



2024-2025

Year 10 Cycle 3

100% Book

Name:

Tutor group:

Your 100% book and knowledge organisers

Knowledge organisers contain **critical** knowledge you must know. This will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term.

Students remember 50% more when they test themselves after learning.

You must have this 100% book for every lesson – it is part of your equipment.

You must keep your 100% books (even after you have finished the cycle or the year).

How do I use my 100% book for self-quizzing?



1) Write today's date and the title from the knowledge organiser and underline with a ruler



2) Write out the keywords leaving two lines between each word



3) Cover the definitions apart from the first: read it, cover it, say it in your head, check it



4) If you got it right, move on and quiz yourself on the rest in your head, one by one



5) Cover up all the definitions and write them out from memory



6) Check your answers using green pen

- Tick any definitions which are correct
- Correct any definitions not completely correct



Correcting spelling, punctuation and grammar

Your work will be marked across all subjects to help you improve your literacy. This is the code that will be used.

Correcting your spelling, punctuation and grammar	
Sp + underlined word	The underlined word is spelt incorrectly. Look, cover, write then check. Do this at least three times so you spell it correctly.
A circle around part of a word or a space	Your punctuation is incorrect, or something is missing (including capital letters).
? + wobbly line	You haven't explained your ideas clearly enough.
/	You need to start a new sentence here. Remember: full stop, capital letter.
//	You need to start a new paragraph here. Remember: new paragraphs for time, place, topic, person (TiPToP).
^	A word is missing where the arrow is pointing.



Year 10 – Cycle 3 – Art – Project Time & Decay

1	Acrylic	A water-based, plastic paint that is thicker than watercolour paint
2	Canvas	Fabrics that are prepared for painting
3	Collage	The combination of pieces of cloth, magazines and other found objects to create artwork
4	Primary colours	Red, yellow and blue
5	Secondary colours	Orange, violet, green. Each colour is midway between the primary colours from which it can be mixed
6	Tertiary colours	Obtained by mixing adjoining primary and secondary colours
7	Contrast	Created by using opposites near each other, such as a light object next to a dark object
8	Character	An individual symbol that makes up a typeface, for example a letter, number or a punctuation mark
9	Highlights	Small areas on a painting or drawing on which reflected light is the brightest
10	Intensity	The brightness or the dullness of a colour
11	Balance	The arrangement of elements in a work of art so that they appear symmetrical or asymmetrical
12	Dominance	An object or colour that stands out
13	Hue	Colour
14	Fixative	Used to fix charcoal drawings on canvas before painting
15	Value	Shadows, darkness, contrasts and light

Year 10 – Cycle 3 – Business GCSE – Operations and HR

Operations		
1	Job production	Production specific to requirements of individual customer.
2	Flow production	Mass production through continuous flow from one stage to the next.
3	Specialisation	Employee does specific, limited and repetitive tasks.
4	Just in time production (JIT)	A business holds as little to no stock, resources are ordered just in time to be used.
5	Just in case production (JIC)	A business holds stock just in case there is an issue with supply or demand.
6	Procurement	Selecting suppliers, establishing the payment terms and negotiating contracts.
7	Total Quality Management (TQM)	Everyone is focused on preventing errors occurring and ensuring quality at each stage.
8	Customer Service	Business activities focused on meeting customers' needs.
9	Post-Sales (after sales) Service	Meeting customer needs after they have purchased a good or service i.e. repair, replace.

Human Resources		
1	Span of control	Number of employees managed directly by another employee (line manager).
2	Delegation	Passing down of authority to more junior employees.
3	Delayering	Removal of one or more layers in the hierarchy of organisation's structure.
4	Retention	The proportion of the workforce that continue their employment.
5	External recruitment	Hiring someone from outside the business to fill a vacancy.
6	Person specification	States the qualifications and skills required by an employee to fulfil a role.
7	Productivity	Quantity of goods or services produced by an employee, per time-period.
8	Zero contract hours	Allows employers to hire staff without any guaranteed quantity of work.
9	Job enrichment	Designing a job to give interesting and challenging tasks for motivation.

Year 10 – Cycle 3 – GCSE Citizenship: Politics and Participation

1	Democracy	Citizens can use their voice through voting in fair elections
2	Representative democracy	A type of government where citizens elect others to represent them
3	Equality	Equal treatment for all
4	Rule of law	The principle that the law applies equally to everyone
5	Councillor	A citizen who is elected and works in a local council
6	Referendum	A vote on one particular issue
7	House of Commons	Members who are elected and responsible for making laws
8	Judiciary	Made up of judges responsible for the legal system
9	Legislature	A group that decides the law
10	Executive	Those who make the key day-to-day decisions in the country
11	Prime Minister	Leader of the government
12	Parliament	Where MPs meet and pass new laws
13	Cabinet	Senior and important members of the government
14	Devolution	The transfer of power from national to local government
15	Voter apathy	Citizens having a lack of interest in voting
16	Constituency	An area which elects an MP to represent them
17	Individual liberty	People have the freedom to make their own choices and decisions
18	Political parties	A group of people who share the same political beliefs

Year 10 – Cycle 2 – Design & Technology

1	Synthetic polymers	Manmade polymers created from crude oil
2	Biopolymers	Polymers made from natural resources such as plants
3	Carbon fibre reinforced polymer (CFRP)	A thermoforming polymer reinforced with carbon fibre
4	Glass-reinforced plastic (GRP)	A thermoforming polymer reinforced with glass fibres
5	Plasticisers	An additive that gives flexibility to polymers
6	Stabilisers	An additive in polymers that reduces UV degradation and brittleness
7	Extrusion	A length of material with a consistent cross-section
8	Filament	The extruded material that is used in a 3D printer
9	One-off production	One product is made
10	Batch production	Several identical products are made
11	Jigs	A mechanical device to aid production
12	High-volume production	Many products are made, making extensive use of machinery and manufacturing aids
13	Blow moulding	Shaping a thermoforming polymer by heating it and blowing it into shape
14	Vacuum forming	Shaping a thermoforming polymer by heating it and sucking it around a mould
15	Screen printing	A printing process for adding detail or text to polymer products
16	Vinyl	A self-adhesive polymer, available in a range of colours and suitable for CNC knife cutting
17	Anthropometrics	The practice of taking measurements of the human body and providing data that can be used by designers
18	Ergonomics	The relationship between people and the products they use

Year 10 – Cycle 3 – Design & Technology

1	Persona	A character used to represent a user that might use your product to help understand users' needs, experiences, behaviors and goals
2	User journey	The experiences a person has when interacting with something to understand pain points
3	Product analysis	The process of examining existing products on the market for their function, cost, size, safety, aesthetics and more
4	Primary data	Data gathered by yourself 'first-hand'
5	Secondary data	Data collected by others 'second-hand'
6	Client	The person the designer is working for
7	End user	The person or group of people a product is designed for
8	Customer	The people who would purchase the product
9	Empathy mapping	A process that helps you to identify the thoughts and feelings of a particular user group
10	Design fixation	When a designer limits their creativity by only exploring one avenue of design or relying heavily on existing designs
11	Iterative design	A repeated cycle of quickly implementing designs or prototypes, gathering feedback and refining the design
12	Obsolescence	When a product becomes unusable or out of date
13	User-centred design	Looking at and checking the needs, wants and requirements of the user at every stage of the design process
14	Focus group	A group of people used to track if a product design is on track
15	Schematic drawing	A visual representation of a circuit or system
16	Render	Adding colour or texture to make a design look realistic
17	Low-fidelity prototype	A quick prototype that gives a basic idea of a product's looks or functions
18	High-fidelity prototype	A detailed and accurate prototype similar to the final product

Year 10 – Cycle 3 – Drama

A: Written terms

1	Describe	To give details of what you saw, heard or experienced
2	Explain	To give the purpose and reason
3	Analyse	To examine something, looking at different perceptions of it for/as an audience
4	Evaluate	To judge or form an opinion
5	Point	What the main theatre element you will focus on in the paragraph is, with terminology used
6	Example	The description of how the theatre element will be used in the scene
7	Style	The manner in which something is performed, such as naturalistically or comically
8	Motivation	What a character wants or needs in a scene

B: Vocal descriptions

1	Bellow	To shout in a deep, angry voice
2	Hiss	Sharp sound with prolonged vowels used to show disapproval or contempt
3	Moan	A prolonged, low sound used to complain or show boredom
4	Whimper	A high-pitched quiet tone used to show pain
5	Murmur	A low quiet and prolonged tone used to gossip

C: Physical descriptions

1	Rigid	A firm and inflexible posture used to show anger or fear
2	Balanced	A neutral posture that shows character is ready to go
3	Hunched	Back curled over, often used to show older person
4	Slouched	A relaxed posture used to show confidence, informal
5	Drooped	Loose body tension, head down posture used to show sadness or lack of energy

Year 10 – Cycle 3 – English – Shakespeare's *Macbeth*

A: Writer's methods			C: Quotations	
1	Imperative	A verb used to give a command or order	1	Captain: 'Unseamed him from the nave to the chops'
2	Soliloquy	A speech where a character is alone and speaks their thoughts and feelings out loud	2	Macbeth: 'Stars, hide your fires, / Let not light see my black and deep desires'
3	Aside	A comment by a character that is meant for the audience to hear, but no other characters	3	Lady Macbeth: 'Look like the innocent flower, but be the serpent under it'
4	Paradox	A statement that contradicts itself	4	Macbeth: 'Is this a dagger which I see before me... Come, let me clutch thee'
5	Foreshadow	A warning or clue about a future event	5	Macbeth: 'Will all great Neptune's ocean wash this blood / Clean from my hand?'
6	Tragic hero	A great, virtuous character destined for a downfall or defeat	6	Macbeth: 'O, full of scorpions is my mind, dear wife!'
7	Hamartia	A fatal flaw or weakness	7	The witches: 'Be bloody, bold/ none of woman born shall harm Macbeth.'
B: Context			8	Lady Macbeth: 'Out, damned spot! out, I say!'
1	Divine Right of Kings	The idea that a monarch is chosen by God, not the people	9	Lady Macbeth: 'all the perfumes of Arabia will not sweeten this little hand.'
2	The Great Chain of Being	A Christian belief that all beings are ranked in a hierarchy, with God at the top, to maintain natural order	10	Malcolm: 'This dead butcher and his fiend like queen'
3	Ambition	Strong desire to achieve something		
4	Unnatural	Going against natural laws; abnormal		
5	Supernatural	Something above and beyond natural laws that cannot be explained		
6	Blasphemy	An act against God		
7	Hallucination	A vision or image that is not real		
8	Regicide	To kill a king or queen		
9	Paranoia	Thinking and feeling like you are being threatened in some way, even if there is no evidence		
10	Apparition	A ghostly figure		

Year 10 French – Cycle 3 – Foundation

A: Routine

1	To feel/smell	se sentir
2	To move	bouger
3	To get dressed	s'habiller
4	To get up	se lever
5	To rest	se reposer
6	I put on (past)	j'ai mis
7	I put on (present)	je mets
8	Day	la journée
9	Midnight	minuit
10	Usual	habituel
11	School	scolaire
12	Bed	le lit

B: Food

1	sweet	sucré
2	light	léger
3	Cheese	le fromage
4	I am hungry	j'ai faim
5	I am thirsty	j'ai soif
6	Dry	sec
7	Pasta	les pâtes
8	A recipe	une recette
9	It/them	le/la/les
10	Enough of	assez de
11	Ice cream	la glace
12	To recommend	recommander
13	To choose	choisir
14	Included	inclus
15	Menu	la carte
16	A starter	une entrée
17	Without	sans
18	In the corner	au coin

19	Bag	le sac
20	Half	la moitié
21	Price	le prix
22	Choice	le choix
23	Box	la boîte
24	About	environ
25	Checkout/till	la caisse
26	Change	la monnaie
27	To drive	conduire
28	To take away	emporter
29	To lose	perdre
30	Product	produit
31	Fresh	frais/fraiche

C: Health

1	Everything	tout
2	To fall	tomber
3	My __ hurts	j'ai mal au/à la/aux ____
4	Face	le visage
5	Emergency	une urgence
6	An appointment	un rendez-vous
7	Medicine/pill	un médicament
8	Waiting room	une salle d'attente
9	To run	courir
10	To walk	marcher
11	To improve	améliorer
12	To stop	arrêter
13	Illness	une maladie
14	Body	le corps
15	Life	la vie
16	To lead a healthy life	pour mener une vie saine
17	To be healthy	pour être en bonne santé
18	To stay in shape	pour garder la forme

Year 10 French – Cycle 3 – Higher

A: Routine

1	Daily	quotidien
2	To sit	s'asseoir
3	By being	en étant
4	By having	en ayant
5	To move	bouger
6	To get dressed	s'habiller
7	To get up	se lever
8	After having done	après avoir fait
9	After having gone	après être allé
10	I put on	je mets
11	Day	la journée
12	Midnight	minuit

B: Food

1	To taste	goûter
2	Sour	aigre
3	Tasty	savoureux
4	I am hungry	j'ai faim
5	I am thirsty	j'ai soif
6	Dry	sec
7	Pasta	les pâtes
8	A recipe	une recette
9	It/them	le/la/les
10	Of it	en
11	Enough of	assez de
12	To welcome	accueillir
13	A drink	une boisson
14	The main dish	le plat principal
15	Menu	la carte
16	A starter	une entrée
17	A glass	un verre
18	In the corner	au coin

19	So much	tant/tellement
20	Half	la moitié
21	Price	le prix
22	Choice	le choix
23	Box	la boîte
24	About	environ
25	Checkout/till	la caisse
26	Change	la monnaie
27	To drive	conduire
28	To take away	emporter
29	To lose	perdre
30	Diet	un régime
31	Available	disponible

C: Health

1	To injure oneself	se blesser
2	Skin	la peau
3	My __ hurts	j'ai mal au/à la/aux ____
4	Face	le visage
5	Emergency	une urgence
6	An appointment	un rendez-vous
7	Medicine/pill	un médicament
8	Waiting room	une salle d'attente
9	I need	j'ai besoin
10	To lead a healthy life	mener une vie saine
11	To improve	améliorer
12	To stop	arrêter
13	Illness	une maladie
14	Body	le corps
15	Life	la vie
16	To avoid	éviter
17	To be healthy	pour être en bonne santé
18	To stay in shape	pour garder la forme

Year 10 – French – Key Structures

A: Opinion phrases			D: Positive reasons – present tense			G: Negative Adjectives			J: Connectives		
1	I believe that	je crois que	1	It makes me laugh	ça me fait rire	1	Boring	monotone	1	Given than	Étant donné que
2	I would say that	je dirais que	2	It relaxes me	ça me détend	2	Annoying	pénible	2	Despite the fact that	malgré le fait que
3	I think that	je pense que	3	It pleases me	ça me plaît	3	Unpleasant	désagréable	3	On the contrary	au contraire
4	According to me	selon moi	4	It helps me to relax	ça m'aide à me reposer	4	Annoying	énervant	4	On the one hand	d'un côté
5	In my opinion	quant à moi	5	It helps me to forget everything	ça m'aide à tout oublier	5	Ridiculous	ridicule	5	On the other hand	de l'autre côté
6	Frankly	franchement	6	It's worth doing	ça vaut la peine de faire	6	Awful	affreux	6	Therefore	du coup
B: Negative opinions			7	I have fun	je m'amuse	7	Worrying	inquiétant	7	So	donc
1	It gets on my nerves	ça m'énerve	E: Negative reasons – present tense			8	Tiring	fatigant	8	Due to	à cause de
2	I'm fed up with	j'en ai marre de	1	It makes me scared	ça me fait peur	H: Infinitive structures			9	In fact	en fait
3	I have some worries regarding	j'ai des soucis par rapport à	2	It's not worth it	ça ne vaut pas la peine	1	I want	je veux	10	Since, because	puisque
4	What scares me	ce qui me fait peur	3	It worries me	ça m'inquiète	2	I hope	j'espère	K: Small but important words		
5	What worries me is	ce qui m'inquiète est	5	I get bored	je m'ennuie	3	I want	j'ai envie de	1	Even	même
6	I can't stand	je ne supporte pas	6	It tires me	ça me fatigue	4	I would like	j'aimerais	2	If	si
7	I can't stand	j'ai horreur de	7	It irritates me	ça m'embête	5	I have the intention of	j'ai l'intention de	3	Except	sauf
C: Positive opinions			F: Positive adjectives			6	I feel like	ça me dit de	4	Without	sans
1	I quite like	j'aime bien	1	Marvellous	merveilleux	7	I need	j'ai besoin de	5	Especially	surtout
2	I'm a fan of	je suis fan de	2	Wonderful	formidable	I: Negatives			6	Everywhere	partout
3	I am passionate about	je suis passionné par	3	Unbelievable	incroyable	1	I don't do	je ne fais pas	7	The majority	la plupart
4	What I like the most is	ce que j'aime le plus est	4	Entertaining	divertissant	2	I no-longer do	je ne fais plus	8	Instead of	au lieu de
5	What I love is	ce que j'adore est	5	Fascinating	fascinant	3	I don't do anything	je ne fais rien	9	Few / not many	peu
			6	Exciting	passionnant	4	I only do	je ne fais que	L: Time phrases		
			7	Unforgettable	inoubliable	5	I never do	je ne fais jamais	1	This evening	ce soir
			8	Pleasant	agréable	6	There isn't any	il n'y a aucun	2	Usually	d'habitude
						7	There isn't anybody	il n'y a personne	3	Sometimes	parfois
						8	It is not yet	Ce n'est pas encore	4	Two years ago	il y a deux ans
									5	The next day	le lendemain
									6	Always	toujours

Year 10 – Cycle 3 – Geography

A: Weather Hazards & Climate Change			B: Fieldwork		
1	Coriolis effect	Wind being deflected north and south from the equator due to the spinning of the Earth	1	River discharge	The volume of water flowing through a river channel at a given point
2	Milankovitch cycles	Natural changes to the Earth's orbit and position	2	The four types of erosion	Hydraulic action, abrasion, attrition, solution
3	Greenhouse effect	The natural process of the Earth's atmosphere trapping some solar radiation	3	Representative	A sample which reflects the whole area or people
4	Enhanced greenhouse effect	Human activity causes more greenhouse gases to be released, causing global warming	4	Reliable	If you measure it again you will get the same results
5	Tropical storm	A very intense, low pressure system	5	Sample	The group of people or sites you choose to investigate
6	Storm surge	A temporary rise in sea level caused by low pressure	6	Stratified sample	Choosing people or sites based on pre-determined groups
7	Meteorological drought	A lack of precipitation due to high pressure systems	7	Systematic sample	Choosing people or sites at equal intervals
8	Hydrological drought	When water stores dry up	8	Random sample	Selecting people or sites without bias
9	Monsoon	A rainy season experienced by countries in southeast Asia	9	Bias	Prejudice for or against one particular group of people or place

Year 10 – Cycle 3 – History: Germany

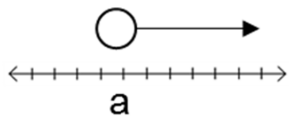
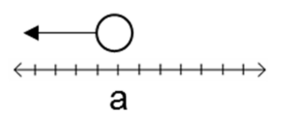
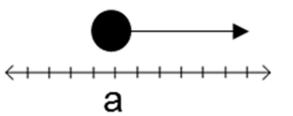

Impact of World War One on the Weimar Republic

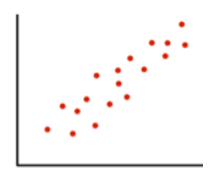
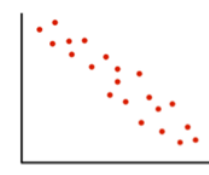
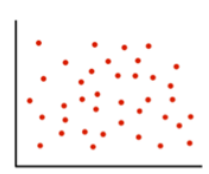
1	Dolchstoss	The theory that the Weimar government had stabbed Germany in the back for signing the armistice and the Treaty of Versailles
2	Constitution	The laws that set out how a country is going to be governed
3	Coalition government	A government containing two or more political parties
4	Proportional representation	The voting system used by the Weimar Republic which led to coalition governments
5	Article 48	Special powers given to the President to take control away from the Reichstag during a state of emergency
6	Reichstag	The German parliament
7	President	The head of state who was in control of the army and could use Article 48
8	Chancellor	The head of the coalition government in the Reichstag
9	Gleichschaltung	The German term for bringing all of Germany into line with Nazi values
10	Trade unions	A group of workers from a particular trade that is formed to protect or further the rights of the workers
11	Führer	Hitler's title which combined the role of president and chancellor
12	Rearmament	The process of building up the military
13	Aryan race	The Nazi term for 'pure' Germans
14	Boycott	Deliberately not purchasing / using something for political reasons
15	Gestapo	Nazi secret police
16	Lebensraum	Living space
17	Anschluss	The political and economic union of Germany and Austria
18	Appeasement	A policy which makes allowances to a hostile country in order to maintain peace

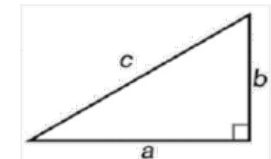
Year 10 – Cycle 3 – Mathematics (Foundation)

A: Index laws		
1	$a^m \times a^n$	a^{m+n} for example, $2^5 \times 2^3 = 2^8$
2	$a^m \div a^n$	a^{m-n} for example, $2^5 \div 2^3 = 2^2$
3	$(a^m)^n$	a^{mn} for example, $(2^5)^3 = 2^{15}$
4	a^0	1
5	a^{-n}	$\frac{1}{a^n}$ for example, $3^{-2} = \frac{1}{3^2}$

B: Averages		
1	Mean	Add up all the numbers and divide by how many numbers there are
2	Median	Put the numbers in ascending order then find the middle number
3	Mode	The most common
4	Range	Largest number – smallest number

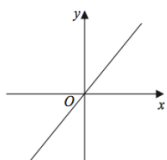
C: Inequalities		
1		$x > a$, greater than a
2		$x < a$, less than a
3		$x \geq a$, greater than or equal to a
4		$x \leq a$, less than or equal to a

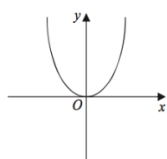
D: Scatter graphs		
1		Positive correlation
2		Negative correlation
3		No correlation

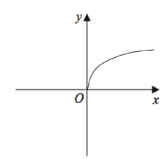
E: Pythagoras' theorem		
1	Hypotenuse	The longest side of a right-angled triangle, opposite the right angle
2	Pythagoras' theorem	$a^2 + b^2 = c^2$ 

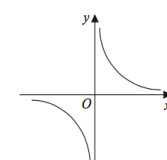
Year 10 – Cycle 3 – Mathematics (Higher)

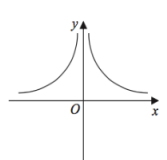
A: Proportion

1	$y = kx$ 	y is directly proportional to x
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2	$y = kx^2$ 	y is directly proportional to the square of x
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3	$y = k\sqrt{x}$ 	y is directly proportional to the square root of x
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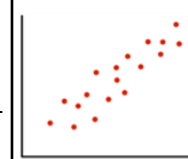
4	$y = \frac{k}{x}$ 	y is inversely proportional to x
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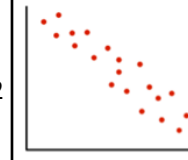
5	$y = \frac{k}{x^2}$ 	y is inversely proportional to the square of x
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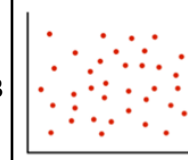
B: Surds

1	$\sqrt{a} \times \sqrt{b}$	$\sqrt{a \times b}$
2	$\sqrt{a} \times \sqrt{a}$	a
3	$\sqrt{\frac{a}{b}}$	$\frac{\sqrt{a}}{\sqrt{b}}$

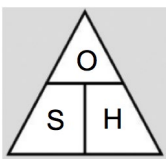
C: Scatter graphs

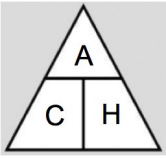
1		Positive correlation
---	---	----------------------

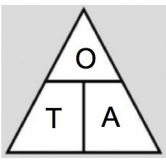
2		Negative correlation
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3		No correlation
---	---	----------------

D: Trigonometry

1	$\sin x$	= $\frac{\text{Opposite}}{\text{Hypotenuse}}$	
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2	$\cos x$	= $\frac{\text{Adjacent}}{\text{Hypotenuse}}$	
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3	$\tan x$	= $\frac{\text{Opposite}}{\text{Adjacent}}$	
---	----------	---	---

E: Exact Values

		x	0°	30°	45°	60°	90°
1		x	0°	30°	45°	60°	90°
	sin x	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	
2	cos x	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	
	x	0°	30°	45°	60°	90°	
3	tan x	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	Undefined	

Year 10 – Cycle 3 – Religious Studies – Issues of relationships & good and evil

1	Responsibilities [2]	Actions / duties you are expected to carry out, e.g. looking after family members
2	Roles [2]	Position, status or function of a person in society, as well as the characteristics / behaviour expected of them
3	Cohabitation [2]	To live together in a sexual relationship without being married
4	Commitment [2]	A sense of dedication and obligation to someone or something
5	Adultery [2]	Voluntary sexual intercourse between a married person and a person who is not their spouse
6	Divorce [2]	To legally end a marriage
7	Contraception [2]	Methods used to prevent a woman from becoming pregnant during or following sexual intercourse
8	Gender equality [2]	People of all genders enjoying the same rights and opportunities in all aspects of their lives
9	Celibacy	When a person decides to never have a sexual relationship
10	Morality [2 marks]	Principles and standards determining which actions are right or wrong
11	Good [2]	That which is considered morally right, beneficial and to our advantage
12	Evil [2]	That which is considered extremely immoral, wicked and wrong
13	Free Will [2]	The ability to make choices voluntarily or independently
14	Justice [2]	Fairness; where everyone has equal provisions and opportunity
15	Punishment [2]	A penalty given to someone for a crime or wrong they have done
16	Sin [2]	Deliberate immoral action, breaking a religious or moral law
17	Suffering [2]	Pain or distress caused by injury, illness or loss
18	Forgiveness [2]	To grant pardon for a wrongdoing

Year 10 – Cycle 3 – Science – Chemistry Topic 4 - Reactions (Paper 1)

A: Acids and alkalis

1	Acid	A substance which forms H^+ ions when aqueous, pH less than 7
2	Alkali	A soluble base which forms OH^- ions when aqueous, pH more than 7
3	Base	A substance that neutralises an acid to make a salt and water

B: Reactions of acids and salts

1	Acids with metal oxides	Acid + metal oxide \rightarrow salt + water
2	Acids with metal hydroxides	Acid + metal hydroxide \rightarrow salt + water
3	Acids with metal carbonates	Acid + metal carbonate \rightarrow salt + water + carbon dioxide
4	Acids with metals	Metal + acid \rightarrow salt + hydrogen

C: Redox and electrolysis

1	Electrolysis	Splitting up an ionic compound using electricity, used to extract metals more reactive than carbon from their ores
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Year 10 – Cycle 3 – Science – Physics Topic 4 - Atomic Structure & Radioactivity (Paper 1)

1	Random decay	We cannot predict which nuclei will decay and when a specific nucleus will decay
2	Activity	Number of unstable atoms that decay per second (measured in Becquerels)
3	Half-life	Average time it takes for half of the radioactive atoms in a sample to decay
4	Alpha particle	Made of two protons and two neutrons, with a charge of +2
5	Beta particle	Made of one electron, with a charge of -1
6	Penetrating power	How easily the type of radiation can pass through materials – the most penetrating is gamma
7	Irradiated	When an object is exposed to ionising radiation but does not become radioactive
8	Contaminated	When unwanted radioactive atoms get onto an object they release radiation and may cause harm

Year 10 – Cycle 3 – Science – Biology Topic 7- Ecology (Paper 2)

A	Ecosystems and food chains	
1	Population	All the organisms of one species living in a habitat
2	Community	The populations of different species living in a habitat
3	Ecosystem	The interaction of a community of living organisms with the non-living parts of the environment
7	Interdependence	The dependence of species on other species for things such as food, shelter and seed dispersal
8	Adaptation	Feature or characteristics that organisms have to allow them to live in specific environmental conditions

B	Distribution and human impacts	
1	Distribution	Where an organism is found, affected by environmental factors
2	Quadrat	A square frame with a known area, used to measure number of organisms in a specific location
3	Percentage cover	An estimate of the percentage area of a quadrat that is covered by a particular species of plant
6	Biodiversity	The variety of different species of organisms on Earth, or within an ecosystem
7	Global warming	The gradual increase in the Earth's mean temperature due to increasing levels of greenhouse gases which act like an insulating layer

Year 10 – Cycle 3 – Science – Chemistry 8 – Chemical Analysis (Paper 2)

Mixtures		
7	Formulation	A useful mixture made with a purpose – e.g. paint.
Chromatography		
8	Chromatography	Used to separate substances in a mixture – e.g. pigments in ink.

Year 10 – Cycle 3 – Triple Science - Physics Topic 5 – Forces (Paper 2)

1	Weight equation	Weight = Mass x Gravitational Field Strength
2	Work done equation	Work done = Force x Distance
3	Hooke's Law equation	Force = Spring Constant x extension
4	Limit of proportionality	The limit of force you can apply to an object for the extension to increase proportionally
5	Acceleration equation	Acceleration = $\frac{\text{Change in velocity}}{\text{Time taken}}$
6	Newton's first law	A resultant force is needed to change the velocity of an object
7	Newton's second law	The acceleration of an object is proportional to the resultant force on it and inversely proportional to its mass. Resultant force = Mass x Acceleration
8	Newton's third law	When two objects interact, the forces they exert on each other are equal and opposite.
9	Momentum equation	Momentum = mass x velocity
10	Conservation of momentum	In a closed system, the total momentum before an event is the same as after the event

Year 10 – Cycle 3 – Triple Science – Chemistry Topics 9 & 10 – Atmosphere & Resources (Paper 2)

A: Climate change

1	Greenhouse effect	When greenhouse gases absorb long-wave radiation, keeping it in the Earth's atmosphere
2	Greenhouse gases	Carbon dioxide, methane and water vapour
3	Carbon footprint	The total amount of greenhouse gases produced over the lifecycle of a product

B: Air pollution

1	Global dimming	Clouds of dust and soot reduce the sunlight that can reach the Earth
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C: Using resources

1	Life cycle assessment	An assessment of the impact of every stage of a product's life, including raw materials, manufacture, use and disposal
2	Sterilisation	Kills microbes, e.g., using chlorine gas or UV light
3	Desalination	Removing salt from seawater to make it potable, e.g., using reverse osmosis
4	Sedimentation tank	Solids sink to produce sludge, leaving liquid effluent floating on top

Year 10 – Cycle 3 – BTEC Sport – Component 2

A: Components of physical fitness		
1	Aerobic endurance	Ability to exercise at moderate intensity for extended periods of time
2	Muscular endurance	Contracting a muscle over a period of time against a light to moderate resistance
3	Muscular strength	The maximum force that can be generated by a muscle
4	Flexibility	The range of motion possible at the joints of the body
5	Body composition	The relative ratio of fat mass to fat-free mass (vital organs, muscle, bone)

B: Components of skill-related fitness		
1	Power	Ability to perform strength-based movements quickly
2	Agility	Ability to change body direction rapidly
3	Reaction time	Time taken to respond to an external stimulus
4	Balance	Ability to control body position and not fall over
5	Coordination	Ability to move more than one part of the body to create one smooth movement

C: Techniques, strategies and fitness required for sports		
1	Skills	The experience needed to perform a sport or physical activity
2	Tactics	Smaller specific steps taken to achieve the overall aim
3	Strategy	Using tactics and decision-making to achieve a long-term or overall aim
4	Isolated practice	Repeating the routine until it becomes automatic without opponents

D: Key officials and roles		
1	Officials	Control how a sports match is played and administer the rules
2	National governing bodies (NGBs)	Organisations that regulate and oversee a sport at a national level
3	Foul	Unfair behaviour by a player, usually due to violation of rules

Year 10 – Cycle 3 – GCSE Sport Science – Component 1

A: Methods of training

1	Continuous training	Training at a steady pace for a minimum of 30 minutes
2	Circuit training	A combination of six or more exercises performed with short rest periods between them
3	Plyometrics	Training that develops explosive power and strength
4	Weight/resistance training	Machines or free weights provide a load for the muscles to work against

B: Principles of training

1	F.I.T.T	<ul style="list-style-type: none"> •<u>Frequency</u> – how often you train •<u>Intensity</u> – how hard you train •<u>Time</u> – how long you train for •<u>Type</u> – what training method you use
2	Individual needs	Matching the training to the requirements of the individual person
3	Specificity	Matching the training to the particular requirements of an activity
4	Thresholds of training	To maximise the chance of fitness adaptations taking place, you should train within your target zone

C: Performance enhancing drugs (PEDs)

1	Erythropoietin (EPO)	Helps increase red blood cell production and oxygen delivery to the muscles
2	Human growth hormones (HGH)	Helps increase muscle mass and therefore strength
3	Blood doping	A process where performers have additional blood added to their bloodstream.

D: Injuries

1	Torn cartilage	An injury at a joint where small tears appear in the cartilage
2	Sprain	An injury at a joint where some of the fibres of the ligament are torn
3	Tennis elbow	A joint injury where the tendons are inflamed, with pain felt on the <u>outside</u> of the elbow
4	Golfer's elbow	A joint injury where the tendons are inflamed, with pain felt on the <u>inside</u> of the elbow
5	Strain	A stretch or tear in the muscle, also known as a pulled muscle

E: Cool down

1	Light exercises	Exercises performed at a much lower intensity than you have just been working at
2	Stretching	Longer stretches to the muscles you have just been using

Y10 Spanish - Key Structures F + H

A	Verbos Importantes <i>Important Verbs</i>	
1	To say	decir
2	To give	dar
3	To arrive	llegar
4	To start / begin	empezar
5	To realise	darse cuenta de
6	To enjoy	disfrutar
7	To get / catch	coger
8	To know	saber
9	To learn	aprender
10	To teach	enseñar
11	To need	necesitar
12	To return	volver
13	To continue / follow	seguir
14	To want / to love	querer
15	To hear	oir
16	To look	mirar
17	To come	venir
18	To open	abrir
19	To go down	bajar
20	To fall	caer
21	To enter/to go in	entrar
22	To start/to begin	comenzar
23	To sit	sentarse
24	To record	grabar
25	To shout/scream	gritar

B	Estructuras con Infinitive <i>Infinitive Structures</i>	
1	To have just	acabar de + inf
2	It is necessary	hay que + inf
3	To have to	tener que + inf
4	To start	empezar a + inf
5	We should	deberíamos + inf
6	To learn to	aprender a + inf
7	Before/After + verb	antes de / Después de + inf
8	To try	tratar de + inf
9	I hope	espero + inf
10	I want	quiero + inf
11	To stop	dejar de + inf
12	To be able to	poder + inf
13	You must	se debe + inf
14	You can	se puede + inf
15	I want	tengo ganas de + inf

C	Preguntas <i>Question Words</i>	
1	What	qué
2	When	cuándo
3	How	cómo
4	Which	cuál
5	Where	dónde
6	Who	quién
7	Why	por qué
8	How much	cuánto
9	How many	cuántos
10	At what time	a qué hora

D	Verbos Communes <i>Common Verbs</i>	
1	To do	hacer
2	I do	hago
3	You do	haces
4	They do	hacen
5	To have	tener
6	I have	tengo
7	He / she / it has	tiene
8	They have	tienen
9	To go	ir
10	I go / I'm going	voy
11	You go	vas
12	They go	van

E	Palabras Pequeñas <i>Small but Important Words</i>	
1	to have been + -ing + for + time	Desde hace (present tense)
2	On/on top of/about	Sobre
3	Mainly/above all	Sobre todo
4	Almost/nearly*	Casi*
5	Never ever	jamás
6	To stop/quit + verb	Dejar de + inf
7	At least	Al menos
8	Due to	Debido a
9	So much	Tanto
10	Except for	Salvo*
11	That's why	Por eso
12	Too much	demasiado
13	Against	(en) Contra
14	So, so much	Tan/tanto
15	At least	Al menos

F	Palabras Pequeñas <i>Small but Important Words</i>	
1	More and more	cada vez más
2	Less and less	cada vez menos
3	Unless	a no ser que
4	Even	incluso
5	Instead of	en lugar de / en vez de
6	Despite	a pesar de
7	Neither / nor	tampoco
8	Still / yet	todavía
9	If	si
10	Already	ya
11	Without	sin
12	Almost	casi
13	Nobody	nadie
14	Little/ no	poco
15	The same	el mismo/ lo mismo
16	Too / too much	demasiado
17	Whereas / while	mientras que
18	Less	menos
19	More	más
20	Apart from	aparte de
21	Every	cada
22	Neither... nor	ni... ni
23	However	en cambio/no obstante
24	Quite	bastante
25	No longer	ya no
26	No / not any/ not a	ningún

Year 10 Spanish – Cycle 3 – Foundation

A: My health and my routine

1	Health	la salud
2	Healthy	sano/saludable
3	Take-away food	comida para llevar
4	Balanced	equilibrado/a
5	It/they hurt (me)	me duele/n
6	heart	el corazón
7	body	el cuerpo
8	I am ill	estoy enfermo/a
9	I am tired	estoy cansado/a
10	I am hungry	tengo hambre
11	I am thirsty	tengo sed
12	To be careful	tener cuidado
13	To be sleepy	tener sueño
14	To be scared	tener miedo
15	To be hot/cold	tener calor/frío
16	To be lucky	tener suerte
17	I feel well/ awful	me siento bien/fatal
18	To return	volver
19	To bathe	bañarse
20	To change/ to get changed	cambiar/cambiarse
21	To fall	caerse
22	To burn (yourself)	quemar (se)
23	Midday	mediodía (m)
24	Midnight	medianoche
25	Late	tarde
26	Early	temprano
27	Loss/waste	pérdida
28	pocket	bolsillo

B: Youth problems and future actions

1	Age	edad
2	Risk	riesgo
3	Face to face	cara a cara
4	To turn off, shut down	apagar
5	Profile	perfil
6	way	forma
7	To know	saber
8	classmate, colleague	compañero
9	To follow	seguir
10	To take/carry/wear	llevar
11	To sell	vender
12	Danger	peligro
13	Peer pressure	presión de grupo
14	To improve	mejorar
15	To meet up	quedar
16	To stay	quedarse
17	Outdoors	al aire libre
18	To hope/wait	esperar
19	People	la gente
20	To spend time	pasar tiempo
21	A beloved person	un ser querido
22	To finish	terminar
23	Work/job	trabajo
24	The rest of the people/others	los demás
25	street	calle
26	place	lugar
27	neighbourhood	barrio
28	half	mitad

Year 10 Spanish – Cycle 3 – Higher

A: My health and my routine

1	Health	la salud
2	Healthy	sano/saludable
3	Take-away food	comida para llevar
4	Food	Alimento
5	Balanced	equilibrado/a
6	It/they hurt (me)	me duele/n
7	I am ill	estoy enfermo
8	I am hungry	tengo hambre
9	I am thirsty	tengo sed
10	To remember	acordarse (de)*
11	To go to bed	acostarse*
12	to sense/to feel/to regret	sentir; sentirse *
13	To change/ to get changed	cambiar/cambiarse
14	to ensure	asegurarse de*
15	to maintain, keep	mantener(se)*
16	to allow (oneself)	permitir(se)*
17	Midday	mediodía (m)
18	Midnight	medianoche
19	Late	tarde
20	Early	temprano
21	Advice	consejo*
22	Youth	juventud *
23	Threat	amenaza*
24	Behaviour	comportamiento*
25	Loss/waste	pérdida
26	To develop	desarrollar
27	A lot/ a pile	un montón*
28	Pocket	bolsillo

B: Youth problems and future actions

1	Age	edad
2	Risk	riesgo
3	Face to face	cara a cara
4	To turn off, shut down	apagar
5	Profile	perfil
6	way	forma
7	To know	saber
8	classmate, colleague	compañero
9	To follow	seguir
10	To take/carry/wear	llevar
11	To sell	vender
12	Except for	salvo *
13	To attend	asistir *
14	To improve	mejorar
15	To meet up	quedar
16	To stay	quedarse
17	Outdoors	al aire libre
18	To hope/wait	esperar
19	People	la gente
20	To spend time	pasar tiempo
21	A beloved person	un ser querido
22	To finish	terminar
23	Work/job	trabajo
24	The rest of the people/others	los demás
25	Survey	encuesta*
26	place	lugar
27	neighbourhood	barrio
28	half	mitad