



Knowledge Organiser
Autumn Term
2024/25

2024/25 Year 10

Name:

Form: _____



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,

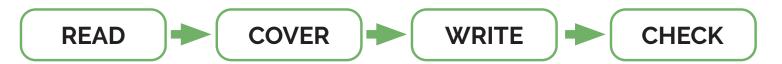
"Thinking well requires factual knowledge that is stored in our long-term memory"

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 7-11. 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 the Google Classroom. 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 swop 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.	(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 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.	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
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.	distribution of a data set such as the ages within a population. In most cases, a	forest lost in a range of countries. 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.		graphs or timeseries graphs. They can be used to display house prices and/or the trend	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.	
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.	х	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	х	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 1	Definition Sentence	Contextual Sentence
1	classical	Representing a high standard within a traditional form or style.	The orchestra played a selection of classical music.
2	comprehensive	Including with all or nearly all elements or aspects of something.	We have a comprehensive selection of art materials.
3	comprise	Consist of; be made up of.	The play comprises three acts.
4	confirmed	Fixed in habit and unlikely to change. Stated that a report or fact is true.	She was a confirmed fan of the band. The phonecall confirmed he had won.
5	contrary	Opposite in nature, direction, or meaning.	Contrary to popular belief, many cats dislike milk.
6	converted	Changed the form, character, or function of something.	The school converted a classroom to a new office area.
7	couple	Two people or things of the same sort considered together. To link or combine something with something else.	A couple of pupils helped tidy the room. You must couple the wire to the battery.
8	decades	Periods of ten years.	Music has changed over the decades.
9	definite	Clearly stated or decided; not vague.	She has very definite ideas about what kind of a job she wants.
10	deny	Refuse to give something to someone; to refuse to admit the truth or existence of.	You can't deny that she's a good singer.
11	differentiation	The process of making two or more things (or people) different.	Mix the paints carefully to allow a gradual differentiation in colour.

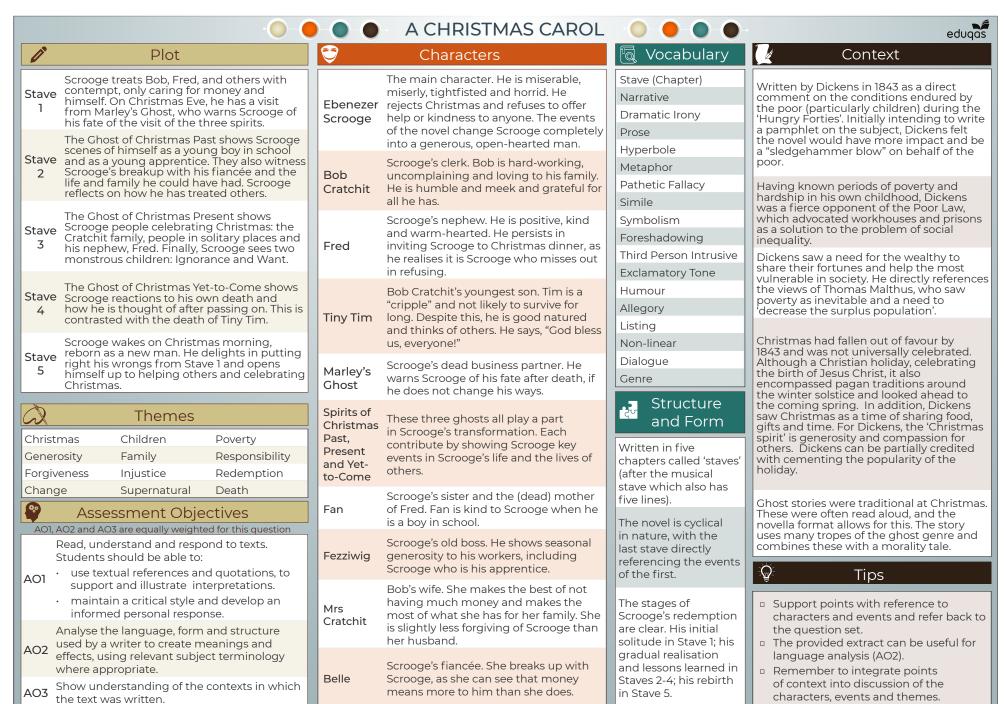
12	disposal	The action or process of getting rid of something.	The disposal of radioactive waste is a problem.
13	dynamic	Constant change, activity, or progress; energetic.	This was a dynamic period in history.
14	eliminate	To completely remove or get rid of something.	Try to eliminate fatty foods from your diet.
15	empirical	Based on observation or experience	We now have empirical evidence that the moon is covered with dust.
16	equipment	The necessary items for a particular purpose.	Collect the sports equipment from the gym at the end of the day.
17	extract	Remove/take out, especially by using effort or force. A short passage taken from a text, film, or piece of music.	They extract coal from open pits and underground mines. This extract is taken from his new novel.
18	file	A folder/box for holding loose papers together and in order for easy reference. To march or walk in a single line.	It is good to keep revision notes organised in a file. In silence, they started to file into the room for the exam.
19	finite	Limited in size or extent.	Every computer has a finite amount of memory.
20	foundation	An underlying basis or principle. The lowest part of a building, typically below ground level.	Good research should be the foundation of your report. The foundation of the house was completed last week.
21	global	Relating to the whole world; the whole of something/of a group of things.	The probable result of global warming will be a rise in sea levels.
22	grade	A particular level of rank, quality or value.	You should get a good grade next year.

23 A formal assurance that The computer comes with a quarantee certain conditions will three-year guarantee. be met; a promise with certainty. The Roman Empire had a 24 hierarchical Of the nature of a hierarchy; arranged in very hierarchical structure. order of rank. 25 All the chairs in the room identical Exactly the same as. were identical. 26 A system of ideas and The ideology of ideology ideals. reincarnation is one of second chances. 27 inferred His cold personality can To conclude something from evidence and be inferred from the reasoning rather than description given in chapter from pure fact. one. 28 innovation A new idea, method, or The company is very interested in product design device and innovation. 29 To place, fit, or push Insert the cable into the slot insert something into on the side of the phone. something else. 30 intervention Interfering with an Military intervention may outcome - especially of increase the conflict even a condition / process to further. prevent harm or improve something. Being in a remote The castle was in an isolated isolated position. location. Happening only once. The theft was an isolated incident. 32 The main means of The media coverage of the media mass communication Olympics was very good. (broadcasting, publishing, and the Internet) are regarded together.

Tier 2 Vocabulary

33	mode	A way in which something happens or is done; a fashion or style in clothes, art, literature, etc.	Flying is now a common mode of transport.
34	paradigm	A typical example or pattern of something.	Fast and skilful, he is the paradigm of the perfect football player.
35	phenomenon	A fact or situation that is observed to exist or happen.	Gravity is a natural phenomenon.
36	priority	A thing that is regarded as more important than others.	She made homework her priority.
37	prohibited	Something that has been forbidden/ banned. The sale of alcohol to people under 18 is prohibited.	
38	publication	The preparation and issuing of a book, journal, or piece of music for public sale.	The publication contained several short stories and poems.
39	quotation	Something that is quoted - a word / phrase / passage referred to or repeated. Offers or prices given for something.	The quotation was taken from "Macbeth". The quotation for the repair was £100.
40	release	To set free from restraint/ confinement; to make something available to the public.	The band will release their new single on Friday.
41	reverse	To move backwards; to make something the opposite of what it was.	The winners were announced in reverse order.

ENGI ST







O O O 'A Christmas Carol' Sample Exam Question









A Christmas Carol

You are advised to spend about 45 minutes on this question.

You should us the extract below and you knowledge of the whole novel to answer the question.

Write about the some members of the Cratchit family and how they are important to the novel as a whole.

In your response you should:

- · refer to the extract and the novel as a whole.
- · show your understanding of characters and events in the novel.
- · refer to contexts of the novel.

[40]

The children drank the toast after her. It was the first of their proceedings which had no heartiness in it. Tiny Tim drank it last of all, but he didn't care twopence for it. Scrooge was the ogre of the family. The mention of his name cast a dark shadow on the party, which was not dispelled for a full five minutes.

After it had passed away they were ten times merrier than before, from the mere relief of Scrooge the Baleful been done with. Bob Cratchit told them how he had a situation in his eye for Master Peter, which would bring in, if obtained, full five-and-sixpence weekly. The two young Cratchits laughed tremendously at the idea of Peter's being a man of business; and Peter himself looked thoughfully at the fire from between his collars, as if they where deliberating what particular investments he should favour when he came into receipt of that bewildering income. Martha, who was a poor apprentice at a milliner's, then told them what kind of work she had to do, and how many hours she worked at a stretch, and how she meant to lie a-bed tomorrow morning for a good long rest; tomorrow being a holiday she passed at home. Also how she had seen a countess and a lord some days before, and how the lord "was much about as tall as Peter"; at which Peter pulled up his collars so high that you couldn't have seen his head if you had been there. All this time the chestnuts and the jug went round and round; and by and by they had a song, about a lost child travelling in the snow, from Tiny Tim, who had a plaintive little voice, and it very well indeed.

There was nothing of high mark in this. They were not a handsome family; they were not well dressed; their shoes were far from being waterproof; their clothes were scanty; and Peter might have known, and very likely he did, the inside of a pawnbroker's. But they were very happy, grateful, pleased with one another, and contented with the time; and when they faded, and looked happier yet in the bright sprinklings of the Spirit's torch at parting, Scrooge had his eye on them, and especially Tiny Tim, until the last.

Exemplar response

The Cratchit family are a very important to 'A Christmas Carol' because they play a big part in the central story of Scrooge's redemption. They are also important because Dickens wanted to portray the poor of Victorian London in the 19th century in a positive way and they help him do achieve his aims.

We first encounter the father of the Cratchits, Bob, in the first chapter. He is not named by Dickens here - we only discover his name later in the book and this is perhaps deliberate to show his lowly status – Scrooge only cares of him as a "clerk" and not a human being. Bob is one of the first 'victims' we see of Scrooge's miserly ways – he only has "one piece of coal" and has to "warm himself on a candle" so he is important in establishing Scrooge's meanness and penny-pinching ways. Moreover, Bob reinforces the message of Christmas by "applauding" Fred when he speaks on the benefits of Christmas. Scrooge doesn't want to give Bob Christmas Day off. This was not uncommon at the time and Bob is important in showing the audience how poorly employees were often treated. In the extract, Bob "toasts" Scrooge with his family which shows how grateful he is to Scrooge, despite being so badly treated by him. This was important for Dickens to show how grateful and humble the poor are and weren't the monsters they were thought of.

In Stave three, we see the rest of the Cratchit family. They are obviously poor (Mrs Cratchit is in her "twice turned gown") and they have a small "goose" for dinner. However, they are grateful and make the best of it. Mrs Cratchit and Belinda are "brave in ribbons" and it is said that the goose was treated like a "feathered phenomenon" or a "black swan". This shows how grateful they are and was central to the theme. They are also a loving family and the day is full of fun (they "laughed tremendously").

Tiny Tim is a "cripple" but is selfless and kind-hearted and cares about others as can be seen when he says "God bless us everyone" and thinks of others when he goes to church. He is important because Scrooge has a face to put to his Malthusian comment of "decrease the surplus population" and changes his mind. In fact, Tiny Tim's death shows a stark contrast to Scrooge's – the boy is mourned and will live on, whereas Scrooge will not. Therefore, Tiny Tim plays a hugely important role in Scrooge's redemption.

Finally, the Cratchits are important at the end of the novel – Scrooge buys them a "turkey" and it is the "biggest one in the shop". This shows just how much Scrooge has changed.

Overall, the Cratchits are essential in showing the 'grateful poor' as was Dickens' intention and also play a huge part in showing Scrooge's transformation.

Commentary

The opening sentence shows a clear focus on the question and addresses the 'importance'. The candidate then brings in contextual points and discusses Dickens' intentions in writing the novel. The second paragraph keeps the focus firmly on why Bob is important in the novel. It also brings in some AO2 points about technique as well as some context - discussing how employees were treated.

The candidate also uses the extract here.

There are appropriate direct references from the extract and other parts of the text, used to support the candidate's astute points. Overall this response shows assured understanding of the demands of the task and covers all the Assessment Objectives in a sustained, integrated way.

		Explorations in Creative	Reading (GCSE English Language Paper 1 Sec	ction A – AQA)	
Q	What is the Q asking?		bject terminology	Excellence criteria	Sentence starters
Read	5-10 mins to read the source				
1: facts	Read lines to List 4 things you learn about 1. Re-read the specified lines. 2. Copy 4 facts: do not infer. 4 marks – 5 minutes			 Focus on facts, not inference or analysis You can quote the text 	
2: analyse language	Read lines to How does the writer use language to present? 1. Re-read the specified lines. 2. Highlight or underline 3 quotations relevant to the question. You can quickly annotate. 3. Write 3 PEEA paragraphs responding to the question. 8 marks – 10 minutes	 Adjective: describes a noun. Adverb: describes a verb. Alliteration: words start with same sound. Allusion: reference to another text or event. Colloquial language: informal language. Euphemism: replacing an offensive phrase with milder words. Hyperbole: over-exaggeration. Imagery: visual language. Imperative verb: command. Juxtaposition: contrasting ideas. Metaphor: comparison. 	 12. Modal verb: shows possibility e.g. could, might. 13. Onomatopoeia: words which sound like what they describe e.g. boom. 14. Oxymoron: combines contradictory terms e.g. a minor crisis. 15. Pathetic fallacy: using the weather to set the emotion or mood. 16. Personification: giving an object human characteristics. 17. Semantic field: group of words with similar connotations. 18. Sibilance: repetition of "s" sound. 19. Simile: comparison using "like" or "as". 20. Symbolism: image represents an idea. 21. Triple: list of three. 22. Verb: action word. 	Point Respond directly to the Q using precise vocabulary. Use "in order to" to address key concepts. Evidence Select precise evidence Embed fluently in a sentence Explain / analyse What do the words suggest, imply or symbolise? Explore more than one word, idea or interpretation Use subject terminology.	The writer portrays as in order to suggest that This is clear when we read "" Evidence of this is "" This means that We learn that The writer communicates that The word / language device suggests / conveys This indicates that In addition, the word / language device is used because This reinforces the idea that
3: analyse structure	Use the whole source. How does the writer structure the text to interest you as a reader? 1. Identify 3 or more structural devices, choosing one from the beginning, one from the middle, and one from the end of the text. 2. Write 3 PEEAs responding to the question, thinking beginning, middle, end.	Beginning: Narrative perspective A. 1st person: told from the character's perspective (I) B. 2nd person: directed to the reader (you) C. 3rd person: external narrator (he, she, it) D. Limited narrator: doesn't have full knowledge of the situation E. Omniscient narrator: full knowledge and understanding F. Unreliable narrator: we question the narrator's credibility Beginning: Introducing Ideas G. Establishing setting H. Introducing character(s) I. Establishing an atmosphere	Middle: shifts in J. Focus K. Place L. Time (flashforward / flashback) M. Narrative perspective N. Atmosphere / mood Ending: O. Circular structure: the narrative ends where it begins P. Cliff-hanger: the narrative ends suddenly Q. Resolved ending: loose ends are tied up R. Unresolved ending: loose ends are not tied up Overall structure: S. Linear: events are told in the order that they happen, chronologically T. Non-linear: events are not in order U. Motif: a pattern of ideas, images or words repeated throughout the text	Point Respond directly to the question using precise vocabulary Use "in order to" to address key concepts Evidence Select precise evidence Embed fluently in a sentence Explain / analyse Explore the effect of the structural device Use subject terminology	The writer structures the text by in order to The writer introduces the idea of The writer focuses on The writer develops the idea of The writer draws the extract to a close by This is evident in the line "" The structural device is used because This suggests that This introduces / develops This focusses our attention on The writer zooms in on because
4: present a point of view	Read lines to Having read this section of the text, a student said "" To what extent do you agree? 1. Re-read the specified lines. 2. Agree/disagree table. 3. Write 4 PEEA paragraphs. 20 marks – 20 minutes	All language and structural devices Use XXOX to structure your argument: X: strongest agree point X: next agree point O: other side of the argument – if relevant X: final agree point	Analytical verbs: o presents: portrays, conveys o shows: demonstrates. illustrates	 believes: perceives, tru considers: appreciates, sympathises: emphasis discovers: realises, und 	See Question 2: confirms supports, justifies, develops sts, learns, observes clarifies, examines es, senses, pities, understands erstands, decides, concludes

Explorations in Creative Writing (GCSE English Language Paper 1 Section B - AQA)

Example question:

Write a description for a magazine inspired by this image:

OR

Write the opening of a story about isolation.

24 marks for content and organisation, 16 marks for technical accuracy

Developing your character:

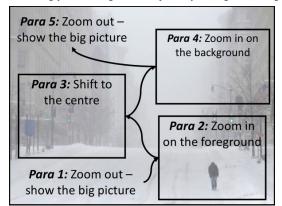
Before the exam, you need to create a fully developed character and know everything about them. When you go into the exam, you can "drop" your character into the image to give you a starting point.

Make sure you know your character's...

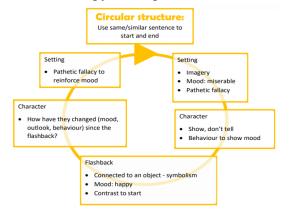
- o Family and education background
- Experience of work and employment
- o Experience of historical events e.g. World War Two
- Personality and characteristics
- Likes and dislikes (food, clothes....)

For each of these, ask yourself **why**. E.g. Why does my character become angry easily? Why did my character leave school at 16?

Structuring your writing 1: take a journey through the image



Structuring your writing 2: circular structure



Using descriptive language: show, don't tell

We use a range of language devices to <u>show</u> rather than <u>tell</u> the reader what the character is doing. E.g. She was sad. → Her body drooped. Slowly, she wrapped her arms around herself, hoping to stop herself shattering into a million pieces. As her lip began to quiver, a single tear fell.

Use all the language devices listed on the other side of this Knowledge Organiser (see Question 2) to describe:

Facial expression

Body language and movement

Clothing and appearance

- Reactions to other people
- Changing weather

Tone of voice

- How an object moves
- How an event makes the character feel

Using a range of sentence structures - start with...

1. Two –ing verbs	Raising a hand
2. Two or three adjectives	Humid and clammy, the air
3. Two –ly adverbs	Rapidly, quickly, the bird
4. A preposition (over, under, in)	Under the moon, the river
5. A simile	Like a
6. A connective:	First, we
7. The noun – adjective,	The tree – bony, twisted – grew
adjective - sentence:	
8. More, more, more sentence:	The more he cried, the more he felt
9. The so, so sentence:	It was so small, so tiny
10. It was one of those days	It was one of those days when

Using a range of punctuation

	osing a range of panetaation
	End a sentence
,	Separate clauses in a sentence (where you take a breath)
-	Add additional information in an informal way
;	Add additional information – full sentence before and after the ;
:	Introduce a list OR a shocking idea e.g. Morning arrived: disaster!
()	Include additional information that isn't essential to the sentence
?	Pose a question
·!	Show shock or surprise (use sparingly)
	Build tension or leave a gap
- (Indicate possession (Amy's work) or omission (I can't do it)
!	Pose a question Show shock or surprise (use sparingly) Build tension or leave a gap

Excellence criteria for self-assessment

	Target
	Communication is convincing – it
	reads like a novel / short story
	Communication is compelling – it is a short story I would be interested in reading
ırks	Tone, style and register are matched
mc	to audience – you have written in the
: 24	style of a novelist
Content and organisation: 24 marks	Extensive and ambitious use of vocabulary
ani	Sustained crafting of linguistic
org	devices – you have used a range of
pui	language devices throughout
nt a	Use of structural features $-e.g.$
nte	circular structure
Ö	Inclusion of a range of complex
	ideas – e.g. you explore different
	moods, emotions, aspects of
	character
	Paragraphs are linked
	Sentence demarcation is accurate –
S)	full stops, commas etc are in the
narl	correct place
9.	Wide range of punctuation used
 1	accurately
rac	Uses the full range of sentence
ככמ	forms for effect
β	Secure control of complex
nicc	grammatical structures
Technical accuracy: 16 marks	High level of accuracy in spelling
7.	Extensive and ambitious use of
	vocabulary

The Soldier by Rupert Brooke
The one about dying unselfishly for your country.
☐ "there's some corner of a foreign field/ That is for ever
England"
"A pulse in the eternal mind"
"hearts at peace, under an English heaven."



<u>Content:</u> In this poem, the persona, a soldier heading to war, talks about the possibility of dying in a foreign country. He claims that this should not be an occasion for sadness, but that by dying he will have made "a corner of a foreign field" a small part of England. He **personifies** England as his mother, who gave birth to him and raised him to become the person he is. He feels that he owes his life to her and therefore unselfishly sacrifices his life. He believes dying will be comforting and that he is only giving back the things that England gave to him and his memory and sacrifice will live on after death.

<u>Context</u>: The poem is <u>idealistic</u>. Rupert Brooke was a young, untested soldier, who had attended public school and was Cambridge educated. Athletic and called "the handsomest young man in England," he was part of the Bloomsbury group of authors and becoming known for his poetry. He wrote this poem at the start of the <u>First World War</u> as part of a series of <u>sonnets</u> and Winston Churchill admired its <u>selfless patriotism</u>. Brooke wrote idealistically about the war. He had not seen action and was never to. After embarking for war, he contracted blood-poisoning from a mosquito bite and died on French hospital ship. The poem has become a <u>symbol for a lost generation of youth</u>.

<u>Form:</u> This poem is a **sonnet**, traditionally used for love poetry. Rather than a person, this sonnet expresses Brooke's love and devotion to his country. Written in the **first person**, it follows an unwavering **iambic pentameter** and clear **rhyme scheme**, that demonstrates the persona's commitment to England. It is characterised as **Georgian** poetry with **motifs** of nature, youth and innocence.

<u>Structure:</u> The first **8 lines**, **or octave**, focus on how England enriched his life and he owes it to her. Whereas, the last **6 lines**, **or sestet**, reflect on how his death is meaningful, and reciprocal. It will bring him peace, and England security. Usually, there is conflict or debate between the two parts of a sonnet, but in *The Soldier* there is only harmony. The structure of the poem embodies the harmonious relationship between man and country.

Language Features:

- England is **personified** through the **extended metaphor** of a mother who has nurtured a son who is willing to die to protect her, embodying ideas of heroic sacrifice.
- Natural imagery is used extensively to express his love of the English countryside and creates a Romantic, idealised idea of war without pain or suffering.
- Religious imagery reveals his sense of faith and belief that his sacrifice will be immortalised by God.

Key Themes:

- ☐ Deep and lasting love (for his country) that is unselfish / Nature and Place
- ☐ Faith, belief and worship
- Attitudes to war and patriotism

Good to compare with:

- ☐ Sonnet 43
- A Wife in London
- ☐ Living Space
- Dulce, Mametz Wood, The Manhunt

A Wife in London by Thomas Hardy The one with the tragic telegram and the ironic letter. "She sits in tawny vapour" "The street lamp glimmers cold" "He –has fallen - in the far South Land..." "His hand, whom the worm now knows"



<u>Content:</u> The poem opens with a description of a wife sitting at home alone in London, against the backdrop of fog and misery which enfolds her. A sharp knock at the door brings her to her senses, and a messenger delivers a telegram with the tragic news that her husband, who is at war in a distant country, has been killed. The poem moves to the following day. Here a letter is delivered to her from her husband who wrote it before he died. He talks with enthusiasm of his hopes for coming home and their future together. The joy and optimism with which he speaks serves to emphasise the terrible waste of his life and the wife's desolation and sadness.

<u>Context</u>: In the poem, Hardy speaks as an **observer** and chooses to focus on those left behind at home at times of war. The war he is speaking about is **the Boer War** – a series of campaigns fought against the Boers (or Dutch) over territory in the **south of Africa**. The war was a **distant one** and one many thought was unnecessary and wasteful of life, as many men died needlessly of diseases like enteric fever. He uses the isolation of the wife to emphasise her helplessness in the face of her separation from her husband – she could be any one of any number of wives left behind – and employs the letter "page full" of hope to show the futility of war and how many died in their prime.

<u>Form:</u> The <u>persona</u> in the poem is an observer who watches in a detached manner contributing to he helpless and melancholy tone. The irregular rhythm and dashes create pauses and reflect the disbelief of the wife at the news. There is an asymmetrical rhyme scheme (ABBAB) which is broken once in the half rhyme of "smartly" and "shortly" – reflecting the wife's struggle to absorb the news.

<u>Structure:</u> Hardy deliberately divides the poem into two opposing halves – The Tragedy and The Irony. The first 2 stanzas accentuate the wife's loneliness trapped in the web of London's fog and build to climax of anticipation with the tragic news. The second 2 stanzas juxtapose the news of the husband's death with his joyful prose, fresh and firm. Hardy does this to show how war can crush hope and joy.

Language Features:

- Hardy uses visual imagery and the pathetic fallacy of the fog to distil the wife's isolation and grief. The fog encloses her and foreshadows the grip of death into which she will fall, and imagery of light offers no warmth, hope or consolation.
- The contrast of the opening imagery with the husband's joyful language, punctuated by powerful alliteration, creates a deep sense of irony and loss.
- The graphic imagery of his "hand" once "fresh" and "firm" now intimately acquainted with the worm focuses on his physical decay and the horror of war.

Key Themes:

- Love and relationships
- ☐ Pain and suffering Death and Loss
- ☐ The impact of war on the individual

Good to compare with:

- ☐ The Manhunt
- ☐ As Imperceptibly as Grief
- Dulce/ Mametz Wood

Dι	ılce et Decorum Est by Wilfred Owen
The	e famous one about the horrific effects of a gas attack.
	"Bent double like old beggars coughing like hags"
	"All went lame; all blind"
	"As under a green sea, I saw him drowning"
	"Obscene as cancer"



<u>Content:</u> The persona describes the suffering of the exhausted soldiers, which he is one of, as they march away from battle back to their rest camp. They are broken, injured and so tired they appear drunk. Suddenly, the shout of "Gas!" rings out. A chlorine gas shell has been dropped and the soldiers scrabble to get their gas masks on. One soldier is unable to and flounders toward the persona choking on gas. The persona recounts how in all his dreams he still sees the man's face plunging towards him. He directly asks the reader if he had seen young men die in such an obscene way could they ever say to others that it is sweet and fitting to die for your country. He calls this a lie.

<u>Context:</u> 2nd Lt Wilfred Owen was a decorated soldier, who won the highest honour of the **Military Cross** for bravery in the front line of battle in **the First**World War. Unlike, Brooke he experienced the horror and depravity of battle first hand and felt that his one duty as a poet was to tell the "**truth.**" He wasn't unpatriotic, in fact after treatment for shell shock (PTSD) he returned to the front, but was sadly killed in action on 4th Nov 1918, 7 days before the war ended. The **Latin phrase** in his poem means *It is sweet and fitting to die for your country*. It was often displayed in military training camps to inspire trainee soldiers to greater patriotism. Owen criticises this as a lie told by the establishment which he finds disgraceful.

Form: The poem has some regular and irregular features. The regular ABAB rhyme scheme reflects the relentless trudge and suffering of the soldiers plight; however the stanzas are of irregular length and the iambic pentameter falters at times, perhaps showing the unpredictability of war or the soldiers exhaustion. It can seem disjointed, fragmented and confusing – like war.

Structure: It is written in the first person and is almost certainly autobiographical in nature. It starts with a past tense description of the long trudge of the soldiers back to rest camp, and develops to the panic of the gas attack. It then flashes forward to the present and the horrific dreams the persona still has of the incident. It ends with a graphic description of the soldier's death on the back of cart and questions the honesty and integrity of those who spread the "old lie" to the young.

Language Features: (there are almost too many)

- Similes are used extensively by Owen to describe the condition of the men and the experience of the gas attack.
- **Graphically violent imagery** to describe the soldier's hideous death, including powerful **adjectives and verbs** convey the brutal, shocking reality of war.
- **Direct address** "My friend" challenges the reader, authorities and other poets (including Jessie Pope) to consider the falsehood they pedal to youth of Britain.

Key Themes:	Good to compare with:
☐ War and its impact	☐ Mametz Wood
☐ Pain, suffering, death, loss and PTSD	☐ The Manhunt
☐ Negative Emotions	□ London

Mametz Wood by Owen Sheers The one where a mass grave of dead soldiers is unearthed. □ "the wasted young" □ "blown and broken bird's egg of a skull" □ "a wound working a foreign body to the surface of the skin"



<u>Content:</u> The persona in the poem describes that how even now the farmers in France are still finding the remains of soldiers who died on the battlefields of the First World War in the earth as they plough. The remains seem to be near a place called Mametz Wood where a particularly brutal battle, that cost many lives, took place. The narrator references how they were commanded to walk into battle and face the devastating machine guns. The poem moves to the present and the discovery of a mass grave of soldiers that has just been discovered and recounts how they are linked arm in arm and how their mouths seem to be open as if they are mid song.

<u>Context:</u> Mametz Wood was written in 2005 by British poet Owen Sheers. Mametz is a village in Northern France; the woodland nearby was the site of an especially bloody battle during World War I, in which around 4,000 men from the British Army's Welsh Regiment were killed. Sheers's poem is set many years later, and considers the way that, even a century after the conflict, the land around Mametz Wood is still filled with fragments of the dead soldiers' bodies. The poem is thus a consideration of the horrors of war, its lasting effects, the fragility of life, and the time it takes nature to heal from such atrocities. It is a commemorative and elegiac in tone.

Form: The poem is written **in tercets** (3 line stanzas) that seem a little less robust than a quatrain, perhaps hinting at the delicate balance between life, death and nature. Sheers chooses to write in **the 3**rd **person**, which creates a sense of distance and detachment. He uses **enjambment** within and between stanzas, which could reflect the slow unearthing and passing of time as the pieces are dug up. It creates a reflective tone.

Structure: The first 3 stanzas focus

on the "years" after the war and how farmers found the fragile remains of the "wasted young" leading the narrator to reflect on their death at the mercy of machine guns. The 4th stanza brings us to the present day and how "even now" the earth is still healing from the horror. The final 3 stanzas are written "this morning" and create a sense of immediacy around the horrific discovery of a mass grave — a reminder that this war is forever present in our history.

Language Features:

- The earth **is personified** as a "sentinel" who guards the remains of the soldiers and ensures they do not slip from memory. It is also described as wounded, suggesting how it still needs to heal from the horror of war.
- Images of brokenness and fragility such as the symbolism of the "bird's egg" emphasise the fragility of life but also how war can dehumanise those who fight in it.
- **Graphic imagery** is used to describe the mass grave to suggest the horrific manner of their death, but is contrasted with the **metaphor** of the "mosaic" emphasising their beauty and delicacy.

Key		n	e	n	<u>1e</u>	<u>'S</u>	
	^						

- Attitudes to war/ death and loss
- ☐ The passage of time/ the past
- Nature

Good to compare with:

- ☐ Dulce/ The Soldier
- ☐ The Manhunt/ A Wife in London
- ☐ To Autumn

1.	The Manhunt by Simon Armitage The one about the scarred soldier
	"frozen river"
	"foetus of metal
	"unexploded mine"



<u>Content:</u> The wife of a soldier gets to know her husband again after he returns home injured from the war. Her husband is physically scarred by the injuries he sustained in the war, but he also has deeply buried psychological scars as result of his traumatic experiences. The poem traces his physical scars and explores deeper into the "unexploded mine" of PTSD. Physically, they can remain close, but there is a gap between them now emotionally as he struggles to let her in.

<u>Context:</u> The Manhunt is a contemporary poem and was originally aired as part of a Channel 4 documentary, Forgotten Heroes: The Not Dead. In the film, the poem is read by Laura, the wife of Eddie Beddoes, who is the subject of the poem. He served as a peace-keeper in Bosnia before being discharged due to injury and depression. Armitage wrote the poem after interviewing veterans returning from war and as a means of exploring the psychological impact on those who survived intense trauma.

<u>Form:</u> The poem is written in **couplet –long stanzas**, which have lines of varying length, from **Laura's perspective**. At the start, the couplets rhyme, but the **rhyme** breaks down making the poem feel disjointed and conveys the theme of brokenness. It may reflect their struggle to reconnect and how she will have to learn who her husband now is.

Structure: Each **couplet** introduces a different injury and the reader explores the body and mind of the soldier alongside his wife, experiencing the process at the same time. The use of **enjambment** mimics the way she traces the injuries that run continuously across his body and explores the damage done. It demonstrates the slow progress she is carefully making.

Language Features:

- The soldier's body is described by using adjectives of damage to show how broken war has left him.
- Parts of the body and mind are described using **metaphors** suggesting his is compiled of broken objects and that part of his humanity has been erased.
- The verbs express her tenderness and caution in how she approaches him.
- The final metaphor of the "unexploded mine" refers to the tension and stress his memories cause which he has not come to terms with yet.

Key Themes:

- War and its lasting effects
- Love and relationships
- □ Pain and suffering
- ☐ Loss and change

Good to compare with:

- ☐ Dulce, Mametz Wood
- ☐ A Wife in London
- ☐ London
- ☐ As Imperceptibly a Grief





Year 10 **Mathematics** Knowledge **Organiser**

Topic		
Statistics:		
Interpreting		
Averages		

Key terms – use www.amathsdictionaryforkids.com to help			
Discrete data	Data that can only take certain values	3, 6, 10, -9, 4235 are all discrete data values	
Continuous Data	This is data in which all values are possible	The heights measured were all examples of continuous data	
Speed	A way of measuring how quickly something is moving or being done	Speed = Change in Distance ÷ Time.	
Acceleration	The rate of change of the velocity of an object with respect to time	Acceleration = Change in Speed ÷ Time	

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!

Miculaii	Wicali	
Find the median of	Find the mean of	
6, 4, 3, 6, 7, 11, 9, 15	8, 6, 2, 3, 11, 12, 0	
_		
Put the numbers in order,	Find the sum of the numbers	

smallest first

9 11 15

There are two numbers in the middle, 6 and 7 - find halfway between them

 $(6 + 7) \div 2 = 6.5$ So 6.5 is the median

Mode Find the mode of

1, 3, 6, 4, 3, 2, 7, 8, 10 Find the number that appears the most (Putting them in order can help)

3 appears the most (twice) so 3 is the mode Highest = 8.4 Lowest = 2.1 **Range** = 8.4 - 2.1 = 6.3

Total = 42

There are 7 items in the

data set (the numbers) so we

will divide by 7

 $42 \div 7 = 6$

So 6 is the mean

Range

Find the range of

2.6, 3.7, 2.1, 8.4, 2.9, 3.6

Find the Highest and Lowest

numbers and calculate

Highest - Lowest

Means from Tables

Discrete Data

Add a frequency density 'fx' column

Number of badges	Frequency	fx
0	2	0×2=0
1	8	1×8=8
2	4	2 x 4 = 8
3	3	3×3=9
4	5	4×5=20
5	3	5 x 3 = 15

Mean = 'fx' total ÷ 'Frequency' total

fx total = 60 Frequency total = 25 60 ÷ 25 = 2.4 badges

Grouped Continuous Data

Time taken (mins)	Frequency
0 < m ≤ 10	3
10 < m ≤ 20	8
20 < m ≤ 30	11
30 < m ≤ 40	9
40 < m ≤ 50	9

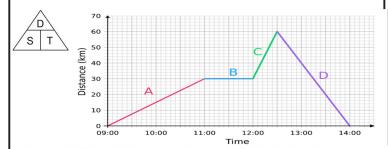
First, find the midpoint of each group, and then follow the same rules as if it were discrete data!

Frequency	Midpoint (x)	fx
3	$\frac{0+10}{2} = 5$	3 x 5 = 15
8	$\frac{10+20}{2} = 15$	8 × 15 = 120
11	$\frac{20+30}{2} = 25$	11 × 25 = 275
9	$\frac{30+40}{2} = 35$	9 x 35 = 315
9	$\frac{40+50}{2} = 45$	9 x 45 = 405

Distance & Velocity Time Graphs

Distance-Time graphs

If an object moves along a straight line, the distance travelled can be represented by a distance-time graph

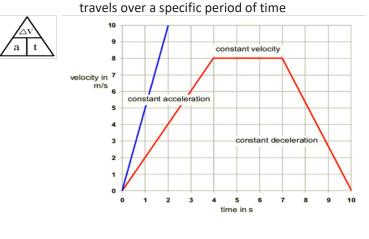


A - travelled 30km in 2 hours B - stationary period

C- travelled 30km further from start D- travelled 60km back to starting point

Velocity-Time Graphs

A velocity-time graph shows the speed and direction an object travels over a specific period of time





Year 10 Mathematics Knowledge Organiser

lopic
Number
Fractions &
Percentages

Key terms – use www.amathsdictionaryforkids.com to help			
Percentage	An amount given out of 100	The percentage 37% means '37 out of every 100'.	
Decimal multiplier	A decimal used to find the percentage of an amount.	15% = $15/100$ = 0.15 so 0.15 is the decimal multiplier .	
Equivalent Fractions	Fractions that are equal to each other	$\frac{2}{3}$ and $\frac{8}{12}$ are equivalent fractions .	

Calculating with Fractions

Simplifying

To write a fraction in its simplest form, (cancel down), you must divide both parts by their HCF.

6	÷6	1
12	÷6	2

Fraction of an Amount

Step 1: Divide by the denominator. Step 2: Multiply by the numerator.

Find
$$\frac{3}{4}$$
 of 20

Step 1:
$$20 \div 4 = 5$$

Step 2:
$$5 \times 3 = 15$$

Add and Subtract

Look for a common denominator.

$$\frac{2}{3} + \frac{4}{5}$$

In this case, 15 is a common denominator
We now write them as equivalent fractions

$$\frac{10}{15} + \frac{12}{15} = \frac{22}{15} = 1\frac{7}{15}$$

We do exactly the same for subtraction

$$\frac{7}{8} - \frac{3}{7}$$

$$\frac{49}{56} - \frac{24}{56} = \frac{25}{56}$$

Mixed Numbers

An **improper fraction** is one where the numerator is greater than the denominator. A **mixed number** is a number with an integer part and a fraction part

Improper → Mixed

$$\frac{13}{4} = \frac{4}{4} + \frac{4}{4} + \frac{4}{4} + \frac{1}{4} = 3\frac{1}{4}$$

 $Mixed \rightarrow Improper$

$$3\frac{2}{5} = \frac{3\times5+2}{5} = \frac{17}{5}$$

Calculating with Mixed Numbers

Change into improper fractions FIRST, then calculate as normal.

$$2\frac{1}{3} - 1\frac{2}{5} = \frac{7}{3} - \frac{7}{5}$$

Multiplying

Multiply the numerators

Multiply the denominators

$$\frac{3}{7} \times \frac{2}{5} = \frac{3 \times 2}{7 \times 5} = \frac{6}{35}$$

$$1\frac{2}{3} \times 2\frac{4}{5}$$

$$\frac{5}{3} \times \frac{14}{5} = \frac{5 \times 14}{3 \times 5} = \frac{70}{15} = 4\frac{10}{15}4\frac{2}{3}$$

Percentage of an Amount

To find 10% of an amount
$$\rightarrow \div by$$
 10

Find 15% of 20

Find 21% of 60

Find 21% of 60

Find 21% of 60

 $10\% = 2$
 $10\% = 2$
 $10\% = 3$
 $15\% = 3$

Find 21% of 60

 $21\% = 6$
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Percentage Increase

Add to the original amount

rida to the original amount		
Non Calculator	Calculator	
Increase 80 by 12%	Increase 120 by 23%	
10% = 8	100% + 23% = 123%	
1% = 0.8	123% = 1.23 Multiplier	
2 % = 1.6	Multiply by the multiplier	
12% = 9.6	120 x 1.23 = 147.6	
80 + 9.6 = 89.6		

Percentage Decrease

Subtract from the original amount

Non Calculator	Calculator
Decrease 40 by 27%	Decrease 35 by 16%
10% = 4	100% - 16% = 84%
1% = 0.4	84% = 0.84 Multiplier
7 % = 2.8	Multiply by the multiplier
20% = 8	$35 \times 0.84 = 29.4$
27% = 10.8	
40 - 10.8 = 29.2	

Reverse Percentages

Lauren is given a 12% pay rise. Her new salary is £24,080

Calculating with Percentages

What was Lauren's salary before the pay rise?

The new salary is 12% larger than the original. So let the original =100%.

The new must be 100% + 12% = 112%

112% as a decimal multiplier is 1.12

so original
$$\times$$
 1.12 = £24,080 original = £24,080 ÷ 1.12 = £21500

Percentage ChangeProfit & Loss $\frac{Change}{Original} \times 100$ $\frac{Profit \ or \ loss}{Cost} \times 100$ Original skirt price = £15
Sale price = £12Profit or loss is selling minus cost
Sale price = £25.20 \cost £18
profit = £7.20 $\frac{3}{15} \times 100 = 20\%$ $\frac{7.20}{18} \times 100 = 40\%$

Year 10 Mathematic
Year 10 Mathematic Knowledge Organise

Topic
Summer 2:

Probability

What is relative frequency?

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.

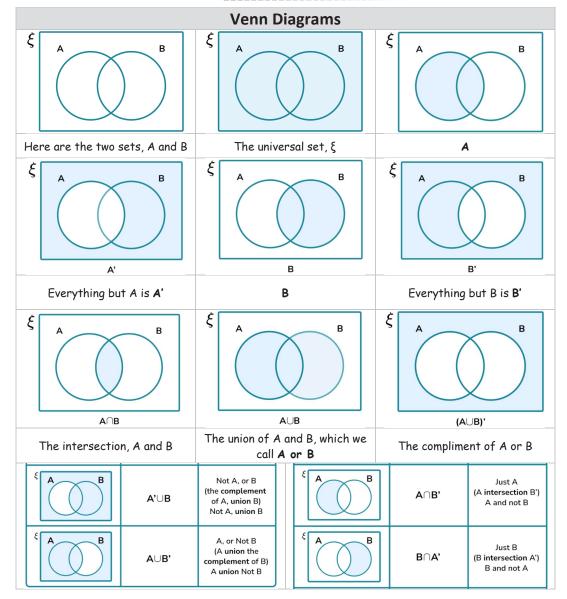
Symbol	Description
{}	Curly Brackets, contain all items in a set
,	Comma - separates all items in a set
,	Complement - the items not in a set
ξ	The Universal Set - contains all items in every set and subset required
ϕ	The Empty Set - contains no items

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.







Year 10 Mathematics Knowledge Organiser

Topic		
Algebra		
Nanipulation		
and Solving		

Key terms – use www.amathsdictionaryforkids.com to help			
Expression	Numbers, symbols and operators (such as + and ×) grouped together that show the value of something.	3(4x + 9y + 5z) is an expression.	
Expanding brackets	"Expanding" means removing the () but we have to do it the right way!	Expand the expression $(x + 5)^2$	
Simplify	In general, it is simpler when it is easier to use.	Simplify $7x + 4y + 2x - 3y$	
Factorise	Finding what to multiply to get an expression.'	Factorise $x^2 + 8x - 20$	

Expanding Brackets

To expand brackets: multiply everything in the bracket by the term outside the bracket

Single Bracket Expansion

Expanding
$$5n(n + 3)$$

$$= 5n^2 + 15n$$

2 Single Brackets \rightarrow Expand then Simplify

$$5(x+3)+6(x-4)$$

 $5x+15+6x-24$ = 11x-9

Double Bracket Expansion

How you expand it out is your call - Crab's Claw, FOIL, ... the choice is yours

Factorising

Factorising is the opposite of expanding. You need to identify factors that the terms share... it could be a number (HCF), a letter or both!

$$5x + 15 = 5(x + 3)$$

 $10x - 12 = 2(5x - 6)$
 $10xy + 15y = 5y(2x + 3)$
 $8x^2y + 4xy^2 = 4xy(2x + y)$

Quadratics

A quadratic is a 3-part equation that is equal to zero and has 2 roots.

Answer
$$(x + 9)(x - 2)$$

To solve, we equate the brackets to zero.

$$(x+9)(x-2) = 0$$

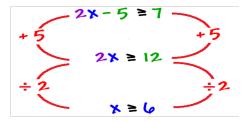
 $x+9=0$ $x=-9$

$$x - 2 = 0$$
 $x = +2$

Inequalites

Inequalities follow the same rules as equations (with one exception see second example!)

As when solving equations, you need to get the unknown on its own on one side of the inequality.



The exception to the normal rules comes when you divide by a negative number. When you divide by a negative you reverse the symbol

Add or subtract to isolate the variable term.

Multiply or divide to solve for the variable.

If multiply or divide by a negative number then reverse the inequality symbol.

$$-3x+5 \le -16$$

$$-5 -5 Subtract$$

$$-3x \le -21$$

$$\frac{-3x}{-3} \ge \frac{-21}{-3} Divide by -3, reverse inequality$$

$$x \ge 7$$

Year 10 Biology: Infection and Response

Communicable Diseases

Communicable (infectious) diseases are caused by pathogens such as bacteria and viruses that can be passed from one person to another e.g. bacteria and viruses. These are called **pathogens** (microorganisms that cause disease).

Pathogens can be spread by:

- By air (including droplet infection), including coughing, sneezing, and talking.
- Direct contact, which is common in plants, and includes STI transmission in humans.
- **By water**, where the pathogen enters the body through the digestive system.

Viral diseases

Viruses use your body cells as a host to reproduce, which destroys your cells. Examples include measles, HIV/AIDS, and Tobacco mosaic virus (TMV).

Bacteria disease

Bacterial disease affect animals and plants. Examples include **salmonella**, **gonorrhoea**, and bacteria that cause **crown galls** in plants.

Diseases caused by fungi and protists

Fungal diseases include **athlete's foot** and **rose black spot disease**, a disease that affects plants and can often be devastating. Protist diseases are rare, but very dangerous, including malaria, which is spread between people by female mosquitos.

Preventing infections

Ignaz Semmelweis introduced the policy of **washing hands in hospitals**, which saw a large decrease in hospital deaths. Other pioneering discoveries included **Louis Pasteur developing vaccines** and **Joseph Lister developing antiseptic chemicals**.

Other methods of preventing infections are hygiene, isolating infected individuals, destroying or controlling vectors, and vaccinations.

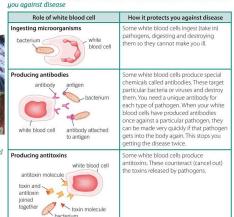
Human defence responses



Figure 1 The scabs that restore the protective barrier of the skin and prevent pathogens getting in are made of red blood cells tangled in protein strands formed by platelets



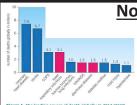
Figure 2 The cilia of the airways beat together to move mucus containing trapped pathogens away from the lungs



Preventing and treating disease Vaccinations Small amounts of dead or inactive pathogen The antigens in the vaccine stimulate your You are immune to future infections by the are put into your body, often by injection. white blood cells into making antibodies pathogen. That's because your body can respond rapidly and make the correct antibody The antibodies destroy the antigens without as if you had already had the disease any risk of you getting the disease. Vaccines contain a dead or Herd immunity No herd immunity weakened version of a Disease spreads mo Immunized people act as a barrier against easily when fewer pathogen, allowing your infection, preventing people are immunized its spread. white blood cells to practice destroying it. The aim of vaccines is to create **herd immunity** amongst a

Discovering and developing drugs

A lot of the compounds that are used in medicines today were discovered form plants and microorganisms. Examples include **aspirin**, **digitalis**, and the antibiotic **penicillin**, that was discovered by **Alexander Fleming**. It is important that bias is avoided when developing a drug, and so methods like **placebos**, **blind trials**, and **double blind trials** are often used by researchers.



Non-communicable diseases There are many risk factors for diseases. A risk factor is something that increases the chances of a disease

developing. Risk factors include **family history**, **smoking**, **alcohol**, **poor diet**, **lack of exercise**, and **carcinogens** (agents that cause cancer).

population.

Cancer

Cancerous cells are called malignant tumours, which are cells that have divided uncontrollably and can spread around the body. Benign tumours are cells that have divided uncontrollably but stay in one place. Risk factors of cancer include, family history, smoking, ionising radiation, and certain viruses such as HPV.

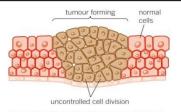


Figure 1 A tumour forms when there is uncontrolled cell division

Year 10 Biology: Infection and Response Key Vocabulary

Key word	Definition	Contextual Sentence
benign tumours	Growths of abnormal cells that are contained in one area, usually	Moles on the body are usually examples of benign tumours.
	within a membrane, and do not invade other tissues.	
cancer	The common name for a malignant tumour, formed as a result of	lonising radiation such as UV light is a risk factor for skin cancer.
	changes in cells that lead to uncontrolled growth and division.	
carcinogens	Agents that cause cancer or significantly increase the risk of	Some chemicals found in smoking tobacco such as tar are carcinogens.
	developing cancer.	
causal mechanism	Something that explains how one factor influences another.	Alcohol is a causal mechanism for cirrhosis of the liver.
clinical trials	Test potential new drugs on healthy and patient volunteers.	If successful at the first stage of clinical trials, the new drug will then be
		tested on sick volunteers.
communicable	Disease caused by pathogens that can be passed from one organism	Viruses, bacteria, protists, and fungi are all examples of communicable
disease	to another.	diseases.
correlation	An apparent link or relationship between two factors.	Smoking is positively correlated to lung cancer.
ionising radiation	Has enough energy to cause ionisation in the materials it passes	Sunbeds use ionising radiation.
	through, which in turn can make them biologically active and may	
	result in mutation and cancer.	
malignant tumours	Invade neighbouring tissues and spread to different parts of the	Chemotherapy and radiotherapy are treatments for malignant tumours.
	body in the blood where they form secondary tumours. They are	
	also known as cancers.	
non-communicable	Are not infectious and cannot be passed from one organism to	Cancer and diabetes are examples of non-communicable diseases .
diseases	another.	
pathogens	Microorganisms that cause disease.	Salmonella bacteria is an example of a pathogen.
placebo		Researchers will often use a placebo when developing a new drug to
	in clinical trials of new medicines.	avoid bias.
preclinical testing	The site of aerobic cellular respiration in a cell.	The sperm contains many mitochondria to release energy for movement.
sexually transmitted	Transmitted from an infected person to an uninfected person by	The use of condoms is one way to reduce the spread of sexually
disease (STD)	unprotected sexual contact.	transmitted diseases (STDs).
tumour	A mass of abnormally growing cells that forms when the cells do not	The two types of tumours are benign and malignant.
	respond to the normal mechanisms that control growth and when	
	control of the cell cycle is lost.	
vaccine	Dead or inactive pathogenic material used in vaccination to develop	Vaccines are used to create herd immunity amongst a population to
	immunity to a disease in a healthy person.	reduce the spread of a pathogen.
virus	Pathogens that are much smaller than bacteria and can only	Influenza and TMV are both examples of viruses.
	reproduce inside living cells of other organisms.	

Year 10 Biology: Photosynthesis

Photosynthesis

Plants can make their own food by **photosynthesis**. This takes place in the green part of plants (especially the leaves) as well as in algae. It is an **endothermic** reaction as it requires an input of energy from the environment (light).

Photosynthesis can be summarised as follows:

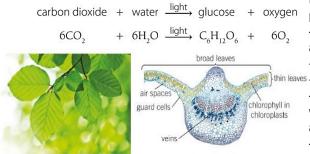


Figure 2 Leaves are well-adapted for photosynthesis

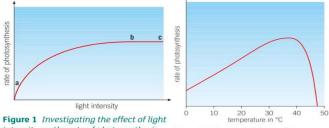
Leaf adaptations

Leaves are highly adapted for photosynthesis. Adaptations include:

- **Broad**, giving them a large surface area to absorb light.
- Thin for easy gas diffusion.
- thin leaves Contain **chlorophyll** to absorb light.
 - **Xylem** and **phloem** to transport water and minerals as well as sugars around the leaf.
 - Air spaces to allow gas exchange.
 - **Guard cells** to open and close **stomata** to regulate gas exchange.

The rate of photosynthesis

Plants need light, warmth, and carbon dioxide in order to photosynthesise. Sometimes, one or more of these things can be in short supply which limits the amount of photosynthesis. These are known as **limiting factors**.



intensity on the rate of photosynthesis

Figure 2 The effect of increasing temperature on the rate of photosynthesis

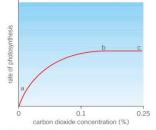
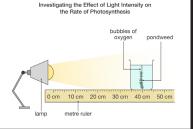


Figure 3 The effect of increasing carbon dioxide concentration on the rate of photosunthesis

Investigating how light intensity affects photosynthesis
You can investigate how light intensity affects the rate of photosynthesis by moving a lamp further away from some pondweed that is in water. As the pondweed photosynthesis, you can count the number of bubbles of oxygen produced in a given time, which gives an indication of the rate of photosynthesis. The closer the lamp to the pondweed, the greater the number of bubbles.



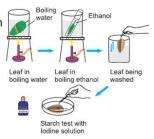
Structure of a leaf Sunlight Wax cuticle epidermis Palisade mesophyll Spongy mesophyll Lower epidermis Guard cell with chloroplasts Sunlight Wax cuticle Exchange of gases through with chloroplasts storial

How plants use glucose

Plants use photosynthesis to make **glucose**, which they use for a variety of things. Plants may use glucose to:

- -Build larger molecules such as **cellulose**, to strengthen cell walls, and **starch**, which is insoluble so is easier to store.
- -Make **amino acids** which can be made into proteins which can be used in many ways, including to make enzymes.
- -Make **lipids** such as fats and oils which can be used in cells as an energy store. Testing a leaf for starch

You can test a leaf for starch to see if it has been photosynthesising, as starch is stored glucose. You first need to place the leaf in a test tube of ethanol and heat it in a water bath. This removes the green colouring. You then remove the leaf from the test tube and add iodine to it. If the iodine turns **blue/black** then the leaf contains starch.



Making the most of photosynthesis (Higher)



ure 1 One piece of American research

ed the crop yield for tomatoes was

Figure 3 Growers need to look at this type of data to help them decide the best economic condition for growing their plants. The cost of providing the conditions that give the very highest yields may be too expensive and may wipe out the profits from the bigger, cleaner crop

Year 10 Biology: Photosynthesis Key Vocabulary

Key word	Definition	Contextual Sentence
endothermic reaction	A reaction that requires a transfer of energy from the environment.	Photosynthesis is an endothermic reaction as it takes in light energy from
		its' surroundings.
glucose	A simple sugar.	Plants use carbon dioxide and water, as well as taking in light, to make
		glucose and oxygen.
limiting factors	Limit the rate of a reaction, for example photosynthesis.	Carbon dioxide is often a limiting factor for photosynthesis as the Earth's
		atmosphere is made from only 0.04% carbon dioxide.
photosynthesis	The process by which plants make food using carbon dioxide, water,	The rate photosynthesis is greatest in bright, warm, carbon dioxide rich
	and light.	environments.

Year 10 Chemistry: Atoms & Matter

Atoms

Atoms are the smallest part of a substance that can exist. If all the atoms are the same, the substance is known as an **element**.

Molecules

A **molecule** is when two or more atoms are chemically bonded together. For example, look at the diagram of a water **molecule**.

Pure water will always have twice as many hydrogen atoms as oxygen atoms. That means its chemical formula is written as $\rm H_2O$.



Compound

A **compound** is when two or more different **elements** chemically bond together.

Formula Writing

If there is no subscript after the atom's symbol in a chemical formula, it is read as "1", which means the ratio of H atoms compared to O atoms is 2:1

Compounds	Mixtures
Compounds have a fixed composition (the ratio of elements is always the same in any particular compound).	Mixtures have no fixed composition (the proportions vary depending on the amount of each substance mixed together).
Chemical reaction must be used to separate the elements in a compound.	The different elements or compounds in a mixture can be separated (by physical means, using the difference in properties of each substance in the mixture).
There are chemical bonds between atoms of the different elements in the compound.	There are no chemical bonds between atoms of the different substances in a mixture

Chemical equations

Chemical equations show the chemicals used, called **reactants** and then new chemicals it forms, are called the **products** of a reaction.

Chemical equations

Using symbol equations helps you to see how much of each substance is involved in a reaction. For example, calcium carbonate **decomposes** (breaks down) when heated. You can show the reaction using a symbol equation like this;

Reactants \rightarrow Product $CaCO_3 \rightarrow CaO + CO_2$ 1 = Ca = 1 1 = C = 13 = O = 3

States & symbols

This is what state the substance is in at a given temperature.

This could be

solid (s), liquid (l)

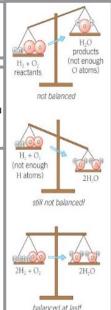
gas (g)

Substances have a melting point and a boiling point.

In chemistry, we also give a state symbol to substances dissolved in water. This is known as an **aqueous solution** with the state symbol being (aq).

This equation is balanced; there is the same number of each type of **atoms** on both sides of the equation. You can see this from the counting under the equation and from the diagram on the right. This is very important because **atoms** cannot be created nor destroyed in a chemical reaction. This means that;

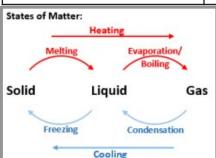
"The total mass of the products formed in a reaction is equal to the total mass of the reactants" (which is the Law of Conservation.)



Changing states

You can see on the graph below that when a substance changes state. The line of the graph stops rising when a substance changes state.

Here, a **solid** is changing to a liquid. The reason it stops rising is that enough **energy** is transferred from the surrounding area to the solid so forces between the particles in the solid break. Once the particles break apart from their fixed position it is no longer a **solid**. Once this happens the transfer of **energy** from the surroundings to the substance causes the temperature to continue to rise.



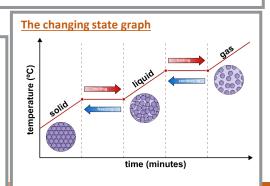
State of matter energy diagram

To the left is a diagram of the **changes of state.** If you increase or decrease the energy of the substances the state will change (e.g. solid \rightarrow liquid).

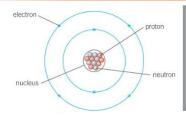
Solids are held together in a fixed pattern/shape and have a fixed volume. **Solids** can not be compressed (squashed).

Liquids have a fixed volume and the particles are packed close together in a random order moving over each other, this allows them to flow and change shape.

Gases have no fixed shape or volume. The particles move around at a much faster speed. The gases will fill the area given but they can be compressed.



Year 10 Atomic Structure & The Periodic Table



Atomic structure

Atoms contain sub-atomic particles. **protons, neutrons** and **Electrons**. **Protons** and **neutrons** are found in the centre of the atom, called its **nucleus** and **electrons** are found in **energy shells** around the **nucleus**. This **nucleus** is not the same as what is found in plant cells.

Sub-atomic Particle	Mass	Charge
Proton	1	+
Neutron	1	No charge
Electron	1/2000	-

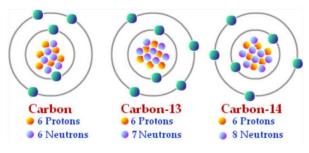
Atomic number

All the atoms of a particular element have the same number of protons. For example, Na has eleven protons in its nucleus.

The number of **protons** in each atom is called its **atomic number**.

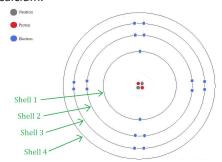
Isotopes

Atoms of the same element with the same number of protons but with different numbers of neutrons are called **ISOTOPES** e.g.

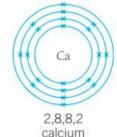


Electron Structure

The electrons in an atom are arranged in energy shells (levels). The lowest energy level (the 1st shell) can hold up to a maximum of 2 electrons, the next energy level (2nd shell) can hold a maximum of 8 electrons and so on. You need to be able to draw the atoms from Hydrogen to calcium.



Calcium has the structure of 2,8,8,2



Properties of Alkali metals

The characteristic **properties** of the alkali metals are:

- They are soft and can be cut by a knife. Softness increases going down the group
- They have a low density. Lithium, sodium and potassium float on water.
- They have low melting and boiling points.

These **properties** mean that the alkali metal do also share some **properties** with typical metals:

- They are good conductors of heat and electricity.
- They are shiny. This is only seen when alkali metals are cut.

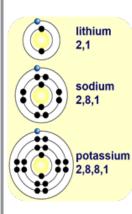
Reactions of alkali metals

The alkali metals are **highly reactive**, they react with oxygen and water. They can also react with acid, however, the reaction is extremely dangerous. We can use word and symbol equations to represent the reactions.

Electron configuration and alkali metals

The alkali metals all have one **electron** in their outer shell. This means that:

- They are found in group 1 of the periodic table
- They have similar physical properties
- They can readily lose the outer shell electron to form positive ions with a +1 charge and a full outer shell.



Group 7, The Halogens

Reactivity decreases going down Group 7. To explain this you consider the same factors you look at with alkali metals.

- The shielding effect of the inner electrons
- The size of the atom
- The nuclear charge

Halogen Properties

They have low melting points and boiling points. Their melting points and boiling points increase going down the group. They are poor conductors of heat and energy.

Group 7 Halogen	F — F F ₂	CI — CI Cl ₂	Br — Br Br ₂	I—I I ₂
Melting Point (°C)	-220	-101	-7	114
Boiling Point (°C)	-188	-35	59	184

Year 10 Chemistry: The Periodic Table

Reactivity can be explained by how easily an electron is lost or gained to form an ion.

Displacement Reactions

A more reactive halogen will displace a less reactive halogen from solutions of its salts.

For example; chlorine will displace bromide ions, which form bromine molecules

	How the halogens react with hydrogen
$F_{2(g)} + H_{2(g)} \rightarrow 2HF_{(g)}$	Explosive, even at -200°C and in the dark.
$F_{2(g)} + H_{2(g)} \rightarrow 2HF_{(g)}$	Explosive in sunlight but slow to react in the dark.
$F_{2(g)} + H_{2(g)} \rightarrow 2HF_{(g)}$	Only reacts at over 300°C in the presence of a platinum catalyst
$F_{2(g)} + H_{2(g)} \rightarrow 2HF_{(g)}$	Only reacts over 300°C in the presence of a platinum catalyst (very slow, reversible)

chlorine + potassium bromide \rightarrow potassium chloride + bromine $Cl_{2(aq)} + 2KBr_{(aq)} \rightarrow 2KCl_{2(aq)} + Br_{2(aq)}$

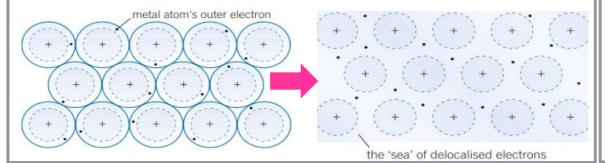
Metallic Bonding

Metal ions are formed and the outer shell electrons (delocalised electron) from each atom can move throughout the structure

Bonding in metals

Metals will lose **electrons** and form **ions**, just like in ionic bonding, but instead of transferring the outer shell **electrons**, they will "float" around the **atom**. We call these **electrons** delocalised **electrons**. The form layered structure.

The electrostatic forces between the positive ion and the negative electrons will strongly hold the atoms together in a regular lattice structure. This means that metals will need a lot of energy to break the strong electrostatic forces of attraction. This is the reason why metals have a high melting and boiling points and is a solid at room temperature (20°C)

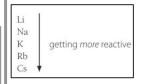


Explaining the trends

You can explain trends in reactivity as you go down the group in terms of the attraction between **electrons** in the outermost shell and the **nucleus**.

This electrostatic attraction depends on;

- The distance between the outermost electrons and the nucleus.
- The number of occupied inner shells (energy levels) of electrons, which provide a shielding effect.
- The size of the positive charge on the nucleus (called the nuclear charge).





F fluorine 9 35 Cl chlorine 17 80 Br bromine 35 127 I iodine 53 210 At astatine 85

Why can you shape metals?

Metals can be hammered and bent into different shapes (this is known as being malleable), and drawn out into wires (known as ductile) because the layers of **atoms** in pure metal are able to slide over each other.

The **atoms** in pure metal, such as iron, are arranged in closely packed layers. This regular arrangement allows the **atoms** to slide over one another quite easily. This is why pure iron is relatively soft and easily bent into shape

Uses of Metals

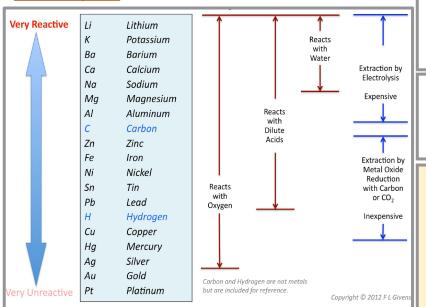
Due to the giant metallic structure, metals are very versatile.

They can be used for

- Electrical wires due to being ductile.
- Pots & pans due to the ability to conduct heat and the ability to be malleable.
- Coins; due to their solid nature and shiny appearance
- Jewellery: easy to shape (malleable)
- Technology such as phones and computers.
- As alloys, the most common is stainless steel which is used by

Year 10 Chemistry: Reactivity of Chemicals

The Reactivity Series



The Reactivity Series

The reactivity series is a list of metals with the most reactive at the top and decreasing reactivity as you go down the list. We can use reactions with water, oxygen or acid to help place them in order. For example: zinc + acid = small fizz, but potassium + acid = explodes.

Displacement Reactions

A more reactive metal will displace a less reactive metal from a compound. e.g.

Magnesium + Copper Sulphate → Magnesium Sulphate + Copper $Mg_{(s)} + CuSO_{4(aq)} \rightarrow MgSO_{4(aq)} + Cu_{(s)}$

More info (higher)

Magnesium + Copper Sulphate → Magnesium Sulphate + Copper $Mg_{(s)} + CuSO_{4(aq)} \rightarrow MgSO_{4(aq)} + Cu_{(s)}$

This equation can be represented by just the metals (SO₄ is a spectator ion)

$$Cu^{2+}_{(aq)} + Mg_{(s)} \rightarrow Mg^{2+}_{(aq)} + Cu_{(s)}$$

You can also use half equations to show what is happening in terms of the movement of electrons.

> Cu²⁺ + 2e- → Cu Reduction (Electrons Gained) Mg → Mg²⁺ + 2e-Oxidation (Electrons lost)

> > Salts from insoluble bases

Naming salts

The first part of a salt's name comes from the metal.

The second part is determined by the acids e.g.

Sulphuric Acid makes Metal Sulphates Hydrochloric Acid makes Metal Chlorides Nitric Acid makes Metal Nitrates

General Equations

For this topic, you need to know some general equations.

Acid + Metal → Salt + Hydrogen

Acid + Base → Salt + Water

Acid + Carbonate → Salt + Water + Carbon Dioxide

Acid + Alkali → Salt + Water

Salts from metals

A more reactive metal than Hydrogen can displace it from an acid to make salt. Salt is a compound formed when the Hydrogen from an acid is replaced by a metal or Ammonium (NH4+) ions.

Magnesium + Sulphuric Acid→ Magnesium Sulphate + Hydrogen $Mg_{(s)} + H_2SO_{4(aq)} \rightarrow MgSO_{4(aq)} + H_{2(g)}$

Pure dry crystals of salt can be obtained from a solution. Some of the water is evaporated from the solution by heating it until the point of crystallisation. The Magnesium atom loses electrons to form an ion

> $Mg_{(s)} \rightarrow Mg^{2+} + 2e^{-}$ The Ma is **oxidised**, it has lost electrons



Two other important ways of making salts are the reactions

The general equation is: Acid + Base → Salt + Water

Acid + Alkali → Salt + Water and Acid + Carbonate → Salt + Water + Carbon Dioxide

A base is a compound that reacts with an acid to produce salt and water. There are two types

of bases: a soluble base (known as an alkali) and an insoluble base (called an insoluble base).

E.g. Copper Oxide + Sulphuric Acid → Copper Sulphate + Water

 $CuO_{(s)} + H_2SO_{4 (ag)} \rightarrow CuSO_{4 (ag)} + H_2O_{(l)}$

Extracting Metals

Making more salts

Metals are extracted from rocks called ores. How they are extracted depends on their position in the reactivity series.

Metals above carbon are extracted by electrolysis, they need a lot of energy.

Metals below Carbon in the series are extracted by **REDUCTION** with carbon. This relies on a displacement reaction between the metal oxide and carbon.

Metal Oxide + Carbon → Metal + Carbon Dioxide e.g. Lead Oxide + carbon → Lead + Carbon Dioxide The Lead is reduced the Carbon is **oxidised**.

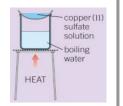
Unreactive metals like Gold and Platinum can be found as elements and do not need to be extracted by chemical processes.

Making Salts



Add CuO in excess





Evaporate & dry

Year 10 Chemistry: Ionic Bonding

An **atom** can achieve a full outer **electron** shell by losing or gaining **electrons**. This charged **atom** is called an **ion**.

Why do atoms react together?

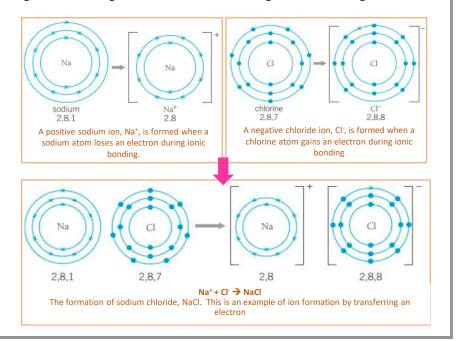
All atoms want a full outer shell. This is the reason chemical reactions happen. Atoms will either transfer electrons or share electrons depending on the bonding. There are 3 types of bonding; Ionic, Covalent and Metallic.

Positive Ions

When an **atom** loses an **electron** it becomes a positive **ion**. This is because they have more positive **protons**, but have less negative **electrons**. Therefore the overall charge is positive. See the diagram of Sodium.

Negative Ions

When an **atom** gains an **electron** it becomes a negative **ion**. This is because they have more negative **electrons**, than positive **protons**. This makes the overall charge of the **ion** negative. This can be seen using the chlorine diagram.



Charges on Ions

The charge on the ion depends on how many electrons they gain or lose. The table shows the general ones.

Transition metals will form the ion based on the roman numbers in its name; Iron (II) oxide will for a Fe²⁺ ion

GROUP	ION
1	+1
2	+2
3	+3
4	Rarely form lons
5	-3
6	-2
7	-1
0	Don't form ions as they have a full outer shell

Ionic bonding occurs when a metal and a non-metal combine. This process creates an electrostatic force that joins a positive ion and negative ion together, resulting in what is known as an ionic bond.

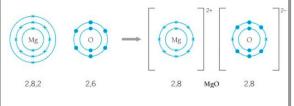
Ionic bonding: Calcium Chloride

Calcium needs to loses two electrons from its outer shell. Chlorine can only gain one electron, so in this case you will need two chlorine atoms to bond with.

Ionic bonding: Magnesium oxide

As you can see from the diagram for ionic bonding, you can see that the magnesium **atom** loses 2 **electrons** from its outer shell forms a Mg²⁺ **ion** and it will transfer the two **electron** to the oxygen **atom**, forming a negative oxide **ion**, O²⁺.

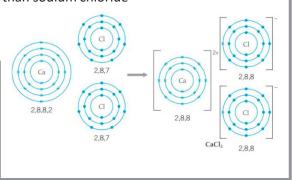
Notice how the **ions** are drawn in square brackets with the charge written in the top right.



Force of Attraction

The force between the positive **ion** and the negative **ion** is called **electrostatic force**.

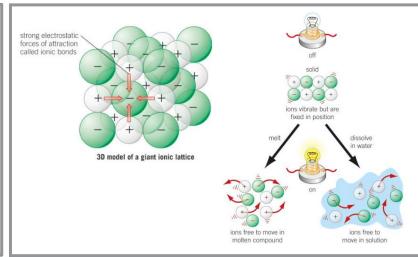
Looking at the sodium chloride where one **electron** is transferred, whereas magnesium oxide transfers two **electrons**. This means that's magnesium oxide has a stronger bond than sodium chloride



Year 10 Chemistry: Ionic Bonding & Acids

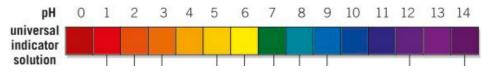
Properties of Ionic Substances

When an ionic substance is molten or in a solution, it can conduct electricity. This is due to the free movement of ions that carry the electrical charge. However, solid ionic substances are unable to conduct electricity as their ions are in a fixed position and cannot move or carry the electrical charge.



Ionic Compound Properties		
Ionic Solid	Molten Ionic Compound	Ionic Compound in Solution
lons are fixed in position in a giant lattice structure. They vibrate but cannot move around. It does not conduct electricity.	High temperatures provides enough energy to overcome the many strong forces of attraction between the ions. lons are free to move around within the molten compound. It does conduct electricity.	Water molecules separate ions from the lattice. Ions are free to move around within the solution. It does conduct electricity.

Neutralisation and the pH scale



All acids release H⁺ (aq) ions when added to water. It is this excess of H⁺ (aq) ions that makes a solution acidic. An acidic solution is less than 7 on the pH scale.

$$HCI_{(g)} \rightarrow H^+_{(aq)} + CI^-_{(aq)}$$

The greater the concentration of H+ ions the lower the pH value.

All **alkalis** release OH- ions when added to water, the excess OH- ions make the solution **alkaline**. An **alkaline** solution is above 7 on the pH scale

$$NaOH_{(s)} \rightarrow Na^+_{(aq)} + OH^-_{(aq)}$$

The greater the concentration of OH- ions the higher the pH value

A value of 7 indicates that the substance is **neutral**. Water is an example of a neutral substance. The **ionic equation** for the formation of water is;

$$H^{+}_{(aq)} + OH^{-}_{(aq)} \rightarrow H_{2}O_{(l)}$$

Strong and weak acids

$$HCl_{(g)} \rightarrow H^+_{(aq)} + Cl^-_{(aq)}$$

In this reaction *ALL or 100* % of HCl *ionises* or dissociates into ions, we call this a *Strong Acid*. Other examples are Sulphuric acid and Nitric acid.

For some acids, only a few H⁺ ionise into ions for example Ethanoic acid. This is the reason why it is a *weak acid*

$$CH_3COOH_{(aq)} \rightleftharpoons CH_3COO_{(aq)} + H_{(aq)}^+$$

The concentration of H+ ions is related to pH values as follows

pH 1 =
$$0.1M$$

pH 2 = $0.01M$
pH 3 = $0.001M$
pH 4 = $0.0001M$

As the concentration of H+ ions decreases by a factor of 10. This is called the order of magnitude, the pH value will increase by one unit.

Therefore if we make a solution 10 times more dilute the pH value increases by 1.

Year 10 Physics: Motion Knowledge

Speed **Speed** is the distance travelled by an object in a certain amount of time. Speed is a scalar object, it only has a magnitude and it doesn't not matter about its direction. **Velocity** is how far some thing travels in a certain time in a certain direction. Velocity is a vector quantity, it has a magnitude and a direction. Calculating Speed, distance and time distance = speed x time speed time distance speed = distance / time time distance time = distance / speed Units speed time Speed (m/s), Distance (m), time (s)

Acceleration

Acceleration is the **rate of change in speed** (or velocity)

It can be calculated using the
equation

Acceleration = <u>change in speed</u> time

Which can be written as

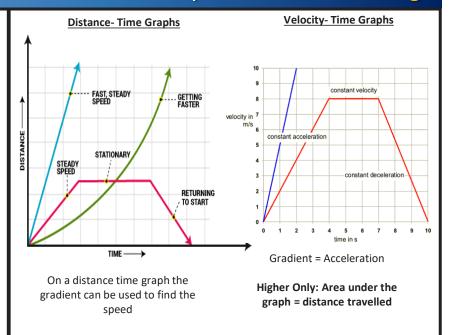
a = <u>v- u</u>

a = acceleration (m/s²) u = end velocity (m/s) v= start velocity (m/s) t = time (s)

Another way to calculate acceleration

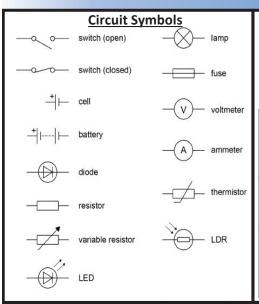
 $v^2 - u^2 = 2as$

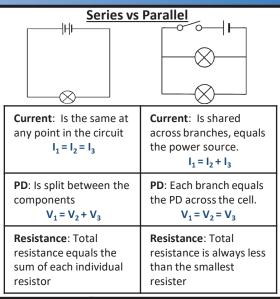
a = acceleration (m/s²) u = end velocity (m/s) v= start velocity (m/s) s = displacement/ distance (m)

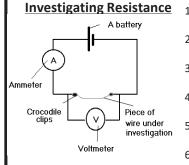


Key Vocabulary	Definition	Contextual Sentence
Acceleration	change of velocity per second (in metres per second per second, m/s ²)	The acceleration of the car increased as the driver pressed the pedal harder.
Deceleration	change of velocity per second when an object slows down	The deceleration of the car was caused by the driver pressing the breaks.
Displacement	distance in a given direction	The boat had a displacement of 120m North
Gradient	change of the quantity plotted on the y-axis divided by the change of the quantity plotted on the x-axis	You can find the speed of an object on a distance – time graph by taking the gradient .
Tangent	a straight line drawn to touch a point on a curve so it has the same gradient as the curve at that point	A tangent can be used to find acceleration on a graph that shows a non-uniform velocity.
Velocity	speed in a given direction (in metres/second, m/s)	An object travelling in a circle will have a constant speed but a changing velocity .

Year 10 Physics: Electricity Basics Knowledge







Ammeter Measures current, must be placed in series Voltmeter Measures potential difference, must

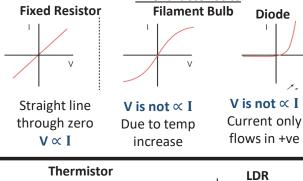
be place in parallel

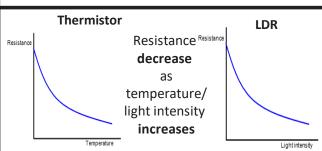
- . Connect the circuit as shown in the diagram above.
- 2. Connect the crocodile clips to the resistance wire, 100 cm apart.
- 3. Record the reading on the ammeter and on the voltmeter.
- 4. Move one of the crocodile clips closer until they are 90 cm apart.
- 5. Record the new readings on the ammeter and the voltmeter.
- Repeat the previous steps reducing the length of the wire by 10 cm each time down to a minimum length of 10 cm.
- Use the results to calculate the resistance of each length of wire by using R = V/I, where R is resistance, V is voltage and I is current.
- 8. Plot a graph of resistance against length for the resistance wire

Static Electricity (Physics Only)

Equation	Symbol	Units
Charge Flow = Charge x Time	Q=lt	Charge- coulomb (C) Current- Amp (A) Time- Second (s)
PD = Current x resistance	V=IR	PD – volts (V) Current- Amp (A) Resistance- Ohm (Ω)
Power = Current x PD	P=IV	Power- Watt (W) Current- Amp (A) PD – volts (V)
Power = current ² x resistance	P=I ² R	Power- Watt (W) Current- Amp (A) Resistance- Ohm (Ω)
Energy = power x time	E=Pt	Energy- Joule (J) Power- Watt (W) Time- Second (s)
Energy = charge x PD	E=QV	Energy- Joule (J) Charge- coulomb (C) PD – volts (V)

Ohm's Law Potential Difference is directly proportional to current, assuming temperature is kept constant or V=IR IV Characteristics Fixed Resistor Filament Bulb Diode





Static electricity is caused when electrons are transferred from an insulator to another due to friction in an electric field. Friction & Electron Transfer

Static Buildup

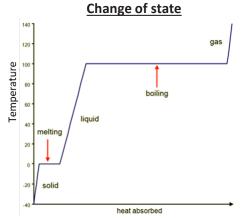
Static Buildup

Year 10 Physics: Thermal Energy Knowledge

Types of Energy Transfer		
Conduction	Convection	Radiation
Energy transferred by direct contact	Occurs in gases and liquids	Energy transferred by electromagnetic waves such as light,
 Energy flows directly from warmer object to cooler object 	Movement of large number of particles in same direction	microwaves, and infrared radiation
Can occur within one object	Occurs due to difference in density	All objects radiate energy
Continues until object temperatures are equal	Cycle occurs while temperature differences exist	Can transfer energy through empty space

Thermal Conductivity

The higher the thermal conductivity of a material, the higher the rate of energy transfer by conduction across the material



Specific latent heat = <u>energy</u>, <u>J</u> mass, kg

- The freezing point of a substance is the same temperature as the **melting** point.
- The energy transferred to a substance as it changes state is called its latent heat.
- The energy stored by particles in a substance is its internal energy.
- This energy is sum of the kinetic energy of particles and their potential energy.
- The specific latent heat of fusion is the energy needed to change **1kg** of a substance from **solid** to **liquid** at its **melting point** (without a change in temperature)
- The specific latent heat of vaporisation of a substance is the energy needed to change 1kg from liquid to vapour, at its boiling point (without a change in temperature)

Specific Heat Capacity

The **specific heat capacity** of a substance is defined as:

 The amount of energy required to raise the temperature of 1 kg of a substance by 1 °C

The amount of energy needed to raise the temperature of a given mass of a substance by a given amount can be calculated using the equation:

 $\Delta E = mc\Delta\theta$

Where:

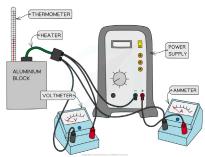
- $\Delta E = \text{change in energy}$, in joules (J)
- m = mass, in kilograms (kg)
- c = specific heat capacity, in joules per kilogram per degree Celsius (J/kg °C)
- Δθ = change in temperature, in degrees
 Celsius (°C)

Required Practical 1: Specific Heat Capacity Variables

IV = Time.

DV = Temperature,

CV= Material of the block, Current, Voltage



- 1. Set up apparatus.
- 2. Measure the initial temp of block
- 3. Turn on the power
- 4. Take temp every 1 min for 20 minutes
- 5. Switch off the power supply.
- 6. Monitor the thermometer and record the final temperature reached for the block

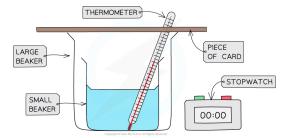
Required Practical 2: Insulation

Variables

IV = Time, t (s)

DV = Temperature, T (°C)

CV: Volume of water, The temp of the water at the start, the thickness of material



- 1. Set up the apparatus
- Place a piece of cardboard over the beakers as a lid
- 3. Record the temp of water at star, then every 2 mins for 20 minutes,
- 4. Repeat the experiment, changing the material

Year 10 Physics: Electricity and Thermal Energy Vocab

Key Vocabulary	Definition	Contextual Sentence	
Ampere (A)	The unit of current.	The phone had a current rating of 2A	
Coulomb (C)	The unit of charge	One amp is the same as one Coulomb per second	
Diode	A non-ohmic conductor that has a much higher resistance in one direction (its reverse	A diode is used in a circuit to control the direction the current is able	
Diode	direction) than in the other direction (its forward direction).	to flow in.	
Electric Field	A charged object (X) creates an electric field around itself, which causes a non-	The electron is repelled due to the electric field of the chiest	
Electric Field	contact force on any other charged object in the field.	The electron is repelled due to the electric field of the object.	
lon	A charged atom or molecule.	The atom lost and electron to become a positive ion.	
Ohm's Law	The current through a resistor at constant temperature is directly proportional to the	The fixed resister phays Ohm's Law	
Ollili S Law	potential difference across the resistor	The fixed resistor obeys Ohm's Law.	
Parallel	Components connected in a circuit so that the potential difference is the same across		
Parallel	each one.	When a bulb breaks in a parallel circuit, the other bulbs remain lit.	
Potential	A measure of the work done or energy transferred to the lamp by each coulomb of	The notestial difference was determined using the voltmeter	
Difference	charge that passes through it. The unit of potential difference is the volt (V)	The potential difference was determined using the voltmeter.	
Resistance	Resistance (in ohms, Ω) = potential difference (in volts, V) ÷ current (in amperes, A)	As the electrons moved through the conductor they encountered	
Resistance	hesistance (in onins, 12) – potential unference (in voits, v): current (in amperes, A)	resistance.	
Series	Components connected in a circuit in such a way that the same current passes	When a bulb breaks in a series circuit, the other bulbs do not remain	
Series	through them.	lit.	
Static Electricity	Electric charge stored on insulated objects	A static shock is caused by a build up of static charge.	
Volts	The unit of potential difference.	The UK mains potential difference is 230V	

Key Vocabulary	Definition	Contextual Sentence
internal energy	the energy of the particles of a substance due to their individual motion and	The internal energy of the substance increased as it was
internal energy	positions	heated.
latent heat	the energy transferred to or from a substance when it changes its state	The unit of latent heat is J/Kg
specific latent	energy needed to melt 1 kg of a substance with no change of temperature	The specific latent heat of fusion for water is 330 KJ/kg
heat of fusion Lf	energy needed to meit 1 kg of a substance with no change of temperature	The specific latent fleat of fusion for water is 550 kJ/kg
specific latent		The specific letest heat of venezisation for water is 2.260
heat of	energy needed to boil away 1 kg of a substance with no change of temperature	The specific latent heat of vaporisation for water is 2,260 KJ/kg
vaporisation Lv		NJ/Kg
Specific heat	The amount of energy required to raise the temperature of 1 kg of a substance	Water requires a large amount of energy to heat up as it has
capacity	by 1 °C	a high specific heat capacity
Thermal	The rate of thermal energy transfer through a material	Metal is use to make frying pans as it has a high thermal
conductivity	The rate of thermal energy transfer through a material	conductivity

Religious Studies

Year 10 Knowledge Organiser

Autumn Term 2

AQA Christian Beliefs

1. The nature of God

- 2. God as omnipotent, loving and just
- 3. The Oneness of God and the Trinity
- 4. Different Christian beliefs about Creation
- 5. The incarnation and Jesus, the Son of God
- 6. The crucifixion
- 7. The resurrection and ascension
- 8. Resurrection and life after death
- 9. The afterlife and judgement
- 10. Heaven and hell
- 11. Sin and salvation
- 12. The role of Christ in salvation







Christian Denominations







1. The nature of God



Catholic Based in Rome (Vatican City) and led



Protestant Split from the Catholic Church in the 16th Century. e.g., Methodist, Baptist, Church of England



Christian beliefs about God

There is only one God. God is the creator of all that exists.

by the Pope

- People have a relationship with God through prayer
- Neither male nor female but has
- qualities of both
- God is holy (worthy of worship) Jesus is the Son of God



believe in One God." The

"We

Nicene Creed

2. God as omnipotent, loving and just

<u>Omnipotent</u>	<u>Benevolent</u>	<u>Just</u>
		A J A
God is the supreme being who is all person of the sulimited authority. God shows his power when he created the world. "Anything is possible with God." When the Angel Gabriel told Mary she was pregnant even though she was a virgin.	God uses his power to do good. Speech his live by Showed his live by Showed his live by Showed his love to them. Showed his love by sending Jesus, his son to earth to dies so humans could gain salvertion. 'God so loved the world that he gave his one and only son.	God is a just (fair) judge on humarity. God will never support to the support of

What is the Problem of Evil and Suffering?

If God is loving- why does he allow people to suffer?

If God is powerful- why does he not prevent evil and suffering?

If God is just- why does he allow injustices to take place?

Responses to the Problem of Evil and Suffering:

- responsibility for our own
- against God and committing

Human's have free will- take

- The Devil- Tempts us into going
- 3. Life is a test- we need to show God we are worthy of heaven.

3. The Oneness of God and the Trinity

God the Father

- -Creator of all life
- -Father to his children
- -Omnipotent, omnibenevolent, omniscient and omnipresent.

God the Holy Spirit

- Unseen power of God at work in the world.
- -Influences, guides and sustains life on earth.



God the Son

- God incarnate (in human form) Jesus.
- Fully human and fully divine (God) at the same time.

4. Different Christian beliefs about Creation

Day 1: Day and Night	Day & Night
Day 2: The Sky	
Day 3: The seas, land and all vegetation and plants	
Day 4: The lights in the sky; the sun, moon and stars	区業
Day 5: Fish of the sea and birds of the sky	
Day 6: Animals of the Land and Adam and Eve	
Day 7: God rested and said it was good.	
"In the beginning, God created the heavens and the earth and the spirit of God was hovering over the waters." Genesis 1:1-3c	"In the beginning was the Word and the Word was with God and the Word was God," John 1:1-3

Different Christian interpretations

- 1. Fundamentalist- the Creation story is exactly as it is described in
- 2. Linguistic- There may be misunderstandings in the language of the story e.g., 'day' in Hebrew doesn't mean a day in English. 3. Mythical- It is a myth- the Bible explains that God made the world and why, but it does not fully explain how.
- 4. Scientific- Science can work with the Christian creation story in Genesis. God caused the Big Bang.





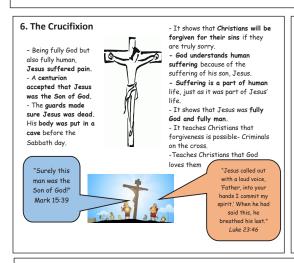
5. The incarnation, and Jesus the Son of God

The Incarnation-

This is the belief that Jesus is God in a human form. The Angel Gabriel appeared to Mary to tell her that she was pregnant. This was a miraculous birth as Mary was a virgin. She had become pregnant through the Holy Spirit. The virgin conception is evidence that Jesus was the Son of God and part of the Trinity. Jesus lived for around 30 years.

Son of God. Messiah. Christ

Jesus was fully human and fully God. This explains his powers (e.g. miracles). His teachings therefore have authority as they are the word of God- 'The word became flesh and made his dwelling among us.' John 1:14. Most Jews expected the Messiah who they believed would be a warrior king. They did not believe this to be Jesus. Christians accept that Jesus is the Messiah. He is often called Christ (anointed one).



7. The resurrection and ascension

- On the Sunday morning, some of Jesus' female followers visited
- -Jesus' body was not there. The women were told by a man that Jesus had risen from the dead.
- Over the next few days, Jesus appeared to several people as he had prophesised.

It is important because..

- Shows the power of good over evil and life over death
- Means sin will be forgiven
- Christians will too be resurrected if they accept Jesus.
- -Shows that there is life after

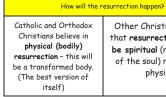
Ascension After meeting with his disciples and asking them to carry on his work, Jesus left them for the last time. He returned to the Father in Heaven. This was 40 days after the resurrection. When Jesus ascended into Heaven



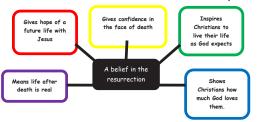
It is important because. - Shows that Toeue is with God in heaven Prepare for God to spend the Holy Spirit to provide comfort and guidance.

8. Resurrection and Life after Death

Some Christians believe a person's soul is resurrected soon after death. Other Christians believe the dead will be resurrected on the Day of Judgement.



Other Christians believe that resurrection will just be spiritual (resurrection of the soul) rather than physical.



9. The afterlife and judgement

- -- Christians believe they will be resurrected and receive eternal life. This is a gift from God and is dependant upon faith (belief) in God.
- They will be judged by God, being sent to Heaven or Hell (or purgatory).
- Some believe judgement will happen soon after death. Others believe judgement will occur on the Day of Judgement.



Judgement



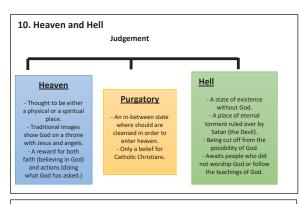


- them on their actions as well as their faith in God. - The Parable of the sheep and goats describes how God will judge people.
- This parable teaches Christians that in serving others, they are serving Jesus.
- -Jesus said that having faith in him and following his teachings is essential for being able to reach heaven.

"I am the way, the truth and the life. No one comes to the Father through me.

John 14:6





12. The role of Christ in salvation

-Jesus' crucifixion made up for the original sin of Adam and Eve. The death of Jesus was necessary to restore the relationship between God and humanity.

- Jesus' resurrection shows the goodness of Jesus defeated the evil of sin. God accepted Jesus' sacrifice on behalf of humanity. Jesus' resurrection means humans can now receive forgiveness for their sins. Jesus' death and resurrection made it possible for all to receive eternal life.

- Atonement removed the effects of sin and allows people to restore [fix] their relationship with God.
- Through his sacrifice, Jesus took the sins of humanity on himself and paid the debt. He atoned for the sins of humanity.
- This sacrifice makes it possible for all who follow Jesus to receive eternal life.



11. Sin and salvation

<u>3III.</u>	Original Sin:
- Thoughts or actions that	- The belief that we are born
separates humans from God.	with a built in tendency to
 Some sins are illegal (e.g. 	sin.
murder)	- Come from Adam and Eve
- Others are legal but against	who committed the first sin.
the laws of God (e.g.	- Caused separation from
adultery)	God.
Free Will:	Salvation:
Free Will: - Humans should use	Salvation: - To be saved from sin and its
- Humans should use	- To be saved from sin and its
- Humans should use freedom to make choices	- To be saved from sin and its consequences and to be
- Humans should use freedom to make choices God approves of.	- To be saved from sin and its consequences and to be granted eternal life with
- Humans should use freedom to make choices God approves of. - God provides guidance on	- To be saved from sin and its consequences and to be granted eternal life with God.

Original Sin:

Salvation

There are two main Christian ideas about how salvation comes about:

Salvation through Salvation through good work grace

The Old Testament makes it clear that salvation comes through faith in God and obeying God's laws set out in the Bible



Salvation is given freely by God, through the Holy Spirit, through faith in Jesus. It is not deserved but is a free gift of God's love.



Key Vocabulary

Denominations	A sub group within a bigger group. E.g. Roman Catholics,
	Protestants and Orthodox Christians are all different
	Denominations of Christianity.
Monotheistic	A group that believes in one supreme being/God.
	Christianity is a Monotheistic religion as they believe in
	only one God.
Omnipotent	A Christian belief about God; this means God is all
	powerful.
Benevolent	A Christian belief about God; this means God is all loving.
Omniscient	A Christian belief about God; this means God is all
	knowing.
Transcendent	A Christian belief about God; This means God is outside
	of our understanding, we will never truly understand God
	and God's actions.
Immanent	A Christian belief about God; God is present in the
	Human world.
The Trinity	The three parts that make up God in Christianity. They
	are The Father, The Son and The Holy Spirit.
Nicene Creed	A statement of Christian belief, which highlights the main
	beliefs about Christianity and God. Developed by the
	Council of Nicaea.
Creation	In Christianity, this refers to the creation of the Universe
	and everything in it including the Earth.
Free will	Humans can choose what they want to do.
Original Sin	Sin is an action against God. Original sin was obtained by
	humans when Adam and Eve disobeyed God and ate the
	forbidden fruit of the tree of knowledge of Good and Evil.
Moral evil	Evil caused by human action. E.g. Violence and war.
Natural evil	Evil caused by nature. E.g. Natural disasters and disease.

	powerful and all knowing, cannot exist if there is evil.	
Afterlife	Belief in what happens after you die.	
Heaven	Christians believe that after you die and live a good life you go to Heaven. It is a place free from pain and suffering and being in the presence of God.	
Hell	Christians believe that if you live a bad life you go to Hell. This is a place full of pain and suffering and <u>not</u> being in the presence of God	
Purgatory	A predominately Catholic Christian view on the afterlife. They believe that if you haven't asked for forgiveness for you sins during life you go to Purgatory. A place where you stay until you have suffered enough to pay for your sins. A place of purification.	
Incarnation	The belief that Jesus is God in human form.	
Crucifixion	An ancient Roman method of capital punishment where an individual is nailed to a cross by their wrists and feet. They eventually die from suffocation as the lungs cannot work correctly under the weight of the individual's body.	
Resurrection	The act of rising from the dead.	
Ascension	Refers to the event where Jesus <u>ascended</u> up to Heaven to sit on the right-hand side of God.	
Salvation	To save someone. In Christianity <u>salvation</u> is granted to humans, which means that the relationship between God and humans has been repaired.	
Atonement	Restoring the relationship between people and God through the life, death and resurrection of Jesus	

Inconsistent triad The belief that God, who is supposed to be all loving, all



Religious Studies Year 10 Knowledge Organiser

Autumn Term

AQA Crime and Punishment 1. What is crime and punishment? 2. What are reasons for crime? 3. What are Christian attitudes to lawbreakers? 4. What are the aims of punishment? 5. What are religious attitudes to suffering? 6. What are the religious attitudes to the treatment of criminals? 7. What are religious attitudes to forgiveness?

Types of Crime

8. What are religious attitudes to the death penalty?

There are many different types of crime. Broadly speaking, you can separate them into three categories, sometimes these overlap.

- 1- Crimes against the person: e.g. physical abuse, hate crime, sexual assault, hate crimes, slander.
- 2- Crimes against Property: e.g. arson, vandalism, theft.
- 3- Crimes against the state: e.g. terrorism, political assassination, cyber hacking/terrorism.

The aims of punishment

People are punished for a purpose. Often the aims of a punishment overlap, e.g. the death penalty acts to **deter** people from committing similar crimes and it aims to protect the public from the individual who is guilty of the crime. There are six recognised aims of punishment:

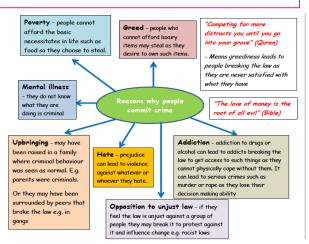
- Deterrence punishment should put people off committing crime
- 2. Protection punishment should protect society from the criminal and the criminal from themselves
- 3. Reformation punishment should reform the criminal
- 4. Retribution punishment should make the criminal pay for what they have done wrong



Key Word	Definition		
Capital punishment	Death penalty; state sanctioned execution for a capital offence; not legal in UK		
Community service order	UK punishment involving the criminal doing a set number of hours of physical labour.		
Conscience	Sense of right and wrong; guilty voice in our head; seen as the voice of God by many religious believers.		
Corporal punishment	Punishment in which physical pain is inflicted on the criminal; not legal in the UK.		
Crime	Action which breaks the law; can be against the person (e.g. murder), against property (e.g. vandalism), or against the state (e.g. treason).		
Deterrence	Aim of punishment to put a person off committing a crime by the level of punishment.		
Duty	What we have a responsibility to do.		
Evil	Something or someone considered morally very wrong or wicked; often linked to the idea of a devil or other malevolent being.		
Forgiveness	Letting go of blame against a person for wrongs they have done; moving on.		
Hate crime	A crime committed because of prejudice, e.g. assaulting a person because they are gay.		
Parole	Release of a criminal from prison under the condition they will meet with a parole officer who can monitor their behaviour.		
Young offenders	Criminals under the age of 18.		
Imprisonment	Locking someone up and taking away of civil liberties of a criminal.		
Law	The rules a country demands its citizens follow, the breaking of which leads to punishment.		

Christian attitudes towards good and evil intentions

- When Christians speak about evil criminal actions, they usually mean that the offence is profoundly immoral and wicked – it is an offence against God = SIN
- Most crimes such as murder, rape and theft are also religious offences. But not all religious offences are illegal e.g. adultery is a religious offence but it is not illegal in the UK



Christian Attitudes towards Law breakers

- Christianity teaches that sin is a part of human nature and that all
 people have the potential to commit a crime. This is shown in the story
 of the fall of Adam and Eve in Genesis, when they disobeyed God and
 ate the forbidden fruit.
- Many Christians believe that the Bible teaches the difference between right and wrong. Following God's will leads people to the right path; ignoring God's will leads to disaster.
- A typical set of guidelines from the Bible is the Ten Commandments.
 Christians should follow these guidelines to be good people. This belief is emphasised in the gospel books such as John:

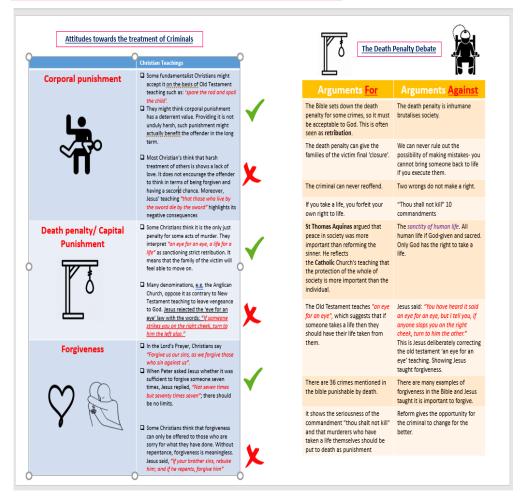
"Anyone who does not do what is right is not a child of God."

- ☐ Some Christians will help the offenders to not re-offend, due to the teaching that you should "hate the sin, not the sinner". They will treat the offender humanely and protect their human rights- "love thy neighbour."
- Other Christians will argue that the punishment needs to be as severe as the crime "an eye for an eye".

Types of Punishment

Different methods are used to punish criminals for their offences. Each punishment is associated with different aims.

unishment	How this meets an aim of punishment
Prison	deterrence/protection/reformation
Electronic togging	deterrence/protection
Fines	retribution/reparation
Community service	reformation/retribution
Capital punishment	protection/deterrence
Probation	reform/vindication



Year 10 History Autumn Term- Peacemakers and the Treaty of Versailles

The First world war devastated Europe. 8 Million soldiers and a further 8 million civilians lay dead. Towns railways and farms had been destroyed. The world would never be the same again. When the leaders of the winning countries met at the Paris peace conference they had to decide the terms of the final peace treaties. There was a great deal of pressure of the Big Three to make a lasting peace, however each had their own aims.

The Treaty of Versailles was signed on the 28th June 1919. The final treaty was a Diktat, meaning that Germany were not allowed to negotiate terms. The Germans were unhappy with the final treaty, however the Big Three were also not satisfied with it.

11 November 1918	Signing of armistice led to the end of WW1	
January 1919	Paris peace conference	
June 1919	Signing of the Treaty of Versailles	

Leader	Country	Aims
Georges Clemenceau	France	Wanted Germany to pay reparations to rebuild areas of France badly affected by war Wanted revenge for all the lives lost Aimed to weaken Germany so it could never attack again Wanted to push German borders back to the Rhine so French people would feel safer
Davis Lloyd George	Britain	Wanted a cautious approach: The British public wanted to see Germany punished, but Lloyd George feared this would lead to Germany wanting revenge Wanted to keep Germany strong so it could trade with Britain and act as a buffer to Communism Aimed to gain German colonies to add to the British Empire Wanted Naval supremacy by reducing Germany's navy
Woodrow Wilson	USA	Wanted a fair peace, so Germany would not seek revenge Proposed the Fourteen points, including foundation of a League of Nations, Self determination and freedom of the seas; but the American public didn't want the USA to get involved in European affairs again.

Key Word	Definition	
Demilitarise	Remove all military from the area	
Allies	A group of countries that work together	
Diktat	A forced treaty – Germany called the Treaty of Versailles a diktat or dictated peace	
Big Three	Representatives of the most powerful winning countries – Britain, France and the USA	
Conscription	Compulsory military service	
Paris Peace conference	Meeting held at the Palace of Versailles in France at the end of the first World War, to decide how to punish the countries that had lost the war.	



Year 10 History Autumn Term- Reactions to the Treaty of Versailles

The Treaty of Versailles was signed and it immediately became international law. However not everyone was satisfied with the terms of the treaty. The Big Three had contrasting views on how Germany should be punished. Germany was outraged by the harsh terms they had been dealt.

The Treaty of Versailles dealt with Germany, however Germany had allies during the war. Austria-Hungary, Bulgaria and Turkey all had to be dealt with as well at the Paris peace conference

Country	Opinion on the Treaty of Versailles
Germany	 Germany was in turmoil at the end of the First World War, the Kaiser had fled to Holland after abdicating the throne. The people of Germany were furious over the Treaty of Versailles. They perceived that the treaty would lead to financial ruin for Germany. The Germans called the treaty a Diktat as they felt it had been dictated to them and they had been forced to sign. The war guilt clause meant that Germany had to accept responsibility for starting the war. They had been told they were winning the war, so felt like they had been stabbed in the back and betrayed by the government. People called those who had signed the armistice the November Criminals. Germany felt like the treaty had left them vulnerable, without a large army to defend themselves they could be easily attacked. 13% of land was lost to other countries, this left 6 million German people no longer living in Germany.
Britain	 Lloyd George was pleased about Britain having naval supremacy over Germany and the British empire gaining more colonies. Lloyd George was unhappy about the harsh reparations meaning Britain would lose trade with Germany. He was also concerned about the threat of possible future war. British people generally thought the treaty was fair, and could even have been harsher. Lloyd George was hailed as a hero, and newspapers said Britain would never be threatened by Germany again.
France	 Clemenceau was pleased about France gaining Alsace-Lorraine and that Germany had no army present in the Rhineland. Clemenceau was unhappy about the reparations, he wanted Germany to pay more. He was also unhappy that Germany was allowed to have an army at all, even if it was a small one. Clemenceau had wanted the whole of the Rhineland to be taken away from Germany not just demilitarised. Many people in France were furious – they believed that the treaty was nowhere near harsh enough and that Germany should suffer as much as France had done during the war. The French people felt that Clemenceau had not done enough to get revenge and he was voted out at the next election. There were a few terms that the people of France liked, such as gaining control of the Saar and its coalfields for 15 years.
USA	 Woodrow Wilson was pleased that the League of Nations was created. Woodrow Wilson was unhappy that his Fourteen points were ignored in the treaty terms and the harshness of the treaty terms. The USA had only joined the war in 1917 and no fighting took place in the USA, Americans did not want revenge in the same way as Britain and France. Many people including Wilson thought the treaty was too harsh. The USA wanted to follow a policy of isolationism. The US Senate refused to approve the treaty or to allow the USA to join the League of Nations.

Key Word	Definition
Isolationism	A policy in which a country does not get involved in Foreign affairs
Ratify	Agree with, make official
Abdicate	To give up the throne of a country
Weimar Republic	The democratic government that ruled Germany from 1918-1932

Country	Austria	Bulgaria	Hungary	Turkey
Name of Treaty	Treaty of St Germain	Treaty of Neuilly	Treaty of Trianon	Treaty of Sevres
Date	10 th September 1919	27 th November 1919	4th June 1920	10 th August 1920
Land	Land taken to create new countries Czechoslov akia and Yugoslavia	Land lost to Yugoslavia and Greece	Land lost to Romania, Czechoslovaki a, Yugoslavia and Austria	Split up the Turkish Empire so Turkey lost nearly all its land in Europe
Reparations	Agreed in principal, but the amount was never fixed	£100 million	Agrees in principal, but the amount was never fixed	None
Military restrictions	30,000 in army, no conscriptio ns; no navy	20,000 in army; no conscriptions; no air force; only four battleships	30,000 in army; no conscription; only three patrol boats	50,000 in army; seven sailboats; six torpedo boats
Other terms	Forbidden to unite with Germany	None	None	Dardanelles and Bosphorus straits were opened to other countries

Year 10 History **Autumn Term- League of Nations formation and 1920s**

During the First World War, many people wanted to set up an organisation that would encourage countries to work together when they had problems and work out their differences, rather than resorting to fighting. At the end of the war US president Woodrow Wilson wanted to set up the League of Nations. What was the League of Nations and why did it have limited powers?

The League had Two Main Aims

- 1) To maintain peace using three different methods:
 - Disarmament involved reducing the number of weapons that each country had.
 - Arbitration meant helping countries to talk about their disputes rather than fight.
 - Collective security meant that if one country attacked another, League members would act together to control the aggressor.
- 2) To encourage cooperation and help solve economic and social problems, such as disease, slavery, and poor working and living conditions.

The League was made up of Various Parts

All the members of the League followed a Covenant (agreement) of 26 Articles (rules). Articles 1 to 7 set up the structure of the League:

The Assembly

The Assembly met once a year to discuss matters like the membership of the League, as well as efforts to maintain world peace. Every country in the League had one vote at the Assembly. Decisions could only be made if everyone agreed on them.

The International Labour Organisation This part of the League discussed and made suggestions to improve working conditions. It was made up of government officials, employers and workers from different countries

The Council

The Council met at least four times a year. It had permanent members (Britain, France, Italy, Japan and later Germany) and temporary members. It dealt with international affairs and aimed to settle disputes. All members had a vote, but permanent members could veto (reject) Council decisions.

The Secretariat

Carried out the work of the League, like a civil service.

- 1) 42 countries joined the League at the start. In the 1930s, about 60 countries were members. This made the League seem strong.
- 2) The League also had a range of agencies and commissions, which worked on specific humanitarian issues. These included a health organisation, a commission for refugees, and a commission for women's rights. These commissions did some valuable work (see p.26).

The Permanent Court of International Justice This was made up of fifteen judges from different member countries. They were asked to settle international disputes. Everyone hoped this would avoid another major war.

Council Members of the League of Nations who met once a year to discuss and vote on matters of international importance Covenant An agreement. This was set up to determined what could be expected of the League and its members When everyone agrees Unanimou Veto The right to reject a proposal

Problems with the League of Nations

The USA didn't join the League of Nations. Wilson was ill and the senate rejected it.

Germany were not allowed to join the League because they lost the war. The USSR were not allowed to join because they were communist

Britain and France were in charge but neither were strong enough to do the iob properly

The league could introduce sanctions but only if powerful countries applied them.

The League relied on the armies of member states, this made it difficult to act on threats.

The league was a large organisation but it was also complicated. Everyone had to agree in the assembly and council before anything happened. It made it difficult to get anything done.

Economic sanctions were frequently undermined by the USA's non membership and the unwillingness of Britain and France to enforce

The League of Nations resolved disputes in the 1920s:

Definition

Key Word

Upper Silesia was a region with valuable industry. A referendum was held for citizens to choose whether to be ruled by Poland or Germany, but the result was too close to be decisive. In 1921, the League suggested dividing the area between the two countries, which both sides (and most citizens) accepted.

The Aaland Islands sit almost exactly halfway between Sweden and Finland. They belonged to Finland, but most people there wanted to be ruled by Sweden. In 1921, the League decided that the islands should remain Finnish, and both sides accepted this.

Bulgaria was invaded by Greece in 1925 after border disputes. The league ordered Greece to withdraw, and it obeyed.

The League of Nations struggled to resolve disputes in the 1920s:

Corfu, a Greek island was occupied by Italy in 1923 in response to an Italian diplomat being shot dead in Greece. At first, the League told Italy to leave and fined the Greeks. Italy ignored this and demanded compensation from Greece. The League changed its mind and agreed that Greece should give money to Italy and apologise. Greece obeyed and Italy withdraw its troops.

Vilna was chosen as the capital of the newly-formed Lithuania after the First World War, but most of the population were Polish. Poland seized Vilna in April 1919 and refused to give it up when told to do so by the League. On this occasion, the League was powerless to stop military aggression.

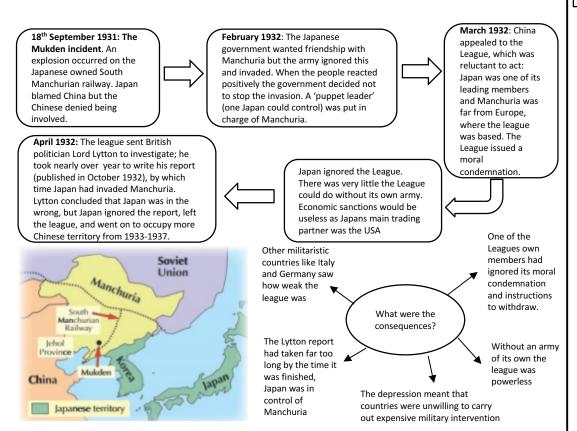
The Ruhr (an industrial region of Germany) was invaded and occupied by France in 1923 after Germany had failed to keep up its reparation payments. The French began shipping its products back to France. The League of Nations didn't intervene. The USA helped resolve the situation with the Dawes plan.

Year 10 History Autumn Term- League of Nations in the 1930s

The League of Nations faced one of its biggest tests so far in September 1931. The Japanese army staged the Mukden incident and used it as an excuse to invade the region of Manchuria in China. The league was also challenged by Italy and Mussolini. In 1935 he invaded Abyssinia in North – East Africa. Both countries were permeant members of the League and had gone against the covenant.

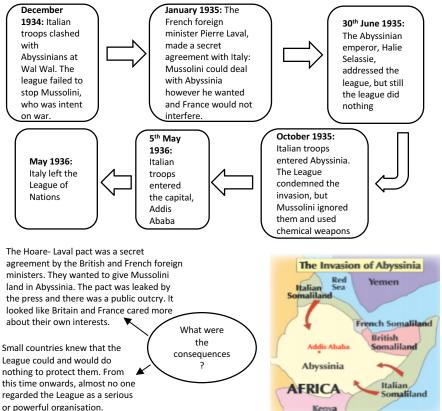
Causes of the Manchurian crisis:

- 1929 Wall street crash started the Great depression. Japan suffered greatly its main export was silk, a luxury many could not
 afford.
- Japan became more militaristic- the government looked for land to invade, thinking it could give them more natural
 resources. Manchuria was rich in natural resources.
- Japan already had industry and a railway there so it looked like an ideal place to invade.



Causes of the Abyssinia crisis:

- Mussolini wanted to rebuild the Roman Empire, by invading other countries
- There was natural resources in Abyssinia, which would be useful for Italy during the Depression.
- In 1896, Italy had tried to invade Abyssinia and had been humiliated when the country defeated them. Mussolini wanted revenge.
- In 1935, Britain and France signed an agreement with Italy to form the Stresa Front. Mussolini did
 not think Britain and France would endanger the new agreement by trying to stop him in Abyssinia.



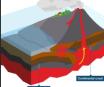
Paper 1: Living with the Physical Environment Section A: Natural and Tectonic Hazards

What is the definition of a Natural Hazard?

A natural hazard is a natural event such as an earthquake, volcanic eruption, tropical storm or flood that poses risk of death, injury or damage to people and property.

What are the processes at Destructive Plate Margins?

This is where two plates are moving towards each other. The oceanic dense plate subducts beneath the less dense continental plate. Friction between the plates causes earthquakes. As the oceanic plate moves downwards it melts. The magma here is very viscous (like jam) and forces its way to the surface to form steep sided composite volcanoes such as those found on the west coast of South America where the Nazca plate subducts beneath the South American plate. Eruptions are often very violent and explosive. COLLISION IS 2 CONTINENTAL PLATES COMING TOGETHER.





What are the processes at Constructive Plate Margins?

This is where two plates are moving apart like what is happening at the Mid-Atlantic Ridge where magma forces its way to the surface along the Mid-Atlantic Ridge. As it breaks through the overlying crust it causes earthquakes. On reaching the surface it forms volcanoes such as Eyjafjallajokull in Iceland. The magma here is very hot and fluid, it will flow a long way before cooling, resulting in typically broad and flat shield volcanoes.



This is where two plates are sliding alongside each other such as the San Andreas Fault in California. The faster-moving Pacific Plate is sliding in the same direction next to the slower North-America Plate. Friction between the two plates then causes earthquakes as stresses gradually build up over many years, they are released suddenly when pressure builds up and plates slip or shift. There are no volcanoes here.

How can we manage and reduce the effects of a Tectonic Hazard? Monitoring and Prediction

Protection

Planning

Seismometers are used to measure tremors before a main earthquake.

Monitoring the water table (water tends to fluctuate before an earthquake).

Satellites monitor ground deformation.

Designing buildings and roads to withstand earthquakes.

Increasing awareness.

Earthquake drills.

Seismic maps can be made.

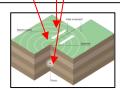
Prepare emergency supplies.

The point directly above the focus where the seismic waves reach first, is called the epicentre. Seismic waves travel out from the focus, which is the point at which pressure is released.

Plate Boundary

▲ Volcances

Earthquakee



What are the reasons why people continue to live in areas at risk from a Tectonic Hazard?

People living in poverty ridden areas have more important things to think about like food, money, security and family. Plate margins often coincide with very favourable areas for settlement, such as coastal areas where ports have developed. Fault lines associated with earthquakes allow water supplies to reach the surface. This is important in dry desert regions. Better building design can withstand earthquakes so people feel less at risk. Volcanoes can bring benefits such as fertile soils, rocks for building, rich mineral deposits, hot water and geothermal energy. More effective monitoring of volcanoes and tsunamis waves enable people to receive warnings and evacuate before events happen.

Paper 1: Living with the Physical Environment Section A: Weather Hazards

How can Tropical Storms be Managed?

Monitoring

Protection

Satellites monitor cloud patterns associated with tropical storms.

NASA monitor weather patterns using unmanned drones called Global Hawk.

Reinforce buildings - hurricane shutters on windows and doors.

Develop coastal flood defences.

Create 'no-build zones' in low lying areas.

Prediction

Planning

Supercomputers give 5 days' warning and predict a location within 400km.

Track forecast cones plot the tropical storms path. Approx. 70% occur within the cone.

Those living where it will hit can prepare disaster supply kits and ensure their car is fully fuelled.

People should know where evacuation centres are.



What is the global distribution of tropical storms?

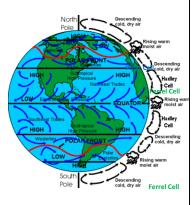
Tropical storms are a natural hazard. They have different names depending on their location. They occur between 5° and 30° north and south of the Equator, between the tropic of Cancer and the tropic of Capricorn. This provides areas of intense low-pressure so that warm, moist air rises rapidly to reach high altitudes where it begins to spin (Coriolis effect). They don't occur on the equator because there is not enough spin from the rotation of the Earth. In the USA and Caribbean tropical storms are called Hurricanes. In south-east Asia and Australia, they are called cyclones, but in Japan and the Philippines they are called typhoons.

What are the Causes and Formation of a Tropical Storm?

- The sun's rays heat large areas of the ocean in the summer and the autumn. When ocean temperatures reach 27°C, warm, moist air rises upwards drawing water vapour up from the ocean surface. This is a low-pressure system.
- 2. This evaporated air cools as it rises and condenses to form towering thunderstorm (cumulonimbus) clouds.
- 3. As the air condenses it releases heat which powers the storm and draws up more and more water from the ocean.
- 4. Several smaller thunderstorms join, to form a giant spinning storm. When surface winds reach an average 120km per hour (75mph) the storm officially becomes a tropical storm.
- 5. The storm now develops an eye at its centre where air descends (sinks) rapidly. The outer edge of the eye is the eyewall where the most intense weather conditions (strong winds and heavy rain) are felt.
- 6. As the storm is carried across the ocean by the prevailing winds, it continues to gather strength.
- 7. On reaching land the storm's energy supply (evaporated water) is cut off. Friction with the land slows it down and it begins to weaken as it approaches land. If the storm reaches warm seas after crossing the land, it may pick up strength again.

What is Global Atmospheric Circulation?

The atmosphere - the air above our heads - is a complex swirling mass of gases, liquids and solids. These include water droplets, water vapour, ash, carbon dioxide and oxygen - just to mention a few. Atmospheric circulation is the large-scale movement of air by which heat is distributed on the surface of the Earth. It involves many circular movements called *cells*. These cells all join to from the overall circulation of the earth's atmosphere.



Air at the equator is heated strongly so it rises in **low pressure** conditions. The air flows towards the North and South Poles. As warm air rises it cools and condenses. **Low pressure** therefore brings clouds and rain.

The air sinks at 30° north and south of the Equator under high pressure. High pressure weather brings dry and clear skies. This forms a convection (circular movements) cell called the Hadley cell.

Air at the polar latitudes is colder and denser (heavier) so the air sinks towards the ground surface under high pressure conditions. This air flows towards the Equator. The air warms as it reaches about 60° and again rises under low pressure conditions. This forms the Polar Cell. Located between the Hadley cell and the Polar cell is the Ferrel Cell.

Is the UK Weather becoming more Extreme?

Extreme Weather is not new to the UK. However, the frequency of extreme weather in the UK is increasing. Since the 1980s, UKs temperatures have increased by about 1°C and winter rainfall has increased. There have been more weather records broken in recent years than ever before.

Extreme Weather Records Temperature

Rainfall

December 2010 coldest on record for 100 years.

Warmest April was 2011.

Highest temperature was $38.5\,^{\circ}\text{C}$ in Kent in August 2003.

Lowest temperature was -27°C in Scotland in 1995.

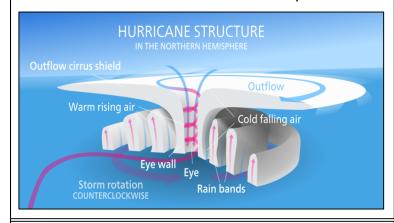
Highest two-day record of rainfall (405mm) was in 2015.

 $\label{eq:highest three - four-day rainfall records} Where both in 2009.$

Highest monthly total rainfall was 1296mm in 2015.

Serious flooding has become more frequent in winters.

What is the structure and the features of a tropical storm?



What are future predictions for UK Weather?

Precipitation is expected to become more frequent. Some rivers are expected to flood more frequently in winters. Air temperature is expected to increase, causing more drought.

Climate change cannot be responsible for individual extreme weather events, yet scientists say it can be responsible for increased frequency in such events.

Paper 1: Living with the Physical Environment Section A: Climate Change

What are the possible Causes of Climate Change?

Climate change is the <u>long-term</u> change in weather. Global climate change occurs very slowly over thousands of years. Evidence of climate change occurring before humans existed means climate change must be natural as well as human enhanced. Natural causes alone cannot account for the significant temperature increase since the 1970s. A thicker layer of greenhouse gases (carbon dioxide 77%, methane 14%, nitrous oxide 8% and CFCs 1%) caused by human activity means less of the Sun's energy is able to escape the Earth's atmosphere, so the temperature increases.

What is the evidence for Climate Change?

Since 1914 the Met Office has reliable climate change data collected using weather stations. satellites, weather balloons, radar and ocean buoys. Evidence includes:

- An increase in the average surface air temperature by 1°C over the past 100 years.
- The warmest ocean temperatures since 1850.
- · A 19cm rise in sea levels since 1900.
- · Artic sea ice has thinned by 65% since 1975.

Natural records like tree rings, ice cores (spanning 800, 000 years) and ocean sediments (spanning beyond the quaternary period), help estimate climate. The period of timeline that spans from **2.6** million years ago to the present day is called the **Quaternary Period**. This period marks a time when there was a **global drop** in temperature and the most recent ice age began.

Ice cores are cylinders of ice drilled out of an ice sheet or glacier. The ice encloses small bubbles of air that contain a sample of the atmosphere - making it possible to measure the past concentration of gases in the atmosphere. Antarctic ice cores show us that the concentration of CO_2 was stable until the early 19th century.

How will Climate Change affect People and the Environment?

- Less ice in the Arctic Ocean increases shipping and extraction of gas and oil reserves (because we can reach it).
- · Droughts reduce food and water supplies in sub-Saharan Africa.
- Water scarcity in the south and south east of the UK.
- · 70% of Asia at increased risk of flooding.
- · Sea level rise increases flooding and coastal erosion.
- Ice melts so wildlife declines such as Adelie penguins on the Arctic peninsula and polar bears in the Arctic.

How can we Manage Climate Change?

The burning of fossil fuels to produce electricity, fuels vehicles and power industry contributes 87% of all human-produced CO_2 emissions. The rest comes from land uses changes such as deforestation (9%) and industrial processes such as making cement (4%).

Alternative Energy Provision: To help reduce carbon emissions many countries are turning to alternative sources of energy such as: hydro-electricity, nuclear power, solar, wind and tidal. These do not emit large amounts of CO_2 . Some are also renewable and will last into the future. Nuclear power uses uranium to generate electricity but it does not emit CO_2 as a by-product. At current, in 2016, renewables produce more than 20% of the UK's electricity.

Carbon Capture and Storage: Coal is the most polluting of all fossil fuels. China gets 80% of its electricity from burning coal, India 70% and the USA 50%. Carbon capture and storage (CCS) uses technology to capture CO_2 produced from the use of fossil fuels in electricity generation and industrial processes. It is possible to capture up to 90% of the CO_2 that would otherwise enter the atmosphere. Once CO_2 is captured, the carbon gas is compressed and transported by pipeline to an injection well. It is injected as a liquid into the ground to be stored in suitable geological reservoirs such as sedimentary rock as this prevents it from escaping. The UK is the world leader in CCS.

Planting Trees: Trees act as carbon sinks, removing CO_2 from the atmosphere by the process of photosynthesis. They also release moisture into the atmosphere. This has a cooling effect by producing more cloud, reducing incoming solar radiation. Tree planting is well established in many parts of the world. Plantation forests can absorb CO_2 at a faster rate than natural forests and can do so effectively for up to 50 years. The UK has a £24.9 million project to reduce deforestation and increase reforestation in Brazil. It aims to tackle climate change by reducing 10.71 million tons of CO_2 emissions over 20 years by recovering 41,560 hectares of degraded forests.

International Agreement: Paris Agreement 2015 -

- 195 adopted the first ever universal and legally binding global climate deal.
- To peak greenhouse gas emissions as soon as possible and achieve a balance between sources and sinks of greenhouse gases in the second half of this century (2050-2100).
- To keep global temperature increase below 2°C and limited to 1.5°C above pre-industrial levels.
- To review progress every 5 years.
- \$100 billion a year to support climate change initiatives in developing countries by 2020, with further finance in the future.
- There have been criticisms that many of these agreements are 'promises' or aims and not firm commitments.

Conservative Plate Margin	Tectonic plate margin where two tectonic plates slide past each other.	Earthquakes are caused by conservative plate margins.	
Constructive Plate Margin	Tectonic plate margin where two tectonic plates slide past each other.	Shield volcanoes are formed by constructive plate margins.	
Destructive Plate Margin	Tectonic plate margin where two tectonic plates slide past each other.	Volcanoes and earthquakes are found on destructive plate margins.	
Immediate Response	The reaction of people as the disaster happens and in the immediate aftermath.	An immediate response to the hazard was evacuation.	
Long-term Response	Later reactions that occur in the weeks, months and years after the event.	A long term response to the hazard was improving infrastructure.	
Monitoring	Recording physical changes, such as earthquake tremors around a volcano, to help forecast when and where a natural hazard might strike.	Seismologists are able to predict future earthquakes by monitoring seismic activity.	
Prediction	Attempts to forecast when and where a natural hazard will strike, based on current knowledge. This can be done to some extent for volcanic eruptions (and tropical storms), but less reliably for earthquakes.	Seismologists are able to predict future earthquakes by monitoring seismic activity.	
Planning	Actions taken to enable communities to respond to, and recover from, natural disasters, through measures such as emergency evacuation plans, information management, communications and warning systems.	We can reduce the impacts of tectonic hazards by planning ahead.	
Protection	Actions taken before a hazard strikes to reduce its impact, such as educating people or improving building design.	Strengthening buildings and infrastructure adds protection to communities in the event of an earthquake, and can reduce the effects.	
Primary Effects	The initial impact of a natural event on people and property, caused directly by it, for instance the ground buildings collapsing following an earthquake.	A primary effect of an earthquake is the collapse of buildings.	
Secondary Effects	The after-effects that occur as indirect impacts of a natural event, sometimes on a longer timescale, for instance fires due to ruptured gas mains resulting from the ground shaking.	A secondary effect of an earthquake is homelessness, because your home collapsed, or unemployed because your place of work collapsed.	
Climate Change	A long-term change in the earth's climate, especially a change due to an increase in the average atmospheric temperature.	The burning of fossil fuels in one of the most significant causes of climate change.	
Mitigation	Action taken to reduce or eliminate the long-term risk to human life from natural hazards, such as building earthquake-proof buildings or making international agreements about carbon reduction targets.	Mitigation strategies include the use of alternative energies, and adopting a plant based diet.	
Adaptation	Actions taken to adjust to natural events such as climate change, to reduce potential damage, limit the impacts, take advantage of opportunities, or cope with the consequences.	Adaptation strategies include the building of flood defences and water transfer schemes.	
Orbital Changes	Changes in the pathway of the Earth around the Sun.	Orbital changes modify the total amount of sunlight reaching the Earth by up to 25%.	

ineme

Vocabulary Theme 1

Words that are highlighted in grey in this list are words that may be useful, but you won't need to know them for the evam

Introductory vocabulary

- I' acteur/actrice actor, actress actif/active active adorer to love
- I' allemand (n.) (m.) German (language) aller to go
- I' amile) (m. /f.) friend amusant(e) amusing, fun, funny, enjoyable
- l' anglais (n.) (m.) English (language)
- anglais(e) (adj.) English s' appeler to be called apporter to bring

anrès after

- l' après-midi (m.) afternoon assez quite, enough au chômage unemployed autre chose anything else
- avoir to have beaucoup (de) a lot (of) le beau-père stepfather,
- father-in-law la belle-mère stepmother,
- mother-in-law la bibliothèque library
- bien good well blanc (adj.) white boire to drink bon(ne) good bonjour good morning,
- afternoon brun(e) brown
- ça it, that le café coffee coffee shop car because
- célèbre famous cependant however
- la chanson sona le /la chanteur / chanteus
- les cheveux (m. pl.) hair

- le chômage unemployment
- le collège (secondary) school comme such as, like, since le concert concert
- la construction construction content(e) glad, pleased, happy
- le cours lesson court(e) short
- le/la cousin(e) cousin dernier/dernière last détester to hate deux two devenir to become
 - difficile difficult
 - du/de la/des/de l' some I' eau (f.) water
 - l' école (f.) school écrire to write I' éducation (f.) education
 - en général in general en plus in addition en premier first of all, firstly
 - I' enfant (m./f.) child enfin finally ennuveux/ennuveuse boring ensemble together
 - ensuite then équilibré(e) balanced l' équipe (f.) team
 - l' espagnol (n.) (m.) Spanish (language)
 - espagnol(e) (adj.) Spanish être to be facile easy
- le/la facteur/factrice postman/ postwoman faire to do to make
- la famille family la femme woman, wife
- la fille girl, daughter le film film
- le fils son le football football

- le français (n.) French (language) français(e) (adj.) French
- la France France les frites (f. pl.) chips
- le fromage cheese le fruit fruit
- gagner to win, earn le aâteau cake gauche left généralement generally
- génial(e) great la aéographie geography
- la alace ice ice cream le aouvernement government
- la grand-mère grandmother le grand-père grandfather
- la arève strike habiter to live
- I' heure (f.) hour, time, o'clock
- I' histoire (f.) history, story important(e) important l' indépendance (f.)
- independence l' informatique (f.) IT, computer science intéressant(e) interestina
- iamais never je voudrais (vouloir) | would like
- ieune vouna iouer to play juillet July
- le lait milk le/la/l'/les the
- le légume vegetable la lettre letter
- leur(s) (to) them, their long(ue) long la maison house
- manaer to eat (le) mardi Tuesday
- le mari husband les maths (f. pl.) maths
- le matin morning méchant(e) naughty, nasty la mère mother

- le métier joh la mode fashion
- moi me la musique music
- la natation swimming non-bingire non-bingry
- nul(le) rubbish I' oncle (m.) uncle
- l' ordinateur (m.) computer où where le pain bread
- par contre on the other
- parce que because parfois sometimes passer to spend, to pass
- le nère father la personne person
- le petit-déjeuner breakfast la photo photo
- la piscine swimming pool plusieurs several
- le poisson fish le/la policier/policière policeman/policewoman
- la politique politics porter to wear, to carry pouvoir to be able to
- préféré(e) favourite le professeur/professeure, prof teacher puis then
- la récréation breaktime rentrer to go back, to go
- le restaurant restaurant
- le rêve dream le riz rice
- la rue street sain(e) healthy
- le salaire salary (le) samedi Saturday
- les sciences (f. pl.) sciences la sécurité safety, security
- la semaine week le/la serveur/serveuse waiter/ waitress
- la sœur sister sourire to smile

souvent often le sport sport

sportif/sportive sporty strict(e) strict

- le studio studio le succès success
- la Suisse Switzerland super great, super sûr(e) safe, secure
- sympa nice la technologie DT
- le temps time, weather le thé tea
- le théâtre drama touiours always
- tous les jours every day transgenre transgender
- trop de too much, many
- trouver to find le t-shirt t-shirt
- un neu a little un(e) a le vélo bike
- vers towards
- la viande meat
- le Vietnam Vietnam le village village
- la ville town city le vin wine
- voici here is vouloir to want voyager to travel
- vraiment really

1.1G Oui suis-ie?

- aimer to like I' an (m.) year avec with beau/belle beautiful, handsome
- la Belaique Belaium bleu(e) blue le chien dog
- comment how la couleur colour la cuisine kitchen, cooking

dans in

- douze twelve elle she facilement easily
- le fast-food fast food le frère brother
- aentil(le) kind grand(e) big, large, tall les grand-parents (m. pl.) grandparents
- il he ie/i' | ioli(e) pretty
- mais but le Maror Mororco mauvais(e) bad
- le million million mon, ma, mes my la montagne mountain travailler to work
 - nous we noir(e) black nouveau/nouvelle new
 - on we, one le nantalon trousers parler to speak, to talk petit(e) small, little, short
 - préférer to prefer le Ouébec Ouebec
 - qui who, which regarder to look, to watch
 - rouge red le Sénégal Senegal sénéaalais(e) (adi.) Senegalese
 - surtout especially la table table
 - la télé TV très very tu you (singular)
 - vert(e) green les vêtements (m nl.) clothes vieux/vieil/vieille old les yeux (m. pl.) eyes

1.1F Ma personnalité

acheter to buy alors so, well, then arriver to arrive attendre to wait au revoir goodbye

aussi also bavard(e) chatty

bonne chance good luck calme (adi.) calm, quiet la catastrophe catastrophe

la clé key connaître to know (person, place)

le copain friend, boyfriend la copine friend, girlfriend de plus besides, moreover

descendre to go down. descend, get off devoir to have to, must drôle funny

embêtant(e) annoying en fait in fact, in reality

- en retard late entendre to hear fier/fière proud fort(e) strong
 - aentil(le) kind inquiétant(e) worrying intelligent(e) intelligent Internet (m.) internet
 - le judo judo maintenant now même same
 - la mission mission neuf/neuve new non no la note grade, mark
 - paresseux/paresseuse
 - partir to leave passionnant(e) exciting penser to think perdre to lose
 - la personnalité personality personne nobody la qualité quality
 - guand when que that quel(le) what which répondre to answer
 - sérieux/sérieuse serious son/sa/ses his/her le téléphone phone

salut hi hello

timide timid, shy toi you (singular) ton/ta/tes your (singular)

le train train travailleur/travailleuse hard-working

triste sad trop too vendre to sell

vite quick la voiture car vrai(e) true

1.2G Voici ma famille

l' année (f.) year ce/cet/cette/ces this,

- se disputer to arque
- s' entendre avec to get on
- s' excuser to apologise handicapé(e) (adj.)
- disabled se marier to get married
- le petit copain boyfriend
- la petite copine girlfriend se séparer to split up.
- separate la tante aunt terrible terrible

tout le temps all the time 1.2F Les familles de nos jours

à at, to adopté(e) adopted aussi ... aue as as canadien(ne) Canadian

chez moi at my place, at

- choisir to choose la chose thing le cinéma cinema
- comprendre to understand la Côte d'Ivoire Ivory Coast les courses (f. pl.) (grocery)
- shopping le déieuner lunch

Grammaire





The position of adjectives

In French, most adjectives follow the noun they describe. J'ai les cheveux courts et les yeux verts. I have short hair and green eyes.

However, some adjectives usually come in front of the noun. For example:

grand(e) big, tall, large small, short, little petit(e)

bon, bonne good mauvais(e) bad jeune young joli(e) pretty beau, bel*, belle beautiful nouveau, nouvel*, nouvelle new vieux, vieil*, vieille old

* in front of a vowel

J'aime mon nouveau pantalon. I like my new trousers. J'habite dans un petit village. I live in a small town.

Grammaire





Comparative adjectives

Use comparative adjectives to make comparisons:

more ... than/...er than plus ... que moins ... que less ... than

aussi ... que as ... as

Angelin est plus amusant que Nicole. Angelin is funnier than Nicole. Je suis **moins gentil que** ma sœur. I am less kind than my sister.

Elle est aussi sympa que moi. She is as nice as me.

Remember to make the adjective agree with the subject of the sentence.

Bon and mauvais have irregular comparatives, meilleur(e) and pire:

La musique est **meilleure que** la lecture.

Music is better than reading. La télévision est pire que la lecture. Television is worse than reading.

Grammaire





Adjective agreement

In French, adjectives must agree in gender and number (singular or plural) with the noun. For most adjectives, you add -e if the noun is feminine singular, -s if the noun is masculine plural, and -es if the noun is feminine plural.

Some adjectives follow different patterns:

Masculine		Femi	Feminine	
-е	timide	-е	timide (no change)	
-X	sérieu x	-se	sérieu se	
-f	neu f	-ve	neu ve	
-er	fier	-ère	fière	

GCSE French Autumn Term - Media, Technology and Celebrity Culture

	encourager to encourage
	énormément hugely
	ensuite then
P	entretien (m.) interview
le.	fils son
16	immédiatement
	immediately
	influencer to influence
	maintenant now
le	membre member
	musical(e) musical
la	nature nature
se	passer to happen, go (well/badly)
la	photographie photography
	presque almost
le	progrès progress
	quelques some, a few
le	style style
la	télé-réalité reality TV
la	vue view
	Vous voulez ŝtre
6.11	Vous voulez être célèbre?
	celebre:
	accessible accessible
ľ	argent (m.) money
le	basket basketball
	calme (adj.) calm, quiet
la	célébrité celebrity
	classique (adj.) classical
la	compétence skill
ia	compétence skill découvrir to discover
Ia	
la l'	découvrir to discover
	découvrir to discover développer to develop
ľ	découvrir to discover développer to develop exemple (m.) example faire attention to be
ľ	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse
l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.)
l' le/la l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled influenceur/influenceuse (m.ft.) influencer joueur/joueuse player
l' le/la l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled Influenceur/influenceuse (m./f.) influencer
l' le/la l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled influenceur/influenceuse (m./f.) influencer joueur/joueuse player
l' le/la l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled Influenceur/influenceuse (m./f.) influencer joueur/joueuse player opinion (f.) opinion organiser to organise oublier to forget
l' le/la l' le/la	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled influenceur/influenceuse (m./f.) influencer joueur/joueuse player opinion (f.) opinion organiser to organise
i' le/la i' le/la i'	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled influenceur/influenceuse (m./f.) influencer joueur/joueuse player opinion (f.) opinion organiser to organise oublier to forget paroles words, lyrics réussir to succeed
i' le/la i' le/la i'	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled Influenceur/influenceuse (m./f.) influencer joueur/joueuse player opinion (f.) opinion organiser to organise oublier to forget paroles words, lyrics
l' le/la l' le/la l'	découvrir to discover développer to develop exemple (m.) example faire attention to be careful footballeur/footballeuse footballer handicapé(e) (adj.) disabled influenceur/influenceuse (m./f.) influencer joueur/joueuse player opinion (f.) opinion organiser to organise oublier to forget paroles words, lyrics réussir to succeed



le mari husband

positif/positive positive avoir lieu to take place démocratique democratic promouvoir to promote

Theme 3 Vocabulary

communiquer to	o le	téléphone phone
communicate		tout d'abord first of all
connaître to kno place)	ow (person,	travailler to work
le copain friend, b	outsiand la	vie quotidienne daily life
The state of the s	and a second	
la copine friend, gi	0.21	G Ton portable, ta vie
de plus in additi		
de temps en temp time to time	ps from	avant (de) before
l' e-mail (m.) e-ma	ail	clair(e) clear
en streaming str		complet/complète complete
envoyer to send		découvrir to discover
l' événement (m.)		disponible available
facile easy		école (f.) school
le film d'action act		elles they (female)
fols par	Maria Caraca Car	en bonne santé in good health
l' Influence (f.) infl		expliquer to explain
Informatif inform		faire la fête to party,
le magazine maga	zine	celebrate
le monde world		faire mes devoirs to do my
l' opinion (f.) opin	ion	homework
l' outil (m.) tool		faire une promenade to go
par by		for a walk
toujours always	le	festival festival
vendre to sell	COLUMN TO SERVICE OF THE SERVICE OF	gratuit(e) free
le(s) větement(s) (m.)	(pl.) clothes	Ils they (male)
le vidéo video	la	mode de vie way of life, lifestyle
8.1F Le monde	avant et	penser to think
après Inter	net les	recherches (f. pl.) research
AN INCOME AND ADDRESS.		recycler to recycle
l' appli (f.) app	la	région region
content(e) happ	u alad	sport sport
pleased		tablette tablet (computer)
le danger danger		tchatter to chat
devoir to have to		tout(e)(s) all
la façon way, man		
faire attention à		J'utilise la
be careful of, to attention to	pay	technologie!
faire des progrès	to make	
progress	to make	à l'avenir in the future
le Jeuvidéo video	game /	anniversaire (m.) birthday
leur(s) their		appeler to call
maintenant nov	v	cependant however
mals but	70	changer to change
mondial(e) glob	ial la	chanson song
ne Jamais ne	-01	contenu content
l' ordinateur porta		cool cool
laptop		dépendance addiction
présent(e) (adj.)	present	en ce moment at the
seulement only		moment
le smartphone sm	artphone	enregistrer to record
la société society		Impossible impossible

Inaccessible inaccessible







Demonstrative adjectives

French has one set of words for both 'this/these' and 'that/those':

	Masculine	Feminine	Plural
Γ	се	cette	ces
	cet (+ vowel)		

Ce film est super.

Cet influenceur a beaucoup de succès.

Cette célébrité travaille en Belgique.

Ces photos sont extraordinaires.

la technologie technology

Grammaire





Revising infinitive verbs

Infinitives end in -er, -ir or -re and are translated as 'to ...' or '...ing'.

utiliser (to use) finir (to finish) vendre (to sell)

We use an infinitive after *almer*, *adorer* and *détester* to express likes and dislikes:

J'adore lire des magazines.

Hove to read/reading magazines.

Je n'aime pas écouter la radio.

I do not like to listen/listening to the radio.

Theme 3

Foundation Vocabulary

Words that are highlighted in grey in this list are words that may be useful, but you won't need to know them for the exam.

7.1G ¿Cómo te gusta viajar?

- el avión plane
- el barco boat
- la bicicleta bike, bicycle
- el billete ticket
- la carretera road
- el coche car
- coger to catch
- de pie standing, on foot
- el extranjero abroad
- la estación station
- ir de compras to go shopping
 - lento/a slow
 - llegar to arrive
 - el metro metro, tube, underground
- el puerto port, harbour
- relajante relaxing
 - salir to leave
 - el tren train
 - viajar to travel

7.1F ¿Oué haces durante las vacaciones?

- al aire libre in the open air, outdoors
- alojarse to stay
- aprender to learn
- el baloncesto basketball
- el bosque wood, forest
- buscar to look for
- la carretera road
- la ciudad town, city
- cocinar to cook
- conducir to drive
- conocer to know (a person or place)
- la costa coast
- decidir to decide
- descansar to rest
- el edificio building
- emocionante exciting
- el/la empleado/a employee
- el equipo equipment

- la estrella star
 - excelente excellent
- la excursión trip la foto photo
- fresco/a cool, fresh
- el fuego fire
- la habitación room
- hacer camping to go camping
- histórico/a historic
- el hotel hotel
- el interés interest
- el invierno winter
- ir de compras to go shopping
- la isla island
- el jardín garden
- el lado side
- lleno/a full
- el lugar place
- la maleta suitcase el mercado market
- mirar to look at
- la mochila rucksack
- montar to set up, to ride
- la naturaleza nature
- nuestro/a our
- el país country
- el paisaje country, countryside pasado/a past
- perderse to get lost
- la piscina swimming pool
- el plano map, street plan
- la playa beach
- principal main
- probar to try, try out
- la recepción reception
- el recuerdo souvenir
- el regalo present, gift reservar to book
- el restaurante restaurant
- el sitio place
- sobre on
- tener calor to be hot
- la tienda tent, shop
- tomar el sol to sunbathe
- el/la turista tourist
 - vender to sell el verano summer

el viento wind visitar to visit

7.2G Una visita a Andalucía

abril April

- el acuario aguarium
 - además de las well as andar to walk
 - el árbol tree
- la arquitectura architecture
- el arte art
- el caballo horse
- la cámara camera
- el castillo castle
- la catedral cathedral
 - celebrarse to be held
 - cerca (de) near (to)
- la cultura culture
- el desfile parade
- entrar en to go into
- el espectáculo show
- la excursión trip, visit, excursion la fiesta fiesta, festival
- el flamenco flamenco (dance/
- music) genial great
- hay que you have to, one must los hijos children, sons and daughters
- la iglesia church la isla island
- el lado side
- leios far
- la mezauita mosque
- millón million los niños children
- el origen origin
- el palacio palace
- el parque acuático water park
- el parque temático/de atracciones theme park
- el plano street map
- la plaza de toros bull ring
- la plaza mayor main square
 - popular popular
 - el puente bridge, Bank Holiday quedarse to stay
- la razón reason

- recomendar to recommend
- el recuerdo souvenir
- seguro/a safe, secure
- el sur south
 - tan so
- la tradición tradition
- tradicional traditional
- un poco a little, a bit
- vale la pena it's worthwhile
- el vestido dress
- la vista view

7.2F ¿Qué tipo de vacaciones prefieres?

- bajar de to get off (transport)
- caer(se) to fall, to fall over / down
- callente warm, hot
- la catedral cathedral
 - celebrar(se) to celebrate, to hold (event)
 - cenar to dine, have the evening
 - meal conducir to drive
- la cosa thing
- la costumbre custom
- el edificio building
- el extraniero abroad
- las gafas de sol sunglasses
- hermoso beautiful
- ir al extranjero to go abroad
- Ilover to rain
- mandar to send
- mejorar to improve
- el mensaje message
- mezauita mosque montar a caballo to ride a horse,
- go horse riding
- el mundo world
- el museo museum
- la nacionalidad nationality
- los/as niños/as children el noroeste north-west
 - el norte north
 - la oportunidad opportunity el país country
- la parte part pasarlo blen to have a good time
 - pintar to paint pobre poor

- practicar to practise
- ¿qué tal...? how is...?
- quedar(se) to stay, remain quemar, quemarse to burn, get
- sunburnt
- el reloj watch, clock la Semana Santa Easter Week, Holy
- Week la sinagoga synagogue
- los tíos uncle(s) and aunt(s)
- la tradición tradition valer la pena to be worth it
- la zona area

Los verbos

6

Me gustaria, me encantaria, preferiria

These are important phrases to learn. They are in the conditional tense which you will see in more detail on the next page.

		with a verb	with a noun
l would like	Me gustaria	Me gustaría viajar.	Me gustarla (tener) una bicicleta nueva.
I would love	Me encantaría	Me encantaria ir.	Me encantaria (hacer) una excursión en barco.
l would prefer	Preferiria	Preferiria ir a pie.	Preferiria (alojarme en) un hotel en la costa.

Gramática



Revising comparatives

Remember these words and phrases from unit 3.1.

más - more menos - less

que - than tan ... como - as ... as

To say 'The ticket is cheaper' in Spanish, just say (literally) 'The ticket is more cheap':

El billete es más barato.

The adjective always agrees with the noun it describes.

Los verbos



The conditional tense

To form the conditional tense ('would' \ldots), follow these steps.

Take the infinitive (like viajar, corner, ir) and add the following endings:

Person	Ending	Examples	English
yo	-ia	viajaria	I would travel
tú	-las	pagarias	you would pay
él/ella/ usted	-la	vendería	he/she would sell
nosotros/ as	-lamos	comeríamos	we would eat
vosotros/ as	-lais	conducirías	you would drive
ellos/ ellas/ ustedes	-ían	irían	they would go

Note the irregular stem (instead of the infinitive) for these five verbs:

tener > tendr- (tendría, tendrías, etc.)

poder > podr- (podría, podrías, etc.)

hacer > har- (haría, harías, etc.)

poner > pondr- (pondria, pondrias, etc.)

haber > habria - there would be

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8.1G Las redes sociales el acoso bullying el uso use adicto/a addict addicted el/la usuario/a user afortunadamente fortunately útil useful alquien someone alguno/a some el vídeo video la app app aproximadamente approximately cambiar to change el comentario comment cómo how compartir to share comunicar to communicate conectar to connect la confianza confidence cruel cruel destruir to destroy diario/a daily educativo/a educational la estrella star falso/a false el juego game el kilo kilo gratis free (of charge) intercambiar to exchange la llamada call el juego game la lista list lo bueno the good thing el mensaje message Internet) el número number olvidar to forget la página page los parientes relatives poco a poco bit by bit por ciento per cent realista realistic propio/a own recargar to charge, recharge

quince fifteen

```
la red net network
   la red social social network
      robar to steal
el/la seguidor(a) follower
      segundo/a second
      similar similar
      tantos/as...como as/so many
   la tarea task, piece of homework
      varios/as several
   la ventaja advantage
la videollamada video call
8.1F Los cambios en la
      tecnología
      avanzado/a advanced
      básico/a basic
el/la compañero/a classmate, partner
   la conversación conversation
      digital digital
      discutir to discuss, argue
      diseñar to design
      enviar to send
   la información information
el/la ingeniero/a engineer
      Inteligente intelligent, smart
      inventar to invent
      ligero/a light (in weight)
   la llegada arrival
   el minuto minute
   el momento moment
      navegar to surf, navigate (i.e. the
      original original
      permitir to allow, permit
      pesado/a heavy
      pesar to weigh
   el portátil laptop
      público/a (adj.) public
```

responder to reply

```
sencillo/a simple
   la serie series
      táctil touch (ie. touch screen)
   el teléfono telephone
   la televisión television
   el tenis tennis
   la transmisión broadcast
      treinta thirty
      último/a last, latest
   el videojuego video game
8.2G La tecnología en casa
      antes de before
el aparato gadget
      arreglar to sort, arrange, fix
la aspiradora vacuum cleaner
      automático/a automatic
      bajar to download
```

ciento hundred conmigo with me el correo electrónico email demasiado too, too much el diseño design encender to light, turn on feo/a ualy funcionar to work, function hacer fotos to take photos horrible horrible instalar to install el libro electrónico e-book Ilevar to take, carry, wear la luz light mantenerse en contacto to keep in touch mayor older, bigger la pantalla screen pesar to weigh el portátil laptop que viene next romper to break roto/a broken la seguridad security, safety la tableta tablet 8.2F ¿Cómo usas tu móvil?

como as, like las compras shopping la cosa thing despertar to wake up el diccionario dictionary educativo/a educational el ejemplo example electrónico/a electronic el familiar family member la función function aratis free el lector electrónico e-book leios far la lista list mantenerse to keep (oneself) medio/a average molestar to bother, annoy el nombre name el número number ofr to hear profundamente deeply prohibido/a forbidden, banned quién who quitar to remove el ruido noise saber to know la tecnología technology todas partes everywhere el tráfico traffic

la calculadora calculator

el/la cantante singer

alguno/a some

los auriculares headphones

la app app

Los verbos



Gramática

diliduca

Talking about good and bad points

When you talk about social media, it is useful to have several ways in which to describe what is good and bad about each one. Here are some useful phrases.

Positive points		
Me gusta	Hike	
Lo bueno de	The good thing about	
La ventaja de	The advantage of	
Se puede + infinitive	You can	
Tiene	It has	
Negative points		
No me gusta	I don't like	
Lo malo de	The bad thing about	
La desventaja	The disadvantage	
No se puede + infinitive	You cannot	
No tiene	It does not have	

The perfect tense

This tense is the equivalent of the English 'has ____-ed, have ___-ed' (I have worked, it has changed). This is how to form it:

	the present tense of haber	+ past participle (ed)	Examples	
I have you (sing.)	he has -ado	he viajado has	I have travelled you (sing.) have found	
have he/she/it has	ha	-ido	encontrado ha recibido	he/she/it has received
we have you (pl.) have they have	hemos habéis han		hemos seguido habéis respondido	we have followed you (pl.) have replied
			han aprendido	they have learned

There are lots of irregular past participles in English (like eaten, fallen, understood, flown, seen) but only a few in Spanish. One common one is *visto* (seen): I have seen – *he visto*.

cantar to sing la canción song caro/a expensive el cine cinema el concierto concert la cultura culture emocionante exciting la energia energy la entrada ticket escuchar to listen el estilo style la estrella star Estados Unidos United States la fama fame la forma way hacer to make, do el icono icon Ilevar to wear mejor better, best morlr to die nacer to be born nuestro/a our opinar to believe, think otro/a other pasar de moda to be out of fashion la pasión passion la pelicula film pensar to think personal personal presentarse to introduce oneself sequir to continue, follow tanto/a so many, so much el tiempo time

6.2F Famosos que valen la pena

a mi modo de ver as I see It agresivo/a aggressive antipático/a unpleasant

aunque although

como as

comprensivo/a understanding

la comunidad community de niño/a as a child deshonesto dishonest donar to donate educado/a polite egoista selfish

emocionante exciting enfermo/a ill la escuela (primary) school Estados Unidos United States estar seguro/a to be sure la fama fame

hablar to speak humilde humble

el idioma language importante important indigena native, indigenous inspirar to inspire

el/la joven young person latinoaméricano/a Latin American maleducado/a impolite mexicano/a Mexican

el/la modelo a seguir role model el norte north

la nominación nomination Nueva York New York opinar to think optimista optimistic

el pais country el papel role parecer to seem

la participación participation participar to participate perezoso/a lazy pesimista pessimistic

el premio award, prize

el proyecto project

puertorriqueño/a Puerto Rican

que yo sepa as far as I know recibir to receive reducir to reduce

sincero/a honest

el sur south

la televisión TV trabajador(a) hard-working único/a unique valer la pena to be worth it

la verdad truth la vida social social life

la visibilidad visibility, awareness

votar to vote la voz voice

Los verbos

Reflexive verbs

They are used when someone does an action for themselves. The se at the end of the infinitive form of the verb indicates that the verb is reflexive and must be conjugated with an appropriate reflexive pronoun.

levantarse	to get up	
me levanto	l get up	
te levantas	you (sing.) get up	
se levanta	he/she gets up	
nos levantamos*	we get up	
os levantáis*	you (pl.) get up	
se levantan*	they get up	

^{*} Higher tier only

6.2G Una TikToker sin descanso

todavia still

la vez time

urbano/a urban

único/a only, unique

aburrido/a boring antes before el balle dance cambiarse (de ropa) to get changed cenar to have dinner desayunar to have breakfast

el descanso rest despertar(se) to wake up dormirse to fall asleep

en estos momentos at the moment estupendo/a wonderful

el evento event famoso/a famous

finalmente finally la foto photo

grabar to record

la habitación room, bedroom

jugar videojuegos to play videogames

lavarse los dientes to brush one's teeth

lentamente slowly

luego then

la moda fashion

normalmente normally

nunca never pensar to think

el pijama pyjamas

por la mañana in the morning primero (adv.) firstly

quitarse to take off

sacar fotos to take photos

si if siempre always

sin without

tener tiempo to have time el uniforme uniform

usar to use

vestirse to get dressed

el video video

el videojuego videogame

la ascendencia heritage

el cine cinema

la ciudad city