



10

Knowledge Organiser
Summer Term
Year 10



A Knowledge Rich Curriculum at Great Sankey High School

Research around memory suggests that if knowledge is studied once and not revisited or revised, it is not stored in the long-term memory. This means that after one lesson, or revising for one test, the knowledge will not be retained unless it is studied again. To ensure that knowledge is embedded in the long term memory it must be revisited frequently. Ensuring knowledge is embedded aids understanding, and in turn makes future learning more successful. To quote Daniel Willingham's learning theory,

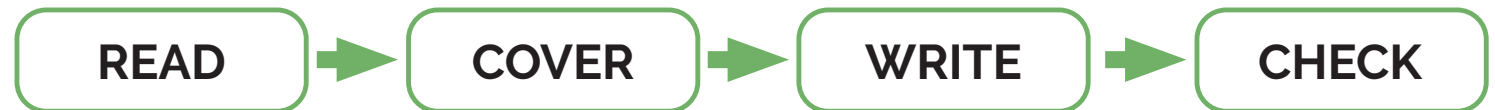
“Thinking well requires factual knowledge that is stored in our long-term memory”

As part of home learning, students should be revising what they have been taught recently but also content they were taught previously. Therefore, as part of our strategy to embed learning over time we have developed knowledge organisers across years 7, 8 and 9. These will provide key content and knowledge allowing students to pre-learn and re-learn, a vital part of processing all the information required to be successful. This knowledge will form the backbone of assessments in school.

How to use your knowledge organiser

Knowledge organisers will be used in subject lessons, homework activities and form time and therefore you need to bring your knowledge organiser to school every day.

Ensuring that knowledge is retained into your long-term memory and you are ready for tests takes work!

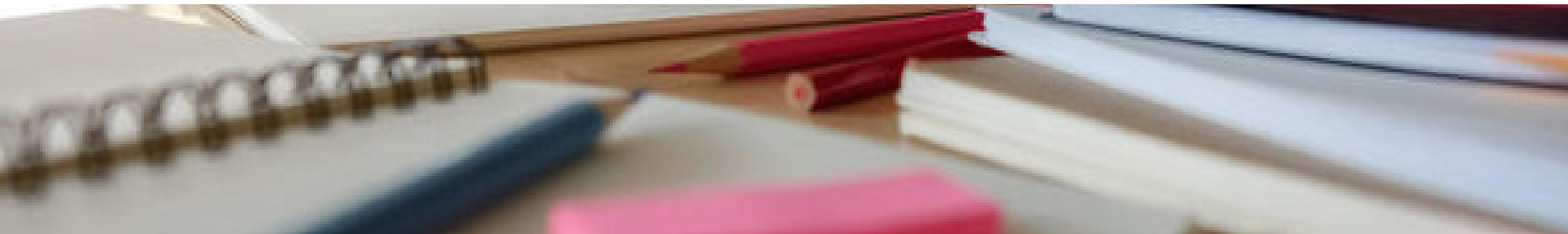


To encourage students to build good study habits, students will be assigned homework quizzes on a week A through Class Charts and Teams. Students will be expected to use revision strategies such as read, cover, write, check to learn key knowledge and will then complete the quizzes to demonstrate their learning. Completion of these quizzes is an essential homework activity and will be closely monitored by the pastoral team.

Other methods that you may wish to try at home are listed below:

- Create mind maps.
- Create flashcards.
- Get sticky with your learning: write out key points from the KO as you read over it on post-it notes.
- Write your own basic recall quizzing questions around the keywords, definitions and key facts that you need to know. Test yourself with these questions and then leave it overnight to answer them the next day.
- Write your own challenging questions using the following command words – explain, compare, evaluate. Then create a model answer for these questions.
- Put the key words from your KO into new sentences.
- Make mnemonics to remember the order of particular concepts.
- Draw a comic strip, storyboard or a timeline describing any series of events that have a chronological order.
- Write yourself or a partner some quiz questions. Quiz each other or swap your questions to see if you can answer each other's questions.
- Think about the big picture – why is knowing specific information important to you/other people/society/companies/science/technology? The more links that you can make, the more meaningful you make your learning and the more likely it is that you will remember it. Think about the big picture – are there any links in the content on your KO to anything that you have watched on TV, read about or heard in the news?
- Give yourself spelling tests.
- Definition tests.
- Draw diagrams of key processes or theories.
- Draw images and annotate/label them with extra information.
- Create fact files.
- Create flowcharts for descriptions or explanations that have a chronological order.
- Summarise in your own words each section.
- Get your parents/carers to test you.
- Pick out key words and write definitions.
- Pre-learning (read a section of your knowledge organiser prior to the lesson).
- Learn key quotes (if applicable). Consider what you may say about these quotes e.g. what the author is trying to make you think/feel, their choice of language, what can be inferred from it.
- Write a letter/blog/article to someone explaining a key idea or concept.
- Prepare to overcome any hurdles: write down any questions or any areas of the KO that you feel you need to speak to your teacher about.
- Use the guidance that may have been given with a specific KO to help you learn the information and use it.

***“Don’t practise until
you get it right.
Practise until you
can’t get it wrong.”***



Portable Knowledge in STEM at KS4



STEM stands for **Science**, **Technology**, **Engineering** and **Maths**, and it is important that you can see connections between each of these subjects. In the real world there are very few challenges that only require one set of skills. For example, you wouldn't be able to design a new app, video game or computer program without an understanding of all of the STEM concepts. This section of the knowledge organiser will show you how different STEM subjects have things in common, including examples of how you might use them, and how some things may actually appear slightly different from one subject to the next. As Geography is a Natural Science we can include that too.

EXAMPLE	SCIENCE	TECHNOLOGY & ENGINEERING	MATHS	GEOGRAPHY
Tally chart	Can be used to record the number of pupils in different height ranges in biology.	Can be used when choosing a final design choice from a selection of draft designs.	Can be used to record the number of pupils (usually labelled frequency) with different eye colours or what their favourite subject is.	Can be used to record the number of people visiting honeypot sites when studying tourism such as visitor numbers in Jamaica over a 5 year period.
Pie chart	Can be used to display the % of different hydrocarbons in crude oil or % of different gases in the atmosphere in chemistry.	Can be used to display results of a tally chart.	Can be used to display the proportion or % of pupils who travel to school in different way.	Can be used to record the amount of people working in different job sectors over time in the UK in comparison to other countries.
Bar chart	Can be used to display the number of people with different blood groups in biology.	Can be used to display results of a tally chart.	Can be used to display the number of pupils with a different favourite sweet.	In geography the term histogram and bar chart are interchangeable and are used to display data such as the percentage of forest lost in a range of countries.
Histogram	This is similar to a bar chart but the bars touch each other and they represent continuous data that is grouped, for example number of pupils in different height ranges in biology.	Can be used to display research data. Can also be used to represent time on a "Gant" chart.	In maths, this can be used to show the distribution of a data set such as the ages within a population. In most cases, a histogram has different class widths meaning the area of each bar is the frequency for it.	A range of different bar charts and histograms are used when writing up fieldwork.
Line graph	Can be used to display the time taken for salt to dissolve at different temperatures in chemistry.	Can be used to represent trend data during research pieces.	In maths, these are sometimes called scatter graphs or timeseries graphs. They can be used to display house prices and/or the trend in a data set over time.	Can be used when studying climate graphs. Line graphs are also used when analysing climate data over a period of time.
Line of best fit	In biology a line of best fit can be point to point, but in chemistry they are most often a straight line. In all 3 sciences they could be a curve depending on distribution of the points. For example the extension of a spring in physics.	x	In maths, you might be asked to add a line of best fit to a scatter graph. It is always a straight line drawn with a ruler and can be used on graphs to show correlation between hours of revision and score in test. In GCSE Statistics, we use correlation coefficients and linear regression equations to analyse this in detail.	In geography lines of best fit are used to look for negative and positive correlations when comparing data usually in physical geography modules. It is always a straight line drawn with a ruler through as many points as possible.

Portable Knowledge in STEM at KS4



Hopefully this section of the knowledge organiser will help you spot where things crossover from one STEM subject to another as you move from lesson to lesson. REMEMBER some things are exactly the same, some are very similar but might be called different things, and some things are different altogether! and don't forget STEM stands for **Science, Technology, Engineering and Maths**

EXAMPLE	SCIENCE	TECHNOLOGY & ENGINEERING	MATHS	GEOGRAPHY
Range	Range around a mean can be used with data for heart rate after exercise in biology, amount of hydrogen gas produced in a chemical reaction in chemistry and number of times a ball bounces in physics.	x	The range is a measure of the spread of a data set. It can be used to compare data, with a smaller range meaning it is more consistent such as comparing times athletes run 100m over 10 races.	Range is used in the geographical skills section of course. Range can be used when looking at rainfall and temperature data for different locations or when using development indicators such as literacy rate, life expectancy etc.
Mean, Median and Mode	Mean, median and mode can be used to analyse any sets of data with a range of results.	x	Mean, median and mode can be used to analyse any sets of data in conjunction with the range.	Mean, median and mode are used in the geographical skills section of the course and can be used to analyse any sets of data with a range of results.
Continuous data	These are data values that can take any value and are grouped/rounded. In biology an example would be bubbles of oxygen produced during photosynthesis.	x	These are data values that can take any value and are grouped/rounded. Data could be length, time, capacity or mass.	This is where you have any value in your data. An example would be mm of rainfall.
Discrete data	In science this is sometimes called discontinuous data. An example would be blood group or eye colour in biology.	x	These are specific data values and can be quantitative (numerical) and qualitative (word or category). Examples include type of colour, the result from rolling a dice or the number of pets people have.	Discrete data in geography includes both primary and secondary data. Fieldwork data could include rock sample sizes and how they change from the source to the mouth of a river.
Using co-ordinates	x	Used by a CNC machine to position the cutter when machining a piece of material. Marking out a series of holes from dimensions on a drawing.	4 and 6 figure grid references are used when plotting in 4 quadrants and used in transformations.	Both 4 and 6 figure references are used across all topics in geography to locate places from a map.
Taking measurements that are accurate and precise	Accurate data is close to the true value and precise data gives similar results if you repeat the measurement. In science there are far too many examples to mention!	Used when marking out materials prior to cutting and quality during checking when manufacturing a component.	Being able to read a variety of scales is a key skill for plotting and drawing graphs or measuring angles and lines. It is important in constructions and scale drawings to be within 0.1 cm or 1°	Measurements and accuracy are really important when studying map skills, especially when looking at scale and distance.

Year 10 Term 3 Vocabulary List

Year 10 Term 3		Definition	Contextual Sentence
1	highlighted	To draw special attention to.	The spelling mistakes had been highlighted in green.
2	implicit	Suggested but not directly said.	The team had implicit faith in his skill.
3	induced	Persuaded or leading someone to do something.	The advert induced people to eat more fruit.
4	inevitably	Is certain to happen; unavoidably.	Inevitably, without a map, he got lost.
5	infrastructure	The foundation or basic framework of a system / organization / country etc.	The war badly damaged the country's infrastructure.
6	inspection	Careful examination.	The kitchen passed the hygiene inspection.
7	intensity	An extreme degree of strength, force, energy or feeling.	The intensity of the hurricane was frightening.
8	manipulation (2 definitions)	To manage or use skilfully. To control someone/ something unfairly, especially to your own advantage.	His manipulation of the paint in the portrait was amazing. The manipulation of the data was misleading.
9	minimised	Reduced to the smallest possible amount.	Safety goggles minimised the risk of eye injuries.
10	nuclear	Relating to the nucleus of an atom.	Nuclear weapons pose a threat to everyone.

11	offset (2 definitions)	Something that counterbalances or to compensates for something else. The amount or distance by which something is out of line.	In basketball, he offsets his small size by his cleverness and speed. The wheel was offset by 5cm.
12	paragraph	A distinct section of a piece of writing, usually dealing with a single theme and indicated by a new line/indentation.	Start each paragraph on a new line.
13	plus	In addition to / more than what is expected; an advantage.	Her knowledge of French is a plus in her job.
14	practitioners	People actively engaged in a discipline, or profession, especially medicine.	Acupuncture is widely used by practitioners of alternative medicine.
15	predominantly	Mostly / mainly.	She is predominantly a dancer, but she also sings.
16	prospect (2 definitions)	The possibility of something happening / looking forward to. To search for (especially for mineral deposits).	He was excited at the prospect of going to the concert. They used to prospect for gold in this area.
17	radical	Very different from the usual or traditional; extreme.	The internet has brought about a radical change in many businesses.
18	random	Lacking a plan/purpose; without definite aim, direction, rule or method	They acted out random scenes from the play.
19	reinforced	Strengthened by additional help or material.	We reinforced the corners of the box.

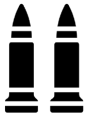
20	restore	To bring back or re-establish.	The army was called in to restore order.
21	revision	Look over again to correct, improve or learn.	The plans needed some revision before they were issued.
22	schedule	A plan for carrying out a process or procedure; a timetable.	He has been forced to adjust his schedule because of the bad weather.
23	tension (2 definitions)	The state of being stretched tight. Mental or emotional strain.	There must be tension in the wire before it is fixed in place. The dramatic tension at the end of the book was very good.
24	termination	The action of ending / stopping something.	He was upset at the termination of his contract.
25	theme	A subject or topic.	The theme of the poem was love.
26	thereby	By that means; as a result of that.	She was injured the day before and thereby lost her chance to compete.
27	uniform (2 definitions)	Having always the same form; not varying or variable. Distinctive or characteristic clothing.	The trees were of uniform height. The new uniform looked very smart.
28	vehicle	Something used for transporting people or goods.	It was an energy efficient vehicle.
29	via	Travelling through a place on the way to somewhere; by way of/ through.	Internet connection via broadband offers many advantages.
30	virtually	Nearly; almost.	Virtually all the children come to school by bus

31	widespread	Found over a large area/ number of people.	The earthquake caused widespread damage to property.
32	visual	Relating to seeing or sight; producing mental images.	Her designs have a strong visual appeal.
33	accommodation	Where someone may live or stay.	He moved into student accommodation in September.
34	analogous	Similar to something else in general or in some specific detail.	The report's findings are analogous with our own.
35	anticipated	Expected or looked-forward to.	A large crowd gathered for his eagerly anticipated arrival.
36	assurance	Being certain.	He spoke with assurance about his future plans.
37	attained	Succeed in achieving.	He has attained the highest grade in his music exams.
38	behalf	In the interest of; as a representative of.	I wrote the letter on behalf of my client.
39	bulk	A large amount; the main or greater part.	He spent the bulk of his time on the computer.
40	ceases	Stops; comes to an end.	With so much training, it ceases to be fun.
41	coherence	Being logical and consistent.	There was no coherence between the first and the second half of the film.

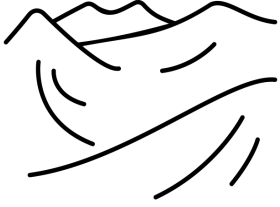
Macbeth: Key quotes for key characters

Macbeth	Lady Macbeth	Banquo	The Witches	Macduff	Duncan	Malcolm
"So foul and fair a day I have not seen" (A1.S3) - supernatural	"When you durst do it, then you were a man" (A1.S7) - ambition	"instruments of darkness" (A1.S3) - supernatural	"fair is foul and foul is fair, hover through the fog and filthy air" (A1.S1) - supernatural	"most sacrilegious murder" (A2.S3) - kingship	"signs of nobleness like stars shall shine on all deservers" (A1.S4) - kingship	"My thanes and kinsman, henceforth be earls" (A5.S8) - kingship
"Stars hide your fires, let not light see my black and deep desires" (A1.S4) - Appearance vs. reality	"Look like the innocent flower but be the serpent under't" (A1.S5) - Appearance vs. reality	"terrible dreams" (A2.S1) - supernatural	"All hail Macbeth, that shalt be king hereafter" (A1.S3) - supernatural	"O horror, horror, horror!" (A2.S3) - kingship	"There's no art to find the mind's construction in the face" (A1.S4) - Appearance vs. reality	"sovereign flower" (A5.S2) - kingship
"Be innocent of the knowledge, dearest chuck" (A3.S2) - Appearance vs. reality	"Give me the daggers" (A2.S2) - ambition/power	"I fear thou played'st most foully for it" (A3.S1) - kingship	"When shall we three meet again? In thunder, lightning or in rain?" (A1.S1) - supernatural	"All my pretty ones?" (A4.S3) - kingship	"Harvest" (A1.S4) - kingship	"medicine" (A5.S2) - kingship
"Never shake thy gory locks at me!" (A3.S4) - guilt	"A little water clears us of this deed" (A2.S2) - guilt	"win us with honest trifles, to betray's in deepest consequence" (A1.S3) - supernatural & appearance vs. reality	"Beware Macduff" (A4.S1) - ambition & kingship	"I must feel it as a man" (A4.S3) - power	"What he hath lost, Macbeth hath won" (A1.S2) - power	"this tyrant...was once thought honest" (about Macbeth) (A4.S3) - power/ambition
"sickly weal" (A5.S2) - ambition/power	"Will these hands never be clean?" (A5.S1) - guilt	"May they not be my oracles as well, and set me up in hope?" (A3.S1) - ambition	"juggling fiends" (A5.S8) - supernatural	"Macduff was from his mother's womb untimely ripped" (A5.S8) - power	"I have begun to plant thee, and will labour to make thee full of growing" (A1.S4) - kingship	"Angels are bright still, though the brightest fell" (about Duncan) (A4.S3) - kingship
"dead butcher" (A5.S9) - kingship & power	"Out damned spot!" (A5.S1) - guilt	"Thou may'st revenge" (to Fleance) (A3.S3) - power	"For none of woman born shall harm Macbeth" (A4.S1) - appearance vs. reality	"Turn, hell-hound, turn!" (to Macbeth) (A5.S8) - power & kingship	"his great office" (A1.S7) - kingship	"to Scone" (A5.S9) - kingship

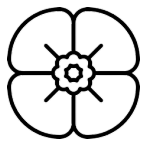
'Bayonet Charge' by Ted Hughes – Key Quotes

Icon	Key Quotations	Analysis
	"Suddenly he awoke and was running – raw"	The poem starts in medias res (in the middle of the action) , this thrusts the reader into the middle of the action and mirrors/reflects the soldiers confused and vulnerable state. It reinforces the frightened soldiers. The adverb 'raw' could reinforce the soldier's emotions and pain running into war, or it could emphasise the soldier's inexperience and lack of preparation.
	"Bullets smacking the belly out of the air"	Personification of nature; the verb 'smacking' reinforces the impact the bullets have on the air (nature). It presents nature being a victim of war as well as the soldiers and expresses the sheer violence of war.
	"The patriotic tear that had brimmed in his eye Sweating like molten iron from the centre of his chest"	The simile suggests that the soldier's patriotism has been replaced by pain and fear now he has seen the reality of war. The feelings of patriotism have let him down – he is disappointed by the reality and fear of war. This heightens the strength of propaganda and how it is indoctrinating soldiers.
	"In what cold clockwork of the stars and the nations"	The alliteration in the metaphor 'cold clockwork' infers the soldiers are a cog in the machine of war. Hughes uses the extended metaphor of the clock to refer to the soldier as part of a machine, which doesn't care for individuals. The soldiers are mere cannon fodder in the wider concept of conflict. The noun phrase 'the stars and the nations' suggest that nature isn't interested in war, reinforcing the idea that war is futile.
	"Threw up a yellow hare that rolled like a flame And crawled in a threshing circle"	Reference to the noun phrase 'a yellow hare' seems strange. Is this man dreaming? Is this a physical manifestation of the soldier and the situation he is in? The hare crawls in a 'circle' which gives the impression its trapped. It reinforces the impact war has on nature. The hare's movements reflects it terrified and helpless – like the soldiers. The reference to adjective 'yellow' has connotations with cowardice – reflects how soldiers may be viewed if they admit the reality of war and try and break free, or return home.
	"His terror's touchy dynamite."	Despite his objections, the soldier has become a killing machine. This alternative metaphor sums up the danger he can potentially inflict upon others. It infers that his fear has become a weapon; he is driven by his 'terror', and this is what is driving him towards the enemy.

'Ozymandias' by Percy Bysshe Shelley - Key Quotes

Image	Quote	Analysis
	<i>'Look on my Works, ye Mighty, and despair!'</i>	The imperative show Ozymandias' commanding style. The verb 'despair' shows he wanted his subjects and enemies to view him with fear and envy. This is ironic because there is nobody in the desert to view the crumbling statue – the only one who would 'despair' is Ozymandias. The exclamation is strong and authoritative – this is ironic because nobody is listening. He was clearly a tyrannical ruler, who seemed to use his power to punish others. When he addresses the 'Mighty', he could have been talking to the gods, suggesting his deluded opinion of himself.
	<i>'And wrinkled lip and sneer of cold command'</i>	Synesthesia (when you experience one of your senses through another) and alliteration of 'cold command' presents Ozymandias' character as powerful and arrogant; this is ironic now as nothing is left. The use of the adjective 'wrinkled' shows how transient power is – yet again, this is ironic due to Rameses II's deluded view of himself.
	<i>'Stamped on these lifeless things, The hand that mocked them'</i>	Verb 'stamped' - makes the ruler seem ruthless, empowered, selfish, arrogant. 'Mock': to a model of, but also to make fun of. This is a pun because of the double meaning, and showcases the ruler's tyrannical actions towards others. The reference to the adjectival phrase 'lifeless things' shows how demeaning and dehumanising Ozymandias was – he was an oppressive ruler.
	<i>'Round the decay Of that colossal wreck, boundless and bare The lone and level sands stretch far away'</i>	Adjective 'colossal' connotes something that is vast or huge – potentially acting as a metaphor for his ego rather than the statue. He is egocentric. The 'lone and level sands' outlast the statue, juxtaposed to the power and ego of the statue. The concrete noun 'sands' are also symbolic of the passing of time. The verb 'stretch' suggests that nature will outlast man and humanity – our place on earth is only temporary and is no match for our natural environment and time. This reinforces the transient nature of power.

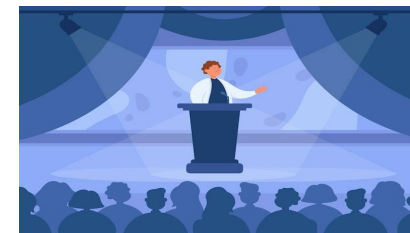
'Poppies' by Jane Weir - Key Quotes

Icon	Key Quotations	Analysis
	<i>"Three days before Armistice Sunday and poppies had already been placed"</i>	Temporal Deixis ('three days before' - adverb of time that takes place at any time, relative to the speaking time) introduces the theme of remembrance. The symbolism of the noun 'poppies' reflects the theme of remembrance. Focus is on the scene of memorial, in which the speaker introduces a mother mourning the loss of her son.
	<i>"All my words flattened, rolled, turned into felt, slowly melting."</i>	Enjambment reflects the chaotic nature of her fragmented thoughts as she tries to process the grief of losing her son and grapple with incomplete memories. It showcases how she is struggling to contain her grief for his loss. This is reinforced with the tricolon of verbs in the asyndetic list.
	<i>"After you'd gone I went into your bedroom, released a song bird from its cage."</i>	Temporal marker 'After' references that lasting impact of the mother's grief and emotional turmoil as the ordinary, domestic items 'bedroom' can become painful. The metaphor 'released a song bird from its cage' indicates and reinforces the emotional turmoil the mother went through as it refers to her outpouring of grief after the death of her son. This symbolic image of peace perhaps suggests the son's peace in death, or the peace the mother has found having come to terms with her grief.
	<i>"the world overflowing like a treasure chest"</i>	Simile creates an image of the mother's outpouring of grief. The speaker appears to be full of emotions. Comparing her emotions like an overflowing treasure chest shows how her emotions are genuine and over someone who was special and invaluable to her – her son.
	<i>"I listened, hoping to hear your playground voice catching on the wind."</i>	Cyclical structure as the poem goes on to describe the son's death, returning to the grave once more at the end. The use of the metaphor ends the poem with a melancholy tone as the mother's grief leaves a lasting impression of the impact of war on the reader.

'The Charge of the Light Brigade' by Alfred Lord Tennyson - Key Quotes

Icon	Key Quotations	Analysis
	"Half a league, half a league, Half a league onward"	The dactylic dimeter reflects and emulates the sound of galloping horses' hooves – it gives an impression that the horses are unstoppable. Repetition of the distance with the adjectival phrase, 'half a league' emphasises how far the soldiers have to go and creates a sense of vulnerability.
	"All in the valley of Death"	Biblical Allusion – Psalm 23; David and Goliath Both this battle and the battle of David and Goliath took place in a valley, and both contained an underdog taking on a powerful enemy. Foreshadows the inevitable death of the 'Light Brigade'.
	"someone had blunder'd"	'Blunder'd' = stupid/careless mistake. Tennyson is criticising the leadership error, which led to this suicidal mission taking place. The message the General received was misinterpreted and they sent their troops in the wrong direction. This is the only line in the poem that doesn't follow the didactyl dimeter --> Important line = 'blunder'd' was taken directly from the news report. It emphasises Tennyson's sense of disgust.
	"Stormed at with shot and shell"	Alliteration/ sibilance of the 's' sound. Represents the viciousness of the attack (visceral effect). Heightens how vulnerable the Light Brigade were in this situation, with the lack of weaponry and preparation.
	"Into the jaws of Death, Into the mouth of Hell"	Personification – signifies the dangers of the attack, and that death is inevitable; it is unavoidable. The concrete noun 'jaws' is predatory, suggesting the Light Brigade were cannon fodder for the Russian soldiers.
	"All the world wonder'd."	Verb 'wonder'd' is ambiguous. It could mean to be amazed with everyone in awe by the bravery of the soldiers <u>OR</u> it could mean to question – the whole world is questioning how a stupid mistake can be made. Sound of the poems pride for the men in 'won'; yet the awareness of the pointlessness of their death in 'ered'.
	"Honour the Light Brigade, Noble six hundred!"	Imperative statement: 'Honour' - Reminder to readers that these soldiers are national heroes. Link to Tennyson's duty as Poet Laureate to instil patriotism in his readers.

AQA GCSE English Language **Spoken Language Endorsements**



The aim of this assessment is to allow students to demonstrate their speaking and listening skills by:

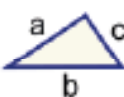
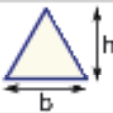
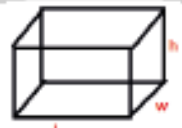
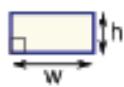
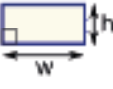
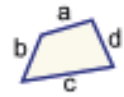
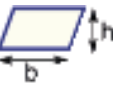
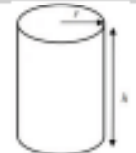
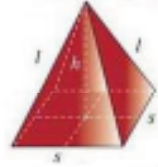
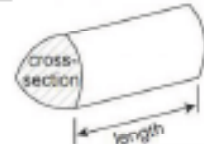
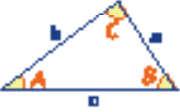
- Giving a presentation in a formal context
- Responding appropriately to questions and feedback
- Using spoken Standard English

Success criteria:

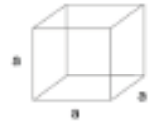
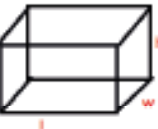
Pass	Merit	Distinction
Expresses straightforward ideas/information/ feelings	Expresses challenging ideas/information/feelings using a range of vocabulary	Expresses sophisticated ideas/information/feelings using a sophisticated repertoire of vocabulary
Attempts to organise and structure his or her presentation	Organises and structures his or her presentation clearly and appropriately to meet the needs of the audience	Organises and structures his or her presentation using an effective range of strategies to engage the audience
Makes an attempt to meet the needs of the audience	Achieves the purpose of his or her presentation	Achieves the purpose of his or her presentation
Listens to questions/ feedback and provides an appropriate response in a straightforward manner.	Listens to questions/ feedback responding formally and in some detail.	Listens to questions/ feedback, responds perceptively and if appropriate elaborates with further ideas and information.

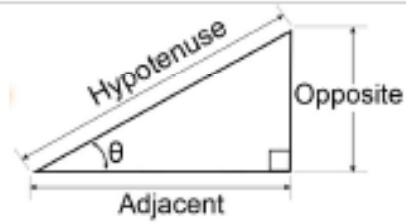
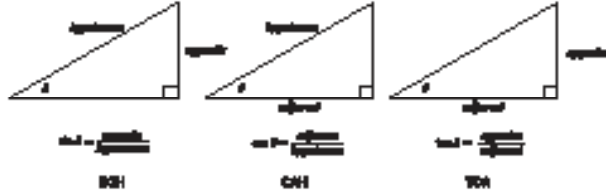
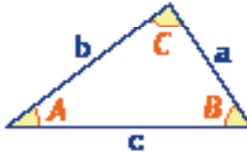
 Year 10 Mathematics Knowledge Organiser	Topic	What is the plural of formula, formulas or formulae?
	Summer: Key Formulae	A formula is a mathematical relationship or rule expressed in symbols. The long-standing plural of formula is formulae, as plurals of this area come under the influence of scientific Latin. In recent years, there has been a normalisation towards the more traditional addition of "s" and so either form can be used, but it is always more enjoyable when using formulae, pronounced <i>for-mu-lae</i> [fawr-myuh-lee]

Geometry and Measures – Key Formulae (Those marked with an asterisk will be given in the exam)

Perimeter			Area			Volume		
Diagram	Shape	Perimeter formula	Diagram	Shape	Area formula	Diagram	Shape	Volume formula
	Triangle	$a + b + c$		Triangle	$\frac{1}{2}bh$		Cube	a^3
	Square	$4 \times a$		Square	a^2		Cuboid	length $\times$ width $\times$ height $= lwh$
	Rectangle	$2(l + w)$ or $2l + 2w$		Rectangle	width $\times$ height $= wh$		Sphere*	$\frac{4}{3}\pi r^3$
	Quadrilateral	$a + b + c + d$		Parallelogram	base $\times$ height $= bh$		Cylinder	$\pi r^2 h$
	Circle	πd or $2\pi r$		Trapezium	$\frac{1}{2}(a + b) \times h$		Cone*	$\frac{1}{3}\pi r^2 h$
	Arc Length	$\frac{\theta}{360} \times 2\pi r$ or $\frac{\theta}{360} \times \pi d$		Circle	πr^2		Pyramid*	$\frac{1}{3} \times \text{base area} \times \text{height}$
	Perimeter	Arc Length $+ 2r$		Sector Area	$\frac{\theta}{360} \times \pi r^2$		Prism	Area of cross-section $\times$ length
	Ellipse	Pretty hard!		Triangle	$\frac{1}{2}ab \sin C$			

 Year 10 Mathematics Knowledge Organiser	Topic	What is the etymology of the word hypotenuse?
	Summer: Key Formulae	The hypotenuse is the side of a right triangle that's opposite the 90-degree angle. It's a term specific to math, specifically geometry. Hypotenuse comes from the Greek word <i>hypoteinousa</i> which means "stretching under." The hypotenuse "stretches under" the right angle of a triangle, which has an angle of 90 degrees.

Geometry and Measures (cont.)		
Surface Area		
Diagram	Shape	Su. Area formula
	Cube	$6a^2$
	Cuboid	$2lw + 2wh + 2lh$ or $2(lw + wh + lh)$
	Sphere	$4\pi r^2$
	Cylinder	$2\pi r^2 + 2\pi rh$ $= 2\pi r(r + h)$
	Cone	πrl where l is the slant height of the cone
Other questions e.g. triangular prisms would involve the use of elements contained here and in the Area section		

Trigonometry
Trigonometry is a branch of mathematics that studies relationships between side lengths and angles of triangles.
Right-angled Triangles

The Trigonometrical Functions

All Triangles
In any triangle ABC where a , b and c are the length of the sides:

The Sine and Cosine Rules
sine rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
cosine rule: $a^2 = b^2 + c^2 - 2bc \cos A$

Algebra
Quadratic Formula
The solution of $ax^2 + bx + c = 0$ where $a \neq 0$ is
$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Key Terminology
Identity
An identity is an equation which is always true, no matter what values are substituted.
Examples
$4(x + 3) \equiv 4x + 12$ $(x + y)(x - y) \equiv x^2 - y^2$
Algebraic Manipulation
Algebraic manipulation refers to the manipulation of algebraic expressions, often into a simpler form or a form which is more easily handled and dealt with.
Examples
Being asked to solve an equation e.g. Solve $5x + 3 = 2x + 10$
Being asked to simplify an expression e.g. Expand and simplify $(3x + 4)(x - 1)$
Being asked to factorise an expression e.g. Factorise $x^2 + 5x - 24$

 Year 10 Mathematics Knowledge Organiser	Topic	What is relative frequency?
	Summer 2: Probability	Relative frequency is the number of times an event happens, divided by the total number of outcomes that took place in an experiment, known as the number of trials. It is sometimes also known as experimental probability. The more times an experiment is carried out, the more reliable the relative frequency will be and closer to the theoretical probability.

Probability Notation

Probability notation is an efficient way of writing the probability of events happening or not happening. To do this we use set notation, which is used when working with Venn diagrams.

Events are usually notated using capital letters, as well as the use of some greek letters.

$P(A)$	Event A	The probability of event A happening.
$P(A')$	Complement	The probability of event A not happening.
$P(A \cup B)$	Union	The probability of event A or B happening.
$P(A \cap B)$	Intersection	The probability of event A and B happening.

Venn diagram symbols are a collection of mathematical symbols that are used within set theory. Venn diagrams were created by mathematician John Venn and are used widely today within computer sciences, problem-solving and set theory.

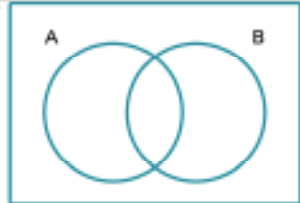
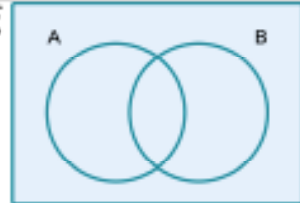
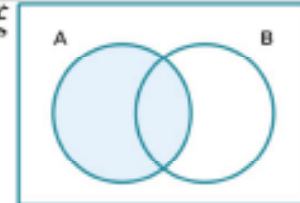
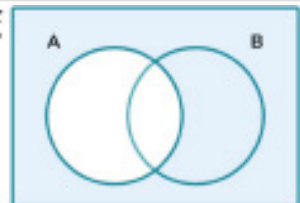
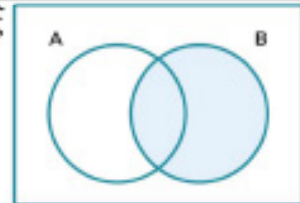
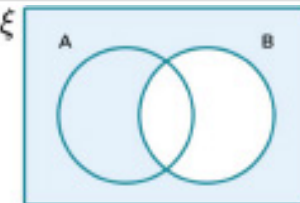
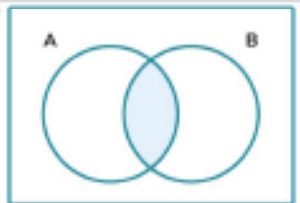
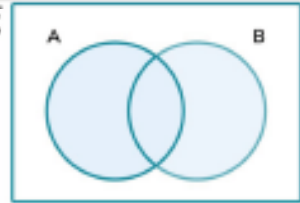
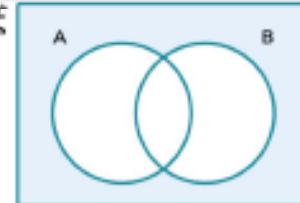
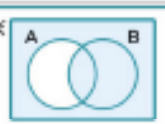
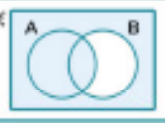
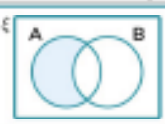
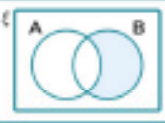
Symbol	Description
$\{ \}$	Curly Brackets, contain all items in a set
,	Comma - separates all items in a set
'	Complement - the items not in a set
ξ	The Universal Set - contains all items in every set and subset required
ϕ	The Empty Set - contains no items

To describe a mathematical set using symbols, we need to know the symbols, and what they represent.

We will mainly look at two sets: set A and set B. The shaded region shows the items within the set. Firstly, we start with the universal set, ξ . We represent this as a rectangle and draw the symbol around the outside.



Venn Diagrams

ξ 	ξ 	ξ 
Here are the two sets, A and B	The universal set, ξ	A
ξ 	ξ 	ξ 
A'	B	B'
Everything but A is A'	B	Everything but B is B'
ξ 	ξ 	ξ 
$A \cap B$	$A \cup B$	$(A \cup B)'$
The intersection, A and B	The union of A and B, which we call A or B	The complement of A or B
ξ 	$A' \cup B$	Not A, or B (the complement of A, union B) Not A, union B
ξ 	$A \cup B'$	A, or Not B (A union the complement of B) A union Not B
ξ 	$A \cap B'$	Just A (A intersection B') A and not B
ξ 	$B \cap A'$	Just B (B intersection A') B and not A

 Year 10 Mathematics Knowledge Organiser	Topic Statistics	What is the Office for National Statistics? (www.ons.gov.uk) The ONS is the UK's largest independent producer of official statistics and it's a recognised national statistical institute. They are responsible for collecting and publishing statistics related to the economy, population and society at national, regional and local levels. They also conduct the censuses in England and Wales every 10 years.
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Averages and Spread

Hey diddle diddle, the median's the middle
 You add then divide for the mean
 The mode is the one you see the most
 And the range is the difference between
 Yeah!

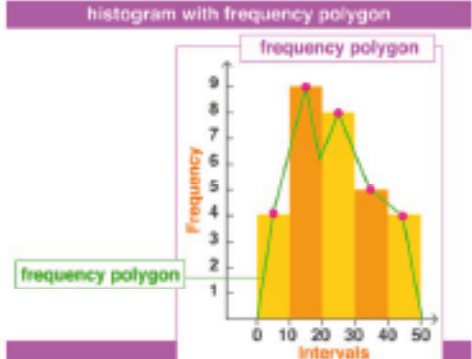
Median	Mean
Find the median of 6, 4, 3, 6, 7, 11, 9, 15	Find the mean of 8, 6, 2, 3, 11, 12, 0
Put the numbers in order, smallest first	Find the sum of the numbers.
3 4 6 6 7 9 11 15	Total = 42
There are two numbers in the middle, 6 and 7 – find halfway between them	There are 7 items in the data set (the numbers) so we will divide by 7.
$(6 + 7) \div 2 = 6.5$ So 6.5 is the median	$42 \div 7 = 6$ So 6 is the mean
Mode	Range
Find the mode of 1, 3, 6, 4, 3, 2, 7, 8, 10	Find the range of 2.6, 3.7, 2.1, 8.4, 2.9, 3.6
Find the number that appears the most (Putting them in order can help).	Find the Highest and Lowest numbers and calculate Highest – Lowest
3 appears the most (twice) so 3 is the mode	Highest = 8.4 Lowest = 2.1 Range = $8.4 - 2.1 = 6.3$

Frequency Polygons

A line graph which joins the midpoints of the top of the bars on a frequency histogram.

A frequency polygon gives a picture of the shape of the data distribution.

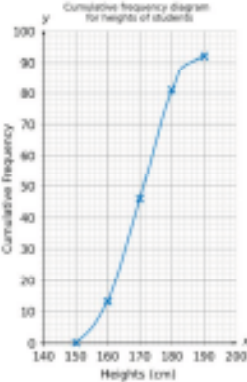
histogram with frequency polygon



Cumulative Frequency Diagram

Cumulative means "how much so far". Think of the word "accumulate" which means to gather together.

To have cumulative totals, just add up the values as you go and then we can create a cumulative frequency diagram



From this we can find the Lower and Upper Quartiles and the Median

Key things to remember

- A cumulative frequency diagram is drawn by plotting the cumulative frequency against the upper class boundary of the respective group.
- Cumulative frequency is plotted on the vertical axis and the other value is plotted on the horizontal axis
- We then join the points by freehand to create a smooth curve

Pie Chart

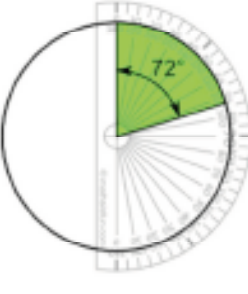
A Pie Chart is a graph using a divided circle where each section represents a percentage of the total.

Each section represents a percentage (or a proportion) of the total

The Pie Chart Checklist

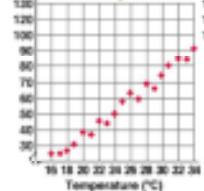
Remember that there are 360° in a circle so each group in the pie chart will be a proportion of 360°.

- ☐ Draw a circle and mark the centre of the circle
- ☐ Draw a radius from the centre of the circle vertically upwards
- ☐ Then use your protractor to measure the degrees of each sector.
- ☐ Finish up by colouring each sector and giving it a label like "Comedy: 4 (20%)", etc.
- ☐ Don't forget a title!

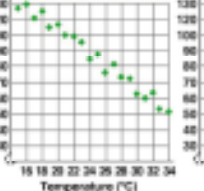


Scatter Diagrams

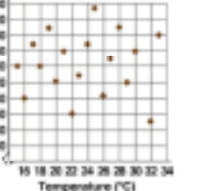
A scatter diagram is a diagram where points are plotted to show the relationship (correlation) between two variables.

Positive Correlation
A positive trend - as one set of values increases, the other set increases.
For example, as the temperature went up ice cream sales went up.

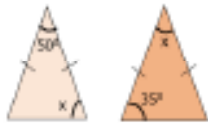
Negative Correlation
A negative trend - as one set of values increases, the other set decreases.
For example, as the temperature went up hamburger sales went down.

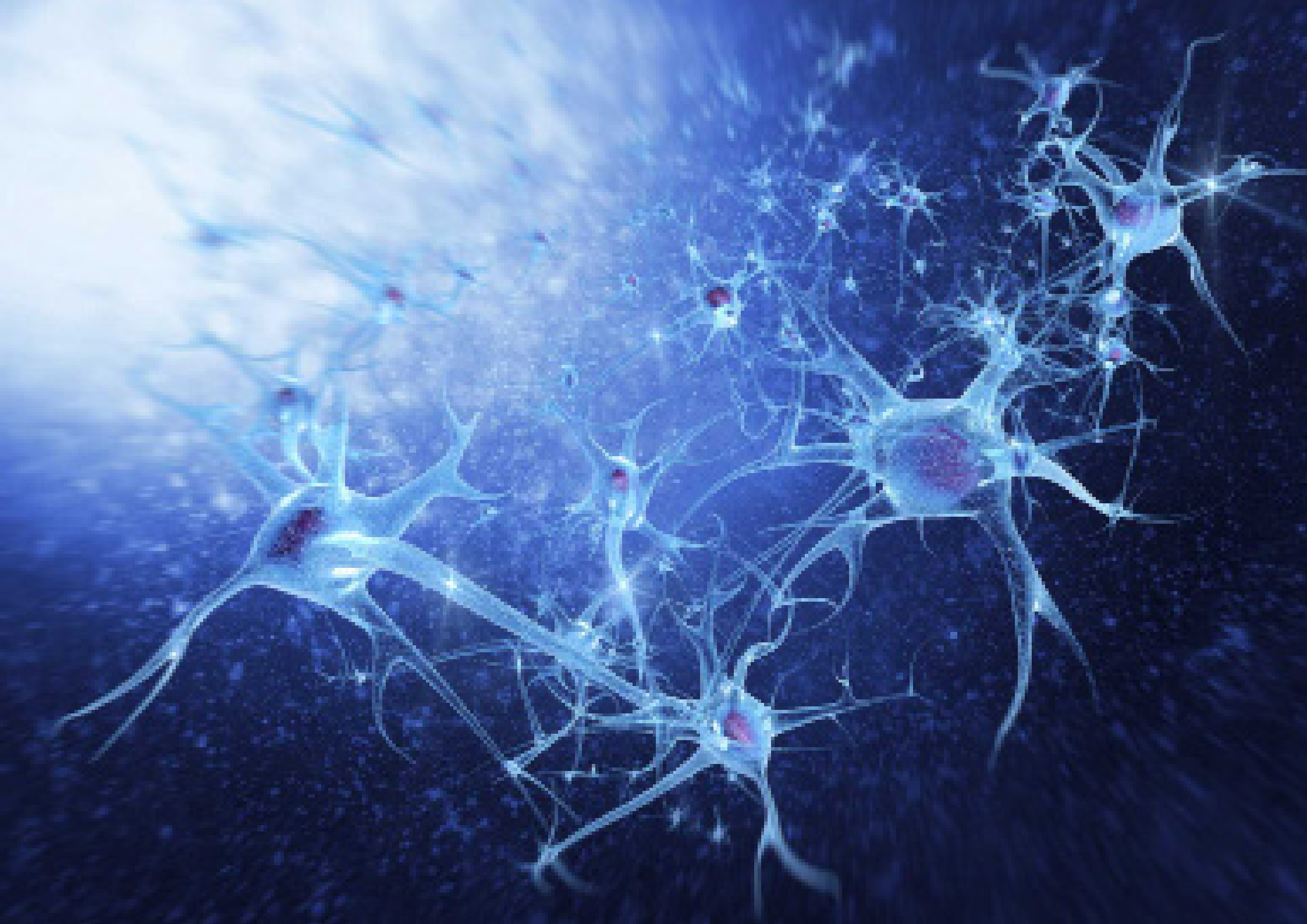



No Correlation
No trend - the points are scattered randomly with no visible pattern.
For example, as the temperature went up there was no apparent effect on coffee sales.

From here we could draw a line of best fit

Mathematics Command Words – Tier 2 Vocabulary

Assess Make a judgement or decision based on the information you have. Example Application <u>Assess</u> the statements below and decide whether they are true or false	Calculate Work out, showing your method where necessary. Example Application <u>Calculate</u> the missing angles in this diagram...	Compare...and/to/with Work out or identify the values required and say which is smaller/larger, etc. Example Application <u>Compare</u> the following calculations and say which is larger. 23% of 50 or 60% of 20	Convert Change a value from one numerical form to another or a measure from one unit to another. Example Application <u>Convert</u> 0.74 into a fraction in its simplest form.	Draw Give an accurate depiction of a graph, map, diagram, etc. Example Application <u>Draw</u> the graph of $y = x^2$ or values of x from -2 to 2
Estimate After rounding given values, give an approximate answer to a calculation or measurement. Example Application <u>Estimate</u> the answer to $\begin{array}{r} 8.62 + 22.1 \\ \hline 5.23 \end{array}$ giving your answer to 1 significant figure.	Explain Give reasons or examples of why or how. Example Application Use the table to <u>explain</u> how you can tell the conversions cannot all be exact...	Find Figure out or work out the answer or missing piece of information Example Application <u>Find</u> a fraction that is greater than 0.3 but less than 0.4.	Hence, or otherwise, .. Using the answer to the previous question (the hence part), or using an alternative method, can you solve the given question Example Application <u>Hence, or otherwise,</u> solve the equation $x^2 + 6x - 16 = 0$	Is this correct? Give an argument, with reasons, whether the statement is correct or not. Example Application Jamal writes the following calculation $\frac{3}{7} - \frac{2}{5} = \frac{15}{35} - \frac{14}{35} = \frac{1}{35}$ Is he correct?
Measure Use a ruler to measure a length or a protractor to measure an angle. Example Application <u>Measure</u> the angle ABC correct to the nearest degree	One has been done for you The given example shows the format in which the rest of the answers are required. Example Application The properties of the quadrilaterals are placed into a table. Complete the table. The first one has been done for you	Show working to support your answer If you have made a decision, give a calculation (and wording where it helps) that shows why you made it. Example Application Anya says the answer is __ Deion says the answer is __. Who is correct? Show working to support your answer	Work out One or more calculations will usually be necessary. Example Application Work out three-quarters of one-fifth of 100	You may use... to help you A diagram or table has been given that may be helpful in organising your working, but you do not have to use it. Example Application Find the angle x , 



1) Principles of Homeostasis

Many of the processes that occur inside of the body aim to keep everything as constant as possible. This constant maintenance of an internal environment is called homeostasis. Internal conditions that are controlled include:

- Body temperature
- Water content
- Blood glucose levels.

All controls in the body need certain key features to function:

- **Receptors:** cells that detect changes in the environment. These changes are known as stimuli.
- **Co-ordination centres:** areas that receive and process the information from the receptors. They send information around the body so that the body can respond.
- **Effectors:** muscles or glands that bring about changes in response to the stimuli.

2) Structure and function of the human nervous system

Your nervous system carries electrical impulses that travel around the body very quickly.

The way your nervous system works can be summed up as:

stimulus → receptor → coordinator (CNS) → effector

Sensory nerves carry impulses to the CNS. The information is processed and impulses are sent out along motor nerves to produce an action.



Measuring reaction times

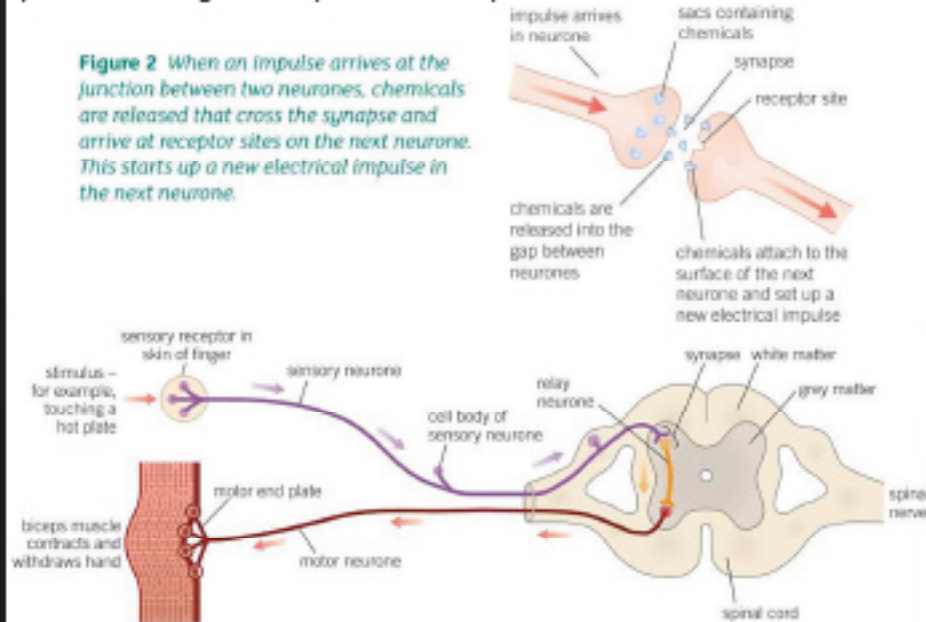
There are many ways to investigate how quickly nerve impulses travel in your body. Two simple methods are:

- use the ruler drop test or digital sensors to measure how quickly you react to a visual stimulus

3) Reflex actions

Some of the body's responses happen so fast that you do not think about them. These automatic responses are known as reflexes. Some of these reflexes help you to avoid danger or carry out basic bodily functions.

Figure 2 When an impulse arrives at the junction between two neurones, chemicals are released that cross the synapse and arrive at receptor sites on the next neurone. This starts up a new electrical impulse in the next neurone.



Key points

- Reflex actions are automatic and rapid and do not involve the conscious parts of the brain.
- Reflexes involve sensory, relay and motor neurones.
- Reflex actions control everyday bodily functions, such as breathing and digestion, and help you to avoid danger.
- The main stages of a reflex arc are:
stimulus → receptor → sensory neurone → relay neurone → motor neurone → effector → response



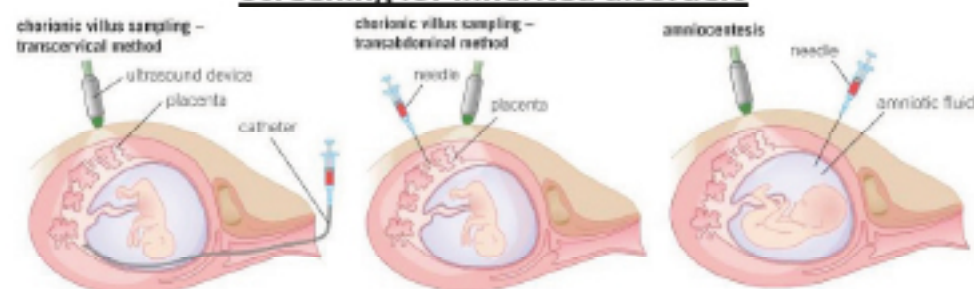
Year 10 Biology: Nervous system Key Vocabulary

Key word	Definition	Contextual Sentence
central nervous system (CNS)	The part of the nervous system where information is processed. It is made up of the brain and spinal cord.	The central nervous system (CNS) co-ordinator of the human body.
coordination centres	Areas that receive and process information from receptors.	The brain and the spinal cord are the coordination centres of the human body.
effectors	Areas (usually muscles or glands) that bring about responses in the body.	When blood sugar levels are high, the pancreas acts as an effector and releases insulin to lower them.
homeostasis	The regulation of the internal conditions of a cell or organism to maintain optimum conditions for function, in response to internal and external changes.	Sweating and shivering are both examples of your body responding to changes in temperature to achieve homeostasis .
motor neurone	Carry impulses from the central nervous system to effector organs.	The motor neurone is the final neurone an impulse will travel along before it reaches an effector.
nerve	Bundle of neurones.	The total lengths of nerve in a human body can reach up to 37 miles.
neurones	Cells of the nervous system that carry minute electrical impulses around the body.	Neurones are examples of specialised cells that are highly adapted to transmit electrical impulses.
receptors	Cells that detect stimuli- changes in the internal or external environment.	Eyes have specialised receptor cells to detect light.
reflex arcs	Bring about a reflex action. They involve the sense organ, sensory neurons, relay neurone, and motor neurone.	An impulse can take milliseconds to travel through a reflex arc .
reflexes	Rapid automatic responses of the nervous system that do not involve conscious thought.	Reflexes allow our bodies to respond to danger quickly.
sensory neurone	Neurone that carries impulses from the sensory organs to the central nervous system.	Sensory neurones can reach 1.5m in length.
stimuli	Changes in the external or internal environment that can be detected by receptors.	Sounds, temperature, and pressure are all examples of stimuli .

Sexual and asexual reproduction

	Asexual reproduction	Sexual reproduction
Advantages	Only one parent is needed. Process is very fast . Enables an organism to quickly colonise an area.	Lots of genetic variation . Population is less likely to be wiped out by disease/competitor/new conditions. Allows evolution to occur.
Disadvantages	All offspring are clones . No genetic variation - can become extinct due to new disease/competitor/new conditions .	Much more time and energy consuming (need to find mate). Need to impress mate .

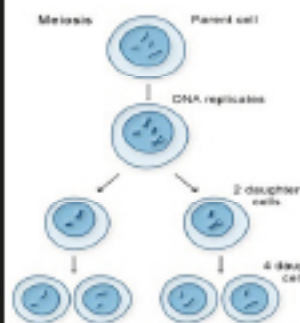
Screening for inherited disorders



Cells from embryos and fetuses can be screened for the alleles that cause many genetic disorders. Embryo and foetal cells are used to identify genetic disorders but screening raises economic, social, and ethical issues.

Meiosis

Gametes (sex cells) are produced in meiosis. Gametes only have **one set of chromosomes (23)**. In meiosis, the genetic material is copied, and the cell divides twice forming **4 gametes**. All of these gametes are **genetically different** from each other.



DNA and the genome

The genome of an organism is the entire genetic material of that organism. The whole human genome has now been studied and it allows genes that code for certain diseases to be found early. The genetic material in a nucleus is made of DNA, which is a polymer made up of 2 strands forming a **double helix**.

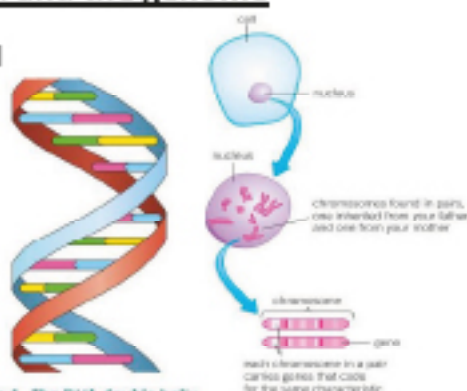


Figure 1 The DNA double helix

Figure 2 The relationship between a cell, the nucleus, the chromosomes, and the genes

Inheritance in action

- homozygote** – an individual with two identical alleles for a characteristic, for example, **BB** or **bb**
- heterozygote** – an individual with different alleles for a characteristic, for example, **Bb**
- genotype** – this describes the alleles present or genetic makeup of an individual regarding a particular characteristic, for example, **BB** or **bb**
- phenotype** – this describes the physical appearance of an individual regarding a particular characteristic, for example, black fur or brown fur in a mouse.

Phenotype: brown fur
Genotype: **bb**

Phenotype: black fur
Genotype: **BB** or **Bb**

Cross 1: **bb** x **BB**

Genetes	B	B
b	Bb	Bb
b	Bb	Bb

Offspring:
genotype: all **Bb**
phenotype: all black fur

Cross 2: **bb** x **Bb**

Genetes	B	b
b	Bb	bb
b	Bb	bb

Offspring:
genotype: 50% **Bb**, 50% **bb**
phenotype: 50% black fur, 50% brown fur

Figure 2 Determining phenotype

Inherited disorders

Polydactyly is a genetic disorder in which someone is born with extra fingers or toes. It is caused by a **dominant allele**.

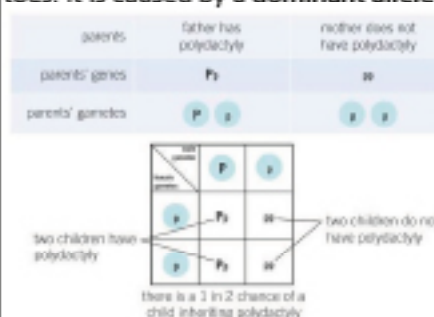


Figure 2 A genetic diagram for polydactyly

C = dominant allele (normal metabolism)
c = recessive allele (cystic fibrosis)

Both parents are carriers, so (**Cc**)

	C	c
C	CC	Cc
c	Cc	cc

Genotype of offspring:
25% normal (**CC**)
50% carriers (**Cc**)
25% affected by cystic fibrosis (**cc**)

Phenotype of offspring:

3/4, or 75% chance normal
1/4, or 25% chance cystic fibrosis

Figure 3 A genetic diagram for cystic fibrosis

Cystic fibrosis is a genetic disorder in which cells produce **excess mucus**. This mainly affects the **lungs and digestive system**. CF is caused by a **recessive gene**. People can be carriers of the gene and have children with CF.

Year 10 Biology: Genetics and Reproduction Key Vocabulary

Key word	Definition	Contextual Sentence
alleles	Different forms of the same gene sometimes referred to as variants.	People have different eye colours due to having different alleles .
asexual reproduction	Involves only one individual and the offspring is identical to the parent. There is no fusion of gametes or mixing of genetic information.	Asexual reproduction can be used by an organism to quickly colonise an area.
bases (DNA)	Nitrogenous compounds that make up part of the structure of DNA and RNA. They are represented by the letters A, T, C, and G.	The proteins that DNA codes for can be altered if there is a change in the base sequence.
carriers	Individuals who are heterozygous for a recessive allele linked to a genetic disorder. Carriers have one healthy allele so are not affected themselves but they can pass on the affected allele to their offspring.	If two carriers of cystic fibrosis meet then they could potentially have a child who will have cystic fibrosis.
cystic fibrosis	An inherited disorder that affects the lungs, digestive, and reproductive system and is inherited through a recessive allele.	Only around half of the people who have cystic fibrosis will live past 40.
dominant allele	The phenotype will be apparent in the offspring even if only one of the alleles is inherited.	Polydactyly is a genetic disorder caused by a dominant allele .
genetic engineering	The process by which scientists can manipulate and change the genotype of an organism.	Genetic engineering can be used to genetically modify crops to give farmers better yields.
genotype	The genetic makeup of an individual for a particular characteristic, for example hair or eye colour.	The genotype of an individual will determine their phenotype.
heterozygote	Individual with different alleles for a characteristic.	A heterozygous person will have both a dominant and recessive allele.
homozygote	Individual with two identical alleles for a characteristic.	A homozygous person will have only either dominant or recessive alleles.
meiosis	Two stage process of cell division that reduces the chromosome number of daughter cells. It is involved in making gametes for sexual reproduction.	Sperm and egg cells are created through the process of meiosis .
mutation	A change in the genetic material of an organism.	Occasionally, mutations can cause a new adaptation to arise.
natural selection	Only those that are most suited to their environment will survive to breed and pass on their useful characteristics to their offspring.	Natural selection can eventually lead to a new species being formed (evolution).
nucleotide	A molecule made up of a sugar, a phosphate group, and one of four different bases. They are key units in the structure of DNA and RNA.	The DNA polymer is made from repeating nucleotide units.
phenotype	The physical appearance / biochemistry of an individual for a particular characteristic.	A person's phenotype is determined by their genotype.
polydactyly	A dominant inherited disorder that results in babies born with extra fingers and/or toes.	Polydactyly can be easily treated by removing the extra digits at an early age.
punnet square diagram	A way of modelling a genetic cross and predicting the outcome using probability.	Scientists can predict the probability of somebody inheriting a genetic disorder by using a punnet square diagram .
recessive	A phenotype that will only show up in the offspring if both of the alleles coding for that characteristic are inherited.	If somebody has a recessive genotype, then they will have two recessive alleles e.g bb.
sex chromosomes	Carry the information that determines the sex of an individual.	In humans, females have XX sex chromosomes , with males having XY.
sexual reproduction	Involves the joining (fusion) of male and female gametes producing genetic variation in the offspring.	Sexual reproduction is more energy consuming than asexual reproduction, however it leads to variation which can be very beneficial.

This history of the Atmosphere

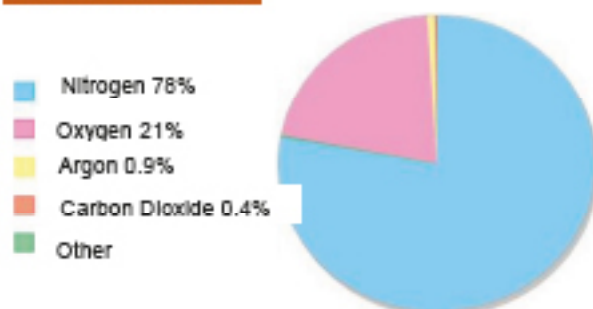
There are lots of ideas about how the Earth and atmosphere formed based on some evidence found. These are called theories. Scientists use theories when there is a lack of evidence to say what really happened. No one was around 4.6 billion years ago to take photos and write it all down!!!

One theory is that intense volcanic activity release gases, such as CO_2 , CH_4 , H_2O and N_2 into the atmosphere, which is similar to Mars or Venus now. It is thought that there was little/no oxygen.

From this, as the Earth started to cool down, the water vapour (H_2O) would **condense** and fall to the ground to make the oceans. It is also believed that **comets** brought more water to the Earth.

The CO_2 in the atmosphere would have **dissolved** in the oceans, this then led to carbon-based organisms forming and oxygen being produced over time, in the process of **photosynthesis**. This contributed to the **increasing the oxygen levels**.

The Current Atmosphere



Over the last 200 million years, the proportions of gases in the Earth's atmosphere has stabilised. See the pie chart above.

Approximately four-fifths (80%) of the atmosphere is **nitrogen** and one-fifth (20%) is **oxygen**. There are some noble gases in the atmosphere, the most abundant is argon, but there is also a small amount of neon, krypton and xenon.

How did the oxygen levels increase over time?

Around 2.7 billion years ago the first carbon-based organism formed; algae. It is believed that it first produced oxygen, through the process of **photosynthesis**. As the organisms evolved, the levels of oxygen increased. This led to more complex life forms developing.



How did the carbon dioxide levels decrease over time?

There are a few ways that carbon dioxide was reduced over time;

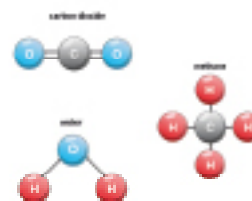
1. Carbon dioxide **dissolved in the water** (oceans).
2. A lot of carbon dioxide become **locked-up** in the Earth's Crust. The dissolved carbon dioxide (CO_2) produced carbonate compounds, that formed a precipitate, what we know today as limestone, a sedimentary rock. The chemical name for limestone is calcium carbonate.
3. Plants **absorb** carbon dioxide during the process of photosynthesis. Any lifeforms that relied on plants fell to the bottom of the seabed and were trapped under layers of sand and mud, over time and under a lot of pressure and heat, and an environment where there was no oxygen, it was turned into fossil fuels.

Meet the greenhouse gases?

Greenhouse gases is a term used for a group of gases that absorb energy radiated by their surface.

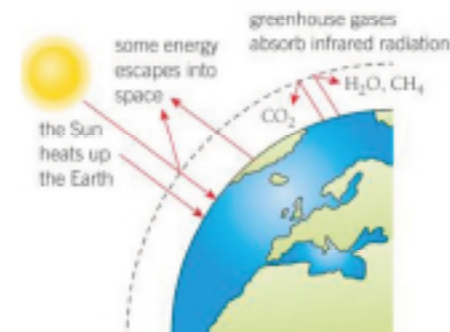
The main greenhouse gases are:

- o Carbon dioxide (CO_2)
 - o Methane (CH_4)
 - o Water Vapour (H_2O)
- Others can include (extra info)
- o Chlorofluorocarbons (CFCs)
 - o Nitrous oxides (NO_x)



Greenhouse Gases: how it warms the Earth

1. UV radiation from the Sun reaches Earth
2. Some Infra-Red re-radiated back into space
3. A portion doesn't reach space and is **absorbed** by greenhouse gases.
4. These gases re-radiate the Infra-Red radiation back to Earth.
5. This warms the Earth's surface.



Evidence of greenhouse gases

Over the last 200 years, there is an increase in the volume of CO_2 produced. This is mainly due to the advances in technology and the use of fossil fuels. CO_2 has been locked-up in fossil fuels for millions of years, but as we burn it, it releases CO_2 .

Methane gets into our atmosphere from **swamps** and **rice fields**. Methane is also produced from **grazing cattle** and from **decomposing waste** (poop).

Landfill sites are another source that produces methane, from the rotting food waste. This has increased over the years due to the population increasing.

Scientists use "hard" evidence to link the levels of CO_2 with the climate and any changes. One source of evidence is the ice cores from Greenland, which have trapped gases over time. These can be dated and analysed for changes.

But remember it is difficult to predict with complete certainty the effects on the climate due to greenhouse gases, however, the evidence is showing trends which can be used to suggest the future effects.

Natural resources from the Earth

We rely a lot on resources from the Earth to meet our needs for food, clothing, shelter, fuel and materials. Resources are classed as **finite** and **renewable** resources.

Food: water, Fruit, vegetables, crops and meat

Shelter: Wood, limestone and sand

Fuel: Crude Oil that produces propane, petrol and diesel that we use for transport

Materials such as metal ores from the Earth's crust.

Scientists are used for developing and advancing technology to assist with agriculture and industrial processes to meet the growing population demands in a sustainable way.

Sustainability

Sustainability is about *meeting the needs of current society, without endangering the ability of future generations to meet their needs.*

Finite resources are resources that are being used up faster than they can be replaced, so if you can carry on using them, they will run out. Fossil fuels (coal, oil and natural gas) and limestone are examples of **finite** resources.

Renewable resources are resources that can be replaced at the same rate at which that is used up. Crops, wool, silk, rubber and wood are all examples of **renewable** resources.

Water

Water is a vital resource. It is used as a raw material for agriculture and in industry, such as solvents and coolants and its also used in washing, cleaning and for drinking. Most water supplies in the UK are source of **fresh water** (e.g. lakes, reservoirs, rivers or groundwater aquifers).

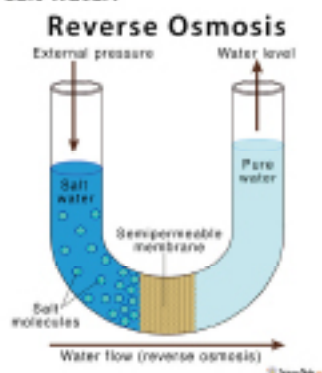
Safe drinking water is known as **potable water**. This means that it has been treated to remove any impurities from it. The impurities such as minerals (dissolved salts) or microorganisms are found naturally in the ground, and can be harmful for human consumption.

How to purify salty water

Most water in the UK is fresh water, however, there are countries that don't have any freshwater supplies. Therefore, salt water is treated using processes such as **distillation** or **desalination**. **Distillation** is expensive due to the energy costs needed therefore most countries use **desalination**.

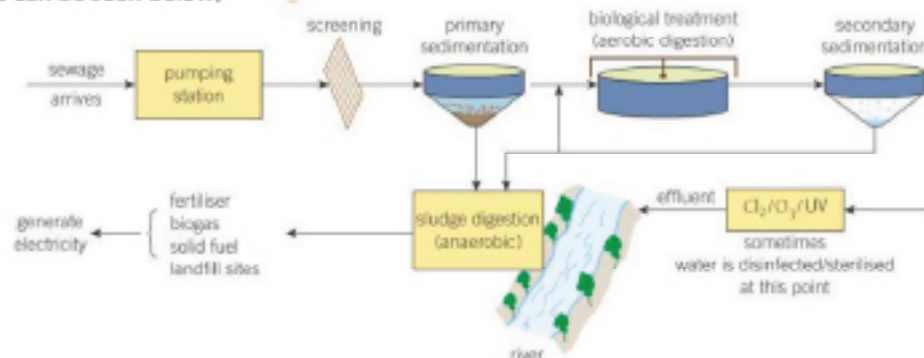
Desalination

Desalination uses reverse osmosis through a semipermeable membrane that removed the NaCl particles from the salt water.



Treating waste-water

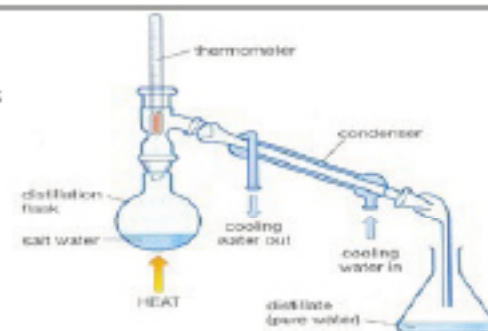
Waste water is water that has been used, normally in homes, that go down the sink/ shower/ bath/ toilet. It all enters a large sewer with waste from other houses/businesses/factories. This is named **sewage**. This waste water needs to be treated to make it safe before it can re-enter the environment. This process can be seen below:



Required Practical: Water Distillation

You can test the **"pure"** water you distil using several methods to see if it is **pure**. Remember, **pure** means that there is only one substance present.

- Measure the boiling point. **Pure water** boils are 100°C
- Test the pH value
- Burn a sample in a flame. Any Sodium will produce an orange/yellow flame.



Energy Changes

Reactions can be grouped into two types;

Exothermic

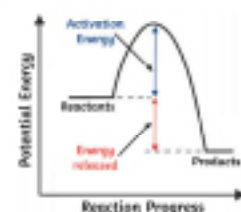
These are reactions that **release thermal energy** to the surroundings. e.g. Burning, Neutralisation you observe a **temperature rise**. A use of these is hand warmers.

Endothermic

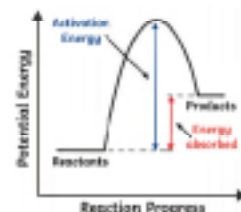
These reactions **take in thermal energy** from the surroundings. e.g. some salts dissolving, thermal decomposition of calcium carbonate you observe a **temperature drop**. Use of these is sports injury packs.

Reaction Profiles

The reaction profile diagrams shows the pathway of a reaction in terms of energy and time.



Exothermic Reaction



Endothermic Reaction

Activation Energy

The **activation energy** is the minimum amount of energy needed to start the reaction. This is when colliding particles have sufficient energy to cause a reaction. If there is not enough energy, then there will not be a reaction.

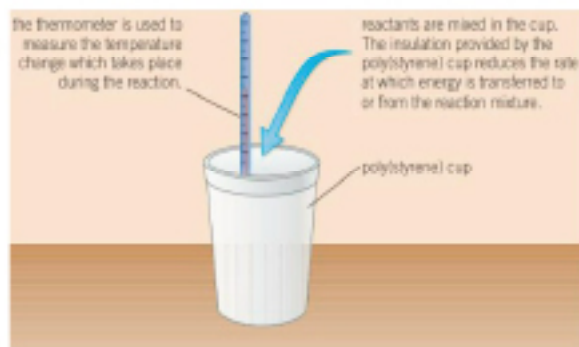
These reactions can be represented by energy profile diagrams. Measured from the peak of the curve to the energy of reactants.

Required Practical: Energy Changes

The energy change in a reaction can be measured using the simple apparatus to the left. The chemicals are mixed, and the temperature is taken at regular time intervals.

You will need to take a start temperature and an end temperature and calculate the temperature difference.

Polystyrene is used as it is a **better insulator** than glass and so it reduces heat transfer. You could insulate further by adding a lid.



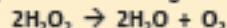
Bond Energy Calculations (HT)

These are calculations to work out the overall energy change of a reaction. The amount of energy to break all the bonds in the reactants minus the amount of energy to make the bonds in the products.

So to use simple numbers if the energy required to break the reactant bonds was 200kJ/mol and the energy released from the new bonds was 150kJ/mol The overall energy change would be= 200-150=50 kJ/mol

Worked Example (HT)

Calculate the energy change for the following reaction:



To make it easier you should draw out the displayed formula for the reaction.

On the left side there are;

4 x O-H bonds = 464 + 464 + 464 + 464 = 1856

2 x O-O bond = 146 + 146 = 292

Total energy for bonds breaking = 1856 + 292 = 2148kJ/mol

On the right side there are

4 x O-H bonds = 464 + 464 + 464 + 464 = 1856

1 x O=O bond = 498

Total energy for bonds forming = 1856 + 498 = 2354kJ/mol

$\Delta H = \text{Sum of bonds broken} - \text{Sum of bonds made}$

$\Delta H = 2148 - 2354$

$\Delta H = -206\text{kJ/mol}$ (a negative number implies an exothermic reaction)

Key Vocabulary	Definition	Contextual Sentence
bond energy	the energy required to break a specific chemical bond.	The bond energy increases generally for double and triple bonds.
Activation energy	The energy required to start a reaction.	The particles collided with sufficient energy to start the reaction. This is called activation energy .
endothermic	a reaction that takes in energy from the surroundings.	Melting is an endothermic reaction.
exothermic	a reaction that transfers energy to the surroundings.	Combustion of fuels e.g. wood burning is an exothermic reaction.
fuel cells	sources of electricity that are supplied by an external source of fuel.	In a Hydrogen fuel cell the only waster product is water.

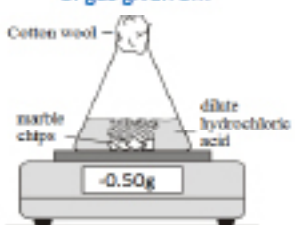
Measuring Rates of Reaction

There are two ways you can work out the rate of a chemical reaction. You can find out how quickly:

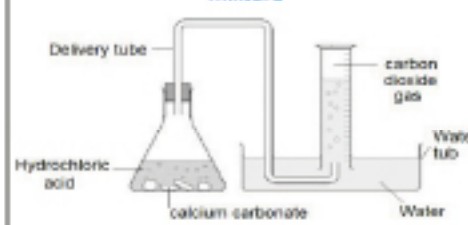
- The reactants are used up
- The products are made

There are **three techniques** that can be used:

Measuring the volume of gas given off.



Measuring the decreasing mass of a reactant mixture



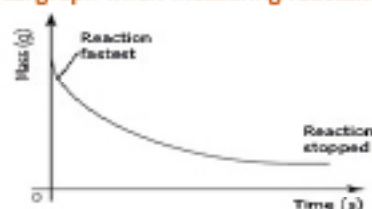
Identifying a colour change



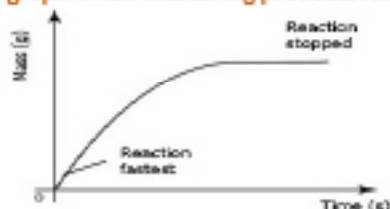
Calculating the Rate of a Reaction

$$\text{Mean} = \frac{\text{quantity of reactant used}}{\text{time}} \text{ or } \frac{\text{quantity of product used}}{\text{time}}$$

Typical graph when measuring reactants used



Typical graph when measuring products formed

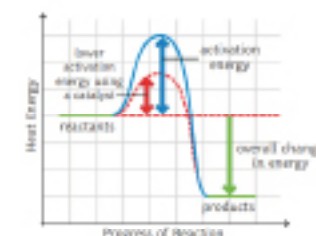


Collision Theory

Factor	Effect on Rate	Explanation
Surface area of solid reactants	Increasing the surface area increases the rate of reaction.	Exposes more of the solid so that there is a greater frequency of collisions occurring.
Concentration of reactants	Increasing the concentration increases the rate of reaction.	Increases the frequency of a collision as particles are closer together.
Pressure of gases	Increasing the pressure increases the rate of reaction.	Increases the frequency of a collision as particles are closer together.
Temperature	Increasing the temperature increases the rate of reaction.	Particles collide more frequently and with more energy.
Catalyst	Catalysts increase the rate of reaction.	Lowers the activation energy by providing an alternate pathway.

Catalysts

The reaction profile diagram of an uncatalysed and a catalysed exothermic reaction is shown on the right. The catalyst lowers the activation energy of the reaction, giving the reaction an alternative pathway to the products.



Variable

How to identify it

Independent variable

This is the one thing you change to see if that's the cause of something happening in an experiment.
Eg: the concentration of the acid

Dependent variable

This is the variable that you can measure to see how much the independent variable has influenced the changes. Eg: the volume of gas produced in 20 seconds

Control variables

There can be a number of control variables for an experiment. These are the things you keep the same.
Eg: Volume of acid, mass of metal, room temperature.

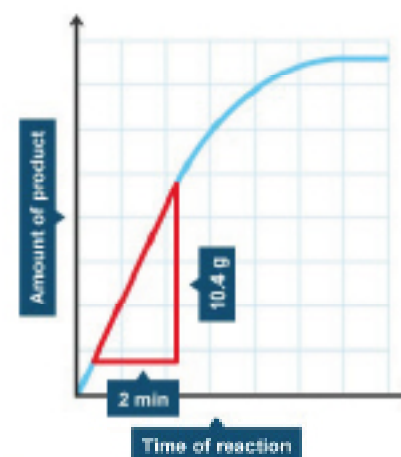
The word AMOUNT

In chemistry, we never use the word AMOUNT. When we are discussing "amount" we use the following terms;

Volume for Liquids, Gases and Solutions
Mass for solids

Calculating the rate using tangents

From the line of, best fit you can draw a tangent at a specific point. See the diagram to the right. Use the values of length (using the scale given). Use the equations $= \frac{y}{x}$



Required Prac: How does the concentration of an acid affect the rate of reaction?

In this experiment you will:

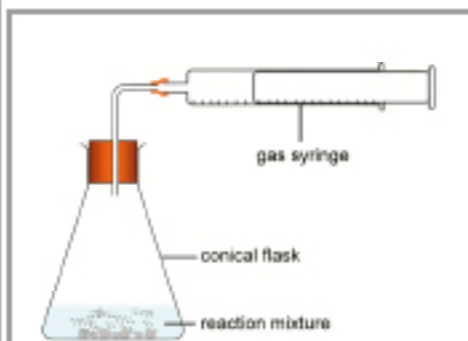
- react magnesium ribbon with different concentrations of hydrochloric acid
- measure the volume of gas produced for each concentration
- use your results to work out how the rate of reaction is affected by the concentration of the acid.

Method

1. use a measuring cylinder to add 50 ml of 0.5 mol/dm³ hydrochloric acid to a conical flask.
2. add a single 3 cm strip of magnesium ribbon to the flask, and immediately connect the gas syringe and start a timer
3. at every 20 seconds, record how much gas has been produced
4. when the reaction is complete, clean the apparatus as instructed by your teacher
5. repeat steps 1-4 with different concentrations (1.0 mol/dm³, and 1.5 mol/dm³) of hydrochloric acid

Equipment

- magnesium strips
- hydrochloric acid (3 concentrations)
- 250 ml conical flask
- 100 ml gas syringe



Results: Table

Draw a table for your results. Don't forget to label your columns with units; such as the one below.

Time (s)	0.5 mol/dm ³	1.0 mol/dm ³	1.5 mol/dm ³

Results: Graph

For each concentration plot a graph on the same set of axes to show:

- volume of gas (ml) on the Y axis (vertical).
- time (s) on the X axis (horizontal)
- a curve of best fit.

Use your graph to compare the rates of reaction with different concentrations of hydrochloric acid with magnesium. Use collision theory to explain your findings.

Required Prac: How does the concentration of Sodium Thiosulfate affect the rate of reaction?

In this experiment you will:

- react different concentrations of sodium thiosulfate with hydrochloric acid
- use a stop clock to time how long it takes for the mixture to become cloudy for each concentration
- use your results to work out how the rate of reaction changes as the concentration of the sodium thiosulfate changes

Method

1. use a measuring cylinder to add 10 ml of sodium thiosulfate solution to a conical flask, then add 40 ml of water (8 g/dm³)
2. measure and record the temperature of the solution
3. place the conical flask on a piece of paper with a black cross drawn on it
4. use another measuring cylinder to add 10 ml of hydrochloric acid to the flask, and immediately start a timer
5. when the cross is no longer visible record the time taken, and then clean the apparatus as instructed by your teacher
6. repeat steps 1-5 changing the concentration of sodium thiosulfate each time as below:
 - 20 ml sodium thiosulfate + 30 ml water (16 g/dm³)
 - 30 ml sodium thiosulfate + 20 ml water (24 g/dm³)
 - 40 ml sodium thiosulfate + 10 ml water (32 g/dm³)
 - 50 ml sodium thiosulfate + no water (40 g/dm³).

Equipment

- water bath
- sodium thiosulfate
- 50 ml measuring cylinder
- 10 ml measuring cylinder
- stop clock or stopwatch



Results: Table

Draw a table for your results. Don't forget to label your columns with units; such as the one below.

concentration (g/dm ³)	time for cross to disappear (s)		
	trial 1	trial 2	mean

Results: Graph

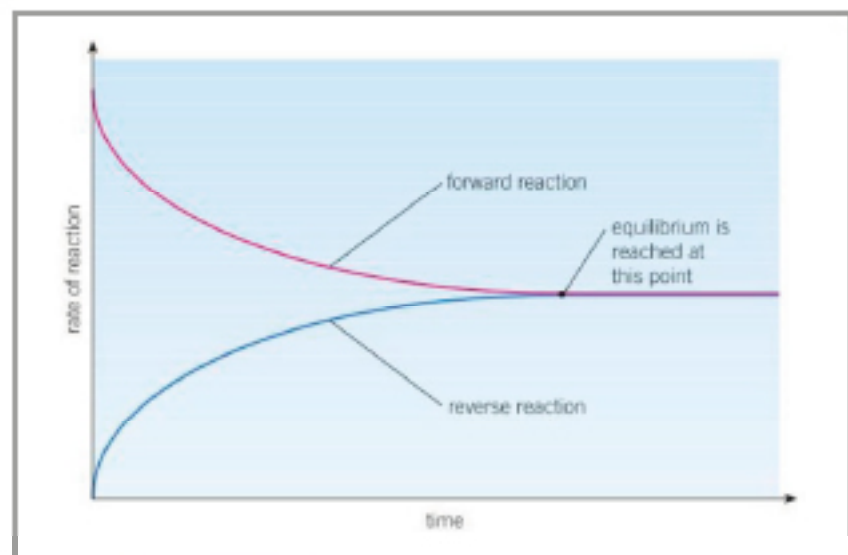
Plot a graph to show:

- mean time (s) on the Y axis (vertical)
- concentration (g/dm³) on the X axis (horizontal)
- a curve of best fit

Describe the relationship between the independent variable and the dependent variable?

What were your control variables? Evaluate the two methods that you have used to investigate the effect of concentration on rate of reaction.

Key term	Information
Reversible reaction	A reaction in which the products can also form the reactants. Its symbol is $\rightleftharpoons$ Shown as: $A + B \rightleftharpoons C + D$
Exothermic	A reaction that transfers energy to the surroundings
Endothermic	A reaction that takes in energy from the surroundings
Equilibrium (HT)	Equilibrium is reached when the forward and backwards reactions occur at exactly the same rate. The amounts of reactants and products present remain constant. Requires a sealed container
Le Châtelier's Principle (HT)	When a change in conditions is introduced to a system at equilibrium, the position of equilibrium shifts so as to cancel out the change.



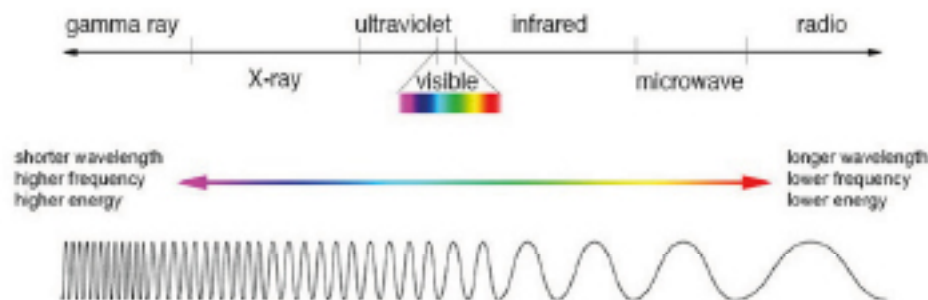
	If the forward reaction is exothermic	If the forward reaction is endothermic
Changing Temperature (HT)	An increase in temperature shifts the equilibrium in the backwards (endothermic) direction. Hence the amount of products decreases. A decrease in temperature shifts the equilibrium in the forwards (exothermic) direction. Hence the amount of products increases.	An increase in temperature shifts the equilibrium in the forwards (endothermic) direction. Hence the amount of products increases. A decrease in temperature shifts the equilibrium in the backwards (exothermic) direction. Hence the amount of products decreases.
Changing concentrations (HT)	If we increase the concentration of one of the reactants, Le Chatelier's principle says that the equilibrium will shift in the direction that tends to reduce the concentration of this reactant. $A + B \rightleftharpoons C + D$ Increasing the concentration of reactant A, the only way the system can reduce the concentration of A, is by some of A reacting with B. Hence the equilibrium moves in the forwards direction and more C & D are made. If the concentration of a reactant is increased, the equilibrium shifts in the forwards direction to decrease the amount of reactant, hence more products will be formed. If the concentration of a product is decreased, more products will be formed.	
Changing pressure (HT)	For reactions of gases: - an increase in pressure causes the reaction to favour the side with the smaller number of molecules (as shown by the balanced symbol equation for that reaction). - A decrease in pressure causes the reaction to favour the side with the larger number of molecules (as shown by the balanced symbol equation for that reaction). e.g. $N_2O_4(g) \rightleftharpoons 2NO_2(g)$ - Decreasing the pressure in this reaction shifts the equilibrium to the side with the most gas molecules. Hence the equilibrium shifts in the forward direction.	



Year 10 Physics: Electromagnetic Spectrum Knowledge

Electromagnetic Spectrum

The **electromagnetic spectrum** is a continuous range of wavelengths. The types of radiation that occur in different parts of the spectrum have different uses and dangers depending on their wavelength.



As the **wavelength** decreases the **frequency** increases.

As frequency increase, energy increases.

The greater the **frequency**, the more **dangerous** the wave.

All EM waves are transverse waves

They all travel at the speed of light (3×10^8 m/s)

They can all travel through a vacuum

Energy	Frequency	Wavelength	Radiation type	Typical use
Lowest	Lowest	Longest	Radio waves	Television signals
			Microwaves	Cooking, mobile phones
			Infrared	Optical fibre communication
			Visible light	Seeing
			Ultraviolet	Detecting forged bank notes
			X-rays	Medical images of bones
Highest	Highest	Shortest	Gamma radiation	Killing cancer cells

Ionising radiation

Ultraviolet waves, X-rays and gamma rays are types of **ionising** radiation.

They can add or remove **electrons** from molecules, producing electrically charged ions. Ionisation can have hazardous effects on the body

Ultraviolet waves can cause damage to skin cells and eyes, and increase the risk of **skin cancer**.

X-rays and **gamma rays** can cause the mutation of genes, which can lead to cancer

Non-ionising radiation

Radio waves, microwaves, infrared and visible light are all **non-ionising** radiation.

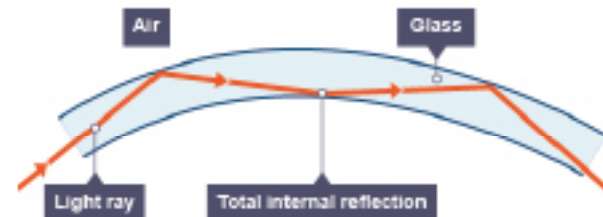
They **cannot** add or remove **electrons** from molecules.

Radio waves are used for terrestrial communication (TV and radio) as it can not pass through atmosphere because it does not have enough energy

Microwaves are used for satellite communication (TV and mobile phones) as it can pass through atmosphere because it does not have enough energy

Optical Fibres

An **optical fibre** is a thin rod of high-quality glass. Very little light is absorbed by the glass. Light getting in at one end undergoes repeated total internal reflection, even when the fibre is bent, and emerges at the other end.



Uses of optical fibres

Optical fibres are used in endoscopes that allow surgeons to see inside their patients.

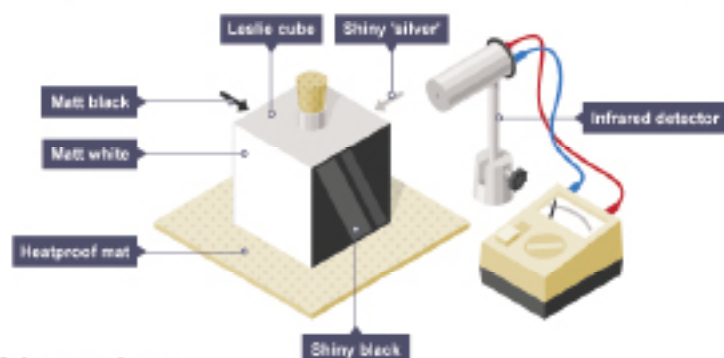
Optical fibres can also carry enormous amounts of information as pulses of light.

Emission and absorption of infrared radiation

All bodies (objects) **emit** and **absorb** infrared radiation. They do this whatever their temperature. The hotter the body:

- the more infrared radiation it gives out in a given time
- the greater the proportion of emitted radiation is visible light

Required practical - investigating infrared radiation



Aim of the experiment

To investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.

Method

- Place a Leslie cube on a heat-resistant mat. Almost fill it with boiling water and replace the lid.
- Leave for one minute. This is to enable the surfaces to heat up to the temperature of the water.
- Use the infrared detector to measure the intensity of infrared radiation emitted from each surface, or the temperature of the surface. Make sure that the detector is the same distance from each surface for each reading.

Results

Surface type	Infrared intensity	
matt black	19.5	Best absorber/ emitter
matt white	5.1	
shiny black	14.2	
shiny silver	3.8	Worst absorber/ emitter

Factors affecting the Earth's temperature - Higher

The temperature of the Earth depends on many factors including the concentration of greenhouse gases such as water vapour, methane and carbon dioxide.

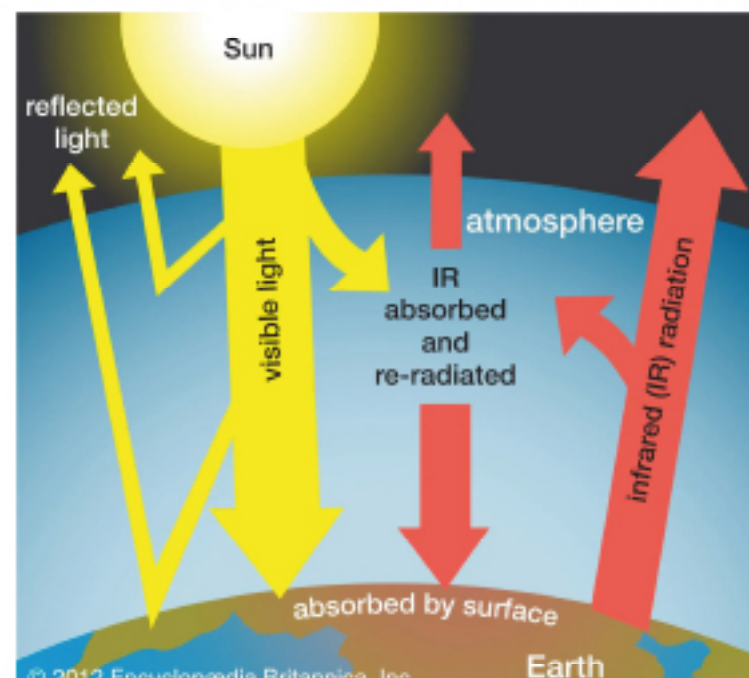
The Earth's temperature also depends on the rates at which light radiation and infrared radiation are:

- absorbed by the Earth's surface and atmosphere
- emitted by the Earth's surface and atmosphere

The greenhouse effect

The 'greenhouse effect' caused by naturally occurring greenhouse gases, such as water vapour, stabilises the surface temperature of Earth. This allows the planet to support life.

However, human activities such as deforestation and the burning of fossil fuels are releasing additional carbon dioxide. This causes more infrared radiation to be 'trapped' and reabsorbed by the Earth's surface. This enhanced greenhouse effect is causing global temperatures to increase, leading to climate change.



Year 10 Physics: Electromagnetic Spectrum Vocab

Key Vocabulary	Definition	Contextual Sentence
Activity	The number of unstable atoms that decay per second in a radioactive source.	Overtime the activity of the isotope reduced.
Alpha radiation (α)	Alpha particles, each composed of two protons and two neutrons, emitted by unstable nuclei.	The Uranium nuclei decayed and emitted an alpha particle .
Atomic number	The number of protons (which equals the number of electrons) in an atom. It is sometimes called the proton number.	During the alpha decay the proton number decreases by 2.
Beta radiation (β)	Beta particles that are high energy electrons created in, and emitted from, unstable nuclei.	Carbon-13 nuclei decayed and emitted a beta particle .
Chain reaction	Reactions in which one reaction causes further reactions, which in turn cause further reactions, etc.	The uncontrolled chain reaction can quickly lead to an explosion.
Count rate	The number of counts per second detected by a Geiger counter.	The count rate is the number of radiation counts per second.
Gamma radiation (γ)	Electromagnetic radiation emitted from unstable nuclei in radioactive substances.	Gamma radiation is the least ionising of the nuclear radiations.
Half-life	Average time taken for the number of nuclei of the isotope (or mass of the isotope) in a sample to halve.	The half-life of the isotope was 10 days.
Ionisation	Any process in which atoms become charged.	The atom lost an electron through the process of ionisation .
Irradiated	An object that has been exposed to ionising radiation.	The person was irradiated by the radioactive source.
Isotopes	Atoms with the same number of protons and different numbers of neutrons.	Carbon 12 and carbon 13 are isotopes of one another.
Mass number	The number of proton and neutrons in a nucleus.	The mass number of Carbon 12 is 12.
Moderator	Substance in a nuclear reactor that slows down fission neutrons.	Water is often used as a moderator .
Radioactive contamination	The unwanted presence of materials containing radioactive atoms on other materials.	The air and dust was dangerous to health due to radioactive contamination .
Reactor core	The thick steel vessel used to contain fuel rods, control rods and the moderator in a nuclear fission reactor.	The reactor core was made of thick lead.



GCSE Paper 1 Religion Christian Practices

1. Worship

2. Prayer

3. Baptism

4. Holy Communion

5. Pilgrimage

6. Festivals

7. Role of the Church in the local community

8. Mission and Evangelism

9. Church growth

10. The importance of the worldwide Church (reconciliation)

11. Christian Persecution

12. The Church's response to world poverty

3. Baptism

Sacraments are holy rituals through which believers receive a special gift of grace. Roman Catholics believe in seven sacraments, Protestants believe in just two.

Baptism is a ritual through which a person becomes a member of the Church. It involves the use of water to symbolise the washing away of sin. Infant baptism is for babies and young children. It welcomes the child into the Christian family and is believed to cleanse the child of the Original Sin of Adam and Eve. Believer's baptism is for people who are old enough to understand the significance of the ritual. The person is fully immersed under the water to wash all their sin (not just original sin).

1. Worship

Liturgical – Follows a set structure or ritual e.g. RC

Non-liturgical - Does not follow a set structure or ritual

Informal – Non-liturgical worship that is 'spontaneous' or 'charismatic'

Private – worshipping alone

Why is worship important?

- It brings a sense of togetherness as a community
- It makes a person feel closer to God
- It is peaceful – allowing for prayer and meditation
- It is an external expression of their faith.

2. Prayer

Nature and purpose of prayer

PACT

P- Praising and adoring God

A- Asking

C- Confession

T- Thanksgiving

When Jesus' disciples asked him to teach them how to pray, he answered with the Lord's Prayer. Christians see it as a model of good prayer as it combines all aspects of PACT.

"Our Father who art in heaven, hallowed be thy name"

"Give us this day our daily bread. And forgive us our sins."



Our Father

Who art in heaven, hallowed be Thy name.
Thy kingdom come, Thy will be done,
on earth as it is in heaven.
Give us this day our daily bread.
And forgive us our trespasses, as we
forgive those who trespass against us.
Lead us not into temptation,
but deliver us from evil.

Amen

4. Eucharist/Communion

Holy Communion (also known as the Eucharist) is the sacrament that uses bread and wine to celebrate the sacrifice of Jesus on the cross and his resurrection. It recalls the Last Supper of Jesus, using his words and actions. Christians interpret the meaning of Holy Communion in different ways. Roman Catholics believe in transubstantiation. This means they believe the bread and wine literally become flesh and blood. Many other Christians see the bread and wine as symbolic.

"This is my body Eat this and remember me."

"This is my blood...drink this and remember me."

In most churches the Holy Communion service has two parts: the ministry of the Word (which focusses on the Bible) and the ministry of Holy Communion (the offering, consecrating and sharing of bread.)



5. Pilgrimage

A pilgrimage is a journey made by a believer to a holy site for religious reasons. As well as making a physical journey to a sacred place, the pilgrim also makes a spiritual journey towards God.

Lourdes- the place where the Virgin Mary appears to a young girl Bernadette. Mary told Bernadette to dig and when she did a spring of water emerged. Pilgrims visit the site to drink the water in the hopes it will heal them.

Iona- An island on the coast of Scotland, discovered by St. Columba. Said to be so beautiful it must be the creation of God. Called the 'thin place', as it is believed this is a place where the space between heaven and earth is at its thinnest.

6. Festivals

A festival is a day or period of celebration for religious reasons.

Festivals help Christians to remember and celebrate the major events in their religion- particularly the life, death and resurrection of Jesus.

Christmas commemorates the incarnation and birth of Jesus.

Celebrations begin on the 25th December and last 12 days, ending with Epiphany (which recalls the visit of the wise men).

Easter celebrates the resurrection of Jesus from the dead.

Celebrations begin before Easter Sunday and finish with the feast of the Pentecost.



7. The role of the Church in the local community

The Church is the holy people of God, also called the Body of Christ, among whom Christ is present and active. A church is a building in which Christians worship. Individual churches and the Church as a whole help the local community in a variety of ways.

1. Trussell Trust- A charity running over 400 food banks in the UK. These provide emergency food, help and support to people in crisis in the UK.
2. The Oasis Project- A community hub run by Plymouth Methodist Mission Circuit. Provides an internet café, creative courses, a job club, training opportunities, a meeting place and a food bank. Spiritual and practical help is given to those in need.
3. Street Pastors- An initiative started in London in 2003 by a Christian charity the Ascension Trust. Adult volunteers are trained to patrol the streets in urban areas. The main aim originally was to challenge gang culture and knife crime in London. The focus then widened to responding to drunkenness and anti-social behaviour.
4. Parish Nursing Ministries- This Christian charity supports whole person health care through the local church. They provide churches with registered parish nurses, who promote well being in body, mind and spirit.

8. The place of mission and evangelism

A mission is a vocation or calling to spread the faith. The Church has a mission to tell non-believers that Jesus Christ, the Son of God, came into the world as its savior. Christians spread the faith through evangelism (showing faith in Jesus by example or telling others). They do this to fulfill Jesus' instructions to the disciples to spread his teachings (the Great Commission).

'Therefore, go and make disciples of all nations, baptising them in the name of the Father and of the Son and of the Holy Spirit, and teaching them to obey everything I have commanded you.' Matthew 28:19-20



9. Church growth

Up to a third of the world's population claim to be Christian (including people who rarely attend church), and around 80,000 people become Christians each day. The Church expects new Christians to help spread the faith as part of their commitment to Jesus.

Christ for all Nations is an example of a Christian organization promoting evangelism. They do this by holding evangelistic meetings throughout the world, but particularly in Africa. Some of their large open air-rallies held in Africa have drawn crowds of up to 1.6 million people.

10. The importance of the worldwide Church

The worldwide Church has a mission to restore people's relationship with God and with one another. The Church therefore plays an important role in reconciliation (restoring harmony after relationships have broken down), through initiatives to develop peace and understanding.

The Corrymeela Community brings together people from different backgrounds, including people of different faiths or political leanings.

Irish Churches Peace Project brings Catholics and Protestants together in Northern Ireland.



11. Christian persecution

Christians have faced persecution (hostility and ill treatment (from the beginning of the Church, and Christians are still persecuted worldwide today. For some Christians, persecution can have positive effects: it can strengthen the faith, allow them to share in Jesus' sufferings, and even inspire others to become Christian.

The Church helps those who are persecuted through prayer, practical help and financial support, and by raising awareness of persecution and campaigning against it. Christian Solidarity Worldwide campaigns for religious freedom for all.



12 The Church's response to world poverty

Christians try to help those living in poverty because Jesus taught that this was important. For example:

- Jesus once told a rich man to sell everything and give to the poor.
- The parable of the Rich Man and Lazarus tells of a rich man who ends up in hell for ignoring a beggar.
- The parable of the Good Samaritan teaches the importance of helping others.

Three Christian charities that help those in poverty are:

- Christian Aid supports projects to encourage sustainable development.
- Tearfund works with over 90,000 churches worldwide to help lift people out of poverty.
- CAFOD gives short term aid such as food, water and shelter and works with local organisations to train, supply and support communities to work their own way out of poverty.

Key Term	Definition	Contextual Sentence
Worship	Acts of religious praise, honour or devotion	<i>Christians worship God in church each Sunday.</i>
Liturgical worship	A church service that follows a set structure of ritual	<i>Roman Catholics have liturgical worship.</i>
Non-liturgical worship	A service that does not follow a set text or ritual	<i>Non-conformist Christians have non-liturgical worship.</i>
Informal worship	A type of non-liturgical worship sometimes 'spontaneous' or 'charismatic' in nature	<i>The Pentecostal Church have informal worship.</i>
Prayer	Communicating with God, either silently or through words of praise, thanksgiving or confession, or requests for God's help or guidance.	<i>Prayer is a key way for Christians to worship God.</i>
Sacrament	Rites and rituals through which the believer receives a special gift of grace; they are an 'outward sign' of an 'inward grace'.	<i>The Roman Catholic Church have seven sacraments.</i>
Baptism	The ritual through which people become members of the Church; baptism involves the use of water as a symbol of the washing away of sin.	<i>Baptism is a sacrament in both the Roman Catholic and Protestant Church.</i>
Holy Communion (Eucharist)	A service of thanksgiving in which the sacrificial death and resurrection of Jesus are celebrated using bread and wine; also called Eucharist, Mass, the Lord's Supper, the Breaking of Bread, and the Divine Liturgy.	<i>There is a similar pattern in the way most churches celebrate Holy Communion.</i>
Pilgrimage	A journey by a believer to a holy site for religious reasons; pilgrimage is an act of worship and devotion.	<i>Lima is an important pilgrimage site for Christians.</i>
Festival	A day or period of celebration for religious reasons.	<i>Festivals help Christians remember the major events in their religion.</i>
Christmas	The day commemorating the Incarnation, the birth of Jesus; also seen as the season of 12 days ending with the Epiphany.	<i>Christmas is celebrated on the 25th December.</i>
Easter	The religious season of celebrating the Resurrection of Jesus from the dead; it starts on Easter Day and finished with the feast of the Pentecost.	<i>Easter is the most important Christian festival.</i>
Church	1. The holy people of God, also called the Body of Christ, among whom Christ is present and active. 2. A building in which people worship.	<i>The Church help the local community through food banks.</i>
Agape	A word in the Bible that describes selfless, sacrificial, unconditional love.	<i>Showing agape love is part of the Christian way of life.</i>
Mission	The vocation or calling of a religious organisation or individual to go out and spread their faith.	<i>The Church has a mission to spread the gospel to non-believers.</i>
Evangelism	Spreading the Christian gospel by public preaching or personal witness.	<i>The Alpha Course is an example of evangelism.</i>
Reconciliation	A sacrament in the Catholic Church; also the restoring of harmony after relationships have broken down.	<i>The Carrymeela Community works for reconciliation.</i>
Persecution	Hostility and ill treatment, especially because of race, or political or religious beliefs.	<i>Christians have faced persecution throughout the history of the Church.</i>



GCSE Paper 2 Themes Peace and Conflict

1. Introduction to Peace and Conflict
2. Violence, violent protest, and terrorism
3. Causes of war
4. Weapons of mass destruction
5. Just War
6. Holy War
7. Pacifism
8. Victims of war



1. Introduction to Peace and Conflict

Peace is to live in harmony and without fear. Peace may be hard to achieve through war because its aftermath is often instability and resentment. Christians and Muslims seek inner peace and tranquillity through prayer and mediation. The prophet Isaiah spoke of a time when God will bring peace, and the Qur'an also emphasises peace *'He will judge between the nations and will settle disputes for many people...Nation will take up sword against nation, nor will they train for war anymore.'* Isaiah 2:4

Justice is fairness. Isaiah says God, the ultimate judge, will establish justice. Justice is equality of opportunity. If more privileged parts of the world are seen to be the cause of injustice, conflict may result. In Islam 'the Just' is one of the 99 names for God who gives humans laws to follow. In Christianity God is a Just God, Christians should follow this.

Forgiveness is a deliberate decision to release feelings of resentment or vengeance toward a person or group who has harmed you. Christians are taught in the Lord's prayer to forgive if they wish to be forgiven. Forgiveness does not mean no action should be taken to right a wrong, but when conflict is over forgiveness should follow. Actions to establish peace and justice need to be taken to avoid further conflict. Both Muslims and Christians believe God offers forgiveness to all who ask in faith.

Reconciliation is a conscious effort to rebuild a relationship which has been damaged by conflict. It is also important in the prevention of conflict.

2. Violence, violent protest, and terrorism

- The right to protest (express disapproval, often in a public group) is a basic right in a democracy. The UK allows peaceful public protest marches if police are told six days before so that violence can be avoided.
- Christians believe protest to achieve what is right is acceptable as long as violence is not used- Jesus taught *'Blessed are the peacemakers'*. Martin Luther King Jr, a Christian pastor organised peaceful protests against unjust racist laws which succeeded in bringing civil rights to African-American citizens.
- However, humans have freewill and where non-violent protest is ignored violent protest may be used for the common good.
- In Islam, fighting is only allowed in self-defence of the faith and only against those who actively fight against you.

'Do not repay anyone evil for evil ...If it is possible, as far as it depends on you, live at peace with everyone.' Romans 2:17-19

'Do not kill each other for God is merciful to you. If any of you does these things out of hostility and injustice, We shall make him suffer Fire' Qur'an 4:29-30

Terrorism

- Some individuals or groups use terrorism to further their cause by killing innocent people.
- Suicide bombers, car bombs and using cars to injure others are examples of terrorism tactics.
- The aim of terrorism is to make society aware of their cause, make people frightened and push the authorities in to giving way to their demands.
- Terrorists may link their cause with a religion, but no religion promotes terrorism.
- Most Christians and Muslims believe terrorism is wrong as it targets innocent people.

3. Reasons for war

Greed

- This is war to gain more land, more power and more resources.
- The Bible warns against greed *'For the love of money is the root of all kinds of evil'* Timothy 6:10
- The Qur'an warns against greed also *'God does not like arrogant, boastful people who are miserly...hiding the bounty God has given them'* Qur'an 4:36-37

Self-defence

- If a country or religion is under attack then conflicts can happen. It would be seen as entirely right to defend your country against attack or fight evil such as genocide,
- The Bible says fighting in self-defence is okay *'Do not repay anyone evil for evil...if it is possible as far as it depends on you, live at peace with everyone'* Romans 12:17-19
- The Qur'an also says it is okay *'Those who have been attacked are permitted to take up arms because they have been wronged- God has the power to help them'*

Retaliation

- At times a country will be attacked in a way that provokes retaliation e.g. WW1
- Retaliation however can often lead to the escalation of a situation with war.
- Jesus taught that retaliation is wrong *'But I tell you, do not resist an evil person. If anyone slaps you on the right cheek, turn to them the other cheek also'* Matthew 5:39
- Islam teaches God allows fair retribution but retaliation must be measured and not cruel.

4. Weapons of Mass Destruction

- Nuclear weapons are weapons that work by nuclear reaction; they devastate huge areas and kill large numbers of people.
- US forces used atom bombs on Hiroshima and Nagasaki during WW2, causing 140,000 people to die in Hiroshima alone. Japan surrendered ending the war so some people may say that their use of nuclear weapons was justified.
- Since then countries have developed more powerful nuclear weapons which are used as deterrents.

Other types of weapons of mass destruction (WMD- kill large numbers of people/cause great damage) include:

- 1) Chemical weapons (use chemicals to poison, burn or paralyse humans and destroy the natural environment)
The Chemical Weapon Convention (1993) made the production, stockpiling and use of these weapons illegal worldwide. Chemical weapons are thought to have been used in Syria and Iraq.
- 2) Biological weapons (that have living organisms or infective material that can lead to disease or death).
Biological weapons are illegal but many countries have them.

Christian and Muslim Beliefs

All are wrong because:

- Sanctity of life- only God has the right to end life
- Nuclear, chemical and biological weapons kill huge numbers of innocent people *'Do not murder'* Exodus 20:13.
The Qur'an also writes; *'Do not contribute to your destruction with your own hands, but do good, for God loves those who do good.'* Qur'an 2:195
- The quote *'Eye for an eye'* can be used to justified war BUT NOT NUCLEAR WEAPONS! HOWEVER, some Christians might see nuclear weapons as a deterrent to maintain peace.



5. The Just War Theory

The Just War theory gives the conditions/rules that must apply if a war is to be considered just. Christian writer St Augustine (fourth century) and Thomas Aquinas (thirteenth century) developed the concept of a 'just war'.

Rules to decide whether the war is just (ius ad bellum)

- Be fought for a just cause (e.g. self-defence)
- Have a just intention (fought to restore a greater good)
- Be the last resort
- Have a reasonable chance of success
- Be proportional (excessive force should not be used)

Rules about how the war should be fought (ius in bello)

- The war should be fought by just means (innocent civilians should not be targeted)
- Only appropriate force should be used
- Internationally agreed conventions must be obeyed (Geneva Convention rules)

6. Holy War

A Holy War is a war fought in the name of God; believing God has sanctioned the war.

- A Holy War seems to be a contradiction- how can killing large numbers of people be holy?
- In Christianity the Old Testament refers to God helping the Jews in battles to win the Promised Land.
- In the Crusades (11-14th century battles between Christians and Muslims) both sides believed God was on their side.

For both Muslims and Christians, a holy war must:

- Be authorised by a religious leader with great authority.
- Only fought to defend the faith from attack (e.g. the right to worship being denied)
- Those who take part gain spiritual rewards) e.g. if they die in battle they will go straight to heaven/paradise.
- In Islam, holy war must meet the criteria for a just war.

7. Pacifism

Pacifists believe that war and violence can rarely be justified- conflicts can be settled in a peaceful way. They think it is better to prevent war by promoting justice and peace.

Christian views on pacifism

FOR:

1. Jesus said '*Blessed are the peacemakers*' Matthew 5:9
2. Christians should follow the teachings of the Sermon on the Mount to '*Turn the other cheek*'
3. It doesn't fit in with '*Love your neighbour*'
4. Quakers are a Christian denomination that strongly support pacifism
5. During WW1 and WW2 some people called conscientious objectors refused to fight and faced punishment. Many conscientious objectors took on non-fighting roles as cooks, doctors or nurses

AGAINST:

1. Fighting may be needed to overcome a greater evil
2. Jesus healed the Roman centurion (soldier) he did not condemn him
3. War can be used to achieve peace

ANGLICAN PACIFIST FELLOWSHIP

Works to overcome the inequality and injustice that leads to war within and between nations. Sponsors the Week of Prayer for World Peace and contributes to peace related events and religious services that raise awareness of pacifism.



8. Religious response to victims

Victims of war may need:

- Psychological support
- A safe place to live
- Medical help
- Access to food and clean water
- A means of earning a living

Christian reasons for helping

- Jesus taught 'Love your neighbour as yourself' Mark 12:31
- Jesus' parable of the Good Samaritan (Luke 10:25-37) taught that everyone is everybody else's neighbour, regardless of race etc.

Christian organisations that help

1. Caritas a Catholic charity that serves the poor and promotes charity and justice world wide, provided food, shelter, translators and legal services to Syrian refugees who escaped to Greece in 2015

2. Christian Aid works to end poverty and promotes peace, justice and human rights so that war is prevented. It raises money to support local organisations that help refugees from places such as Gaza, Afghanistan and Syria

Definition	Definition	Contextual Sentence
Civil War	Armed conflict between factions within the same country.	A civil war happened in England in 1642-1651.
Conscientious Objector	A person who refuses to do something, here fight in war, because of their conscience	Many conscientious objectors refused to fight in World War 2 because of their religious beliefs.
Conventional (warfare)	War using conventional weapons- weapons acceptable under the Geneva Conventions	World War 1 is an example of conventional warfare.
Forgiveness	Willingness to not blame a person any more for the wrongs they have done	Many Christians believe Jesus taught forgiveness on the cross.
Holy War	Rules around fighting a war acceptable to Islam	The crusades are an example of Holy War.
Justice	Making things fair again	A war fought in self defence is also fought for justice.
Just War	Rules around fighting a war acceptable to Christians and Muslims	Thomas Aquinas establishes a rule book for war called the Just War Theory.
Nuclear weapons	A weapon/war of mass destruction	A nuclear weapon was used in Hiroshima.
Pacifism	Belief that all violence is wrong	The Christian denomination Quakers believe in pacifism.
Peace	The opposite of war, harmony	The aim of the Just War theory should be to establish peace.
Protest	Voicing disagreement with something	Martin Luther King used protest to end segregation laws in America.
Reconciliation	Making up between two groups after disagreement	Reconciliation is an important part of establishing peace.
Retaliation	To pay back for harmful actions	Christians do not agree with a war fought in retaliation.
Terrorism	Use of violence and threats to intimidate, especially for political purposes to create a state of fear in a population	9/11 is an example of terrorism.
Violence	Causing harm to someone	A pacifist agrees with no form of violence.

Break with Rome 1215

Summary

- Henry wants an heir.**
Henry wanted a male heir. His wife Catherine of Aragon had had a girl, Mary, but she had suffered miscarriages and still births, and was not able to have more children.
- Henry needs a divorce.**
Henry started having an affair with Anne Boleyn. He wanted to divorce Catherine but only the Pope could grant a divorce.
- Henry falls out with the Pope.**
The Pope refused Henry's divorce, several times. Henry found a solution where the Pope didn't have much power over him and could get himself a divorce.

Key People

Henry VIII: became king in 1509.

Martin Luther: protestant monk who became increasingly angry with the catholic church, started the protestant reformation.

Thomas Cromwell: Henry's faithful servant, helped secure divorce.

- Henry and the Reformation**
Henry saw the Pope as a competing power, Henry wanted the people of England to listen to him only. He was not a supporter of Luther's ideas but he used these new ideas to go against the Pope.
- Creates a new church - 1534**
Parliament passed the 'Act of Supremacy' This removed the Pope as head of the Church in England and made Henry head of the Church of England. Henry could now get a divorce.
- Dissolution of the monasteries**
Cromwell promised Henry that he would make him the richest king in Europe. In 1536, small monasteries were closed that had an annual income less than £200. Not everyone was happy, they didn't support a complete break with Rome.

7. People unhappy about Henry's changes?

- Rising prices
- Changes to religion
- Landowners lost influence/Cromwell's power

Key Facts/Context

- In 1517, Luther nailed a list of 95 points where he thought the Church had gone wrong to the door of a Catholic Church in Germany.
- By 1529, the followers were known as Protestants because they protested against the Catholic Church.
- There were 2 main religious groups who believed in a Christian version of God.

Year 10 History Summer Term- Power and the people

Pilgrimage of Grace 1536-37

Summary

- Rebels attack**
 - The rebels took over York, Hull and Pontefract Castle in the North.
 - The King's army of the north, led by the Duke of Norfolk, only numbered 3,000 whereas there were over 30,000 rebels.
 - When the rebels took over a town they made sure the monks were returned to their monasteries and run.
- King negotiates**
 - The Duke of Norfolk told the King he had to negotiate.
 - A list of grievances was drawn up and sent to the King.
 - Henry agreed to some of the demands in order to buy some time including: a pardon for all, a Parliament in York and no more monasteries would be closed.
- Christmas with the King**
 - After the pardon was read out at Aske's insistence, the rebels agreed to disband and go home.
 - Aske was invited to spend Christmas with the King.
- Things go wrong**
 - When travelling home a new revolt broke out. Henry used this as an excuse to tear up the pardon attack the north.
 - Aske was hanged in chains in York.
 - 216 people were executed.

Key factors Change Religion Economy Role of the individual

Key People

Henry VIII: The King of England at the time.

Robert Aske: Led the Pilgrimage of Grace protest, was executed for treason 12 July 1537.

Key Facts/Context

- The Pilgrimage of Grace was a serious threat to the rule of Henry VIII.
- It is important to remember it was not solely caused by religious changes - there were other causes too, such as poor harvests, low wages, bad government and rumours of new taxes.
- They wanted mainly religious change, but they did not want to remove the King.
- It was a conservative movement, seeking to reverse change and return to the old ways of religion. Henry was able to face down the rebels and emerge at the end of the process in a stronger position.
- Of all the rebellions, it is one of the least remembered.

English Civil War 1642-51

Key People

Charles I: Became King in 1625, believed in the divine right of kings

Oliver Cromwell: The mastermind behind the New Model army which was used to defeat the Royalist army and capture Charles

Key factors War Government Religion Ideas Role of the individual

Key Facts/Context

- 1649 Cromwell crushed a rebellion in Ireland.
- Groups going against the government were marginalised and their leaders were imprisoned.
- 1653 Cromwell, backed with the army, marched into Parliament and took power as Lord Protector.
- Attempted to create a religious settlement that would appeal to all but his puritan views made him unpopular.
- He closed theatres, banned Christmas and stopped women wearing make up.
- After Cromwell's death Parliament restored the monarchy but it had gained more powers than before the Civil War.

Summary

- During this time the nation fought a civil war, executed a king, became a republic, restored the monarchy and replaced the king yet again.
- People in the 1640s talked about a 'world turned upside down'.
- It was a period of strong feelings and dissent in politics, economics and religion.
- Families were often divided. Loyalties were tested and big questions asked such as, is it right to rebel against your King?
- The demands of Parliament were met, but those of the poor, and women, were not.
- The reputations of key characters involved - Charles I and Cromwell - are still disputed today.

New Model Army

- Swung the balance of power in Parliament's favour.
- The first fully professional army created by Oliver Cromwell.
- Soldiers were veterans from other battles and held strong religious views.
- The soldiers believed that God was on their side
- Officers were promoted by merit and not class.
- Soldiers were well paid - 8d per day.
- Many members believed that all men should have the vote.

Charles' Execution

- MPs were divide about how to treat the King. The army ejected 300 MPs leaving only a Rump who put the King on trial.
- Charles was found guilty of treason. He refused to plea as he did not recognise the power of the court.
- Charles was executed on 30th January 1649.
- After his execution Parliament abolished the monarchy and the House of Lords.
- England was declared a Commonwealth.

American Revolution 1775-82

Year 10 History Summer Term- Power and the people

Chartists

Summary

1. In 1776 the thirteen colonies of North America declared their independence from Britain. Most people believed that colonies were unable to exist as a separate country.
2. Most people believed that colonies were unable to exist as a separate country.
3. Over the previous 150 years these colonies had been largely self-governing but it was war with France that brought to a head the tensions that led to the American Revolution.

4. There are echoes of Magna Carta and other revolts in the words of the Declaration of Independence, words that are still powerful today and which would have an impact on events during the next 200 years.

5. The slogan of the Revolution, 'no taxation without representation', remains a strong political rallying cry today.

The British Surrender at Yorktown

- The American's supported by the French surrounded the British army at Yorktown.
- The British commander had no choice but to surrender as he could not bring in reinforcements.
- They were forced to surrender all their weapons, including 214 artillery pieces and thousands of muskets.
- On hearing the surrender, the British Government passed a Bill stating that no more attempts to defeat the Americans should be taken.
- The defeat at Yorktown was a humiliating end and defeat for the 'superior' British forces.

Key Facts/Context

- The Seven Years war with France made Britain introduce new taxes in America.
- Britain sent troops to defend their 13 American colonies but wanted them to pay for their upkeep.
- As a result, they introduced new taxes on the 13 colonies including the Stamp Act of 1763.
- There was wide-spread opposition to the new taxes as the Americans felt they as they were not represented in the British Parliament then they should not be taxed.
- This promoted the slogan of the War of Independence, 'No taxation without representation'.
- 1773 Boston Tea Party: tipped all the tea on a boat going to Britain into the sea as a protest against British rule.
- The British responded by closing Boston Harbour to all shipping until compensation was paid.

Key factors
War
Government
Communication
Ideas
Role of the individual

Key People

Thomas Paine: Wrote a pamphlet called 'Common Sense' in 1776. The pamphlet urged for American Independence. Sold over 500,000 copies.

Key factors
Economy
Government
Communication
Ideas
Role of the individual

Key People

Fergus O'Connor: became a leading Chartist who promoted the cause through the *Northern Star* newspaper which became the Chartists' 'bible'.

Henry "Orator" Hunt was a British radical speaker and agitator remembered as a pioneer of working-class radicalism and an important influence on the later Chartist movement. He advocated parliamentary reform and the repeal of the Corn Laws.

Key Facts/Context

- The only people who could vote were those who owned property.
- There was no secret ballot. As a result, voters could be intimidated or bribed by rich land owners.
- Rotten Boroughs sent an MP to Parliament though no one lived there, while the city of Birmingham had no MP.
- After seeing events in America, a group of 'radicals' wanted to change the election system in Britain.
- A peaceful protest in Manchester promoting reform in 1819 was crushed by the government. Eleven people were killed, including women and children. This became known as the Peterloo Massacre.
- The radicals wanted: Universal manhood suffrage (votes for all men), equal electoral districts and annual Parliaments.

Summary

- The 1832 Reform Act is often thought of as a huge stepping stone on the road to democracy and government by the people but to many at the time it was a big disappointment.
- Ordinary people remained convinced that the way to improve their lot in life was through political change. George Harney, a Chartist, said in 1839, 'we demand universal suffrage, because we believe universal suffrage will bring universal happiness.'
- The Chartists attempted to force the Government to concede universal suffrage, and the Government was equally determined to resist.
- The Chartist movement died out without achieving its aims; however, most of its demands were granted later.

Great Reform Act 1832

Changes:

- 67 new constituencies were created so the industrial towns (like Birmingham) were represented.
- Gave factory owners, shop keepers and small landowners the vote.
- Removed 56 'Rotten Boroughs'.

Continuity:

- You still had to own property to vote & women were forbidden the vote.
- Political demands for reform increased as ordinary people realised the Reform Act did nothing.

The People's Charter 1838

The Charter stated the six aims of the Chartists:

1. A vote for all men over 21
2. A secret ballot
3. Equal electoral districts
4. No property qualification to become an MP
5. Payment for MPs
6. Annual Parliaments

Year 10 History Summer Term- Power and the people		Trade Unions	
Campaigns and Reformers		Summary	
Summary - Single-issue politics is widespread today. Pressure groups exist to try to influence and change government policy on a vast range of issues. - In 1800 they were virtually unknown, yet two great movements – abolition of the slave trade and abolition of the Corn Laws – came to dominate public life during the first half of the nineteenth century. - While very different in nature, both employed many similar tactics and both were successful. - Throughout the century many individuals played a huge part in forcing change out of a reluctant government, selflessly working to ameliorate the lives of million of people.		- Trade unions developed as working men (and later, working women) banded together to try to improve their standard of living and protect their jobs. - Sometimes unions were successful, sometimes they were not. - Employers and governments were mostly hostile to such attempts, seeing them as restraint of trade. - The law was repeatedly used to limit the effectiveness of unions and any gains made by workers tended to be short-term and limited. - Union membership grew throughout the period, although still only about 10% of workers were union members by 1900. Very few women were union members. - The union movement led directly to the formation of the Independent Labour Party in 1893. - Some people argued that unions became too powerful and needed weakening whilst others stated that the government and employers had all the power. - There have been successes, like the Dagenham sewing machinists in 1968 and failures like the 1984 miner's strike. - Workers and their unions have been prepared to take on governments in attempts to improve their living standards, and as a consequence many workers are better off today than ever before.	
Key factors The Economy Religion Communication Ideas Role of the individual		Key Facts/Context - Since medieval times there had been workers' guilds that controlled prices and wages. - There were groups who fought against the changes in industry, Luddites would deliberately break machinery in the hope that factory owners would turn away from technology. - Combination Act 1825: defined the rights of trade unions as meetings to discuss wages and conditions. 1851, a new type of union was set up: Amalgamated Society of Engineers (ASE) which was a union of highly skilled men who could afford weekly subscriptions to cover sick pay and benefits. - This sparked a new wave of New Model Unions which paved the way for a move into politics and the creation of the Labour Party at the start of the 20th century	
Key People Thomas Clarkson: leading campaigner against the slave trade and slavery in Britain and the British empire. Lord Shaftesbury: heavily involved in reforming lunatic asylums in Britain, one of the key individuals responsible for bringing about reform of Britain's factories, improving working conditions and limiting the length of the workday and president of the Ragged School Union, promoting the education of poor children.		Key People/groups Robert Owen: mill owner in Scotland, set up the Grand National Consolidated Trade Union (GNCTU) in 1833. Tolpuddle Martyrs 1834 Match Stick Girls Docker's strike General Strike 1926 Miner's strike 1984/5	
Anti-Corn Law League Methods - Motions were introduced to Parliament regularly but were always opposed by MPs. - Petitions, adverts and reports were always in newspapers to keep the topic in people's minds. - Large peaceful meetings – one had a crowd over 5,000 people. - Memorabilia was produced and sold.		Key Facts/Context - After the Napoleonic Wars tariffs were placed on imported corn. - Attempt to keep out cheaper foreign corn. - Good for landowners and farmers but bad for factory owners and workers. In their opinion it showed who Parliament cared for. - The Anti-Corn Law League wanted to end the Corn Laws in society. - Due to the industrial revolution new social problems were created in towns and cities. 'Laissez-Faire' or self help was the main idea at the time. - Powers were given to local councils to make improvements to social problems – however few did.	
Fight to end slavery Methods 1783 London Quakers send a petition to Parliament against the Slave Trade. 1788 – 103 petitions were sent to Parliament. - Speeches were used to gain support. William Wilberforce introduced a motion against slavery to the House of Lords. - Thomas Clarkson showed people 'hard facts' to win their support.		Social Reform Methods: - Used Parliament to pass laws to improve social problems for the people. Ten Hours Bill – limited hours children under nine could work. 1840 – set up Children's Employment Commission which evidence led to the 1842 Mines and Collieries Act.	

Year 10 History
Summer Term- Power and the people

Women's rights

Summary

- Over time the status and position of women has changed dramatically. Once women obtained the vote on the same basis as men they had the opportunity to push for more and more equality. Gradually attitudes towards women, work and politics changed.
- By 1969 everyone in the country over the age of eighteen could, and since the 1970 Equal Pay Act employers have had to pay men and women equally.
- Many men were reluctant to concede both the vote and equal rights to women.
- Today, on average, women earn 30% less than men.
- Women have managed to progress towards equality – sometimes through their own efforts and sometimes through the efforts of government.

Suffragists (NUWSS)

- Created in 1897 and led by Millicent Fawcett.
- Used peaceful methods to campaign for votes for women: marches, meetings and petitions
- Gained support for MPs who supported votes for women. However it was never enough to achieve their aims.
- Many women became frustrated at the slow pace of change.

Suffragettes (WSPU)

- A breakaway group of the NUWSS.
- Created in 1903 and led by Emmeline Pankhurst.
- Used militant (violent) methods of protest: disrupted political meeting, attacked police officers, vandalised MPs houses and set fire to letter boxes
- Violent methods attracted a lot of media attention but alienated a lot of potential supporters. - especially MPs.

Key Facts/Context

- Victorians thought that a woman's place was in the home raising children.
- Working Class women who worked were always paid less than men.
- The law favoured men – women could not own property, vote or ask for a divorce.
- Some men argued that as women could not fight in war they should not be allowed the vote.
- From the 1850s some women began to campaign against the inequalities shown towards them.
- To achieve all their aims many women thought they first needed the right to vote.

Key factors
Chance
War
Government
Communication
Ideas
Role of the individual

Key People

Millicent Fawcett: leading Suffragist and campaigner for equal rights for women. She led the biggest suffrage organisation, the non-violent (NUWSS) from 1890-1919 and played a key role in gaining women the vote.

Emmeline Pankhurst: founded the Women's Social and Political Union, whose members—known as suffragettes—fought to enfranchise women in the United Kingdom.

Key factors
Chance
Government
Economy
Ideas
Role of the individual

Key People

Enoch Powell: increased tensions against the immigrants with his public speech stating that the immigrants should be sent 'home' from Britain.

Key Facts/Context

- The British Nationality Act 1948 allowed anyone from the Commonwealth to come to Britain and become a citizen.
- Britain needed migrant workers to help rebuild the country after World War Two.
- 1948: MV Windrush brought the first migrants from the West Indies to Britain.
- The migrants clustered in London suburbs such as Brixton and Hackney.
- No matter how skilled they were – most migrants ended up doing unskilled, low paid jobs.
- 1968: Enoch Powell (MP) gave his 'River's of Blood Speech' where he called for all immigrants to return home.
- There was also an increase in supporters of the extreme racist group the National Front.

The Rights of Ethnic Minorities

Summary

- Migrants have long come to Britain, making a valuable contribution to economic life.
- Since WW2, mass migration, both into Britain and out of Britain, has changed the way we live.
- Migration remains an emotive political issue. Many people have not always welcomed migrants.
- Parliament has passed laws making life easier for migrants once they settle in Britain.

Brixton Riots 1981

Background:

- Many people believed the police were unwilling to protect black people.
- Police used stop and search tactics – but were seven times more likely to stop young black people.
- High unemployment in the Brixton – mainly minorities

Events:

- 11th April – a stop and search led to a policeman being hit by a brick which caused more police to appear in Brixton.
- As more police came so did large crowds of people who began throwing missiles at the police.
- By the evening 1,000 police were sent to restore order in Brixton.
- 300 police officers were hurt, 100 vehicles were destroyed and 82 arrests were made.
- The riots also spread to other cities such as Liverpool and Manchester.

Consequences:

- The Government set up an inquiry into the riots.
- The report was published in November 1981 blaming the police for being racist towards the black community in Brixton.
- This led to the creation of the Independent Police Complaints Authority in 1985.

Reducing the Global Development Gap

Microfinance loans

This involves people in LICs receiving small loans from traditional banks.
 + Loans enable people to begin their own businesses
 - Its not clear they can reduce poverty at a large scale.

Foreign-direct investment

This is when one country buys property or infrastructure in another country.
 + Leads to better access to finance, technology & expertise.
 - Investment can come with strings attached that country's will need to comply with.

Aid

This is given by one country to another as money or resources.
 + Improve literacy rates, building dams, improving agriculture.
 - Can be wasted by corrupt governments or they can become too reliant on aid.

Debt Relief

This is when a country's debt is cancelled or interest rates are lowered.
 + Means more money can be spent on development.
 - Locals might not always get a say. Some aid can be tied under condition from donor country.

Fair trade

This is a movement where farmers get a fair price for the goods produced.
 + Paid fairly so they can develop schools & health centres.
 - Only a tiny proportion of the extra money reaches producers.

Technology

Includes tools, machines and affordable equipment that improve quality of life.
 + Renewable energy is less expensive and polluting.
 - Requires initial investment and skills in operating technology

CS: Reducing the Development Gap In Jamaica

Location and Background

Jamaica is a LIC island nation part of the Caribbean. Location makes Jamaica an attractive place for visitors to explore the tropical blue seas, skies and palm filled sandy beaches

Tourist economy

- In 2013, 2.12 million visited.
 - Tourism contributes 27% of GDP and will increase to 38% by 2025.
 - 130,000 jobs rely on tourism.
 - Global recession 2008 caused a decline in tourism. Now tourism is beginning to recover.

Multiplier effect

- Jobs from tourism have meant more money has been spent in shops and other businesses.
 - Government has invested in infrastructure to support tourism.
 - New sewage treatment plants have reduced pollution.

Development Problems

- Tourists do not always spend much money outside their resorts.
- Infrastructure improvements have not spread to the whole island.
- Many people in Jamaica still live in poor quality housing and lack basic services such as healthcare.

Case Study: Economic Development in Nigeria

Location & Importance

Nigeria is a NEE in West Africa. Nigeria is just north of the Equator and experiences a range of environments.
 Nigeria is the most populous and economically powerful country in Africa. Economic growth has been based on oil exports.

**Influences upon Nigeria's development****Political**

Suffered instability with a civil war between 1967-1970. From 1999, the country became stable with free and fair elections. Stability has encouraged global investment from China and USA.

Social

Nigeria is a multi-cultural, multi-faith society. Although mostly a strength, diversity has caused regional conflicts from groups such as the Boko Haram terrorists.

Cultural

Nigeria's diversity has created rich and varied artistic culture. The country has a rich music, literacy and film industry (i.e. Nollywood). A successful national football side.

Industrial Structures

Once mainly based on agriculture, 50% of its economy is now manufacturing and services. A thriving manufacturing industry is increasing foreign investment and employment opportunities.

The role of TNCs

TNCs such as Shell have played an important role in its economy.
 + Investment has increased employment and income.
 - Profits move to HICs.
 - Many oil spills have damaged fragile environments.

Changing Relationships

Nigeria plays a leading role with the African Union and UN. Growing links with China with huge investment in infrastructure. Main import includes petrol from the EU, cars from Brazil and phones from China.

Environmental Impacts

The 2008/09 oil spills devastated swamps and its ecosystems. Industry has caused toxic chemicals to be discharged in open sewers - risking human health. 80% of forest have been cut down. This also increases CO₂ emissions.

Aid & Debt relief

+ Receives \$5 billion per year in aid.
 + Aid groups (ActionAid) have improved health centres, provided anti-mosquito nets and helped to protect people against AIDS/HIV.
 - Some aid fails to reach the people who need it due to corruption.

Effects of Economic Development

Life expectancy has increased from 46 to 53 years. 64% have access to safe water. Typical schooling years has increased from 7 to 9.

Case Study: Economic Change in the UK

UK in the Wider World

The UK has one of the largest economies in the world.
 The UK has huge political, economic and cultural influences.
 The UK is highly regarded for its fairness and tolerance.
 The UK has global transport links i.e. Heathrow and the Eurostar.

**Causes of Economic Change**

De-industrialisation and the decline of the UK's industrial base. Globalisation has meant many industries have moved overseas, where labour costs are lower. Government investing in supporting vital businesses.

Towards Post-Industrial

The quaternary industry has increased, whilst secondary has decreased. Numbers in primary and tertiary industry has stayed the steady. Big increase in professional and technical jobs.

Developments of Science Parks

Science Parks are groups of scientific and technical knowledge based businesses on a single site.
 • Access to transport routes.
 • Highly educated workers.
 • Staff benefit from attractive working conditions.
 • Attracts clusters of related high-tech businesses.

CS: UK Car Industry

Every year the UK makes 1.5 million cars. These factories are owned by large TNCs. i.e. Nissan.
 • 7% of energy used there factories is from wind energy.
 • New cars are more energy efficient and lighter.
 • Nissan produces electric and hybrid cars.

Change to a Rural Landscape**Social**

Rising house prices have caused tensions in villages. Villages are unpopulated during the day causing loss of identity. Resentment towards poor migrant communities.

Economic

Lack of affordable housing for local first time buyers. Sales of farmland has increased rural unemployment. Influx of poor migrants puts pressures on local services.

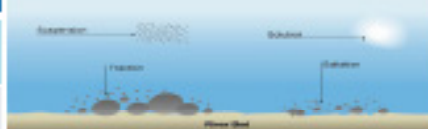
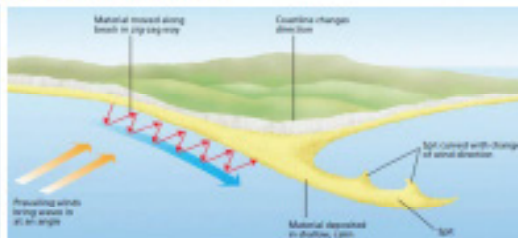
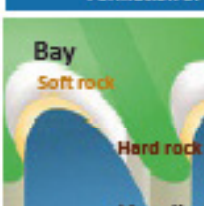
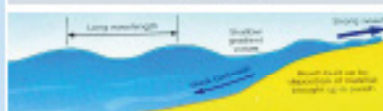
Improvements to Transport

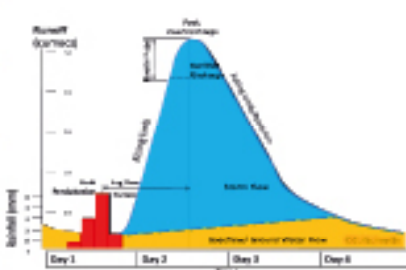
A £15 billion 'Road Improvement Strategy'. This will involve 10 new roads and 1,600 extra lanes. £50 billion HS2 railway to improve connections between key UK cities. £18 billion on Heathrow's controversial third runway. UK has many large ports for importing and exporting goods.

UK North/South Divide

- Wages are lower in the North.
 - Health is better in the South.
 - Education is worse in the North.
 + The government is aiming to support a Northern Powerhouse project to resolve regional differences.
 + More devolving of powers to disadvantaged regions.

Tier 3 Vocab	Definition	Contextual Sentence
Abrasion	When bits of eroded rock in water or on ice scrape against rock, eroding it.	Abrasion wears away at the base of a waterfall, making the plunge pool deeper.
Attrition	When bits of rock eroded in water collide, break into smaller pieces and become more rounded.	Attrition will not alter the shape of a coastline, but will change the size and shape of the sediment carried by the waves.
Beach Nourishment	Adding sand or shingle from elsewhere to the upper part of a beach, often to prevent erosion.	Beach nourishment is a popular form of soft engineering in places such as Mablethorpe and Skegness.
Deposition	The process of water dropping material as it slows down and loses energy. Ice can also deposit material when it melts.	Deposition occurs when water carrying sediment loses energy and slows down.
Discharge	The volume of water flowing in a river, measured in cumecs (cubic meters per second).	Peak discharge is the highest discharge in the period of time you're looking at.
Erosion	The gradual wearing away of material, e.g. by moving water or ice.	Waves wear away the coast using three processes of erosion; hydraulic action, abrasion and solution.
Hydraulic Action	Erosion caused by sea or river water colliding with rocks.	Hydraulic action can take place in rivers and along coastlines.
Longshore Drift	The gradual zigzag movement of sediment along a coast. Caused by waves carrying material up the beach at an oblique angle and back down the beach at a right angle.	Material is transported along the coast by longshore drift.
Managed Retreat	Removing flood defences to let land flood naturally.	Managed retreat was carried out at Alkborough Flats, Lincolnshire to help protect 400, 000 homes from flooding.
Mass Movement	The shifting of rocks and loose material down a slope by sliding, slumping and rockfalls.	Mass movement happens when the force of gravity acting on a slope is greater than the force supporting it.
Saltation	When pebble-sized particles are bounced along the sea or river bed by the force of water.	The river doesn't have enough energy to carry the particles, so they are bounced along the river bed by saltation.
Solution	When soluble materials, e.g. limestone, dissolve in water and are transported.	Solution is both a process of erosion and transportation.
Suspension	When small particles, e.g. silt and clay, are transported by water.	Small particles are suspended in the water and are transported this way by suspension.
Traction	When large particles, e.g. boulders, are pushed along the river or sea bed by the force of water.	The largest particles in a river are rolled along the river bed by traction.
Transportation	The movement of eroded material.	There are four processes of transportation; traction, saltation, suspension and solution.
Weathering	The breaking down of rock in situ.	Weathering can be either biological, chemical, or physical (think Science).

Relief of the UK		Areas +600m: Peaks and ridges cold, misty and snow common. i.e. Scotland	Types of Erosion		Types of Transportation		Mass Movement	
Relief of the UK can be divided into uplands and lowlands. Each have their own characteristics.			The break down and transport of rocks – smooth, round and sorted.		A natural process by which eroded material is carried/transported.		A large movement of soil and rock debris that moves down slopes in response to the pull of gravity in a vertical direction.	
Key			Attrition	Rocks that bash together to become smooth/smaller.	Solution	Minerals dissolve in water and are carried along.	1	Rain saturates the permeable rock above the impermeable rock making it heavy.
Lowlands		Areas - 200m: Flat or rolling hills. Warmer weather. i.e. Fens	Solution	A chemical reaction that dissolves rocks.	Suspension	Sediment is carried along in the flow of the water.	2	Waves or a river will erode the base of the slope making it unstable.
Uplands			Abrasion	Rocks hurled at the base of a cliff to break pieces apart.	Saltation	Pebbles that bounce along the sea/river bed.	3	Eventually the weight of the permeable rock above the impermeable rock weakens and collapses.
Formation of Coastal Spits - Deposition			Types of Weathering					
Example: Spurn Head, Holderness Coast.			Weathering is the breakdown of rocks where they are.					
			Carbonation	Breakdown of rock by changing its chemical composition.	What is Deposition?		Formation of Bays and Headlands	
- Swash moves up the beach at the angle of the prevailing wind. - Backwash moves down the beach at 90° to coastline, due to gravity. - Zigzag movement (Longshore Drift) transports material along beach. - Deposition causes beach to extend, until reaching a river estuary. - Change in prevailing wind direction forms a hook. - Sheltered area behind spit encourages deposition, salt marsh forms.			Mechanical	Breakdown of rock without changing its chemical composition.	When the sea or river loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition.		 - Waves attack the coastline. - Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition. - More resistant rock is left jutting out into the sea. This is a headland and is now more vulnerable to erosion.	
Unit 1c			AQA					
Physical Landscapes in the UK								
How do waves form?			Mechanical Weathering Example: Freeze-thaw weathering					
Waves are created by wind blowing over the surface of the sea. As the wind blows over the sea, friction is created - producing a swell in the water.								
Why do waves break?			Formation of Coastal Stack					
- Waves start out at sea. - As waves approaches the shore, friction slows the base. - This causes the orbit to become elliptical. - Until the top of the wave breaks over.								
			Example: Old Harry Rocks, Dorset					
- Fetch how far the wave has travelled - Strength of the wind. - How long the wind has been blowing for.			Types of Waves					
			Constructive Waves			Destructive Waves		
			This wave has a swash that is stronger than the backwash. This therefore builds up the coast.			This wave has a backwash that is stronger than the swash. This therefore erodes the coast.		
								
			- Hydraulic action widens cracks in the cliff face over time. - Abrasion forms a wave cut notch between HT and LT. - Further abrasion widens the wave cut notch to form a cave. - Caves from both sides of the headland break through to form an arch. - Weather above/erosion below – arch collapses leaving stack. - Further weathering and erosion leaves a stump.					

Coastal Defences			Water Cycle Key Terms		Lower Course of a River	
Hard Engineering Defences			Precipitation	Moisture falling from clouds as rain, snow or hail.	Near the river's mouth, the river widens further and becomes flatter. Material transported is deposited.	
Groynes	Wood barriers prevent longshore drift, so the beach can build up.	✓ Beach still accessible. ✗ No deposition further down coast = erodes faster.	Interception	Vegetation prevent water reaching the ground.	Formation of Floodplains and levees	
Sea Walls	Concrete walls break up the energy of the wave. Has a lip to stop waves going over.	✓ Long life span ✓ Protects from flooding ✗ Curved shape encourages erosion of beach deposits.	Surface Runoff	Water flowing over surface of the land into rivers.	When a river floods, fine silt/alluvium is deposited on the valley floor. Closer to the river's banks, the heavier materials build up to form natural levees.	
Gabions or Rip Rap	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	✓ Cheap ✓ Local material can be used to look less strange. ✗ Will need replacing.	Infiltration	Water absorbed into the soil from the ground.	✓ Nutrient rich soil makes it ideal for farming. ✓ Flat land for building houses.	
Soft Engineering Defences			Transpiration	Water lost through leaves of plants.	River Management Schemes	
Beach Nourishment	Beaches built up with sand, so waves have to travel further before eroding cliffs.	✓ Cheap ✓ Beach for tourists. ✗ Storms = need replacing. ✗ Offshore dredging damages seabed.	Physical and Human Causes of Flooding.		Soft Engineering	Hard Engineering
Managed Retreat	Low value areas of the coast are left to flood & erode.	✓ Reduce flood risk ✓ Creates wildlife habitats. ✗ Compensation for land.	Physical: Prolong & heavy rainfall Long periods of rain causes soil to become saturated leading runoff.	Physical: Geology Impermeable rocks causes surface runoff to increase river discharge.	Afforestation – plant trees to soak up rainwater, reduces flood risk. Demountable Flood Barriers put in place when warning raised. Managed Flooding – naturally let areas flood, protect settlements.	Straightening Channel – increases velocity to remove flood water. Artificial Levees – heightens river so flood water is contained. Deepening or widening river to increase capacity for a flood.
Case Study: Hunstanton Coast			Upper Course of a River		Hydrographs and River Discharge	
Location and Background Located on the North-West coast of Norfolk. The town is a popular sea resort for tourists to visit all year round. In 2013, the town suffered damage from a storm surge. The Sea Life Centre was flooded and closed for a number of months.			Near the source, the river flows over steep gradient from the hill/mountains. This gives the river a lot of energy, so it will erode the riverbed vertically to form narrow valleys.		River discharge is the volume of water that flows in a river. Hydrographs who discharge at a certain point in a river changes over time in relation to rainfall	
Geomorphic Processes			Formation of a Waterfall		1. Peak discharge is the discharge in a period of time. 2. Lag time is the delay between peak rainfall and peak discharge. 3. Rising limb is the increase in river discharge. 4. Falling limb is the decrease in river discharge to normal level.	
- Old Hunstanton is dominated by dunes that are formed when sand is trapped and built up behind objects. - Hunstanton Cliffs are made from three different bands of rock (sandstone, red chalk and white chalk). - Hunstanton Cliff are exposed to cliff retreat. This is when a wave-cut notch develops enough for the cliff face to become unstable and eventually collapses. - Longshore drift travels from Sheringham in the north to the Wash in the south.			1) River flows over alternative types of rocks. 2) River erodes soft rock faster creating a step. 3) Further hydraulic action and abrasion form a plunge pool beneath. 4) Hard rock above is undercut leaving cap rock which collapses providing more material for erosion. 5) Waterfall retreats leaving steep sided gorge.			
Management			Middle Course of a River		Case Study: The River Tees	
- Hunstanton is protected by a number of groynes. These trap sand to build up the beach for better protection. - The town is also protected by large sea walls to prevent flooding and deflect the waves energy. - \$15 million has been spent on beach nourishment to add sediment to beach for increased protection against flooding.			Here the gradient get gentler, so the water has less energy and moves more slowly. The river will begin to erode laterally making the river wider.		Location and Background Located in the North of England and flows 137km from the Pennines to the North Sea at Red Car.	
Formation of Ox-bow Lakes			Step 1: Erosion of outer bank forms river cliff. Deposition inner bank forms slip off slope. Step 2: Further hydraulic action and abrasion of outer banks, neck gets smaller. Step 3: Erosion breaks through neck, so river takes the fastest route, redirecting flow. Step 4: Evaporation and deposition cuts off main channel leaving an oxbow lake.		Geomorphic Processes Upper – Features include V-Shaped valley, rapids and waterfalls. High Force waterfall drops 21m and is made from harder Whinstone and softer limestone rocks. Gradually a gorge has been formed. Middle – Features include meanders and ox-bow lakes. The meander near Yarm encloses the town. Lower – Greater lateral erosion creates features such as floodplains & levees. Mudflats at the river's estuary.	
					Management - Towns such as Yarm and Middlesbrough are economically and socially important due to houses and jobs that are located there. - Dams and reservoirs in the upper course, controls river's flow during high & low rainfall. - Better flood warning systems, more flood zoning and river dredging reduces flooding.	

Les Fêtes & Traditions

- une fête – *a celebration*
- un festival – *a festival*
- une tradition – *a tradition*
- une coutume – *a custom*
- un jour férié – *a public holiday*
- une célébration – *a celebration*
- une cérémonie – *a ceremony*
- les coutumes locales – *local customs*
- les fêtes religieuses – *religious festivals*
- les fêtes culturelles – *cultural festivals*
- la culture – *culture*

Les Fêtes Françaises

- Noël – *Christmas*
- la veille de Noël – *Christmas Eve*
- le Réveillon – *Christmas Eve meal*
- le Nouvel An – *New Year*
- la Saint-Sylvestre – *New Year's Eve*
- l'Épiphanie – *Epiphany*
- la Chandeleur – *Pancake Day*
- le Carnaval – *Carnival*
- Mardi Gras – *Shrove Tuesday*
- Pâques – *Easter*
- la Fête Nationale – *Bastille Day (14 July)*
- la Toussaint – *All Saints' Day*
- la Fête des Mères / Pères – *Mother's / Father's Day*
- l'Armistice – *Armistice Day*
- la Fête de la Musique – *Music Festival (21 June)*

Les Activités des Fêtes

- célébrer – *to celebrate*
- fêter – *to party / celebrate*
- se réunir – *to gather together*
- offrir des cadeaux – *to give presents*
- recevoir des cadeaux – *to receive presents*
- partager un repas – *to share a meal*
- préparer un repas traditionnel – *to prepare a traditional meal*
- assister à un défilé – *to attend a parade*
- regarder un feu d'artifice – *to watch fireworks*
- allumer des bougies – *to light candles*
- décorer la maison – *to decorate the house*
- se déguiser – *to dress up*
- chanter – *to sing*
- danser – *to dance*
- aller à l'église – *to go to church*
- rendre visite à la famille – *to visit family*

Objets & Nourriture de Fête	Adjectifs Utiles	Verbes Clés (Key Verbs)
• un cadeau – <i>a present</i> • un sapin de Noël – <i>Christmas tree</i> • des décorations – <i>decorations</i> • des lumières – <i>lights</i> • un costume – <i>a costume</i> • un masque – <i>a mask</i> • un feu d'artifice – <i>fireworks</i> • un défilé – <i>a parade</i> • une galette des rois – <i>Epiphany cake</i> • une crêpe – <i>a pancake</i> • du chocolat – <i>chocolate</i> • un repas traditionnel – <i>traditional meal</i>	• animé – <i>lively</i> • traditionnel – <i>traditional</i> • religieux – <i>religious</i> • culturel – <i>cultural</i> • impressionnant – <i>impressive</i> • magnifique – <i>magnificent</i> • passionnant – <i>exciting</i> • amusant – <i>fun</i> • spécial – <i>special</i> • important – <i>important</i> • bruyant – <i>noisy</i> • coloré – <i>colourful</i>	• célébrer – <i>to celebrate</i> • fêter – <i>to celebrate / party</i> • organiser – <i>to organise</i> • participer – <i>to take part</i> • se déguiser – <i>to dress up</i> • défiler – <i>to parade</i> • prier – <i>to pray</i> • offrir – <i>to give</i> • recevoir – <i>to receive</i> • préparer – <i>to prepare</i> • cuisiner – <i>to cook</i> • se reposer – <i>to rest</i> • se réunir – <i>to gather</i>

Key questions (preparing for the speaking mock)

- **Décris ta famille.** *(Describe your family)*
- **Qu'est-ce que tu as fait le week-end dernier avec tes amis ?**
(What did you do with your friends last weekend?)
- **Tu t'entends bien avec ta famille ? Pourquoi/pourquoi pas ?**
(Do you get on well with your family? Why/why not?)
- **Décris ton/ta meilleur(e) ami(e).**
(Describe your best friend.)
- **Qu'est-ce que tu fais normalement le week-end avec ta famille/amis ?**
(What do you normally do at the weekend with your family/friends?)
- **Est-ce que tu manges sain ?**
(Do you eat healthily?)
- **Qu'est-ce que tu as mangé hier ?**
(What did you eat yesterday?)
- **À l'avenir, qu'est-ce que tu vas faire pour rester en forme ?**
(In the future, what will you do to stay fit and healthy?)
- **Quelles activités sportives as-tu faites récemment ?**
(What sports activities have you done recently?)
- **Quel(s) sport(s) faisais-tu quand tu étais plus jeune ?**
(What sports did you do when you were younger?)

Connectives

- Mais (*but*)
- (mal)heureusement (*un/fortunately*)
- Cependant (*however*)
- Même si (*although*)
- aussi / en plus (*also / furthermore*)
- par contre (*on the other hand*)
- à cause de (*because of*)
- parce que / car (*because*)

Giving opinions

- Je pense que (*I think that*)
- Je déteste (*I hate*)
- J'adore (*I love*)
- À mon avis (*in my opinion*)
- J'ai aimé / j'ai adoré (*I liked / loved it*)
- J'aimais (*I used to like*)
- Je voudrais / j'aimerais (*I would like*)
- C'était (*it was*)
- C'est / ils/elles sont (*it is / they are*)
- Ça va être (*it's going to be*)
- Ce sera (*it will be*)
- Ce serait (*it would be*)

Intensifiers and useful phrases

- assez (*quite*)
- très (*very*)
- extrêmement (*extremely*)
- un peu (*a bit*)
- il y a / il y avait (*there is / was*)
- Quel(le) + adjective/noun (*how / what a...*)
- Par exemple (*for example*)
- Le/la meilleur(e) / le/la pire chose est que (*the best/worst thing is that*)
- Je dirais que (*I would say that*)
- Pour moi (*for me*)

Las Asignaturas

- inglés – English
- asignatura – school subject
- ciudadanía – citizenship
- geografía – geography
- historia – history
- informática – ICT
- lenguas – languages
- matemáticas – maths
- arte – art
- música – music
- educación física – PE
- ciencias – science
- francés – French
- español – Spanish
- asignatura favorita (f.) – favourite subject

En el Colegio

- biblioteca – library
- clase – class / lesson
- campo de deporte – sports field
- comedor – canteen
- campo – field
- gimnasio – sports hall / gym
- patio – playground
- aula – classroom
- piscina – pool
- laboratorio – laboratory
- instituto – secondary school
- colegio – school
- primaria – primary school
- secundaria – secondary school
- universidad – university

El Transporte

- autobús – bus
- coche – car
- tren – train
- barco – boat
- viaje – trip

El Uniforme

- uniforme – uniform
- camisa – shirt
- falda – skirt
- pantalones – trousers
- zapatos – shoes

El Mundo Laboral

- internacional – international
- informática – IT
- negocio – business
- empresa – company
- ganar – to earn
- jefe – boss
- trabajar – to work
- empleo – job
- trabajo – job
- salario – salary
- puesto – position
- entrevista – interview
- experiencia – experience
- horario – timetable / hours
- prácticas – work experience
- tiempo parcial – part-time
- tiempo completo – full-time
- oportunidad – opportunity
- cualificación – qualification

Verbos Claves

- aceptar – to accept
- apoyar – to support
- aprender – to learn
- ayudar – to help
- bailar – to dance
- cantar – to sing
- comer – to eat
- comunicar – to communicate
- compartir – to share
- comprar – to buy
- contestar – to answer
- correr – to run
- crear – to create
- descansar – to rest
- dibujar – to draw
- empezar – to begin
- enseñar – to teach
- escuchar – to listen
- estudiar – to study
- ganar – to earn
- hablar – to talk

- leer – to read
- llevar – to wear / carry
- tocar – to play (an instrument)
- tomar – to take
- usar – to use
- ver – to see
- visitar – to visit
- vivir – to live
- beber – to drink
- romper – to break
- viajar – to travel
- mandar – to send
- esperar – to wait for
- cuidar – to look after
- evitar – to avoid
- pagar – to pay
- aprender – to learn
- abrir – to open
- cerrar – to close
- subir – to go up
- bajar – to go down
- hacer – to do

- llegar – to arrive
- salir – to go out
- pedir – to ask for
- seguir – to follow
- elegir – to choose

Nombres y Adjetivos Claves

- ambicioso – ambitious
- amable – kind
- atento – helpful
- trabajador – hardworking
- tímido – shy
- serio – serious
- listo – clever
- simpático – nice
- generoso – generous
- paciente – patient
- organizado – organised
- responsable – responsible
- fuerte – strong
- débil – weak
- impresionante – impressive
- importante – important
- necesario – necessary
- posible – possible
- imposible – impossible

- difícil – difficult
- útil – useful
- inútil – useless
- rápido – fast
- lento – slow
- grande – big
- pequeño – small
- caro – expensive
- barato – cheap
- moderno – modern
- antiguo – old
- nuevo – new
- fácil – easy

La Vida Escolar

- amigo – friend
- alumno – pupil
- estudiante – student
- profesor – teacher
- director – headteacher
- compañero – classmate
- recreo – break
- descanso – break
- día escolar – school day
- hora – hour
- minuto – minute
- mes – month
- año – year
- trimestre – term
- horario – schedule / timetable
- asignatura – subject

Los Trabajos

- construcción – construction
- político – politician
- médico – doctor
- enfermero – nurse
- bombero – firefighter
- policía – police officer
- abogado – lawyer
- juez – judge
- profesor – secondary school teacher
- cocinero – cook
- camarero – waiter
- dependiente – shop assistant
- cajero – cashier
- mecánico – mechanic
- peluquero – hairdresser
- recepcionista – receptionist
- secretario – secretary
- actor – actor
- artista – artist
- cantante – singer

Key questions (preparing for the speaking mock)

- ¿Adónde vas de vacaciones normalmente? ¿Qué actividades sueles hacer? (*Where do you normally go on holiday? What activities do you usually do?*)
- ¿Adónde fuiste de vacaciones el año pasado? ¿Qué hiciste? (*Where did you go on holiday last year? What did you do?*)
- Si tuvieras muchísimo dinero, ¿cuáles serían tus vacaciones ideales? (*If you had a lot of money, what would your ideal holiday be?*)
- ¿Prefieres ir de vacaciones con tu familia o amigos? (*Do you prefer going on holiday with your family or with friends?*)
- ¿Para qué usas tu móvil o portátil normalmente? (*What do you normally use your mobile or laptop for?*)
- ¿Cuáles son las ventajas y desventajas de usar las redes sociales? (*What are the advantages and disadvantages of using social media?*)
- Háblame de un programa de televisión o una película que has visto recientemente. (*Talk to me about a TV programme or film you have seen recently.*)
- ¿Cómo es tu casa? (*What is your house like?*)
- ¿Qué instalaciones hay en tu pueblo? (*What facilities are there in your town?*)
- ¿Cómo sería tu casa ideal? (*What would your ideal house be like?*)

Connectives

- pero (*but*)
- (des)afortunadamente (*un*)*fortunately*
- sin embargo (*however*)
- aunque (*although*)
- también / además (*also / furthermore*)
- por un lado (*on one hand*)
- por otro lado (*on the other hand*)
- como resultado (*as a result*)
- porque / dado que / puesto que / ya que (*because*)

Giving opinions

- creo / pienso / opino ... que (*I think that*)
- no me gusta(n) / odio (*I hate*)
- me ... encanta(n) / chifla(n) / mola(n) (*I love*)
- en mi opinión / me parece que (*in my opinion*)
- me ... gustó / encantó / chifló (*I liked / loved it*)
- me gustaba (*I used to like*)
- me ... gustaría / encantaría (*I would like / would love to*)
- fue (*it was*)
- es / son (*it is / they are*)
- va a ser (*it's going to be*)
- será (*it will be*)
- sería (*it would be*)

Intensifiers and useful phrases

- bastante (*quite*)
- muy (*very*)
- extremadamente (*extremely*)
- un poco (*a bit*)
- hay / había (*there is / was*)
- ¡Qué + adjective! (*How...*)
- por ejemplo (*for example*)
- lo bueno/malo es que (*the good/bad thing is that*)
- diría que (*I would say that*)
- por mi parte (*as for me*)