mi gente, mi mundo (My people, My world)

Key term: Adjectival agreement

Definition: When an adjective matches in number and gender.

Example: Mis hermanas son simpáticas (my sisters are kind)

Art - Year 9 - Project 2: Mental Health

Big Idea 1: Technical Skill and Mastery		Big Idea 2: Art in Context	Big Ideas 3: Critical Thinking & Evaluation
Formal Elements **Line** A mark that connects two or more points. These can be straight, curved, short or long. **Tone** The lightness or darkness or something. For darker tones use a higher grade B pencil. **Colour** Colour is what you see when light reflects off something. Colours are often used to create a range of emotions. **Texture** How something looks or feels e.g. fluffy, rough, smooth etc. **Pattern** A symbol, shape or colour that repeats. Man-made patterns are designed by humans, natural patterns are formed by nature. **Shape/Form** Shape is 2D e.g. rectangles. Form is 3D e.g. cubes, spheres etc. **Primary Colours** Colours that can't be mixed/ made from other colours e.g. red, yellow and blue.	**Shading Techniques** Hatching, Cross-Hatching, Stippling and Scumbling. **Continuous Line Drawing** A drawing technique in which the line remains unbroken from the beginning to the end. Whilst drawing the pen or pencil stays in contact with the paper until the drawing is completed. **Fragmentation** The process of breaking or splitting an image. **Typography** The art of arranging and designing typefaces or text to make written language both readable and visually striking. **Mono-Printing** A form of printmaking that has lines or images that can only be made once. **Composition** This is where you decide to place 'things' within your work. Things can refer to lines, shapes, colours, textures, objects etc.	**Portrait** A piece that depicts a human face or figure. **Facial Expressions** The arrangement of facial features (eyes, eyebrows, nose and mouth) to show specific emotions. **Body Language** How a figure is positioned to express emotions. **Vincent Van Gogh (1853-1890)** Vincent Van Gogh, a Dutch artist (Netherlands), focused on representing his emotional and spiritual state in each of his artworks. Van Gogh used line work and colours to express his emotions. **Van Gogh's Letters (1872-1890)** There are about 800 surviving letters he wrote to his brother Theo which document his life and are a key reason we know so much about his art and his mental health struggles. **Frida Kahlo (1907-1954)** Frida Kahlo's life was filled with many events which inspired her work, especially her complicated relationship with her husband Diego Rivera. She was	**Analyse** To break something e.g. an artwork into smaller parts so you can examine it more easily. In art we analyse a work by identifying the Formal Elements (**Form**), explaining how it is made (**Process**) and why it has been made (**Mood**). **Evaluate** To determine the quality of your work as well as your understanding of how you can develop and improve your work. This is often done during a project and at the end of a project. **Annotate** Providing written notes on your work as it develops as well as the process of writing notes during artist research. **Mental Health** It includes our emotional (how we feel), our psychological (how we think) and our social well-being (our relationships with others). 39

Secondary Colours
Colours that can be made by mixing two primary colours.
Red + Blue = Purple
Yellow + Blue = Green
Yellow + Red = Orange

Tertiary Colours
Colours that can be made by mixing a primary and secondary colour together e.g. Blue + Green = Turquoise.

Complementary Colours
Colours that are opposite each other on the colour wheel.
Blue & Orange
Red & Green
Purple & Yellow

Analogue Colours
Colours that are next to each other on the colour wheel e.g. Red, red-orange and orange.

Tints/ Shades
Tint - Adding white to a colour to make it lighter.
Shades - Adding black to a colour to make it darker.

Blender Stick
A paper stump that allows you to blend tones.

Blending
The smooth transition between tones.

Watercolour Wash
Making watercolours lighter by adding more water.

Collage
Ripping/ Cutting materials such as paper, photographs or fabric and sticking them to a surface to create an image.

Mixed Media
Using more than one material within a piece of work.

Proportion
The correct size and placement of objects within a piece of work.

Grid Method
Splitting an image into smaller equal squares or rectangles to accurately copy an image. This method helps you draw in proportion.

a Mexican artist and was inspired by the nature and artefacts of her homeland.

Frida Kahlo's Diary (1944-1954)
It contains watercolour illustrations and ink drawings, as well as poems and personal thoughts that detail her political views and physical and emotional pain.

Symbolism
The use of an image, object or colour to express more complex themes, ideas or emotions beyond their actual physical appearance e.g. a rose can be a rose or symbolise love/beauty.

Big Idea 4: Personal Expression & Reflection

Personal Expression
The act of using your imagination, thoughts and feelings to develop your artwork.

Final Piece
The final outcome to a project where you apply what you have learnt throughout the project e.g. theme, skills & techniques and links to artists.

Links to Artists
Using elements of artist work e.g. theme, colour or techniques in your own work.

Year 9 – Food Technology (Hospitality and Catering) - Malnutrition (Deficiencies/Excesses & Effects on Health)

Malnutrition	There is a link between a poor diet, and the risk of developing some diseases. This includes the risk of: *cancer; *Coronary heart disease (CHD); *bone health; *anaemia. Having intakes of energy and/or nutrients below or in excess of needs for long periods of time can affect health. The risk of malnutrition is increased by: *increased requirements for some nutrients *restricted range of foods; *reduction in available income; *very low income; *medical conditions; *psychological conditions.
Undernutrition	Worldwide, Kwashiorkor and marasmus are two common diseases caused by a lack of protein and energy. Fat soluble vitamins (A, D, E and K) are stored in the body so it takes time for deficiency diseases to develop.
Diet and Cancer	The World Cancer Research Fund has released nine cancer prevention recommendations *Be a healthy weight *Move more *Avoid high-calorie foods and drinks *Enjoy more grains, veg, fruit and barley. Limit intake of red meat and avoid processed meat *Don't drink alcohol *Eat less salt *Don't rely on supplements. Breastfeed your baby.
Diet & Coronary Heart Disease	It is believed that 80% of CHD and strokes could be prevented by changes to lifestyle factors, such as diet, physical activity and smoking. Changes to the diet to reduce the risk of CHD include: *increasing oily fish intake; *reducing salt intake; *increase fruit and vegetables; *decreasing alcohol consumption.
Bone Health	Calcium is important for strong bones. Vitamin D is needed for calcium to be absorbed from food.
Anemia	Iron is vital for making red blood cells. Iron from the diet forms haemoglobin, which carries oxygen in the blood. Anaemia develops if the body's stores of iron are too low.
Obesity	People who are obese are more likely to suffer from CHD, type 2 diabetes, gall stones, arthritis, high blood pressure and some types of cancers, i.e. colon, breast, kidney and stomach.
Inactivity	It is also important that the amount of time being sedentary is reduced. Over time, sedentary behaviour can lead to weight gain and obesity, which can increase the risk of developing chronic diseases in adulthood.

Food Labelling

Packaging Information	Information on the labels of pre-packed food and drink products can be legally required or just for consumer information. Legally required information is: country of origin and place of provenance (where an ingredient is from); date mark; list of ingredients (including additives and allergens); name and address of the manufacturer, packer or seller; name of food or drink; nutrition information; storage and preparation instructions; weight or volume. Consumer information (not a legal requirement) front-of-pack nutrition label; price; serving suggestions/image.

Year 9 – Food Technology (Hospitality and Catering) - Functional Characteristics of Ingredients

Selecting Ingredients	Ingredients are chosen for a number of reasons, *to add flavour, colour or texture *to provide a particular function, e.g. to thicken *to provide nutrients or change the nutritional profile of a dish, e.g. to increase fibre *to extend the shelf life, e.g. vinegar for pickling or chemical preservatives *cost and availability, e.g. fruit in season *to satisfy a need to buy food with a certain provenance, e.g. Red Tractor.
Adding Flavour, Colour or Texture	• Fresh and dried herbs and spices can be added to dishes to provide flavour and replace the salt in some dishes, • Fruit, vegetables, herbs and spices can all be used in recipes to add colour. • Nuts, seeds, grains, fruit and vegetables can be added to recipes to provide texture. • The cooking method and cooking time can impact the texture, e.g. steaming or microwaving vegetables quickly can retain their colour, flavour and firm texture. • Equipment used to process food can impact the texture - blending soup for a smoother texture.
Ingredient functions in recipes	**browning**, e.g. flour in a bread roll (dextrinisation); **raising**, e.g. yeast in bread (aeration); **setting**, e.g. scrambled eggs (coagulation); **thickening**, e.g. flour in a roux sauce (gelatinisation).
Raising Agents	**mechanical**, e.g. beating, creaming, rolling and folding, sieving, whisking; **chemical**, e.g. baking powder, baking powder, self-raising flour; **biological**, e.g. yeast. Different foods may use one or more of these to achieve a desirable end result.
Tenderisation	Mechanical tenderising – a meat cleaver or meat hammer may be used to beat the meat. Cutting into small cubes or mincing can also help. Chemical tenderisation (marinating) –the addition of any liquid to flavour or soften meat before cooking.

Glossary

Key Terms	**Aeration**: Incorporating air into a mixture. **Caramelisation**: The chemical change of heated sucrose (sugar) to caramel, which produces flavour and browning. **Coagulation**: The irreversible denaturation of protein molecules to thicken and set. **Denaturation:** A change in the structure of protein molecules, resulting in their unfolding. **Dextrinisation**: The reaction of dry heat on the surface of food which changes starch to dextrin, e.g. toast. **Gelatinisation**: The process of thickening which takes place when a mixture of starch and liquid is heated. **Shortening**: The effect caused when fat is rubbed into flour (rubbing in method - crumble. The fat coats the flour particles, waterproofing them to prevent gluten formation. **Allergen:** An ingredient that may cause an adverse reaction to food. **Back-of-pack labelling**: Is legally required and can help consumers make healthier choices. **Front-of-pack labelling**: Is voluntary but must provide certain information and can use red, amber and green colour coding. **Use-by-date:** Relates to the safety of the food. Food must be eaten by this date. **Best-before-date:** Relates to the quality of the food. Food may still be eaten beyond this date.

Spreadsheets

Summary

A spreadsheet is a program which makes it easy for you to work with numbers. It consists of a page made up from columns and rows which are arranged into a grid.

You can identify every single cell on a spreadsheet by its unique cell reference, made up from the row number and column letter, for example A6, E14, N45. Numbers, text or formulas can be entered into each cell.

Formulas allow you to perform calculations on the numbers in your spreadsheet. You can add, subtract, multiply and divide numbers by using formulas.

Using formulas is a very good idea, because it means that once your spreadsheet is set up, any changes you make to one area are automatically recalculated throughout the spreadsheet.

Key Words	
Axis labels	A label for a graph's horizontal or vertical axis that explains what the value relates to.
Cell	An individual spreadsheet box where you enter data.
Cell reference	Names of individual cells (A5 for example).
Chart	A graphical way of displaying data.
Column	Cells that go down the spreadsheet page.

Key Words continued	
Computer model	Predicts and investigates how real-life devices or processes might behave in different situations.
Data	Values, typically letters or numbers.
Field	A Collection of one data type across multiple records.
Format	The appearance of a document, including the fonts, colours, size and rotation.
Formula	Makes automatic calculations that update when the data does.
Function	Makes more complex calculations.
Label	Text used to identify cell contents.
Range	Set of cells next to each other.
Record	A collection of data on one person or item.
Row	Cells that go across the spreadsheet page.
Spreadsheet	A piece of software used to manipulate data, often used in modelling.
Workbook	A collection of worksheets

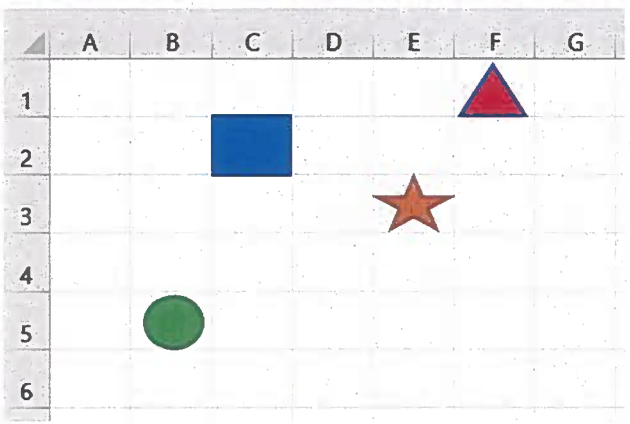
Spreadsheets

Advantages of using Spreadsheets:

- They can simulate real life events safely.
- When actioned correctly, formula will automatically update the result of a calculation when data in amended.
- Data can be presented in the form of charts and graphs.
- You can carry out "what if?" investigations. For example, the grocer could increase his prices to see the effect on sales and the builder could increase his hourly charge to see the effect on his daily total.

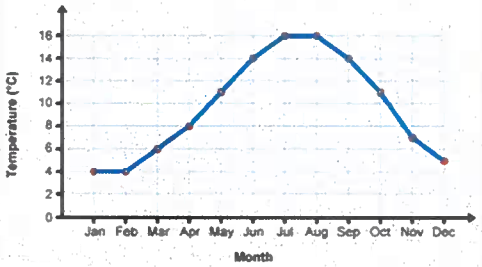
Knowing your Graphs	
Line Graph	To show a change over time.
Pie Chart	To show the individual parts that make up a whole.
Bar Chart	To compare things that aren't directly related.
Scatter Graph	To look for a pattern or link between two sets of data.

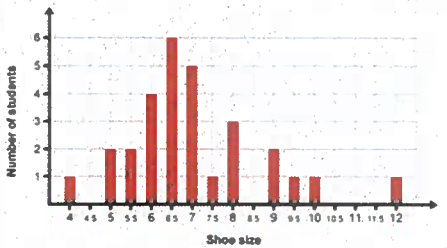
Cell Referencing

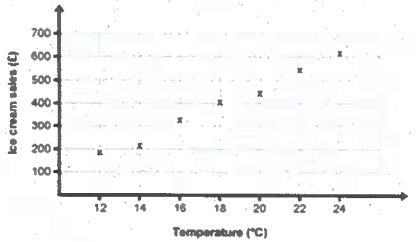


Identify the cells the following shapes are located:

- Square – C2
- Circle – B5
- Star – E3
- Triangle – F1







Spreadsheets

Formula	Explanation
=A7+B7	This will add the data in cell A7 with the data in cell B7.
=D4-J1	This will subtract the data in cell J1 from the data in cell D4.
=C5*I9	This will multiply the data in cell C5 with the data in cell I9.
=E6/T7	This will divide the data in E6 with the data in T7.
=SUM(F4:F12)	This will add up all the data from cells F4 to F12.
=AVERAGE(H2:R2)	This will work out the average of the data between cells H2 and R2.
=MAX(A6:A34)	This will look at cells A6 to A34 and display the maximum value across the range.
=MIN(C4:K4)	This will look at cells C4 to K4 and display the minimum value across the range.

Operator	Explanation
=	Equal to.
>	Greater than.
<	Less than.
>=	Greater than or equal to.
<=	Less than or equal to.
<>	Less than or greater than.

IF Functions

	A	B	C	D
1	**School Tests**			
2				
3	**Surname**	**Forename**	**Test result**	**pass/fail**
4	Black	Emma	45	
5	Brown	Simon	55	
6	Green	Louise	66	
7	Lilac	Maddy	86	
8	Orange	Daniel	21	
9	Tan	Tom	100	
10	White	Jack	37	
11		**Average**	59	

=IF(C4>=50, "Pass","Fail")

IF the value in cell C4 is greater than, or equal to the value of 50. "Pass" will be displayed in cell D4. Otherwise it will display "Fail".

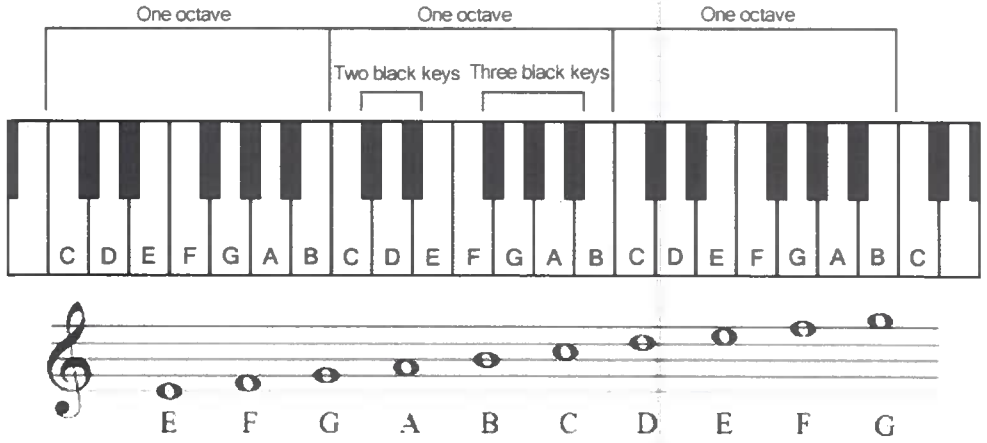
Re-write the formula for D5. This time the pupil will only pass if the match or get higher than the class average.

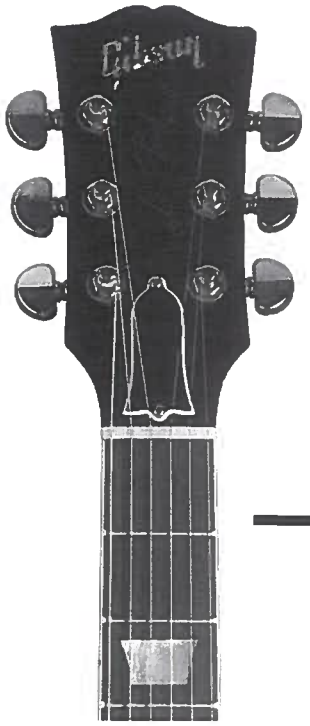
=IF(C5>=C11, "Pass","Fail")

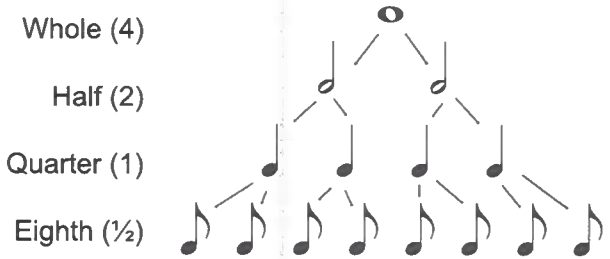
MUSIC - The Elements of Music

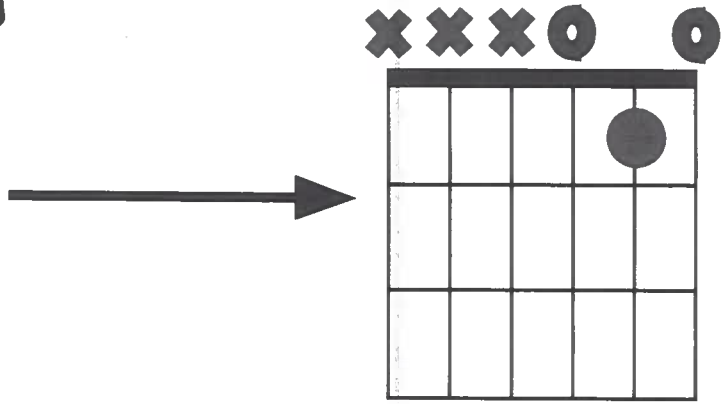
Key Terminology

Conductor - A person who directs the performance.
Note - A singular sound.
Chord - A group of three or more notes played at the same time.
Harmony - Different notes played or sung together.
Melody - A small arrangement of notes that make a tune.
Scale - A series of eight notes starting somewhere between A-G.
Arpeggio - When you play the 1st, 3rd, 5th, and 8th note of a scale one after each other.
Rhythm - The pattern of how notes are played.
Beat - The pulse or heartbeat of the music.
Tempo - The speed of the music.
Dynamics - The volume of the music.
Octaves - The jump between the same note going higher or lower on the piano (e.g. lower C to higher C).
Pitch - How high or low the notes are played.
Guitar - 6-stringed instrument. Can be electric or acoustic.
Bass Guitar - Low sounding 4-stringed instrument. Usually electric.
Piano/Keyboard - Percussion instrument made up of white keys and black keys.
Drum Kit - Percussion instrument made up of drums and cymbals.









Feedback Starters

Positives: ***What I thought went well was...***
Points for improvement: ***It would be even better if...***

Drama Y9 Blood Brothers

Blood Brothers plot

Russell's BB revolves around twin boys (Mickey and Edward) who are separated at birth and brought up in completely different environments in the city.

The play, set in the 1960s, is divided into two acts, with songs throughout.

Mickey is brought up with his seven older siblings by his struggling single mother, Mrs Johnstone. His twin brother, Edward, however is brought up as the only child of the wealthy Lyons family, who live nearby, after Mrs Lyons persuaded Mrs Johnstone to hand over one of her twins at birth.

Mickey and Edward don't meet each other until they're seven years old, but immediately become best friends and blood brothers. The bond continues when the boys are teenagers and both live in the countryside, despite them both being in love with Mickey's neighbour Linda.

However, as they get older, the huge difference in their backgrounds pulls them apart and eventually leads to their tragic deaths.

Written during a period of huge changes in society and politics, Blood Brothers draws the audience's attention to the detrimental effect that social inequality can have on people's lives.

Useful vocabulary: Contrast Multi-role Dramatic Irony Tragedy Dole Prejudice Manipulates Consequences Vulnerable Foreboding Foreshadow Judgemental Sympathy Stigmatised Monologue Prologue Dialogue Transitions Cyclical Cautionary

Background of the play

Born into a working class family, Russell grew up on a council estate in Liverpool. His father worked very hard in a variety of jobs including mining and other laborious occupations. His mother worked as a nurse. This echoes the situations of Mickey and Linda, struggling to get by during a difficult period. His plays largely focus on the problems faced by working class people. He writes a lot about social divides and how someone's class can affect who they are and the opportunities they are given.

Liverpool depended heavily on traditional industries, so it was badly hit by the industrial decline in the late twentieth century. The city's working-class areas were very poor and things went from bad to worse. Margaret Thatcher was Prime Minister at the time and was arguably to blame for some job losses.

There was a large gap between working and middle class in Britain, even before the industrial decline. The Johnstones and Lyons' are class stereotypes. A lot of working class people struggles finically, even if they were in work or on the dole. The Middle class were largely unaffected by the industrial decline, as they had jobs like teaching or accountancy. There was also a class divide in education, whether you went to a public and private schools often decided your job in the future

Families were expected to have a 'nuclear' structure- a mother, a father and their children. Single-parent families like Mrs Johnstone were less common and were frowned upon by many.

Key Terms

Foreshadowing - Warning or indication of a future event
Pathos - Appeal to emotion
Multi-role- One actor playing a two or more roles
Motif- A repeated idea throughout the story
Dialogue - Conversation between two or more characters
Tension - Dramatically used to build suspense
Humour - Language used for amusing/comic effect
Dramatic Irony - When the audience know something that the characters do not
Songs - Contain lyrics that are set to music to give audience more information
Stage Directions - Instructions indicating how the actor should move/speak
Cyclical Structure - Finishes a similar way to how the text began
Prologue - A separate introduction that reveals some of the plot
Atmospheric - A distinctive mood/feel to the scene
Parallels - Similarities in the text—almost a replication of events
Tragedy - A play dealing with tragic events and having an unhappy ending for main characters.

Acting Style

Epic Theatre is a technique used in theatre created by Bertolt Brecht to remind the audience the were not watching real life.

Narration is a technique used by break to remind the audience what they are watching is just a play and not real life. This is shown throughout Blood Brothers as their is a character called, 'Narrator.'

The Narrator constantly, 'Breaks the Fourth Wall,' another Epic theatre technique. They do this by talking directly to the audience and asking them questions about what is happening in the performance.

A third technique we see used in Blood Brothers is Multi-Rolling. This is a technique where one actor will play more than one character or more than one actor will play the same character. This reminds the audience that these characters are not real and that they are watching something that is not real life.

The final Epic Theatre technique that is used is Songs. Although Blood Brothers is not a musical it does have songs which again remind the audience that what they are watching is not real life.

(47)