

Year 9 Learning Cycle 1

Student Name: _____

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How to Use your Learning Cycle

Planner

Poltair School believe that the Learning Cycle Planner should be used daily for classwork and home learning. The Learning Cycle Planner will inform students and parents of topics that are being covered in class during each learning cycle, enabling all students to extend their learning outside of the classroom.

Students should be using their Learning Cycle Planner as a revision guide for assessments and using their SORT strategies to revise for each subject prior to assessments.

Learning Cycle 1

1/9/24 - 20/12/24

Knowledge check

2/12/24 - 13/12/24



At Poltair we **SORT** it!

How to Use your Learning Cycle Knowledge Organiser

Poltair School believe that the Learning Cycle Knowledge Organiser should be used daily for classwork and home learning. The Learning Cycle Knowledge Organiser will inform students and parents of topics that are being covered in class during each learning cycle, enabling all students to extend their learning outside of the classroom.

Students should be using their Learning Cycle Knowledge Organiser as a revision guide for assessments and using their SORT strategies to revise for each subject prior to assessments.




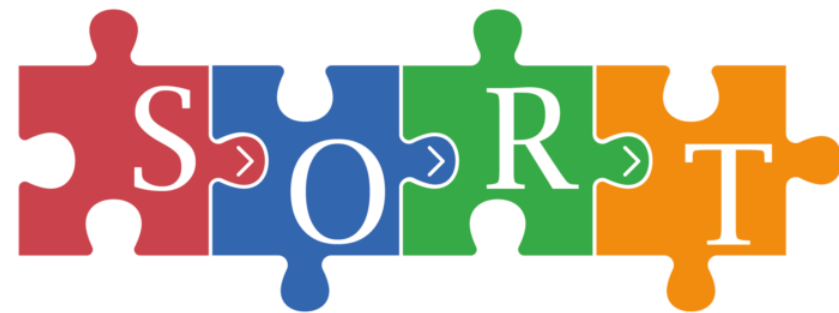
At Poltair we **SORT** it!

What are the SORT strategies?

Select	Organise	Recall	Test
Select your revision materials by topic/subtopic. Traffic light your PLC sheets to identify areas of weakness or gaps (Red/Amber) that need to be prioritised.	Organise and condense any class notes, revision guides and revision.	Use active recall and spaced repetition to memorise your knowledge organisers until you can recall the information e.g.. Look, cover, write or self-testing	Use low stakes online tests/quizzes and answer high stakes past paper/sample questions to check and apply knowledge and understanding
Strategies			
<ul style="list-style-type: none"> • How to use your PLC • How to schedule your home learning and stick to it! • How to select the correct knowledge to study 	<ul style="list-style-type: none"> • Cornell Notes • Flash cards • Mind mapping • Revision clocks • Dual coding • Summary 	<ul style="list-style-type: none"> • Look cover & test • Leitner system • Blurt it • Transform it 	<ul style="list-style-type: none"> • Low stakes • Self-quizzing • Quiz each other • Online quizzes • High stakes • Exam style questions

How to use SORT

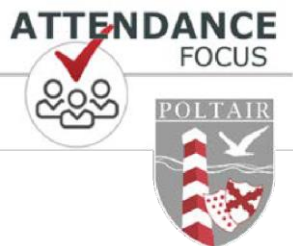
Step 1: Select	Step 2: Organise	Step 3: Recall	Step 4: Test
<p>When you revise for a specific topic use your knowledge organiser, revision guide, website etc to select the key knowledge you need to learn.</p> <p>a. Use the daily planner on page 10 to identify all the times when you will complete your home learning and when you will complete independent revision</p> <p>b. RAG each of the PLCs so you identify your RED topics – the ones that you are unsure of or you do not fully understand</p> <p>c. Write your RED topics into your daily planner for when you will revise that subject.</p>	<p>Organise the knowledge that you have selected using a range of strategies:</p> <ul style="list-style-type: none"> • Flashcards • Mindmaps • Cornell Notes • Revision Clocks • Summary <p>For more details go to the SORT webpage: https://www.poltairschool.co.uk/sort</p> 	<p>Once you have summarized the knowledge, you need to actively memorise it. This is the most important part of the revision process!</p> <p>You could use any of the following strategies to help:</p> <ul style="list-style-type: none"> • Lietner System • Blurt It • Look, say, cover, write, test 	<p>The last step in revision is to be confident that you can recall and retrieve the knowledge. To do this you need to test yourself. Quick and simple ways are to ask someone else to quiz you on the knowledge or to complete an online quiz. You can also answer past exam questions.</p> <p>If you can not confidently recall the knowledge you will need to repeat step 3.</p>



At Poltair we **SORT** it!

ATTENDANCE FOCUS





Attendance Reflection Sheet

What is your current attendance?	
How many sessions have you missed of school?	
How many 'I' coded sessions have you had?	
How many 'M' coded sessions have you had?	
How many 'L' coded sessions have you had?	
How many 'U' coded sessions have you had?	
How many 'O' coded sessions have you had?	
How many days does this equate to so far this year?	
If this attendance continued how many days off would you have this year?	

To improve my attendance, I commit to the following:

1.	
2.	
3.	
What attendance do you want to end this term with?	
What is your end of year attendance target?	
What is our minimum expected attendance to be rewarded?	

Possible strategies to REACH MY attendance Goals

- I will make attending school every day a priority.
- I will keep track of my attendance and absences.
- I will set my alarm clock for _____a.m.
- I will attend school everyday unless I am truly sick.
- I will find a relative, friend or neighbour who can take me to school if I miss the bus.

- If I am absent, I will contact my teachers to find out what I missed.
- I will set up medical and dental appointments for weekdays after school. If I must make a medical appointment during the school day, I will try to attend school for most of the day.
- When I am struggling with a challenge that is keeping me from school I will confide in an adult at school and seek help.

Home Learning timetable - when I am going to complete my home learning

	Mon A	Tues A	Weds A	Thurs A	Fri A	Mon B	Tues B	Weds B	Thurs B	Fri B
9X1	Eng	MFL/Nutri	Sci	Ma/RE		His	Geog	Eng/Creative	Comp	
9X2	Eng	Creative/His	Nutri/Geog	Ma/Sci	RE		Comp/MFL	Eng/His		
9X3	Eng	Creative/RE	Sci	Ma/MFL	Nutri		His	Eng	Comp/Geog	
9X4	Eng	MFL	Sci	Ma/Geog	Creative	Nutri	His	Eng/RE	Comp/	
9Y1	Ma/Creative	His/RE	Eng			Eng/Comp	Sci/Geog	Nutri	Ma/MFL	
9Y2	Ma/Creative	His/MFL	Eng	Comp	Geog/RE	Eng	Sci		Ma	Nutri
9Y3	Ma/Nutri	Geog	Eng	MFL		Eng/His	Sci/Comp		Ma/RE	Creative
9Y4	Ma/Creative		Eng/Geog	Comp/RE		Eng/His	Sci/Nutri		Ma/MFL	

Expected time home learning will take:

Subject	Homework
English (Eng)	60 minutes (weekly)
Mathematics (Ma)	60 minutes (weekly)
Science (Biology/Chemistry/Physics)	30 minutes (every two weeks)
Computing (Comp)	30 minutes (every two weeks)
Spanish (MFL)	30 minutes (every two weeks)
Geography (Geog)	30 minutes (every two weeks)
History (His)	30 minutes (every two weeks)
Creative Learning (Music/DT/Art/Performing Arts) – Creative	30 minutes (every two weeks)

My Computer passwords:

Platform	Username	Password

Revision Planner

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Time	Saturday	Sunday
8.30am - 4pm						8.30am - 4pm		
4pm - 5pm						4pm - 5pm		
5pm - 6pm						5pm - 6pm		
6pm - 7pm						6pm - 7pm		
7pm - 8pm						7pm - 8pm		
8pm - 9pm						8pm - 9pm		

Year 9 Learning Cycle 1 Summative Assessment Timetable

Lesson	02/12	01/12	04/12	05/12	06/12	09/12	10/12	11/12	12/12	13/12
	B					A				
	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
1	7X1							Science	History	
	7X2			Geography			History	Science		RE
	7X3							Science		
	7X4							Science		
	7Y1		Music				DT	RE	English	
	7Y2		DT				Drama		English	
	7Y3		Art		RE		Food		English	
	7Y4		Food				Art		English	RE
2	7X1	DT		Geography					RE	
	7X2	Music								
	7X3	Drama								
	7X4	Food	Spanish					History		
	7Y1			Food		Art	Mathematics		Drama	History
	7Y2		Spanish	Music		Food	Mathematics		Art	History
	7Y3		Geography	DT		Drama	Mathematics		Music	
	7Y4			Drama		Music	Mathematics		DT	
3	7X1			Art			Mathematics	Food	Drama	
	7X2			DT			Mathematics	Art	Food	
	7X3			Music	Geography		Mathematics	DT	Art	
	7X4			Drama	Geography		Mathematics	Music	DT	
	7Y1									
	7Y2									RE
	7Y3									
	7Y4								History	
4	7X1		Spanish				English			Music
	7X2		Spanish				English			Drama
	7X3		Spanish				English	RE	History	Food
	7X4			RE			English			Art
	7Y1		Geography		Spanish			Science		
	7Y2				Geography			Science		
	7Y3				Spanish			Science		History
	7Y4		Geography		Spanish			Science		

Year 9 Learning Cycle 1 Personal Learning Checklists

English – The art of Rhetoric

Key Ideas	S	O	R	T
Understanding the meaning of rhetoric				
Identifying and analysing rhetorical methods				
Identifying and analysing pathos, ethos and logos				
Planning a well-sequenced extended persuasive speech				
Using a range of effective language methods to support my persuasive purpose				
Using a range of effective structural methods to support my persuasive purpose				
Using a range of sophisticated vocabulary precisely to convey an opinion				
Using a range of punctuation accurately in an extended piece of writing				
Using a range of verbal and non-verbal features to deliver a speech to an audience				

English – Animal farm

Key Ideas	S	O	R	T
Recalling significant moments in the plot				
Understanding characters and how they develop throughout the play				
Understanding key themes (power, tyranny, rebellion, oppression, corruption, conflict)				
Identifying and analysing language methods used by Orwell				
Identifying and analysing cyclical structure				
Understanding Orwell's intentions and messages				
Understanding how the historical context of the Russian Revolution influenced the plot and characters of the novella				
Understanding Priestley's intentions and messages				
Planning thoughtfully sequenced responses to exam questions				
Writing thesis introductions				
Developed what, how, why paragraphs				
Using a range of references (including quotations) to support ideas				
Using appropriate connectives				
Developing analysis with relevant contextual ideas				
Using a range of sophisticated vocabulary to enhance analysis				
Understanding the conventions of a polemical article				
Using knowledge of the novella to write an extended polemical article				

English – Noughts and crosses

Key Ideas	S	O	R	T
Recalling significant moments in the plot.				
Understanding characters and how they develop throughout the play.				
Recalling a range of features of the play form.				
Understanding the effect of features of the play form and how they support the plot and characters.				
Identifying and analysing structural methods used by Cooke.				
Writing a thesis introduction.				
Developed what, how, why paragraphs.				
Recalling significant moments in the plot.				

Year 9 Learning Cycle 1 Personal Learning Checklists

Mathematics

Key Ideas	Sparx code	S	O	R	T
I can write a number as a product of its prime factors	M108				
I can find the HCF and LCM of a number from the product of its prime factors	M365				
I can substitute into expressions	M327				
I can expand and factorise single brackets	M237				
I can expand double brackets, including repeated brackets	M960				
I can interpret and draw two-way tables and frequency trees	M899				
I can find averages from a list	M328, M934, M841, M940				
I can find averages from a table	M127, M287				
I can compare data using averages	M440				
I can find the area and perimeter of rectangles, triangles, parallelograms and Trapeziums	M390, M610, M291, M705				

Mathematics

Key Ideas	Sparx code	S	O	R	T
I can form and simplify ratios	M885				
I can write ratios in the form 1:n and n:1	M543				
I can write ratios and fractions and fractions as ratios	M267				
I can write equations as ratios and ratios as equations (higher only)	U676				
I can convert between mixed and improper fractions	M601				
I can add and subtract fractions and mixed numbers	M931				
I understand reciprocals	M216				
I can multiply and divide fractions and mixed numbers	M197, M265				
I can calculate fractions or amounts	M695, M684				
I can express a quantity as a fraction of another	M939				

Year 9 Learning Cycle 1 Personal Learning Checklists

Science – Cell biology

Key Ideas	S	O	R	T
I can identify the structure found in eukaryotic and prokaryotic cells				
I can describe the differences between animal and plant cells				
I can calculate magnification, actual size and image by rearranging formulae				
I can describe and explain how substances move in and out of cells				
I can describe the process of cell division by mitosis				
I can evaluate the use of stem cells in medicine				
I can describe the symptoms and treatment for a range of bacterial, viral, fungal and protist diseases				
I can explain how the body defends against disease				
I can explain how vaccinations work to prevent disease				

Science – Atomic structure & bonding

Key Ideas	S	O	R	T
I can select the best way to separate a mixture and explain how distillation and filtration work				
I can recall the structure of an atom and correctly label a diagram of an atom from memory				
I can describe the history of the atom including key scientists and what they discovered				
I can draw the electronic configuration for the first 20 elements correctly using electron shells				
I can describe what happens when a metal and non-metal form an ionic bond				
I can describe what happens when non-metals form covalent bonds				
I can describe what the reactivity series is				
I can use the reactivity series to explain displacement and extraction of metals from their ores				
I can describe the environmental impacts of mining for metals and justify why metals should be recycled				

Computing

Key Ideas	S	O	R	T
I can define the term malware				
I can list some of the types of malware and explain the differences				
I can explain how human error is one of the big problems in computing security				
I can explain the term social engineering and give examples				
I know how ethics relates to computing				
I can describe some of the ways companies try to prevent hackers accessing data.				
I can explain some of the risks in networking computers				
I can explain the terms Phishing and Blagging				

Year 9 Learning Cycle 1 Personal Learning Checklists

Science

Key Ideas	S	O	R	T
I can select the best way to separate a mixture and explain how distillation and filtration work				
I can recall the structure of an atom and correctly label a diagram of an atom from memory				
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I can describe what the reactivity series is				
I can use the reactivity series to explain displacement and extraction of metals from their ores				
I can describe the environmental impacts of mining for metals and justify why metals should be recycled				

Art

Key Ideas	S	O	R	T
I can understand and explain the meaning of the 7 observational drawing key words, tone, texture, shape, scale, line and composition				
I can discuss and compare the different viewpoints of WW1				
I can empathise with the people affected by WW1				
I understand how to research and select information to develop ideas				
I understand how to develop my ideas using the work of WW1 artists, poets and people to design and create a final outcome				
I understand how to use my chosen materials with skill and flair				

Computing

Key Ideas	S	O	R	T
I can define the term malware				
I can list some of the types of malware and explain the differences				
I can explain how human error is one of the big problems in computing security				
I can explain the term social engineering and give examples				
I know how ethics relates to computing				
I can describe some of the ways companies try to prevent hackers accessing data.				
I can explain some of the risks in networking computers				
I can explain the terms Phishing and Blagging				
I can list ways to stay safe from malware				

Year 9 Learning Cycle 1 Personal Learning Checklists

Design Technology

Key Ideas	S	O	R	T
I can identify the main parts of a mechanical system, including a crank, cam, follower and gears.				
I can name the 4 types of motion.				
I can give examples of the 4 types of motion.				
I can design a system to convert one type of motion into another.				
I can use gears to change the speed of rotation in a mechanical system.				
I can use a centre lathe to face-off metal to produce counterweights.				
I can apply the idea of turning forces to make my balancing figure balance.				

Drama

Key Ideas	S	O	R	T
I can use effective physical and vocal skills to interpret my characters				
I have ensured that effective characterisation has been explored through rehearsal				
I can make sure that all lines have been learned and memorised accurately				
I can make sure that all members of the group have worked collaboratively and effectively				

Food

Key Ideas	S	O	R	T
I can explain how to ensure a hygienic and safe kitchen environment.				
I understand the importance of a balanced diet.				
I can explain the difference between macronutrients and micronutrients.				
I know the source, function and deficiency of the five main nutrients.				
I can describe the dietary needs of a teenager.				
I can describe the process of gelatinisation				

Year 9 Learning Cycle 1 Personal Learning Checklists

Geography

Key Ideas	S	O	R	T
Define key terms – standard of living and quality of life				
Describe the factors that lead to differences in wealth				
Describe the distribution of global wealth				
Explain reasons for global differences in wealth				
Define key development indicators				
Explain the link between GDP and life expectancy				
Define and evaluate the Human Development Index				
Explain the causes of uneven development				
Explain how we can reduce the development gap				

Geography

Key Ideas	S	O	R	T
I can locate the world's plate boundaries on a world map				
I can describe the main features of tectonic plate boundaries				
I can explain how plates move and the hazards that form at each type of plate boundary				
I can explain the hazards associated with volcanoes and earthquakes				
I can compare the responses to earthquakes in Nepal and Japan				
I can explain the causes and effects of the Asian tsunami				
I can explain why people live in hazardous areas				
I can explain how lives can be saved with good planning, prediction and protection				
I can explain the role of Governments and charities to respond to tectonic disasters				

History

Key Ideas	S	O	R	T
I can state what a protest is				
I can give features of protests				
I know the difference between the methods used by the Suffragists and the Suffragettes				
I can explain how people's rights have changed because of protest				
I can give reasons for the Russian Revolution				
I can explain what the Russian Revolution was				

Year 9 Learning Cycle 1 Personal Learning Checklists

Music

Key Ideas	S	O	R	T
I can find notes on a keyboard				
I can form triad chords without guidance				
I am able to understand how to read music notes from a stave				
I understand how to how to recognise syncopated rhythms				
I know how to identify consonance and dissonance				
I am able to perform accurately and in time as a group				
I understand the cultural and societal history of Reggae				

Religious studies

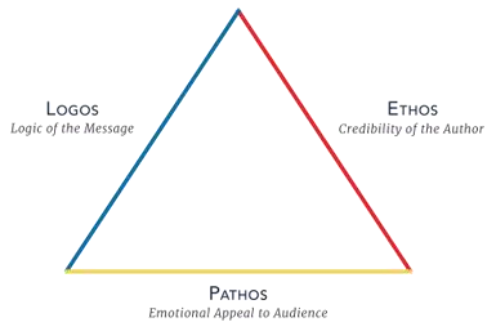
Key Ideas	S	O	R	T
I can give examples of different types of suffering				
I can outline the problem of evil				
I can explain how Christians respond to the problem of evil				
I can outline Buddhist responses to suffering				
I can explain how Jewish people respond to the Holocaust				
I can give examples of different types of suffering				
I can outline the problem of evil				

Spanish

Key Ideas	S	O	R	T
I understand the rules for correct Spanish pronunciation				
I understand the meaning of all of the question words				
I know my non-negotiable verbs for the past, present and future tenses				
I can confidently introduce myself in Spanish				
I can confidently talk about the people in my family				
I can describe the relationships with my family				
I can describe the relationships with my friends				

Year 9 Learning Cycle 1 English - The Art of Rhetoric & Animal Farm

1. The Rhetorical Appeals



with an individual.

2i = first person pronouns Words that show a writer is talking about themselves e.g. I, we, us, our.

2j = personal anecdote A short, thought-provoking story relating someone's memorable experience.

2k = pathos A persuasive method designed to appeal to emotion, especially to create feelings of sadness or sympathy.

2l = ethos A persuasive method designed to gain the trust of the reader by presenting the writer as experienced or knowledgeable.

2m = logos A persuasive method designed to present ideas as logical and unquestionable.

2n = hook An opening statement (usually the first sentence) that grabs the reader's attention.

2o = position The writer's stance or view on a subject matter.

2p = counter-argument A view that goes against your own opinion.

2. Subject Vocabulary

2a = inference A prediction about something based on evidence.

2b = rhetoric The art of effective persuasive writing or speaking.

2c = rhetorical question A question asked to make a powerful point and convey an opinion, rather than get an answer.

2d = repetition Use of a word, phrase or sentence more than once.

2e = anaphora The repeated use of a word or phrase at the start of a series of sentences.

2f = emotive language Words or phrases designed to appeal to the feelings of the reader.

2g = rule of three / triple Three words or short phrases used together to build an impactful point.

2h = direct address The use of the pronoun 'you' to give the impression of a writer or speaker communicating directly

3. Characters

3a = Old Major The old boar whose rousing, rhetorical speech about the tyranny of humans incites the rebellion. He dies soon after.

3b = Napoleon The pig who becomes the leader of Animal Farm after the rebellion. Based on Joseph Stalin, the leader of the communist Soviet Union, he is corrupt, sly, lazy and opportunistic. He uses Squealer and the dogs to oppress others.

3c = Squealer A skilled, persuasive orator. He is used to spread the pigs' propaganda and represents the propaganda machine of the communist Soviet Union. He twists the truth and uses false information to ensure the pigs retain their power over the other animals.

3d = Snowball One of the more powerful pigs, he challenges Napoleon for leadership of the farm after the rebellion and the two become increasingly hostile towards one another. He is an idealist but does exploit the animals for his own gain. He is expelled from the farm by Napoleon's dogs and subsequently becomes a scapegoat for anything awful that happens.

3e = Boxer A gentle, hard-working cart-horse who dedicates his life to the pigs' cause, adopting the maxims "I will work harder," and "Napoleon is always right." His toil allows for the building of the windmills. However, his lack of intelligence blinds him to the real intentions of his leaders and he is sent to the slaughterhouse by them.

3f = Benjamin A cynical donkey with the view that life will always be painful. Benjamin isn't surprised when the pigs corrupt the revolution and turn the farm into a totalitarian state but fails to stand up to them.

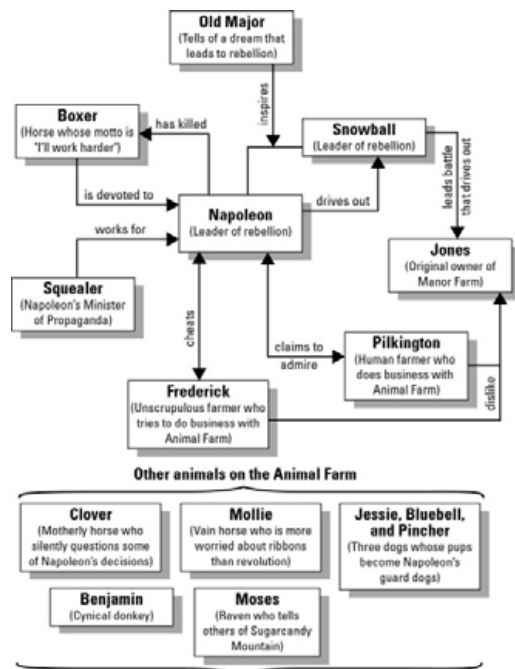
3g = Clover A gentle, motherly, and powerful carthorse. She is distressed by the increasing tyranny of the pigs but lacks the confidence or ability to defend the animals against them.

3h = Mr Jones The original owner of Manor Farm. Once a strict master, in the years before the story begins, Mr. Jones became drunk, careless, and ineffective. The other farmers show no sympathy for him when the farm is taken from him by the animals.



Year 9 Learning Cycle 1 English - Animal Farm

4. Character Map



5. Plot

5a = Chapter 1 Mr Jones – a farmer – drunkenly stumbles to bed for the night, leaving the animals to gather in the barn to hear Old Major’s speech. He blames their short and miserable lives on man, inciting rebellion. He teaches them a song: *Beasts of England*.

5b = Chapter 2 Old Major dies in his sleep. The other animals prepare for rebellion, with the pigs (the cleverest animals) taking a lead role, teaching them animalism, which they do not all understand. Moses tells the animals about Sugarcandy Mountain – a beautiful place where animals go when they die. The Rebellion occurs and Jones is driven from

the farm. The farm is renamed ‘Animal Farm’ and seven commandments are made. Some buckets of milk go missing.

5c = Chapter 3 The animals work hard in the fields throughout the summer – Boxer hardest of all. The harvest is completed quickly. There is conflict between Snowball and Napoleon. Snowball spends time trying to educate the animals, with mixed success. He teaches them the maxim “Four legs good, two legs bad.” Napoleon takes a group of puppies away to ‘educate’. When it is noted the pigs have been eating the apples and milk, Squealer persuades the animals that it is for the best.

5d = Chapter 4 News of the rebellion spreads. Jones and the other farmers conduct an attack, attempting to seize the farm. Led by Snowball, the animals fight off the humans. Boxer and Snowball are awarded medals for their heroic efforts, but Boxer is distressed at the thought of killing a human – who is later found to be stunned rather than dead. The conflict is named ‘The Battle of the Cowshed’.

5e = Chapter 5 Mollie is tempted away from the farm. While the pigs’ influence increases, Snowball and Napoleon grow more hostile towards one another. As Snowball announces new plans for a windmill, Napoleon orders his dogs to attack and chase Snowball from the farm. The animals grow anxious but Squealer placates them. Later, Napoleon announces that the windmill will be built.

5f = Chapter 6 The animals work hard to build the windmill, despite their rations being cut. The pigs begin trading with humans, much to the shock of the other

animals, and begin sleeping in beds. A change in the wording of the commandments is noticed. Again, Squealer persuades the animals that this is acceptable. A storm destroys the windmill but Napoleon blames this on Snowball.

5g = Chapter 7 The animals begin to starve. The hens protest after being told they must give their eggs to be sold. Napoleon cut their rations and nine die. Other animals are executed as ‘traitors’ at Napoleon’s meeting. The singing of ‘*Beasts of England*’ is outlawed.

5h = Chapter 8 As time passes, the animals work harder for less rations, and more of the commandments change, although the animals are persuaded by Squealer statistics that this is not the case. More trading with the humans take place but Frederick tries to trick Napoleon with forged banknotes. Frederick, with other men, attacks the farm and blows up the windmill. The animals fight back but several die and Boxer is injured. The pigs begin drinking alcohol.

5i = Chapter 9 Napoleon orders a school to be built for the education of the ever-increasing young pigs on the farm. Boxer collapses while working and the pigs announce he will be taken to the hospital. It is revealed that the van that comes to collect Boxer is from the slaughterhouse, although Squealer tries to convince the animals this is not true. Boxer is never seen again.

5j = Chapter 10 Years pass and no animal retires. Few remember the rebellion. The pigs begin to walk on two legs and the commandments are replaced with “All animals are equal but some are more equal than others.”. The humans visit and praise the pigs for their efforts. The farm returns to the name ‘Manor Farm’. Finally, while the pigs play cards and drink to excess with the humans one evening, the animals realise that they cannot differentiate between the humans and the pigs: they are now one and the same.

6. Context

6a = George Orwell (1903-1950) A writer of fiction, poetry, essays and articles. Despite a privileged upbringing, Orwell went to live among the poor to become a writer, in order for him to experience poverty first hand. Orwell’s writing conveys his support of democratic socialism, frequently challenging totalitarianism and social injustice. His most famous books are *Animal Farm* and *1984*. He was inspired to write *Animal Farm* when he saw a child whipping a horse, and has the following ideas: “If only such animals became aware of their strength we should have no power over them, and that men exploit animals in much the same way as the rich exploit the working class”.

6b = The Russian Revolution *Animal Farm* is an allegory for the Russian Revolution of 1917 and the subsequent years. The Tsarist regime (led by a rich, autocratic ruler named Tsar Nicholas II and represented in the novel by Mr Jones) was overthrown and replaced by a communist state, led by Vladimir Lenin. Russia was re-named the

Year 9 Learning Cycle 1 English - Animal Farm

Union of Soviet Socialist Republics, just as Manor Farm is renamed Animal Farm.

6c = Vladimir Lenin Lenin believed that the country should be run for the benefit of the working class. He was the leader of The Bolshevik Party who seized control after the 1917 revolution. He is represented by Old Major in the novel. He was inspired by Karl Marx's theory of Communism, which urges the "workers of the world" to unite against their economic oppressors, just as Animalism urges the animals to do.

6d = Joseph Stalin A revolutionary who changed his name to Stalin, which means 'man of steel'. Following the death of Lenin in 1924, Stalin rose to power through manipulating and intimidating others, sidelining other potential leaders such as Victor Trotsky. Under Stalin, the Soviet Union became more autocratic and totalitarian: he oversaw mass repressions, hundreds of thousands of executions and ordered over 22 million deaths. In the novel, Napoleon represents Stalin.

6e = Victor Trotsky A skilful rhetorical speaker and one of the cleverest men in the communist party. Snowball's plans for the windmill and programs reflect Trotsky's intellectual character and ideas about the best ways to transform Marx's theories into practice.

7. Authorial Intent

George Orwell wrote this novel for a purpose and uses the plot and characters to send a message to his readers...

7a = To criticise... the development and corruption of Soviet communism under Stalin, which departed from the socialist ideals upon which the revolution was built, and allowed for those in charge to manipulate and oppress those less powerful.

7b = To highlight... the plight of the working classes in the communist Soviet Union and how their oppression led to suffering and death.

7c = To convey... the injustice of a hierarchical class system and how class divisions lead to misery for those

at the bottom of the hierarchy.

7d = To warn... of the dangers of manipulation of propaganda and false information, especially when presented to those who lack the necessary education to interpret information critically.

8. Vocabulary

6a = Socialism (noun) The organisation of a country's economy allowing for workers to have a share in the organisations that earn money. Its goal is to spread wealth more evenly and treat workers more fairly.

8b = Communism (noun) A way of organising a country in such a way that does not allow for private property or a class system. All goods are owned and made available to everyone as they need them.

8c = oppression (noun) Extended cruel or unfair treatment of people by those in power.

8d = corrupt (adjective) Acting in a way that is dishonest or harmful, for personal gain.

8e = rebellion (noun) The act of violent action by a group of people trying to overthrow those in power.

8f = glorify (verb) To describe or represent something as admirable or worthy of praise, especially if it is not

8g = propaganda (noun) Information, especially misleading in nature, used to convince people to follow a particular cause or point of view

8h = dictator (noun) A ruler with total power over their country.

8i = totalitarian (adjective) A government and system in which those in power have complete control.

8j = exploit (verb) To use someone unfairly for your own gain.

9. Subject Vocabulary

9a = allegory A story that can be interpreted to reveal a hidden meaning, typically a moral or political one.

9b = fable A short story, typically with animals as characters, conveying a moral.

9c = moral A lesson that can be learnt from a story or experience.

9d = satire The use of irony, sarcasm or ridicule in revealing someone's flaws or mistakes

9e = symbolism The use of characters, events or ideas to represent something broader

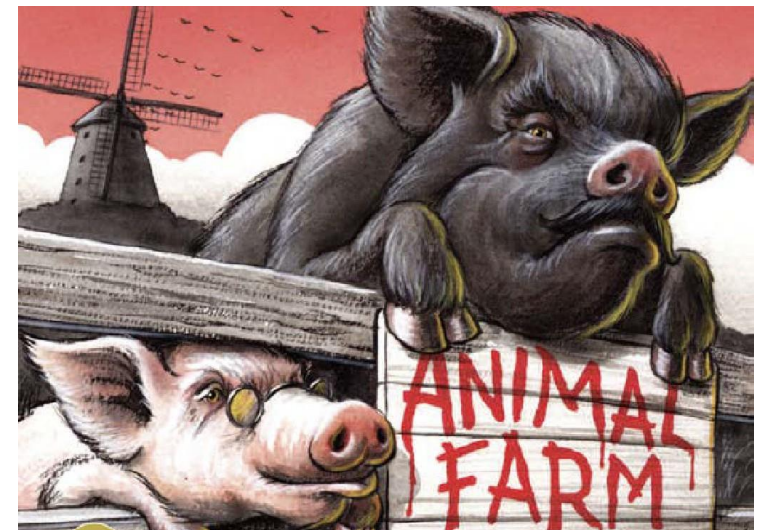
9f = polemic A strong verbal or written attack on someone or something.

9g = plot The main events of a play, novel or film.

9h = inference A prediction about something based on evidence.

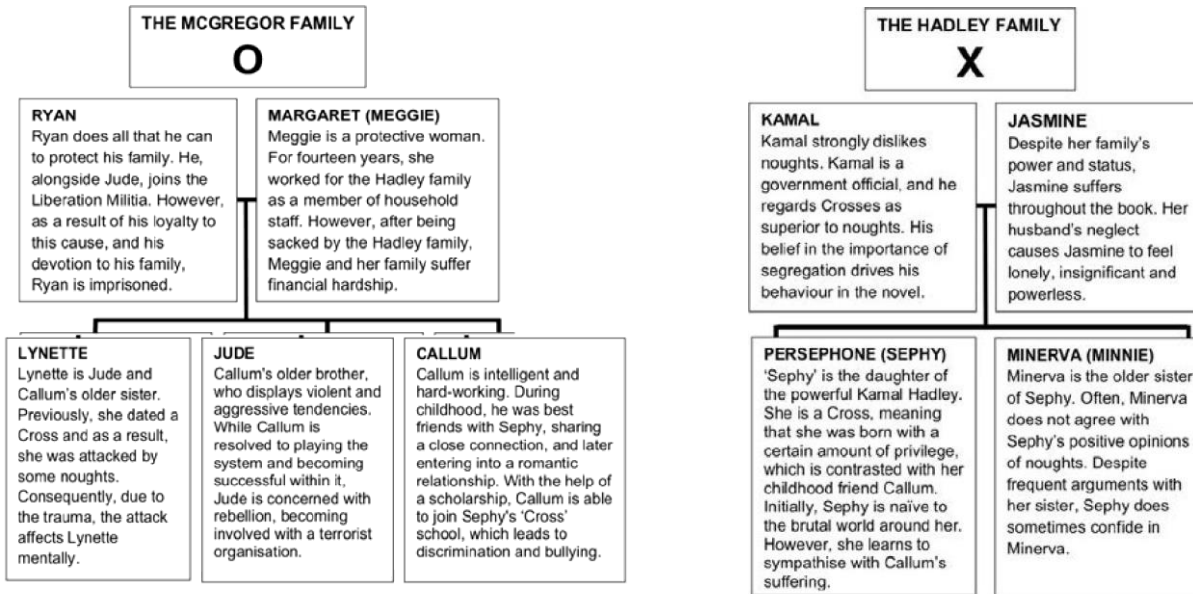
9i = characterisation The creation of a character e.g. appearance, motives, actions, inner thoughts.

9j = setting Where or when a story is set, usually introduced at the exposition (beginning) of a story along with the characters.



Year 9 Learning Cycle 1 English - Noughts and Crosses (Play)

1. Characters



2. Context

2a = On the Stage The play is a stage version of Malorie Blackman's dystopian novel of the same name. The Royal Shakespeare Company used the Dominic Cooke adaptation of the story and their production ran at the Civic Hall in Stratford-upon-Avon in winter 2007 and toured the UK in 2008.

2b = Malorie Blackman's Motivation 'I wanted to turn society as we know it on its head in my story, with new names for the major divisions in society. I wanted to see this new world through the eyes of the main two characters, Callum (a nought) and Sephy (a Cross). Race and racism are emotive issues that most people are loathe to discuss, but I think they should be discussed, no matter how painful.'

2c = Apartheid From 1948-1994, the South African government enforced apartheid. This meant that black and white people were forced to live separately, go to different schools and black people could not vote. White people got privileges and ruled the country. However, this all came to an end when black people finally got the right to vote and elected Nelson Mandela as president. He had spent 27 years in prison for fighting for black people's rights.

2d = Slavery In the USA, white landowners used black slaves to work their farms until the 1860s. Even after slavery was abolished black people often continued to work on the farms in the southern states, in bad conditions and for poor wages, or as servants or manual labourers. Even now, 150 years later, black communities in the USA are often worse off than white communities. The story of Noughts & Crosses is set at a time when people can still remember noughts being slaves.

2e = All-white schools Up until 1954 in many areas of the USA there were separate schools for black children and white children. This was finally made illegal in 1954. Schools quickly opened their doors to black children but there was a lot of resentment. At one school in Little Rock, Arkansas, in 1957, there was a full-blown riot when black pupils tried to enter the school



Year 9 Learning Cycle 1 English - Noughts and Crosses (Play)

3. Plot

The Story Noughts & Crosses tells the story of two young people: a girl called **Sephy** and a boy called **Callum**. Callum is a **Nought** – he's white, from a poor family and lives on a rough estate. Sephy is a **Cross** – she's black, from a wealthy, powerful family and lives in a grand country house with a private beach.

The story takes place in world very similar to our own, apart from the massive **split** between Noughts and Crosses. Crosses are the **ruling class** and Noughts struggle against **prejudice, poverty and low status**.

It's almost unheard of for a Cross to be friends with a Nought, but Sephy and Callum are very close and eventually become **lovers**. Even so, Callum sometimes feels Sephy doesn't understand the prejudice he faces. Sephy is frustrated that Callum doesn't realise how hard she tries to understand and that she has her own problems with her cold, snobbish family.

Callum's dad and brother get involved with a Nought **terrorist organisation**. Callum initially hates the violence but after his sister dies and his dad is killed in prison, he turns terrorist too. He hardens himself to the **violence** but when he is involved in kidnapping Sephy, he realises that he should never have joined the organisation.

Despite Sephy and Callum's **love** for each other, there's no place in their society for a Nought and a Cross who want to be together. The story ends with Sephy **pregnant** with Callum's child and Callum being executed for **terrorism**.

4. Vocabulary

4a = inequality (noun) a situation in which money or opportunities are not shared equally between different groups in society

4b = terrorism (noun) violent, criminal acts committed by individuals or groups designed to influence the government or intimidate the public

4c = disconcerting (adjective) causing someone to feel on edge, unsettled or anxious

4d = discrimination (noun) the unfair treatment of different groups of people, especially due to their race, gender or disability

4e = victimised (verb) singled out for cruel or unfair treatment

4f = intolerance (noun) a state in which someone is unable to accept views, beliefs or behaviour that is different from their own

4g = empathy (noun) the ability to understand and share the feelings of another

4h = unjust (adjective) not based on or behaving in a way that is morally right or fair

4i = prejudiced (adjective) having or showing a dislike or distrust that is based on unreasonable hatred towards a group or individual

4j = liberation (noun) the act of setting someone free

4k = manipulate (verb) control or influence someone often unfairly or dishonestly

4l = ambiguous (adjective) unclear; open to more than one interpretation

5. Subject Vocabulary

5a = play (noun) A dramatic piece of literature intended to be acted out on the stage.

5b = act (noun) A way of dividing a play. Each act is a group of scenes.

5c = scene (noun) A dramatic part of the story of a play, at a particular time and place and a way of dividing **acts** into smaller parts.

5d = stage direction (noun) An instruction in a play that tells actors how to move or speak, or gives information about the setting, sound effects or lighting.

5e = structure (noun) The way a play, novel or poem is constructed and linked together.

5f = episodic (noun) A piece of writing that consists of a series of events, which might seem not to be connected.

5g = prologue (noun) A separate section that can appear before a novel or play that might reveal something that has happened before the story begins

5h = props (noun) Any movable articles or objects used on the set of a play.

5i = climax The part of the story where the suspense reaches its highest part.

5j = soliloquy (noun) a speech in a play that the character speaks to himself or herself or to the people watching rather than to the other characters.

5k = declarative (noun) a sentence that makes a statement

5l = interrogative (noun) a sentence that asks a question

5m = imperative (noun) a sentence giving a command or an order

6n = exclamative (noun) a sentence conveying a strong sense of emotion, alarm or emphasis



Year 9 Learning Cycle 1 Mathematics

Key Terms	Description
Prime number	A number whose only factors are one and itself
HCF	The highest number which goes into both quantities given
LCM	The first number which is a multiple of all of the quantities given
Factor	A number which can be multiplied to reach the starting number
Variable	A letter which is used to represent an unknown quantity
Expression	An algebraic statement including terms and operations
Term	A collection of variables and numbers
Equation	An algebraic statement with an equals sign in the middle
Mean	An average to represent a set of data. Add all of the numbers together, and divide by the quantity of numbers
Median	The middle number in a list, when the numbers have been ordered
Mode	The most common item in a list
Range	The difference between the largest number and the smallest number in a set of data
Perimeter	The distance around the outside of a shape
Area	The amount of 2d space a shape takes up
Parallelogram	A quadrilateral with two pairs of parallel sides
Trapezium	A quadrilateral with one pair of parallel sides
Perpendicular	At 90 degrees
Reciprocal	The reciprocal of a number, is the value which you multiply your original number by, to get 1.
Improper fraction	A fraction where the numerator is larger than the denominator

Year 9 Learning Cycle 1 Mathematics - Factors, multiples & primes

1. What are factors?

30

Factor pairs	Products
1 30	$1 \times 30 = 30$
2 15	$2 \times 15 = 30$
3 10	$3 \times 10 = 30$
5 6	$5 \times 6 = 30$

2. What are multiples?

$6 \times 0 =$	0	}	A few Multiples of 6
$6 \times 1 =$	6		
$6 \times 2 =$	12		
$6 \times 3 =$	18		
$6 \times 4 =$	24		
$6 \times 5 =$	30		
$6 \times 6 =$	36		
$6 \times 7 =$	42		
$6 \times 8 =$	48		
$6 \times 9 =$	54		
$6 \times 10 =$	60		

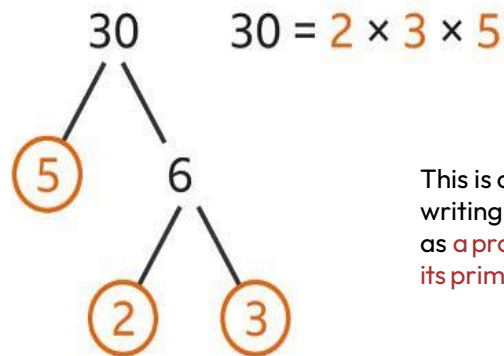
3. What are primes

2 3 5 7 11 13 17
19 23 29 31 37 41
43 47 53 59 61 67
71 73 79 83 89 97

Numbers which have exactly two factors:
1 and itself

4. Prime factor decomposition

1. Break number down into factor pairs
2. Circle prime numbers
3. Write final answer as a product



This is called writing a number as a product of its prime factors

5. HCF & LCM from a list

Multiples of 4:
4 8 12 16 20 24 28 32 36 40

Multiples of 5:
5 10 15 20 25 30 35 40

LCM (4, 5) = 20

Factors of 18 are:
1 2 3 6 9 18

Factors of 27 are:
1 3 9 27

Common Factors : 1, 3 and 9

HCF

↑

6. HCF & LCM from product of primes

HCF- Multiply the numbers which appear in both lists

$$12 = 2 \times 2 \times 3$$

$$18 = 2 \times 3 \times 3$$

Common factors = 2, 3

$$\text{HCF} = 2 \times 3 = 6$$

LCM- HCF x the numbers leftover in both lists

$$\text{LCM} = 6 \times 2 \times 3$$

$$\text{LCM} = 36$$

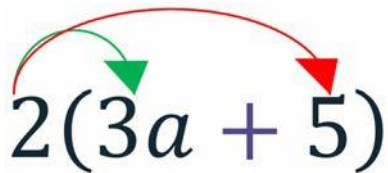
Year 9 Learning Cycle 1 Mathematics - Manipulation of Algebra

1. Substitution

Replacing variables with numbers and evaluating the expression.

$$\begin{aligned} 3a - 2b & \quad (a = 10 \quad b = 4) \\ &= 3(10) - 2(4) \\ &= 30 - 8 \\ &= 22 \quad \checkmark \end{aligned}$$

2. Expanding single brackets

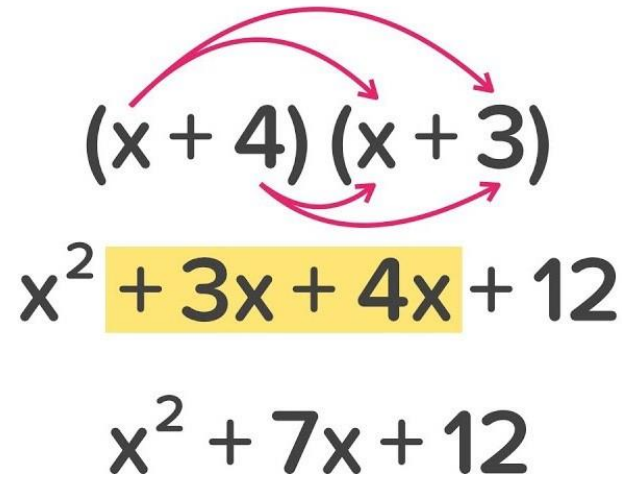
$$2(3a + 5)$$


The **green arrow** shows the first calculation $2 \times 3a = 6a$

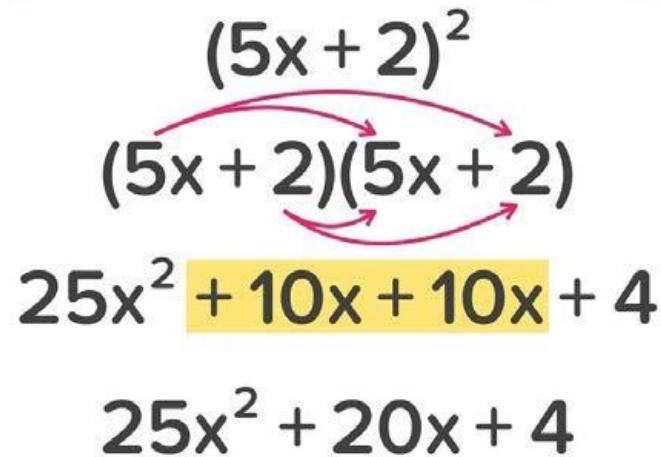
The **red arrow** shows the second calculation $2 \times 5 = 10$

This gives the final answer as $6a + 10$

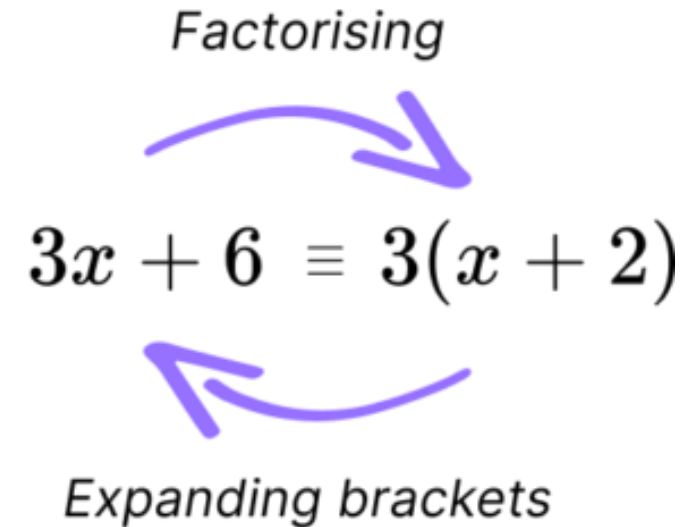
3. Expanding double brackets

$$\begin{aligned} & (x + 4)(x + 3) \\ & x^2 + 3x + 4x + 12 \\ & x^2 + 7x + 12 \end{aligned}$$


4. Expanding double brackets

$$\begin{aligned} & (5x + 2)^2 \\ & (5x + 2)(5x + 2) \\ & 25x^2 + 10x + 10x + 4 \\ & 25x^2 + 20x + 4 \end{aligned}$$


5. Factorising single brackets

$$\begin{aligned} & \text{Factorising} \\ & 3x + 6 \equiv 3(x + 2) \\ & \text{Expanding brackets} \end{aligned}$$


The factor out the outside of the bracket must be the HCF of the terms .

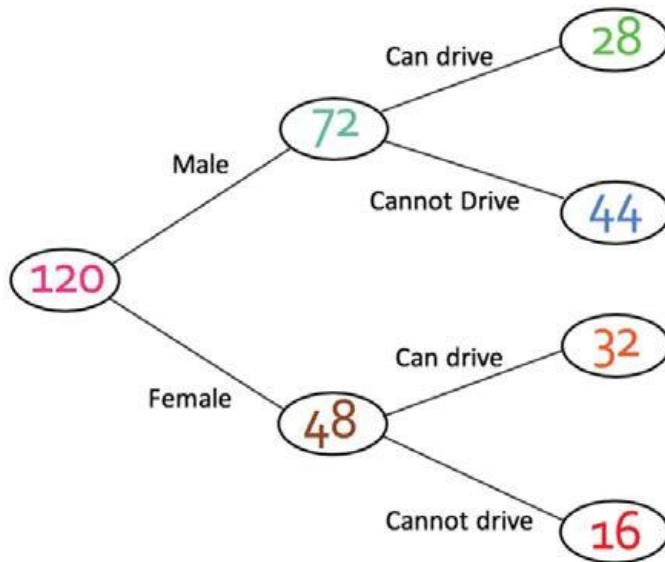
Year 9 Learning Cycle 1 Mathematics - Tables and averages

1. Two-way tables

	Baseball	Basketball	Football	Total
Male	13	15	20	48
Female	23	16	13	52
Total	36	31	33	100

Each row has a total and each column has a total. These can be used to find missing values.

2. Frequency trees



Each pair of numbers add together to make the number which they are connected to with straight lines in a v-shape.

3. Averages from a list

Mode: most common item in the list

Median: middle item when the list is ordered

Range: largest value – smallest value

Mean: Add all numbers together and divide by the quantity of items in the list

4. Averages from a table

Number of goals	Frequency
0	7
1	3
2	3
3	1
4	1

Mode- value with the highest frequency

$$\text{Mode} = 0$$

Median: middle number

$$\text{There are } 7+3+3+1+1=15 \text{ numbers}$$

Median is the 8th number

$$\text{Median} = 1$$

Range: largest value – smallest value

$$4-0 = 4$$

$$\text{Range} = 4$$

5. Mean from a table

Number of people	Frequency	Number \times Frequency
1	5	$1 \times 5 = 5$
2	6	$2 \times 6 = 12$
3	3	$3 \times 3 = 9$
4	2	$4 \times 2 = 8$
	$n = 16$	Total = 34

Mean: Add all numbers together and divide by the quantity of items in the list

$$\text{Mean} = 34 \div 16$$

$$\text{Mean} = 2.125$$

6. Estimate of the mean

Marks scored	Frequency	Mid-point	Frequency \times Mid-point
0 - 9	3	$\frac{0+9}{2} = 4.5$	$3 \times 4.5 = 13.5$
10 - 19	5	$\frac{10+19}{2} = 14.5$	$5 \times 14.5 = 72.5$
20 - 29	8	$\frac{20+29}{2} = 24.5$	$8 \times 24.5 = 196$
30 - 39	4	$\frac{30+39}{2} = 34.5$	$4 \times 34.5 = 138$
	$n = 20$		Total = 420

Mean: Add all numbers together and divide by the quantity of items in the list. If you do not know the exact numbers, use the midpoint of the group.

$$\text{Mean} = 420 \div 20$$

$$\text{Mean} = 21$$

7. Reverse mean

The mean height of seven pupils is 123cm.

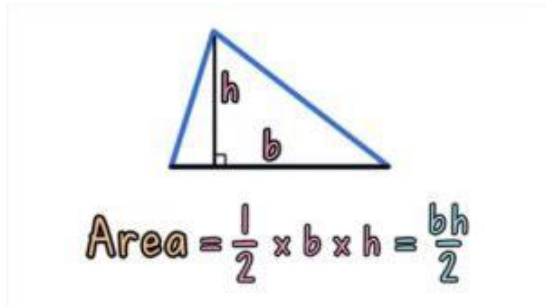
One pupil of height 147cm leaves the group.

Find the mean height of the remaining six pupils.

- Find the total height of 7 pupils
- Subtract the 147cm to find the total height of 6 pupils
- Divide by 6 to find the mean

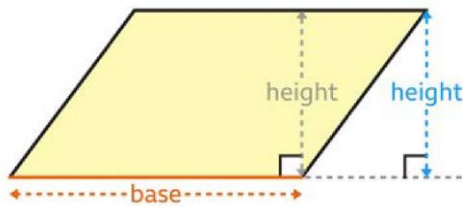
Year 9 Learning Cycle 1 Mathematics - Perimeter & area

1. Area of a triangle



The height is perpendicular to the base

2. Area of parallelogram



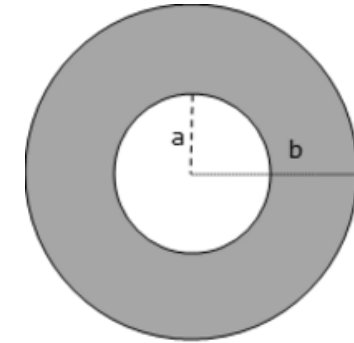
The height is perpendicular to the base

3. What is a Trapezium?

Quadrilateral with one pair of parallel sides

Types of Triangle	Shape	Definition
Isosceles Trapezium		The trapezium which has legs of equal length is called an isosceles trapezium. Here, $AD \parallel BC$
Scalene Trapezium		The trapezium whose neither the sides nor the angles are equal is a scalene trapezium.
Right Trapezium		The trapezium which has right angles in a pair are known as right trapezium.

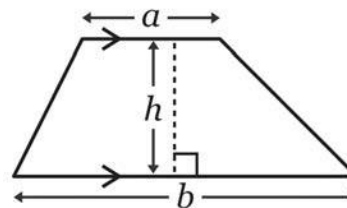
5. Compound shape areas



Area of big shape - area of small shape

4. Area of a trapezium

$$A = \frac{1}{2} (a + b)h$$

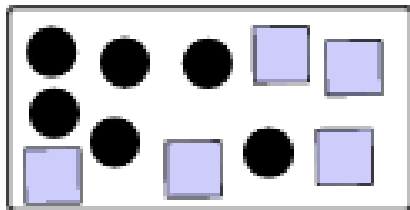


a and b are the parallel lines.

The height is perpendicular to a and b.

Year 9 Learning Cycle 1 Mathematics - Ratio

1. Forming ratio

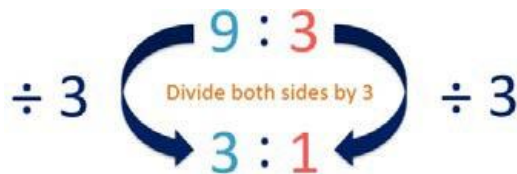


Circles : squares
6:5

Ratios describe relationships between two quantities.

Give the values in the order that the items were mentioned i.e. circles first.

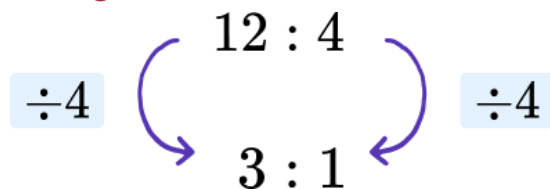
2. Simplifying ratio



Look for a common factor in the numbers which make up the ratio.

Divide by the common factor

3. Writing in the form n:1



Simplify the ratio as before, but instead of choosing the common factor, divide to get a 1 where the question asks for a 1.

4. Writing ratio as Fraction

b : r

3 : 2



The fraction for blue is $3/(2+3)=3/5$

The fraction for red is $2/(2+3)=2/5$

5. Combining ratios (H)

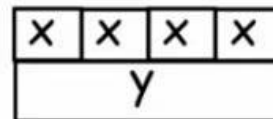
If $a:b = 2:3$ and $b:c=4:5$, find $a : b : c$

$$\begin{array}{c}
 a : b : c \\
 2 : 3 \\
 \times 4 \left(\begin{array}{c} \times 4 \\ \times 3 \end{array} \right) \left(\begin{array}{c} 4 : 5 \\ \times 3 \end{array} \right) \times 3 \\
 8 : 12 : 15
 \end{array}$$

1. Find the LCM of the overlapping numbers.
2. Convert both ratios to equivalent ratios with the LCM as the overlapping number
3. Combine

6. Writing equations as ratios (H)

Write $4x = y$ as a ratio $x : y$



x : y

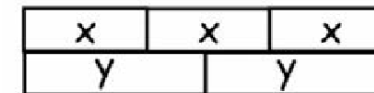
1 : 4

X is the smaller quantity.

7. Writing ratios as equations (H)

Given $x : y = 2 : 3$

write an equation linking x and y.



$$3x = 2y$$

Year 9 Learning Cycle 1 Mathematics – Fractions and reciprocals

1. Converting between mixed numbers and improper fractions

To find the numerator:

- Multiply the whole number by the denominator
- Then add the numerator

The denominator stays the same

$$2\frac{3}{4} = \frac{(4 \times 2) + 3}{4} = \frac{11}{4}$$

2. Adding and subtracting fractions

- Convert any mixed numbers to improper fractions before beginning calculation
- Identify the LCM of the denominators
- Use equivalent fractions to convert each fraction to have the LCM as the denominator
- Add/subtract the numerators

$$\frac{1}{2} + \frac{1}{3} = ?$$

$$\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$$

$$\frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$$

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

3. Reciprocals

- What you multiply a number by to get an answer of 1
- Flip the fraction
- If you have a whole number, think of it as a fraction with denominator 1

$$\frac{3}{4} \times \frac{4}{3} = 1 \quad \text{Reciprocal}$$

$$\frac{6}{1} \times \frac{1}{6} = 1$$

4. Dividing fractions

- Convert any mixed numbers to improper fractions before beginning calculation
- Keep the first fraction the same
- Flip the second fraction
- Multiply instead of divide

$$\frac{4}{11} \div \frac{5}{9} = \frac{4}{11} \times \frac{9}{5} = \frac{36}{55}$$

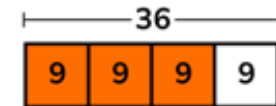
5. Multiplying fractions

- Convert any mixed numbers to improper fractions before beginning calculation
- Multiply the numerators
- Multiply the denominators
- Simplify if you can

$$\frac{3}{4} \times \frac{2}{5} = \frac{3 \times 2}{4 \times 5} = \frac{6}{20} \quad \text{Simplify?}$$

6. Fractions of amounts

- Divide by the denominator
- Multiply by the numerator



$$\frac{1}{4} \text{ of } 36 = 9$$

$$\frac{3}{4} \text{ of } 36 = 27$$

7. Expressing one quantity as a fraction of another

20p as a fraction of £2.00 Change the £2.00 to pence = 200p.

Write the quantities as a fraction as follows:

$$\frac{20p}{200p} \quad (\text{The } p \text{ cancels out then reduces to the lowest term})$$

$$\frac{1}{10}$$

20p is $\frac{1}{10}$ of £2.00.

Year 9 Learning Cycle 1 Mathematics - Calculator Features

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Square numbers: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

Cube Numbers : 1, 8, 27, 64, 125

Prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47...

Useful features on your calculator:

FACT: this express a number as a product of its prime factors

RATIO (menu 4): this will find missing values within equivalent ratios

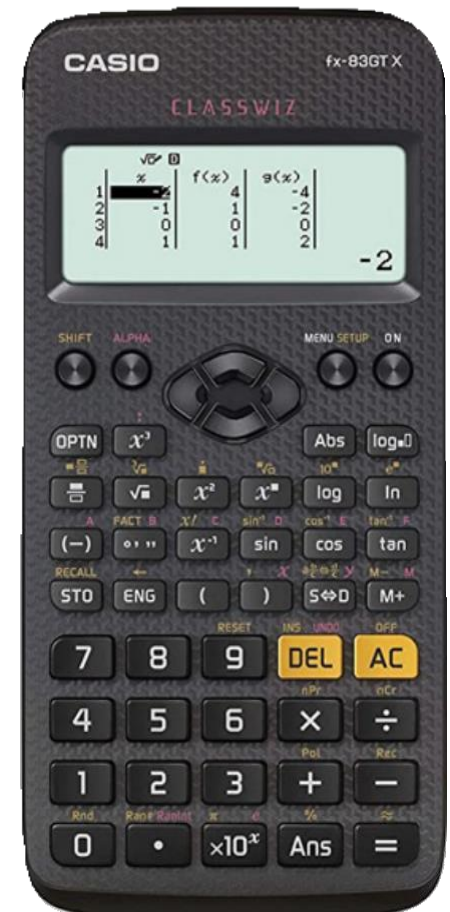
Table (menu 3): This is where you can generate values within a table- useful for plotting graphs and generating terms of a sequence

Statistics (menu 2): this will find all of the averages from a table of data

o^o: This is the time button and can do conversion between time units, as well as calculations with different times

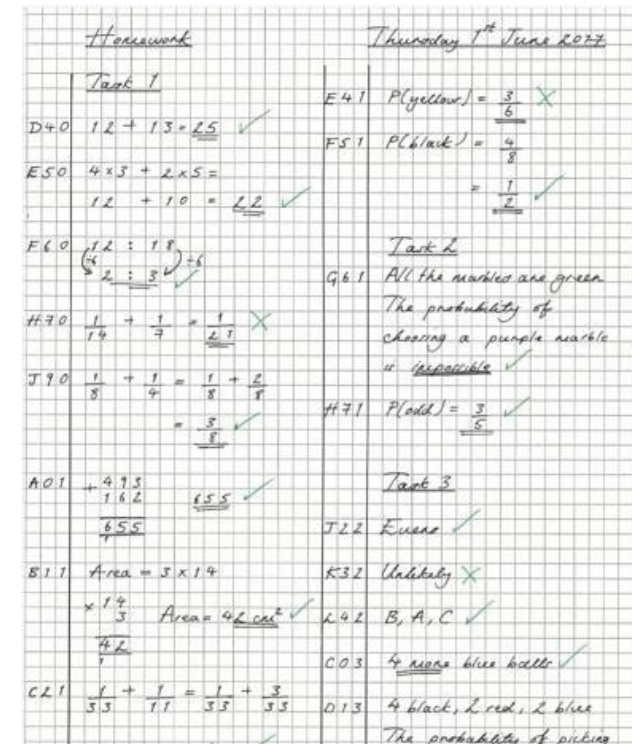
Fraction button: can be used for any calculations with fractions

S-D: Converts decimal answers to fractions and vice versa



Sparx Maths

- Homework will be set on Tuesdays and will be due on Tuesday morning at 7:00am
- You must complete 100% of the homework- if you have not got 100% of the questions correct, then you have not done your homework
- You will receive a merit for completion of your homework
- Bookwork must also meet the criteria outline in the table
- A bookwork score of 5/5 means you will receive a merit
- If your bookwork code is 4 or less, you will receive 1pt
- You need to bring your homework book to the first lesson after the Tuesday hand-in.
- If you complete one of the extra homework's- XP Boost or Target, you will receive another merit.- they must be 100% complete
- Sparx clinics will run every break time and lunchtime in the Arc, with a maths teacher available to support you. There will also be help available in homework club on Tuesday afternoon.
- It is your responsibility to seek help BEFORE the deadline, if you get stuck



Book work criteria	Marks
Due date and title written and underlined	1 mark
Bookwork codes written down	1 mark
All workings shown in the bookwork SOME workings = 1 mark NO workings = 0 marks	2 mark
Every question marked	1 mark

Year 9 Learning Cycle 1 Science - How can I use the Periodic Table?

Group 1 - Alkali Metals

Group number – tells you the number of **electrons** in an elements **outer** shell.
Elements in the **same group** have **similar properties**.

Magnesium (Mg) has **12 electrons** in total. It is in **group 2** so has 2 electrons in its **outer shell**. Mg's electronic configuration is **2,8,2**.

Mass Number = number of **protons** and **neutrons** added together.

Atomic / Proton Number = number of **protons** which is the same as the number of **electrons**.

Neutrons = Mass number – Atomic number

Group 1 – Alkali Metals

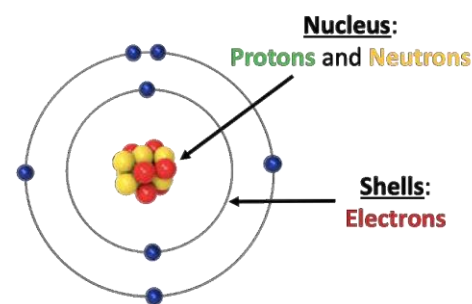
Group numbers: 1, 2, 3, 4, 5, 6, 7, 0

Transition Metals

Non-Metals

Noble gases have a **full outer shell** of electrons. E.g., Neon (Ne)

Subatomic Particle	Mass	Charge
Proton	1	+1
Neutron	1	0
Electron	Negligible	-1



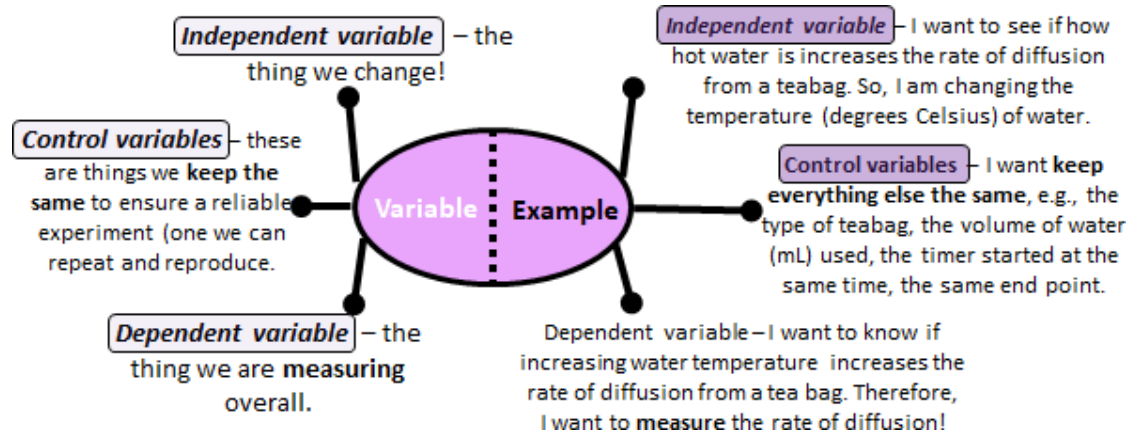
Year 9 Learning Cycle 1 Science - Experiments

1. Key Terms	Description
Independent variable	The variable you change in an investigation
Dependent variable	The variable you measure in an investigation
Control variable	The variable you keep the same in an investigation
Hypothesis	A prediction of what will happen in an investigation
Reliability	We use control variables to ensure a reliable experiment
Reproducible	To re-do our experiment and get similar results due to a reliable method
Mean	Doing an experiment 3 times then dividing by 3 to get an average
Fair test	An experiment where only the independent variable changes.
Anomalous result	Result that does not fit with the rest of the data.

2. The Variables

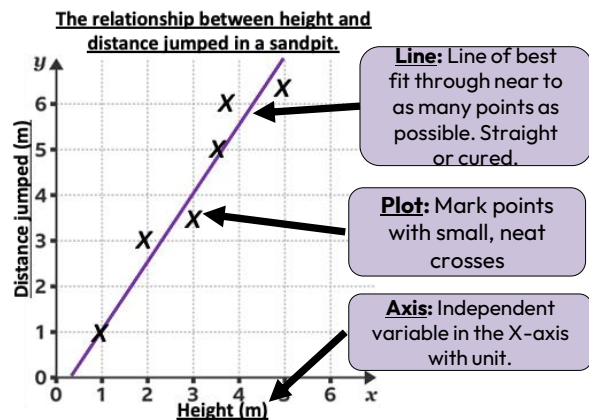
- 1 Repeatable** – The same person gets the same results after repeating the experiment using the same method and equipment.
- 2 Reproducible** – Similar results can be achieved by someone else or using a different method/piece of equipment.
- 3 Accurate** – Results are close to the true answer
- 4 Precise** – data is close to the mean (or the average!)

For data to be **reliable**, it must be **repeatable and reproducible**



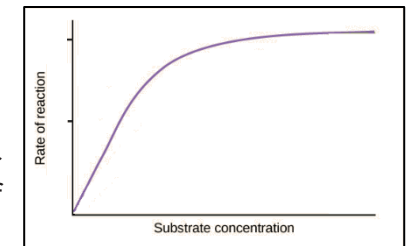
3. Graphs

Scaling – Even scale
 Plot – Small crosses 'x'
 Line of best fit – on line graphs
 Axis – Titles and units
 Title - Appropriate graph title



4. Drawing conclusions from Graphs

- State the **relationship** between the independent and dependent variable, e.g., 'as the time increases the product formed increases.'
- Use **statistics** to support your answer. 'For example, at 10 minutes there was 50g of product, compared to 160g at 20 minutes'
- Is the graph the same throughout or does it change? Split it into sections and describe each.



Model Answer: As the substrate concentration increases, the rate of reaction increases. For example... The rate increases more rapidly initially, then increases more slowly until the rate stays the same.

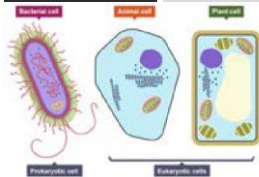
Year 9 Learning Cycle 1 Science - Cell Biology

1. Key Terms	Description
Cell	The smallest living unit. All living organisms are made of cells
Eukaryote	An organism consisting of a cell or cells in which the DNA is contained within a nucleus (animals and plants)
Prokaryote	An organism in which the DNA is not contained within a nucleus (bacteria)
Organelle	A subcellular (smaller than a cell) structure found within a cell
Diffusion	The movement of particles from a high concentration to a low concentration
Active Transport	The movement of particles from a low to high concentration, moving against the concentration gradient. This process requires energy
Osmosis	The movement of water particles from an area of high concentration to low concentration gradient
Mitosis	Cell division that produces two genetically identical daughter cells
Stem Cell	An undifferentiated cell that can become any other type of cell
Vaccination	Treatment with a dead or inactive form of the pathogen to prevent disease
Pathogen	A microorganism that causes disease
Phagocytosis	The engulfing of a pathogen by a phagocyte (white blood cell)
Lymphocyte	A white blood cell that is able to produce antibodies
Phagocyte	A white blood cell that is able to produce antibodies
Placebo	A fake or dummy drug
Double Blind Trial	Part of a clinical trial where neither the doctor or the patient know whether they are receiving the active drug or a placebo

Year 9 Learning Cycle 1 Science - Cell Biology

2. Cell Biology

Organelle	Function	Animal	Plant	Bacteria
Nucleus	Contains genetic information that controls the functions of the cell	Y	Y	
Cell membrane	Controls what enters and leaves the cell	Y	Y	Y
Cytoplasm	Where many cell activities and chemical reactions within the cell occur	Y	Y	Y
Mitochondria	Provides energy from aerobic respiration	Y	Y	
Ribosome	Synthesises (makes) proteins	Y	Y	Y
Chloroplast	Where photosynthesis occurs		Y	
Permanent vacuole	Used to store water and other chemicals as cell sap		Y	
Cell wall	Strengthens and supports the cell. (Made of cellulose in plants.)		Y	Y
DNA loop	A loop of DNA, not enclosed within a nucleus			Y
Plasmid	A small circle of DNA, may contain genes associated with antibiotic			Y



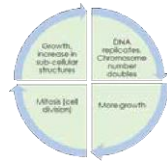
Magnification = $\frac{\text{size of image}}{\text{size of real object}}$

Embryonic stem cell	Can divide into most types of cell. Therapeutic cloning – embryonic stem cells produced with same genes as patient. No rejection.
Adult stem cell	Can divide into a limited number of cells e.g. bone marrow stem cells can form various blood cells.



<https://www.bbc.co.uk/bitesize/guides/zwnp7p3/revision/5>

3. Cell Cycle



Number of sub-cellular structures (e.g. ribosomes and mitochondria) increase.

Number of chromosomes double.

One set of chromosomes is pulled to each end of the cell.

The nucleus divides.

Cytoplasm and cell membranes divide to form two identical cells

4. Cell Transport

Diffusion	Spreading out of the particles (gas/ solution) resulting in a net movement from an area of higher concentration to an area of lower concentration.	Oxygen and carbon dioxide in gas exchange (leaves and alveoli). Urea from cells into the blood plasma for excretion in the kidney
Osmosis	The diffusion of water from a dilute solution to a concentrated solution through a partially permeable membrane.	Movement of water into and out of cells
Active Transport	The movement of substances from a more dilute solution to a more concentrated solution (against a concentration gradient). Requires energy from respiration.	Absorption of mineral ions (low concentration) from soil into plant roots. Absorption of sugar molecules from lower concentrations in the gut into the blood which has a higher sugar concentration.

6. Further reading, websites

Types of microscope:

<https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/5>



Defence against disease:

<https://www.bbc.co.uk/bitesize/guides/zs6q2p3/revision/4>



Drug development:

<https://www.bbc.co.uk/bitesize/guides/z8fkmsg/revision/10>



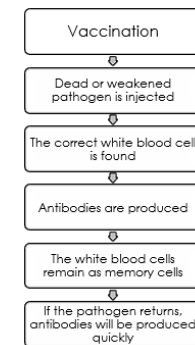
Cell cycle:

<https://www.bbc.co.uk/bitesize/guides/z2kmk2p/revision/2>



5. Pathogens

	Pathogen	How it is spread	Prevention/ Control
Measles	Virus	Droplets from sneezes and coughs	Vaccination of children
HIV	Virus	Sexual contact, needle exchange	Antiretroviral drugs when infected
Salmonella	Bacteria	Infected food	Vaccination of poultry (chickens)
Gonorrhoea	Bacteria	Sexual contact	Controlled by antibiotics. Spread prevented by condoms
Malaria	Protist	By a vector – mosquito	Preventing mosquitos from breeding, using mosquito nets

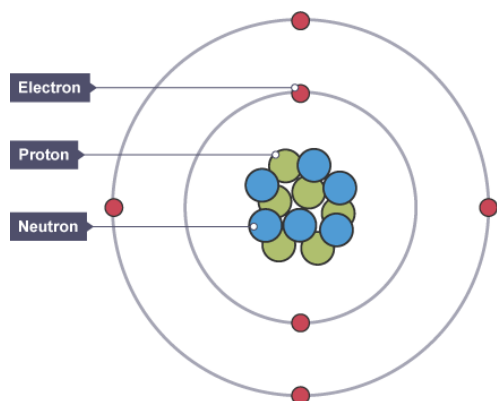


Year 9 Learning Cycle 1 Science - Atomic structure and bonding

1. Key Terms	Description
Atom	The smallest part of an element which can exist.
Element	A substance made of only one type of atom. E.g., Carbon.
Compound	A substance made of 2 or more elements, chemically combined in fixed proportions. E.g., Water, sodium chloride.
Mixture	Two or more atoms/elements/compounds which are not chemically joined together. E.g., air, crude oil.
Ionic bonding	The electrostatic attraction between two oppositely charged ions
Giant Ionic Structure	Giant ionic structures like sodium chloride have strong electrostatic forces between oppositely charged ions. This gives them high melting and boiling points as lots of energy is needed to overcome these bonds.
Covalent bonding	A shared pair of electrons between two non-metals
Fractional Distillation	Heating, evaporating, cooling and condensing crude oil to give fractions, which contain molecules with a similar number of carbon atoms
Ore	A compound that contains enough of a metal to make it economically viable to extract the metal from it
Displacement	When a more reactive element reacts and swaps places with a less reactive element.
Electrolysis	Using electricity to decompose a compound

Year 9 Learning Cycle 1 Science - Atomic structure and bonding

1. Atomic Structure



Subatomic particle	Relative mass	Relative charge
Proton	1	+1
Neutron	1	0
Electron	Very small	-1

2. Electronic structure

Electrons orbit the nucleus at different energy levels called shells. The first shell can hold 2 electrons, the second and third can only hold up to 8 electrons

Atomic number	Name	Electronic configuration	Diagram of atom
3	Lithium	2.1	
11	Sodium	2.8.1	
19	Potassium	2.8.8.1	

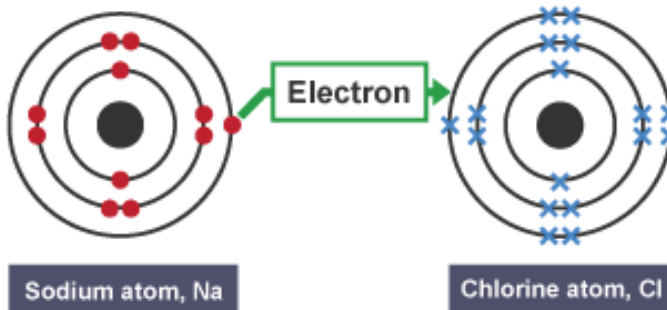
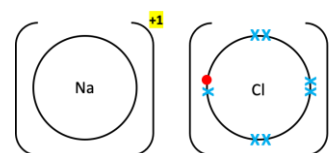
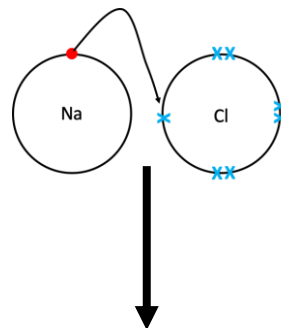
3. Ionic bonding

Rules:

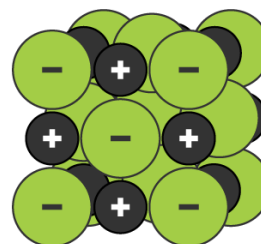
1. Draw outer shell only
2. Show electron transfer
3. Draw [box brackets]
4. Add charge

'Describe the bonding between Sodium and Chlorine' (4)

- Sodium atom transfers 1 electron (1) to chlorine atom (1)
- Sodium becomes a positively charged ion (+1), chlorine (1) becomes a negatively charged ion (-1) (1)



Giant ionic lattices, such as sodium chloride (NaCl) have high melting and boiling points because of strong electrostatic attractions between ions. They only conduct electricity when molten or dissolved.

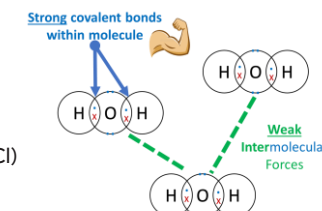
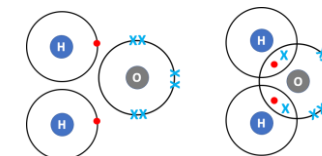


4. Covalent bonding

Covalent Bonding = Bonding between a non-metal where electrons are shared. Atoms become stable

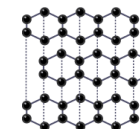
Drawing Covalent Bonds Rules:

1. Draw outer shell only
2. One pair of electrons = one covalent bond.
3. The number of electrons needed for an atom to become stable is how many must be drawn in the covalent bond.

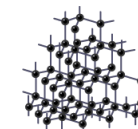


Simple molecules, such as water (H₂O) and hydrogen chloride (HCl) have low melting and boiling points because they have weak intermolecular forces between molecules

Giant covalent structures, such as diamond and graphite (carbon allotropes) have very high melting and boiling points – lots of energy is needed to break



Graphite – each carbon atom forms 3 covalent bonds. Graphite conducts electricity because there are delocalised electrons between layers.

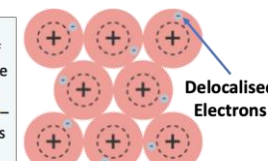


Diamond – each carbon atom forms 4 covalent bonds with another carbon atom.

5. Metallic bonding

Metal atoms have free (delocalised) electrons on their outer shell

There is a strong electrostatic force of attraction between the positive ion and the delocalised electrons – making metallic bonds strong.



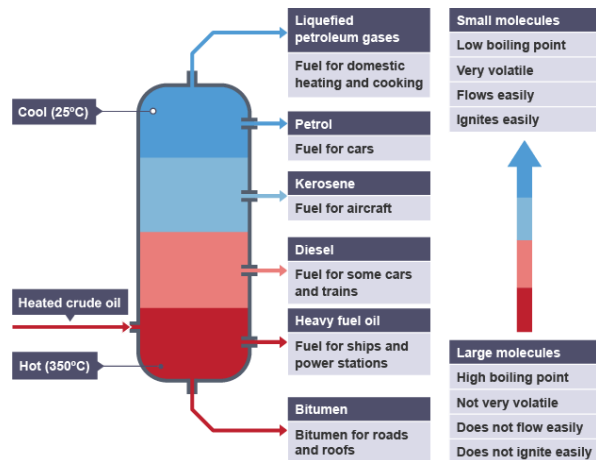
Lattice of positive ions

- Metal atoms have delocalised electron(s) on their outer shell
- Can flow through the structure.
- And carry electrical charge (conduct electricity) and transfer heat thermal energy (good heat conductor)

Year 9 Learning Cycle 1 - Atomic structure and bonding

6. Fractional distillation

Fractional distillation separates substances in a mixture based on their boiling point. We can use it to separate the compounds in crude oil.



7. Reactivity Series

↑
Potassium
Sodium
Lithium
Calcium
Magnesium
Aluminium
Zinc
Iron
Copper
Silver
Gold
↓

The reactivity series is like a league table of metals sorted into order of reactivity. The most reactive metal is at the top and the least reactive metal is at the bottom

A more reactive metal can **displace** (swap places with) a less reactive metal.

magnesium + copper sulfate → copper + magnesium sulfate

potassium + calcium nitrate → calcium + potassium nitrate

8. Extracting metals

Metal	Method	Reactivity
Potassium	Electrolysis of molten compounds	Most reactive ↑ Least reactive
Sodium		
Lithium		
Calcium		
Magnesium		
Aluminium		
(Carbon)	Heating with carbon	
Zinc		
Iron		
Copper		
Gold		

Less reactive metals can be extracted from their ores using displacement. They are roasted with carbon in a process called **smelting**. More reactive metals need to be extracted by **electrolysis**.

Electrolysis uses electricity to break the compound down into ions that then separate.

9. Environmental impacts of mining

1. Digging ores out of the ground is noisy, can cause dust and air pollution and leaves unsightly waste/holes in the ground.
2. Both smelting and electrolysis require **lots of energy**. This makes the process **expensive** and can also cause carbon dioxide to be released into the atmosphere. This causes **global warming**.

3. **Recycling of metals** is a more sustainable option because less ores have to be extracted and less energy is needed to recycle metals than extract new ones.



10. Further Links

Atomic structure

<https://www.bbc.co.uk/bitesize/guides/z3sg2nb/revision/3>



Bonding

<https://www.bbc.co.uk/bitesize/topics/zq6h2nb>



Reactivity series

<https://www.bbc.co.uk/bitesize/guides/zsm7v9q/revision/1>



Year 9 Learning Cycle 1 Science - How to Approach 6 Mark Questions

1. How to approach 6 mark questions in Science - Cell Biology

Question	Describe what a vaccination is and explain how they protect from infection. Explain what antibiotics are and why they can't be used to treat viral diseases. Describe and explain the process of developing new drugs
Info	At least one of these questions is likely to come up. The examiner is going to be looking for a clear answer in a logical sequence
Top tip	Be careful that you use key words/phrases accurately (these are in bold in your model answers below)
Model answer	Describe what a vaccination is and explain how they protect from infection A vaccination involves a dead or inactive pathogen being injected into the person. This produces an immune response. The antigen on the vaccine stimulates the white blood cells to start making antibodies. The white blood cells produce antibodies more rapidly which leads to the pathogen being destroyed
Model answer	Explain what antibiotics are and why they can't be used to treat viral infections. Antibiotics are drugs that are used to treat bacterial infections, they work by damaging the bacterial cell without harming your own cells. They can't be used to treat viral infection as viruses are found within body cells, because antibiotics don't damage body cells they don't work
Model answer	Describe and explain the process of developing new drugs. The first stage involves pre-clinical trials of the new drug on cells, tissues and live animals this is done to test toxicity, dosage and efficacy . Next the drug moves onto clinical trials in which the drug is tested on healthy volunteers and then patients at very low doses to check for safety and side effects . Finally the trial will be carried out on patients to find the optimum dosage and test efficacy . This involves the use of double blind trials in which patients are randomly allocated into two groups, one group is given the drug and the other group is given a placebo which does not contain the drug. The drug is tested double blind which means that the patients and the doctor do not know who has been given the drug and who has been given the placebo to remove bias . Finally there is a peer review of data to help prevent false claims
Practice	1. Learn and practice the model answer above

2. How to approach 6 mark questions in Science - Atomic Structure

Question	Explain the arrangement of the first 20 elements in today's periodic table. Identify and explain the changes that Mendeleev made to the periodic table. Explain why Mendeleev's periodic table was accepted over time
Info	At least one of these questions is likely to come up. The examiner is going to be looking for a clear answer written in logical sequence
Top tip	Be careful that you use key words/phrases accurately (these are in bold in your model answers below)
Model answer	Explain the arrangement of the first 20 elements in today's periodic table. The elements are arranged in order of their atomic number . Elements in the same group have the same number of electrons in their outermost shell
Model answer	Identify and explain the changes that Mendeleev made to the periodic table. Mendeleev left gaps for the discovery of new elements. He also rearranged the position of some of the elements so that the properties fitted other elements in the same group
Model answer	Explain why Mendeleev's periodic table was accepted over time. New elements were discovered that fitted into the gaps that Mendeleev had predicted. Also, when the neutron was discovered, this led to an understanding of isotopes which explained why Mendeleev needed to swap position of some elements
Practice	1. Learn and practice the model answers above

Year 9 Learning Cycle 1 Science - Clubs and Reading

1. Science reading opportunities

Reciprocal Reading
The Fab 5

PREDICT
I think... I predict...
I wonder...
I imagine... I suppose...

QUESTION
I wonder... Who? What? Where?
When? Why? How? What if?
What does?

CLARIFY
I'm not sure of this word... section... image...
diagram... label...
what does this mean?
I think I recognise this word...
does it link to... can I have help with a synonym...

TALK THE TEXT
Why is this text important?
How does it link to my learning?
What key information can I take from the text?

SUMMARISE
Label the key points / Paragraphs...
bullet point key ideas...
highlight key words...
The most important part is...
next... also... finally...

2. STEM club: Science, technology, engineering, Maths

Could you survive a Zombie Apocalypse?
Tuesday 3.15pm in S3 with Mr Stone

4. Science discovery Websites

Spectacular Science
National Geographic

<https://kids.nationalgeographic.com/videos/topic/spectacular-science>



Discover Natural History
Museum

<https://www.nhm.ac.uk/discover.html>



Conversations – Eden Project

<https://www.edenproject.com/learn/eden-at-home>



Cornwall Wildlife Trust

<https://www.cornwallwildlifetrust.org.uk/>



Year 9 Learning Cycle 1 Art

1. Key Words	Definitions
Western Front	An area of northern France and Belgium with the most fighting during the First World War
Tommy	Nickname given to the British soldiers
Artillery	Heavy guns back from the front line
Home Front	The activities and lives of the people left at home
Trench	Soldiers dig down into the earth from between a few centimetres and 6' to provide protection from the enemy artillery
Shell Hole	When a shell (bomb) falls onto the earth it causes an explosion which throws earth into the air
Munitions	Factories where ammunition, guns, shells, tank and bombs were made by women

2. What will I learn?

You will learn to look, understand and empathize with the soldiers, parents, children, brothers, sisters, women and workers on both sides of the war. You will use WW1 poetry as the inspiration to create a design for a sweetheart brooch, cap badge or lucky charm that you will make in DT.

3. What is empathy?

You will learn to look and analyse to understand how the soldiers, parents, children, brothers, sisters, women and workers on both sides of the war felt about the conflict and loss.



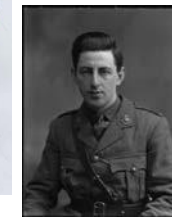
Art can be a form of therapy, promoting us to reflect on the meaning of life. What happens when we stand in front of a work of art? How might it affect us? What can we learn about ourselves by contemplating it? Art can be a way to speak truth to power.

4. Artists that use art as their vocabulary



CWR Nevinson

Nevinson was a studying at Slade Art school London before signing up to the Artist Rifles and serving on the Western Front.



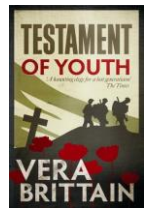
Paul Nash

Nash was a studying at Slade Art school London before signing up to the Artist Rifles and serving on the Western Front



Vera Brittain

Vera Mary Brittain was a WW1 nurse, writer, feminist, socialist and pacifist. Her best-selling 1933 memoir Testament of Youth recounted her experiences during the First World War.



5. Links and Further Reading

Vera Brittain: Testament of Youth
John McCrae : In Flanders Fields
Wilfred Owen: Dulce et Decorum
Vera Brittain: To my Brother

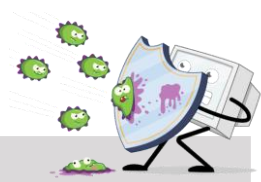
Regimental Brooches and Lucky Charms | Imperial War Museums

(iwm.org.uk)<https://www.tate.org.uk/art/artists/christopher-richard-wynne-nevinson-1697>

<https://www.tate.org.uk/art/artists/paul-nash-1690>



Year 9 Learning Cycle 1 Computing - Cyber Security & Social Engineering



1. Data and information

- **Data** – the facts about you and the people you are in contact with
- **The Data Protection Act** – prevents companies from using your data without your permission.
- **Information** – this is derived (worked out) from the data you leave online
- **Digital footprint** – The ways you interact with applications online. Is traceable back to you
- **Cyber Security** – keeping you and your information safe online

2. Social Engineering

Human error creates the largest risk of the data being compromised. **Social engineering** is a set of methods used by cybercriminals to deceive individuals into handing over information that they can use for fraudulent purposes

Shouldering	involves the attacker watching the victim while they provide sensitive information, for example, over their shoulder. This type of attack might be familiar; it is often used to find out someone's PIN at a cash machine.
Blagging	an attack in which the perpetrator invents a scenario to convince the victim to give them data or money.
Phishing	A phishing attack is an attack in which the victim receives an email disguised to look as if it has come from a reputable source, in order to trick them into giving up valuable data. The email usually provides a link to another website where the information can be inputted.

3. Malware

Malware	Malicious software – designed to do harm
Virus	Viruses are a malicious form of self-replicating software. Once on a computer or network, a virus will replicate itself by maliciously modifying other computer programs and inserting code.
Worms	replicate themselves but do not attach themselves to files as a virus does. Instead, worms spread through the network and use the system's resources.
Trojan	A trojan is a piece of software that appears to perform a useful function (such as a game) but it also performs malicious actions.
Spyware	Spyware is unwanted software that monitors and gathers information on a person and how they use their computer.
Ransomware	This is a form of virus, as it is self-replicating. Ransomware locks a computer, encrypts files, and therefore prevents the user from being able to access the data

4. Network Risks

A Network is one or more devices connected to share resources and information
Connecting computers has benefits but can also leave people open to problems such as malware.



5. Ethics

Ethics is about doing things that are morally correct.

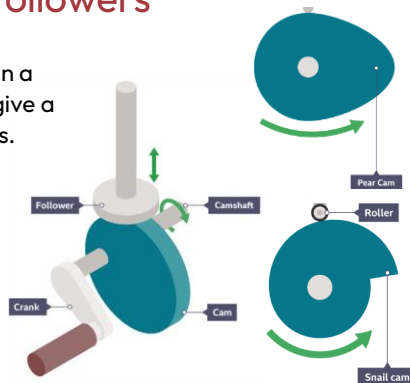
Can computers be ethical? Driverless cars must be programmed to protect the user other drivers and pedestrians. These are called ethical coding decisions.

Year 9 Learning Cycle 1 Design Technology – Mechanical Marvels









1. Key Words	Definitions
Crank	An arm attached at 90 degrees to the end of a rotating shaft
Cam	A wheel attached to a shaft
Follower	A bar that follows a cam around its circumference
Eccentric	Deliberately locating a cam off-centre so that it makes a follower rise and fall as the cam rotates
Shaft	A rod connecting moving parts of a mechanical system together
Gear	A wheel with teeth that can change the speed of a mechanism
Drive Gear	The starting gear that is moved to cause all other movement
Driven Gear	A gear that transfers motion from the drive gear
Input Motion	The type of movement that is put into a mechanical system
Output Motion	The type of movement that comes out of a mechanical system
Torque	The force generated or needed to cause an object to rotate

3. Cams and followers

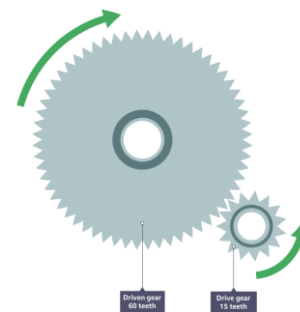
Cams can be made in a range of shapes to give a range of movements.



2. Using gears

- Linear**   Linear motion moves something in a straight line. For example - a train moving down a track
- Rotary**   Rotary motion is where something moves around an axis or pivot point. For example - a wheel
- Reciprocating**   Reciprocating motion has a repeated up and down motion or back-and-forth motion. For example - a piston or pump
- Oscillating**   Oscillating motion has a curved backwards and forwards movement that swings on an axis or pivot point. For example - a swing or a clock pendulum

4. Using gears



One complete turn of the large gear will cause the smaller gear to rotate many more times and at a faster speed.

We call this difference in speed the gear ratio.

5. Workshop Safety

- Always wear goggles and tie-back long hair when using machine tools and remember that work and tools must be clamped securely before turning the lathe or pillar drill on.
- Do not use a tool unless your teacher has shown you how to use the tool safely. Ask to be shown again if you have forgotten how to use the tool safely.
- Using gear systems can increase the speed and power of rotating objects. Winding the crankshaft of a geared system can cause the driven gear to rotate much faster. Ensure that anything attached to the driven gear is secure and that your fingers are not going to get hit/trapped.

6. Links and further reading

<https://www.youtube.com/watch?v=U337crT3OC0&t=50s>



<https://www.youtube.com/watch?v=wTiw2CktpW0&t=27s>



Revise:
Mindmap Makeris.gd/
mindmapmaker



Year 9 Learning Cycle 1 Drama - Interpreting Scripts

1. Key Words	Definitions
Stage Directions	An instruction in the text of a play indicating the movement, position, or tone of an actor, or the sound effects and lighting
Thrust Staging	Staging that extends into the audience on three sides and is connected to the backstage area by its upstage end
Proscenium Staging	The staging in proscenium theatres often implies that the characters performing on stage are in a four-walled environment, with the fourth "wall" open to the audience
In The Round Staging	The acting area, which may be raised or at floor level, is completely surrounded by the audience
Traverse Staging	The audience is on two sides of the stage, facing towards each other- like a catwalk
Tone	The emotional sound of your voice
Pitch	How high or low your voice goes in speech
Facial Expression	How you show emotion on your face
Body Language	How you communicate feeling through the actions of your body
Gait	How your character walks
Gesture	A movement that communicates something

2. Scripts

The written text of a play, TV programme or film is called a **script**.

Script analysis is a key step in any actor's process.

A close examination of the text can help you **develop your character's motivations and backstory** to enable you to bring your character in your script to life.

Setting and Script Notes

The script will also give you details about the setting - or settings if a number of scene changes are needed. There could also be information about design, props and costume.

Dialogue

The play will normally be written with character names indicating who speaks which line and in which order. There are plays where this is stated less clearly, leaving more decisions for the director to make, but usually the playwright provides these details.

Stage Directions

Stage directions will be given where the writer has a definite idea of what's required at a particular point. They're also used to make the situation clear when the action, rather than the characters' words, is the vehicle for the plot.

3. Stanislavski

A Russian theatre practitioner who developed a 'system' for actors, born out of a quest for realism in acting.



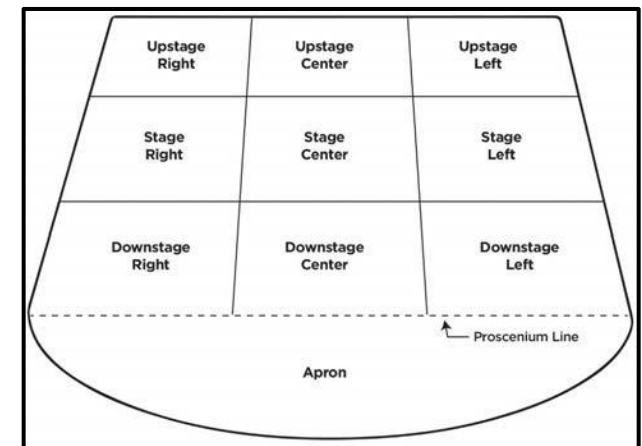
Techniques

Given circumstances- Information about the character you can gather from the script.

Character objective- Considering the reason behind the character's action. What are they trying to achieve?

Magic if- the actor puts themselves into the character's situation, imagining what they would do 'if' this happened to them.

4.



Stanislavski

is.gd/stanislavski



Types of Staging

<https://is.gd/typesofstaging>

Flashcard Maker

<https://is.gd/flashcardmaker>



5. Character development

In order for your character to be believable to an audience, you have to do some work to create and develop your character.

Ways to develop a character:

Character profile- Create a backstory for your character. A character profile should include information about your characters' life up until now, which will inform the physical and vocal choices that you make.

Hot seating- Hot-seating involves having a dialogue with a character. The character steps out of the drama for a while, usually sits in an appointed chair (the hot-seat) and is open to questioning by the audience or students. The character must answer in role.

Year 9 Learning Cycle 1 Food - Legislation and Labels

1. Key Terms	Description
Legislation	Rules or laws made by the government to ensure food is produced, handled, and sold safely
Environmental Health Officer (EHO)	A person who works for the government to make sure that businesses follow the rules and regulations for food safety and hygiene
Cross-contamination	When germs or harmful substances from one food item spread to another, making it unsafe to eat
Coeliac	A person who has a condition where their body cannot tolerate gluten
Lactose Intolerant	A person who has difficulty digesting lactose, a sugar found in milk and dairy products, which can cause stomach pain and discomfort
Shortening	A person who has difficulty digesting lactose, a sugar found in milk and dairy products, which can cause stomach pain and discomfort
Plasticity	The ability of a material, like butter or dough, to be easily moulded or shaped
Allergy	When a person's immune system reacts strongly to certain foods, causing symptoms like hives, difficulty breathing, or swelling
Intolerance	When a person has difficulty digesting or processing certain foods, leading to symptoms like stomach discomfort or diarrhoea
Seasonality	The idea that certain foods are best and most abundant during specific times of the year, like strawberries in the summer or pumpkins in the fall

2. EHO Roles and Responsibilities

The EHO's (or Environmental Health Officer) main job is to ensure that every food business runs up to code and that public health and the environment are protected from harm. An Environmental Health Officer (EHO) is a food safety professional tasked with implementing and ensuring food safety laws.

You will see these signs in every place that sells food to the public.



EHO Roles:



3. Labelling

The following eight pieces of information **MUST** appear **BY LAW** on food labels:

1. NAME OF FOOD/DRINK
2. LIST OF INGREDIENTS (INCLUDING ADDITIVES AND ALLERGENS)
3. WEIGHT OR VOLUME
4. DATE MARK
5. STORAGE AND PREPARATION CONDITIONS
6. NAME AND ADDRESS OF THE MANUFACTURER, PACKER OR SELLER
7. COUNTRY OF ORIGIN AND PLACE OF PROVENANCE
8. NUTRITION INFORMATION



4. Skills

Stuffing	The skill of filling ingredients, such as meats or vegetables, with a seasoned mixture.
Enrobing	The technique of coating one ingredient, usually in chocolate or batter, to create a smooth and even outer layer.
Rubbing-In	The process of combining fat, such as butter, with dry ingredients, like flour, by rubbing them together until the mixture resembles breadcrumbs.
Rolling	The action of using a rolling pin to flatten dough or pastry into a desired thickness or shape.
Shaping	The skill of forming ingredients, such as dough or meat, into specific shapes or forms, often using hands or utensils.
Whisking	The act of vigorously mixing ingredients together using a whisk, typically to incorporate air or create a smooth consistency.
Baking	The method of cooking food in an oven using dry heat, resulting in the browning, rising, and cooking of the ingredients.
Kneading	The process of working dough by folding, pressing, and stretching it to develop gluten and create elasticity.
Proving	Allowing dough to rise and ferment in a warm place, often in a covered bowl, to encourage yeast activity and achieve a lighter texture when baked.

5. Links and Further Reading

TEDTalk: How the Food You Eat Affects Your Brain

<https://youtu.be/xyQY8a-ng6g>

Article: Nutrition needs when you're over 65

<https://is.gd/elderlydiet>

Revise: Mindmap Maker

is.gd/mindmapmaker



Year 9 Learning Cycle 1 Geography - Do we live in an equal world?

1. Comparing lives

Five dimensions of Quality of Life



UNIVERSITY OF
CANBERRA
AN AUSTRALIAN NATIONAL UNIVERSITY



2. Development Indicators

Sustainable Development	Development that meets the needs of the present without affecting future generations
Adult literacy rate (%)	The percentage of people that can read and write
Infant mortality	The average number of deaths of children under 1 year old per 1000 live births
GDP	The total value of goods and services produced by its total population
Life expectancy (years)	The average number of years a person born in a country might be expected to live
Birth rate	The number of live births per 1000 people per year

3. Development Indicators

Indicators	Canada	Japan	Peru	Zaire
Annual income per person (in \$US)	11100	15760	160	130
Life expectancy at birth	76	78	51	47
Daily calorie supply per person	3326	2846	1927	1749
Adult literacy rate (%)	99	99	68	34

4. Gross National Income

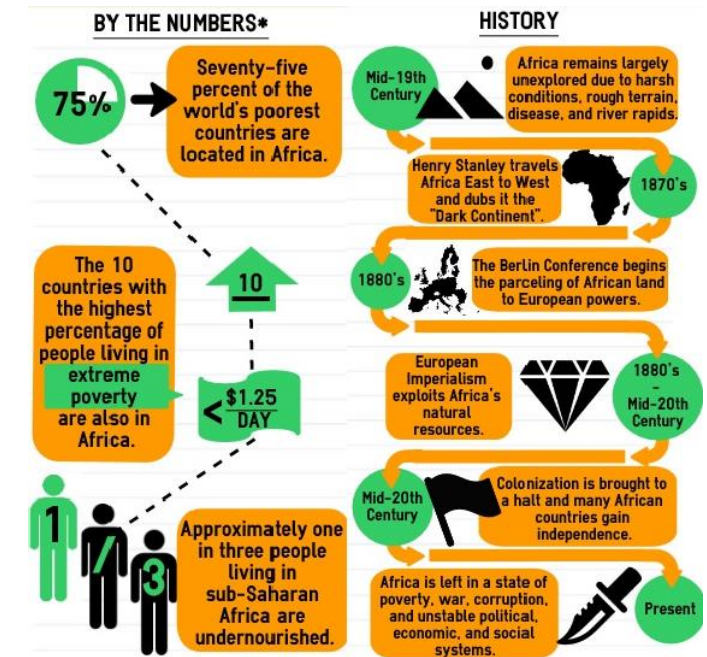
GNI per capita is the total value of all the goods and services produced in a country in a year plus income from abroad, divided by the number of people (per capita) living in that country.

GNI per capita allows us to compare wealth between different countries. However, the calculation only tells us the average income within a country. The wealth of the country may not be shared out equally. Some people may earn a lot of money, whereas others may have very little.

5. Human Development Index

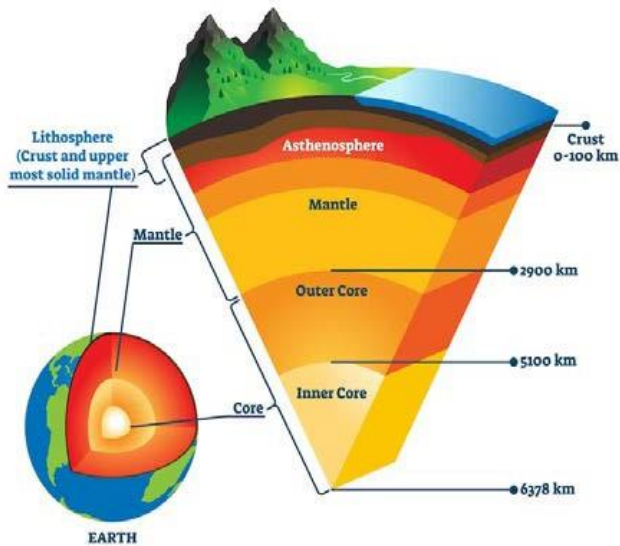


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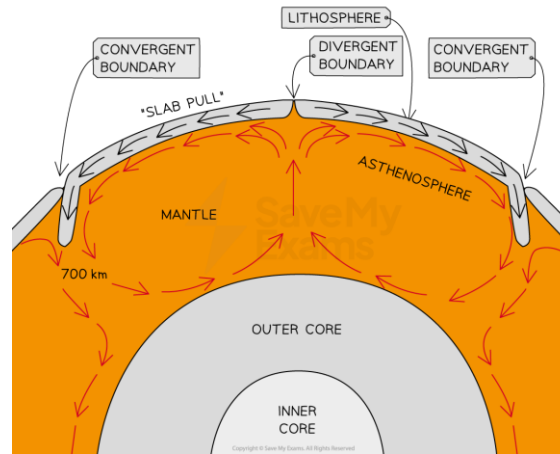


Year 9 Learning Cycle 1 Geography – Tectonic Hazards

1. Layers of Earth

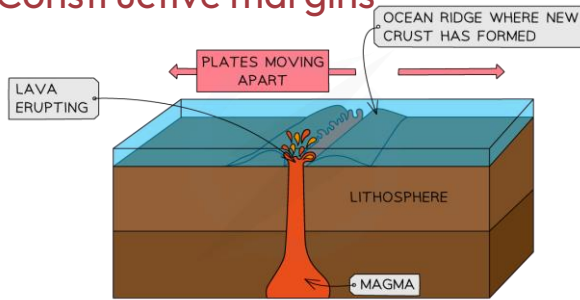


2. Convection Currents



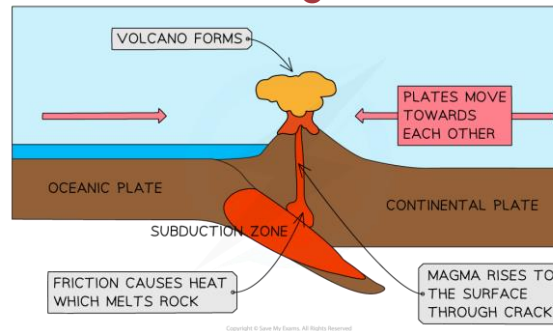
- In the past the theory of convection currents was used on its own to explain tectonic plate movement
- Heat from radioactive decay in the core moves upwards in the mantle
- It creates convection currents which rise towards the surface before spreading in the asthenosphere, cooling and sinking
- As they reach the asthenosphere they carry the lithospheric plates above with them

3. Constructive margins



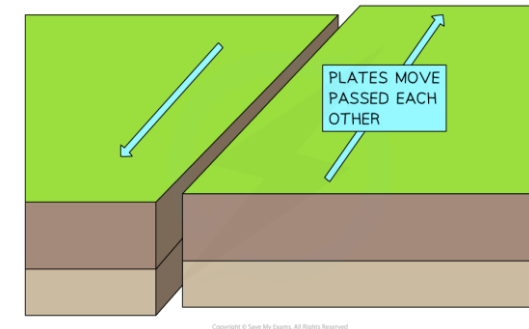
- An ocean ridge forms when the diverging plates are under the ocean
- As the plates move apart, magma rises up to fill the gap and this accumulates over time to become taller and wider
- The Mid Atlantic Ridge is an example of an ocean ridge

4. Destructive margins



- The denser, heavier oceanic plate subducts under the lighter, less dense continental plate
- This forms deep ocean trenches in the subduction zone
- Both violent volcanic eruptions and earthquakes occur
- Volcanoes tend to be steep-sided, composite volcanoes

5. Conservative margin



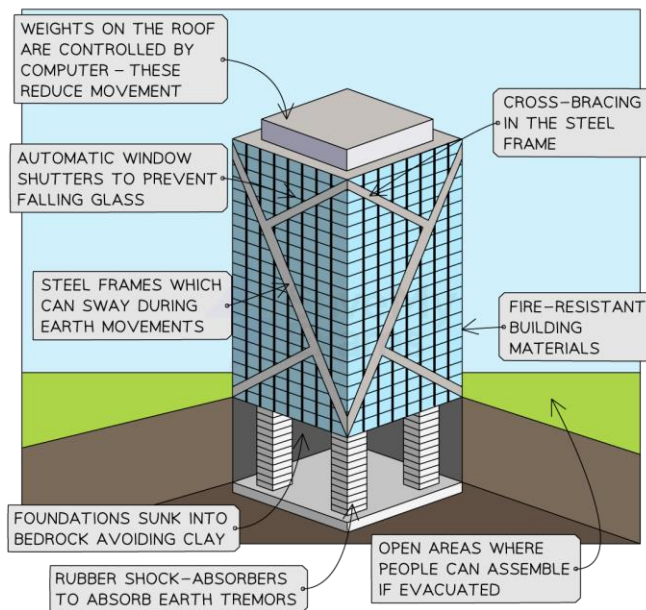
- At a conservative (transform) margin the plates move past each other in opposite directions or in the same direction at different speeds
- Earthquakes are the only hazard at this type of boundary
 - An example of a conservative margin is the **San Andreas Fault**

Year 9 Learning Cycle 1 Geography – Tectonic Hazards

1. Responses to earthquakes

Responses can also be categorised as prevention, preparedness, mitigation and adaption

	Prevention	Preparedness	Mitigation	Adaption
What is it?	It is impossible to prevent earthquakes.	Ensures that people are ready to respond	Aims to reduce the threat by altering the environment	Changes in behaviour to reduce the risk
Example	Land use zoning can help to prevent building in vulnerable areas – in Christchurch after 2010 earthquake 6000 hectares were declared a red zone and left as parkland	Monitoring and warning systems to send out warnings and education programmes. Japan has an Earthquake Early Warning System (EEW)	Tsunami walls – since the 2011 earthquake and tsunami Japan has built over 400km of tsunami wall Earthquake resistant buildings using bracing, shutters on windows etc... to reduce the chances of collapse	Emergency kits which are kept to hand with contents to help with evacuation and survival Evacuation routes and trained emergency services



2. Long & short-term responses to Earthquakes

Long-term responses to earthquakes are measures taken to reduce the impacts of future earthquakes

Short-term responses usually happen immediately before, during or after an earthquake

Long-term responses	Short-term responses
Building codes – creating a set of building codes to increase the resilience of buildings to earthquakes	Search and rescue – using sniffer dogs and heat sensors to locate survivors and rescue them
Education and training – preparing communities to improve evacuation and response through regular drills e.g. Japan's Disaster Prevention Day held each year on September 1st	Emergency aid – providing food, water, medical aid to affected communities
Early warning systems – early warning systems can be implemented to give people time to take precautions e.g. slowing trains, switching off the gas supply	Evacuation – moving people out of the danger zone when a tsunami warning has been issued – this isn't possible before an earthquake as there is not enough warning
Hazard mapping and land use zoning – identifying areas at most risk of liquefaction or tsunamis and limiting activities that can take place there	Issue a warning – a warning can be sent via text, TV and radio as soon as an earthquake happens underground but before the seismic waves reach the surface – this gives enough time to take precautions e.g. take cover under a table

Year 9 Learning Cycle 1 History - Enquiry Question: What makes a successful protest?

Key Terms	Description
Protest	Actions taken to show you want something to change because you think it is wrong (e.g. Protest marches, demonstrations)
Suffrage	The right to vote
Franchise	The right to vote
Reform	To change something to make it better
Sedition	Actions or speech to try to get people to rebel against the government
Militant	Aggressively active in supporting a cause (can also mean engaged in war/fighting)
Parliament	The people who are chosen (elected) to pass laws and make decisions about how the country is run
Manifesto	A document setting out what someone (usually a political party) stands for; what they will and won't do if they have political power
Democracy	A System where people are able to vote to have a say in who runs the country and makes the laws

Core Knowledge	
1. What happened at Peterloo, Manchester 1819?	People met to show they were unhappy and wanted political reform. The government saw this as a serious treat and sent in the army; the event became known as the Peterloo Massacre
2. What changes did the Reform Act, 1832 create?	Rotten boroughs were abolished, this gave the people better representation in parliament More men were given the vote; but the working class were angry this didn't include them!
3. What happened in 1872?	Secret Ballot Act, finally voting was a secret!
4. What did the Third Reform Act, 1884 mean for men?	If they were householders in the town/countryside they could vote, voting numbers increased by 2 million.
5. How did the Suffragists (NUWSS) protest for the right to vote?	Letter writing campaigns, peaceful marches.
6. How did the Suffragettes (WSPU) protest for the right to vote?	'Deeds not words'; they committed acts of arson, they smashed windows, interrupted speeches etc.
7. What did Emily Wilding Davison do in 1913?	She ran in front of the Kings horse at the Epsom Derby and died days later. Historians now believe she was trying to pin a suffragette banner to the horse as it crossed the finish line
8. Why did the Suffragettes stop their campaign during WWI?	They thought it would be unpatriotic, they supported the war effort
9. Why was the 1918 Representation of the people act limited?	It only gave <i>some</i> women who were over 30 the right to vote. This wasn't equal to men yet!
10. What examples of protest have there been in the 2020s?	Black Lives Matter Protests. Protests over wars (e.g. Ukraine, Israels actions). Protests for the environment – Just Stop Oil. Strikes by Railway workers, NHS, Fire Services, Teachers over pay and conditions.

Historical Skills we will develop in this enquiry:

- ✓ Our understanding of change and continuity
- ✓ Our understanding of using sources



Secret Suffragette
Barbara Mitchellhill
(Author)

These are **suggestions** of reading that might help boost your history knowledge for the current enquiry. Anything you can read linked to our enquiry questions is amazing and if you tell your teacher what you've been reading and make suggestions to us for books then we will be rewarding Merits! Remember to check out the library; there are some fantastic history books in there too!

Protest!
Alice and Emily
Haworth-Booth (Author)



WSPU leader Emmeline Pankhurst being arrested. Many suffragettes were arrested for their protests

Front cover of The Suffragette newspaper after the death of Emily Wilding Davison, she is shown as an angel in the image.



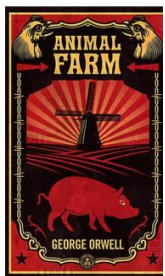
Year 9 Learning Cycle 1 History - Enquiry Question: Did the Russian Revolution fail the people?

Key Terms	Description
Autocracy	Rule by one person with complete power
Tsar	The Russian word meaning emperor
Serf	Slave under the control of a wealthy landowner
Duma	Russian Parliament
Communism	Political system based on the ideas of Karl Marx. In the perfect communist society, everyone would work together for the common good, everyone would be equal and there would be no need for money
Capitalism	Economic and political system where a country's trade and industry are controlled by private owners for profit
Proletariat	The working class
Bourgeois	The ruling classes
Bolsheviks	Russian Communists led by Lenin. ('Men of Many')

Core Knowledge	
1. Who ran Russia until 1917?	A Tsar (Emperor), 1894 Tsar Nicholas II became Tsar.
2. What was life like for the Serfs?	Tough, finally freed from the land in 1861 but had to make 'Redemption Payments' to the government for their freedom!
3. How did Russia get a Duma?	There was a revolution following the loss of the Russo-Japanese war and the Duma were created to keep the people happy
4. What was the WWI like for Russia?	The war didn't go well, there weren't enough supplies due to Russia's lack of industrialisation. People were angry!
5. What happened in February 1917?	Revolution to overthrow the Tsar; Provisional Government is set up
6. What happened in October 1917?	The Bolshevik (Communist) Revolution led by Lenin overthrew the Provisional Government
7. Who were the Cheka?	Created in 1917 they were used to terrorise and remove opponents. They had rights to investigate, try and execute enemies of the state without using the normal courts
8. When was the Russian Civil war?	1918-1921; the Communists (Reds) won
9. Who led the Red Army?	Trotsky; charismatic general
10. What was the NEP?	Lenin's New Economic Policy- This was essentially a truce with the peasants and allowed them some freedom

Historical Skills we will develop in this enquiry:

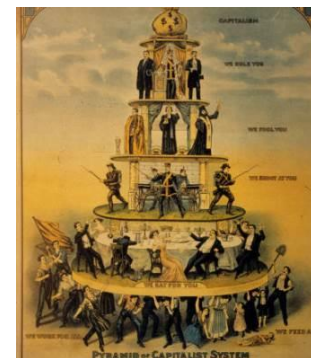
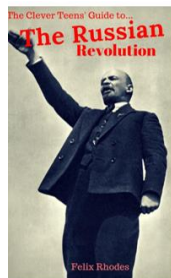
- ✓ Our understanding of change and continuity
- ✓ Our understanding and use of interpretations



Animal farm
George Orwell
(Author)

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The clever teens guide to the Russian revolution
Felix Rhodes (Author)



A diagram representing the Russian social hierarchy in the 1880s and 1900s.

The Political Scale



Tsar Nicholas II



Vladimir Lenin



Karl Marx

Year 9 Learning Cycle 1 Music - Reggae

1. Key Words	Definitions
Syncopation/ Offbeat	When you emphasise a weak beat in music to create a rhythmic effect
Bass Line	A repeating pattern of low notes in music that forms the foundation of a song's harmony
Backbeat	A strong accent on the second and fourth beats in a bar of music
Consonance	A pleasing combination of sounds in music
Dissonance	An unpleasant combination of sounds in music
Chords	Multiple notes played at the same time in music to create harmony
Rhythm (Riddim)	A pattern of beats in music that creates a groove
Bob Marley & The Wailers	A popular Reggae band from Jamaica with Bob Marley – the most famous Reggae musician – as the lead singer
Vocal Projection	The technique of using your voice to sound loud and clear
Triad	A group of three notes played together in music
Steel Drums/ Steel Pans	A percussion instrument from the Caribbean that is made from metal

2. Syncopation

Syncopation can be a difficult concept to understand. In music there are stronger beats and weaker beats. Syncopation is where emphasis is placed on a weak beat or an offbeat rather than the strong beat that is expected. For example:

Strong and weak beats in 4/4

Strong Weak Strong Weak

Syncopation is shown below – the notes hit in between the main pulse of the music

SYNCOPATION

4. How to find notes on a piano

There is an easy method that will help you find notes on a piano/keyboard. All black notes are grouped in twos and threes. If you find the group of two black notes, The D (dog) sits in between the two black notes (kennel).



5. Links and Further reading

Article: The rise of Reggae: How a uniquely Jamaican sound conquered the world
<https://is.gd/historyofreggae>



Lesson: Learn Reggae Guitar (Rhythm, Chords, Scales, History, Songs)
<https://is.gd/reggaelesson>



Revise: Flash Card Maker
is.gd/flashcardmaker



3. How to read pitch notation

We use these mnemonics to help remember how to read music. The Bass Clef is usually played with our left-hand, and the Treble Clef is usually played with our right-hand

THE BASS CLEF

Good Boys Do Fine Always

THE TREBLE CLEF

Every Good Boy Does Fine

Year 9 Learning Cycle 1 Religious Studies

1. Key Words	Definitions
Free Will	The freedom of humans to make a choice between right and wrong
Suffering	The experience of serious physical or emotional pain
Moral evil	The behaviours of human beings that cause suffering, such as murder, lying and stealing.
Natural evil	The things that cause suffering that humans have no control over, such as illnesses, tsunamis and hurricanes
The Fall	The moment that Adam and Eve disobeyed God and allowed evil to enter the world
Original Sin	The belief that all humans are born with a tendency to sin as a result of Adam and Eve's disobedience
Omnipotent	All powerful
Omnibenevolent	All loving
Omniscient	All knowing
Theodicy	An attempt to explain why a loving God would allow people to suffer
Dukka	Buddhist term for suffering
The Four Noble Truths	The Buddha's teachings about the causes of suffering and how it can be ended
Noble Eightfold Path	Eight steps that Buddhists should follow in order to live a good life and ultimately escape suffering
Holocaust	The murder of 6 million Jews by the Nazis during the 1930s and 40s
Shoah	Jewish term used to refer to the Holocaust

2. How does Christianity explain why there is suffering?

Genesis 2-3 – The Fall

These chapters of Genesis describe the following events:

God forms man, known as Adam, out of the dust of the Earth and breathes life into him.

God then creates the Garden of Eden and places Adam there.

God creates birds and animals for Adam, and Adam names these.

God decides to create another human, and so he creates a woman, Eve, out of Adam's rib while Adam is asleep.

Adam and Eve live an innocent and sinless life in the Garden of Eden until the serpent, which some Christians believe represents Satan, tempts them to eat the fruit God has forbidden them from eating.

Eve eats the fruit first and then gives some to Adam, meaning they are both banished from the Garden of Eden.

Eve is punished with the pain of childbirth and Adam is condemned to work hard for his living.

This account is significant as it shows that God has given humans self-knowledge and free will, which means they are capable of choosing between good and evil.

Many modern readers question how Eve is treated and presented and the impact this has had on the role and treatment of women.

The Book of Job (1: 8-12 and 42:1-6)

The Bible tells the story of a man called Job who is described as a good man who loves God. Satan challenges God, saying that Job is only good because he has a happy life. God allows Satan to put Job's faith to the test by causing him to suffer.

First, Job loses his livestock, his servants and all his children. He is devastated, but he remains faithful and praises God. Then he suffers horrible weeping sores all over his body. Job's wife tells him to reject God and to accept that he is dying, but Job refuses.

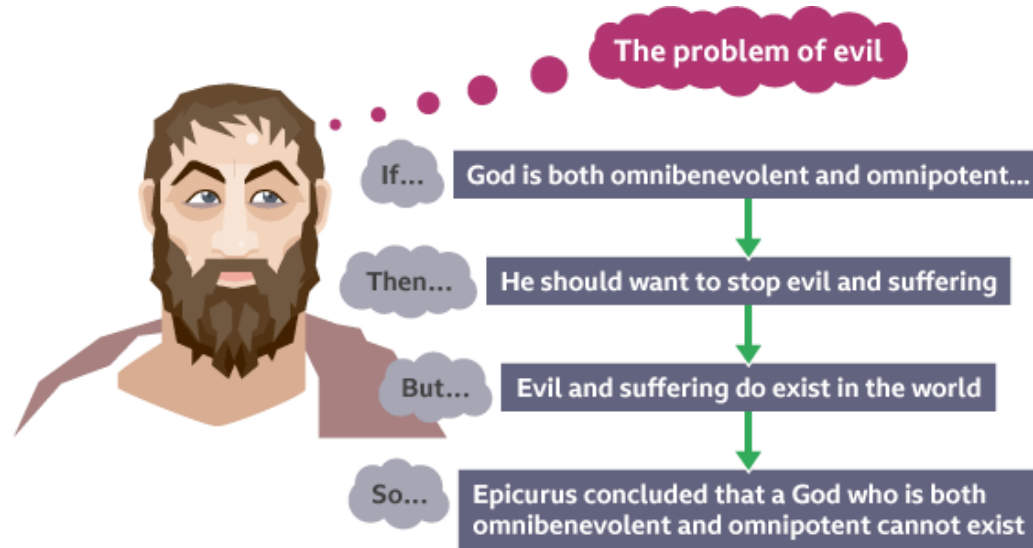
Eventually, God appears to Job. He asks impossible questions that show Job how little he can understand about God's ultimate plan. Job is humbled by this encounter, and at last appreciates that God's unlimited power cannot be fully understood by human beings.

Job never learns why he suffered, but God restores his health and gives him twice as much property as before, more children and a very long and prosperous life.

Year 9 Learning Cycle 1 Religious Studies - Why is there suffering?

1. Why is suffering such a problem?

The ancient Greek philosopher Epicurus (341–270BC) wrote about the contradictions between the characteristics of God and the presence of evil and suffering. He described God as malevolent, meaning 'cruel':



2. How do Christians respond to the problem of evil?

Christians have various solutions to the problem of evil and suffering in the world:

- God gave humans free will. Therefore, although he exists, he cannot interfere in any suffering that results from choices people have made.
- Suffering is not God's fault. Sin entered God's perfect world when the first humans, Adam and Eve, used their free will to turn away from God.
- Experiencing bad things is all part of God's plan and humans should respond positively.
- Many Christians believe that balance is important – humans need evil to appreciate goodness.
- God is fair – people may suffer in their lives on Earth, but good people will be rewarded in Heaven.

3. How do Buddhists respond to suffering?

Through the Four Noble Truths, the Buddha taught that suffering is inevitable and is caused by human greed and desire. However, he also taught that there is a way to escape it

He taught that the way to get rid of the desire that causes suffering is to free yourself from being attached to it. The Eightfold Path is a set of guidelines for Buddhists to live by that should lead to the end of suffering.

By following the Eightfold Path, Buddhists believe that they can achieve Enlightenment and escape the suffering of life.



4. How do Jewish people respond to the Holocaust?

There are many Jewish responses to the problem of evil and suffering:

The Torah teaches that suffering can be a punishment for sins.

- The Torah teaches that suffering can be part of a test from God of a person's faith and to see if they will freely follow God's commandments. Passing the test means they will be rewarded in this life or after death.
- Some Jews believe that suffering can bring people closer to God. In times of trouble many people turn to religion for comfort and support.
- Some Jews believe suffering helps people to empathise with others and to assist them when necessary.
- Suffering cannot be understood by humans; this particularly relates to the suffering Jewish people endured during the Holocaust or Shoah. However, many Jews believe they must do all they can to overcome and relieve suffering.

Year 9 Learning Cycle 1 Spanish

Numbers

1. uno
2. dos
3. tres
4. cuatro
5. cinco
6. seis
7. siete
8. ocho
9. nueve
10. diez
11. once
12. doce
13. trece
14. catorce
15. quince
16. dieciséis
17. diecisiete
18. dieciocho
19. diecinueve
20. veinte
21. veintiuno
22. veintidós
23. veintitrés
24. veinticuatro
25. veinticinco
26. veintiséis
27. veintisiete
28. veintiocho
29. veintinueve
30. treinta
31. treinta y uno

The alphabet

- a = ah
 b = beh
 c = theh
 d = deh
 e = eh
 f = effeh
 g = heh
 h = atcheh
 i = ee
 j = hota
 k = kah
 l = eleh
 m = emeh
 n = eneh
 ñ = enyeh
 o = o (hot)
 p = peh
 q = koo
 r = erreh
 s = esseh
 t = teh
 u = oo
 v = oobeh
 w = oobeh dobleh
 x = eh kis
 y = ee gri egah
 z = theta

2. Classroom language

Español	Inglés
¿Cómo se dice.... en español/inglés?	How do you say... in Spanish/English?
¿Cómo se escribe...?	How do you spell...?
¿Cómo se pronuncia?	How do you pronounce (it)?
¿Me das ?	Can you give me...?
¿Puedes repetir?	Can you repeat that?
¿Puedo ir a mi clase de música?	Can I go to my music class?
(No) entiendo	I (don't) understand
Lo siento	I'm sorry
(Casi) he terminado	I have (almost) finished
por favor	please
gracias	thank you
Objetos en la clase	Classroom objects
un bolígrafo	a pen
una regla	a ruler
un rotulador floreciente	a highlighter
un cuaderno	an exercise book

3. Question words

Español	Inglés
¿Qué?	what
¿Cómo?	how
¿Por qué?	why
¿Dónde?	where
¿Adónde?	where to
¿De dónde?	where from
¿Cuándo?	when
¿Cuánto/a?	how much
¿Cuántos/as?	how many
¿Cuál?	which
¿Quién?	who
¿A qué hora?	at what time

Phonics - Sound Symbol Correspondence (SSCs)

These sounds never change!

a = cat e = egg i = feet o = hot u = woo

ca - ce - ci - co - cu

Stick your tongue out like the English /th/ for /ce/ and /ci/ and also z, /que/ = ke - /qui/ = key

ga - ge - gi - go - gu

Soft /g/ sound, except for /ge/ and /gi/ these are pronounced like a Spanish /j/ in the back of your throat. Soft

/gue/ = get and /gui/ = geese

h = silent, ll = like an English y, v like an English b, ñ = ny, roll your rs if they come at the beginning of a word, or are a double rr

Year 9 Learning Cycle 1 Spanish

Large numbers

0. cero
 10. diez
 20. veinte
 30. treinta
 31. treinta y uno etc.
 40. cuarenta
 50. cincuenta
 60. sesenta
 70. setenta
 80. ochenta
 90. noventa
 100. cien
 101. ciento uno etc.
 200. dos cientos
 300. tres cientos
 400. cuatrocientos
 500. quinientos
 600. seiscientos
 700. setecientos
 800. ochocientos
 900. novecientos
 1000. mil
 2000. dos mil etc.

Days and Dates

Hoy es...	Today is...
lunes	Monday
martes	Tuesday
miércoles	Wednesday
jueves	Thursday
viernes	Friday
sábado	Saturday
domingo	Sunday
enero	January
febrero	February
marzo	March
abril	April
mayo	May
junio	June
julio	July
agosto	August
septiembre	September
octubre	October
noviembre	November
diciembre	December

¿Cuándo es tu cumpleaños?
 Mi cumpleaños es el de

Who I live with

En mi familia hay...	In my family there is...
(No) tengo...	(I (don't) have...
Vivo con...	I live with
mi	my
mis	my
padre/ papá	father
padrastra	stepfather
cuidador	carer
hermano mayor	older brother
hermano menor	younger brother
hermanastro	stepbrother
tío	uncle
abuelo	grandfather
primo	cousin
madre/ mamá	mother
madrastra	stepmother
hermana mayor	older sister
hermana menor	younger sister
hermanastra	stepsister
tía	aunt
abuela	grandmother
prima	cousin
gemelo	twin
mujer	wife
marido	husband
soy hijo único	I'm an only child (boy)
soy hija única	I'm an only child (girl)

Describing people (tener)

Tengo el pelo...	I have the hair...
Tiene el pelo...	He/she has the hair...
marrón	brown
castaño	chestnut
rubio	blond
negro	black
gris	grey
pelirrojo	red
corto	short
largo	long

1.	
2.	
Tengo los ojos...	I have the eyes...
Tiene los ojos...	He/she has the eyes...
marrones	browns
grises	grey
verdes	green
azules	blue

1.	
(No) llevo gafas	I (don't) wear glasses
(No) lleva gafas	He/she (doesn't) wear glasses
tener	to have
tengo	I have
tienes	you have
tiene	he/ she/ it has
tenemos	we have
tenéis	you (pl) have
tienen	they have
¿tienes...?	do you have?

Year 9 Learning Cycle 1 Spanish

Describing people (ser)

¿Cómo eres?	What are you like?
¿Cómo es?	What is he/she like?
(No) soy...	I am (not)...
(No) es	he/ she is(n't)
muy	very
bastante	quite
un poco	a little
alto	tall
bajo	short
1.	
2.	
(No) soy...	I am (not)...
(No) es	He/she is (not)....
amable	kind
simpático	nice
amable	friendly
callado	quiet
divertido	fun
aburrido	boring
feliz	happy
responsable	leal
1.	
Ser	To be
soy	I am
eres	you are
es	he/she is
somos	we are
sois	you (pl) are
son	they are

Making comparisons

Comparatives	
más... que	more... than
menos... que	less...than
tan...como	as...as
mejor que	better than
peor que	worse than
mayor que	older than
menor que	younger than
Superlatives	
es el/ la más...	is the most...
son los/ las más...	are the most...
es el/la menos...	is the least...
son los/ las menos...	are the least....
el/la mejor	the best
el/la peor	the worst
el/la mayor	the oldest
el/la menor	the youngest
Possessive adjectives	
mi/mis	my
tu/tus	your
su/sus	his/ her/ their
nuestro/a	our
nuestros/as	our + plural
su/ sus	their

Talking about relationships

apoyar	to support
conocer	to meet/ know
dar consejos	to give advice
hacer reír	to make laugh
criticar	to criticize
juzgar	to judge
divertirse	to have fun
casarse	to get married
pelearse	to fight
parecerse	levantarse
llevarse bien/mal	to get on well/ badly
apoyar	to support
conocer	to meet/ know
dar consejos	to give advice
hacer reír	to make laugh
criticar	to criticize
juzgar	to judge
divertirse	to have fun
Conjugating reflexive verbs	
me llevo	I get on
te llevas	you get on
se lleva	he/she gets on
nos llevamos	we get on
os lleváis	you(pl) get on
se llevan	they get on
Negation	
no...nada	not at all
no...nunca	never
no ...jamás	never ever
no...ni...ni	neither... nor...
no...tampoco	neither
no ...ningún(a)	none
no..nadie	no one

My daily routine

despertarse (1236)	to wake up
levantarse	to get up
lavarse los dientes	to clean your teeth
bañarse	to bathe
vestirse (1236)	to get dressed
arreglarse	to get ready
relajarse	to relax
acostarse (1236)	to go to bed

My typical routine

me despierto	I wake
me levanto	I get up
me lavo los dientes	I clean my teeth
me baño	I bathe
me visto	I get dressed
me arreglo	I get ready
a la una	at one o'clock
a las <u>dos/ tres</u>	at <u>two/three</u> o'clock
a la una y <u>cinco</u>	at <u>five</u> past 1
a las <u>dos</u> y cuarto	at quarter past <u>two</u>
a ____ y media	at half past ____
a ___ menos cuarto	at quarter to__
primero	first
luego	then
después	after that
antes	before that
en seguida	right away
finalmente	finally
más tarde	later
más temprano	earlier
mientras que	while

Year 9 Learning Cycle 1 Sports – Basketball

Key Knowledge, Skills and Tactics

1. Lay-up (pressured) - being able to perform a lay-up (a one-handed shot off the backboard when dribbling towards the basket) when under pressure from surrounding defenders attempting to win possession back from you.
2. Rebounding - collecting the rebound after a shot comes off of the backboard or rim, to maintain possession and continue the attack, or alternatively as the defender, regain possession of the ball and begin building your own attack.
3. Attacking plays - A style of set plays created as an attacking collective to run through patterns of play. Patterns of play mutually understood by all members of the team.
4. Defensive strategies - tactics created by the squad/team regarding how they will go about defending the basket, regaining possession of the ball and stopping the opposition from shooting.
5. Offensive strategies - tactics created by the squad/team regarding how they are going to work opportunities to shoot towards and score through the basket and outwitting the defenders.

Key Vocabulary

Confidently perform
Using non-dominant hand
Fast break
Offensive and defensive formations
Comprehend rules



Year 9 Learning Cycle 1 Sports – Football

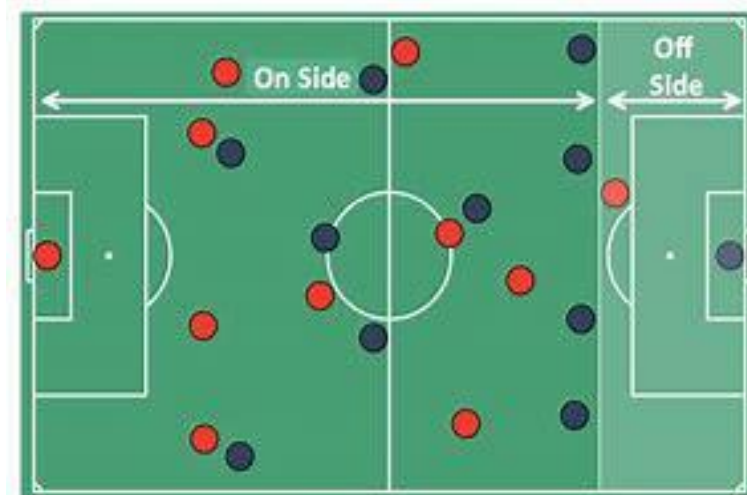
Key Knowledge, Skills and Tactics

1. Passing and controlling (Lifting, longer, attacking and defending) - the passing of a ball from yourself to a teammate but managing to lift the ball off of the floor and have it travel through the air. Helpful for passing longer distances or over opponents. Understanding how these passes may change in an attacking or defending scenario and also how can these passes be defended when the opposition attempt one against you.
2. Volleying – striking the ball in the air before it bounces. Often used as a form of shot after a teammate has crossed the ball to you but can also be used as a pass or defensive skill.
3. Goalkeeping and shooting – Learning how to act as the goalkeeper to save shots and keep the ball out of the goal. This taking place whilst attackers are attempting to shoot against a goalkeeper and discover ways in which they can make it harder for the goalkeeper to save the ball.
4. Throw ins/corners/set plays – Building skills of restarting the play from a dead-ball situation. Combining skills with strategies to maintain possession of the ball and attempt to build scoring opportunities. Understanding that the people not taking the set piece are equally, if not more, important than the one individual taking it.
5. Crossing (width) – the style of pass used to get the ball into the attacking box when the ball is out wide on the flanks. Typically performed by wingers and midfielders towards strikers. Being able to move the ball out wide to your wingers and then move towards the goal to receive a cross in return.



Key Vocabulary

Tactics
Confidently perform
Precision
Signals
Awareness
Replicate
Competition



Year 9 Learning Cycle 1 Sports – HRE

Key Knowledge, Skills and Tactics

1. Plyometrics – a form of training using fast and powerful muscle contractions to develop muscle speed, strength and power. Movements seen in plyometric sessions often include jumps, bounds, leaps and hops to exaggerate the muscle stretch-shortening cycle.
2. Weight Training – the use of weights (all forms) to build muscle strength and hypertrophy (growth). Using the correct weight/resistance will be crucial to get the result you are looking for from your training regime.
3. Principles of Training – Applying principles of training to your training programmes will increase likelihood of successful outcomes. They are Specificity; Progression; Overload; Reversibility; Tedium and Frequency; Intensity; Time; Type.
4. Nutrition – Understanding about dietary choices and the ways in which what we eat has an impact on our bodies and ability to upkeep exercise. Learning which dietary components do what for us and our bodies.
5. Retesting – Completing fitness tests for a second time, usually after a period of training to compare your results from before to after. This will help evaluate the training programme and determine if it has had a positive effect and how future training should therefore be adapted.



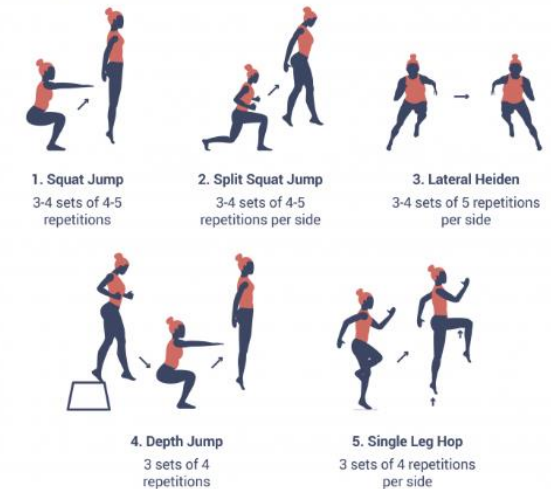
Key Vocabulary

Plyometrics
Strength
Power
Overload
Resistance training
FITT principles
Short term and long-term effects on the body.
Nutrition
Retesting



BEST PLYOMETRIC TRAINING EXERCISES

This is a list of what we believe to be the top five bang-for-your-buck plyometric exercises on the planet.



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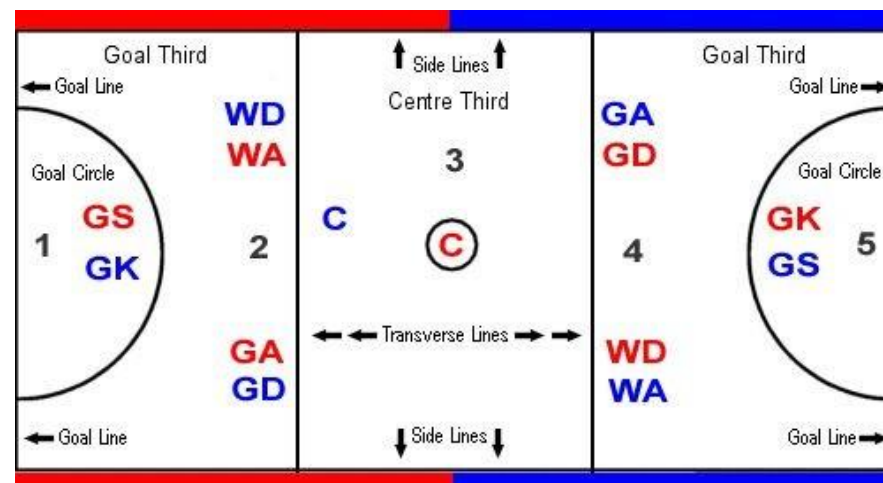
Year 9 Learning Cycle 1 Sports – Netball

Key Knowledge, Skills and Tactics

1. Footwork – Enforcement of footwork increased; students need to make a conscious effort when landing and pivoting to enforce footwork rules.
2. Turning in Air – Turning in the air accurately to allow a quicker and more successful offload. This allows for a faster paced game.
3. Running Footwork – Students to look at stepping through on their second landed foot to allow faster play.
4. Shooting (With Steps) – Line the ball elbow and wrist with the rim and goal, keep body balanced and focused, step away from defender, transfer weight, place grounded
5. Rebounds – Position themselves as close to the goalpost as possible, keep eye on ball, as it hits the ring jump high and strong, at the highest ball catch the ball and pull ball in, on landing bend knees to absorb impact, once landed pivot or pass.
6. Attacking Principles – exploring ways in which the ball can be worked into the shooting area to create opportunities to score. Use of the wings, playing through the centre, maintaining possession of the ball, dodging and weaving through the defence.
7. Defending Principles – exploring ways to defend your own hoop and making these effective to regain possession and begin to build your own attack moving the ball up the court.

Key Vocabulary

Confidently perform
Step and shoot
Defensive principles
Attacking principles
Creativity



Year 9 Learning Cycle 1 Sports – Rugby

Key Knowledge, Skills and Tactics

1. Passing- passing the ball backwards to be caught or passed onto teammates. Retrieving the ball from a variety of scenarios within rugby and reacting appropriately. Using prior skills to build into more complex passing such as spin passing and pop passing.
2. Creating space- this can be done by players running a 'crash ball' to slow the game down in order for the team to run a set play or run into space made. This can also be done by drawing in a defender by running between two defenders and passing the ball at the last moment
3. Tackling- safe and effective tackling should be kept low, arms wrapped and head to one side of the opposition player.
4. Rear tackle- focusing on aiming for the back of the attackers' thighs, getting as close to their feet for a greater chance of completing the tackle. Head contact should be on one side of the attacker's leg, aiming to finish on top of the attacker.
5. Kicking can be used at various points in the game: to kick into space to give players time to run onto the ball before the opposition, kicking it out wide for a winger or outside centre to catch it or to kick the ball into touch resulting in a lineout with the throw-in to the opposition.
6. Box and grubber kick- a box kick is used to kick the ball up high, often with the strategy of getting the ball off the field or to relieve pressure on a teams territory. A grubber kick is a low kick that aims to move the ball past the defending team for attacking players to try and retrieve, the ball should be kicked low with the objective of the ball bouncing several times before being retrieved.
7. Lineouts- restart method when the ball goes into touch (off the field of play at the side). A lineout uses a selection of forwards in one place near the touchline with the backs in the rest of the field ready to attack or defend.
8. Scrum (5 man)- one method to restart the game following an infringement by the opposition.
9. Game play

Key Vocabulary

Accurately
Switch pass
Overlap
Replicate
Maul
Scrum
Binding
Cool down

