



FRAMWELLGATE
SCHOOL DURHAM

KNOWLEDGE ORGANISER

YEAR 9 - 2026/27

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YEAR 9

ART & DESIGN

YEAR NINE ART & DESIGN

Knowledge Organiser

It's impossible for us to include every **skill, technique or artist** that we will look at on this sheet - instead we have set up a website for you with all the information you need.



Scan the QR codes with a phone to access the pages

UNIT 1

artists can control media

We will **develop your skills to get you 'GCSE ready'** by having weekly workshops **exploring different techniques and media**. We will link our work to the work of relevant artists and **build on skills developed in Y7 and Y8**.



UNIT 2

artists present personal responses

We will **continue our preparation for GCSE** by running a GCSE style project using the starting point of **Pop Art**. We will **research artists, explore techniques and then develop our own personal response**.



READING LIST

Providing opportunities for you to read, both in and out of the classroom, is vital to **develop your literacy skills**.

We will do lots of work in class **developing your literacy through reading a range of texts** and have included these here, as well as **some extra books we think you may find interesting**.



INDEPENDENT LEARNING - YOU ARE A PHOTOGRAPHER

Scan the QR code for access to our **Independent Learning Tasks**; quick weekly things for you to do to develop as an artist.

Each half term we will **select the pupil with the most points for completing tasks** and **issue them with a prize**.



NO PHONE? NO PROBLEM...

The quickest and easiest way to access the information you need is by **scanning the QR codes**. If you don't have a phone then you can access the Art Department website **via the link sent to you on Teams** or by **typing the address below into your web browser**.

Talk to your teacher or tutor if you need to use the school computers to access the website after school.



thisisfsdartanddesign.weebly.com/year-nine

EVALUATING YOUR WORK

WHAT?

WHAT IS IT? Explain your work.

Example: This is a drawing I made of a... This is a series of photos I took of... This an experiment using... This is a section of a piece of work by... Here I have used... On this page I have tried... This is a collection of....

WHY?

WHY DID YOU MAKE IT? How does it help?

Example: ...to get ideas about... to show what I have learned about... to explore the idea of... to examine the shape/form/texture/colour/pattern of... to analyse the style of... to try out the technique of... to practice... to develop my skills...

HOW?

HOW DID YOU MAKE IT? Explain the process.

Example: I drew it using... I painted it with... I constructed it from... I built it up by collaging... I photographed/drew it from life... I worked from a photograph... I experimented with... I photocopied... I cut up and rearranged...

QUALITY?

HOW GOOD IS IT? What works/what doesn't?

Example: I am pleased with...one good thing is...the best part of this piece is...I'm not happy with...one part I could improve is...the least successful part is. I wish I could... If I had chance I would... I could improve this by...

LEARNING?

WHAT DID YOU LEARN? What's next?

Example: I improved my skills in...I got better working in the style of...I have a better understanding of... I feel more confident about...Next I will try...To follow this up I will...To move my ideas on I could... Next I should... To make progress I must...

**USE THE HEADINGS TO EXPLAIN EACH
PIECE OF WORK YOU HAVE COMPLETED
IN YOUR SKETCHBOOK**



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YEAR 9

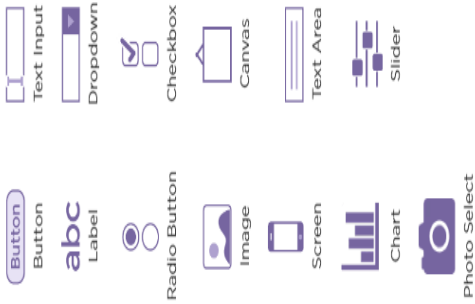
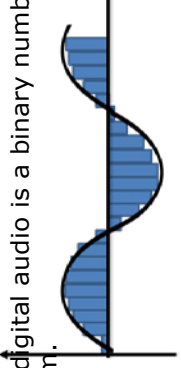
COMPUTER SCIENCE

Computer Science Knowledge Organiser – Year 9 – Part 1			
Key terms Casting Convert a value held in a variable to different data type - for example a string to a decimal using float(). Programming Constructs Sequencing; Selection and Iteration Condition controlled loop Repeating lines of code while a particular set of conditions remain true; e.g. using Python while. Count controlled loop Repeating lines of code a fixed number of times; e.g. using Python for. Subroutine a set of instructions designed to perform a frequently used operation within a program .	Python condition controlled loop (while) A while loop repeats as long as a condition is true. In the example below, while the PIN (personal identification number) is incorrect and the user has not yet had three attempts they get to retry. <pre># ask for a PIN pin = input("Enter PIN: ") tries = 1 # on error, limit retries to 3 while pin != "42" and tries < 3: pin = input("Re-enter PIN: ") tries = tries + 1 # lock if incorrect after 3 tries if pin != "42": print("Account locked") else: print("Access granted")</pre> Limiting the number of attempts to guess a PIN or password can help to prevent brute force cyber attacks - see Part 2 of the Computer Science Knowledge Organiser for more information.	Python condition count controlled loop (for) A for loop repeats for a set number of times as decided by the programmer, if they know exactly how many times certain lines of code need to be repeated. <pre># print message to act as column headers print("Number", "Square of Number") # for loop to run from 1-12 (stop before 13) for x in range(1,13): #prints the number and its squared number print(x, " ", x*x)</pre> <pre>Number Square of Number 1 1 2 4 3 9 4 16 5 25 6 36 7 49 8 64 9 81 10 100 11 121 12 144 >>></pre>	Self-test knowledge retrieval questions 1) Give two examples of casting functions used in python programs and explain their purpose? 2) Which Python command is used to make a condition controlled loop? 3) Can you identify all of the flowchart symbols? 4) Does a Python for loop repeat a fixed or a variable number of times? 5) What happens if shapes are not connected with lines in flowgorithm and Flowol and why? 6) Why is selection important in algorithms and programming? 7) What are the other two programming constructs?
Flow chart symbols for Flowgorithm and Flowol	Subroutines allow the program to skip to another set of instructions. Very handy and makes algorithms more efficient		

Computer Science Knowledge Organiser – Year 9 – Part 2

Key terms Brute force attack When an attacker inputs many passwords until it is eventually guessed correctly. Cyber security A technique for protecting computers, networks, programs, and data from unauthorized access or hackers for exploitation. A cyber attacker who uses software and social engineering methods to steal data and information. Two-factor authentication Attaching a phone number or email address to an account for heightened security. Artificial Intelligence (AI) The simulation of human intelligence in machines that are programmed to think and act like humans	Cybersecurity is the practice of protecting critical systems and sensitive information from digital attacks. Implementing effective cybersecurity measures is particularly challenging today because there are more devices than people, and attackers are becoming more innovative. Social engineering is a tactic that criminals use to trick you into revealing sensitive information. They can try to get a monetary payment or gain access to your confidential data. Social engineering can make you more likely to click on links, download malware, or trust a malicious source. Phishing is the practice of sending fraudulent emails that resemble emails from reputable sources. The aim is to steal sensitive data like credit card numbers and login information. It's the most common type of cyber attack. You can help protect yourself through education or a technology solution that filters malicious emails.	People Network users must understand and comply with basic data security principles like choosing strong passwords, being wary of attachments in email, and backing up data. Processes Organisations must have a framework for how they deal with both attempted and successful cyber attacks. Technology Technology is essential to giving organisations and individuals the security tools needed to protect themselves from cyber attacks. Three main entities must be protected: endpoint devices like computers, smart devices and routers; networks; and the cloud. Common technology used to protect these entities include next-generation firewalls, DNS filtering, malware protection, antivirus software, and email security solutions.	Self-test knowledge retrieval questions 1) How can you prevent other people accessing your personal accounts? 2) What is meant by a brute force attack and how can they be prevented? 3) How can you trust an organisation to store your data securely? 4) What can you do to avoid phishing scams? 5) What is your digital foot print and how can it be seen by others? 6)How does 2 factor authentication help protect your accounts? 7) What is the Computer Misuse Act 1992? 8) What is Artificial Intelligence and how is it changing our lives?
Wider Issues of Computer Science Ethical Moral Environmental and Legal Everything we do using technology has a potential wider impact on with ourselves or society. Over recent years and certainly in 2023 we have seen huge advances in Artificial Intelligence (AI). Everything from buying a new smartphone to facial recognition in shopping centres there are other issues that you probably haven't even thought about. Advances in medical science and automation of jobs mean that there has been a lot of changes to working practices compared to 10-20 years ago. Even the entertainment and music industry are using AI to their advantage. See our Compute Science SharePoint page on AI	Why is cybersecurity important? In today's connected world, everyone benefits from advanced cyber defence programs. At an individual level, a cybersecurity attack can result in everything from identity theft, to fraud to the loss of important data like family photos. Everyone relies on critical infrastructure like power plants, hospitals, and financial service companies. Securing these and other organisations is essential to keeping our society functioning.	  	

Computer Science Knowledge Organiser – Year 9 – Part 3

Key terms App (Application) Computer software that performs a specific function Javascript Computer programming language commonly used to create interactive effects within web browsers. Properties characteristics of an object Sequencing Writing instructions in the order that they need to be executed Selection Making decisions in a program so it can decide where to go to based on an event Iteration Repeating lines of code a set number of times or until a condition is met	The common design elements in App Lab Drag the elements into your app! 	AppLab Tips Hover to Read IDs: By hovering over an element in your app you can read its ID. onEvents Don't Go Inside One Another: Check Your IDs: You need to change the "id" property in <code>onEvent()</code> so that it detects events with the correct element. You Can Use Multiple Blocks in an <code>onEvent()</code>: If you want multiple things to happen when you click the same button, just add more blocks to the same <code>onEvent()</code>. You should never have a program that has two <code>onEvent()</code> blocks for the combination of element (e.g. "button1") and event type (e.g. "click"). Using relevant IDs: An important part of programming in App Lab is giving your elements appropriately named IDs, just like the concept of variables in python.
Sample Rate So that we don't hear gaps between the sound recordings, the sampling process happens very, very fast. In a typical audio CD, for example, the music has been sampled 44,100 times per second (or 44.1 kHz). This can be carried out across 1 or 2 "channels" (1 = mono, 2 = stereo). Sample Resolution / Bit Depth The sample resolution (also known as bit depth) describes the number of bits used in each sample. A higher 'sample resolution' will mean that more data is recorded per sample and therefore the sound quality will be improved. A typical audio music file will have a bit depth of 16-bits and will be sampled at a rate of 44.1 kHz. So, in terms of the storage space needed for a 3-minute song, that works out at: 44,100 samples per second, over 180 seconds is 7,938,000 samples. Each sample is 16bits -> $16 \times 7,938,000 = 127,008,000$ bits $127,008,000 / 8 = 15,876,000$ bytes <i>That is a lot of data for a short song!</i>	Sampling – Digital Audio Sampling is simply recording snippets of sound at set intervals. So, whereas analogue sound is continuous over time, digitised sound is made up of lots of 'sound bites' over time. Technically, a sample is a measure of the amplitude (height) of the sound wave at a specific moment in time. Sampling therefore, is the measuring of the amplitudes (heights) of sound waves over time. All digital audio is a binary number at its lowest form. 	Self-test knowledge retrieval questions 1) What is JavaScript and why is it used? 2) What does an <code>onEvent()</code> action do? 3) Identify some object properties in JavaScript 4) What is meant by the term 'sampling'? 5) What would be the size of a sound file that is 30 seconds in length, has a bit depth / sample resolution of 8 bits and a sample rate of 16000 samples per second? You must show your working out. 6) Explain how an increase in sample resolution can increase the quality of a sound file.



YEAR 9

ENGLISH

TYear 9 Term 1.1: Protest Poetry

POEMS AND KEY CONCEPTS		
Writers protest against war		
"Futility" by Wilfred Owen is set in World War One. A soldier dies because of exposure to the cold.	"The Battle" by Louis Simpson is set in World War Two. The soldiers suffer due to enemy fire and the cold.	Key concept: Writers protest against war, which causes suffering and results in the waste of human life.
Writers celebrate racial equality		
"Rosa" by Rita Dove celebrates Rosa Park's defiance of the Jim Crow Segregation Laws.	"The Hill We Climb" by Amada Garman celebrates how society has progressed to be more equal and diverse.	Key concept: Writers celebrate diversity.
Writers celebrate gender equality		
"Legacy" by Rupi Kaur celebrates the success of women, which allows the next generation to feel empowered.	"If" by Deanna Rodger inspires women to feel empowered and determined to achieve their goals in life.	Key concept: Writers celebrate gender equality and empower women.
Writers protest against the social hierarchy		
"A Wider View" by Seni Seneviratne reveals the poor living conditions the working-classes experienced during the Industrial Revolution.	"Winter Song" by Sam Fender/Alun Hull speaks out for homeless people and asks for kindness to them.	Key concept: Writers protest against the social hierarchy, which results in people experiencing poor living conditions.
SENTENCE STARTERS		
Intro	In POEM 1 and POEM 2, the writers explore... in order to KEY CONCEPT.	
PEA 1: poem 1	Point: discourse marker, writer's name, question, in order to...	
PEA 2: poem 2	Evidence: The writer describes ... as "..."	
PEA 3: poem 1	Analyse: identify method + explain why it is used/the effect. E.g. At first glance, the writer uses METHOD to WHY. This sense of WHY is amplified by ANOTHER METHOD, which implies WHY. On closer inspection, the writer also uses the METHOD to represent WHY.	
PEA 4: poem 2		
Conc	Ultimately, in both poems, the writers explore... in order to KEY CONCEPT.	

LANGUAGE METHODS AND POETIC TERMINOLOGY	
Connotations	What a word suggests or makes you think of
Emotive language	Words which make the reader feel an emotion
Imagery	A picture or visual that connotes an idea
Juxtaposition	Setting two different things side by side
Personification	Giving an object human characteristics
Pronoun	A word which replaces a name e.g. you, he, I
Refrain	A chorus in a song
Semantic field	A group of words with similar connotations
Stanza	A paragraph in a poem
Symbol	An object that represents an idea
Verb	An action word

VOCABULARY	
Compassion	Sympathy and kindness for others
Determination	Focussed on achieving a goal
Diversity	A range of different backgrounds
Empathy	Putting yourself in someone else's shoes
Empowerment	Feeling strong and confident
Endurance	Remaining strong during a challenging situation
Futility	Pointlessness
Injustice	Unfairness
Melancholy	Sadness
Prejudice	Dislike of something based on opinions
Resilience	Keeping on going even when something is challenging
Social hierarchy	A system where people have different amounts of power
Transcend	To go beyond (challenges)
Vulnerable	Weak, fragile

HISTORICAL CONTEXT	
Boycott	To refuse to buy or support something
Collective endeavour	Working together towards a shared goal
Industrial Revolution	19 th century England – increase in factories
Jim Crow segregation laws	US laws that forced separation of black and white people
Peaceful protest	Protesting against something without becoming violent
Segregation	Groups of people are kept separate from one another

Year 9 Term 1.2: Persuasive Writing –The Environment

Task: Write a speech/article/letter in response to a prompt. e.g. "Too many people are throwing rubbish into landfill instead of recycling. We must change our habits to protect the environment." Write a letter to a newspaper persuading them of your point of view.	
KEY CONCEPTS	
What damages the environment?	What protects the environment?
Discarded rubbish builds up in landfill sites, where material does not decompose.	Recycling and reusing reduce the amount of waste in landfill sites.
Over-reliance on cars means we release lots of carbon dioxide into the atmosphere.	Using public transport or walking reduces carbon emissions.
Fast fashion wastes resources: companies like Shein use poor quality fabrics. This leads to a mountain of discarded clothing.	Using websites like Vinted means that clothes are reused, and less fabric is deposited in landfill sites.
GAP	
Genre	The type of text e.g. speech, article, letter
Audience	Who you are writing for
Purpose	The reason why you are writing
Features of an article	Headline; subheadings; paragraphs; discourse markers
Features of a speech	E.g. Direct address; rhetorical questions; imperative verbs
Features of a letter	Dear.... Yours faithfully...
PLANNING AND STRUCTURE	
Brain dump ideas	Mindmap or list
Organise your ideas	Number your ideas
Start your writing	Letter: Dear... Article: Headline Speech: go straight in to writing
Introduction	Imagine this: AND/OR One word + rhetorical question?
1 st paragraph	Most importantly....
2 nd paragraph	Secondly....
3 rd paragraph: counter-argument	Whilst some might claim that..., the reality is...
4 th paragraph	The simple fact is...
Conclusion	Ultimately, it is irrefutable that... Thank you for listening, and remember to join with me in...
Check your work	Check capital letters, punctuation, and spelling

VOCABULARY	
Environmental Problems: Climate Change Ecological footprint Recycling and Reusing Contamination Landfill Pollution Unsustainable Ecosystem Toxins Over-reliance on cars Emissions Carbon dioxide Air pollution Smog Congestion Fast fashion Textile waste Synthetic Microplastics Overconsumption Disposable	The Importance of our Environment Environment Habitat Biodiversity Abundant Vital Precious Fragile Irreplaceable Vulnerable Defenceless Impactful Phrases - Collective responsibility - Devastating cost to the environment - For the sake of future generations - The planet ultimately pays the price - A culture of throwaway fashion
LANGUAGE METHODS	
Emotive language	Words which make the reader feel an emotion
Rhetorical question	A question that doesn't require a response
Triple	A list of three
Verb	An action
Imperative verb	A command verb
Plural first person pronoun	e.g. we, us, our
Personification	Giving an object human characteristics
SENTENCE STRUCTURES AND PUNCTUATION	
One word sentence	E.g. Landfill. What does that word bring to mind?
Compound sentence using because/but so	E.g. Recycling is essential because it means we don't waste the earth's resources.
Apostrophe	Possession e.g. Joe's book Omission e.g. can't
Comma	Include additional information e.g. Recycling, which is easy for everyone to do, is essential.
Question mark	Use at the end of a question sentence
Colon	Introduce a surprising idea. E.g. Climate change: it is our collective responsibility to reverse this dangerous process.
Semi-colon	Write a sentence with BBs; cross out BBs; replace with semi-colon.

KEY CONCEPTS – Sepetys wrote <i>Salt to the Sea</i> to...	
<u>criticise</u> the atrocities and <u>savagery</u> of war	<u>reveal</u> the power of <u>resilience</u> of refugees during World War II
CHARACTERS	
Refugees Joana – Lithuanian refugee, nurse Emilia – Pregnant teenager Florian – Prussian, former art restorer Heinz – ‘Shoe Poet’ Ingrid – Blind German refugee Eva – German refugee, in her fifties Halinka – Emilia’s daughter	Other characters Alfred – delusional Nazi soldier Hannelore – A German girl who Alfred is captivated by



PLOT	
1	Florian saves Emilia from an attempted assault. Emilia follows Florian on his voyage out of East Prussia. They meet Joana, Klaus, Eva, Ingrid and the ‘Shoe Poet’. Although the other refugees distrust Florian, Joana is a nurse and feels obligated to help him. In the morning, Florian escapes – but Emilia follows him.
2	The next day, Florian and Emilia run into Joana when they decide to shelter in an abandoned mansion. Although Florian’s wound has begun to heal, Emilia is now unwell. Joana examines her and discovers that she is heavily pregnant. Emilia assures Joana that she is going to meet the father of her child: August.
3	The two groups reach a frozen bay. Ingrid begins to cross when planes shoot through the ice. She drowns. Florian has altered his identification papers to make it look as though he is on a mission for a Nazi official. A soldier offers to help. The group are transported to Gotenhafen, a port town where they hope to board a ship.
4	In Gotenhafen, the group meets the <u>delusional</u> Alfred – who works on a ship called the Wilhelm Gustloff. Everyone but Eva manages to get a boarding pass. Joana begins to work in the boat’s maternity ward, caring for Emilia – who gives birth to a baby girl, Halinka.
5	Two days after boarding the ship, it sets sail. That same day, torpedoes strike the ship – causing the Wilhelm Gustloff to start sinking. Joana, Klaus and Florian manage to get into a lifeboat – with Florian carrying Halinka. Florian had asked Alfred to carry his pack – which contains something stolen and priceless.
6	Joana and Florian are rescued, but Emilia and Alfred remain adrift at sea. Alfred, who has been writing letters to his beloved Hannelore, reveals that she was Jewish and he turned her in to the Nazis when she rejected him. Tormented by hypothermia, he confuses Emilia for Hannelore and lashes out when she speaks Polish. Alfred falls into the water whilst Emilia freezes.

VOCABULARY	
Antagonistic	A dangerous, threatening person.
Atrocities	Acts of extreme cruelty, particularly during war.
Dehumanising	Treating someone as inferior or less than human.
Delusional	Believing things that are not true.
Empathy	The ability to understand and share the feelings of others.
Menacing	Someone who shows hostility or anger to others.
Nostalgia	Feeling happiness and sadness when remembering the past.
Oppressive	Harsh, cruel and crushing treatment of others.
Resilience	The ability to recover from challenges.
Unified	Brought together as one.

SYMBOLS	
The hunter It is a symbol of war, but also represents psychological burden. Each of the characters feel pursued by Hitler and Stalin – as well as their own conscience.	
Storks Birds commonly represent freedom. Storks also represent a united, happy family in this text – especially for Emilia. They make her feel nostalgic.	
Blindness Ingrid’s disability does not make her less valuable in society – despite what the Nazis argued. Ingrid’s other senses are heightened. Joana wonders if Ingrid is lucky to be blind, so she does not have to endure the atrocious sights of war.	
Emilia’s child Halinka is a symbol of innocence borne out of the chaos of oppressive conflict. Therefore, Halinka is used as a symbol of a hopeful future.	
The sinking of the Wilhelm Gustloff The ship sinking represents the savagery of war. Once confronted with death, Florian loses his desire for revenge; he realises that causing pain to others will never bring him peace.	

Year 9: Term 2.2 – Describing Journeys



Task: Using a picture as a starting point, write a description of a journey.

KEY CONCEPTS		
Journeys can be challenging, but develop resilience and determination.	Journeys can be metaphorical. A journey with a friend can develop relationships; a journey alone can develop self-knowledge; a journey can represent overcoming challenges in life.	
PLANNING YOUR ANSWER		
Step 1	Label the nouns	
Step 2	Add adjectives	
Step 3	Add verbs	
Step 4	Add adverbs	
Step 5	Add personification	
Step 6: STRETCH	Take a step back – what is round the edge of the picture? What might have happened here 10 years before, or what will happen in 10 years time?	
STRUCTURE		
METHOD	SENTENCE STARTER	EXAMPLE
Focus on: - Weather - Setting - Surroundings	Beneath... Amidst...	Beneath the grey blanket of cloud, the landscape became gloomy. Amidst the pouring rain, the animals sought shelter.
Introduce character	A lone figure	A lone figure wound his way down the path...
Time shift	After a moment...	After a moment, she noticed something in the distance...
Circular structure with a twist	As before... yet...	As before, the traveller continued to trudge along the mountain path, yet now she felt renewed optimism.
Cliffhanger ending	And still, the lone figure...	And still, the lone figure continued her journey into the unknown.

LANGUAGE METHODS		
METHOD	DEFINITION	EXAMPLE
Adjective	Describes a noun	The towering, majestic mountains
Verb	Doing word	The lone figure trudged onwards
Adverb	Describes a verb	The clouds drifted lazily
Repetition	Using the same word or phrase more than once	The path was long and arduous. [...] The path still continued, endlessly.
Personification	Giving human characteristics to an object	The trees stood silently, watching the figure.
Metaphor	Saying something is something else	The trail was a serpent coiling through the landscape.
Simile	Comparing two things using "like" or "as"	Like giants , the mountains watched the landscape.
Pathetic fallacy	Giving human characteristics to the natural world	Gloomy and oppressive , the clouds closed in.
Foreshadowing	Giving the reader a hint of something yet to happen	The figure glanced up at the dark peaks of the mountains
PUNCTUATION		
Semi-colon ;	Replaces a connective in a sentence. Both sides of the semi-colon must make sense on their own.	The path wound up the steep side of the mountain; the journey was going to be long and arduous.
Colon :	Emphasises a key piece of information.	She reached the summit and looked over the landscape: a glorious view.
Comma ,	Adds extra information into a sentence.	The trees, skeletal and bare, stood completely still.
Dashes - -	Adds extra information into a sentence	The mountains – towering yet inviting – stretched across the horizon.
Whilst	Introduces opposite/ juxtaposing ideas	Whilst the journey was difficult, she knew she must continue.

SENTENCE STARTERS		
Adjective start	Snow-capped and icy , the mountain peaks stood in the distance.	
Verb start	Twisting and turning , the path progressed through the landscape.	
-ly Adverb start	Silently , the lone figure made their way along the path.	
Preposition start	Beneath the winter sun , her confident footsteps took her towards her destination.	
More, more, more	The more she progressed along the path, the more she felt free from her troubles, the more she realised she needed a different way of life.	

KEY CONCEPTS	
Shakespeare uses Caesar to reveal how ambition is a corrupting force.	Shakespeare uses Brutus to warn the audience about the dangers of trusting the wrong people.
TRAGIC CONVENTIONS	
Tragic hero	A noble character with a fatal flaw that leads to their downfall. Brutus
Tragic victim	The character who dies as a result of the tragic hero's actions. Julius Caesar
Hamartia	The tragic hero's fatal flaw. Naive trust in the goodness of others
Fate	Events in a character's life are decided by supernatural forces. The soothsayer
Downfall	The tragic hero's death. Brutus' suicide
Speech	A talk given to a group of listeners. Mark Anthony: "friends, Romans, countrymen"
Soliloquy	A character speaks their thoughts to the audience. The other characters do not hear. Brutus' "it must be by his death" soliloquy.
Aside	A character very briefly speaks their thoughts to the audience
VOCABULARY	
Ambition	A strong desire to achieve something
Republic	A state governed by representatives (senators and tribunes)
Senators	A group of people who govern the state
Tribune	An official chosen by the people to represent them
Tyranny	Cruel or oppressive rule
Manipulation	Controlling or persuading another person
Conspiracy	A secret plan
LANGUAGE METHODS	
Symbolism	An object represents an idea e.g. the crown
Pronoun	A word that stands in for a name e.g. I, you
Imagery	A picture or visual that connotes an idea
Foreshadowing	Hinting at something that will take place in the future
Verb	An action word
Imperative verb	A command
Adjective	Describes a noun
Abstract noun	A noun which is an idea or quality e.g. liberty, freedom
Triple	A list of three
Rhetorical question	A question that does not require an answer
Repetition	Repeating a word or phrase

CHARACTERS		
Opponents of Caesar	Undecided	Supporters of Caesar
The Senators and Tribunes (Cassius, Casca, Marullus, Flavius, Decius, Cinna) – men who govern Rome	The people of Rome Brutus – a senator and friend of Caesar.	Julius Caesar – a strong military leader Mark Anthony – friend of Caesar
PLOT		
Exposition	Julius Caesar has returned victorious from battle. The people of Rome want to crown him King. But Rome is a Republic, ruled collectively by a group of senators and tribunes. They think that if Caesar becomes King, he will be a tyrant.	
Rising Action	The senators and tribunes conspire to murder Caesar, but they need Brutus' help with their plan. Brutus eventually agrees to join them. A soothsayer (prophet) warns Caesar.	
Climax	The senators and tribunes (including Brutus) murder Caesar. They cover themselves in blood, and go out into Rome to tell the people that they have saved them from tyranny.	
Falling Action	Caesar's friend, Mark Anthony, wants to avenge his death. He and Brutus make speeches to the Roman people. Mark Anthony accuses Brutus of betraying Caesar; Brutus defends his actions. A riot begins, which results in war between Mark Anthony and Brutus.	
Denouement	Mark Anthony's army is closing in on Brutus' men. Caesar's ghost visits Brutus, who is now haunted by guilt. Realising that he cannot survive, Brutus commits suicide.	
QUOTATIONS TO LEARN		
1. Brutus: "I do fear the people do choose Caesar for their King" 2. Brutus is "with himself at war" 3. Cassius: "This man is now become a God" 4. Cassius: "Who is so firm that cannot be seduced?"	5. Brutus: "kill him in the shell" 6. Brutus: "Cassius first did whet me against Caesar" 7. Brutus: "Let's all cry 'Peace, freedom, & liberty!'" 8. Brutus: "Not that I loved Caesar less, but that I loved Rome more"	
SENTENCE STARTERS		
Intro	In this extract from Shakespeare's Roman tragedy, he presents Brutus as QUESTION FOCUS. Shakespeare does this in order to teach/criticise/reveal/warn the audience about KEY CONCEPT.	
PEA	Point: discourse marker, writer's name, question, in order to... Evidence: Brutus exclaims/considers/wonders "..." Analyse: identify method + explain why it is used/the effect. E.g. At first glance, Shakespeare uses METHOD to WHY. This sense of WHY is amplified by ANOTHER METHOD, which implies WHY. On closer inspection, Shakespeare also uses the METHOD to represent WHY.	
Conc	Overall, Shakespeare presents Brutus as QUESTION FOCUS in order to KEY CONCEPT.	

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Year 9 Term 3: Educating Rita by Willy Russell

KEY CONCEPTS	
Russell criticises the social class hierarchy.	Russell teaches that education offers the opportunity of social mobility.

PLOT	
Act 1: Rita, a working-class hairdresser, joins an Open University course and begins studying with Frank, a university lecturer. Rita aspires to broaden her knowledge and change her life. Rita claims that the working class don't have a culture, before explaining that Denny, her husband, disapproves of her studying, so he burnt her books. As Rita studies literature, she grows in confidence and starts to question the expectations of her family and husband. Rita decides to leave Denny in order to pursue her aspirations. Act 2: Rita returns to Frank's office after going to summer school and has moved in with a friend, Trish. Frank seems to struggle with Rita's new-found independence. As Rita adopts some of the behaviour and attitudes of the upper-class, academic world, Frank worries that she is changing. Unimpressed with how she has changed, Frank states that he has created a monster. Rita passes her Open University exams and has gained autonomy over her life. Frank embarks upon a voyage of his own.	

VOCABULARY	
Alienated	Feeling like you don't belong
Aspiration	A dream or a goal
Assimilate	To blend into a group seamlessly
Autonomy	Freedom to make choices
Conflicted	Feeling torn between two choices
Culture	The customs, beliefs and way of life of a group
Empowered	Stronger, more confident
Enlightened	Being informed and more knowledgeable
Epiphany	A moment of sudden realisation
Hierarchy	Different levels of power
Monotonous	Boring, repetitive
Privileged	Having advantages over others
Social mobility	Being able to move up the hierarchy

CONTEXT	
An unequal class system Upper class Middle class Working class 	A patriarchal society Women were expected to remain at home and prioritise having a family.
The Open University A university that provided an opportunity for adult learners to study for a degree without academic qualifications.	

LANGUAGE + STRUCTURE METHODS	
Adjective	Describes a noun
Cyclical structure	The beginning and end of a text are linked
Imagery	A picture or visual that connotes an idea
Juxtaposition	Putting two opposites side by side
Microcosm	A small version of a bigger system
Motif	Repeated symbol throughout a text
Repetition	Repeating a word or phrase
Symbol	An object with a deeper meaning
Verb	An action word

SYMBOLS AND MOTIFS		
Doors and windows The door to Frank's office represents an obstacle for Rita to overcome. Her journey through the door reflects her growing social mobility and assimilation.	Dresses Rita's dresses represents her hollow attempts to distract herself from her life. She eventually has an epiphany that changing her clothes is merely a superficial change.	Books Rita's books represent knowledge and power. Denny burning her books highlights his disapproval of her growing autonomy and his attempt to stop her enlightenment.

DRAMATIC METHODS	
Character	A person represented in the play
Dialogue	Speech
Ellipsis	When time passes offstage
Fixed setting	Just one setting for the entire play
Stage directions	Instructions within a script for the actors
Staging	How the scene is designed

A large, stylized eagle graphic in a light blue color, spread across the entire page. The eagle's wings are spread wide, and its head is turned to the right. The graphic is composed of simple, bold lines.

YEAR 9

FOOD & NUTRITION

Knowledge Organiser 1

Bread

Bread is made from:-

Strong bread flour - has a high gluten content to make the bread soft and elastic.

Yeast - is a biological raising agent which makes the bread rise.

Sugar - provides food for the yeast which helps it to ferment and rise.

Salt - helps improve the flavour of the bread.

Warm water - helps to develop the texture and helps with the fermentation of yeast.

The commercial process used to make bread is called the **Chorleywood process**. This process makes the bread softer, reduces the cost and more than doubles its shelf life.



British cuisine and health

UK diet is often high in saturated fat and sugar. A diet high in these nutrients can cause diet related diseases such as obesity, Type 2 diabetes, tooth decay and heart disease.

Obesity - where people have put on weight this means they are more likely to get other diet related diseases.

Type 2 diabetes - a condition where the body's sugar levels cannot be controlled properly.

Tooth decay - where a person has eaten too many free sugars which interacts with the bacteria in the plaque and produces an acid. This acid breaks down the enamel and this causes tooth decay.

Heart disease - a build up of fatty deposits in the coronary arteries.

British Cuisine

Cuisine - a style of cooking of a particular country or region.

Organic farming - food produced without the use of chemicals, fertilisers and pesticides.

Some British food is produced by organic farming examples include apples, cucumber, tomatoes and milk and meat.

Caught food - examples include cod, salmon, mackerel, and crab.

Reared food - example include beef, pork, lamb and chicken.

Grown food - examples include wheat, oats, tomatoes and lettuce

Traditional dishes and mealtimes

Shepherds pie, roast beef and Yorkshire pudding, Bakewell tart, Cornish pasties and fish and chips.

Traditional mealtimes included breakfast, elevenses, lunch, afternoon tea, dinner and sometimes supper.



Seasonality

Food that is grown at certain times of the year.

Positives: Cheaper, lots of it and is fresher.

Negatives: Only available at certain times of the year, can get sick of same products.

Examples include strawberries in summer, pumpkins in autumn,

Food poisoning

Pathogenic bacteria that can cause people to become ill if food is not cooked or stored correctly.

Symptoms include nausea, abdominal pain, vomiting, diarrhoea, fever, headache and weakness.

Danger zone - 5°C to 63°C this is where bacteria multiply quickest.

High risk food – food that contain protein, moisture and are unlikely to be cooked again

such as cooked chicken, ham and cream

Perishable foods - include both raw and cooked foods with a short shelf life and they normally need to be stored in the fridge or freezer.

Food and the environment

Food waste

Food waste in the UK is worth over £19 million. The volume of waste equates to around 10 billion meals.

Reducing food waste

Households and consumers waste too much food for a variety of reasons.

Reducing greenhouse gases

Waste is one of the highest emitters of greenhouse gases, which damages the environment. Recycling and composting can help to reduce this.

Knowledge Organiser 2

Chinese

Chinese food is quick to make with an emphasis on colour, flavour and texture. Food is stir-fried in a wok or steamed in a bamboo steamer—both are healthy ways of cooking.

Eating patterns - soups are eaten throughout a meal, the family has four or five dishes at the same time with a bowl of rice. The traditional drink is green tea.

Nutrition— noodles and rice are the staple food and are complex carbohydrates of the diet. Pork, duck and chicken are the main protein foods of the diet. Fruit and vegetables provide the vitamins and minerals in the diet.



Indian

A traditional oven is rarely used in India; food is cooked on hobbs. Indian food is often fried, and a variety of spices are blended and used to enhance the flavour of the food cooked.

Eating patterns - all the dishes are placed on the table at once and shared. Indians enjoy snacks and these are often sold in street markets. Desserts are only sold on special occasions such as Diwali.

Nutrition - chapatis, breads and rice are the staple food are complex carbohydrates. Goat, lamb, lentils and chicken are the main protein foods of the diet. Vegetables provide the vitamins and minerals in the diet.



Italian

Italy has a long history of cooking which dates to the Roman times when the banquets were famous. Italian flavours are simple and the only use local ingredients.

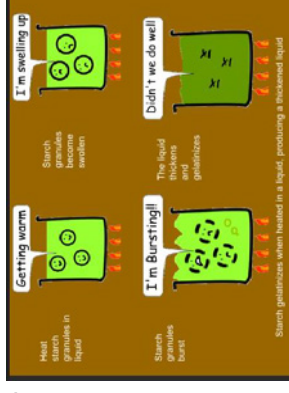
Eating patterns - breakfast is usually light this is then followed by two main meals one served in the middle of the day the other in the evening usually quite late.

Nutrition - the diet is based on fresh vegetables, herbs and fish as well as olive oil. This diet is associated with good health and at lower risk of heart disease and stroke.



Gelatinisation

Process of a sauce being thickened by using starch, liquid and heat.
Used to make custard, gravies and cheese sauce.



Ultra processed food (UPF)

Ultra-processed foods (UPFs) are foods that have been heavily changed during manufacturing and often contain added sugar, salt, fats, colours, or preservatives. Examples include crisps, fizzy drinks, sweets, instant noodles, and packaged cakes. Eating too many UPFs can increase the risk of health problems such as obesity and heart disease. A healthy diet includes more fresh foods like fruit, vegetables, and whole grains.

Greek food

Greek food is an important part of life in Greece and is based on fresh, healthy ingredients such as olive oil, vegetables, fish, olives, and feta cheese. Popular dishes include moussaka, souvlaki, gyros, and Greek salad. Greek cuisine is part of the Mediterranean diet, which is known for being nutritious. Meals are often shared with family and friends, making food an important social tradition in Greek culture.

Food and social media

Positives: looks better, can get people to try different foods.

Negatives: food is edited so might look nothing like what is made, can be unhealthy.

Why do people do it? – likes, followers and to get sponsorship so they are paid to do it.



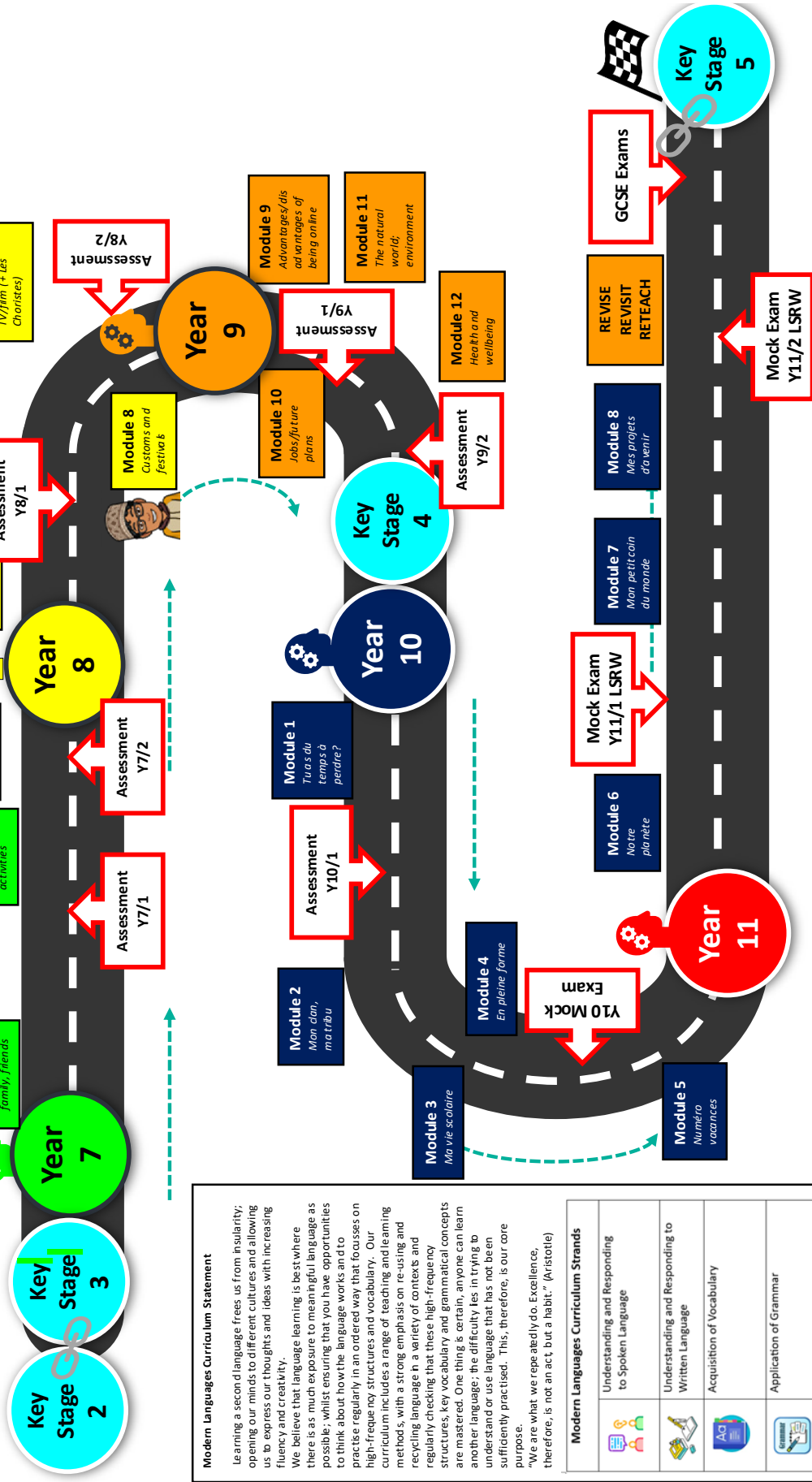
YEAR 9

FRENCH

KS3 French Core Vocabulary – Modern Languages Learning Journey



The Journey @ FSD Starts ..



Modern Languages Curriculum Statement

Learning a second language frees us from insularity; opening our minds to different cultures and allowing us to express our thoughts and ideas with increasing fluency and creativity.

We believe that language learning is best where there is as much exposure to meaningful language as possible; whilst ensuring that you have opportunities to think about how the language works and to practise regularly in an ordered way that focusses on high-frequency structures and vocabulary. Our curriculum includes a range of teaching and learning methods, with a strong emphasis on re-using and recycling language in a variety of contexts and regularly checking that these high-frequency structures, key vocabulary and grammatical concepts are mastered. One thing is certain, anyone can learn another language; the difficulty lies in trying to understand or use language that has not been sufficiently practised. This, therefore, is our core purpose.

"We are what we repeatedly do. Excellence, therefore, is not an act, but a habit." (Aristotle)

Modern Languages Curriculum Strands	
	Understanding and Responding to Spoken Language
	Understanding and Responding to Written Language
	Acquisition of Vocabulary
	Application of Grammar
	Cultural Awareness and Appreciation



Cross- Theme – Exam Preparation (Skills and Techniques)

KS3 French Core Vocabulary – High Frequency Words and Phrases

Connectives & other little words

et	and
mais	but
pourtant	however
pendant	however
si	if
avec	with
sans	without
sauf	except
aussi	also
parce que	because
car	because
à cause de	because of
grâce à	thanks to
pour (+ infinitive)	in order to
afin de (+ inf.)	in order to
avant de (+ inf.)	before ___ing
bien que ce soit	although it is
comme	as/such as
puisque	since/seeing as
par exemple	for example
y compris	including
en plus	in addition
donc / alors	so/therefore
par conséquent	as a result
quand	when
pendant que	while/whilst
en bref	in short
peut-être	perhaps/maybe
malgré	in spite of
heureusement	fortunately
malheureusement	unfortunately
sauf	except
même si	even if
c'est-à-dire	that is to say
d'un côté	on the one hand
de l'autre côté	on the other hand
par contre	on the other hand

Time markers

pour commencer to start with	assez
tout d'abord	très
au début	un peu (de)
puis	peu de
ensuite	trop
après (ça)	trop de
plus tard	beaucoup de
mais maintenant	bien de
tout de suite	plein de
immédiatement	pas mal de
soudainement	pas grand chose
enfin / finalement	plusieurs
aujourd'hui	quelques
bientôt	vraiment
un jour	complètement
vers ___ heures	extrêmement
at about ___	absolument
o'clock	tout à fait
after 5 minutes/	surtout
after 5 minutes	actuellement

Intensifiers and Adverbs

quite	assez
very	très
a bit (of)	un peu (de)
few/not many	peu de
too (+ adj)	trop
too many/much	trop de
enough	beaucoup de
a lot (of)	bien de
a lot (of)	plein de
loads of	pas mal de
quite a lot of	pas grand chose
not a lot	plusieurs
several	quelques
some/a few	vraiment
really	complètement
completely	extrêmement
extremely	absolument
absolutely	tout à fait
totally	surtout
especially	actuellement
currently	(not 'actually'!!)

Comparisons

que	than
plus (+ adj)	more (+ adj)
moins (+ adj)	less (+ adj)
plus de (+ noun)	more (+ noun)
moins de (+ noun)	less/fewer (+ noun)
le plus (+ adj)	the most (+ adj)
le moins (+ adj)	the least (+ adj)
meilleur	better (adjective)
mieux	better (adverb)
pire	worse

Negatives

To use these in a sentence, the verb goes between **ne** and the **second word**

ne ___ pas	not/don't
ne ___ jamais	never/not ever
ne ___ plus	not any more
ne ___ que	only
ne ___ rien	nothing/not anything
ne ___ ni ___ ni	neither ___ nor ___
ne ___ personne	nobody / no-one / not anybody

Possessives, a & the

	Masc	Fem	Vowel	Plural
a/some	un	une	un/une	des
the	le	la	l'	les
my	mon	ma	mon	mes
your (friendly/singular)	ton	ta	ton	tes
his/her	son	sa	son	ses
your (polite/plural)	votre	votre	votre	vos
our	notre	notre	notre	nos
their	leur	leur	leur	leurs

Opinion phrases

j'aime/Je n'aime pas	I like/I don't like
j'adore	I love
je déteste	I hate
selon moi	according to me
personnellement	personally
à mon avis	in my opinion
je pense que	I think that
je crois que	I believe that
il me semble que	it seems to me that
je suis d'accord	I agree
je pense le contraire	I think the opposite
ça peut être	it can be
certaines disent que	some people say that

KS3 French Core Vocabulary – Narrating Events

Referring to the Past	
récemment	recently
ce jour-là	(on) that day
hier	yesterday
hier matin	yesterday morning
hier après-midi	yesterday afternoon
hier soir	yesterday evening
samedi dernier	last Saturday
le weekend dernier	last weekend
la semaine dernière	last week
le mois dernier	last month
octobre dernier	last October
l'été dernier	last summer
l'année dernière	last year
il y a deux ans	two years ago
avant	before
dans le passé	in the past
quand j'avais huit ans	when I was 8 years old

Useful Verbs

c'était = it was
j'étais = I was
ils/elles étaient = they were

il y avait = there was/were

je suis allé(e) = I went
j'y suis allé(e) = I went **there**
j'ai fait = I did
je l'ai fait = I did **it**
je l'ai aimé = I liked/enjoyed **it**

Talking about regular or current activity	
aujourd'hui	today
le matin	in the morning
l'après-midi	in the afternoon
le soir	in the evening
le weekend	at weekends
le vendredi	on Fridays
en hiver	in winter
à Noël	at Christmas
Pendant la semaine	during the week
pendant la journée	during the day
pendant les vacances	in the holidays
après le college	after school
avant le college	before school
tous les soirs	every evening
tous les jours	every day
rarement	rarely
quelquefois	sometimes
parfois	sometimes
normalement	normally
d'habitude	usually
régulièrement	regularly
souvent	often
fréquemment	frequently
toujours	always

Useful Verbs

c'est = it is
je suis = I am
il y a = there is/are
je **le** fais = I do **it**
je **le** faisais = I used to do **it**
j'y vais = I go **there**
j'y allais = I used to go **there**

Expressing Future plans	
demain	tomorrow
demain matin	tomorrow morning
demain après-midi	tomorrow afternoon
demain soir	tomorrow evening
après-demain	the day after tomorrow
le lendemain	the next day
plus tard	later
à l'avenir	in the future
la semaine prochaine	next week
le mois prochain	next month
l'année prochaine	next year
le weekend prochain	next weekend
en octobre prochain	next October
dans quelques jours	in a few days
dans ___ heure(s)	in ___ hour(s)
dans ___ jour(s)	in ___ day(s)
dans ___ semaine(s)	in ___ week(s)
dans ___ mois	in ___ month(s)
dans ___ an(s)	in ___ year(s)

Useful Verbs

ce sera = it will be
je serai = I will be
ils seront = they will be

il y aura = there will be

j'irai = I will go
j'y irai = I will go **there**
je vais **y** aller = I'm going to go **there**
je ferai = I will do
je **le** ferai = I will do **it**
je l'aimerai = I will enjoy **it**

KS3 French Core Classroom Language

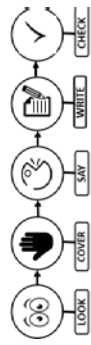
Ça va? (how are you ?)	Asseyez-vous (sit down)
Merci (thank you)	Silence, s'il vous plaît (silence please)
Pardon, Madame / Monsieur (excuse me, Miss/Sir)	Ecoutez (listen)
J'ai fini (I've finished)	Regardez (look)
Je ne sais pas (I don't know)	Ecrivez (write)
J'ai besoin d'aide (I need some help)	Levez-vous (stand up)
Je ne comprends pas (I don't understand)	Travaillez en équipe (work in a team)
Répétez, s'il vous plaît (repeat, please)	Travaillez avec un partenaire (work with a partner)
Comment dit-on _____ en français? (How do you say _____ in French?)	C'est quoi en anglais? (what is it in English?)
Je peux... ? (can I... ?)	Qui peut expliquer en anglais? (who can explain in English?)
Pouvez-vous... ? (Can you... ?)	J'ai besoin d'un volontaire (I need a volunteer)

Days, months and birthdays

*No capital letters for days of the week or months in French (unless it's the start of a sentence)

<u>Days</u> Monday lundi Tuesday mardi Wednesday mercredi Thursday jeudi Friday vendredi Saturday samedi Sunday dimanche		<u>Months</u> janvier février mars avril mai juin juillet août septembre octobre novembre décembre		<u>Numbers</u>			
<u>Seasons</u> Spring le printemps Summer l'été Autumn l'automne Winter l'hiver				1	un	16	seize
				2	deux	17	dix-sept
				3	trois	18	dix-huit
				4	quatre	19	dix-neuf
				5	cinq	20	vingt
				6	six	21	vingt-et-un
				7	sept	22	vingt-deux
				8	huit	23	vingt-trois
				9	neuf	24	vingt-quatre
				10	dix	25	vingt-cinq
				11	onze	26	vingt-six
				12	douze	27	vingt-sept
				13	treize	28	vingt-huit
				14	quatorze	29	vingt-neuf
				15	quinze	30	trente
				40	quarante	80	quatre-vingts
				50	cinquante	90	quatre-vingts-dix
				60	soixante	100	cent
				70	soixante-dix	1000	mille
<u>Saying the date in French</u> Le + number+ month e.g. le deux avril = the 2 nd April le vingt juin = the 20 th June EXCEPTION the 1 st = le premier e.g. le <u>premier</u> mai = the 1 st May				<u>Colours</u> blanc white noir black rouge red bleu blue vert green jaune yellow rose pink violet purple gris grey brun brown			

Y9 French Module 11 – On Se Connecte!



A	Français	Anglais
1	un commentaire	a comment
2	un forum	a forum
3	les réseaux sociaux	social networks
4	les médias sociaux	social media
5	un membre	member
6	un risque	a risk
7	une image	an image/picture
8	un message	a message
9	un lien	a link
10	une application	an app
11	à mon avis	in my opinion
12	pour moi	for me
13	dangereux (-euse)	dangerous
14	noir/nodve	harmful
15	populaire	popular
16	gratuit (e)	free
17	agréable	pleasant
18	addictif/addictive	addictive
19	amusant (e)	fun
20	malsain (e)	unhealthy

Un Forum sur les médias sociaux et les jeux en ligne

 Le jeu vidéo est **important** dans ma vie car il me permet de me détendre et de socialiser. J'**utilise** les réseaux sociaux tous les jours aussi. Ce **sont bien et utiles**.

 J'adore les réseaux sociaux, ils me permettent de rester **connecté(e)** avec mes amis, de partager des moments spéciaux et d'explorer de nouvelles idées **passionnantes**.

 Selon moi, Les réseaux sociaux sont addictifs et peuvent nuire à la santé mentale. Il ne faut jamais partager trop d'**informations personnelles** en ligne.

Oui, mais les réseaux sociaux permettent de rester en **contact** avec des amis, partager des idées et découvrir de nouvelles cultures, renforçant ainsi les **liens** sociaux et la diversité. Par **contre**, je n'aime pas trop les jeux vidéos; je ne m'y **intéresse** pas.

Tu es d'accord avec qui?



-ien

-u

on/om

in/im

B	Français	Anglais
1	les influenceurs	influencers
2	les youtubeurs	youtubers
3	riche	rich
4	célèbre	famous
5	important	important
6	un modèle	role-model
7	un fan	a fan
8	une tendance	a trend
9	une chaîne	a channel
10	une célébrité	a celebrity
11	milleur (e)	best
12	pire	worse
13	suivre	to follow
14	promouvoir	to promote
15	encourager	to encourage
16	causer	to cause
17	partager	to share
18	inspirer	to inspire
19	explorer	to explore
20	influencer	to influence

C	Français	Anglais
1	un jeu	a game
2	un genre	a type
3	une console	a console
4	une victoire	a victory
5	un joueur	a player
6	en streaming	streamed
7	une manette	a controller
8	un abonnement	a subscription
9	tous les soirs	every night
10	tout le temps	all the time
11	la violence	violence
12	acro	addicted
13	passionnant	exciting
14	divertissant	entertaining
15	une perte d'argent	a waste of money
16	une perte de temps	a waste of time
17	gagner	to win
18	perdre	to lose
19	passer du temps	to spend time
20	participer à	to take part in

D	Français	Anglais
1	pour moi	for me
2	pour ma part	for me
3	selon moi	according to me
4	à mon avis	in my opinion
5	à ton avis	in your opinion
6	à son avis	in his/her/their opinion
7	je dirais que	i would say that
8	les avantages sont	the advantages are
9	les inconvénients sont	the disadvantages are
10	par contre	on the other hand
11	milleur	better
12	pire	worse
13	réaliste	realistic
14	formidable	fantastic
15	affreux	awful
16	effrayant	scary
17	agacant	annoying
18	cher	expensive
19	bon marché	cheap
20	fascinant	fascinating

Y9 French Sentence Builders – Module 9 – On Se Connecte!



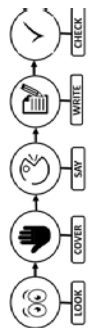
Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

SB1 : Que penses-tu des réseaux sociaux? – What do you think of social media?		
Opinion Phrase	Noun	Present tense verb
À mon avis, (in my opinion)	les réseaux sociaux (social networks)	sont (are)
Selon moi, (according to me)	les médias sociaux (social media)	ne sont pas (aren't)
Je pense que (I think that)	les applications sociales* (social apps)	ne sont jamais (are never)
Je crois que (I believe that)	Instagram	est (is)
	TikTok	n'est pas (isn't)
	Snapchat	n'est jamais (is never)

SB2 : Qui sont les influenceurs? – Who are the influencers?			
Subject and verb	comparative/ superlative	Adjective	Than/as
les influenceurs sont	Plus (more)	riche	que
les Youtubeur's sont(are)	Moins (less)	célèbre	
les célébrités ne sont pas (celebrities are not)	Aussi (as)	important	
x (named person) est (is)	le/la plus	puissant	
X n'est pas (is not)	le/la moins	amusant (e)	du monde
x (named person) est	meilleur(s) pire	populaire	que

SB3 : Tu joues à des jeux en ligne? – Do you play games online?			
Subject and Verb	Adverb of frequency	Possessive Adjective + Object	Reason
Je joue (I play)	souvent (often)	sur mon xbox (on my xbox)	car c'est barbant (because it is boring)
Je ne joue pas (I don't play)	tous les jours (every day)	sur/avec mon ps (on/with my ps)	ça me relaxe (it relaxes me)
Il/Elle joue (He/she plays)	régulièrement (regularly)	sur/avec mon console (on/with my console)	je le trouve amusant (I find it fun)
Il/elle ne joue pas (He/she doesn't play)	rarement (rarely)	contre/avec mes amis (against with my friends)	ça me plaît beaucoup (I like it a lot)
Je gagne (I win)	le soir (on an evening)		
J'ai joué (I played)	le weekend (at the weekend)		
J'ai perdu (I lost)			
J'ai gagné (I won)			

SB4 : Quels sont les avantages/désavantages des médias/jeux? _What are the adv/disadvantages of media?			
Opinion Phrase	Object	Modal Verb	Infinitive phrase
À mon avis (in my opinion)	les réseaux sociaux	peuvent (can)	être contrôlé (es) (be controlled)
Selon/Pour moi (according to/for me)	les médias sociaux	pourraient (could)	être dangereux (euses) (be dangerous)
En ce qui me concerne (As far as I'm concerned)	les jeux vidéos (video games)	ne peuvent pas (can not)	être restreint (es) (be restricted)
Pour ma part, (For me..)	les consoles de jeux (games consoles)	doivent (must)	être aboli (es) (be abolished)
	les influenceurs	devraient (should)	avoir un impact positif/négatif (s) (have a positive/negative impact)
	les youtubeurs	ne doivent pas (must not)	être un passe-temps agréable (be a pleasant hobby)
			avoir une bonne influence (have a good influence)
	FIFA/Roblox/ Minecraft etc.	est (is)	meilleur/pire que ... (better/worse than ...)
	X (Instagram/Tik tok)	n'est pas (is not)	plus passionnant que .. (more exciting than ..)
		peut/doit (can/must)	moins barbant que .. (less boring than ..)



A	Français	Anglais
1	se lever	to get up
2	s'amuser	to have fun
3	se coucher	to go to bed
4	se reposer	to rest
5	s'engager à	to get involved in
6	en forme	fit
7	activité physique	physical activity
8	l'exercice	exercise
9	le corps	the body
10	l'énergie	energy
11	régulièrement	regularly
12	souvent	often
13	peu	not much
14	de bonne heure	early
15	tard	late
16	une promenade	a walk
17	handicapé	handicapped
18	malade	ill
19	la musculation	weight-training
20	une salle de sport	a gym

B	Français	Anglais
1	un régime	a diet
2	saïn	healthy
3	malsain	unhealthy
4	de la viande	meat
5	végétarien (ne)	vegetarian
6	végan	vegan
7	l'eau	water
8	les fruits	fruit
9	les légumes	vegetables
10	le fromage	cheese
11	le pain	bread
12	manger	to eat
13	boire	to drink
14	le poisson	fish
15	le lait	milk
16	l'œuf	egg
17	le riz	rice
18	le repas	meal
19	le fast food	fast food

Une lettre au courrier du cœur et la réponse

Chère Tante Élise,
Je m'appelle Seydou et j'ai 14 ans. Je traverse une période difficile et je commence à me sentir déprimé. Mes soucis de santé mentale me rendent triste et je ne sais pas si je peux **vain**cre mes problèmes. Je me sens souvent seul et découragé. Est-ce qu'il y a des **ch**oses que je peux faire pour me sentir mieux, c'est une bata**ill**e constante ?
Merci beaucoup pour ton aide, ton cop**ain**, Seydou



Cher Seydou,
Il est important de prendre soin de ta santé mentale. Tout d'abord, essaie de t'engager dans une activité physique régulière. L'exercice peut aider à libérer des endorphines, les hormones du bonheur. Trouve une activité que tu aimes, et essaie de le faire régulièrement. Même le trav**ail** scolaire peut offrir une diversion utile. Il faut aussi avoir un régime **sain**. Ensuite, passe du temps à l'extérieur. Une promenade dans la nature peut être apaisant pour l'esprit. Essaie de prendre quelques minutes **ch**aque jour pour respirer profondément. N'oublie pas que tu n'es pas seul et qu'il est important de parler de tes sentiments à quelqu'un, comme un membre de ta famille, un enseignant ou un conse**ill**eur. *F*ixe x



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C	Français	Anglais
1	mes professeurs	my teachers
2	les autres gens	other people
3	le s exams	exams
4	mes parents	my parents
5	ma santé	my health
6	les problèmes	problems
7	les soucis	worries
8	agacer	to annoy
9	émerv	to get on ... nerves
10	irriter	to irritate
11	rendre	to make (someone sth.)
12	quelquefois	sometimes
13	parfois	sometimes
14	beaucoup	a lot
15	trop	too much
16	tout le temps	all the time
17	énormement	enormously
18	constamment	constantly
19	triste	sad
20	stressé	stressed

D	Français	Anglais
1	promouvoir	to promote
2	prioriser	to prioritise
3	parler	to speak/talk
4	cacher	to hide
5	lutter	to struggle/fight
6	se sentir	to feel
7	s'en sortir	to get through (a problem)
8	accepter	to accept
9	aider	to help
10	réduire	to reduce
11	le stress	stress
12	les émotions	emotions
13	quelqu'un	someone
14	la santé mentale	mental health
15	la confiance en soi	self-esteem
16	le maltraitement	mistreatment
17	le bien-être	well-being
18	isolé	isolated
19	seul	alone/lonely
20	les sentiments	feelings

Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKvI>

method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

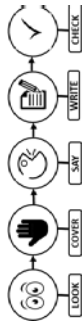
SB1 : Que fais-tu pour rester en forme? – What do you do to stay fit?			
Pour + Infinitive	Reflexive Verb (present)	Adverb	Additional info.
Pour rester en forme (to stay fit)	je me lève (I get up)	souvent (often)	de bonne heure (early)
Pour être en forme (to be fit)	je me couche (I go to bed)	régulièrement (regularly)	tard (late)
Pour être sain (to be healthy)	Je ne me couche pas (I don't go to bed)	toujours (always)	avec mes amis (with my friends)
Pour garder la forme (To keep fit)	je m'amuse (I have fun)	normalement (normally)	à la maison (at home)
	je me repose (I rest)	peu (not much)	le soir/le weekend (on an evening/at the weekend)
	Je m'engage à (I get involved in)		une équipe/club (a team/club)
	Present Tense verb		
	je fais (I do)		du sport/judo/vélo
	je joue (I play)		au foot/hockey/golf
			de l'activité physique

SB2 : As-tu un régime équilibré? – Do you have a healthy diet?		
Verb	Object	Opinion with Direct Object Pronoun
Je mange (I eat)	de la viande (meat)	et je le/la (s) trouve savoureux/dégoûtant (es) (and I find it/them tasty/disgusting)
Je bois (I drink)	des fruits (fruit)	car je le/la aime (because I like it/them)
Je ne mange pas	des légumes (vegetables)	puisque je ne le/la/les aime. (since I don't like it/them)
Je ne bois pas	des pâtes (pasta)	et je l' /les ai trouvé (es) trop sale (s)/sucré (s) – I found it/them too salty/sweet
J'ai bu (I drank)	De l'eau (water)	parce que je l' /les ai aimé (es). (because I liked it/them)
Je n'ai pas mangé	des boissons gazeuses (fizzy drinks)	comme je ne l' /les ai pas aimé (es) (as I didn't like it/them)
Je n'ai pas bu		

SB3 : Q			
Quels sont les causes de stress dans ta vie? What are the causes of stress in your life?			
Subject	Direct Object pronoun	Verb	Adverb
mes amis (my friends)	me/m' (me)	agacent (annoy)	souvent (often)
mes profs (my teachers)	te/t' (you)	irritent (irritate)	beaucoup (a lot)
mes parents (my parents)	nous (us)	énervent (get on ..nerves)	tout le temps (all the time)
mon/mes frère (s) (my brother (s)	vous (you)	stressent (stress)	énormement (enormously)
ma/mes sœur (s) (my sister (s)	le/la/l' (him/her)	rendent triste (make .. sad)	quelquefois (sometimes)
les examens (exams)	les (them)	préoccupent (worry)	
les autres gens (other people)			
Substitute any noun	NB word order is different in French (e.g. me stresses not stresses me	You should know lots of adverbs by now	

SB4 : Qu'est-ce qu'on peut faire pour promouvoir le bien-être? What can we do to promote well-being		
Modal verb	Infinitive	Add it! onal sentence endings (if needed)
On peut (you/we can)	promouvoir (promote)	la santé mentale (mental health) les bons rapports (good relationships) le bien-être (well-being), la confiance en soi (self-esteem)
On pourrait (you/we could)	prioriser (prioritise)	
On doit (you/we must)	aider (help)	les autres (others)
On devrait (you/we should)	réduire (reduce)	le stress (stress)
Il faut (you/we must)	parler (to talk)	à quelqu'un (to someone)
On ne peut pas (you/we can't)	ignorer (ignore)	les problèmes (problems)
On ne doit pas (you/we must not)	accepter (accept)	le maltraitement (mistreatment)
On ne devrait pas (you/we should not)	cacher (hide)	les signes de stress (signs of stress)
	lutter (struggle/fight)	les émotions (emotions)
Il ne faut pas (you/we mustn't)	se sentir (to feel)	seule (e) – alone
		isolé (es) - isolated

Y9 French Module 11 – C’est Notre Planète



A	Français	Anglais
1	S'intéresser à	To be interested in
2	S'engager à	To be involved in
3	Participer à	To participate in
4	Sauver	To save
5	respecter	To respect
6	La nature	Nature
7	Les animaux	Animals
8	Les plantes	Plants
9	Les arbres	trees
10	Les bois	Woods
11	Les forêts	Forests
12	Les rivières/fleuves	Rivers
13	Les fleurs	Flowers
14	La campagne	Countryside
15	La terre	Earth
16	L'environnement	Environment
17	Le monde naturel	The natural world
18	Les activités en plein air	Outdoor activities
19	La conservation	Conservation
20	Les ressources	resources



Je m'inquiète des animaux en voie de disparition car ils sont essentiels à l'équilibre de notre planète. Il est nécessaire de prendre soin de leur habitat et d'abolir la déforestation qui n'est pas éthique. Dans les Pyrénées les ours bruns sont devenus très rares.



Je suis préoccupé par les catastrophes naturelles qui sont causées par le réchauffement climatique. J'ai déjà vécu l'ouragan dévastateur et les inondations sont fréquentes. Les conséquences du changement climatique sont évidentes et il faut agir maintenant pour protéger notre planète.

B	Français	Anglais
1	l'homme	man
2	la déforestation/le déboisement	de-forestation
3	les chasseurs	hunters
4	les gens	people
5	les habitats	habitats
6	les espèces	species
7	les tortues de mer	sea turtles
8	les oiseaux	birds
9	les abeilles	bees
10	les baleines	whales
11	des manifestations	demonstrations
12	vu	seen/saw
13	fait	did/done
14	organisé	organised
15	causé	caused
16	menacé	threatened
17	détruit	destroyed
18	amélioré	improved
19	chassé	hunted
20	protégé	protected



J'adore la nature ! J'ai déjà exploré de beaux paysages, observé des oiseaux rares et nagé dans des rivières. C'est dans ces moments que je me sens vraiment vivant et en harmonie avec le monde qui m'entoure. J'ai participé à des manifestations pour les organisations environnementales.



Il est important de protéger l'environnement pour assurer un avenir durable. Il faut réduire notre empreinte carbone en utilisant les transports en commun et en favorisant les énergies renouvelables, comme l'énergie thermique. Il est également crucial de recycler et de préserver les ressources naturelles.



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C	Français	Anglais
1	en Asie	in Asia
2	en Afrique	in Africa
3	au Canada	in Canada
4	récemment	recently
5	il y a deux ans	two years ago
6	l'année dernière	last year
7	les inondations	floods
8	les tremblements de terres	earthquakes
9	les catastrophes	disasters
10	les incendies	fires
11	un risque	risk
12	le réchauffement de la terre	global warming
13	le temps extrême	extreme weather
14	qui m'inquiète	which worries me
15	il faut agir	we must act
16	se passer	to happen
17	devenir	to become
18	remarquer	to notice
19	vivre	to experience
20	voir	to see

D	Français	Anglais
1	Il faut	we/you must
2	il est nécessaire de	it is necessary
3	il est possible de	it is possible
4	il est important de	it is important
5	réduire	to reduce
6	accepter	to accept
7	changer	to change
8	recycler	to recycle
9	lutter	to fight
10	agir	to act
11	la consommation d'énergie	consumption of energy
12	la pollution	pollution
13	les gaz carbonique	carbon dioxide
14	les déchets	rubbish
15	les ordures	(household) waste
16	gaspiller	to waste
17	utiliser	to use
18	les énergies renouvelables	renewable energy
19	les produits bio	organic products
20	les transports en commun	public transport

Y9 French Sentence Builders – Module 11 – C'est Notre Planète



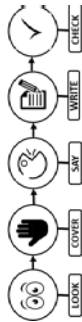
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SB1 : Est-ce que tu apprécies la nature? Do you appreciate nature/the natural world?			
Subject Pronoun and Verb	Preposition	Noun	Reason
Je m'intéresse I am interested	n	monde naturel (m) nature (f)	depuis un jeune âge (since a young age)
Je ne m'intéresse pas I am not interested	à l' (vowel) à la (f) aux (pl)	Les droit des animaux (mpl) animal rights terre (f) earth environnement (m) conservation (f) forêts/bois (mpl) forests/woods	parce qu'il est très important pour moi (because it is very important for me) car c'est notre responsabilité (it is our responsibility) ce n'est pas mon truc (it's not my thing) ce sont des ressources essentielles (they are essential resources) C'est une perte de temps (it is a waste of time)
Je m'engage I am involved			
Je ne m'engage pas I am not involved			
Je participe I take part			
Je ne participe pas I don't take part			

SB2 : Qu'est-ce qui s'est passé? What has happened?			
Subject	Auxiliary	Past Participle	Object (phrase)
L'homme (man)	a (has)	causé (caused)	l'extinction des espèces (extinction of species)
La déforestation (hunters)	n'a pas (hasn't)	détruit (destroyed)	les habitats naturels (the natural habitats)
Les chasseurs (hunters)	ont (have)	menacé (threatened)	les animaux (animals)
Les gens (people)	n'ont pas (haven't)		les choses (things)
Je/ J' (I)	ai (have)	amélioré (improved)	des documentaires (documentaries)
Nous (we)	n'ai pas (haven't)	vu (seen)	des manifestations (demonstrations)
	n'avons pas (haven't)	fait (done)	une pétition (nothing)

SB3 : Que sais-tu des désastres naturels? What do you know about natural disasters?			
Where/When	Subject and verb (past tense)	Object	Development
En Asie/Europe/Afrique/France/Australie Au Canada/Maroc/Sénégal	on a vécu (we have experienced)	(more) plus de/les inondations (floods)	qui est un risque majeur pour la planète (which is a major risk for the planet)
Récemment, (recently)	on a vu (we have seen)	les incendies (fires)	qui m'inquiète beaucoup (which worries me a lot)
Il y a deux ans, (2 years ago)	on a remarqué (we have noticed)	les tremblements de terre (earthquakes)	qui est un danger pour tout le monde (which is a danger for everyone)
L'année dernière, (last year)		la pollution (pollution)	à cause du réchauffement de la terre (because of global warming)
L'été dernière, (last summer)	il y a eu (there have been)	les catastrophes (disasters)	à cause du temps extrême (because of extreme weather)
Les inondations (floods)	se sont devenu(e)s (have become)	plus communes (more common)	à cause des activités humaines (because of human activities)
Les incendies (fires)		plus graves (more serious)	et il faut agir (and we must act)
Les tremblements de terre (earthquakes)	se sont passé(e)s (have happened)	fréquemment (frequently) souvent (often)	
Les catastrophes (disasters)			

SB4 : Que peut on faire pour protéger la planète? What can we do to protect the planet?			
Impersonal Verb	Infinitive	Object	Relative pronoun
Il faut (We must)	réduire (reduce)	la consommation d'énergie (energy consumption)	Qui
Il est nécessaire de (It is necessary to)	protéger (protect)	les animaux/les plantes	(that/ which)
Il est important de	utiliser (use)	nos habitudes (our habits)	
Il est possible de	changer (change)	Les énergies renouvelables (renewable energy)	que/qu'
Il ne faut pas (we must not)	recycler (recycle)		(that/ which)
Il n'est pas essentiel de (it is not essential to)		les déchets (rubbish)	



A	Français	Anglais
1	si j'avais la possibilité	if I had the chance
2	si j'étais riche	if I was rich
3	je ferais	I would do
4	j'irais	I would go
5	j'aimerais	I would like
6	je voudrais	I would like
7	je préférerais	I would prefer
8	je voyagerais	I would travel
9	je visiterais	I would visit
10	je n'aimerais pas	I would not like
11	j'essayerais	I would try
12	un tour du monde	a world tour
13	une île tropicale	a tropical island
14	un autre pays	another country
15	les vues	the views
16	aller à la pêche	to go fishing
17	faire du paddle de bout	to go paddleboarding
18	faire du tourisme	to see the sights
19	la plage	the beach
20	des pôles touristiques	tourist hubs

B	Français	Anglais
1	ce qu'il/ce que	what
2	m'intéresse	interests me
3	me plaît	pleases me
4	j'apprécie	I appreciate
5	Me permet de	allows me to
6	je trouve bien	I find good
7	j'aime le plus/moins	I like the most/least
8	rencontrer de nouveaux gens	to meet new people
9	découvrir	to discover
10	chercher	to look for
11	les sites historiques	historic sites
12	les belles plages	beautiful beaches
13	les endroits	places
14	les souvenirs	memories
15	élargir nos horizons	to broaden our horizons
16	s'évader	to get away
17	s'enrichir	to become enriched
18	apprendre quelque chose	to learn something
19	mémorable	memorable
20	s'amuser	to have fun

Véronique nous parle des vacances....

Si j'avais la possibilité de partir en vacances j'aimerais visiter un pays européen. Si j'avais l'occasion, je voudrais éviter des **p**ôts touristiques j'essayerais des plats délicieux et j'apprécierais les vues magnifiques.

Ce qui est merveilleux dans le tourisme, c'est qu'il nous permet de découvrir de nouveaux endroits, de rencontrer des personnes agréables et de créer des souvenirs incroyables. Cela élargit nos horizons, même si on ne fait pas un tour du monde!

Ce que je trouve parfois frustrant dans le tourisme, c'est le coût élevé des voyages et les foules de touristes que l'on trouve dans certains endroits. Parfois, l'expérience peut être épuisante et donc rester au **f**oyer est préférable.

Cet été, j'ai hâte de partir en vacances avec ma famille. J'ai envie de visiter la **c**ôte pour profiter du soleil et me baigner à la plage. On va également aller à la **p**êche près de **chez** moi, et je vais vraiment m'amuser. En explorant les possibilités locales, chacun peut profiter d'une été mémorable.

En conclusion, que l'on voyage ou non, les vacances sont une opportunité de s'évader, de s'enrichir avec des nouvelles expériences et de développer sa vision du monde.



C	Français	Anglais
1	je trouve frustrant	I find frustrating
2	m'énnerve	annoys me
3	m'agace	annoys me
4	ne m'intéresse pas	doesn't interest me
5	ne me plaît pas	displeases me
6	je n'aime pas trop	I don't like too much
7	j'ai horreur de	I can't stand
8	épuisant	exhausting
9	fatigant	tiring
10	l'empreinte carbone	carbon footprint
11	les foules	the crowds
12	surpeuplé	over-crowded
13	la chaleur	the heat
14	le transport en commun	public transport
15	le coût élevé	the high cost
16	l'hébergement	the accommodation
17	parfois	sometimes
18	affreux	awful
19	sale	dirty
20	le voyage	the journey

D	Français	Anglais
1	pendant les grandes vacances	during the summer holidays
2	l'année prochaine	next year
3	cet été	this summer
4	en juillet/août	in July/August
5	l'été prochain	next summer
6	bientôt	soon
7	à Noël	at Christmas
8	je vais/on va	I am going/we are going
9	aller/visiter/faire	to go/visit/do
10	ce sera	it will be
11	il y aura	there will be
12	magnifique	magnificent
13	une plage/piscine	beach/pool
14	à couper le souffle	breathtaking
15	la mer	the sea
16	un camping	a campsite
17	une auberge de jeunesse	a youth hostel
18	un gîte	a self-catering cottage
19	en avion	by plane
20	en bateau	by boat

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Built Phrases

Accuracy

Vocabulary

Options

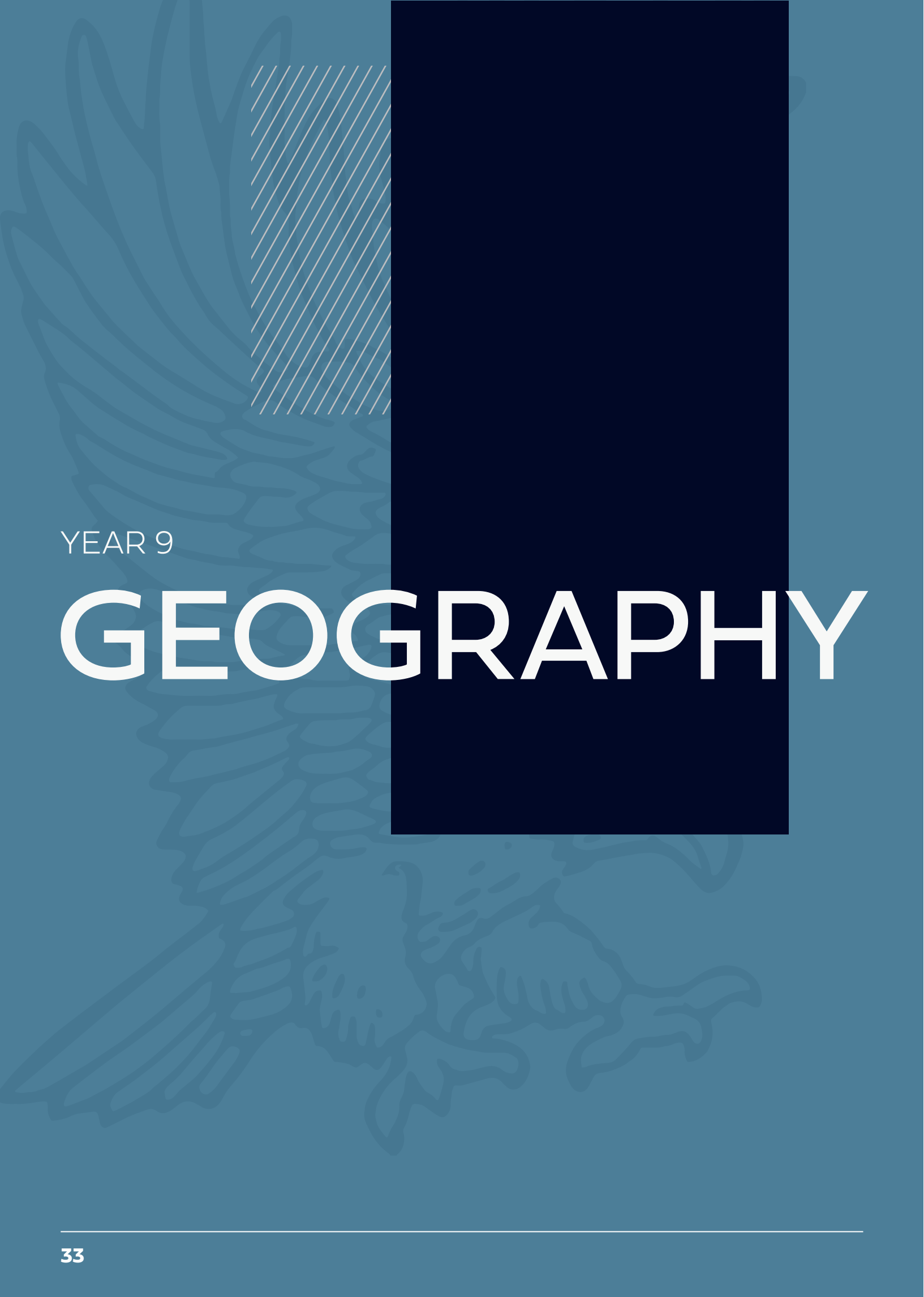
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SB1 : Quelle est ta destination de vacances idéale? What is your ideal holiday destination?			
Si clause	Conditional Verb	Destination /Activity	
Si j'avais la possibilité (if I had the chance)	je voyagerais (i would travel)	en Europe/Asie/Norvège (in europe/asia/norway)	
	j'irais (i would go)	à New York/Tokyo/Paris	
Si je pouvais (If I could)	je visiterais (i would visit)	une île tropicale (a tropical island)	
Si j'étais riche (If I was rich)		un tour du monde (a tour of the world)	
Si je devais choisir (if I had to choose)	je ferais (i would do)	du tourisme en Italie (tourism in italy) un safari (a safari)	
	je préférerais faire (i would prefer to do)	de l'escalade/des randonnées (climbing.hiking)	
	j'aimerais faire (i would like to do)		

SB2 : Quels sont les avantages des vacances? What are the advantages of holidays?		
Relative Pronoun	Verb	Subordinate Clause
Ce qui (what)	m'intéresse (interests me)	c'est voyager (is travelling)
	me plaît (pleases me)	c'est rencontrer de nouveaux gens (is meeting new people)
Ce que (what)	j'aime le plus (I like the most)	c'est découvrir des nouvelles cultures (is discovering new cultures)
	j'apprécie (I appreciate)	relaxer chez moi (is relaxing at home)
	je trouve bien (I find good)	c'est s'amuser avec ma famille (is having fun with my family)

SB3 : Quels sont les inconvénients des vacances? What are the disadvantages of holidays?			
Relative Pronoun	Verb	Subordinate Clause	
Ce qui (what)	m'énneve (annoys me)	c'est les autres touristes (is the other tourists)	
		c'est les plages surpeuplées (is overcrowded beaches)	
	m'inquiète (worries me)	c'est mon empreinte carbone (is my carbon footprint)	
	ne me plaît pas (displeases me)	c'est le coût des vacances (is the cost of holidays)	
Ce que (what)	j'aime le moins (I like the least)	c'est choisir une destination (choosing a destination)	
	je n'aime pas (I don't like)	c'est être avec ma famille (is being with my family)	
	je trouve agaçant (I find annoying)		

SB4 : Quels sont tes projets pour les grandes vacances? What are your plans for the summer holidays?			
Time Expression	Part of « aller »	Infinitive	Development
Pendant les grandes vacances	Je vais (I am going)	Aller (to go)	En Suisse/France/Allemagne avec ma famille
Cet été	Tu vas (You are going)	Visiter (to visit)	(à) Paris/Lyon/St. Tropez avec mes amis
	Il/Elle va (He/She is going)	Rester (to stay)	Les sites historiques
L'année prochaine	On va (we are going)	Voyager (to travel)	Dans un hôtel/un appartement
	Nous allons (we are going)	Faire (to do)	sur un camping/sur une île tropicale
		S'amuser (to have fun)	à la maison
En juillet/août	Vous allez (you are going)	Chercher (to look for)	En train/avion/bateau/voiture
	Ils/Elles vont (They are going)		Un tour du monde/du kayak/de la planche à voile, du tourisme

A large, stylized eagle graphic in a light blue color, spanning the entire page. The eagle's head is at the bottom, and its wings are spread upwards. The wings have a detailed, feathered texture. A dark blue vertical rectangle is positioned on the right side of the page, partially overlapping the eagle's wing. A smaller, light blue rectangle with diagonal white lines is located in the upper left quadrant, also overlapping the eagle's wing.

YEAR 9

GEOGRAPHY

Geography Knowledge Organiser

EQ1: What are the challenges of Asia's southern climate?

Monsoon	Season of prevailing winds
Tropical Storm	A large low-pressure system with winds of 74+mph
Vulnerability	The state of being exposed to potential risk or harm

Location of Asia
Asia is the **largest continent** by land mass and population. It is made up of **48 countries**. Asia is located in **both hemispheres**, west of Europe and north of Oceania. The Indian ocean is to the south, and the Pacific ocean to the east.

Tropical Storms

Location	Name
Located between 5-30° north and south of the equator.	Typhoons – Pacific Hurricanes – Atlantic Cyclones – Indian
Conditions Needed Ocean waters 27°C+ Deep ocean waters Earths Rotaion (Coriolis Effect)	

Summer Monsoon

The **Summer Monsoon** occurs between May and September. Wind blows from the Indian ocean towards the land brining **wet** weather conditions. At the end of September, there is a reversal in the wind direction marking the start of the **dry winter monsoon**.

Advantages

- Supports agriculture accounting for 15% of India's GDP
- Fills up stores for the winter
- Provides HEP with India being the 5th largest producer

Disadvantages

- Flooding can destroy crops, homes and infrastructure
- 900 people killed due to heavy rainfall
- Increase in landslides

Typhoon Haiyan, Nov 2013

Strenght	Category 5 195+mph winds 28cm rainfall in 24h
Impacts	7000 people killed 90% of buildings in Tacloban destroyed \$4 billion in damages 6000h of farmland destroyed
Solutions	Build back better No build zone Emergency aid

Factors affecting the Philippines Vulnerability

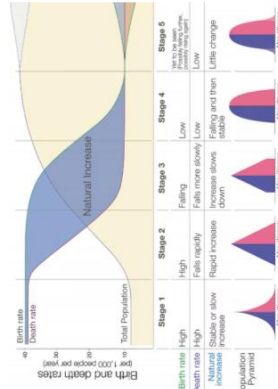
Warm Ocean Waters	The Philippines lie within a 'warm pool' in the Indian ocean where temperatures are often above 27°C
Coastal Homes	60% of the population live in low-lying coastal areas. These areas are most at risk from TS.
Deforestation	Increase in the number of mudslides due to bare soils being hit with excessive rainfall
Under-development	The Philippines is a lower MIC with 20% of the population in poverty. This means there are poor living conditions

EQ2: Why are many East Asian countries concerned about their population?

Population Pyramid	Show the sex-age distribution of a population
Development	The economic progress of a country and improvement in quality of life
Demographics	The different social characteristics of a population

Measures of Development and Demographics

Birth Rate	The number of live births per year per 1000 of the population
Death rate	The number of deaths per year per 1000 of the population
Fertility Rate	The average number of children a women would have
Infant Mortality Rate	The number of deaths of infants under 1 per 1000 of live births



Asia is home to the top 2 countries with the largest population (India and China). These countries have a **birth rate higher than their death rate** causing **natural increase** (Stage 3) As the country develops into high MICs, the birth rate also falls due to better access to contraception and changes in lifestyle (Stage 4). In some HICs, the **birth rate is lower than the death rate** causing **natural decrease** (Stage 5)

Japan's Ageing Population

Japan has an ageing population with over 1/3 of the population being over 65.

Causes	Impacts
• Increase in life expectancy (85) • Decrease in birth rate (5.8) • Decrease in fertility rate (1)	• Decrease in the economically active group • Pressure to fill job vacancies
Solutions • Pension age has increased to 65 • Employers receive grants to keep over 65s in work • Invested in more specialist healthcare and more care homes	

China's One Child Policy

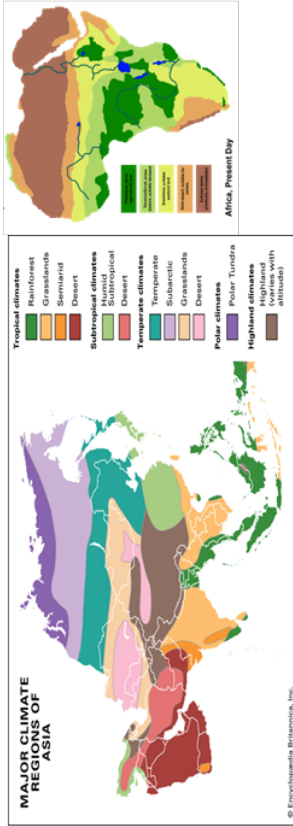
In 1979, China introduced the OCP to combat their rapidly growing population. The OCP ended to became the two-child policy in 2016 and the three child in 2021.

For the OCP	Against the OCP
• 400 million births prevented • Fertility rate reduced from 5.7 to 1.5 in 2011 • Need to reduce the pressure on resources	• Gender gap with 60 million more men than women • Forced sterilisation • Increased abortion rates

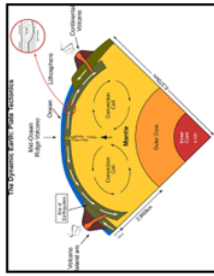
Geography Knowledge Organiser

Discuss discuss the geographical similarities, differences and links between Asia and Africa.

Ecosystems in Asia and Africa vary – Asia being larger has a greater range of ecosystems whereas Africa only has a small range of ecosystems.



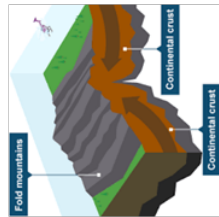
Whereas Asia experiences both positive and negative impacts of monsoon rains, Africa struggles with the impacts of desertification. Africa is located either side of the equator and this means that over much of Northern Africa (The Sahel) the air is dry and sinking, creating deserts.



In Asia, there is much tectonic activity and we studied the Nepal earthquake; learning about the specific causes, short and long term impacts of this earthquake.

The cause was movement of the collision plate boundary and an earthquake of 7.8 on the Richter scale.

Over 2000 people killed
Avalanche caused on Mount Everest
At the main hospital in Kathmandu, volunteers formed human chains to clear the way for ambulances to bring in the injured, while across the city, rescuers scrambled through the rubble of destroyed buildings, among them ancient, wooden Hindu temples, in search of victims.
The scale of the disaster put the country at a massive financial strain.



Discuss discuss the geographical similarities, differences and links between Asia and Africa.

Brandt line divides the world into rich northern hemisphere and poor southern hemisphere. Asia lies both above the Brandt line (with Russia) and below the Brandt line with South East Asia, such as Japan and China.

The **population issues** vary within Asia and with Africa. In **China** they have the one child only policy, these means that most people are encouraged to only have one child, due to their large population 1.4 billion and the strain on resources to feed and provide for this large number.

In **Japan** they have an ageing population, meaning that the dependency ratio is high, the number of economically active citizens in Japan is under a great pressure to provide for a growing proportion of the population which are not working, because they are retired.

The continent of **Africa** has a population of 1.1billion people, with an uneven distribution. It is the second most populated continent after Asia and comprising of over 15% of the world's population. Africa's population has been on the increase over the past 50 years and now 60% of Africa's population are younger than 25. The population is projected to double by 2050 to around 2.4 billion people.

Ethiopia has the second largest population in Africa with over 100 million people. The government is trying to develop the economy of this landlocked country. While 80% of the population is still rural, urbanization and economic development are accelerating fast. Much of this is focused upon the capital city of Addis Ababa, which is centrally located in the country. This urban growth is happening because of push and pull factors. People move to the cities because they expect to be better off, but the reality is more like the slum pictured.

Links between China and Africa: The Belt and Road initiative

It hopes to do so by building massive amounts of infrastructure connecting it to countries around the globe. There are plans for pipelines and a port in Pakistan, bridges in Bangladesh and railways in Russia – all with the aim of creating what China calls a ‘modern Silk Road’ trading route that Beijing believes will kick start a ‘new era of globalisation’. It will connect about 65% of the world’s population, directly to China. Bewilderingly, the ‘road’ is not actually a road but rather a sea linking China’s southern coast to east Africa and the Mediterranean. The ‘belt’ is a series of overland corridors connecting China with Europe, via Central Asia and the Middle East.

In many ways it is an economic plan designed to open up and create new markets for Chinese goods and technology. Some countries, such as India, suspect the project is simply a smokescreen (something used to hide behind) that China is using to seize strategic control of the Indian Ocean.

Geography Knowledge Organiser

Explain how Atmospheric Circulation impacts Europe's Climate

Atmospheric Circulation is the large-scale movement of air which heat is distributed on the surface of the Earth, steered by 3 convection cells: the Hadley cell, the Ferrel cell, and the Polar cell. As the ground heats up it warms the air above it, providing the heat in our atmosphere. Not all areas receive the same amount of radiation from the Sun, because Earth is curved, the equator receives the most concentrated radiation, because the rays hit at a right angle. At the poles, the radiation is spread out. As air is heated by the ground, it rises, causing low pressure. In other places, air sinks, which leads to high pressure. Differences in pressure cause winds, which redistribute heat from the tropics across the planet.

Oceanic Climate

Strongly conditioned by the Stream, which keeps mild air (for the latitude) over North-western Europe in the winter months, especially in Ireland

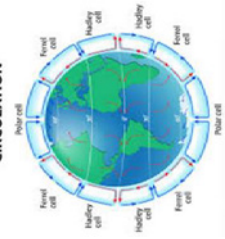
Mediterranean Climate

Characterized by rainy winters and dry summers.

Continental Climate

Experiences distinct wet seasons, with prevailing hot and dry conditions during the summer months.

GLOBAL ATMOSPHERIC CIRCULATION



Examine the effect of anthropogenic causes of climate change

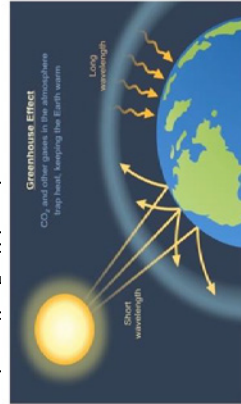
Orbital Theory — 3 changes in Earth's orbit (elliptical, axis tilts and precession (wobble)). These changes alter the amount of sunlight the Earth receives. They also affect where sunlight falls on the Earth's surface

Eruption Theory—large eruptions of ash can block incoming sunlight and thus cooling the climate.

Asteroid Collision Theory—large asteroid impacts can cool the climate, as they release dust blocking sunlight on impact with Earth.

Solar Output Theory— The Sun's output (amount produced) is not constant . Temperatures are greatest when there are more sunspots,

The *greenhouse effect* is the way that gases in the *atmosphere* trap heat from the sun. The gases act like a glass in a greenhouse. They let heat in, but prevent most of it from getting out. The *atmosphere* is a layer of gases



Evaluate the impact of the Gulf Stream/ North Atlantic Drift on the UK climate

Warm less salty water travels at the surface of our oceans, driven by surface winds that blow over the top of those oceans. This water cools as it travels north away from the Equator. Colder, denser water sinks and flows towards the equator.



The North Atlantic Drift (or Gulf Stream) ocean current flows northwards across the Atlantic Ocean, bringing warm water from the Gulf of Mexico. This results in milder (between 5-10 degrees!) winter temperatures in the west of the UK. Without this 'boost' to our climate, Europe would have very long, cold winters such as those found in Canada.

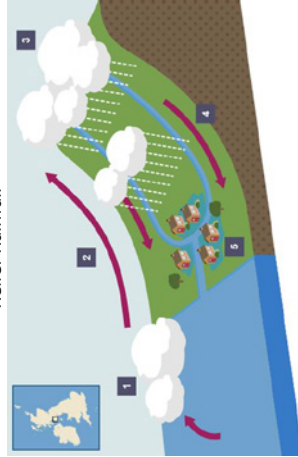
Differences in Air Pressure

Dark surfaces on land (soil, forest) absorb sunlight which is converted to heat. Land heats quickly in summer & causes the air above to heat up, rise and expand, forming areas of low pressure. The sea takes longer to heat up because sunlight is absorbed up to 30m deep. So, the Sea heats slowly in summer, therefore the air above remains cooler and denser, forming areas of high pressure.

Compare the social, economic and Environmental impacts of Storm Desmond

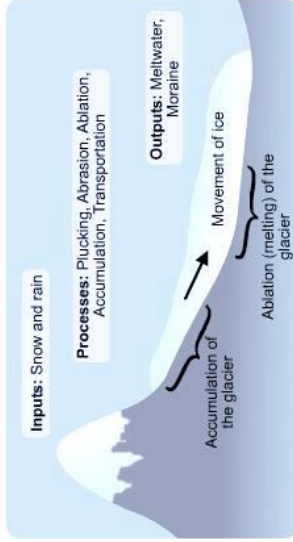
1. Warm air from the mid-Atlantic moved towards land due to the prevailing wind.
2. The warm air was forced upwards by the Cumbrian Mountains.
3. As the air cooled, it condensed to form heavy rain. The weather front stopped over Cumbria and this heavy rain fell on land that had already been saturated.
4. The falling rain poured into the River Derwent and River Cocker.
5. Cocker mouth is located at the rivers' confluence as a result, led to significant flooding.

Relief Rainfall



Geography Knowledge Organiser

EQ1: Explain how does glacial processes shape the land.



Glaciers are formed when snow falls and is compacted by the weight of overlying snow. This weight removes air from snow creating granular snow, and overtime becomes more compact creating firm and eventually glacial

Glacier	Large body of ice moving under its own weight. ('river of ice')
Zone of Accumulation	Area covered by snow and ice where precipitation is inputted.
Zone of Ablation	Area where snow and ice is removed from the glacier.
Equilibrium Line	Line that separates the zone of accumulation and ablation.
Glacial advance	The glacier increases in size. Accumulation > ablation
Glacial retreat	The glacier decreases in size. Accumulation < ablation

Erosional processes and landforms

Plucking - Meltwater freezes around a rock and is plucked as the glacier moves.

Abrasion - Rocks at the base scrape along the bedrock.

Freeze-thaw weathering - Water seeps into cracks, freezes and expands.



Transportation

Basal Sliding

Meltwater at the base of the glacier lubricates the glacier and the land beneath meaning it can flow downhill.

Internal Deformation

Gravity and the weight of the ice deforms ice crystals causing them to slide over each other.

Bulldozing

Material located at the front of the glacier is pushed downhill by the force of the ice as it is transported.

Depositional processes and landforms

Deposition - When material being transported by the glacier is dropped as the glacier retreats.

The material is characterised by:

*Randomly sorted
Soft and easily eroded*

Moraines - Mound of loose sediment (till) that is deposited by the glacier.

Erratics - Rocks that have been transported by ice and deposited elsewhere. These rocks are different from the bedrock.

Drumlins - Elongated hills of glacial deposits.



EQ2: Discuss the opportunities and challenges of glacial environments.

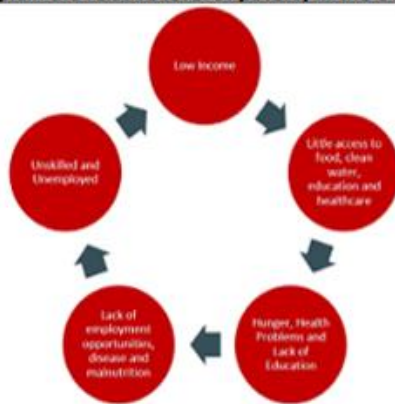
The Lake District is a national park situation in North-west England in the county of Cumbria. During the last glacial maximum, this area was covered with ice and as a result, glacial processes have shaped the landscape. Whilst upland areas in the UK provide economic activities such as farming, and forestry, tourism is the most important industry in this area. Currently 19.38 million tourist visit the Lake District spending over £1.48 millions every year.

Tourism

Opportunities	Challenges
Tourism provides employment opportunities and income for local people.	Increase in second home ownership causes house prices to rise.
Tourists stay in the local areas which maintains essential services.	Congestion and parking is a major issue due to the narrow roads which results in air pollution.
Services provided for tourists also benefit the local residents.	Increase in footpath erosion which damages the soil and plants.
Money from tourists results in economic development in the area.	Shops and services are seasonal and cater to the needs of the tourists rather than local residents.
Management Strategies	
- Fix the fells project which repairs and maintains upland footpaths. - Investment in public transport to reduce car usage. - GoLakes parking scheme to restrict parking in busy areas. - Housing schemes put in place to award planning permission for new houses that can only be sold to local people.	

Geography Knowledge Organiser – Inequality in the UK

Explain the relative level of poverty in the UK



Where can the cycle of poverty be broken? Many governments try to target education to try and get people as high as possible exam grades and therefore better jobs.

Whilst the UK is a developed country, many people are still in poverty. In the UK, being in poverty means "Households are considered to be below the UK poverty line if their income is 60% below the median household income after housing costs for that year." More than one in five of the UK population (22%) are in poverty—14.5 million people. (Population of the UK is approximately 70m)

Of these, 8.1 million are working-age adults, 4.3 million are children and 2.1 million are pensioners.

The COVID pandemic has only made things worse, coupled with Russia's invasion of Ukraine which has caused prices (inflation) to increase hugely many people are struggling more than ever to pay for the basics. Whilst the government has announced measures to help people pay bills and cope, will they actually make the difference?

Describe the Exe– Tees Line and Evaluate the effect of HS2 on 'levelling up'

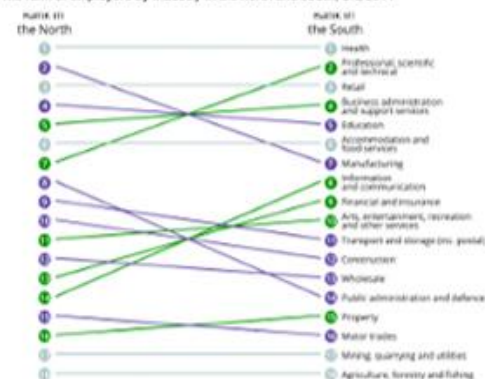
The Exe-Tees line runs from the River Exe near Plymouth and the river Tees in Middlesbrough. It is an approximation of where the relative 'poor' north and the relative 'rich' south. There are so many reasons why there is this imaginary line, but the main one is that opportunities are limited up north.

The south has London, England's Capital City which is the financial, political and economic centre/ core of the UK. Most of the governments decisions are based around what is needed in the South rather than the North. It is also said the government spends more money per person in the South than the North on things like Healthcare, services (like education) and investment in infrastructure (roads, railway etc).

Recently the Northern part of HS2, the high speed rail line between London and Birmingham/ Leeds/ York was cancelled due to the project being over budget. One of the main aims of the project was to 'level up' the UK. This could be seen as favouritism towards the South.



The rank of employers by industry in the north and south, UK, 2014



Overall UK poverty rates

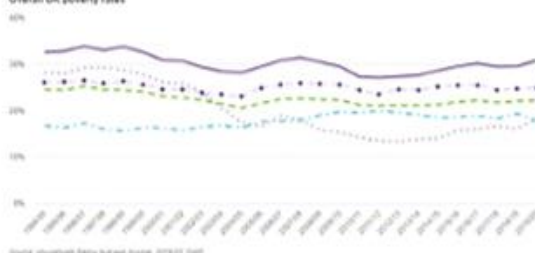


Figure 1 (left) shows how industries differ according to whether you are in the North or South.

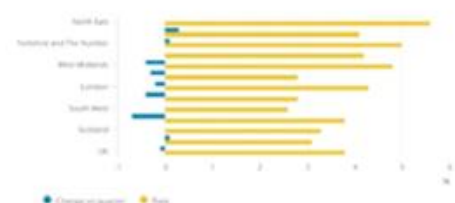
Figure 2 (bottom left) Shows an overview of UK Poverty rates. In theory, poverty should be dropping....

Figure 3 (right). An extract from the sun newspaper giving details on the North South Divide.

Figure 4 (bottom right) showing the unemployment rates in different parts of the UK.



The North East had the highest unemployment rate in the UK (unemployment rates by region, seasonally adjusted, March to May, 2019) UK regions





YEAR 9

GERMAN

Gernan Core Language

Numbers

null	0
eins	1
zwei	2
drei	3
vier	4
fünf	5
sechs	6
sieben	7
acht	8
neun	9
zehn	10
elf	11
zwölf	12
dreizehn	13
vierzehn	14
fünfzehn	15
sechzehn	16
siebzehn	17
achtzehn	18
neunzehn	19
zwanzig	20
einundzwanzig	21
zweiundzwanzig	22
dreiundzwanzig	23
vierundzwanzig	24
fünfundzwanzig	25
sechszwanzig	26
siebenundzwanzig	27
achtundzwanzig	28
neunundzwanzig	29
dreißig	30
einunddreißig	31
zweiunddreißig	32
vierzig	40
fünfzig	50
sechzig	60
siebzig	70
achtzig	80
neunzig	90
hundert	100
hundertheins	101
zweihundert	200
tausend	1000

Greetings

Hallo!	<i>Hello!</i>
Guten Tag!	<i>Good day!</i>
Guten Morgen!	<i>Good morning!</i>
Guten Abend!	<i>Good evening!</i>
Wie geht's?	<i>How are you?</i>
Gut, danke.	<i>Good, thank you.</i>
Tschüss!	<i>Bye!</i>
Auf Wiedersehen!	<i>Goodbye!</i>

Days of the week

Montag	<i>Monday</i>
Dienstag	<i>Tuesday</i>
Mittwoch	<i>Wednesday</i>
Donnerstag	<i>Thursday</i>
Freitag	<i>Friday</i>
Samstag	<i>Saturday</i>
Sonntag	<i>Sunday</i>

Frequency words

nie	<i>never</i>
selten	<i>rarely</i>
ab und zu	<i>now and then</i>
manchmal	<i>sometimes</i>
oft	<i>often</i>
immer	<i>always</i>

Intensifiers

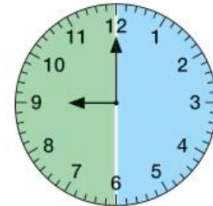
besonders	<i>especially</i>
echt	<i>truly, really</i>
ein bisschen	<i>a little</i>
ganz	<i>completely</i>
gar nicht	<i>not at all</i>
mega (z.B. mega wichtig)	<i>super (e.g. super important)</i>
nicht so	<i>not very</i>
sehr	<i>very</i>
voll	<i>totally</i>
völlig	<i>completely</i>
ziemlich	<i>quite</i>
zu	<i>too</i>

Conjunctions

und	<i>and</i>
aber	<i>but</i>
denn	<i>because</i>
oder	<i>or</i>
weil	<i>because</i>

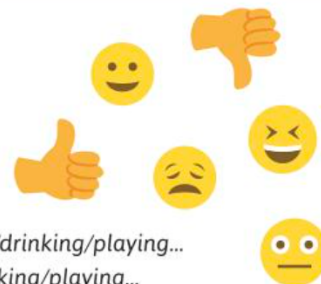
Telling the time

Es ist ... Uhr.	<i>It's ... o'clock.</i>
Es ist zwanzig nach...	<i>It's twenty past...</i>
Es ist zehn vor...	<i>It's ten to...</i>
Es ist Viertel vor/nach...	<i>It's quarter to/past...</i>
Es ist halb fünf.	<i>It's half past four ('half to five').</i>



Expressing opinions and preferences

Ich mag...	<i>I like...</i>
Ich mag (gar) nicht...	<i>I don't like... (at all)</i>
Das finde ich...	<i>I find it...</i>
Mir gefällt...	<i>I like...</i>
...interessiert mich.	<i>...interests me.</i>
Ich esse/trinke/spiele (nicht) gern...	<i>I (don't) like eating/drinking/playing...</i>
Ich esse/trinke/spiele lieber...	<i>I prefer eating/drinking/playing...</i>
Am liebsten esse/trinke/spiele ich...	<i>I like eating/drinking/playing ... most of all.</i>



Y9 German Module 1: Hallo!



A	Deutsch	Englisch
1	Guten Tag	Hello
2	Hallo	Hi
3	Guten Abend	Good evening
4	Wie heißt du?	What is your name
5	Wie sagst man...?	How do you say...?
6	Wie schreibt man das?	How do you write it?
7	Ich heiße...	I'm called.../My name is...
8	Wie geht's?	How are you?
9	gut	good
10	nicht schlecht	not bad
11	nicht so gut	not so good
12	Danke!	Thank you!

16	der Mann	man
17	der Prinz	prince
18	die Prinzessin	princess
19	das Schloss	castle
20	der Name	name

B	Deutsch	Englisch
1	Wie alt bist du?	How old are you?
2	Ich bin ... Jahre alt.	I am ... years old.
3	null	zero
4	eins	one
5	zwei	two
6	drei	three
7	vier	four
8	fünf	five
9	sechs	six
10	sieben	seven
11	acht	eight
12	neun	nine
13	zehn	ten
14	elf	eleven
15	zwölf	twelve
16	dreizehn	thirteen
17	sechzehn	sixteen
18	siebzehn	seventeen
19	zwanzig	twenty
20	das Jahr	year



Hallo!

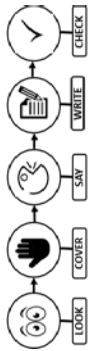
: geht's? Ich heiße Stefan und ich komme aus
itschland. Ich wohne in Stuttgart im Süden. Das ist
eine Stadt. Mercedes kommt aus Stuttgart! Ich finde
Stuttgart idyllisch und gar nicht langweilig. Im Sommer
ist es der perfekte Ort für Touristen – das Schloss ist
interessant; es gefällt mir. Wo wohnst du? Ich bin
dreizehn Jahre alt und ich habe am dritten Mai
Geburtstag. Wie alt bist du und wann hast du
Geburtstag?

Tschüss!!



C	Deutsch	Englisch
1	Ich komme aus Deutschland	I come from Germany
2	Großbritannien/Österreich/ der Schweiz.	Great Britain/Austria/ Switzerland.
4	Wo wohnst du?	Where do you live?
5	Ich wohne in...	I live in...
6	Das ist ein/eine/ein...	It's a...
7	das Dorf	village
8	der Hafen	port
9	die Hauptstadt	capital city
10	der Ort	place/area
11	die Stadt	town
12	Ich finde...	I find...
13	attraktiv	attractive
14	cool	cool
15	gar nicht	not at all
16	idyllisch	idyllic
17	interessant	interesting
18	langweilig	boring
19	toll	great
20	Es gefällt mir.	I like it.

D	Deutsch	Englisch
1	einundzwanzig	twenty-one
2	zweiundzwanzig	twenty-two
3	dreißig	Thirty
4	Wann hast du Geburtstag?	When is your birthday?
5	Ich habe am ... Geburtstag.	My birthday is on the...
6	am ersten	on the first
7	am zweiten	on the second
8	am dritten	on the third
9	Januar	January
10	Februar	February
11	März	March
12	April	April
13	Mai	May
14	Juni	June
15	Juli	July
16	August	August
17	September	September
18	Oktober	October
19	November	November
20	Dezember	December



Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

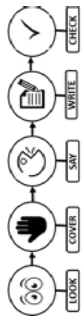
SB1 : Wie heißt du? – What's your name?			
Subject	Verb	Object	Adverb
Ich (I)	heiße (am called)	Stefan	gut (well) nicht so gut (not so well) nicht schlecht (not badly) Okay (OK)
der Prinz (the prince)	heißt (is called)	Karl	
die Prinzessin (the princess)		Karoline	
das Schloss (the castle)		Schloss	
Es (it)	geht (goes)	mir (me)	

SB2 : Wie alt bist du? – How old are you?		
Subject	Verb	Time Phrase
Ich (I)	bin (am)	Monate alt (months old) Jahre alt (years old)
du (you)	bist (are)	
er (he)	ist (is)	
sie (she)	ist (is)	
wir (we)	sind (are)	
Ihr (you pl.)	seid (are)	
sie (they)	sind (are)	
Sie (you pol.)	sind (are)	
		sechs (6)
		acht (8)
		dreizehn (13)
		fünfzehn (15)
		zwanzig (20)

SB3 : Wo wohnst du? – Where do you live?		
Subject	Verb	Object
Ich (I)	komme aus (come from)	Deutschland (Germany) /Österreich (Austria) /der Schweiz / England / Durham
Das (that)	ist (is)	ein Dorf (a village) eine Stadt (a town/city) ein Hafen (a port) die Hauptstadt (the capital city)
Subject	Verb	Object Adjective
Ich (I)	finde (find)	das (that) interessant (interesting)/cool (cool)/attraktiv (attractive)/idyllisch (idyllic)/gar nicht langweilig (not at all boring)/toll (great)

SB4 : Wann hast du Geburtstag? – When is your birthday?			
Subject	Verb	Ordinal number	Noun
Ich (I)	habe (have)		Januar
du (you)	hast (have)	am ersten (on the 1 st)	Februar
er (he)	hat (has)	am dritten (on the 3 rd)	März
sie (she)	hat (has)	am siebten (on the 7 th)	April
wir (we)	haben (have)	am zwölften (on the 12 th)	Mai
Ihr (you pl.)	habt (have)	am zwanzigsten (on the 20 th)	Juni
sie (they)	haben (have)	am einunddreißigsten (on the 31 st)	Juli
Sie (you pol.)	haben (have)		August

Y9 German Module 2: Das ist meine Welt!



A	Deutsch	Englisch
1	Hast du Geschwister?	Do you have any brothers or sisters?
2	Ich bin Einzelkind.	I'm an only child.
3	Ich habe einen Bruder/ eine Schwester.	I have a brother/sister.
4	Ich habe keine Geschwister.	I have no brothers or sisters.
5	Eltern (pl)	Parents
6	die Familie	Family
7	der Halbbruder / die Halbschwester	half-brother / half-sister
8	der Stiefbruder / die Stiefschwester	stepbrother / stepsister
9	die Mutter	mother
10	der Vater	father

14	Zwillinge (pl)	twins
15	der Zwillingsb Bruder / die Zwillingsschwester	twin brother / twin sister
16	das Familienmodell	family model
17	die Patchworkfamilie	blended family
18	die Regenbogenfamilie	rainbow family
19	typisch	typical
20	zusammen leben	to live together

B	Deutsch	Englisch
1	Wie ist dein bester Freund/ deine beste Freundin?	What's your best friend like?
2	Er/Sie ist...	He/She is...
3	dynamisch	energetic
4	egoistisch	selfish
5	faul	lazy
6	frech	cheeky
7	freundlich	friendly
8	intelligent	intelligent
9	kreativ	creative
10	langweilig	boring
11	launisch	moody
12	lustig	funny
13	optimistisch	optimistic
14	respektvoll	respectful
15	schüchtern	shy
16	treu	loyal
17	auch	also
18	gar nicht	not at all
19	sehr	very
20	ziemlich	quite, fairly



Hallo!

Ich bin der Benni **aus** Berlin! Ich habe eine **ziemlich** große Familie. Ich wohne mit meiner Mutter und meinem **Stief**vater. Ich habe **auch** eine Halbschwester und einen **Stief**bruder. Mein Vater lebt jetzt in Polen mit meinen Großeltern zusammen. Meine Patchworkfamilie ist **ziemlich typisch** in Deutschland. Mein bester Freund heißt Max und er ist 14 Jahre alt. Er ist **dynamisch**, sehr treu und **lustig** aber gar nicht frech. Ich habe kurze, rote, glatte Haare aber Max' Haare sind **lockig** und **braun**. Meine **Augen** sind **blau** und ich habe Sommersprossen. Ich bin so gut **aussehend**!! Ich mag **Tiere** und ich habe viele **Haustiere**. Ich habe fünf **Fische**, eine **braune** Katze und einen neuen Hund, Luna. Sie ist so intelligent und freundlich. Hast du ein **Haustier**? **Wie** ist deine Familie? Hast du **auch** einen besten Freund oder eine beste Freundin? **Wie** siehst du **aus**?

Bis bald!



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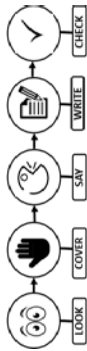
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C	Deutsch	Englisch
1	Meine Lieblingsfarbe ist...	My favourite colour is...
2	blau	blue
3	braun	brown
4	gelb	yellow
5	grau	grey
6	grün	green
7	orange	orange
8	rot	red
9	schwarz	black
10	violett	purple
11	weiß	white
12	Wie siehst du aus?	What do you look like?
13	Wie sind deine Augen / deine Haare?	What are your eyes / is your hair like?
14	blond	blond
15	glatt	straight
16	kurz	short
17	lang / mittellang	long / medium-length
18	lockig	curly
19	der Bart / der Schnurrbart	beard / moustache
20	Sommersprossen	freckles

D	Deutsch	Englisch
1	groß	tall
2	gut aussehend	good looking
3	klein	small
4	muskulös	muscular
5	pummelig	plump
6	schlank	slim
7	ein bisschen	a bit
8	Hast du ein Haustier?	Have you got a pet?
9	Ich habe kein Haustier.	I don't have a pet
10	der Fisch(e)	fish
11	der Hund (e)	dog
12	der Kanarienvogel (")	canary
13	das Kaninchen	rabbit
14	die Katze (n)	cat
15	das Meerschweinchen	guinea pig
16	das Pferd (e)	horse
17	die Schlange (n)	snake
18	das Tier (e)	animal
19	der Vogel	bird
20	Ich mag/ich mag (gar) nicht	I like / I really don't like

Y9 German Sentence Builders – Module 2: Das ist meine Welt!



Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

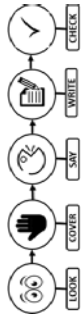
SB1 : Hast du Geschwister? – Have you got any brothers or sisters?		
Subject	Verb	Object
Ich (I)	habe (have)	eine (Halb- / Stief- / Zwillingen- Schwester (a half / step / twin sister)
		2 Schwestern (2 sisters)
		einen (Halb- / Stief- / Zwillingen- Bruder (a half / step / twin brother)
mein Bruder (my brother)	heißt (is called) ist	2 Brüder (2 brothers)
		keine Geschwister (no brothers or sisters)
		Florian acht Jahre alt (eight years old)

SB3 : Wie siehst du aus? – What do you look like?			
Subject	Verb	Intensifier	Adjective
Ich (I) er (he) sie (she)	bin (am) ist (is) ist (is)	ein bisschen (a bit)	schlank (slim)/ pummelig (plump)
		ziemlich (fairly)	groß (tall)/klein (small)
		nicht so (not so)	muskulös (muscular)
Subject	Verb	Adjective	Object
Ich (I) er (he) sie (she)	habe (have) hat (has) hat (has)	lange (long)/kurze (short)/lockige (curly)/glatte (straight)/blonde (blonde)	Haare (hair)
		blaue (blue)/grüne (green)	Augen (eyes)
			einen Bart (a beard) / einen Schnurrbart (a moustache) Sommersprossen (freckles)

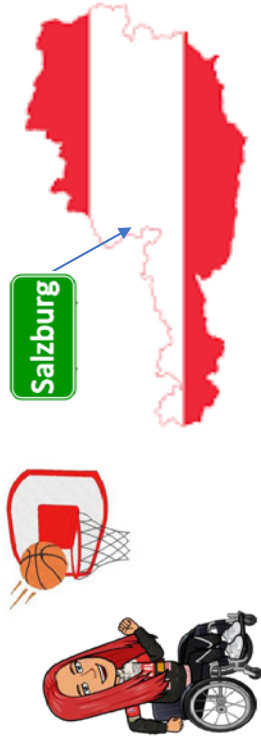
SB2 : Hast du gute Freunde? – Have you got good friends?				
Subject	Verb	Object		
Ich (I) er (he) sie (she) sie (they)	habe (have) ist (is) ist (is) sind (are)	eine beste Freundin (a best friend f)		
		einen besten Freund (a best friend m)		
		gute Freunde (good friends)		
Subject	Verb	Intensifier	Adjective	Connective
er (he) sie (she) sie (they)	ist (is) ist (is) sind (are)	gar nicht (not at all)	kreativ (creative)	und (and)
		ziemlich (quite)	freundlich (friendly)	aber (but)
			faul (lazy)	auch (also)
		sehr (very)		
				schüchtern (shy) launisch (moody) frech (cheeky)

SB4 : Was sind deine Lieblingstiere? – What are your favourite animals?			
Subject	Verb	Object	
Ich (I)	habe (have)	einen Hund (a dog)/eine Katze (a cat)/ein Kaninchen (a rabbit)	
		drei Vögel (three birds)/drei Hunde (three dogs)/zwei Fische (two fish)/vier Mäuse (four mice)	
		kein Haustier (no pets)	
Meine Lieblingstiere (my favourite animals)	sind (are)	Delfinen (dolphins)/Elefanten (elephants)/Kamele (camels)/Eisbären (polar bears)/Pinguine (penguins)/Wölfe (wolves)/Ratten (rats)/Walrosse (walruses)/Giraffen (giraffes)/ Pandas (pandas)	

Y9 German Module 3: Meine Freizeit!



A	Deutsch	Englisch
1	Welche Sportarten machst du?	Which sports do you do?
2	Ich gehe/mache/spiele/tanze...	I go/do/play/dance...
3	angeln gehen	to go fishing
4	Ballett tanzen	to dance ballet
5	Basketball spielen	to play basketball
6	Federball spielen	to play badminton
7	ins Fitnesscenter gehen	to go to the gym
8	Fußball spielen	to play football
9	Gymnastik machen	to do gymnastics
10	joggen	to jog
11	Judo/Karate machen	to do judo/karate
12	Rugby spielen	to play rugby
13	schwimmen gehen	to go swimming
14	Tennis spielen	to play tennis
15	Yoga machen	to do yoga
16	Wie findest du...?	How do you find...?
17	anstrengend	tiring
18	entspannend	relaxing
19	schwierig	difficult
20	Es macht Spaß.	It is fun.



Servus!

Ich heiße Marie und ich wohne in Salzburg in Österreich.

Ich bin sehr sportlich und ich treibe viel Sport. Mein

Lieblingssport ist Basketball. Das spiele ich jeden Abend.

Ich finde es ziemlich anstrengend aber es macht Spaß. Ich gehe auch gern ins Fitnesscenter und meine beste Freundin

Lili macht gern Judo. Bist du sportlich? Ich male gern in

meiner Freizeit denn es ist spannend und ich bin sehr

kreativ und ab und zu zocke ich mit meinem Bruder. Am

Wochenende gehe ich manchmal mit Freunden einkaufen

aber ich gehe lieber ins Kino. Ich bin Fan von Musik und

höre oft Rap denn ich finde die Liedtexte inspirierend.

Leider spiele ich kein Instrument aber ich möchte Gitarre

spielen. Was machst du gern in deiner Freizeit? Wie findest

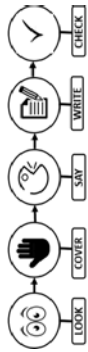
du Musik?

Tschüss!



C	Deutsch	Englisch
1	Was machst du oft/nie?	What do you often/never do?
2	ausruhen/chillen	to relax
3	die Familienzeit	family time
4	die Schularbeit	school work
5	zocken	to game/play video games
6	zuhause bleiben	to stay at home
7	ab und zu	now and then
8	am Wochenende	at the weekend
9	einmal/zweimal pro Woche	once/twice a week
10	jeden Abend	every evening
11	jeden Tag	every day
12	manchmal	sometimes
13	nie	never
14	nur	only
15	oft	often
16	selten	rarely
17	denn	because
18	verbringen	to spend time
19	an erster / zweiter / dritter Stelle	in first / second / third place
20	eine Stunde	an hour

D	Deutsch	Englisch
1	der/die	composer
2	Komponist/Komponistin	favourite piece (of music)
3	das Lieblingsstück	song
4	das Lied	song lyrics
5	Liedtexte (pl)	melody
6	die Melodie	singer
7	der/die Sänger/Sängerin	to sing
8	singen	voice
9	die Stimme	aggressive
10	aggressiv	harsh
11	hart	inspiring
12	inspirierend	beautiful
13	schön	Do you play an instrument?
14	Spielt du ein Instrument?	I am not musical.
15	Ich bin nicht musikalisch.	violin
16	die Geige	guitar
17	die Gitarre	piano
18	das Klavier	musical instrument
19	das Musikinstrument	drums
20	das Schlagzeug	trumpet



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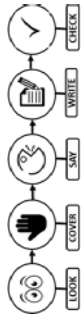
SB1 : Treibst du gern Sport? – Do you like doing sport?						
Subj ect	Verb	Object	connective	sub ject	verb	adjective
Ich (I)	spiele (play)	Rugby	denn (because)	es (it)	ist (is)	entspannend (relaxing)
		Fußball				anstrengend (tiring)
		Federball (badminton)				schwierig (difficult)
	gehe (go)	ins Fitnesscenter (to the gym)	langweilig (boring)			
	mache (do)	Yoga				
	tanze (dance)	Ballett			macht (is)	Spaß (fun)

SB2 : Was machst du gern in deiner Freizeit? – What do you like doing in your free time?					
Subject	Verb	Adverb	Object		
Ich (I)	spiele (play)		Videospiele (video games) / Musik		
	sehe (watch)	sehr gern (really like)	fern (TV)		
	chatte (chat)		mit Freunden (with friends)		
	fahre (ride)	gern (like)	Skateboard / Rad (bike)		
	höre (listen to)	gar nicht gern (don't like at all)	Musik		
	mache (make)		Musik		
				Adverb	
Verb				lese (read) / male (paint) / bastele (do crafts)	sehr gern / gern / gar nicht gern

SB3 : Hast du Zeit? – Have you got time?				
Subject		Verb	Adverb of frequency	Object
Ich (I)		spiele (play)	oft (often)	Rugby / Tennis / Videospiele
		gehe (go)	manchmal (sometimes)	ins Kino (to the cinema)
		höre (listen to)	ab und zu (now and then)	Musik
		lese (read)	selten (rarely)	Comics / Bücher (books)
Adverb of frequency		Verb	Subject	Object
Oft (often)		mache (do)		Yoga
Manchmal (sometimes)		tanze (dance)	Ich (I)	Ballett
Ab und zu (now and then)		sehe (watch)		fern (TV)
Selten (rarely)		chatte (chat)		mit Freunden (with friends)
Nie (never)		fahre (ride)		Rad (bike)

SB4 : Was für Musik hörst du gern? – What sort of music do you like listening to?				
Subject	Verb	Adverb	Object	
Ich (I)	höre (listen to)		elektronische Musik (electronic dance music)	
du (you)	hörst	sehr gern (really like)	klassische Musik (classical music)	
er (he)	hört	gern (like)	Rap	
sie (she)	hört	gar nicht gern (don't like at all)	Rock	
wir (we)	hören	lieber (prefer)	Schlager	
Ihr (you pl.)	hört	am liebsten (best of all)	viele Musikarten (types of music)	
sie (they)	hören			
Sie (you pl.)	hören			
Ich (I)	spiele		Trompete / Gitarre / Klavier (piano)	

Y9 German Sentence Builders – Module 4: In der Schule



A	Deutsch	Englisch
1	das Fach/Schulfach / Fächer (pl)	subject/school subject/ subjects
2	der Stundenplan	timetable
3	die (Mittags)pause	(lunch) break
4	Was hast du am Montag?	What do you have on Monday?
5	Biologie	biology
6	Chemie	chemistry
7	Deutsch	German
8	Englisch	English
9	Erkunde	geography
10	Französisch	French
11	Fremdsprachen (pl)	foreign languages
12	Geschichte	history
13	Informatik	computing
14	Kunst	art
15	Mathematik	maths
16	Musik	music
17	Naturwissenschaften (pl)	sciences
18	Physik	physics
19	Spanisch	Spanish
20	Sport	PE



Hi Leute!

Ich heiße Hassan – das ist ein türkischer Name. Ich komme aus Hamburg. Das ist ein Hafen in Norddeutschland, wo ich auf eine Gesamtschule gehe. Ich gehe in die neunte Klasse. In der Schule lerne ich viele Fächer. Mein Lieblingstag ist Montag, weil ich mein Lieblingsfach Musik habe und ich bin stark in Musik und meine Lehrerin ist hilfsbereit und gibt gute Noten. Mathe interessiert mich auch. Ich finde es nützlich, aber Geschichte interessiert mich gar nicht, weil ich es ätzend finde denn mein Lehrer gibt zu viele Hausaufgaben auf und man muss Daten auswendig lernen. Meine Schule ist groß. Es gibt viele Klassenzimmer und Labors, eine Sporthalle, eine kleine Kantine, eine Aula und natürlich auch ein Lehrerzimmer. Wir haben einen Schulhof und meine Freunde und ich spielen Tischtennis in der Pause. In meiner Schule muss man keine Schuluniform tragen aber es gibt andere Schulregeln: man muss pünktlich sein und man darf nicht mobben aber man kann im Unterricht Wasser trinken.

Alles im allen gehe ich gern in die Schule, aber es ist nervig Hausaufgaben zu machen.

Tschüss!



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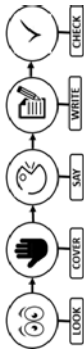
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C	Deutsch	Englisch
1	(Texte) auswendig lernen	to learn (texts) off by heart
2	eine gute/ schlechte Idee	a good/bad idea
3	faszinierend	fascinating
4	Fragen stellen	to ask questions
5	Hausaufgaben machen	to do homework
6	im Internet forschen	to do research online
7	mit Freunden lernen	to study with friends
8	Notizen machen	to make notes
9	spicken	to cheat
10	Vokabeln lernen	to learn vocabulary
11	der/die Lehrer/Lehrerin	teacher
12	Mein Lehrer/Meine Lehrerin gibt zu viele Hausaufgaben auf	My teacher gives too much homework.
13	Mein Lehrer/Meine Lehrerin gibt gute/ schlechte Noten.	My teacher gives good/bad marks.
14	lernen	to learn, to study
15	die Stunde	lesson
16	hilfsbereit	helpful
17	nett	nice, friendly
18	streng	strict
19	sympatisch	kind
20	unfreundlich	unfriendly

D	Deutsch	Englisch
1	die Aula	(assembly) hall
2	der Flur	corridor
3	der Informationsraum	computer room
4	die Kantine	canteen
5	das Klassenzimmer	classroom
6	das Labor	science lab
7	das Lehrerzimmer	staff room
8	der Schulhof	playground, school yard
9	das Sekretariat	admin office, secretary's office
10	die Sporthalle	sports hall
11	eine gute/ schlechte Regel	a good/bad rule
12	das Handy benutzen	to use your mobile phone
13	im Flur rennen	to run in the corridor
14	im Unterricht Wasser trinken	to drink water in class
15	Kaugummi kauen	to chew gum
16	Klassenfahrten machen	to go on school trips
17	mit dem Vertrauenslehrer sprechen	to speak with the student welfare teacher
18	mobben	to bully
19	pünktlich sein	to be punctual/on time
20	Schuluniform/Make-up tragen	to wear school uniform/make-up

Y9 Germany Sentence Builders - Module 4 – In der Schule



Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

SB1 : Welche Fächer lernst du in der Schule?- What subjects do you learn at school?						
Subject	Verb	Adverb	Object	Connective	Subject	Verb
Ich (I)	lerne (learn)	sehr gern (really like) gern (like) gar nicht gern (don't like at all)	Deutsch (German) Mathe (maths) Erdkunde (geography)	denn (because) und (and) aber (but)	es (it)	ist (is)
						schwierig (difficult) langweilig (boring) Spaß (fun)
Subject	Verb	Number / time		Noun	Object	
Ich (I)	habe (have)	eine / zwei / drei / vier		Stunde(n) (hour[s])	Geschichte (history)/ Kunst (art)/ Naturwissenschaften (science) / Musik (music) / Französisch (French) / Sport (PE) / Englisch (English)	
Wir (we)	haben (have)	um neun Uhr (at 9.00)				
		um Viertel vor zwei (at 1.45)				
		am Montag (on Monday)				

SB2 : Wie findest du...? – What do you think of....?						
Subject	Verb	Object	Connective	Subject	Adjective	Verb
Ich (I)	mag	Mathe [nicht] (maths [not])		es (it)	interessant (interesting) / wichtig (important) / nützlich (useful) / bescheuert (stupid) / einfach (easy) / schwierig (difficult) / nervig (annoying)/praktisch (practical)	ist (is)
Erdkunde (geography)	interessiert [en] mich [nicht] (interest[s] me [not])					
Mir (to me)	gefällt (appeals)	Biologie	, weil (because)	sie (they)		sind (are)
	gefallen [pl] (appeal)	Mathe und Informatik				

SB3 : Wie lernst du am besten? – How do you learn best?					
Subject	Verb	Qualifier	Adjective		Infinitive + zu
Es (it)	ist (is)	total (totally)	[un]wichtig ([un]important)	im Internet (on the internet)	zu forschen (to research)
		voll (really)	nervig (annoying)	Texte	auswendig zu lernen (to learn off by heart)
		sehr (very)	faszinierend (fascinating)	Fragen (question)	zu stellen (to pose)
				Hausaufgaben (homework)	zu machen (to do)
Subject		Verb	Adjective		
Mein Lehrer [m] / meine Lehrerin [f] (my teacher)		ist (is)	nett (nice) / sympathisch (kind) / [un]freundlich ([un]friendly) / hilfsbereit (helpful)		
		sind (are)			
			Object		
Meine Lehrer [pl] (my teachers)		gibt (gives)	zu viele Hausaufgaben auf (too much homework)		
		geben (give)	schlechte / gute Noten (bad / good marks)		
SB4 Was gibt es in deiner Schule? – What is there in your school?					
Location	Impersonal verb		Object		
In meiner Schule (in my school)	gibt es	einen Schulhof (school yard) / einen Informatikraum (IT room) / eine Sporthalle (gym) / eine Aula (hall) / ein Lehrerzimmer (library) / eine Kantine (canteen) / ein Sekretariat (school office) / viele Labors / Klassenzimmer (lots of labs/classrooms)			
		Modal verb	Subject	Object	Infinitive
		muss [nicht] (must [don't have to])	man (you)	pünktlich (punctual) das Handy (mobile) eine Schuluniform (uniform)	sein (be) benutzen (use) tragen (wear) mobben (bully)
			darf [nicht] (are [not] allowed)		



A	Deutsch	Englisch
1	das Brot	bread
2	die Butter	butter
3	Frühstücksflocken (pl)	breakfast cereal
4	der Joghurt	yoghurt
5	der Kaffee	coffee
6	der Käse	cheese
7	Kekse (pl)	biscuits
8	die Marmelade	jam
9	die Milch	milk
10	das Müsli	muesli
11	das Obst	fruit
12	der Saft	juice
13	der Schinken	ham
14	der Tee	tea
15	das Wasser	water
16	die Wurst	sausage
17	das Frühstück	breakfast
18	das Mittagessen	lunch
19	das Abendessen	evening meal, dinner
20	Was isst / trinkst du zum Frühstück?	What do you eat/drink for breakfast?

B	Deutsch	Englisch
1	Was nimmst du?	What are you having?/What will you have?
2	Ich nehme einen/eine/ein...	I'll take a...
3	Was kostet das?	What does that cost?
4	Es kostet ... Euro/Cent.	It costs ... euros/cents.
5	die Dose Cola/Limonade/Soda	can of cola/lemonade/fizzy drink
6	die Flasche Wasser	bottle of water
7	100 Gramm Butter	100 grams of butter
8	der Liter Milch/Saft	litre of milk/juice
9	die Packung Kekse	packet of biscuits
10	die Scheibe Schinken	slice of ham
11	das Stück Käse	piece of cheese
12	die Tafel Schokolade	bar of chocolate
13	die Tüte Gummibärchen	bag of gummy bears
14	Es schmeckt mir./Mir schmeckt's.	It tastes good.
15	...schmeckt mir (nicht).	(about food/drink) I (don't) like...
16	das Lieblingsessen	favourite food
17	das Lieblingsgetränk	favourite drink
18	das Fleisch	meat
19	Nudeln (pl)	pasta
20	der Reis	rice



Grüezi!

Mein Name ist Zuna und **ich** wohne in **Zürich** in der **Schweiz**. **Ich** mag essen! Für **mi**ch**** ist das **Frühstück** die **wicht**igste Mahlzeit – ein gutes **Frühstück** gibt Energie für den Tag! Vor der **Schule** esse **ich** immer **Müsli** mit **Milch** und Obst. **Ich** trinke **Milch** oder Wasser aber am **Wochenende** esse **ich** oft ein Ei, Käse, **Schinken** mit Brot, Butter und Marmelade und **ich** trinke Saft oder manchmal Kaffee. Mein Lieblingsessen ist **Fleisch** mit Nudeln und Salat, weil es mir **schmeckt**. Was ist dein Lieblingsessen? **Ich** esse gesund denn **ich** esse täglich Obst und **Gemüse** und trinke viel Wasser. Man soll wenig Fett und Zucker essen - das mache **ich**. Ab und zu esse **ich** bei einem Foodtruck. **Ich** mag pikante **Knödel** oder **Bratwürste** mit **Brötchen** – lecker! **Ich** möchte auch **Knödel** oder **Bratwürste** probieren. Am Samstag war **ich** in einem Restaurant. **Ich** habe **Schnitzel** mit Pommes und Zitronentorte gegessen und Wasser getrunken. Die Atmosphäre im Restaurant ist herzlich aber das Essen hat nicht **geschmeckt**. 😞 **Tschüss!**



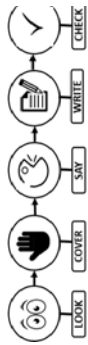
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C	Deutsch	Englisch
1	Hast du Hunger?	Are you hungry?
2	Was darf es sein?	What would you like (to order/buy)?
3	Ich möchte/hätte gern einen/eine/ein...	(about food/drink) I would like a...
4	Etwas zu trinken?	(Would you like) anything to drink?
5	Sonst noch was?	(Can I get you) anything else?
6	die Bratwurst	sausage
7	das Brötchen	(bread) roll
8	der Flammkuchen	thin pizza
9	der Hamburger	burger
10	der Knödel	dumpling
11	die Pizza	pizza
12	Pommes (pl)	chips
13	die Suppe	soup
14	gesund essen	to eat healthily
15	Ich esse kein Fleisch/Fisch.	I don't eat meat/fish.
16	Ich esse alles.	I eat everything/anything.
17	Lecker!	Delicious!
18	der/die Vegetarier/Vegetarierin	vegetarian
19	der/die Veganer/Veganerin	vegan
20	das Hähnchen	chicken
D	Deutsch	Englisch
1	die Vorspeise	starter
2	das Hauptgericht	main course
3	die Nachspeise	dessert
4	die Atmosphäre	atmosphere
5	die Bedienung	service
6	der Preis	price
7	das Restaurant	restaurant
8	die Restaurantbewertung	restaurant review
9	herzlich	warm
10	Klasse	great
11	ungemütlich	uncomfortable
12	das Restaurant	restaurant
13	die Restaurantbewertung	restaurant review
14	herzlich	warm
15	Klasse	great
16	ungemütlich	uncomfortable
E	Deutsch	Englisch
1	Man soll ... essen/trinken.	You ought to eat/drink....
2	täglich	every day
3	wenig	little, a little of, not much
4	eine ausgewogene Ernährung	balanced diet
5	das Fett	fat
6	Kohlenhydrate (pl)	carbohydrates
7	Mineralstoffe (pl)	minerals



Use Sentence Builders to help you answer the question. Use this method to help learn the phrases <https://youtu.be/cMKo65jKVhU>

SB1 : Wie frühstückst du? – What do you have for breakfast?		
Meal time	Verb	Subject Object
Zum Frühstück (for breakfast)		Frühstücksflocken (cereal) Brot (bread) / Toast / Butter Joghurt (yogurt) / Marmelade (jam) Kaffee(coffee) / Tee (tea)/Soft (juice)
Zum Mittagessen (for lunch)	esse (eat)	ich (I)
	trinke (drink)	ein Butterbrot (sandwich) Nudeln(pasta) / Reis (rice) Cola (Coke) / Limonade (lemonade)
Zum Abendessen (for dinner)		Fisch (fish) / Hähnchen (chicken) / Fleisch (meat) / Gemüse (vegetables) / Kartoffeln (potatoes) / Salat (salad) Wasser (water)

SB2 : Wie schmeckt's? – How does it taste?		
Subject	Verb	Object
Ich (I)	esse [nicht] gern ([don't] like to eat)	Eier (eggs) Obst (fruit)
Mein Lieblingsessen (my favourite food)	trinke [nicht] ([don't] like to drink)	Gemüse (vegetables)
Mein Lieblingsgetränk (my favourite drink)	ist (is)	Vegetarier(in) (vegetarian) / Veganer(in) (vegan)
Ich (I)	bin (am)	

SB3 : Hast du Zeit? – Magst du Fastfood? – Do you like fast food?		
Subject	Verb (phrase)	Indefinite article Object
Ich (I)	möchte (would like)	einen (a) Knödel (dumpling), Flammkuchen (thin pizza), Salat (salad)
	hätte gern (would like)	eine (a) Bratwurst (sausage), Currywurst (sausage with curry ketchup), Suppe (soup), Pizza (pizza)
		ein (a) Brötchen (bread bun)
		etwas Veganes /Vegetarisches (something vegan/vegetarian)

SB4 : Gehst du gern ins Restaurant? – Do you like going to restaurants?			
Subject	Verb	Adjective	
die Atmosphäre (the atmosphere) die Bedienung (the service)	ist (is)	herzlich (warm), toll (great), freundlich (friendly), gemütlich (cosy), ungemütlich (not cosy), unfreundlich (unfriendly)	
Subject	Auxiliary Verb	Object	Past Participle
Ich (I)	habe (have)	Suppe (soup), pommes (chips) Wasser (water), Limonade (lemonade)	gegessen (eaten [ate]) getrunken (drunk [drank])
Es (it)	hat (has)		[nicht] geschmeckt (tasted [not]good)

SB5: Ernährst du dich gesund? – Do you eat healthily?			
Subject	Modal Verb	Adverb of frequency	Object Infinitive
Man (one/you)	soll (should) /ought	täglich (daily) regelmäßig (regularly) selten (rarely) nie (never) jeden Tag (every day)	Obst (fruit), Gemüse (vegetables), Pommes (chips), Käse (cheese), Schokolade (chocolate) fünf Portionen Obst und Gemüse (five portions of fruit and vegetables) Cola (Coke), Wasser (water), Milch (milk), Tee (tea), Kaffee (coffee) zwei Liter Wasser (two litres of water)
			essen ([to] eat) trinken ([to] drink)



YEAR 9

HISTORY & POLITICS

Year 9 Unit 1, Term 1a. Protest; Britain and the struggle for the right to vote.

SECTION 1

1897	1903	1905	1909	1910	April 1913	June 1913	June-July 1913	1914	1916	February 1918	November 1918	1928
NUWSS (Suffragists) formed by Millicent Fawcett.	WSPU (Suffragettes) formed by Emmeline Pankhurst and her daughters after they broke away from NUWSS.	Militancy begins when Annie Kenney and Christabel Pankhurst heckle MPs.	Hunger strikes and force-feeding of prisoners begins with Marion Dunlop.	'Black Friday' – violent clash between 300 Suffragettes and the police in London.	Passing of the 'Cat and Mouse Act' to avoid sympathy for the prisoners on hunger strike.	Suffragette Emily Davison collides with the Kings horse at Epsom Derby and later dies of her injuries.	The Great Pilgrimage. Biggest, peaceful Suffragist march held in London over 6 weeks. 50,000 attended rally in Hyde Park.	Outbreak of First World War Suffragettes suspend their militant campaign to help with the war effort.	David Lloyd George replaces Herbert Asquith as UK Prime Minister.	Representation of the People Act passed, giving women over the age of 30 - who owned property - the right to vote (around 40% of adult women).	End of the First World War.	Men and women given the right to vote on equal terms i.e. from the age of 21.

SECTION 2. UK Female Suffrage: Key people

1	Emmeline Pankhurst	Co-founded and led the militant WSPU.
2	Millicent Fawcett	Founded and led the non-violent NUWSS.
3	Emily Davison	One of WSPU most militant members who died after colliding with a horse at Epsom Derby races in June 1913.
4	Herbert Asquith	Prime Minister of UK from 1908-1916.
5	David Lloyd George	Prime Minister of UK from 1916-1922.
6	Mary Humphrey Ward	Founder and leader of Women's National Anti-Suffrage League in 1908.
7	Christabel Pankhurst	Daughter of Emmeline Pankhurst and co-founder of the WSPU.
8	Sylvia Pankhurst	Daughter of Emmeline Pankhurst and co-founder of the WSPU. Later expelled and formed Women's Freedom League.

SECTION 3. UK Female Suffrage: Key terms

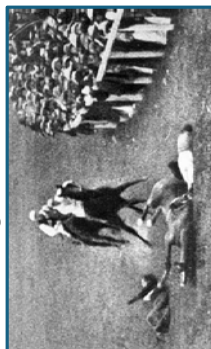
1	Cat & Mouse Act, 1913	1913 law that allowed the release of hunger-striking prisoners and recalled them once their health recovered.	8	NUWSS	A suffragist organisation campaigning for women's rights in a non-violent way.
2	Representation of the People Act, 1918	Law passed that gave women over the age of 30 with property the right to vote.	9	WSPU	A suffragette organisation campaigning for women's rights in a militant way.
3	suffrage	The right to vote in elections.	10	petition	A formal written request signed by many people to ask for change.
4	militant	Direct campaigning methods that may involve violence.	11	Suffragette	A campaigner for women's suffrage who takes militant action.
5	lobbying	Trying to influence politicians. A key method of the Suffragists.	12	Suffragist	A campaigner for women's suffrage who believes only in peaceful, legal methods.
6	Punch magazine	Satirical magazine that depicted suffragettes in a demeaning way.	13	Women's Land Army	Organisation during WWI where women worked on farms.
7	"Angel in the House"	Term used to describe 'ideal' Edwardian woman who looked after their husband and households.	14	feminism	Supporting women's rights on the basis of gender equality.



NUWSS rally



WSPU meeting



Death of Emily Davison

Year 9 Unit 1, Term 1a. Protest; Britain and the struggle for the right to vote.

Knowledge Check (section 1)	Knowledge Check (section 2)	Knowledge Check (section 3)
1. When was NUWSS founded?	1. Who led the NUWSS?	1. In which year was the Cat and Mouse Act?
2. When did the WSPU begin their militant campaign?	2. Who led the WSPU?	2. Which 'Act' gave women over the age of 30 with property the vote in 1918?
3. Who was the first woman to be force-fed while in prison in 1909?	3. Who became Prime Minister first? A. Herbert Asquith b. David Lloyd George	3. What is the key term meaning the right to vote in elections?
4. When was Black Friday?	4. Who was leader of Women's National Anti-Suffrage League?	4. What is the term for the method used by Suffragists to influence politicians?
5. When did Emily Davison die?	5. Who died after colliding with a horse at Epsom Derby in June 1913?	5. What phrase is used to describe the 'ideal' Edwardian woman?
6. What was the name of the Suffragist march held in London in 1913?	6. Who was Prime Minister when women over the age of 30 gained the vote i.e. in 1918?	6. What is the key term meaning 'direct campaigning methods that may involve violence'?
7. When was the outbreak of WWI?	7. Name the two Pankhurst daughters	7. What is the key term meaning 'supporting women's rights on the basis of gender equality'?
8. When were some women given the right to vote?	8. Which Pankhurst daughter was expelled from the WSPU and joined the Women's Freedom League?	8. What is the key term meaning 'a campaigner for women's suffrage who believes only in peaceful methods'?

Year 9 Unit 2, Term 1b. Protest; US Black Civil Rights' Movement.

Key Dates	
1783	US colonies win the war of independence against the British.
1861-1865	US Civil War between the North and South over the issue of slavery .
1863	Abraham Lincoln's emancipation declaration that all slaves in the North or South are now free.
1954	Brown v. Board of Education case
Aug 1955	Emmett Till brutally murdered
Dec 1955	Rosa Parks arrested for refusing to give up her seat on a bus for a white person
1957	Nine African-American students attend Little Rock high school.
1960	Four African American college students in Greensboro , North Carolina start sit in protests.
1963	The March on Washington where MLK Jr gives his "I Have a Dream" speech.
1964	The Civil Rights Act which outlaw's segregation and the Jim Crow laws.
Feb 1965	Malcom X is assassinated by members of his previous group Black Muslim faith.
Aug 1965	The Voting Rights Act is passed
1966	The militant Black Panthers are founded by Huey Newton and Bobby Seale.
1968	Martin Luther King Jr is assassinated by escaped convict and racist James Earl Ray.
2008	Barack Obama becomes first African American to be elected President
2020	Series of Black Lives Matter protests over police brutality after the murder of George Floyd.

SECTION 1. Origins of African American persecution	
Emancipation	When a someone is freed from slavery.
Constitutional Amendment	When a country changes its constitution (the laws agreed when created).
Reconstruction	The period after the US Civil War where former slaves were integrated into society.
Segregation	Separation of people in their daily lives based on race.
Jim Crow laws	State and local laws in Southern American states that enforced racial segregation. This included restricting black Americans from voting and prevention of interracial marriage.
Racism	Discriminating against a person because of their race.
Oppression	The act of treating people in a cruel and unjust way.
KKK	White supremacist group.
Lynching	Execution-style of murder often by hanging.
SECTION 3. Key Individuals/ Groups:	
NAACP	National Association for the Advancement of Coloured People. A civil rights organisation founded in 1909 to represent African Americans in legal cases (such as Brown v. Board of Education)
Emmett Till	A 14-year-old who was lynched after allegedly wolf-whistling at a white woman. His mother, Mamie Till decided for Emmett to have an open casket funeral so "the whole nation had to bear witness to" his violent disfigurement.
Rosa Parks	Activist known for sparking the Montgomery Bus boycott following her arrest for refusing to give up her seat on the bus for a white person.
Martin Luther King Jr	Non-violent leader in the Civil Rights Movement from 1955, organised the Montgomery Bus Boycott and March on Washington.
Malcolm X	Violent civil rights leader who supported black nationalism.
Huey Newton	Co-founder and leader of the militant Black Panther activist group.

SECTION 2. Key Terminology	
Boycott	Refusal to purchase a product or use a service.
Sit-ins	A grassroots, peaceful protest against the Jim Crow Laws where black Americans occupied white seats in racially segregated establishments (such as restaurants, lunch counters, and coffee shops) and refused to leave if they were not served.
Campaign	Working in an active way towards a particular goal, typically a political or social one.
March on Washington, 1963	A massive protest march to draw attention to continued challenges and inequalities faced by African Americans a century after their emancipation.
Civil Rights Act, 1964	The law that banned segregation in public places, racial discrimination in employment, and set up an Equal Opportunities Commission to investigate complaints of discrimination.
Equality	Being treated the same as another in terms of rights, opportunities and status.
Integration	Allowing whites, African Americans, and all races to be together in public places (schools, buses, restaurants, movie theatres etc).



Year 9 Unit 2, Term 1b. Protest; US Black Civil Rights' Movement.

Knowledge Check 1 (Section 1 of your KO)	Knowledge Check 2 (Section 2 of your KO)	Knowledge Check 3 (Section 3 of your KO)
1. Emancipation means when someone is freed from what?	1. What term can be defined as the refusal to purchase a product or use a service?	1. What does NAACP stand for?
2. What term can be defined as when a country changes the laws agreed when created?	2. What were "sit ins" protesting against?	2. During which legal case was Linda Brown and her family represented by the NAACP?
3. The period after the US Civil War where former slaves were integrated into society is known as what?	3. Give an example of a racially segregated establishment that "sit ins" took place in?	3. What happened to Emmett Till? Why?
4. What is the term for when people are separated in their daily lives based on their race?	4. What is the term for working in an active way towards a particular goal?	4. What did Mamie Till (Emmett's mother) decide to do with his funeral?
5. In which American states were the Jim Crow laws enforced? North or South?	5. What year did the March on Washington take place?	5. What event did Rosa Parks spark?
6. Give an example of how black Americans were restricted because of the Jim Crow Laws.	6. Give an example of a change for black Americans in the Civil Rights Act, 1964?	6. What type of protest did Martin Luther King Jr advocate?
7. What was the KKK?	7. What term means being treated the same as another in terms of rights, opportunities and status?	7. Give an example of a key event Martin Luther King organised?
8. What is an execution-style of murder often by hanging?		8. Name a violent (or militant) black civil rights leader.

Year 9, Unit 3; Term 2a: South Africa and the Campaign Against Apartheid, 1948 – 1994.

YEAR	Key Dates
1948	The United Nations adopts the Universal Declaration of Human Rights
1948	National Party wins election and introduces Apartheid
1949	Prohibition of Mixed Marriages Act
1952	Abolition of Passes Act
1952	The ANC organise The Defiance Campaign
1955	The ANC launches the Freedom Charter
1960	Sharpeville Massacre. Police kill 69 people.
1962	Nelson Mandela arrested and jailed
1976	Soweto School Pupils' Uprising
1985	Serious rioting. State of Emergency declared.
1989	De Klerk becomes President
1990	Mandela released from prison after 27 years
1994	First democratic election in South Africa's history won by ANC; Mandela becomes President

SECTION 1. Key terms	
Apartheid (1948)	“separateness”. A system of government set up by white South Africans to treat people differently according to their colour of skin.
Freedom Charter (1955)	A statement of principles published by the ANC and others opposing apartheid and demanding democracy and equality for all South Africans.
Coloureds	The term used in South Africa for people with parents from different races. For example, a white father and a black mother.
Pass system	One of the most hated Apartheid rules. Black people were made to carry a pass at all times so white people control their movements.
Sanctions	Trade, sporting and cultural “punishments” imposed by other countries on South Africa in protest at apartheid.

SECTION 2. Racial clarification of South Africans during Apartheid 1948 - 1994		
Blacks	<i>native South Africans</i>	69%
Whites	<i>European settlers</i>	21%
Coloureds	<i>People from a mixed race</i>	8%
Asians	<i>Mainly from India</i>	2%

SECTION 3. Key Individuals		
Nelson Mandela	Anti-apartheid leader who served as the first president of South Africa from 1994 – 1999.	
Desmond Tutu	Bishop who opposed apartheid and helped guide the country to peace once it ended in 1994.	
Steve Biko	Radical anti-apartheid student activist who was murdered by police in 1977.	
F W De Klerk	South African leader of the National Party who worked with Mandela and others to dismantle the Apartheid system.	

SECTION 4. Key Groups		
Boers	An Afrikaans (Dutch language) word for “farmer”. Used to describe all Dutch settlers and their descendants in South Africa.	
Zulus	The largest ethnic group of South Africans.	
National Party	The political party that introduced Apartheid.	
African National Congress (ANC)	The political party led by Mandela which opposed Apartheid.	
Anti-Apartheid Movement	Hundreds of groups from across the world who used sanctions, boycotts and culture to oppose apartheid.	

Year 9, Unit 3; Term 2a: South Africa and the Campaign Against Apartheid, 1948 – 1994.

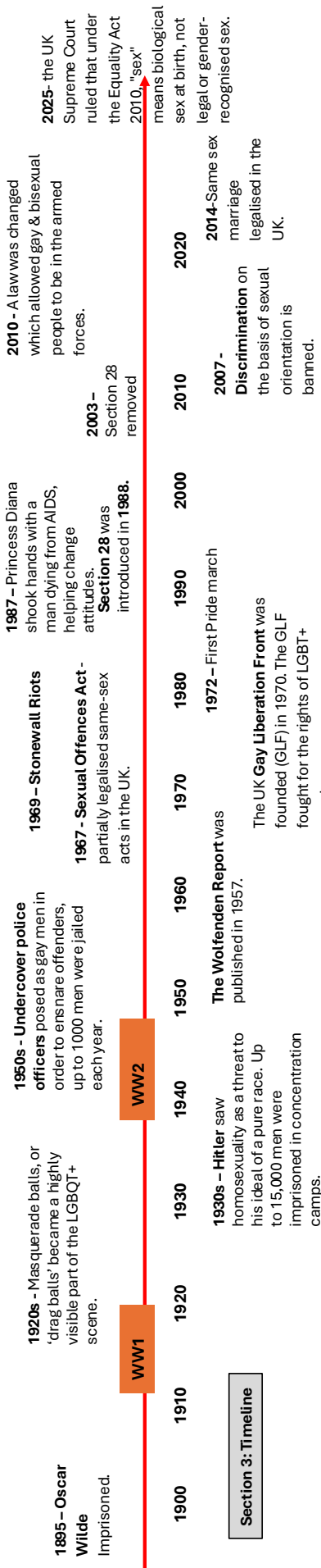
Knowledge Check 1 (Section 1 of your KO)	Knowledge Check 2 (Sections 2 & 3 of your KO)	Knowledge Check 3 (Section 4 of your KO)
1. What single word best defines “apartheid”?	1. Who was the anti-apartheid leader that served as the first president of South Africa from 1994 – 1999?	1. What is the Dutch term for “farmer”?
2. In which year was apartheid introduced?	2. Who was the Bishop who opposed apartheid and helped guide the country to peace once it ended in 1994?	2. What term is given to the largest ethnic group of South Africans?
3. What was the name of the document the ANC published in 1955 that demanded democracy?	3. Who was the radical anti-apartheid student activist murdered by police in 1977?	3. What was the name of the political party that introduced apartheid?
4. What did black South Africans think of the Pass System?	4. Who was the South African leader of the National Party who worked with Mandela and others to dismantle the apartheid system?	4. What does A. N. C. stand for?
5. How did other countries “punish” South Africa for apartheid?	5. Under apartheid, what was the term given to South Africans who were from a “mixed race”?	5. State one way in which the worldwide Anti-Apartheid Movement protested.

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Enquiry question: How inclusive has Britain become towards the LGBTQ+ community since 1900?

SECTION 1: Definitions	
Activism	Taking a stand against an injustice.
Bigotry	Disliking those who hold different views or have a different way of life.
Bisexual	Describes a person who is attracted to people of more than one gender.
Conformity	Going along with accepted beliefs and behaviour.
Discrimination	Treating someone as inferior, because of their race, gender, sexuality, or for other reasons.
Gay	Someone who is attracted to the same sex.
Heterosexual	A person attracted to the opposite sex.
Homophobia	The fear or dislike of LGBTQ+ people.
Homosexual	A person who is attracted to someone of the same sex.
Non-binary	Describes a gender identity that falls outside the usual terms of 'male' or 'female'.
Persecution	The ill treatment of people because of their race, gender, sexuality or other reasons.
Prejudice	An unfavourable opinion formed without knowledge or reason.
Sexual identity	How you see and express yourself sexually.
Stereotype	A set idea that people hold about someone or something, which is often wrong.
Transgender	Describes a person who has a gender identity that differs from their sex assigned at birth.

SECTION 2: Individuals	
Oscar Wilde Oscar Wilde was a celebrity in late 19th century London. He was put on trial for gross indecency in 1895 after the details of his affair with a British aristocrat were made public.	Alan Turing He worked as a codebreaker during WW2 and played a huge role in the Allies defeat of the Nazis. He agreed to 'chemical castration' as an alternative to prison. His death is widely believed to have been suicide.
Gilbert Baker Gilbert Baker was an American artist, gay rights activist and designer of the iconic rainbow flag which debuted back in 1978.	Mark Ashton Was an Irish gay rights activist who co-founded the Lesbians and Gays Support the Miners Movement.
Justin Fashanu Became the first Black footballer in Britain to achieve a £1 million transfer fee. Nine years later he became the first professional footballer to come out as gay.	Lisa Power MBE She became Secretary-General of the International Lesbian and Gay Association in 1988 and helped set up the Pink Paper. She co-founded the charity, Stonewall, in 1989.
Frida Kahlo Frida Kahlo was a gifted painter and openly bisexual. She used her medium to depict taboo topics, like female sexuality, pain, and feminine beauty standards, primarily through self-portraits.	Marsha P. Johnson Marsha P. Johnson was a black trans woman, a sex worker, and an activist who spent much of her life fighting for equality.



Year 9, Unit 4; Term 2b: LGBTQ+

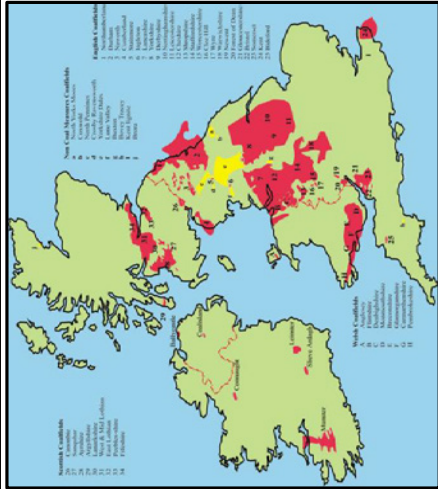
Knowledge Check 1 (Section 1 of your KO)	Knowledge Check 2 (Section 2)	Knowledge Check 3 (Section 3 of your KO)
1. What term describes “disliking those who hold different views or have a different way of life”?	1. Who worked as a codebreaker during WW2 and played a huge role in the Allies defeat of the Nazis?	1. Who saw homosexuality as a threat to his ideal of a pure German race?
2. What term describes “a person who is attracted to people of more than one gender”?	2. Who became the first professional footballer to come out as gay?	2. When was the Wolfenden Report published?
3. What term describes “a gender identity that falls outside the usual terms of ‘male’ or ‘female’”?	3. Which charity did Lisa Powers co-found in 1989?	3. Which riots were in 1969?
4. What word do we use to describe “a person attracted to the opposite sex”?	4. What iconic Gilbert Barker design debuted in 1978?	4. When was the first Pride march?
5. What term describes “a person who has a gender identity that differs from their sex assigned at birth”?	5. Who was put on trial for gross indecency in 1895?	5. When was Section 28 introduced?
6. What term do we use to describe “how you see and express yourself sexually”?	6. Who co-founded the Lesbians and Gays Support the Miners Movement?	6. When was same-sex marriage legalised in the UK?

Year 9, Unit 5; Term 3a. Protest: County Durham – the Miners' Strike of 1984.

SECTION 1. Timeline of Key Events

March 1st 1984 20 mines announced to be closed (lack of profitability).	March 8th 1984 The Miner's Union backs nationwide strike action.	March 12th 1984 Nationwide strike action is declared – 81 pits out of work. 83 still working.	June 18th 1984 Battle of Orgreave.	November 12th 1984 1,200 miners go back to work	December 25th 1984 Striking miners celebrate Christmas despite 9 months without pay.	January 17th 1985 Rail workers strike for 24 hours in support of the mining industry.	February 27th 1985 More than 50% of miners return to work.	March 3rd 1985 Voting takes place to end strike action.
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A map showing coal mining in the UK



A map showing coal mining in the UK

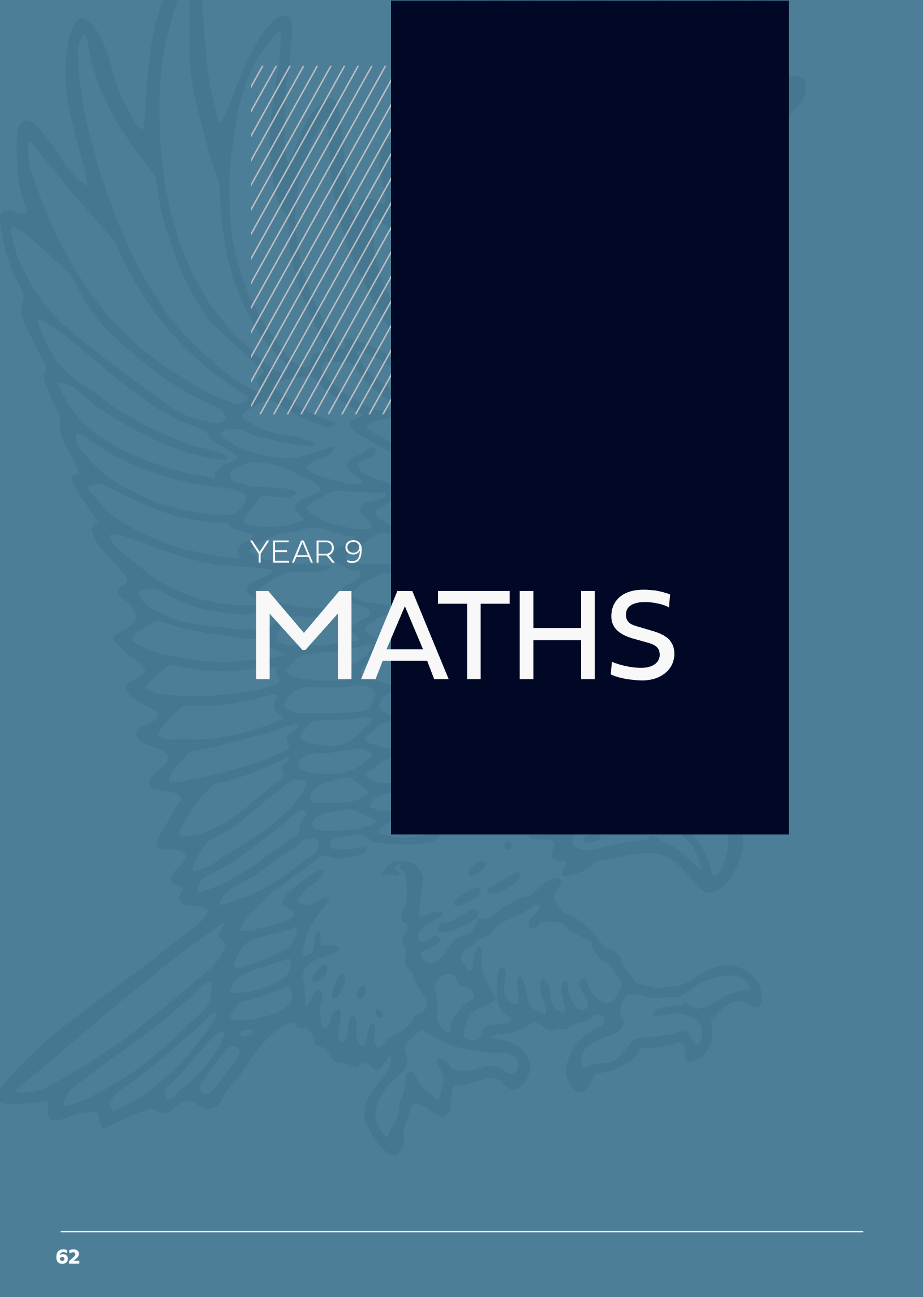
1.	colliery	A coal mine and the buildings and equipment associated with it.
2.	Conservatives	A political party of Great Britain, led by Margaret Thatcher during the strike.
3.	industry	The process of using raw materials to make and sell something: manufacturing, electrical, construction, production, mining etc.
4.	NCB	National Coal Board.
5.	NUM	National Union of Mineworkers.
6.	picketlines	A boundary established by workers on strike, especially at the entrance of a place of work, which others are asked not to cross.
7.	profit(able)	Financial gain: money that is made from something.
8.	protest	A statement or action to express an objection or lack of approval to something.
9.	riot	A violent disturbance of the peace.
10.	scabs	The individuals who decided not to strike against the Government and continued to work whilst their colleagues were on strike.
11.	strike	The refusal to work, organised by a body of employees as a form of protest, typically in an attempt to gain something from an employer.

SECTION 3. Key Individuals/Groups

1.	Ian McGregor	Head of the National Coal Board. To make the coal industry profitable he cut jobs and closed pits which led to the Miners' Strike. He retired from the NCB in 1986.
2.	Arthur Scargill	In 1973 he became the leader of the Yorkshire Area of the NUM and he led the Miners' Strike in 1984-5.
3.	Margaret Thatcher	In 1975 she became the first woman leader of the Conservative Party. She became the first female Prime Minister of the UK in 1979 and was in power during the Miners' Strike 1984-5.
4.	WAPC	Women Against Pit Closures. They aimed to secure the future of the mines and the jobs of their husbands and sons and also the promotion and development of education for working class women and campaigns on issues which affected mining communities.
5.	LGSM	Lesbians and Gays Support the Miners. A UK based campaign group formed in 1984 to support the NUM.

Year 9, Unit 5; Term 3a. Protest: County Durham – the Miners’ Strike of 1984.

Knowledge Check 1 (Section 1 of your KO)	Knowledge Check 2 (Sections 2 and 3 of your KO)	Knowledge Check 3 (Sections 2 and 3 of your KO)
1. What date were 20 mines announced to be closed (due to lack of profitability)?	1. What name is given to a coal mine and the buildings and equipment associated with it?	1. Who were the WAPC?
2. When was the nationwide miners’ strike declared?	2. What name was given to individuals who decided not to strike and continued to work?	2. What was the name of the leader of the National Coal Board called?
3. When was the Battle of Orgreave?	3. What were the boundaries established by workers on strike, which others are asked not to cross?	3. Who were LGSM?
4. On March 12 th , 81 pits closed but how many remained working?	4. What was the NCB?	4. What name is given to an objection or lack of approval to something?
5. Who else came out on strike to support the miners on 17 January 1985?	5. What was the NUM?	5. Who led the Miners’ Strike?
6. By Christmas 1984, how many months had the miners been on strike for?	6. Which political party was Margaret Thatcher the leader of?	6. Who became the first female Prime Minister of the UK?
7. What percentage of miners returned to work by 27 February 1985?	7. What word describes a violent disturbance of the peace?	7. What’s the key term for financial gain: money that is made from something?
8. When did the Miners’ Strike end?	8. What is the refusal to work, in an attempt to gain something from an employer called?	8. What’s the key term for the refusal to work, organised by a body of employees as a form of protest, typically in an attempt to gain something from an employer?

A large, stylized eagle graphic in a light blue color, spread across the entire page. The eagle's wings are spread wide, and its tail feathers are visible at the bottom. A dark blue vertical rectangle is positioned on the right side of the page, partially overlapping the eagle's body. A smaller, lighter blue rectangle with diagonal white lines is located in the upper left quadrant, overlapping the eagle's wing.

YEAR 9

MATHS

Year 9 Maths Course Content

Term 1

Units

Fractions, decimals and percentages review
 Percentage change
 Theoretical and experimental probability
 Calculations with standard form
 Linear inequalities
 Factorising and solving quadratic equations
 Rearranging formulae
 Constructing bisectors and perpendicular lines
 Circles and cylinders

Sparx topic codes

U888 U594 U881 U916 U554 U349 U533
 U773 U671 U286 U278
 U166 U580 U280
 U264 U290 U161
 U738 U145 U337
 U178 U963 U228
 U556
 U787 U245
 U221 U373 U464 U915

Term 2

Units

Error intervals
 Representations of 3D shapes
 Pythagoras' theorem in 2D
 Ratio
 Proportion word problems
 Equations of linear graphs
 Speed and rates
 Distance-time graphs

Sparx topic codes

U657 U108 U301
 U743
 U385
 U687 U577
 U721 U357 U610
 U315 U669
 U151 U256
 U403 U914 U462 U966

Term 3

Units

Plotting and interpreting quadratic graphs
 Angles
 Bearings
 Transforming shapes
 Similarity
 Congruence
 Collecting and presenting data
 Scatter graphs
 Grouped data
 Column vectors

Sparx topic codes

U989 U667 U601
 U665 U826 U329 U427
 U525 U107
 U696 U519 M881
 U551 U578
 U790 U886 U187
 U322 U520 U717
 U199 U277 U128
 U312 U877 U840
 U632 U903 U564 U660

Year 9 Maths



Order of Operations

$()$ Brackets
 n^a Indices
 $\div$ Divide & Multiply
 $+$ Add & Subtract

Converting Units of Time

60 seconds = 1 minute
 60 minutes = 1 hour
 24 hours = 1 day
 7 days = 1 week
 12 months = 1 year
 52 weeks = 1 year
 365 days = 1 year
 10 years = 1 decade
 100 years = 1 century
 1000 years = 1 millennium

Area

Area of a rectangle = $l \times w$
Area of a triangle = $\frac{1}{2} b \times h$

Metric Conversions

millilitres (ml) $\xrightarrow{\div 1000}$ litres (l)
 grams (g) $\xrightarrow{\div 1000}$ kilograms (kg)
 tonnes (t)
 millimetres (mm) $\xrightarrow{\div 10}$ centimetres (cm)
 metres (m)
 kilometres (km)

$\times 1000$ (ml to l)
 $\times 1000$ (g to kg)
 $\times 1000$ (t)
 $\times 10$ (mm to cm)
 $\times 100$ (cm to m)
 $\times 1000$ (m to km)

Angle Facts

Angles on a straight line add up to 180° .
 $a + b = 180^\circ$

Angles at a point up to 360° .
 $a + b + c + d = 360^\circ$

Opposite angles are equal.

Types of Number

odd	end in 1, 3, 5, 7, 9
even	end in 0, 2, 4, 6, 8
prime	has exactly two factors, 1 and itself. E.g. 2, 3, 5, 7, 11,...
factor	a number that divides exactly into another number, e.g. 3 is a factor of 9
highest common factor	the largest factor common to two or more numbers.
multiple	a number in the times table of another, e.g. 10 is a multiple of 5
lowest common multiple	the smallest number in two different times tables.

Averages

mode/modal	most common value or values (modal class).
median	the middle number when they are in ascending order.
mean	add the numbers up and divide by how many there are.
range	the difference between the largest and smallest value.

Name	Sides	Vertices
triangle	3	3
quadrilateral	4	4
pentagon	5	5
hexagon	6	6
heptagon	7	7
octagon	8	8
nonagon	9	9
decagon	10	10

Mathematical Symbols

$\neq$ is not equal to
 $<$ is less than
 $\leq$ is less than or equal to
 $>$ is greater than
 $\geq$ is greater than or equal to

Angles in Triangles

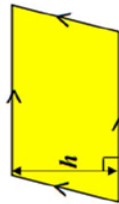
Angles in a triangle add up to 180° .

$a + b + c = 180^\circ$

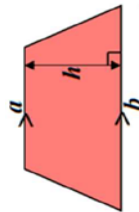
x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Year 9 Maths

Area

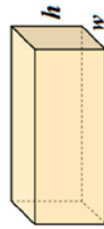


$$\text{Area of a parallelogram} = b \times h$$

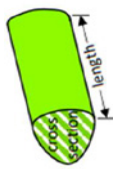


$$\text{Area of a trapezium} = \frac{1}{2}(a + b)h$$

Volume



$$\text{Volume of a cuboid} = l \times w \times h$$



$$\text{Volume of any prism} = \text{area of cross section} \times \text{length}$$

Standard Form

Standard form is a way of writing very large or very small numbers by using powers of ten. It is also known as scientific notation.

Numbers in standard form are written in this format:

$$a \times 10^n$$

Where a is a number $1 \leq a < 10$ and n is an integer.

Percentages of amounts

A percentage of an amount allows us to calculate a percentage of a given number by either calculating simple percentages such as 10% and 1% and building the percentage up from there, or by using a percentage multiplier.

E.g. Find 21% of £500.

Using simple percentages

100% is the original amount.

$$10\% = \text{£}50$$

$$1\% = \text{£}5$$

$$21\% \text{ of } \text{£}500 = 2 \times \text{£}50 + \text{£}5 = \text{£}105$$

Using percentages multipliers

$$21\% = \frac{21}{100}$$

$$21\% \text{ of } \text{£}500 = 0.21 \times 500 = \text{£}105$$

Money

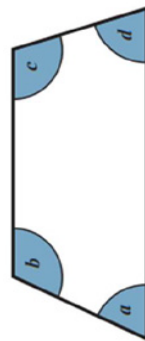
£1 is made of 100 pence (or 100p).

Pounds can be written as pence, for example £3.15 can be written as 315p.

Pence can be written as pounds, for example 27p can be written as £0.27.

Angles in Polygons

Interior angle sum of any polygon = $(n - 2) \times 180$
where n is the number of sides.



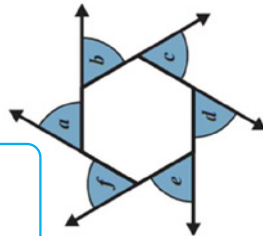
$$a + b + c + d = 360$$

Angles in a quadrilateral add up to 360



$$a + b = 180$$

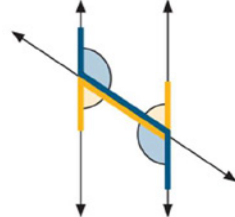
Exterior angles of a polygon add up to 360



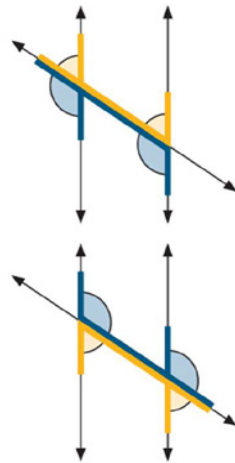
$$a + b + c + d + e + f = 360$$

The interior and exterior angle of any polygon add up to 180

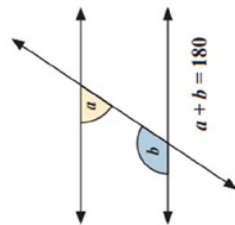
Angles in Parallel Lines



Alternate angles are equal

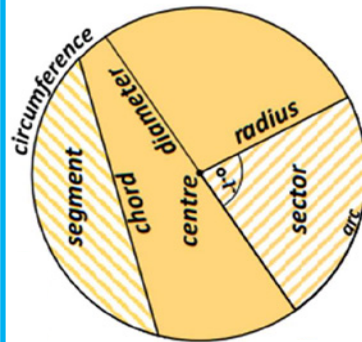


Corresponding angles are equal



Allied (or co-interior) angles add up to 180

Circles



$$\text{Circumference of a circle} = \pi d = 2\pi r$$

$$\text{Area of a circle} = \pi r^2$$

$$\text{Area of a sector} = \frac{x}{360} \pi r^2$$

$$\text{Arc length} = \frac{x}{360} \pi d = \frac{x}{360} 2\pi r$$

Laws of Indices

$$a^m \times a^n = a^{m+n}$$

$$a^m \div a^n = a^{m-n}$$

$$a^0 = 1$$

$$a^{-m} = \frac{1}{a^m}$$

$$(a^m)^n = a^{m \times n} = a^{mn}$$

Cylinders

Surface area of a cylinder $= 2\pi r^2 + 2\pi rh$

Volume of a cylinder $= \pi r^2 h$

Speed

Speed $= \frac{\text{distance}}{\text{time}}$

Plans and Elevations

Calculating in Standard Form

Multiplying and dividing numbers in standard form is where we multiply and divide integers/decimals and apply the laws of indices to simplify the powers of ten. We need to check that your final answer is in standard form.

E.g. $(4 \times 10^3) \times (2 \times 10^6)$ E.g. $(8 \times 10^9) \div (2 \times 10^6)$

$4 \times 2 = 8$ $8 \div 2 = 4$

$10^3 \times 10^6 = 10^9$ $10^9 \div 10^6 = 10^3$

$(4 \times 10^3) \times (2 \times 10^6) = 8 \times 10^9$ $(8 \times 10^9) \div (2 \times 10^6) = 4 \times 10^3$

Adding and subtracting numbers in standard form is where we can either convert standard form to ordinary numbers then use the column method for addition or subtraction, or we can adjust the numbers so that they have the same power of ten and then use addition or subtraction.

E.g. $(4 \times 10^3) + (6 \times 10^3)$

Converting to ordinary numbers first:
 $4000 + 6000 = 4600 = 4.6 \times 10^3$

Using adjusting the numbers to standard form:
 $(4 \times 10^3) + [0.6 \times 10^3] = 4.6 \times 10^3$

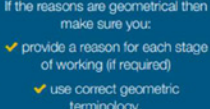
Pythagoras' Theorem

For any right-angled triangle, where c is the hypotenuse and a and b are the shorter sides:

Pythagoras' Theorem:
 $a^2 + b^2 = c^2$

Properties					
Quadrilateral	Image	Sides	Angles	Diagonals	Symmetry
Square		- Four equal sides - Opposing sides are parallel	All equal angles (90°)	- Bisect each other - Same length - Meet at 90°	- Four lines of symmetry - Rotational symmetry of order 4
Rectangle		- Two pairs of equal sides - Opposing sides are parallel	All equal angles (90°)	- Bisect each other - Same length	- Two lines of symmetry - Rotational symmetry of order 2
Parallelogram		- Two pairs of equal sides - Opposing sides are parallel	Two opposing pairs of equal angles	Bisect each other	- No lines of symmetry - Rotational symmetry of order 2
Rhombus		- Four equal sides - Opposing sides are parallel	Two opposing pairs of equal angles	- Bisect each other - Meet at 90°	- Two lines of symmetry - Rotational symmetry of order 2
Kite		Two pairs of equal sides	One opposing pair of equal angles	Meet at 90°	- One line of symmetry - No rotational symmetry
Trapezium		One pair of parallel sides	No equal angles	No special properties	- No lines of symmetry - No rotational symmetry
Isosceles Trapezium		- One pair of equal sides - One pair of parallel sides	Two pairs of equal angles	- Bisect each other - Same length	- One line of symmetry - No rotational symmetry
Irregular		- No equal side lengths - No parallel sides	No equal angles	No special properties	- No lines of symmetry - No rotational symmetry

Maths Command Words

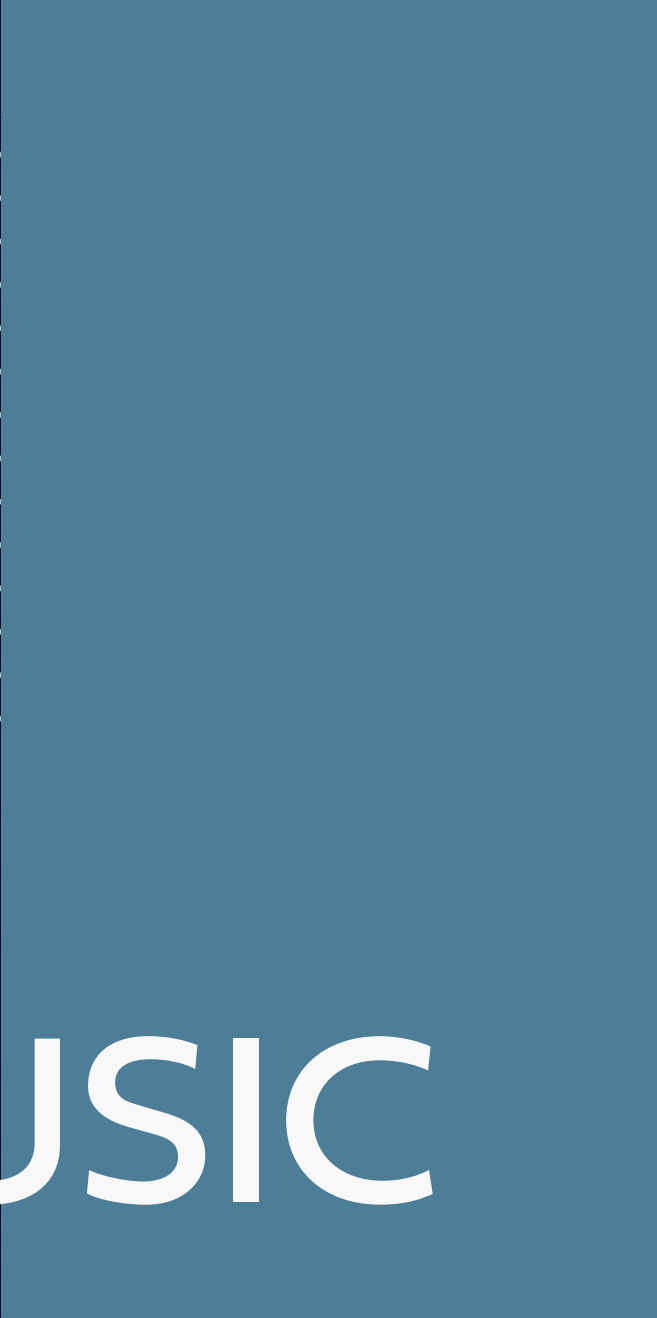
Explain Write a sentence or a mathematical statement to show how you got to your answer or reached your conclusion. 	Show All working needed to get to a given answer or complete a diagram to show given information. 	Expand Remove brackets. 	Describe Write a sentence that gives the features of the situation. 	Justify Show all working and/or give a written explanation. 												
Draw Produce an accurate drawing (unless a sketch is being drawn). 	Find Some working will be needed to get to the final answer. 	Expand and simplify Remove brackets and then collect like terms. 	Complete Fill in missing values. <table border="1" data-bbox="980 681 1131 805"><tr><th>x</th><th>y</th></tr><tr><td></td><td>-3</td></tr><tr><td>-1</td><td></td></tr><tr><td>0</td><td>1</td></tr><tr><td></td><td>3</td></tr><tr><td>2</td><td>5</td></tr></table>	x	y		-3	-1		0	1		3	2	5	Solve Find the solution of an equation or inequality. 
x	y															
	-3															
-1																
0	1															
	3															
2	5															
Draw a sketch of... Sketch Produce a drawing that does not have to be drawn to scale or a graph that is drawn without working out each coordinate. 	Factorise Insert brackets by taking out common factors. 	Work out Some working will be needed in order to get the answer. 	Write down No working is needed. 	Solve algebraically Find the solution of an equation or inequality; algebraic manipulation must be shown. 												
Simplify Simplify the given expression. 	Factorise fully Insert brackets by taking out all the common factors. 	Change Usually convert from one unit to another; either using known metric unit conversions or the use of a conversion graph. 	Write No working needed for 1 mark questions. Working may be needed for questions with more than 1 mark. 	Prove More formal than 'show', all steps must be present. In the case of a geometrical proof, reasons must be given. 												
Simplify fully Simplify the given expression. Answer must be given in its simplest form. 	Express Re-write in another form, some working may be needed. 	Give a reason Must be clear and accurate reasons. If the reasons are geometrical then make sure you: ✓ provide a reason for each stage of working (if required) ✓ use correct geometric terminology. 	Calculate A calculator and some working will be needed. 	Prove algebraically Use algebra in the proof. 												

Useful websites:

For homework and revision: sparxmaths.uk

For revision: corbettmaths.com

BBC Bitesize Revision



YEAR 9

MUSIC

KS3 KNOWLEDGE ORGANISER

Both sides of the back cover of your folder are one big knowledge organiser for years 7 and 8.

Check the information next to each poster for the focus of each class project.

All music K.O.s plus extra resources are also online at: <https://framwellgatemusic.wordpress.com/>

The image displays four music knowledge organiser posters arranged in a 2x2 grid. Each poster is decorated with musical notes and symbols.

- Duration (Green background):** Features a table for note values (Semibreve, Minim, Crotchet, Quaver, Semiquaver) and their corresponding counts (1, 2, 3, 4). It also includes a section for Time Signature, showing various ratios like 6/8, 9/8, 4/4, 2/2, 3/4, 5/4, 12/8, and 4/2, with labels for 'Number of beats in a bar' and 'Type of beat'.
- Pitch (Yellow background):** Shows a piano keyboard with notes labeled C through B. It includes a diagram of the vocal range (Low, Mid, High) and a section for Clefs (Bass, Alto, Treble) with their respective note ranges. It also features illustrations of various musical instruments.
- Texture (Orange background):** Defines different musical textures: Monophonic (One single melody line), Polyphonic (Multiple layers simultaneously), Homophonic (Layers moving together in harmony), Heterophonic (Original and decorated versions of melody playing simultaneously), Imitative (Melodies are copied by other players), Octaves (A melody heard in two or more parts at an interval of 8 notes), and Melody and Accompaniment (A tune supported by chords).
- Structure (Purple background):** Explains different musical forms: Binary form (Two contrasting sections), Ternary form (Three sections with contrasting middle), Rondo form (A returning section between contrasting sections), Theme and Variation (An original melody is repeated with alterations), Sonata form (For large works with three sections with defined roles: Exposition, Development, Recapitulation), Stripped (Repeated section with new lyrics), Through Composed (Section never repeat), Arch form (Symmetrically ordered sections), 12 Bar Blues structure (Three lines lasting four bars each; a specific chord pattern is used), 32 Bar song form (Four sections of 8 bars including a contrasting section), and Pop song structure (A combination of sections including Intro, Verse, Chorus, Middle 8, and Outro).

Music is an integral part of the human condition, and is essential to a well-rounded education. Not only is it intellectually satisfying, but as an art form it engenders concentration, teamwork, individual confidence, self-discipline and creativity.

The aim of the music department is to provide all students with a wide range of music making experiences in both curricular and extra-curricular activities. Everything in our curriculum is geared towards taking pupils as far towards becoming a practicing musician as possible.

Musically, you should be able to confidently read treble clef notation by the time they leave, have experience of singing and playing instruments, be able to aurally recognise musical styles and their features, be able to compose coherently. All students are encouraged regardless of their ability and there are many opportunities available for involvement both in and out of the classroom.

The department is a positive, inclusive environment where students can develop their imagination, self-esteem and teamwork skills.

Timbre

Tone Colour
Each instrument or voice is unique in its sound quality

Warm Harsh Bright
Dull Boomy Metallic Shimmery

Sound ingredients

- Size**
 - Large instruments produce low frequencies
 - Small instruments produce high frequencies
- Shape**
 - The nature of the bore and bell (tubing) will affect the amplification
- Material**
 - A metal version of the same instrument in wood will sound different
- Beaters**
 - The type of beater chosen will vary the tone produced
- Mouthpiece**
 - The mouthpiece directly impacts on the sound created

Dynamics

Loud

Crescendo
Getting gradually louder

ff Fortissimo
Very loud

f Forte
Loud

mf Mezzoforte
Moderately loud

mp Mezzopiano
Moderately soft

p Piano
Soft

pp Pianissimo
Very soft

Diminuendo
Getting gradually softer

Quiet

Tempo

Andante
Walking pace

Vivace
Lively

Allegro
Fast

Presto
Very quickly

Adagio
Leisurely

Largo
Slow and stately

Lento
Slow

rall. Rallentando
Slowing down

accel. Accelerando
Speeding up

Mood

Amaroso
Lovingly

Dolce
Sweetly

Cantabile
Singing style

Agitato
Agitated

Maestoso
Majestically

Grazioso
Gracefully

Animando
Animated

Furioso
Furiously

♩ = 90
Bpm 'beats per minute'

Every Good Boy Deserves Football

FACE

Sign	Name	Value	Rest
♩	Semibreve	4 beats	—
♪	Minim	2 beats	—
♫	Crotchet	1 beat	⏏
♫	Quaver	1/2 beat	⏏
♫	Semiquaver	1/4 beat	⏏



YEAR 9

PE

Basketball Overview



Core Skills to learn in this unit

1. Dribbling – using both hands, change of pace and direction.
2. Passing – chest, javelin, bounce, overhead, use of the fake.
3. Receiving/intercepting – making a target (signaling), one/two handed catch, stationary and on the move, differing speeds and heights, rebounding, stealing.
4. Shooting – lay-up, set shot, jump shot, free shot, use of the fake.
5. Footwork and marking – stopping (jump stop, stride stop), pivoting, getting free, tracking (drop step).

Local Clubs

Club	Distance	Venue	Postcode
Durham Palatinates Basketball Club	2.33 Miles	Durham University Sports and Wellbeing Park, Maiden Castle	DH1 3SE
Durham University	2.33 Miles		DH1 3SE
Durham Wildcats Basketball Club	2.33 Miles	Durham University Sports and Wellbeing Park, Maiden Castle	DH13SE
Oxclose Basketball Club	7.06 Miles	Oxclose Community School	NE38 0LN
Biddick School Community	7.07 Miles	Biddick School Sports College	NE38 8AL
Norpol	7.07 Miles	Biddick School Sports College	NE38 8AL
Cardinal Vipers	8.61 Miles		NE9 7NP
East Durham Lions Basketball Club	9.73 Miles	East Durham College	SR8 2RN

Competitive Opportunities

- School team to practice on a Friday night after school. Bring your PE kit and a bottle of water to rehydrate

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Cricket Overview



Core Skills to learn in this unit

1. Batting (defensive)
2. Batting (attacking)- drive, pull, sweep shot
3. Bowling – bowling for line and length, fast or slow bowling
4. Catching in the field (from close, from distance) or catching as wicket keeper (standing up, standing back).
5. Throwing and ground fielding in the field (from close, from distance) or stumping and recovery work as a wicket keeper, long barrier technique.

Local Clubs

ANNFIELD PLAIN CRICKET CLUB	DURHAM CITY CRICKET CLUB	LITTLETOWN CRICKET CLUB	SOUTH NORTH CRICKET CLUB
BARNARD CASTLE CRICKET CLUB	EASINGTON CW CRICKET CLUB	MARSDEN CRICKET CLUB	SOUTH SHIELDS CRICKET CLUB
BEAMISH AND EAST STANLEY CRICKET CLUB	EAST RANTON CRICKET CLUB	MIDDLETON-IN-TEESDALE CC & RABY CASTLE CC	STOCKSFIELD CRICKET CLUB
BILL QUAY ALBION CRICKET CLUB	EPPLETON CRICKET CLUB	ESH WINNING CRICKET CLUB	SUNDERLAND CRICKET CLUB
BLAYDON CRICKET CLUB	EVENWOOD CRICKET CLUB	MURTON CRICKET CLUB	SWALLOW CRICKET CLUB
BOLDON CRICKET CLUB	FELLING CRICKET CLUB	PETERLEE CRICKET CLUB	TANTOBIE CRICKET CLUB
BOLDON CA CRICKET CLUB	GATESHEAD FELL CRICKET CLUB	PHILADELPHIA CRICKET CLUB	TUDHOE CRICKET CLUB
BRANDON CRICKET CLUB	GREENSIDE CRICKET CLUB	RYHOPE CRICKET CLUB	USHAW MOOR CRICKET CLUB
BURNMOOR CRICKET CLUB	HARTLEPOOL CRICKET CLUB	RYTON CRICKET CLUB	WASHINGTON CRICKET CLUB
BURNOPFIELD CRICKET CLUB	HETTON LYONS CRICKET CLUB	SACRISTON CRICKET CLUB	WEARMOUTH YAV CRICKET CLUB
CASTLE EDEN CRICKET CLUB	HORDEN CRICKET CLUB	SEAHAM HARBOUR CRICKET CLUB	WHICKHAM CRICKET CLUB
CHESTER-LE-STREET CRICKET CLUB	HUNWICK CRICKET CLUB	SEAHAM PARK CRICKET CLUB	WHITBURN CRICKET CLUB
CONSETT CRICKET CLUB	HYLTON CRICKET CLUB	SHOTLEY BRIDGE CRICKET CLUB	WILLINGTON CRICKET CLUB
CROOK TOWN CRICKET CLUB	LANCHESTER CRICKET CLUB	SILKSWORTH CRICKET CLUB	LEAGUE CONTACTS
DAWDON CW CRICKET CLUB	LEADGATE CRICKET CLUB		
	LINTZ CRICKET CLUB		

Follow this link to find all junior cricket clubs in the North East and their contact details:

<https://www.durhamcricket.co.uk/wp-content/uploads/2023/04/DCB-Junior-League-Contacts-V3.pdf>

Competitive Opportunities

- School teams run throughout the year but particularly in the summer term. There are a lot of opportunities to represent the school at several competitions. Bring your PE kit and a bottle of water to rehydrate

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Netball Overview



Core Skills to learn in this unit

1. Passing and receiving (chest pass, shoulder pass, one/two handed passing).
2. Dodging – single/double/sprint.
3. Marking a player.
4. Shooting (close/distance) or rebounding (attacking or defending) or marking a pass/intercepting (Centre court players).
5. Footwork and movement – landing on one/two feet, pivoting.

Local Clubs

U14	
Team Name	
Grangetown	
Oakway	
Riverside	
Headlanders	
DPNC	
Great Park	
Cleveland Classics	
Novos	

U16	
Team Name	
Grangetown	
Oakway	
Riverside	
DPNC	
Headlanders	
Vixens	
Wildcats	
Seatonians	

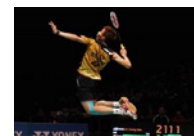
Competitive Opportunities

- School teams begin from the start of the year and there are plenty of opportunities to represent the school. Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Badminton Overview



Core Skills to learn in this unit

1. Service – high, low, flick (forehand or backhand).
2. Overhead – clear, drop (forehand and backhand where appropriate).
3. Underarm – clear, drive, drop (forehand and backhand where appropriate).
4. Net play.
5. Smash.

Local Clubs

The Phoenix Junior Badminton Club

Junior Sessions run on a Friday night 5.45 – 8.45pm
Senior Sessions Mondays 6 – 8pm
contact Steve Dunnett 07500527212
steved50_6@live.com

Address Contact Details

The Phoenix Junior Badminton Club
Freemans Place
Durham City
DH1 1SW

Glaxo Badminton Club

We are a small and friendly club who welcome players of all ages and standards. We hold club nights on Wednesdays 7-9pm, between September and April, and prospective new members are welcome to come and join a session for free. Just turn up to have a chat. We run teams in the Darlington League for those who wish to compete, but club nights are just for fun!

Address Contact Details

Glaxo Badminton Club
Southmore road
Barnard Castle
DL12 8DS

Aycliffe Badminton Club

Aycliffe Badminton Club
Beveridge Way
Haxton Aycliffe
DL5 4BA

Durham Swifts Badminton Club

Durham Swifts Badminton Club
Buckinghamshire Road
Belmont
Durham
DH1 2QP

Durham County Badminton Association

Durham County Badminton Association provides coaching and local tournament opportunities for junior players of all abilities with the aim of developing these players to progress on to represent the junior county teams in regional and national competitions as well as, hopefully, going on to represent the Durham County senior teams in national leagues.

Durham County Badminton Association are also a Deaf Aware Organisation and are keen to welcome members of the deaf community as volunteers, players or coaches.

Address Contact Details

Durham County Badminton
Association
Buckinghamshire Road
Belmont
DH1 2QP

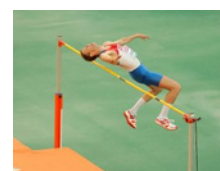
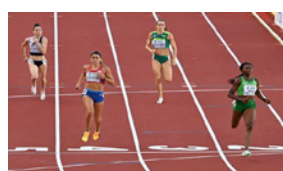
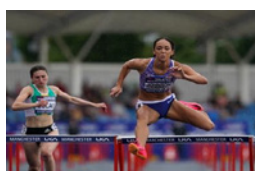
Competitive Opportunities

- Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Athletics Overview



Core Skills to learn in this unit

Track

1. Starts/finishes.
2. Arm action – effectiveness and consistency.
3. Leg action to create appropriate pace – consistency

Jumps

1. Run-up/speed.
2. Take-off.
3. Flight and landing.

Throws

1. Grip, stance and preparation to throw.
2. Movement into throwing action.
3. Release, follow-through and recovery.

Local Clubs



Competitive Opportunities

- Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate. There are a lot of opportunities to compete in competitions against other schools.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Hockey Overview



Core Skills to learn in this unit

1. Dribbling/moving with the ball – open and reverse stick, change of pace, dodging.
2. Passing – push, hit, slap.
3. Shooting – placement and power.
4. Receiving – stationary, on the move, open and reverse stick.
5. Marking/intercepting/tackling/jockeying – open and reverse stick tackles, jab tackle

Local Clubs

Durham City HC
3.1 MILES FROM DH15YN
The Graham Sports Centre
University of Durham
Durham, County Durham
DH1 3SE

Durham University HC
3.1 MILES FROM DH15YN
Graham Sports Centre Maiden Castle
Sports Ground, Maiden Castle Sports
Durham, County Durham
DH1 3SE

Sunderland Broom HC
15.5 MILES FROM DH15YN
14 Driston Gardens
Sunderland, Tyne and Wear
SR4 7TD

Gateshead HC
17.9 MILES FROM DH15YN
Market Lane
Gateshead, Tyne and Wear
NE11 9NX

Newcastle Medics HC
21.1 MILES FROM DH15YN
12 Warton Terrace
Heaton
Newcastle Upon Tyne, Tyne and Wear
NE6 3LR

Durham Dales HC
21.9 MILES FROM DH15YN
Lifestyle Fitness
Leazes Ln
Worsingham, Bishop Auckland
DL13 3DN

Jesmond Parish Church HC
22.2 MILES FROM DH15YN
14, Adelaide Gardens
Gosforth
Newcastle upon Tyne, Tyne and Wear
NE3 4JQ

Newcastle HC
23.0 MILES FROM DH15YN
Newcastle, Tyne and Wear
undefined

Newcastle University HC
23.9 MILES FROM DH15YN
Stan Calvert Memorial Pitch
Longenton Sports Ground
NEWCASTLE UPON TYNE, Tyne and Wear
NE12 8AD

Whitley Bay and Tynemouth HC
24.1 MILES FROM DH15YN
NE29 6TL

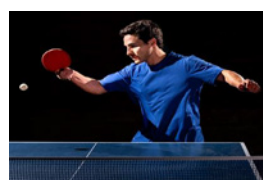
Competitive Opportunities

- Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate. There are a lot of opportunities to compete in competitions against other schools.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Table Tennis Overview



Core Skills to learn in this unit

1. Service – forehand and backhand (with and without spin as appropriate).
2. Drives – forehand and backhand (with and without topspin as appropriate).
3. Push – forehand and backhand (with and without backspin as appropriate).
4. Smash – forehand and backhand (with and without spin as appropriate).
5. Lob – forehand and backhand (with and without spin as appropriate).

Local Clubs

Durham City Table Tennis Club

Premier Club

Premier Club

Address: Freeman's Quay Leisure Centre, Durham, County Durham

DH1 1SW

More info: <https://www.tabletennis365.com/DurhamTTC>

Coxhoe table Tennis Club

Associate Club Affiliation

4.96 Miles

ACTIVE LIFE @ COXHOE Linden
Grove DURHAM DH6 4DW

+44 7929716379

Brandon Table Tennis Club

Club Membership £10 adults and £5 juniors

£4 per session adult

£2 per session junior

Details of regular meet-ups/sessions:

Monday 6:30 pm to 8:30 pm

Wednesday 10:00 am until noon

Thursday 6:30 pm to 8:30 pm

Saturday 10:00 am until noon

Sunday 10:00 am until noon

Address: Brandon Community Hall, Brandon Lane, Brandon, Durham
DH7 8PS

Competitive Opportunities

- Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate. There are a lot of opportunities to compete in competitions against other schools.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Volleyball Overview



Core Skills to learn in this unit

1. Service – underarm and overarm
2. Dig – two arm (receiving serve and from team mates)
3. Volley – set, straight, sideways, overhead
4. Smash/spike
5. Block – single and double

Local Clubs

Haughton Darlington

location:

→ Darlington

matches:

Darlington Education Village

DL1 2AN

Longbenton

location:

→ Newcastle upon Tyne

matches:

Friday

7-9pm

teams:

→ Longbenton Black Sheep (Div 1)

→ Longbenton Bitter & Twisted (Div 2)

→ Longbenton Speckled Hens (Women's Div)

Longbenton High School

Hallsham Ave

Longbenton

NE12 8ER

Newcastle Panthers

location:

→ Newcastle upon Tyne

matches:

Tuesday

6-8pm (Cubs)

8-10pm (White, Black, Scarlet, Pink)

teams:

→ Newcastle White Panthers (Div 1)

→ Newcastle Black Panthers (Div 1)

→ Newcastle Panther Cubs (Div 2)

→ Newcastle Pink Panthers (Women's Div)

→ Newcastle Scarlet Panthers (Women's Div)

Vertu Motors Arena

Scotswood Road

NE4 7AF

Competitive Opportunities

- Make sure you are attending after-school practices and bring your PE kit and a bottle of water to rehydrate. There are a lot of opportunities to compete in competitions against other schools.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Fitness Overview



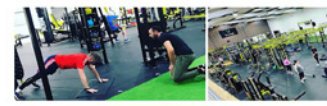
Core Skills to learn in this unit

1. Year 7 – Components of Fitness – able to define and demonstrate each component
2. Year 8 – Fitness Testing – able to link tests to relevant component and discuss both benefits and limitations
3. Year 9 – Methods of Training – able to describe the methods before evaluating each one using sporting examples

Local Clubs



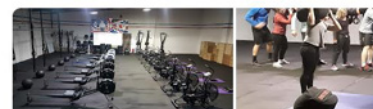
PureGym Durham Arnison



Unique Health Clubs



Result Fitness
4.4 ★★★★★ (72) Open



CrossFit DHM Durham
5.0 ★★★★★ (19)

Competitive Opportunities

- Make sure you are attending after-school clubs and bring your PE kit and a bottle of water to rehydrate.

Lesson highlights

- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

Football Overview



Core Skills to learn in this unit

1. **First Touch** – Consistency in ability to control/trap a football regardless of quality of pass from teammate.
2. **Passing** – Consistently chooses the correct option when passing the ball. Uses a variety of passes with different parts of the foot and consistently finds intended target.
3. **Defending/Tackling** – Can read opponent when they have the ball and can either perform a tackle or stop their opponent from going in the direction or space they want to.
4. **On the ball** – When in possession of the football is the learners head up looking around them? Can they move comfortably with the ball at their feet? Can they dribble and go past opponents when doing so?
5. **Shooting** – Learner should aim for corners of the net and consistently make clean contact on the ball.

Local Clubs

 Langley Park Hotspurs Youth F.C. Langley Park Hotspurs Youth U16s Saturday 0.62 Miles	 Durham Corinthians F.C. Durham Corinthians U16s Sunday 1.75 Miles	 Durham Blue Star Youth F.C. Durham Blue Star Youth U16s Saturday 2.07 Miles
 Deerness Valley Youth F.C. 4 suitable teams Saturday 2.46 Miles	 Durham United FC Youth 6 suitable teams Saturday 2.46 Miles	 Durham Pass Soccer Juniors F.C. Durham Pass Soccer Juniors U13 & Greens Saturday 2.46 Miles

Competitive Opportunities

- School teams run throughout the year – See the PE department for more information on how to join a school team. Practice also occurs throughout the week, with futsal practice on a lunch time.

Lesson highlights

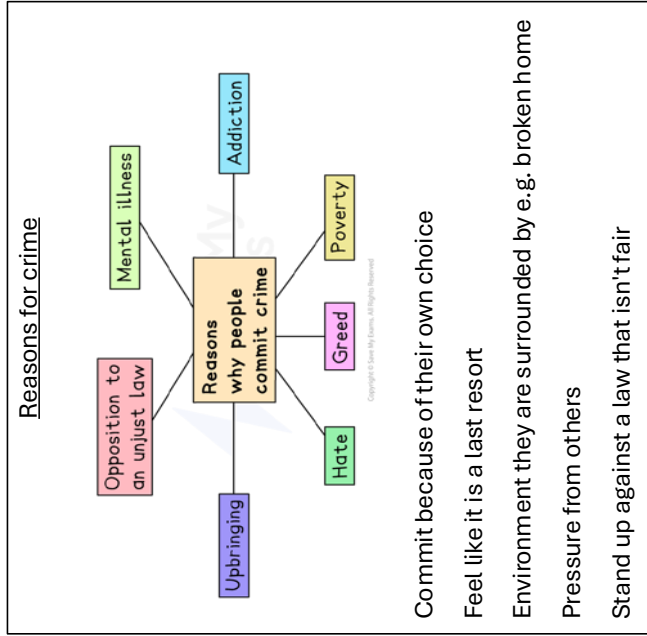
- Opportunities for self and peer assessment.
- Feedback opportunities to support team mates and build leadership and communication skills

A large, stylized eagle graphic in a light blue color, positioned on the left side of the page. The eagle's wings are spread, and its tail feathers are visible. A dark blue vertical rectangle is positioned on the right side of the page, partially overlapping the eagle's body. A small, square area with diagonal white lines is located in the upper left corner of the dark blue rectangle.

YEAR 9

R.E

Year 9 – Crime and Punishment



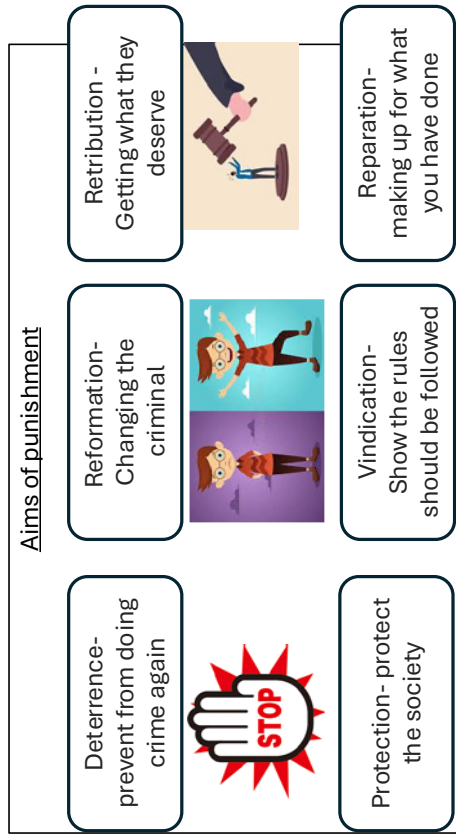
Christian Attitudes to Lawbreakers

Sin is part of human nature- Adam and Eve and original sin

Bible teaches about right and wrong and how to be a good person

e.g 10 commandments

- Help others to reform and become better
- Deserve a punishment



Quotes

"eye for an eye"
 "do not murder"
 "overcome evil with good"
 "anyone who does not do right is not a child of God"

"love the sinner, hate the sin"
 "do not steal"
 "love thy neighbour"

- Retrieval Questions**
1. Explain three reasons for crime.
 2. What is the main goal of reformation as an aim of punishment?
 3. Name the type of crime that targets an individual.
 4. Name the type of crime that targets property.
 5. Explain why prison may be used as a type of punishment.
 6. Explain why community service would be used as a type of punishment.
 7. From a Christian perspective explain one idea about people who break the law?

<u>Good and evil intentions</u> Evil actions usually link to the intention behind the action. e.g. murdering because they hate a person Some actions are 'evil' in religions but not against laws e.g. adultery and some are illegal e.g. murder	
<u>Types of crime</u> Crime against person- targets individual e.g. murder Crime against property- targets building or land e.g. trespassing Crime against state- causes issues for the society e.g. terrorism	
Types of punishment	
punishment	Views
Prison	- Protects society - A lot of reoffending
Community service	- Support to get better - Not harsh enough
Corporal punishment	- Retribution - Do not learn/get help
Capital punishment	- Protects society, retribution - Wrong person, no chances

Year 9 – Christian Beliefs

Nature of God

Omnipotent- all powerful

Omniscient- all knowing

Omnibenevolent- all loving

Just- fair

"There is no other God beside me"

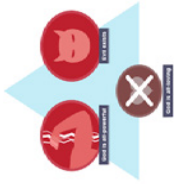


Problem of Evil

If God had these powers why doesn't he stop evil

Moral- humans Natural- nature

Inconsistent triad



Test from God?

Free will?

"when I want to do good, evil is right there within me"

<u>Creation</u>	
Genesis	John
Old testament Created in 6 days God created Holy Spirit present "hovering over the waters"	New testament No time mentioned God created Jesus helped create "the word... all things were made"



Incarnation

As a human (showed divine nature too)

Human- birth, emotions in temple, suffering, choices "overturned the tables of the money changers"

Divine- miracles, purpose to save, angels

✓ Relatable, know experiences, role model

Resurrection

Mary Magdalene found Jesus. Rose from the dead

Instructed to tell other people to show he was the son of God

✓ Divinity, son of God, proof for Christians about Jesus and the afterlife, Easter. "he has risen"



Salvation/ Atonement

Jesus dying on cross allowed people a chance of going to heaven if they do right things (forgive- atonement)

"for the wages of sin is death free gift of God is eternal life"

Law- following rules Grace- believing in God

Good works- doing good actions

Spirit- guiding to make right decisions



Judgement

General- Day of Judgement everyone will be judged "Rise from their graves and be separated"

Particular- individual judgement on actions

Original Sin

Perfect world was broken suffering now happens

Adam and Eve used free will to disobey

Everyone born with sin "the intent of man's heart is evil from his youth"



Crucifixion

Died on the cross to help people have a chance of going to heaven"

Suffered as Romans hated his claims he was the son of God

✓ Suffering like humans, resilience, omnibenevolent, died for a purpose

Ascension

40 days after resurrection. Rose up to heaven

Mission was completed

Told others to spread the word about God "make disciples of all nations"

Said he will come again (Parousia)



Afterlife

Heaven- doing right actions

Hell- Bad actions

Purgatory- Catholic belief suffer to get rid of sin then heaven

Parable of sheep and goat- sheep follow God and do right actions (heaven) goat don't help (hell)

Retrieval Questions

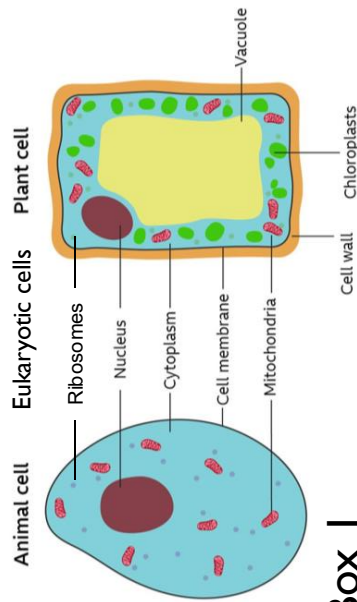
- What are two main qualities or characteristics that Christians believe God possesses?
- What is 'original sin' and how does it relate to everyone being born with a certain "intent of man's heart"?
- At the resurrection of Jesus. what did Mary Magdalene find, and what was Jesus' instruction to his followers after his resurrection?
- In your own words, what do you think "for the wages of sin is death free gift of God is eternal life." this means?
- What is the main difference between Heaven and Hell according to Christians?



YEAR 9

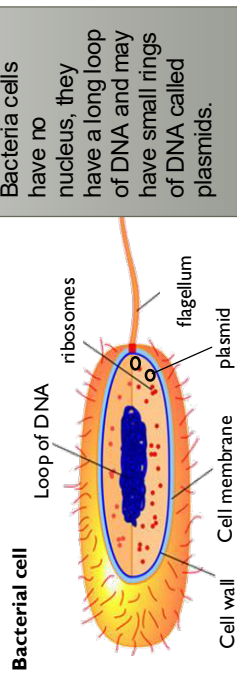
SCIENCE

Biology B1a Cell Structure and transport



Box 1

Box 2



Specialised cells
These are cells that have specific features or adaptations to perform a particular job.

Sperm cells - long tail for movement and an acrosome containing enzymes to help digest the outside of the egg

Nerve Cells – long axon, lots of dendrites for connections to many cells

Muscle Cells - special proteins to help the cell contract, lots of mitochondria

Root Hair Cells - long hair like extension increases surface area for absorption of water and minerals

Phloem cells - cell walls between cells breakdown to allow transport of sugars made in photosynthesis

Xylem cells - older cells are dead and have thickening to give them strength.

Photosynthetic cells – have lots of chloroplasts to absorb light for photosynthesis

Box 4

Box 3

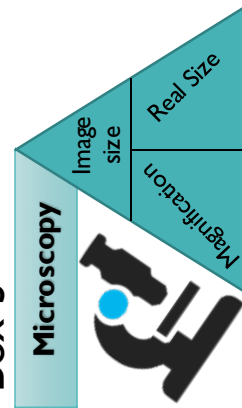


Image size = magnification $\times$ real size

Light microscopes use light which has a long wavelength and has a lower resolution. Some light microscopes have a magnification up to x2000

Electron microscopes use electrons which have a shorter wavelength than light and have a higher resolution. The magnification can be up to x2000000

Number	Standard form
150	1.5×10^2
5560	5.6×10^3
237.5	2.375×10^2
0.023	2.3×10^{-2}
0.0005	5.0×10^{-4}

Box 5

Conversions:

1km = 1000m (metres)

1m = 1000mm (millimetres)

1mm = 1000 μ m (micrometres)

1 μ m = 1000nm (nanometres)

1 μ m = 0.001mm

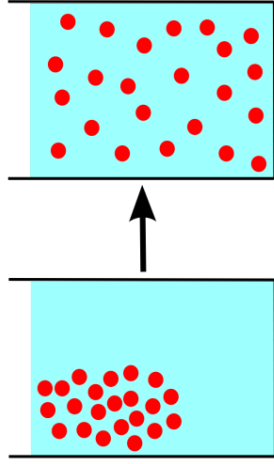
100 μ m = 0.1mm

Key word	Definition
Eukaryotic	Cell with a nucleus
Prokaryotic	Cell without a nucleus
Sub-cellular structures/ organelles	Small structures inside a cell e.g. nucleus. Some are bigger than prokaryotic cells.
Nucleus	Contains DNA
Cytoplasm	Where chemical reactions take place
Cell membrane	Controls what enters and leaves the cell
Mitochondria	Where aerobic respiration takes place
Ribosomes	Where proteins are made
Chloroplasts	Where photosynthesis occurs
Vacuole	Contains cell sap
Differentiation	When a cell becomes a specialised cell
Cell wall	Made of cellulose . Supports and strengthens the cell
Mitosis	Cell division where one set of chromosomes are pulled to each end of the cell and the nucleus divides
Stem cell	Cells that are undifferentiated but can turn into any type of cell

Box 6

Biology B1b Cell Structure and transport

Diffusion



Box 1

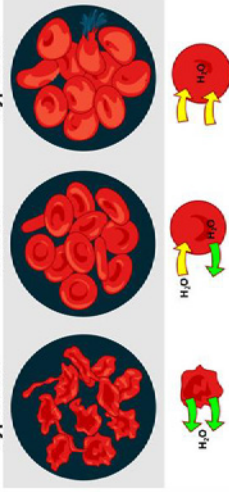
Factors affecting the rate of diffusion:

- Concentration gradient – the steeper the concentration gradient, the faster the rate of diffusion.
- Temperature – the higher the temperature the more kinetic energy the particles will have. These means they are going to move from a high concentration to a low concentration more quickly.

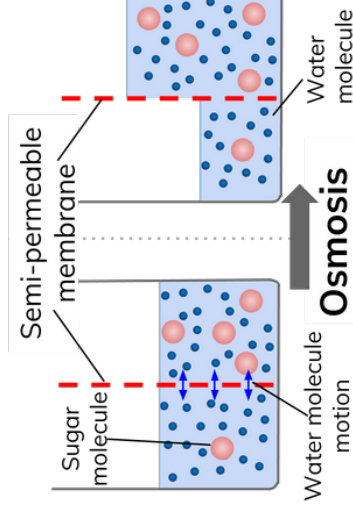
Box 2

Box 4

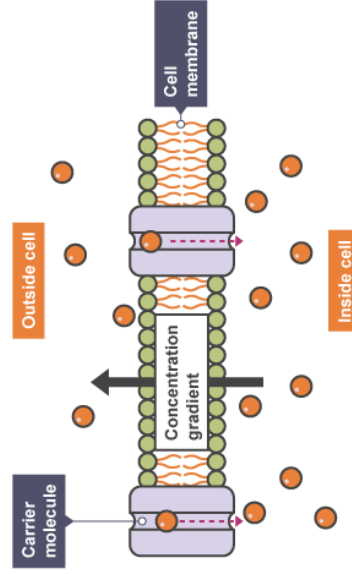
Hypertonic Isotonic Hypotonic



Box 3



Box 5



Active transport is important for the absorption of mineral ions which are found in very low concentrations in the soil, into the roots where they are at a higher concentration.

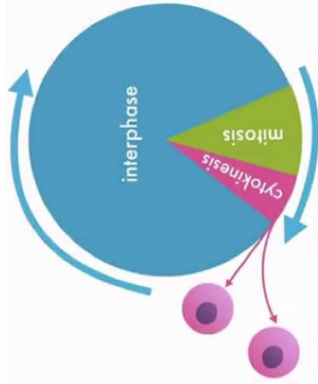
Active transport is also important for the absorption of sugar such as glucose out of the gut and into the blood.

Key word	Definition
Diffusion	The movement of particles from a HIGH concentration to a LOW concentration down a concentration gradient
Osmosis	The movement of WATER across a membrane from a DILUTE SOLUTION to a MORE CONCENTRATED SOLUTION or from a HIGH concentration of water to a LOW concentration of water.
Active transport	The movement of particles, e.g. mineral ions, from a LOW concentration to a HIGH concentration, AGAINST the concentration gradient, using ENERGY
Partially permeable membrane	A membrane that only allows some types of particles through.
Concentration gradient	The difference in concentration between two areas.
Dilute	A dilute solution has a high concentration of water molecules.
Concentrated	A concentrated solution has a low concentration of water molecules.
Hypertonic	When the concentration of solutes outside the cell is higher than the concentration of solutes inside the cell.
Hypotonic	When the concentration of solutes outside the cell is lower than the concentration of solutes inside the cell.
Isotonic	When the concentration of solutes inside and outside of the cell are the same.

Box 6

Biology B2 Cell division

Box 2



Cell cycle

The growing and division of cells to repair and maintain existing cells. This process has three parts:

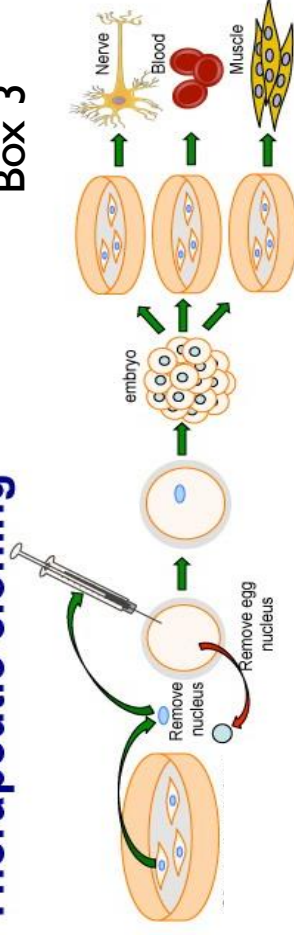
- Stage 1: Interphase: Growth and DNA Replication
- Cell develops more subcellular structures and copies DNA ready for the cell to divide.
- Stage 2: Mitosis: the process separating chromosomes
- X shaped chromosomes (made of the DNA) line up at the centre of the cell and cell fibres (spindles) pull them apart. The two 'arms' of the X-shaped chromosome are pulled to opposite ends of the cell.
 - Membranes form around each set of chromosomes, these form into each cell's nucleus
- Stage 3: Cytokinesis – splitting of the cell membrane
- The cytoplasm and cell membrane divide. The cell has now become two exactly identical daughter cells. They are clones of the original cell.

Box 1

Key word	Definition
Differentiation	When a cell becomes a specialised cell
Mitosis	Cell division where one set of chromosomes are pulled to each end of the cell and the nucleus divides
Stem cell	Cells that are undifferentiated but can differentiate into a specialised cell
Clone	A genetically identical copy of a cell
Zygote	The first cell made after fertilisation
Embryo	The very early stages of development of a multi celled organism.
Adult stem cell	Stem cells in adults that can only form a limited number of cells
Embryonic stem cell	Stem cells in embryos that can form all cells of the body
Meristem cells	The name given to plant stem cells. They can differentiate into any plant cell
Therapeutic cloning	Making an embryo using a patients own stem cells to help produce new tissues and organs to treat the patient
Gene	Small sections of DNA on a chromosome that control a characteristic.
Chromosome	Thin strands of DNA that contain all the genes needed to make an organism.

Therapeutic cloning

Box 3



In therapeutic cloning, the nucleus of the patient's body cell is removed and transferred to a donor egg cell that has also had its nucleus removed. The egg cell is stimulated to divide, eventually becoming an embryo containing stem cells. These stem cells are then made to differentiate into certain cell or tissue types, depending on what cell is needed.

Stem Cells Ethics & problems Box 4

Ethical concerns about using embryos. They have the potential to be a human life but are destroyed or only develop into particular cell types. Many people object on religious grounds due to denying a potential life. Some people argue a lot of money is wasted on stem cells which could be better spent on other treatments/research. There is a risk the cells could be infected by viruses or that the cells may be rejected by the human body.

Biology B3 organisation and the digestive system

Box 1

Key word	Definition
substrate	The substance an enzyme combines with
active site	The part of enzyme with a unique shape into which a substrate fits
denatured	The change in shape of an active site resulting in the substrate no longer fitting in the active site. May occur because of temperature or pH changes in the environment
gland	a tissue which makes and releases other chemicals e.g. enzymes, hormones and HCl

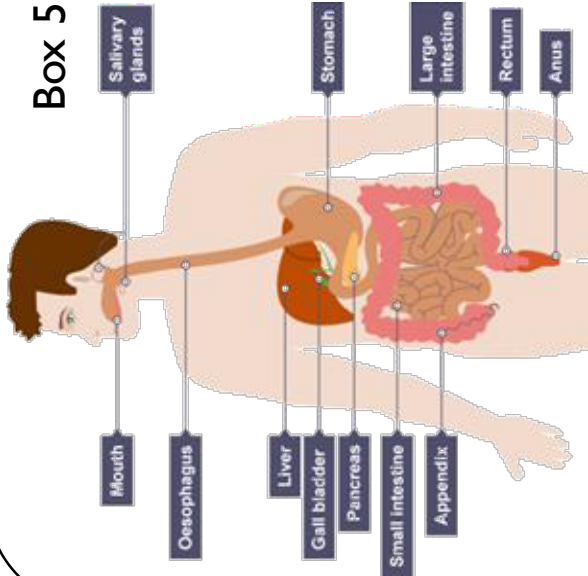
Box 2

Cell e.g. muscle cell
Tissue – a group of similar cells working together to carry out the same job e.g. cardiac muscle
Organ – a collection of tissues working together e.g. heart
Organ system - several organs working together e.g. circulatory system
Organism - several organ systems working together e.g. rabbit

Box 3

Enzyme	Location	Function
Amylase	Salivary glands, Pancreas, Small intestine	Breaks starch into maltose
Protease	Stomach, Pancreas, Small intestine	Breaks proteins into amino acids
Lipase	Pancreas, Small intestine	Breaks lipids into fatty acids and glycerol

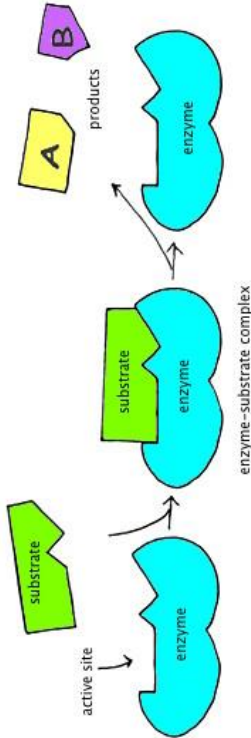
Box 5



Bile is produced in liver, stored in the gall bladder and released into the small intestine. Here it neutralises the HCl acid mixed with food coming from the stomach. This provides the correct pH for the enzymes in the small intestine to function properly. Bile also emulsifies fats into small drops – giving a much larger surface area for lipase enzymes to breakdown fat.

Box 4

Box 6



Biology B4 part A organising animals and plants

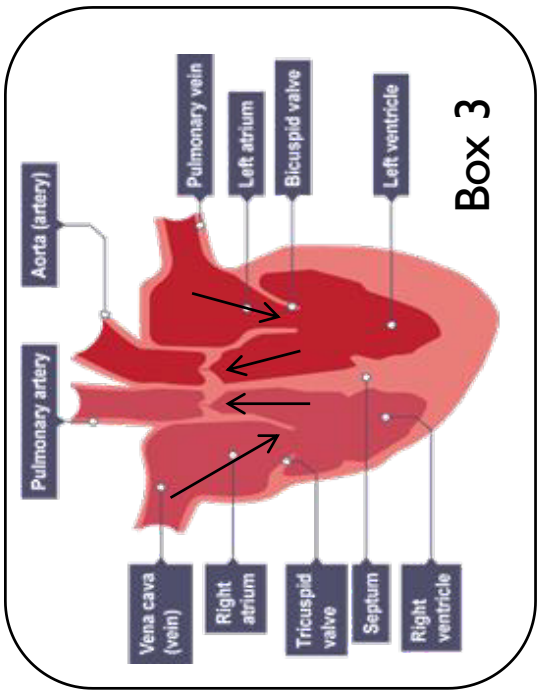
Box 1

Key word	Definition
Stent	Used to keep narrowed or blocked arteries open
Statin	A drug which reduces cholesterol levels in the blood, reducing the risk of heart disease
Pacemaker	Part of the heart – in the walls of the right atrium which controls the rhythm of the heart
Artificial pacemaker	An electrical device used to correct an irregular heart beat
Alveolus	Tiny air sacs in the lung increasing surface areas for gas exchange

Blood:

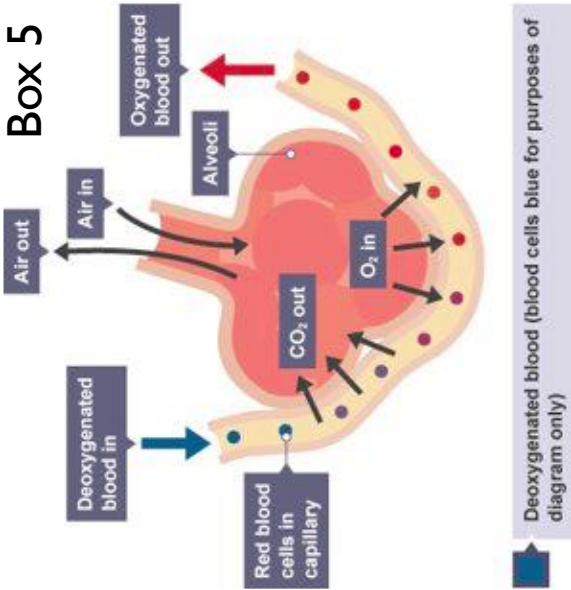
- Red blood cells** – Carry O₂, No nucleus to help store lots of haemoglobin. Disk shape for a large surface area to absorb oxygen.
- White blood cells** – involved in the immune system to defend the body from infection.
- Platelets** – Help blood clot and help form scabs on wounds.
- Plasma** – A yellow liquid that transports CO₂, urea (waste), hormones, proteins, antibodies / antitoxins, glucose, water, amino acids, fatty acids and glycerol.

Box 2

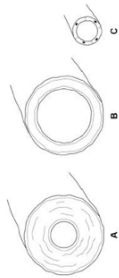


Box 3

Box 5



Vessel	Where	Structure	Additional feature
Artery	Away from heart	Thick muscular wall, thick elastic tissue Small lumen	High pressure blood flow
Vein	To the heart	Thin muscular wall, Large lumen	Low pressure, valves to stop blood flowing the wrong way
Capillary	Connects arteries to veins – allows exchange of substances	One cell thick wall, Very small lumen	Permeable walls increasing the rate of diffusion



A: Artery
B: Vein
C: Capillary

Box 4

Biology B4 Part B organising animals and plants

Box 1

Key word	Definition
Palisade layer	Tissue containing lots of chloroplast which carry out photosynthesis
Spongy mesophyll	Tissue with lots of air spaces to help with gas exchange
Guard cells	The two cells which can open and close stomata
Stomata	Small holes in the leaf surface which allow gases in and out
Xylem	Cells which form tubes to transport water
Phloem	Cells which form tubes to transport sucrose (a type of sugar)
Translocation	The movement of sugars through the phloem

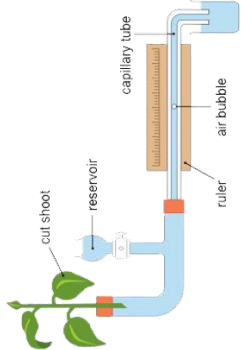
Transpiration: the movement of water through a plant from the roots to the leaves.

Factors which significantly affect transpiration are:

Temperature, wind, humidity and light intensity.

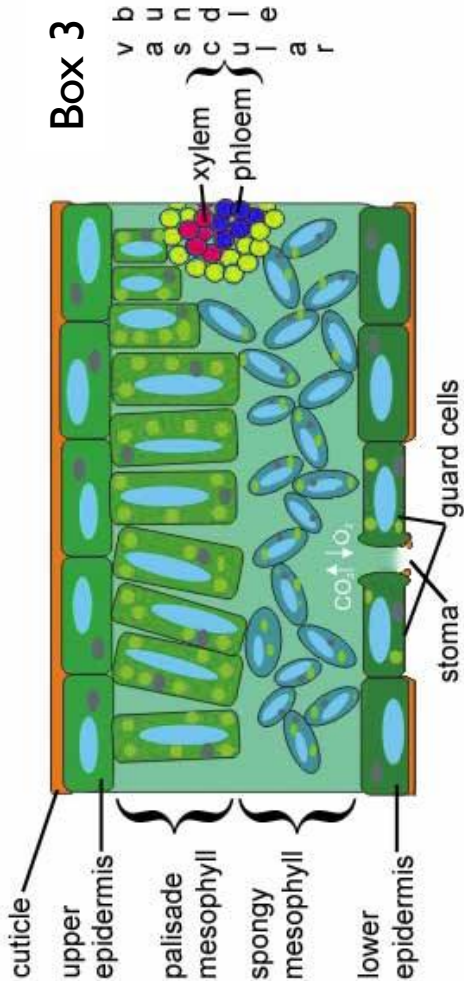
Transpiration is greater in hot, dry, windy and bright conditions.

A potometer (image to the right) can be used to measure transpiration.



Box 2

Box 3



Box 4

Inspiration (breathing in)

The diaphragm contracts and moves downwards.

The intercostal muscles contract and move the

ribcage upwards and outwards. This increases the

volume of the chest and decreases the air

pressure inside. Air is forced into the lungs from

high atmospheric pressure outside the body to the

lower pressure in the lungs.

Expiration (breathing out)

The diaphragm relaxes and moves back to

its domed shape. The intercostal muscles relax

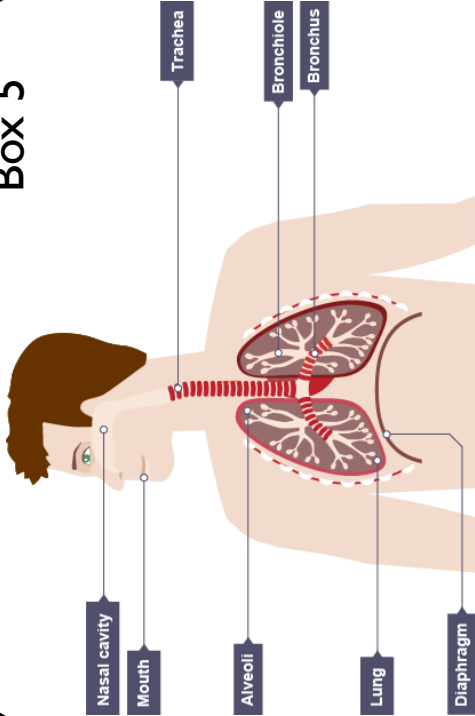
so the ribcage move inwards and downwards.

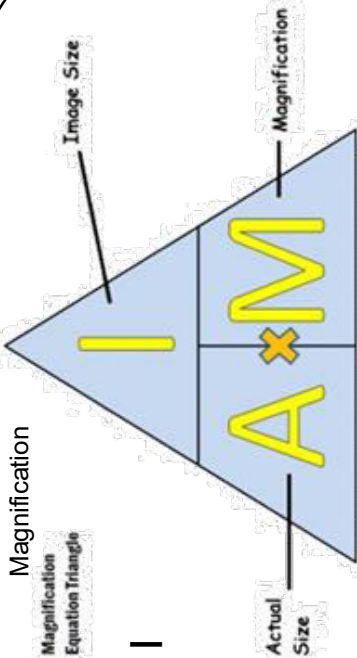
This decreases the volume of the chest

and increases the air pressure in the chest so air

is forced out of the lungs.

Box 5





Box 1

1. Magnification = image size ÷ actual size.
2. Actual size = image size ÷ magnification.
3. Image size = actual size x magnification.

Rules:

- Always measure in mm.
- Multiply your mm measurement by 1000 to convert mm into μm

Length in mm	Length in μm
1	1000
0.1	100
0.01	10
0.001	1

Box 2

% change

Percentage change is calculated by dividing the difference between the two amounts by the original amount.

$$\text{Percent Change} = \frac{\text{Change}}{\text{Original}} \times 100$$

The original mass = 11g, the new mass is 13g.

What is the % change?

$$\begin{array}{l} \text{Change: } 13-11 = 2 \\ \text{Original: } 11 \end{array}$$

$$\% \text{ change} = \frac{2}{11} \times 100$$

$$\% \text{ change} = 18.181818$$

$$\% \text{ change} = 18.19 \text{ (2dp)}$$

Box 3

Mode, media, mean and range

Median: the middle value. To find the median, order the numbers and see which one is in the middle of the list.

E.g. 3, 3, 6, 13, 100 = 6. The median is 6. f there are two middle values the median is halfway between them. This might not be a whole number.

Mode: the number that appears the most. To find the mode, order the numbers lowest to highest and see which number appears the most often.

E.g. 3, 3, 6, 13, 100 = 3. The mode is 3.

Mean: the total of the numbers divided by how many numbers there are. To find the mean, add all the numbers together then divide by the number of numbers.

E.g. $6 + 3 + 100 + 3 + 13 = 125 \div 5 = 25$

The mean is 25. The mean is not always a whole number.

Range is the difference between the smallest and the biggest number.

To find the range, state the smallest to the biggest number. Subtract the smallest number from the biggest number.

E.g. 7, 13, 3, 56, 100, 97

E.g. 3 -100. The range is 97.

Box 4

Time

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

7 days = 1 week

7.25 hours is **not** 7 hours and 25 minutes.

0.25 of an hour is one quarter of an hour or one quarter of 60 minutes,

$\frac{1}{4} \times 60 = 15$ minutes

So 7 hours 15 minutes is the same as 7.25 hours

0.5 of an hour is 30 minutes

0.1 of an hour is 6 minutes

Box 5

Surface area, volume and ratio

Surface Area (SA): Calculate the surface area of one side (multiply the length and height together).

Multiply this by 6 as the cube has 6 sides. If in cm, the units for area would be cm^2

Volume (V): Calculate by multiplying the length, height and width together. If in cm, the units for volume would be cm^3

Ratio: Compare the two values. Write as SA:V e.g. for the 3cm cube, $\text{SA}=54$, $\text{V}=27$, $\text{SA:V} = 54:27$ or $\text{SA:V} = 2:1$

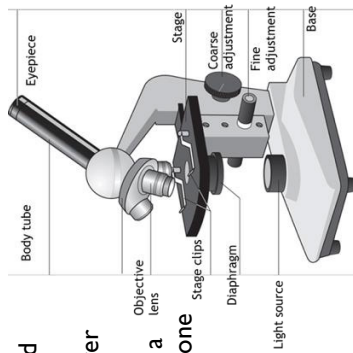


Length	SA	V	SA:V=
1cm	$1 \times 1 \times 6 = 6 \text{cm}^2$	$1 \times 1 \times 1 = 1 \text{cm}^3$	6:1
2cm	$2 \times 2 \times 6 = 24 \text{cm}^2$	$2 \times 2 \times 2 = 8 \text{cm}^3$	3:1
3cm	$3 \times 3 \times 6 = 54 \text{cm}^2$	$3 \times 3 \times 3 = 27 \text{cm}^3$	2:1

REQUIRED practical sheet 1

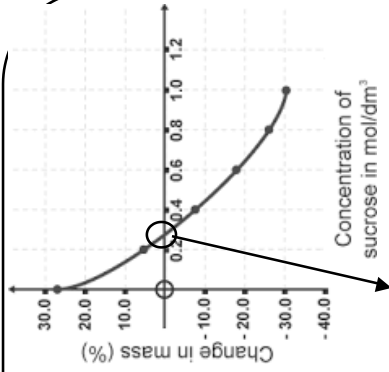
Box 1 Required Practical – Observing Cells

- Collect the equipment – onion, forceps, microscope, microscope slide, coverslip, iodine and goggles.
- Plug the microscope in and turn it on.
- Peel the onion to get a layer one cell thick.
- Place the onion peel onto a microscope slide and add one drop of iodine.
- Place a coverslip over the onion peel.
- Place the slide under the objective lens of the microscope and using the lowest powered lens first, focus the image.
- Move the objective lens to a higher magnification to observe the onion cells.



Independent variable – Concentration of sucrose/salt
Dependent variable – Mass of the potato or any food substance

- Label 6 boiling tubes, 0M, 0.2M, 0.4M, 0.6M, 0.8M, 1.0M and your groups initials
- Record the initial mass of 6, 4cm pieces of potato and place one piece into each labelled tube – make sure you know which piece is in which tube.
- Add 10ml of distilled water into the 0M labelled test tube.
- Repeat step 3 for the other 5 solutions.
- Leave the experiment for 20 minutes
- Remove each piece of potato and record the final mass
- Calculate the change in mass of the potato pieces.
- Calculate the % change in mass.
- Plot your graph as a line graph



Isotonic point – where the concentration is the same as the solution.

Box 2

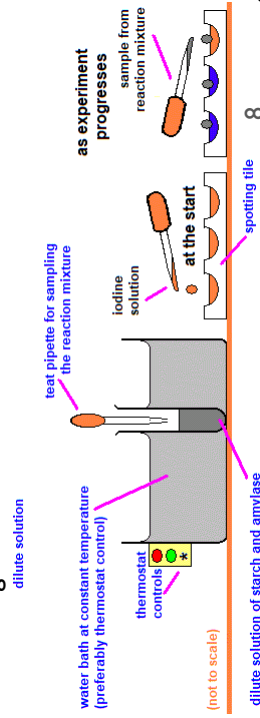
Required Practical – Osmosis

Required Practical – The Effect of pH on Amylase Activity

- Place one drop of iodine solution into each depression on the spotting tile.
- Place labelled test tubes containing the buffered pH solutions, amylase solution and starch solutions in to the water bath. Allow the solutions to reach 30 °C. Add 2cm³ of starch solution, pH buffer and amylase (add last) to a test tube. Start the stopwatch as soon as the amylase is added.
- After 30 seconds, remove one drop of the mixture and place this drop on the first depression of the spotting tile with the iodine solution. The iodine solution should turn blue-black. Repeat this every 30 seconds, adding a drop into the next depression of the spotting tile until the iodine solution remains orange.

Box 4

Independent variable – pH
Dependent variable – time taken for amylase to break down starch.



Required Practical – Food Tests

CHEMICAL	TESTS FOR ...#	HOW TO CARRY OUT THE TEST	RESULT	CHEMICAL	TESTS FOR ...#	HOW TO CARRY OUT THE TEST	RESULT
	Starch	1.) Add the iodine solution directly to the substance to be tested (in solid or liquid form) and look for a colour change.	Turns blue/black with starch		Protein	1.) Add Biuret's to the solution/suspension to be tested and look for a colour change.	Turns purple with protein
	Reducing Sugar	1.) Add Benedict's to the solution/suspension to be tested. 2.) Heat for 2 mins in a water bath at boiling point and look for a colour change.	Turns brick red with reducing sugars (green/yellow/orange if less sugar present)		Lipid (known as the Emulsion test)	1.) Add ethanol to the solution/suspension to be tested and shake thoroughly. 2.) Then add water and look for a colour change.	Turns white/milky with lipid

Box 3

Chemistry C1 Atomic Structure

C1 ATOMIC STRUCTURE

1. Atoms, elements & compounds

Atoms; Everything is made of atoms, it is the smallest part of an element.



Elements;

There are about 100 different elements each with a symbol. Elements contain only one type of atom



Compounds;

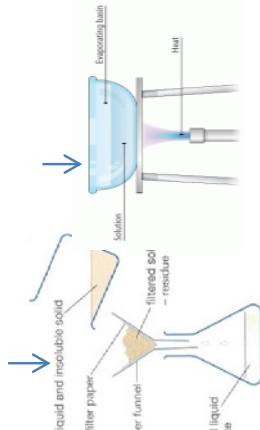
- Are formed by elements in chemical reactions
- Are 2 or more elements that are chemically combined/ bonded.



2. Mixtures; Are elements not chemically combined and can be separated by the following methods

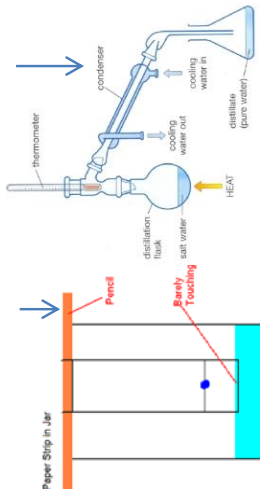
Filtration; Crystallisation;

Separating soluble and insoluble substances leaving a solid behind



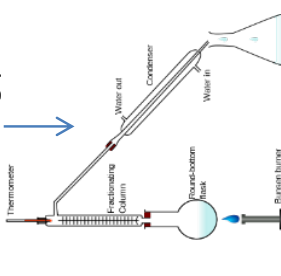
Chromatography Simple distillation;

Separating solutions Separating a liquid from its solvent



Fractional distillation;

Separating 2 different liquids based on different boiling points



4. Atoms; An atom has no overall charge, the number of protons = the number of electrons

Relative charges; Size and mass;

Very small, radius is 0.1nm (1x10⁻¹⁰m)
Mass is mainly in the nucleus

Name of particle	Relative charge
Proton	+1
Neutron	0
Electron	-1

Name of particle	Relative mass
Proton	1
Neutron	1
Electron	Very small

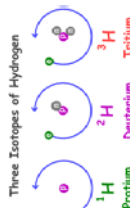
Atomic number;

The proton number, it is different for every element

(Mass number) ²³Na
(Atomic number) ₁₁

Isotopes;

Atoms that have the same number of protons (element), but different numbers of neutrons



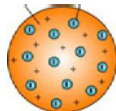
3. Development of the model of the atom;

New experimental evidence may lead to the model being changed or replaced



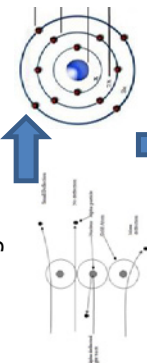
Early ideas;

Before the discovery of the electron atoms were tiny spheres, they couldn't be divided

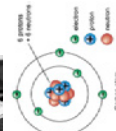


Alpha particle scattering;

After the electron was discovered the atom became a ball of positive charge with negative electrons scattered in it



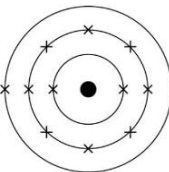
James Chadwick; Evidence to show the existence of neutrons in the nucleus



5. Electronic configurations;

Electrons fill the lowest energy levels first
This starts from the nucleus, following a set pattern up to the following maximum

- 1st shell – 2 electrons
- 2nd shell – 8 electrons
- 3rd shell – 8 electrons
- 4th shell – 2 electrons



Chemistry C2 Periodic Table

1. Development of the periodic table;

As more elements were discovered scientist tried to classify them.



Dalton -First attempts to classify elements were made before subatomic particles were discovered
Based on atomic weight
Wrong groups used



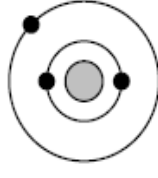
Newlands assumed all elements had been found and arranged them in "octaves" as each 8th element seemed similar – this was not widely accepted



Mendeleev - Overcame the problems of atomic weight.

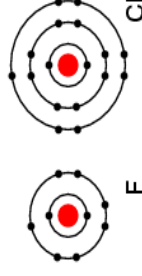
- He did this by;
- Leaving gaps
- Changing the order of the elements
- Predicted elements were discovered
- Differences were accounted for by isotopes

Today;
Elements with similar properties arranged in groups
Based on properties
All have the same number of electrons in the outer shell



Lithium

- 3. Group 1;**
- Alkali metals – soft and reactive metals.
 - 1 outer electron
 - Reactivity increases going down the group due to outer electron being easier to remove the more shells there are.
 - Alkali Metal + water --> Metal hydroxide + hydrogen



- 4. Group 7;**
- Halogens
 - 7 outer electrons
 - Non-metals
 - Molecules made of pairs of atoms joined by covalent bonds. Eg/ F₂
 - Reactivity increases going **up** the group as easier to attract electrons as fewer shells



- 5. Group 0;**
- Noble gases
 - Unreactive/ stable – full outer shell of electrons
 - Don't form molecules easily
 - boiling point increases going down group

6. Transition elements (Chem only)

- Compared to alkali metals TM's are:-
 - Strong, hard metals
 - Not very reactive
- Their ions can have different charges
- Form coloured compounds
- Used as catalysts



2. Metals;

- Majority of elements are metals
- Form positive ions
- Found on left hand side, middle and bottom of table



- Non-metals;**
- Form negative ions
 - Found on right hand side and top of table



Chemistry C3: Structure and Bonding

Chemical bonding involves either transferring or sharing electrons in the highest occupied energy level (shells) of atoms in order to achieve the electronic structure of a noble gas.

Atoms can be represented as shown in this example;

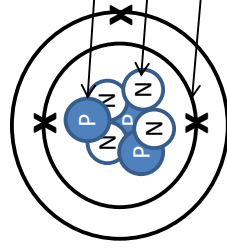
Mass Number 7

Li

Atomic Number 3

Atoms of the same element can have different numbers of neutrons

Atoms have an overall charge of 0 because the number of electrons is equal to the number of protons.



Name of particle	Mass	Charge
Proton	1	+1
Neutron	1	0
Electron	Very small	-1

1. Ionic bonds

- When atoms form chemical bonds by transferring electrons, they form ions.
- Atoms that lose electrons become positively charged ions (+) because the total number of positively charged protons outnumber the number of negatively charged electrons.
- Atoms that gain electrons become negatively charged ions (-) because the total number of negatively charged electrons outnumber the number of positively charged protons.
- Ions have the electron structure of a noble gas in group 0 (take care as they do not 'become' a noble gas as the proton number remains unchanged).
- Elements in group 1 are called alkali metals and they all form ions with a charge of +1. They all react with non-metals to form ionic compounds.
- Elements in group 7 are called the halogens and they all form ions with a charge of -1. They all react with the alkali metals to form ionic compounds.

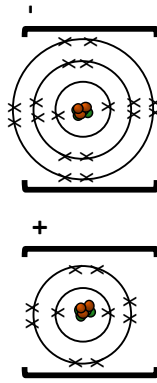
An example is sodium chloride

Sodium loses an electron to form Na^+

Chlorine gains an electron to form Cl^-

The name of the ionic compound is

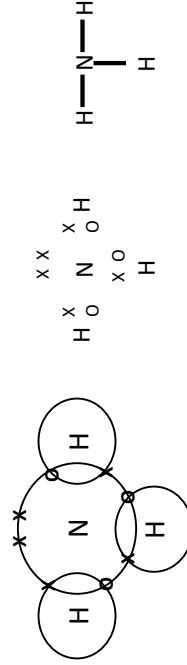
Sodium chloride and the formula is NaCl



2. Covalent bonds

- When atoms share pairs of electrons, they form covalent bonds. These bonds between atoms are strong.
- Some covalently bonded substances consist of simple molecules such as H_2 (hydrogen), Cl_2 (chlorine), O_2 (oxygen), HCl (hydrochloric acid), H_2O (water), NH_3 (ammonia) and CH_4 (methane).
- Others have giant covalent structures (macromolecules) such as diamond and silicon dioxide.
- Compounds with covalent bonds can be represented in 3 ways in order to show the shared pair of electrons.

For example ammonia (NH_3)

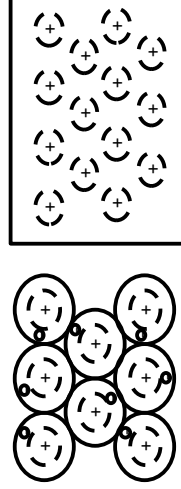


3. Metallic bonds

Metals, such as copper and magnesium, consist of giant structures of atoms arranged in a regular pattern.

The electrons in the highest occupied energy levels (outer shells) of metal atoms are delocalised so are free to move through the whole structure.

This corresponds to a structure of positive ions with electrons between the ions holding them together by strong electrostatic forces.



Chemistry C3: Structure and Properties

Substances that have simple molecular, giant ionic and giant covalent structures have very different properties. Ionic, covalent and metallic bonds are strong but the forces between molecules are weaker, e.g. in carbon dioxide and iodine.

4. Simple Covalent Molecules

These contain small molecules, with covalent bonds between the atoms.

Substances that consist of simple molecules are gases, liquids and solids that have **relatively low melting and boiling points**.

These substances have only weak forces between the molecules (intermolecular forces). It is these intermolecular forces that are overcome, not the covalent bonds, when the substance melts or boils.

Substances that consist of simple molecules **do not conduct electricity** because the molecules do not have an overall electric charge.

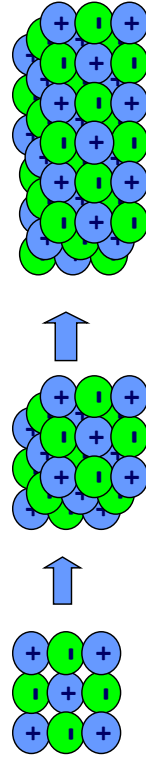
Examples of simple molecules are oxygen, hydrogen, hydrochloric acid, ammonia, methane, carbon dioxide, water and chlorine.

5. Ionic structures

• Ionic compounds have regular structures (giant ionic lattices) in which there are strong electrostatic forces in all directions between the oppositely charged ions.

• These compounds have **high melting points and high boiling points** because of the large amounts of energy needed to break the many strong bonds.

• When solid these structures **do not conduct electricity because the ions cannot move**. However when these substances **melt or are dissolved in water they do conduct electricity** because the ions are free to move.

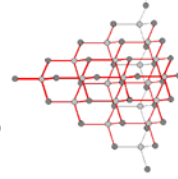


6. Covalent structures

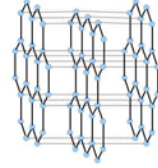
• Atoms that share electrons can also form giant structures or macromolecules. Diamond and graphite (forms of carbon) and silicon dioxide (silica) are examples of giant covalent structures (lattices) of atoms.

• All the atoms in these structures are linked to other atoms by strong covalent bonds and **so they have very high melting points**.

• In diamond each carbon atom forms four covalent bonds with the other carbon atoms in a giant covalent structure so **diamond is very hard**.



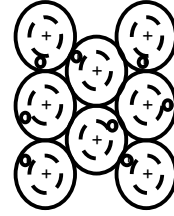
Diamond



Graphite

• In graphite, each carbon atom bonds to three others forming layers. The layers are free to slide over each other because there are no covalent bonds between the layers and so **graphite is soft and slippery**.

• In graphite, one electron from each carbon atom is delocalised. These delocalised electrons allow **graphite to conduct heat and electricity**.



7. Metallic bonds

Metals **conduct heat and electricity** because of the delocalised electrons in their outer shells.

The layers of atoms in metals are able to slide over each other and so metals can be bent and shaped.

Alloys are usually made from two or more different metals. The different sized atoms of the metals distort the layers in the structure, making it more difficult for them to slide over each other, and so make alloys harder than pure metals.

Shape memory alloys can return to their original shape after being deformed, e.g. Nitinol used in dental braces

Chemistry C5: Chemical Changes

1. Displacement reactions and metal extraction

Metals react with oxygen to form metal oxides.

Metal + oxygen → Metal Oxide

This is called oxidation

potassium	K	most reactive
sodium	Na	
calcium	Ca	
magnesium	Mg	
aluminium	Al	
carbon	C	
zinc	Zn	
iron	Fe	
tin	Sn	
lead	Pb	
hydrogen	H	
copper	Cu	
silver	Ag	
gold	Au	
platinum	Pt	least reactive

Reactivity depends on tendency to form metal ion



Metals that are less reactive than carbon can be displaced from their oxide by carbon.

Eg/ Iron + carbon → Iron + Carbon Oxide
This is called reduction.

2. Reactions of acids

Acid + metal → salt + hydrogen

Acid + alkali → salt + water

Acid + insoluble base → salt + water

Acid + carbonate → salt + water + carbon dioxide

ACID SALT

Hydrochloric Acid → Chlorides

HCl → Cl⁻

Nitric Acid → Nitrates

HNO₃ → NO₃⁻

Sulphuric Acid → Sulphates

H₂SO₄ → SO₄²⁻

Eg/ Zinc + Nitric acid → Zinc + hydrogen
Chloride

HT: OILRIG
Oxidation Is Loss of electrons
Reduction Is Gain of electrons

HT: OILRIG

e.g. 2HCl + Mg → MgCl₂ + H₂

Magnesium is **OXIDISED**

Mg → Mg²⁺ + 2e⁻

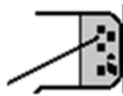
Hydrogen is **REDUCED**

2H⁺ + 2e⁻ → H₂(g)

This makes it a **REDOX** reaction, because both **reduction and oxidation** are happening.

3. Making a salt

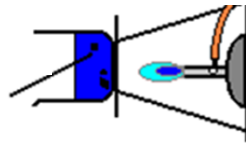
1. Choose correct acid
Eg/ Hydrochloric to make a chloride



2. Add base to excess



3. If it's an oxide - warm

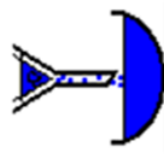


3. If it's a carbonate or metal – wait for the fizzing to stop.

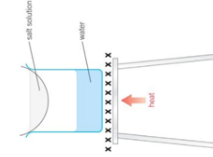


There should be some solid left at the bottom for both.

4. Filter off excess



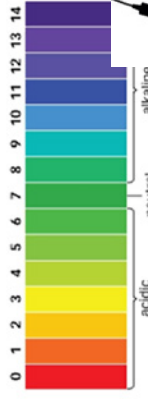
5. Evaporate off water



4. pH Scale and neutralisation

pH is a measure of how acid or alkaline a substance is.

To measure, add 3 drops of universal indicator and compare the colour to the chart.



Or you can use a pH probe



Acids produce H⁺ ions
Alkalis produce OH⁻ ions

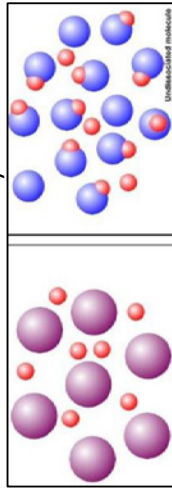
Neutralisation Equation



HT: Strong and Weak acids

Strong acids – fully ionise (split apart).

Weak acids – do not fully ionise.



Conc. Of H ⁺	pH
0.1	1.0
0.01	2.0
0.001	3.0

Chemistry C7 Energy Changes

1.Exothermic vs Exothermic

Exo^{thermic}

In some reactions more energy comes OUT than goes in

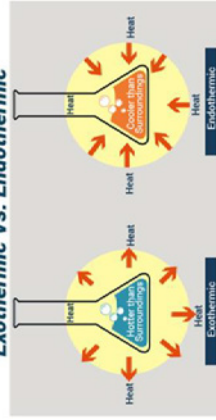
EXO = energy EXits the chemicals



The reactants have more energy than the products.

e.g. combustion, oxidation, neutralisation.

Exothermic Vs. Endothermic



Endo^{thermic}

In some reactions more energy goes IN than comes out.

ENDO = energy goes INTO the chemicals



The products have more energy than the reactants.

e.g. thermal decomposition

2. Uses

Exo^{thermic}



Self heating cans, hand warmers

Chemicals react in an exothermic reaction and give OUT heat energy so warms up the surroundings

Endo^{thermic}

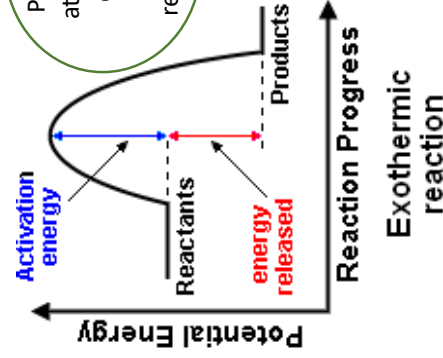


Cool packs for sports injuries

Chemicals react in an Endothermic reaction and take IN heat energy – therefore cooling the surroundings.

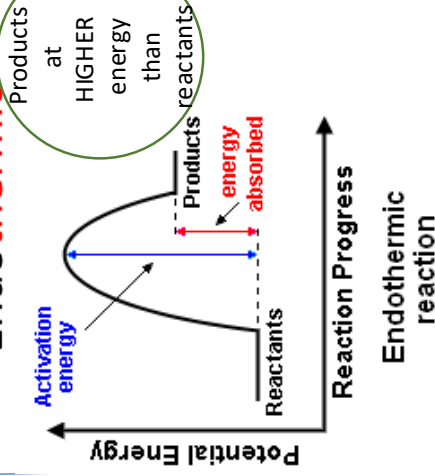
3. Reaction Profiles

Exo^{thermic}



Products at LOWER energy than reactants

Endo^{thermic}



Products at HIGHER energy than reactants

Activation Energy is the minimum energy needed to start a reaction.

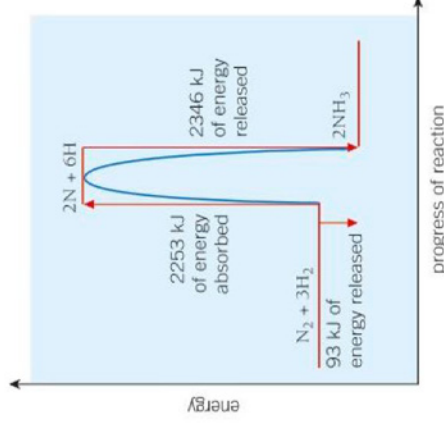
4. Bond energy Calculations (HT)

BINMIX

Bond **B**reaking is **e**ndothermic
Bond **M**aking is **e**xothermic

Exo^{thermic}

More energy comes OUT making bonds



Endo^{thermic}

More energy goes IN breaking bonds

Physics P1 Energy and Energy Resources

Term	Definition	Equation
Chemical energy	The energy stored in chemical bonds.	
Efficiency	The proportion of energy that is usefully transferred.	$\frac{\text{Useful energy out}}{\text{total energy in}}$
Elastic potential energy, E_e	The energy stored due to being stretched or compressed.	$E_e = 0.5 \times k \times e^2$
Gravitational field strength, g	The area around a mass which caused a non-contact force with other masses. On Earth, $g = 9.8\text{N/kg}$	
Gravitational potential energy, E_p	The energy stored due to an object's height in a gravitational field.	$E_p = m \times g \times h$
Kinetic energy, E_k	The energy stored due to an object's speed.	$E_k = 0.5 \times m \times v^2$
Non-renewable	Stores are used quicker than can be replenished.	
Power	The rate which energy is transferred from one store to another by a device. Measured in watts, W.	$P = \frac{E}{t}$
Renewable energy	Stores are replenished as quickly as they are used.	
Stiffness constant, k	The property of a material that determines how much force is needed to stretch or compress it. Measured in N/m.	
Thermal conductivity	A measure of how good a material is at transferring thermal energy by conduction. Insulators have a low value.	
Thermal energy	The energy stored due to an object's temperature.	
Work done	The energy transferred by a force moving an object.	$W = F \times s$

BOX 1: Energy stores and transfers

Stores

Energy is measured in

joules, J.

Transfers

Heat, radiation, electrical, mechanical



BOX 2: Conservation of energy

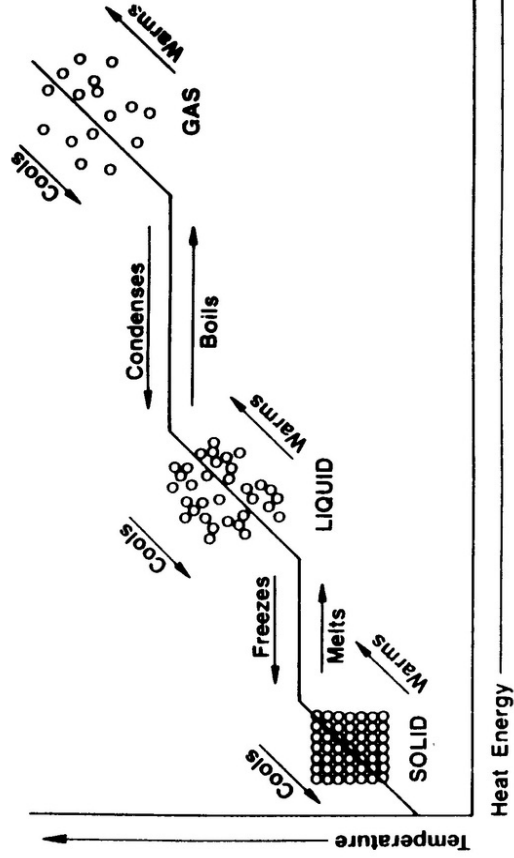
Energy can't be created or destroyed it is just transferred from one store to another. Friction increases energy loss and reduces the efficiency. Lubrication and insulation help to increase the efficiency of energy transfers by reducing energy loss through heating (**dissipating**).

Box 3: Energy resources

Resource	Advantages	Disadvantages
Fossil fuels (coal, oil, gas)	Reliable Relatively cheap	Produces CO ₂ Non-renewable
Nuclear	No CO ₂ High energy density	Radioactive waste Catastrophic accidents
Solar	No CO ₂ No fuel costs	Unreliable Expensive
Hydroelectric Power (HEP)	No CO ₂ Fast start-up /reliable	Flooded valleys Remote locations
Wave	No CO ₂ No fuel costs	Expensive Visual pollution
Tidal	No CO ₂ No fuel costs	Expensive Visual pollution
Wind	No CO ₂ No fuel costs	Unreliable Visual pollution
Geothermal	No CO ₂ Reliable	Rare suitable locations
Biofuels	Reliable Relatively cheap	Produces lots of CO ₂ Lots of space needed

Term	Definition	Equation
Boyle's Law	Pressure and volume are inversely proportional.	$P \times V = \text{Constant}$
Density	A comparison of the mass of the material to the volume it occupies.	$\rho = \frac{m}{V}$
Internal energy	The total potential and kinetic energies of all the particles in an object.	
Pressure	Gas pressure is caused by the particles colliding with the sides of their container.	$P = \frac{F}{A}$
Specific heat capacity	The energy required to raise the temperature of 1kg of a substance by 1°C.	$\Delta E = m \times c \times \Delta\theta$
Specific latent heat of fusion	The energy required to change the state of 1kg of a substance from a solid to a liquid at a constant temperature.	$\Delta E = m \times L_f$
Specific latent heat of vaporisation	The energy required to change the state of 1kg of a substance from a liquid to a gas at a constant temperature.	$\Delta E = m \times L_v$
Sublimation	The changing of state directly from a solid to a gas without forming a liquid.	

Box 1: States of matter



Box 2: Gas pressure and temperature

Gas particles are moving randomly and freely. They have high kinetic energy. The higher the temperature the more kinetic energy = faster. Gas particles collide with the walls of the container creating a force. Increasing the temperature of a gas, increases the pressure, (If the volume is kept constant)

This is because the particles will collide with the sides of the container more frequently and with greater force.

Box 3: Gas pressure and volume (Triple Only)

Increasing volume, decreases pressure (at a constant temperature)

This is because the particles will hit the sides less frequently on a larger surface area.

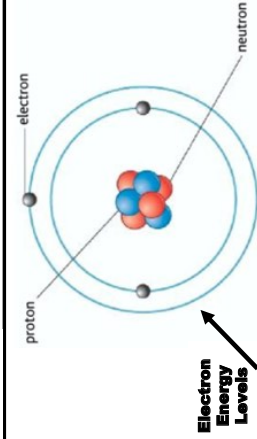
When a gas is pumped its temperature increases because work is done on the gas causing an increase in internal energy.

Physics P3 Radioactivity

Term	Definition
Activity	The number of unstable atoms that decay in 1 seconds, measured in becquerel, Bq.
Alpha radiation	2 protons and 2 neutrons (helium nucleus). Emitted from the nucleus.
Atomic number	The number of protons in an atom. Also known as the proton number.
Beta radiation	High energy electrons emitted from the nucleus.
Chain reaction	Where one reaction causes further reactions, which in turn causes further reactions.
Contamination	The unwanted presence of radioactive material in or on something.
Count rate	The number of counts per second detected by a Geiger counter.
Electrons	Negatively charged particles orbiting the nucleus of an atom.
Energy levels	Specific energy values for the electrons orbiting a nucleus.
Fission	The breaking of a large nucleus into two smaller nuclei.
Fusion	The joining of nuclei into a larger nucleus.
Gamma radiation	High energy electro-magnetic radiation emitted from an unstable nucleus.
Half-life	Average time taken for the number of radioactive nuclei or the count rate to halve.
Ion	A charged atom.
Ionisation	The process of atoms gaining or losing electrons to become ions.
Irradiated	An object has been exposed to ionising radiations.
Isotopes	Atoms with the same number of protons but a different number of neutrons.
Mass number	Number of protons + neutrons in a nucleus.
Neutrons	Uncharged particles in the nucleus. Same mass as a proton.
Nucleus	The tiny centre of an atom composed of protons and neutrons.
Protons	Positively charged particles in the nucleus. Same mass as a neutron.

Box 1: Atomic Structure

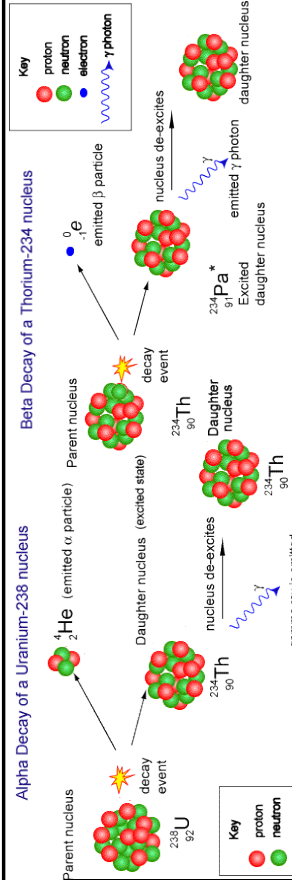
Particle	Relative Mass	Relative Charge
Proton	1	+1
Neutron	1	0
Electron	1/1860	-1



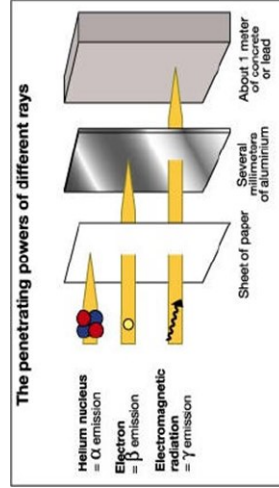
Mass number
23
Atomic number
11
Na

Box 2: Nuclear Decay

Decay	Atomic no	Mass no.
Alpha	-2	-4
Beta	+1	+0
Gamma	+0	+0

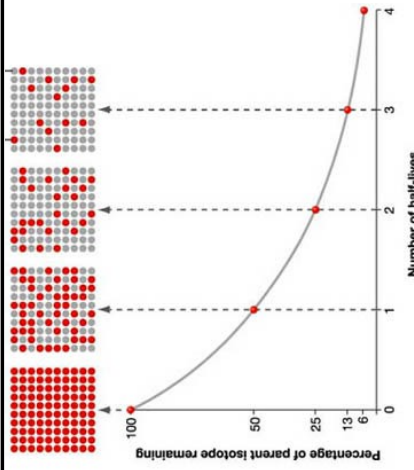


Box 3: Properties of radiation

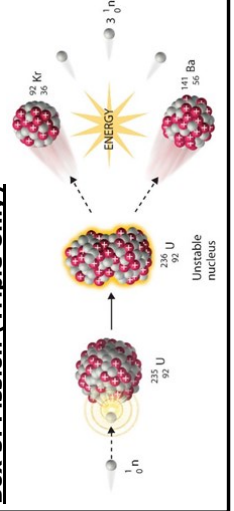


Alpha = smoke detectors
Beta = paper/foil thickness
Gamma = sterilising, tracers, killing cancer cells

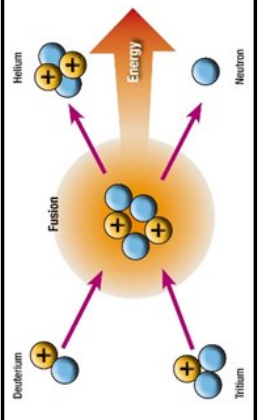
Box 4: Half Life



Box 5: Fission (Triple Only)



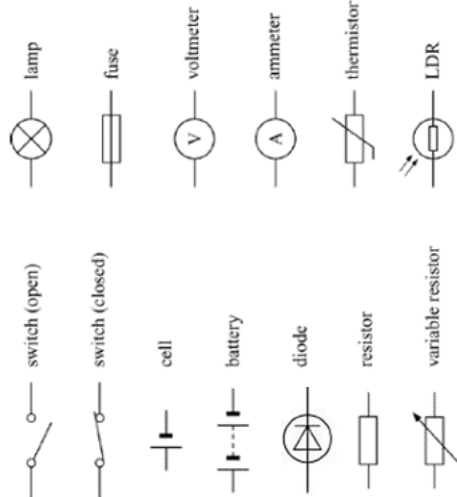
Box 6: Fusion (Triple Only)



Physics P4 Current electricity

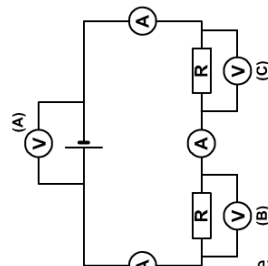
Term	Definition	Equation
Charge (Q)	A property of matter that can be positive or negative. Measured in coulombs, C	
Diode	Non-ohmic conductor.. It has a high resistance in the reverse direction. Current flows in one direction only.	
Current (I)	Flow of electric charge. Measured in amps, A. (1A is 1C /s).	$Q = I \times t$
Electric field	The area around a charged object which causes a non-contact force on other charged objects.	
Field lines	Direction a positive charge would move when placed in an electric field.	
Fuse	A thin wire that melts to stop the flow of current if it gets too hot.	
Light dependant resistor	A resistor in which the resistance changes with light intensity. (LDR)	
Light emitting diode	A diode that will also emit light. (LED)	
Ohm's Law	Current through a resistor is directly proportional to the potential difference at a constant temperature.	$V = I \times R$
Parallel circuit	A circuit connected so the same potential difference is across every component.	
Potential difference (V)	Energy transferred by each coulomb of charge. Measured in volts, V.	$E = V \times Q$
Power (P)	Rate of energy transfer. Measured in watts, W.	$P = E/t$ $P = I \times V$ $P = I^2 \times R$
Resistance (R)	How difficult it is for an electric current to flow. Measured in ohms, Ω .	$V = I \times R$
Series circuit	A circuit connected so the same current flows through every component.	
Static electricity	Electric charge stored on insulating objects by electrons flowing.	
Thermistor	A resistor in which the resistance changes with temperature.	

Box 1: Circuit symbols



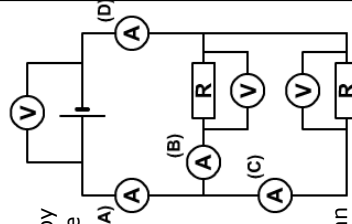
Box 3: Series circuits

1. Current is always the same, so all ammeter readings will be the same.
2. Potential Difference of battery is shared by components, so reading (A) = (B) + (C).
3. Total Resistance of Circuit is the sum of the resistance of all components. E.g. Total $R = R_1 + R_2 + \dots$

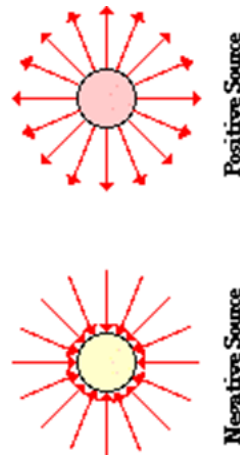


Box 4: Parallel Circuits

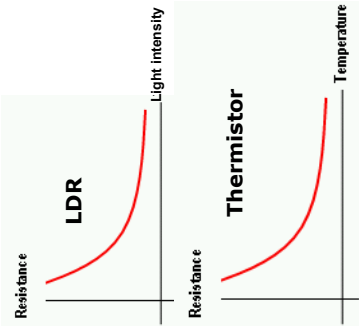
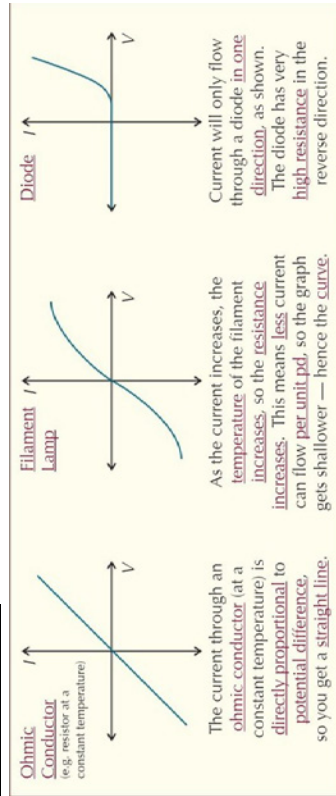
1. Current from the battery is shared by the components on the branches of the circuit before returning to the battery. (A) = (D) = (B) + (C)
2. Potential Difference of battery is the same for all components on the branches of the circuit. All voltmeter readings are equal.
3. Total Resistance of circuit is less than the smallest resistor in the circuit.



Box 2: Electric Field diagrams (Triple Only)



Box 5: Resistance



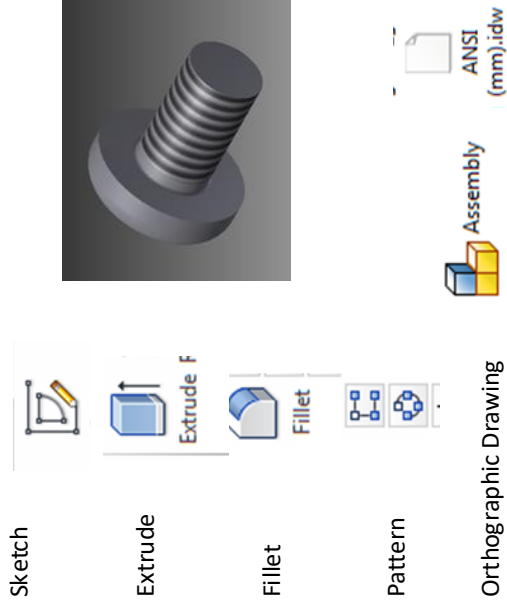
A large, stylized eagle graphic in a light blue color, spread across the entire page. The eagle's wings are spread wide, and its tail is visible at the bottom. The graphic is composed of simple, bold lines.

YEAR 9

TECH

Year 9 D&T Knowledge Organiser 1

Autodesk Inventor



Isometric Drawing



When designing, where do we get new ideas?

- Nature
- Geometry/mathematics
- The man-made world
- Other designers
- Other products



Rarely from looking at a piece of blank paper!

Design Brief

A **design brief** is the statement **acient**(the person you are designing for) gives to a designer outlining what they want their product to be like, eg 'Design a drinks bottle holder for use while riding a bicycle'. The designer could also produce a brief on behalf of the client, as the client might have a problem but not know how to proceed.

Design Specification

A **design specification** a list of criteria a product needs to address. Using the brief as a starting point for research, a specification can be written when more facts are known. Information needs to be found through research to help produce early design solutions and improvements.

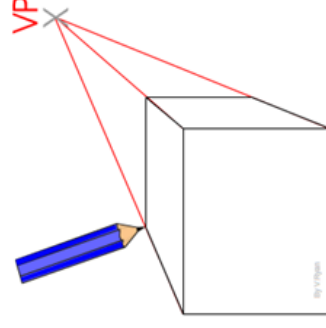
If the criteria are measurable, it makes it easier to later measure how effective the design ideas are, eg 'How much will the design cost to produce?'

How to avoid design fixation

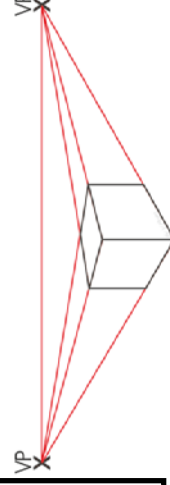
Design fixation confines a designer to limited creativity. It is a regressive cycle, that is sometimes difficult to escape. However, there are strategies that can be used, that will help a designers creativity.

Simply by copying a design, is not creating a new design. Using a source of inspiration can be an excellent way of starting a design.

Single Point Perspective

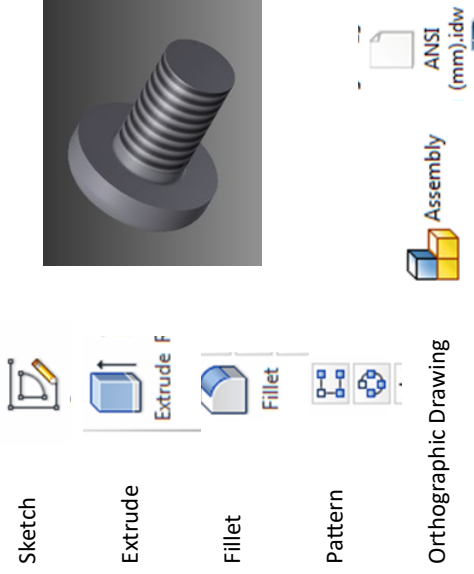


Two Point Perspective



Year 9 D&T Knowledge Organiser 2

Autodesk Inventor



Evaluating a Product

Design Criteria

Use your design criteria or manufacturing specification to compare whether your product meets each of the points outlined.

Testing the functionality of an item.

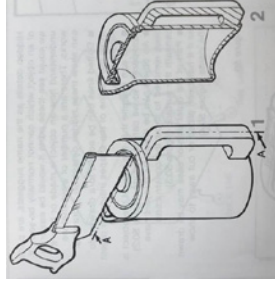
- Is the product fit for purpose?
- What about the aesthetics?
- Is any of the book too fragile?
- Is it suitable for the target market? Etc.

Being aware of commercial methods.

Can it be produced on an industrial scale? Explain how this can be done.

Gaining and using client/user third party opinion.

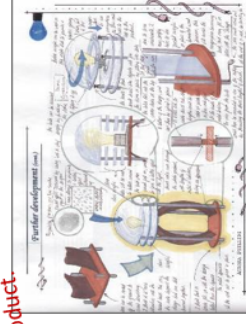
Formulate questions that you could ask a third party in order to gain their opinion (although we do not have time to fulfill this task, your planning for the task will demonstrate your understanding of reasonable questioning that will aid the development of the product).



Cross Sections

Design Development

Use sketches and annotation to explain ALL the different possibilities of making your product.



Top Tips!

- This could be combination of 2 or more of your ideas
- Give different solutions to each part of your product
- You do **not** have to draw the full product each time
- Discuss materials/processes
- Could this be handed over to a stranger and they would know exactly how to make it?

Designing and Developing Prototypes

They are used to check requirements of the client, respond to client needs, test to functionality (to see how they work), check aesthetics and check its marketability

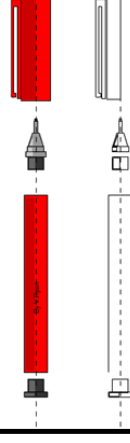
A designer would use the prototype to test the above.

CAD/CAM is effective and quick way of producing prototypes because can be modified easily.

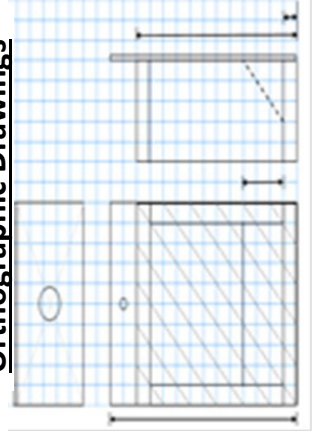
Evaluating Prototype

Final prototypes will be used to get client feedback and will be used to work out costings for materials and labour.

Exploded Drawings



Orthographic Drawings



Notes

Notes



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