Knowledge Book

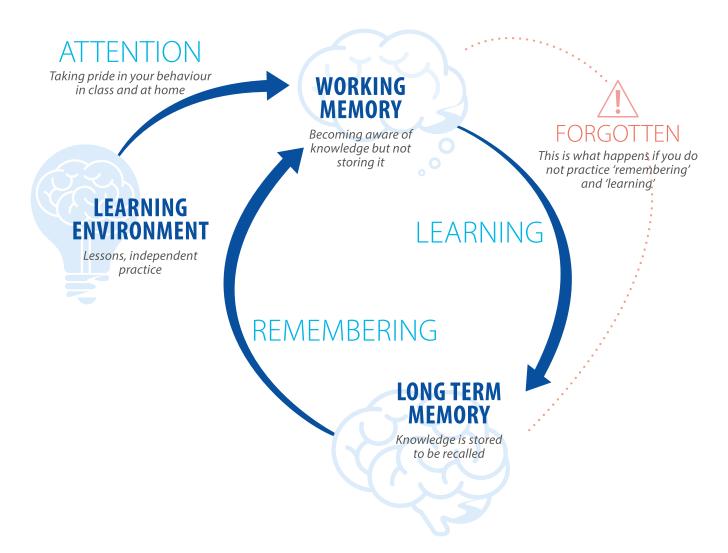
Year 9

Cycle Two

Name:



THIS IS HOW YOU LEARN



REMEMBERING:MASTERING YOUR MEMORY

Learning is what happens when knowledge moves from your **working memory** to your **long-term memory**.

Your **working memory** is like a desktop on your computer. If the information is not saved, then it will be **forgotten.**

Your **long-term memory** is like a computer hard drive. **Remembering** is what happens when you access the information in your **long-term memory**.

You can take practical steps to improve your ability to **learn** and **remember** key information and become the master of your memory.

Our ability to learn and remember is enhanced when we engage in activities that test what we remember. The testing effect' is a proven way of enhancing our long-term memory which gives us clear feedback on gaps in our learning. Therefore, regular quizzing is a vital part of our curriculum.

REMEMBERING: MASTERING YOUR MEMORY

Cornell Notes

- **1.** Divide your page into three sections like in this diagram.
- 2. In the note taking area, complete your work normally (if taking notes, try only to write down key information)
- **3.** In the bottom section, summarise all the information in the note taking area into 3 bullet points
- **4.** The Cue Column is where the magic happens in this area, write a series of quiz questions about the notes you have written.
- 5. When revising, try to answer the quiz questions in the cue column before you read your notes. If you can do it, well done! You have remembered this. If not, you need to learn it again.
- **6.** The Summary at the bottom of the page also strengthens the learning. It can be used as a prompt for you too try and remember the knowledge in the note taking area.

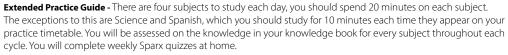


Cue	Note
Column	
Column	taking
	area
	Summary
	Julillary

Link to Learning

Cornell Notes are a note taking system that was developed at Cornell University in America.

It is specifically designed to help you initially strengthen your **learning** but perhaps more importantly, build in opportunities to **remember** what you have **learned**.



We use Google Classroom for sharing work outside of the classroom with our students using Class Codes, the content follows our curriculum and is used to support students inside of the classroom. You will only need to log into the Class code once. Here is the link you will need to access Google Classroom: https://classroom.google.com/ and the Class Code per subject is below:

Google Classroom Class Codes				
Subject	GC Code			
Dashboard	ckus5f4			
English	6vlem2k			
Geography	gkkcxru			
History	nt5eoxu			
Mathematics	suzoq76			
Science	j3pftj3			
Spanish	uzs3z4n			
Sport Heath & Nutrition	znyexao			
West Exe Baccalaureate	nacpeod			
Art& Design	utmumgw			
Business Vocational	3hbypwx			
Citizenship	cmdep26			
Classics	c4cizsi			
Design Technology	dajoo7v			
Food GCSE	r4vabe2			
Health & Social Care	ydsafia			
Music Vocational	ob7kknm			
Performing Arts	ktmxilb			
Photography	aszjh24			
Sports Vocational	kjepzph			
Statistics & Further Maths	puxj7vr			

Extended Practice Timetable

This is your extended practice timetable. You need to complete the tasks for each subject on the timetabled day. Your tutor will check this the following morning. If you have not completed your homework for each subject, you will receive a detention to be carried out later that day.

	10 mins	10 mins	20 mins	20 mins	20 mins
Monday	Science	Spanish	English Literature	Maths - SPARX	
Tuesday	No Extended Practice due to period 6.				
Wednesday	Science	Spanish	Option P	Maths - SPARX	
Thursday	Science	Spanish	Geography	History	
Friday	Opt	ion P	English Literature	Maths - SPARX	Option Q

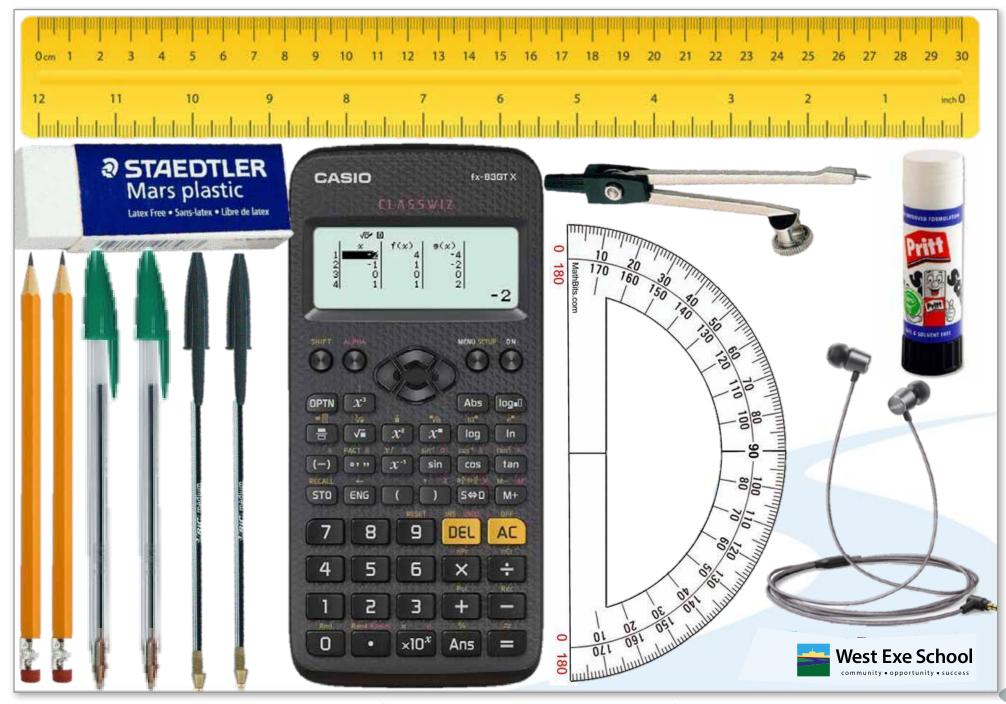
Maths Sparx Reminder

Sparx practice is set 8 am on a Thursday morning and 100% of compulsory and Target is to be completed by **4pm on Wednesday afternoon**. There is an expectation that you have completed **50% by Monday 8am** and if you cannot meet that deadline, you will be invited to a support session at breaktime/afterschool on Monday. You are advised to start the tasks earlier than later. Support will be offered on a Monday and Tuesday at break in Mal if you are struggling with any questions. Any student who has not completed 100% by **8am Thursday morning** will be expected to attend Sparx lunch time catch up in MA 1.

Sparx Science

Extended practice will be set via the Sparx science platform and will consist of two quizzes to be completed each week. Extended Practice quizzes will be set on the Monday and must be completed by the Sunday. The quizzes have support built in to help you master the content and you can also ask you class teacher for help.

Rewards: Merits will be awarded daily by your Tutor.



HOUSE WEEK, WEST EXE SCHOOL & BRITISH VALUES

	West Exe School Student Attributes	British Values	House Week Activities	Key Questions
House Week 1	Kind Adaptable	Democracy Understanding how citizens can influence decision-making through the democratic process. Rule of Law Appreciating that living under the rule of law protects individual citizens and is essential for their wellbeing and safety.	School Parliament Elections House Charity Vote	What is a good citizen? What behaviours would we expect of a good citizen? Do we need rules?
House Week 2	Curious Ambitious	Tolerance and Mutual Respect Accepting that other people having different faiths or beliefs to oneself (or having none) should be accepted and tolerated, and should not be the cause of prejudicial or discriminatory behaviour. Importance of identifying and combating discrimination.	 Charity Fundraising Anti-bulling Ambassadors Activities Green Team Activities Mental Health Celebrating Diversity 	What is tolerance? Is tolerance enough? How does our community proactively combat discrimination?
House Week 3	Resilient Proud	Individual Liberty Understanding that the freedom to choose and hold other faiths and beliefs is protected by law.	 Transition Focused Activities Sports Day Taster Sessions (being brave and trying new things) 	What does it mean to succeed? How do individuals demonstrate courage in our community? How is our individual liberty protected?

Dream More. Do More. Become More.

BULLYING UPDATE - YEAR 9



"Each of us deserves the freedom to pursue our own version of happiness. No one deserves to be bullied"

Barack Obama

Bullying affects lots of people and can happen anywhere: at school, travelling to and from school, in sporting teams, in friendship or family groups or in the workplace.

Bullying can take may forms including:

- Emotional abuse
- Social media
- Social exlusion
- Threatening behaviour
- Name calling
- Cyberbullying
- Sexting
- · Sexual exploiration



Average child posts 26 times a day on social media but only 6 - out of 10 followers are really friends!

Speak

"Don't you ever let a soul in the world tell you that you can't be exactly who you are" Lady Gaga

Speak to someone. No one has a magic wand but we always do our best and we really do care.

There are lots of things you can do to keep yourself safe online.

- · Think before you post
- Don't share personal details
- Watch out for phishing and scams
- · Think about who you are talking to.
- Keep your device secure
- Never give out your password
- Cover your webcam
- Use strong passwords
- · Report anything you are unsure of

Images sent on sites like Snapchat can still be saved and screenshotted, they stay FOREVER!

Set, protect, and respect boundaries for yourself!

Talk to someone you trust!

Speak

"Blowing out someone else's candles doesn't make yours shine any brighter" *Drake*

What we do at West Exe to deal with bullying:

Whatever your worry, it's better out than in!

Mentoring is having a named person you can go to for support at school.

Peer mentoring is when older students are trained to become buddies providing support and someone to talk to nearer their own age. This helps everyone in school learn that bullying is not acceptable.

Restorative justice brings all children involved together so everyone affected plays a part in repairing the harm and finding a positive way forward.

Remember: there is no reason for you to ever put up with any kind of bullying.







TALKING FUTURES

Community

You don't need to know what job you want in the future. However, starting to explore the possibilities and looking at labour market information to discover what our local and national community needs can be helpful. Use your CareerPilot account to explore some options.



Opportunity

Our promise to you: The Talking Futures offer has lots in store for you this year;

- Assembly on "A world of employment"
- Teachers will talk about real life applications
- Employer encounters

- CareerPilot sessions
- Talking Futures Fayres

Success

Our Talking Futures offer supports you to make informed decisions, by nurturing your confidence to think and talk about your future.

Employers tell us that in addition to the qualifications you gain at school, there are certain skills they are looking for. These all fit link to our student attributes, so strive to be your #BestExe every day.



My Ambition Statement

SPORT, HEALTH AND NUTRITION

Opportunities: Fitness suite, PE lessons, Sports clubs, Parkruns, fitness tests, walking/cycling to school.



Healthy choices: 5-a-day, less salt and sugar, more fibre, limit intake of fat, smaller portions.



Teamwork, Leadership and Communication: Fair play, equality and inclusion - House matches, fixtures, clubs, being a coach or official.

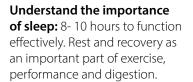








Targets and Goals: Being positive, being resilient, never giving up, doing your #BestExe, being a good role model.









Get Physically Active! Aim to do 60 mins of moderate-vigorous physical activity each day across the week. Take part in activities that develop movement skills, muscles and bones. Reduce the time spent sitting or lying down - spread activity throughout the day. Monitor and regulate your screen time.

Be active daily: Make healthy lifestyle and nutrition choices. Understand the life long benefits and know how to stay healthy.

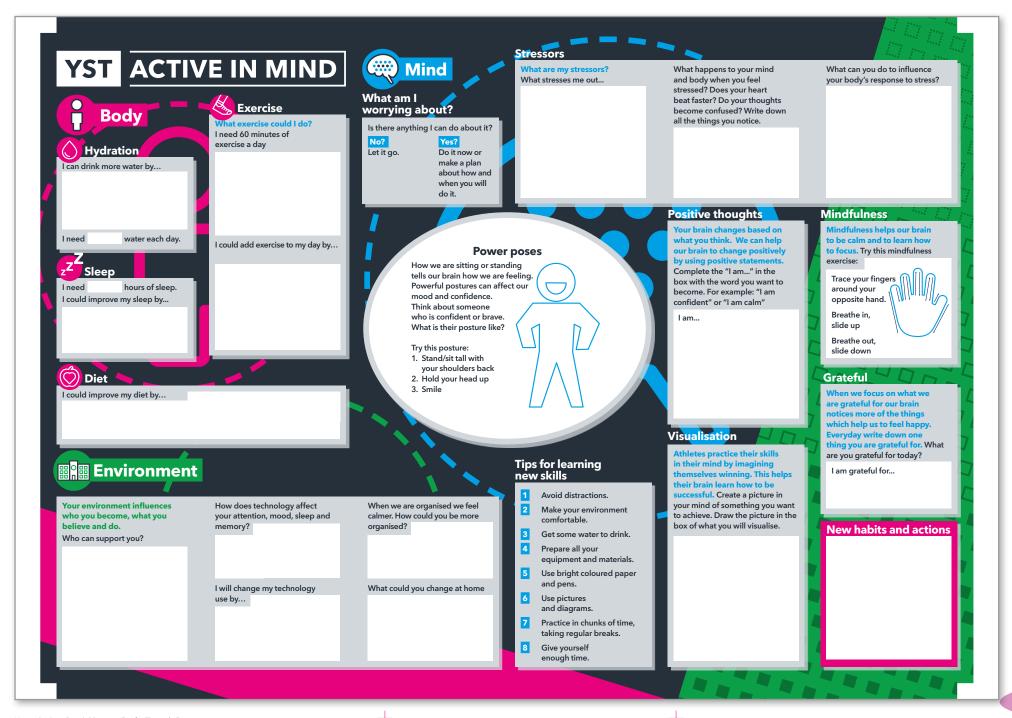


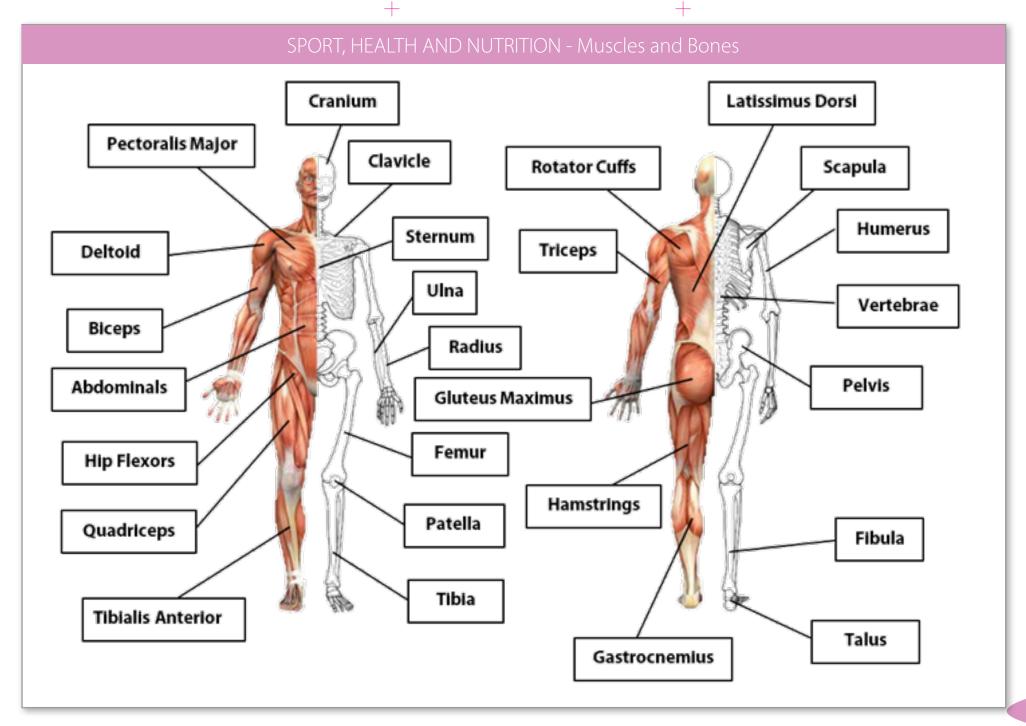
SPORT, HEALTH AND NUTRITION - Healthy ME

You should choose something from each column each week to focus on in your lesson.

Once you have completed the task put a tick next to the activity. You should try to complete all of these over the cycle.

Physical ME	Thinking (Mental) ME	Social ME				
Skill development: Make a list of 5 new skills you have improved on during this cycle (e.g. shooting in handball or chopping technique in food).	Making appropriate time for rest, relaxation, and sleep - Having routines that support positive mental health.	Leadership - Taking responsibility within lessons (e.g. officiating, leading warm ups or practices or supporting food preparation in food lessons).				
Attend an after-school club to help you develop and improve these skills further. Developing fitness	Try to get 8-10 hours of good quality sleep a night! Rules, strategies and tactics. Think about:	 Offer to be a leader for a lesson! Help another person in a lesson to help them make progress. 				
For one of the sports, you are covering in this cycle, identify the main components of fitness needed.	What are the main rules for the sport you are covering now? Write down 3 rules you have learnt.	 Officiate a game. Give feedback and support to another person. 				
Engage in periods of sustained physical activity. The NHS recommends that you do 2 types of physical activity each week: 1. Aerobic exercise.	Can you give an example of a simple strategy or tactic you have been using?	 Motivate and encourage others in a lesson. Make an effort to INCLUDE another less confident person in your lesson. Help others learn - coaching. 				
 Exercises to strengthen muscles and bones. Young people aged 5-18 should: 	 Can you give an example of a more complex strategy or tactic you have been using? Give 3 rules you must follow in the 	Teamwork - Working together - Work co-operatively, work collaboratively to achieve a goal.				
 Aim to do 60 mins of moderate-vigorous physical activity each day across the week. Take part in activities that develop movement skills, muscles and 	kitchen Terminology: Give 3 examples of terminology you have learnt	Give 2 examples of where you have shown good teamwork. Communication				
 Reduce the time spent sitting or lying down - spread activity throughout the day. Monitor and regulate your screen time. 	in any of your SHN lessons. Knowledge of muscles and bones - how many	Verbal - give some feedback on a performance - What went well? How could they improve it?				
Keep a log of your activity levels for a typical week - see if you meet the NHS guidelines. Monitor your screen time for a week.	Being resilient - positive growth mindset and never give up attitude- always looking to improve! Give	Non-verbal - Use of whistle, signals as an official, use of a demonstration - Try to do one of these each week.				
Use equipment safely and hygienically. Think about the activities you are doing in this cycle and in each	an example of how you have demonstrated resilience in your lessons. If you found something challenging/ difficult but kept trying - How did you feel afterwards?					
cook a healthy meal from one of the recipes you have done in food this cycle.						





	Literacy Marking Codes			Reading Consistencies		
	What it means	What you need to do in green pen	Following text at	Use your bookmark to follow the text. This way you know exactly where you are when you are asked to read and you		
SP	Incorrect spelling	Find the correct spelling and write it in the margin three times	all times	wont lose your place during discussion. Use an overlay if you have one.		
CL	Use a capital letter	Replace the lower case letter with a capital	Switching the reader	When you are given the instructions you are to take over the reading for a period of time. All pupils are expected to read.		
0	Missing full stop or other missing punctuation	Add the punctuation in the correct place	reader	Using your bookmarks to carefully note where you have		
//	New paragraph	Think why you need a new paragraph here (change of topic/time/place/speaker)	Holding the place	stopped reading so that you can commence reading again swiftly once discussion is over.		
ww	Wrong word choice	The word you have chosen does not fit in this sentence - chose an alternative	Checking the punctuation/	Your teach may ask you to reread a section, paying attention to the pauses, exclamation marks and question		
?	Doe this make sense?	Re-write the sentence so it makes sense	emphasis	marks written in the text.		
HW	Handwriting is illegible	Re-write the selected words so they are legible and clear	Pointing out the error	Your teach may ask you to reread a particular word, breaking it down and sounding it our so that the correct pronunciation is given.		

The West Exe Canon - a collection of culturally significant texts

I Am Malala - Malala Yousafzai (2013)

"I tell my story not because it is unique, but because it is the story of many girls."

Synopsis: When Malala was ten years old the Taliban came to Swat Valley. Malala began to write a diary about life as a girl under the Taliban. One day when Mala la was on the bus a strange man boarded and shot her in the face. She survived, and this is her story.

Context: The attempted murder of Malala Yousafzai by the Taliban for speaking out for girls' education can be viewed as an isolated act by religious extremists. But it is also emblematic of the discrimination and violence that women and girls throughout the world are subjected to because of their gender.

A collection of Short Stories-Edgar Allen Poe (1840)

Short tales of terror.

Synopsis: A series of macabre and disturbing tales that examine mental health and those on the fringes of society. The characters are usually complex, and many of them are mentally unstable. Many are broken in spirit and struggling to find a place in society after the Civil War. The morality of characters is often questioned. Exciting and unique, you will never forget these tales!

Context: Poe hoped to show that the social order was fragile, and the realities behind it were actually disturbing. He wanted to point out truths of Southern culture and its moral shortcomings. Typical settings take place on a plantation, old slave quarters or broken-down towns.

YEAR 9 CYCLE 2 MATHS

Word	<u>Used in context</u>	<u>Definition</u>	<u>Example</u>
Mixed Number	Express $\frac{12}{5}$ as a mixed number .	A number made up of an integer (whole number) and a proper fraction.	$2^{\frac{2}{5}}$ $5^{\frac{3}{4}}$ $12^{\frac{1}{10}}$
Improper Fractions	Express $2\frac{1}{2}$ as an improper fraction.	A number where the numerator is greater than the denominator.	$\frac{6}{4}$ $\frac{17}{5}$ $\frac{23}{7}$
Recurring Decimal	Is 0.75 a recurring decimal ?	Where the digits of a number repeat forever.	3.33333333
Irrational Number	π is an irrational number.	A number that cannot be written as a simple fraction.	$\sqrt{7}$, π
Surd	Leave your answer in surd form.	Used to write irrational numbers precisely and include a root symbol.	$\sqrt{7}$
Rationalise (the denominator)	Rationalise the denominator for this fraction.	Converting the denominator of a fraction from an irrational umber to a rational one.	$\frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
Simple Interest Calculate the simple interest added after 5 years.		Simple interest is calculated by finding a percentage of the principal (original) amount and multiplying by the time period of the investment.	
Compound Interest Calculate the compound interest added after 5 years.		Compound interest is calculated on the principal (original) amount and the interest already accumulated on previous periods.	
Multiplier	What is the percentage multiplier for 76%?	A number which is used to calculate a percentage of an amount or used to increase or decrease an amount by a percentage	76% = 0.76
Reverse Percentage	Use reverse percentages to find the original cost.	A way of working backwards on a percentage problem to find the original amount.	Original Price ?

YEAR 9 CYCLE 2 MATHS

Word	<u>Used in context</u>	<u>Definition</u>	<u>Example</u>
Term	In the expression $4x - 7$, $4x$ is the x-term and 7 is the number term .	A single number or variable (letter).	EQUATION
Variable	The variable in the expression $4x - 7$ is the letter x .	A symbol (usually a letter) that represents an unknown number.	3x + 5 = 20
Co-efficient	The co-efficient of $5x^2$ is 5.	A number used to multiply a variable. Variables with no number have a co-efficient of 1.	COEFFICIENT CONSTANT
(To) Solve	Solve the following equation to find the value for x	Finding the value of an unknown variable.	y + 14 = 20 -14 -14 y = 6
Inverse	What is the inverse operation for addition?	The process of undoing a calculation by doing the opposite operation.	subtract a
Linear Equations	Solve the linear equation.	An equation where the variable has a power of 1.	y = 6x + 8
Subject (of a formula)	Make y the subject of the formula.	Re-arranging a formula to get the variable (letter) on one side.	
		> means "Greater/more than", < means "Less than", ≥ mean "greater than or equal to" and ≤ means "less than or equal to.	6 > 2 $-2 < 5$ $2x > 6$
Ratio The ratio of boys to girls in my class is 5:4. A ratio says how much of one thing compared to another.		A ratio says how much of one thing there is compared to another.	3:1
Proportion	Proportion What proportion of my class are boys? A number considered in comparison to the whole amount.		
Direct Proportion Speed and distance are in direct proportion .		When two amounts are in proportion, and one increases as the other increases.	
Inverse Proportion	Speed and time are inversely proportional.	When one variable increases and the other decreases.	
Scale Factors	Find the scale factor that transforms shape A to Shape B.	The number you multiply one amount by to get to another amount.	See S.E.S. How

YEAR 9 CYCLE 2 COMBINED SCIENCE					ED SCIENCE		
Year	9 Combined Science Cycle Two	Week One				Week Two	
Key	Vocabulary Activation Energy – the minimum amount	arrang	ement, vib	n fixed posit rate in fixed vest energy		Simple distillation – separating a mixture from a liquid by heating to cause evaporation and then cooling to cause	
"	of energy needed by colliding particles for a reaction to happen.	2. Liquid past ea	l – Particles ach other &	are touchin	g but can flow ape of an	condensation. The least efficient form of distillation. Used to make sea water	
2.	Catalyst – a substance that speeds up the rate of a reaction without altering the products, being used up itself or affecting the final mass of the products.	than a	gas. Random arı		of particles, not irections.	drinkable 2. Fractional distillation – evaporation followed by condensation. A method to separate a mixture from liquids with	
3.	Crystallisation - separating the solute from a solution by evaporation the solvent.	4. Chang	ges betwee	n the state s.	s are known as	different boiling points into different fractions.	
4.	Endothermic reaction – a reaction where heat energy is given out.		aporation	Gas Cond	ensing	Paper chromatography – the separation of mixtures of soluble substances by running a	
5.	Enzymes – are biological catalysts. They can be used in the production of alcoholic drinks.			iquid)	solvent (mobile phase) through the mixture on the paper (stationary phase) which causes the substances to move at different	
6. 7.	Exothermic reaction – a reaction where heat energy is taken in. Filtration – Using a filter to separate an			Solid <	Deposition	rates over the paper. 4. R _f = <u>distance moved by the spot</u> distance moved by the solvent	
8.	insoluble solid from a liquid. Gas Pressure – the force generated by	Week Thr	ee			Week Four	
	particles colliding with the container walls.	1. Atomi	ic structure	•		Electrons occupy shells in order and fill the	
9. 10.	Insoluble – cannot dissolve in that solvent. Isotope – a different version of an atom	Particle	Charge	Mass	Location	shell closes to the nucleus first. There is a limit to the number of electrons:	
	with the same number of electrons and protons but a different neutron number.	Proton	+ 1	1	Nucleus	 1st shell – 2 electrons 2nd shell – 8 electrons 	
11.	Mixture – contains one or more	Neutron	0	1	Nucleus	3. 3 rd shell – 8 electrons	
	elements/compounds that are not chemically joined. Can be separated into its components. Has sharp changes in boiling	Electron	-1	1/1835	Electron shell	You can work out which group an element in by the number of electrons in the outer shell:	
12. 13. 14. 15.	point due to its different components. Pure substance – composition cannot be changed, is the same in all parts of the substance so it has gradual changes in its properties. Je. Boiling point.	 There is always the same number of protons & electrons in an atom. Atomic mass = protons + neutrons Atomic number = protons Mendeleev arranged the Periodic Table in order of increasing atomic mass but this isn't true in some cases because of the masses of some of the isotopes. 			utrons riodic Table in ass but this isn't	 Group 4 – 4 electrons in outer shell Group 1 – 1 electron in the outer shell You can work out which period an element is in by the number of shells the electrons occupy 1 shell – period 1 2 shells – period 2 	

FAR 9 CYCLE 2 COMBINED SCIENCE

Week Five	Week Six	Week Seven
 Conservation of mass states that the mass of reactants will always be equal to the mass of the products (symbol equations must be balanced). This can be shown during a precipitate reaction (a closed system) - a solid will form with the same mass as the 2 reactants or when a gas is formed/taken in (a non-enclosed system). Empirical formulae – simplest whole number ratio of elements in a compound. Write the mass for each element in the question. Record the RAM for each element. Calculate the number of moles (No of moles = question mass/RAM) Divide all elements by the smallest No of moles. 	 1. Group 1 (Alkali metals) – all have: a. 1 electron in their outer shell, b. form 1+ ions, c. reactivity increases as you go down the group because the force of attraction between the + nucleus and the - outer electron decreases so it is easier to remove the electron, d. are soft, float on water e. relatively low melting points. 2. Group 7 (Halogens) – all have: a. 7 electrons in their outer shell, b. form a 1-ion, c. reactivity decreases as you go down the group. The force of attraction between the + nucleus and the - outer electron decreases making it harder to attract extra electrons, d. are all diatomic (travel in pairs, Cl₂) 	 Group 0 (Noble gases) - are inert (unreactive) because they have a full outer shell, have a low density, colourless, poor conductors of heat are non-flammable. Rates of reaction - Reactions occur what reactant particles collide at the correct orientation and with enough energy (activation energy) to successfully produce products. (collision theory) Factors that affect the rate of reaction - Temperature Pressure Catalyst Surface Area: Volume ratio Concentration
Week Eight	Week Nine	Week Ten
Factors that affect Rates of reactions 1. Temperature Higher temperatures lead to greater kinetic energy of particles, increasing the frequency of successful collisions. 2. Pressure Compressing a gas increases the frequency of successful collisions, because the particles are squashed into a smaller area. 3. Catalyst Provides an alternative reaction route with a lower activation energy, so more successful collisions occur. 4. Surface Area: Volume ratio Powders have a greater SA:V ratio so there are more reactant particles available to collide. 5. Concentration More reactant particles increases the frequency that particles will collide causing a faster rate.	 Rate of Reaction Core practical Effect of surface area on rate of reaction - Independent variable: size of marble chip Dependent variable: time taken Control variable: concentration & type of acid, temperature, mass of marble chips Effect of temperature on rate of reaction - Independent variable: temperature of sodium thiosulfate & hydrochloric acid Dependent variable: time taken for cross to disappear Control variable: concentration & type of acid, volume of reactants, strength of cross 	Catalyst Provides an alternative reaction route with a lower activation energy, so more successful collisions occur.

YEAR 9 CYCLE 2 SEPERATE SCIENCE

Year	Year 9 Separate Science Cycle Two Week One					Week Two		
1. 2. 3. 4. 5. 6. 7.	Activation Energy – the minimum amount of energy needed by colliding particles for a reaction to happen. Catalyst – a substance that speeds up the rate of a reaction without altering the products, being used up itself or affecting the final mass of the products. Crystallisation – separating the solute from a solution by evaporation the solvent. Endothermic reaction – a reaction where heat energy is given out. Enzymes – are biological catalysts. They can be used in the production of alcoholic drinks. Exothermic reaction – a reaction where heat energy is taken in. Filtration – Using a filter to separate an insoluble solid from a liquid.	 Solid - Particles in fixed positions, regular arrangement, vibrate in fixed positions when heated. Lowest energy. Liquid - Particles are touching but can flow past each other & take the shape of an object. Has more energy then a solid but less than a gas. Gas - Random arrangement of particles, not touching, moving fast in all directions. Changes between the states are known as physical changes. Simple distillation - separating a mixture from a liquid by heating to cause evaporation and then cooling to cause condensation. The least efficient form of distillation. Fractional distillation - separates a mixture of liquids with different boiling points into different fractions. 			positions g but can flow ape of an a solid but less of particles, not irections. s are known as ing a mixture use g to cause ent form of	 Paper chromatography – the separation of mixtures of soluble substances by running a solvent (mobile phase) through the mixture on the paper (stationary phase) which causes the substances to move at different rates over the paper. Pure inks only have one dye/spot. Insoluble inks stay on the sample line. Rf can be calculated to compare inks. R_f = distance moved by the spot distance moved by the solvent Waste and ground water is made potable through sedimentation, filtration & chlorination. Sea water can be made potable by using distillation. 		
8.	Gas Pressure – the force generated by	Week Thre	ee			Week Four		
9.	particles colliding with the container walls. Insoluble – cannot dissolve in that solvent.	1. Atomi	c structure			1. Electrons occupy shells in order and fill the		
10.	Isotope – a different version of an atom	Particle	Charge	Mass	Location	shell closes to the nucleus first. There is a limit to the number of electrons:		
	with the same number of electrons and protons but a different neutron number.	Proton	+ 1	1	Nucleus	1. 1 st shell – 2 electrons		
11.	•	Neutron	0	1	Nucleus	2. 2 nd shell – 8 electrons		
	elements/compounds that are not chemically joined. Can be separated into its components. Has sharp changes in boiling	Electron	- 1	1/1835	Electron shell	 3. 3rd shell – 8 electrons 2. You can work out which group an element is in by the number of electrons in the outer 		
12. 13. 14. 15. 16.	Solute – the thing being dissolved					shell: 1. Group 4 – 4 electrons in outer shell 2. Group 1 – 1 electron in the outer shell 3. You can work out which period an element is in by the number of shells the electrons occupy 1. 1 shell – period 1 2. 2 shells – period 2		

YEAR 9 CYCLE 2 SEPERATE SCIENCE

Week Five	Week Six	Week Seven
 Conservation of mass states that the mass of reactants will always be equal to the mass of the products (symbol equations must be balanced). This can be shown during a precipitate reaction (a closed system) - a solid will form with the same mass as the two reactants or when a gas is formed/taken in (a nonenclosed system). Empirical formulae – simplest whole number ratio of elements in a compound. Write the mass for each element in the question. Record the RAM for each element. Calculate the number of moles (No of moles = question mass/RAM) Divide all elements by the smallest No of moles. Number of moles (mol) = mass (g) / Molar mass 	 Group 1 (Alkali metals) – all have: 1 electron in their outer shell & form 1+ ions reactivity increases as you go down the group because the force of attraction between the + nucleus and the - outer electron decreases so it is easier to remove the electron, are soft, float on water relatively low melting points. Group 7 (Halogens) – all have: 7 electrons in their outer shell & form a 1-ion, reactivity decreases as you go down the group. The force of attraction decreases making it harder to attract extra electrons, are all diatomic (travel in pairs, Cl₂) Group 0 (Noble gases) - are inert (unreactive) because they have a full outer shell, have a low density, colourless, poor conductors of heat & are non-flammable. 	Factors affecting rate of reaction: 1. Temperature Higher temperatures lead to greater kinetic energy of particles, increasing the frequency of successful collisions. 2. Pressure Compressing a gas increases the frequency of successful collisions, because the particles are squashed into a smaller area. 3. Catalyst Provides an alternative reaction route with a lower activation energy, so more successful collisions occur. 4. Surface Area: Volume ratio Powders have a greater SA:V ratio so there are more reactant particles available to collide. 5. Concentration More reactant particles increases the frequency that particles will collide causing a faster rate.
Week Eight	Week Nine	Week Ten
 Exothermic – heat energy is given out, bonds are made. more heat energy is released in forming bonds in products than is required in breaking bonds. neutralisation and displacement reactions are always exothermic. Endothermic –	 Formation of ionic bonds – Formed by transferring electrons between atoms creating ions with a + or – charge. Cations are positively charged ions.	 Formation of covalent bonds – when a pair of electrons is shared between two atoms forming molecules. Molecules can form simple of giant structures. Simple covalent structures – Low melting & boiling points due to weak intermolecular forces between molecules. Poor conductors of electricity Giant covalent structures – Diamond – each C atom forms four bonds linking layers of atoms, which are v strong. Graphite – each C atom forms three bonds in layers leaving one free electron, good conductors of electricity. No bonds between layers means they slide easily making it soft, good for writing & a good lubricant.



YEAR 9 CYCLE 2 HISTORY

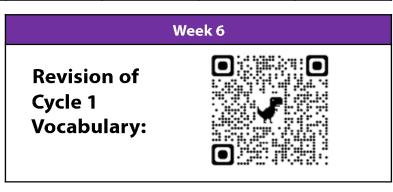
1 – Key concepts	Dictatorship: A country or government in which absolute power is exercised by an individual. Nationalism: A political outlook in which all policies are organised to make the nation stronger and more independent. Socialism: A political outlook which stresses that a country's land, industries and wealth should all belong to the workers of that country. Totalitarianism: Power in the hands of one leader	6 – Key words 3	of Adolf Hitler's political opponents as well as def in public. Schutzstaffel (SS): Led by Heinrich Himmler, the S	From 1921 to 1933 the SA disrupted the meetings ended the halls where Hitler was making a speech SS was the most important of these organisations personal bodyguard service, the SS was fanatically	
2 – Key people 1	Benito Mussolini: Il Duce (Italian: "The Leader"), Italian prime minister (1922–43) and the first of 20th-century Europe's fascist dictators. Joseph Stalin: Communist leader of the USSR during WW2. After this conflict he became committed to taking both political and ideological control of eastern European states, believing this to be integral to creating a buffer between the democratic West. This quest for domination is seen as one of the predominant factors in starting the Cold War.	7 – Key dates 1	1917- Russian Revolution – Imperial Government overthrown, Bolsheviks came to power. People were unhappy with government corruption, the Tsar's policies, and WW1 losses. April 9, 1920 – Mussolini becomes Prime Minister of Italy. His rise came right after he created a famous radical group at the time called Fasci Itali di Combattimento which was anti communism and pro nationalism June 20, 1921 – Hitler becomes leader of the Nazis. Adolf Hitler joined a small society called the Nazis when he was a few years younger. After many changes in the Nazi quota, Hitler became the leader of the Nazis and he promised to bring them to power.		
3 – Key people 2	General Franco: El Caudillo ("The Leader"), general and leader of the Nationalist forces that overthrew the Spanish democratic republic in the Spanish Civil War (1936–39); thereafter he was the head of the government of Spain until 1973 and head of state until his death in 1975 Adolf Hitler: Der Führer (German: "The Leader"), leader of the Nazi Party (from 1920/21) and chancellor and Führer of Germany (1933–45). He was chancellor from January 30, 1933, and, after President Paul von Hindenburg's death, assumed the twin titles of Führer and chancellor (August 2, 1934)	8- Key dates 2	August 12, 1924 - Stalin becomes ruler of U.S.S.R. Rising to rule, Stalin became power hungry and his thoughts about humanitarianism soon depleted. He became a dictator in 1924 and made changes that would not benefit society in a positive way. March 23, 1933 – Hitler uses enabling act to become a dictator. Democracy was removed from Germany, and Hitler and the Nazis began to tighten their grip on their brutal regime over the country. 1935 - The Nuremberg Laws formalised anti-Semitism into the Nazi state by: -Stripping Jews of German citizenshipOutlawing marriage and sexual relations between Jews and GermansTaking away from Jews all civil and political rights. September 1939 – World War Two begins in Europe when Hitler invades Poland. He and Stalin had agreed a 'non-aggression pact'. Hitler in June 1941 then invaded Russia, going back on his promise.		
4 – Key words 1	Censorship: Involves banning information or ideas. It sometimes involves banning the vehicles for delivering ideas, such as newspapers, pictures, radio or film. Therefore, it controls attitudes by forbidding certain information or opinions. Chancellor: The Head of the German Government. Concentration Camps: New prisons set up to house those that spoke out against Hitler. They were run by the SA and the SS	9 – Comparison	Similarities Blamed scapegoats (Hitler blamed Jews & communists; Stalin blamed Kulaks & professionals Killed enemies who were in their way (Stalin's	Differences Hitler rose to power in Weimar Republic (democracy), then made it into a new government Soviet Union was already in place as a	
	Enabling Act: An act that was passed to allow Hitler to make laws for four years without the support of the Reichstag Gestapo: This was the Nazis' secret police force. Its job was to monitor the German population for signs of opposition or resistance to Nazi rule. It was greatly helped by ordinary German people informing on their fellow citizens. Propaganda: A way of controlling the public attitudes. Propaganda uses things like	Comparison	Came to power legally (Hitler/Nazis through elections & appointments; Stalin through Communist Party promotion)	communist dictatorship; Stalin just succeeded Lenin as Soviet leader. Hitler used economic emergency of Great Depression to increase popularity and power.	
5 – Key words 2	newspapers, posters, radio and film, to put ideas into people's minds and therefore shape attitudes.		Used propaganda and censorship to build totalitarian states Built up the military and economy	Stalin was firmly in control of USSR before the Great Depression began.	

YEAR 9 CYCLE 2 LANGUAGES

Week 1		Week 2		Week 3		Week 4		Week 5	
aceptar	to accept	amenazar	to threaten	el camino	path, way	asistir	to attend	oír	to hear
dedicar	to dedicate	atacar	to attack	el dios	god	cumplir	to fulfil	reconocer	to recognise
echar de menos	to miss	considerar	to consider	la batalla	battle	huir	to run away	sentir	to feel
lograr	to manage to	escapar	to escape	el imperio	empire	nacer	to be born	el marido	husband
nadar	to swim	matar	to kill	la lengua	language	ambos/as	both (m/f)	la mujer	woman, wife
soportar	to put up with	la organización	organisation	el oro	gold	el derecho	right	la población	population
Alemania	Germany	el tiempo	time, weather	Perú	Peru	la duda	doubt	la raíz	root
la aventura	adventure	diferente	different	el rey	king	la esperanza	hope	la relación	relationship
el desafío	challenge	peligroso/a	dangerous (m/f)	el siglo	century	la experiencia	experience	actual	current
el sol	sun	pobre	poor	peruano/a	Peruvian (m/f)	extranjero	abroad, foreigner	cubano/a	Cuban (m/f)
El humano	human	todavía	still	entonces	so, then				
		a través de	through, across	indígena	indigenous, native				

Here you will find **quizlet** sets to help you to learn this Cycle 2 language:





YEAR 9 CYCLE 2 LANGUAGES

Week 7		Week 8		Week 9		Week 10	
encender	to turn on	promover	to promote	tuve	l had	respetar	to respect
morir	to die	proteger	to protect	comprender	to understand	tratar	to deal with
producir	to produce	resolver	to resolve	incluir	to include	conseguir	to get, obtain
prohibir	to prohibit	sobrevivir	to survive	realizar	to carry out	la manifestación	protest
el bosque	forest	el planeta	planet	la acción	action	el principio	beginning
el consumo	consumption	el recurso	resource	el final	end	al principio	in/at the beginning
el efecto	effect	el uso	use	al final	in/at the end	el protagonista	main character
el futuro	future	el vidrio	glass	la ley	law	la idea	idea
el gobierno	government	esencial	essential	un millón	million	el público	audience
el medio ambiente	environment	grave	serious	el plano	map		
el plástico	plastic	terrible	terrible				

Each week you will need to practise and learn your **Vocabulary of the Week**. For your **Vocabulary of the Week** also pay attention to
which type of words they are:

Verbs are in VIOLET		
Feminine nouns are in PINK		
Masculine nouns are in BLUE		
Adjectives are in AMBER		

Weeks 11 and 12

Revision of Cycle 2 Vocabulary:



YEAR 9 CYCLE 2 WEST EXE BACCALAUREATE

Week 1

Skills glossary

Communication: Effectively interacting with other people.

Numeracy: Using numbers and statistics accurately.

IT: Using computer programmes to communicate and/or produce work.

Teamwork: Effectively working with others to complete a task.

Problem-solving: Coming up with creative and practical solutions to overcome a difficulty. **Listening skills:** Actively listening to someone and

responding appropriately.

Top 10 soft skills

1. Communication 2. Teamwork 3. Adaptability 4. Problem-Solving 5. Creativity 6. Work Ethic 7. Interpersonal | A model of behaviour Skills. 8. Time Management. 9. Leadership. 10 Attention to Detail.

Top 7 employability skills

1. Communication, 2. Teamwork, 3, Critical Thinking. 4. Willingness to learn. 5. Information Technology, 6, Planning and Organising. 7. Enterprise and entrepreneurial skills.

Week 2

Values glossary

Personal values: A set of beliefs held by an individual. **Integrity:** Being honest and having strong moral principles **Accountability:** Taking responsibility for your own actions.

Respect: Valuing other people and their opinions.

A model of development





Week 3

Values glossary (continued)

Excellence: Doing your very best at all times.

Legacy: Doing something that will have a lasting impact.

Perseverance: Keeping going, even when things go wrona.

Courage: Doing something even if it scares you or makes vou nervous.

What the experts say

The good communicator is not just a persuasive speaker. He or she must be a good listener too..." Peter Portnoi, HR Consultant

"Think before you speak. It's obvious, isn't it? Not just in making sure you say the right thing but also in not saving the wrong thing, however tempting!" David Turnbull, **Location Sound Recordist**

"Well I've made plenty of mistakes, but I've always done my best to learn from them. That way at least I never make the same mistake twice."

Steve Boniface, PR and Social Media Manager

"Make sure your reasons for avoiding something are not iust fear of failure." Jo Weston, Footwear Designer

Week 4

Values glossary (cont.)

Collaboration: Working well with others to achieve a goal. **Curiosity:** Wanting to learn about, understand and experience new things. **Empathy:** The ability to understand other people's views by putting 'yourself in their shoes'.

Top tips for maintaining motivation and confidence

- 1. List the things you are good at, and review them.
- 2. Reward yourself when you reach a goal.
- 3. Have topics of conversation ready when meeting new people.
- 4. Prepare an 'opening line' for situations where you will meet new people.
- 5. Practice your handshake to give a good first impression.
- 6. Set short, achievable targets for yourself.
- 7. Break tasks or projects down into smaller chunks.
- 8. Find a mentor to support you.
- 9. Remind yourself of where you want to be in the future and focus on the progress you are making.
- 10.Be vourself be genuine towards others, and yourself.

Week 5

Behaviour glossary

Passive: Accepting what happens or what others do without active response or resistance.

Assertive: Confidently and clearly stating your opinions, while taking the views of others into account.

Aggressive: Behaving in an actively hostile or emotional way.

Six types of assertiveness

- 1. Basic: Express your feelinas.
- 2. Responsive: Find out the other person's feelings.
- 3. Empathetic: State what you want, but show you understand the other persons' point of view.
- 4. Discrepancy: Point out the difference between what you agreed and what is happening.
- 5. Negative feelings: Point out how the other person's actions are negatively affecting you.
- 6. Consequences: Tell the other person what will happen if they don't change their behaviour.

YEAR 9 CYCLE 2 WEST EXE BACCALAUREATE

Week 6

Key words
Community: A group of

people who live together and have a responsibility towards each other.

Discrimination: An action.

Treating a group of people unfairly because of having a prejudiced view about them. **Equality:** All humans should have the same rights and be valued equally. We are all equal and deserve respect. **Harmony:** Living peacefully with other people.

Justice: A situation where everything is fair and equal. Right action is done, and wrong actions are punished or stopped.

The Causes of Prejudice **Ignorance:** A lack of understanding of a group's culture causing intolerance. **Stereotyping:** Assuming everyone in a group is the same because of a bad experience with one person from that group. Xenophobia: Feeling that their race is better than others so have a poor attitude towards other races. Fear: A fear that their own identity may be lost if another race becomes part of their society.

Key words

Week 7

Patriotism: Pride in your country or a belief that people from your country are better than others.

Positive discrimination: To treat a group favourably due to their race, etc., usually because they have been

treated unfairly in the past. **Prejudice:** An **attitude**.

Prejudging a group of people without knowing much or anything about them individually.

Racism: To treat someone unfairly because of their race or ethnicity.

Scapegoating: Unfairly blaming a group of people for problems in society.

The Causes of Prejudice Scapegoating: Unfairly blaming one group for society's problems.

Parents/upbringing:
Prejudiced parents may have influenced their children to think in the same way.

Media: The media often stereotypes people and thus reinforces within its audience these opinions.

Victim of prejudice: Being a victim of prejudice can cause someone to have a negative attitude toward all people

Week 8:

Key words
Stereotyping: An
assumption. Stereotyping is
believing that a group of
people who share a similar
characteristic (race / sex /
age) are all the same.

Tolerance: To be openminded and to accept other people, their beliefs and their lifestyles although different to your own.

Universal Declaration of Human Rights: A document stating all people should be treated equally whatever their race, gender, etc.

Value of the individual: All people are important and valuable because they are human.

Steps of prejudice



Types of prejudice

Week 9

Ageism: Ageism is prejudice against someone based on their age. It is often based on stereotypes. Discrimination based on age is illegal.

Sexism: People who do not conform to gender

Sexism: People who do not conform to gender stereotypes might be the victims of prejudice. Gender discrimination is illegal in the UK. However, many women still get paid less than men.

Racism: Racism is the belief that the people from some races are inferior to other people. Racial discrimination is illegal, but racial abuse and attacks still happen.

Disability discrimination:

Disability discrimination can happen in the workplace, or when people with disabilities are denied access to services. People with learning difficulties can be the victims of prejudice when others do not understand their condition or needs.

Religious prejudice:

Discrimination based on religion or belief is illegal Ignorance can be a factor in why some people are prejudiced against religious believers.

Week 10

Effects of prejudice and discrimination

The Individual: Prejudice can cause a lack of self-worth or self-respect leading to a life of unhappiness.

The Community: Prejudice divides communities, causing people to live in fear of one another. So, society does not work together, and people live in disharmony only looking out for themselves and not others.

The World community:
Discrimination has been responsible for the deaths of millions of people such as those from the Jewish community during the Holocaust.

Combatting discrimination Education: Educating pupils to accept that all people are equal. This can prevent the development of fear and ignorance towards people who are different to them.

Promote mixing between groups: Mixing with others from all groups leads to a better understanding of each other.

Punishment: People and students could be punished if they do discriminate, e.g. exclusion from school or dismissal from work.

from this group.

	INTRODUCTION OF GRAMMAR							
NAME		DEFINITION	EXAMPLE					
	Verb	A verb expresses an action, state or a condition in a sentence. These can be either verbs of doing or being.	The boy ran to the park. I was here long ago.					
Ñ	Auxiliary Verbs	Auxiliary verbs help to form the various tenses, moods, and voices of other verbs. Auxiliary verbs: a form of be, do, have or a modal, used with a main verb to form different tenses.	She is reading a book. We were going to the beach. I had to eat the cake.					
Types of Verbs	Mod <mark>al</mark> Verbs	These combine with other verbs to express necessity, possibility, and intention.	You should know what modal verbs are. He might not know the milk has gone bad. I ought to stop eating so much cake.					
Type	Participles	They are words formed from verbs and look like verbs, but they are used as adjectives (i.e. they describe a noun). Past participles end in 'ed'; present participles end in 'ing'. These will always be non-finite.	In the house, there was a screaming witch. The worried man kept eating the cake. The dying woman reached for the hand of her weeping son.					
	Gerunds	A gerund is a verb that is acting as noun in a sentence. It's made from a verb by adding '-ing.' Infinitives are the 'to' form of the verb. E.g. to ski. Gerunds are the 'ing' form of the verb which acts as a noun.	Skiing is fun. I enjoy skiing.					
Finite or Non-finite	Finite or Non-finite Verbs	All verbs - regardless of their type - are either finite or non-finite when they are used. Finite verbs can only be used in some circumstances - if you change tense, the number or the person it will have to change. Whereas, a non-finite verb can be used in ANY number of circumstances. They won't change even if you alter the tense, the number or the person.	Ben sat on the bench, looking at the ducks. First, identify the verbs In the park, Ben sat on the bench, looking at the ducks. Then, change the tense In the park, Ben sits on the bench, looking at the ducks. Sat is finite - It had to change. Looking is non-finite - It didn't need to change					
	Main Clause/ Simple Sentance	A main clause/simple sentence has one - and only one - finite verb and a subject. (It can have as many non-finite verbs as you like.) A subject is the thing doing the <i>verb</i> .	The crocodile ate my friend. In the desert, scorpions hide. The car crash was unexpected and tragic.					
sentence	Object	A main clause <i>can</i> have an object, but it doesn't need one. The <u>object</u> is the thing that receives the <i>verb</i> - the subject affects it in some way.	The girl kicked the <u>ball.</u> The man ate <u>all of the cake.</u>					
parts of se	Imperative Sentances	Imperative verbs act as an instruction or command. It is a sentence, but it only has a finite verb as the subject is implied. This means it is obvious who the sentence is referring to so that it doesn't need to be stated.	Sit down. Hand me that cake! Tell me when the pain started.					
Types/p	Compound Sentence	Two main clauses linked together by a co-ordinating conjunction (FANBOYS). For/And/Nor/But/Or/Yet/So	The chips were delicious, but the fish was foul. I went to the shops to get some cake, so I could eat it for dessert. The man went dancing and the woman played Xbox.					
	Complex Sentance	Made up of two parts: a <u>main clause</u> and <u>one</u> or <u>more</u> subordinate clause. A <i>subordinating conjunction</i> always comes at the start of the subordinate clause.	The boy sat down after he heard the news. Nobody saw the alien because he was invisible.					

ntence	Complex Sentence - Subordinate Fronted	As above, but the subordinate clause comes before the main clause. It needs to be separated by a comma.	After he heard the news, the boy sat down. Because he was invisible, nobody saw the alien.		
Types/parts of sentence	Embedded Clause/Phrase	Clauses and <u>phrases</u> can be embedded in both main and subordinate clauses. They are usually embedded between the subject and the finite verb (of either the main or the subordinate clause). A comma is needed both before and after the embedded ingredient	Monkeys, that were jumping and calling, surrounded the car. The nun, with whom I recently had a falling out with, prayed to God.		
Types/	Fragments	A fragment is a word, that is punctuated as if it is a sentence. It is not a sentence because it doesn't have a subject and a finite verb. Fragments add emphasis, create a colloquial style and create realistic speech.	This is the worse day ever. Ever. She told me that if I didn't do my homework, she'd put me in detention. Well, whatever. "Where are you going?" " Home. "		
	Phrases	Whereas a clause has BOTH a subject and a finite verb, a phrase does not have BOTH a subject and a finite verb. A group of two or more words which usually do not contain a finite verb and which can act as a noun, verb, adverb, adjective or preposition.	This is a clause: after the school day ended. This is a phrase: after school.		
	Prepositional Time Phrases	Phrases that indicated when something happens. A comma is needed to separate a (prepositional) time phrase from the rest of the sentence when it is before the main clause.	Yesterday, it was snowing heavily. It was snowing heavily yesterday.		
ses	Prepositional Place Phrases	Phrases that indicated where something happens. A comma is needed to separate a (prepositional) place phrase from the rest of the sentence when it is before the main clause.	Under the hill, Bilbo Baggins lived. Bilbo Baggins lived under the hill.		
Phrases	Present Participle Phrases (ING)	Begins with an ING present participle and it does not have a subject or a finite verb. They are separated from the main clause with a comma - BOTH when they are before the main clause AND when they are after it. The phrase must refer to the subject of the clause.	Thinking about her hot dinner, the woman shifted on the cold seat. Watching their daughters play football, the two mothers shouted support.		
	Past Participle Phrases (ED)	As above, but begins with an ED past participle.	Scared he might not make it, the boy ran to the toilet. The young couple hugged, thrilled at the news of their pregnancy.		
	Adverbs	An adverb can be placed at the beginning, middle and end of a sentence. Adverbs are used to qualify or modify the verb. At the beginning it needs to be separated by a comma; in the middle of the subject and finite verb it needs be embedded between two commas; at the end it does not need to be separated.	Suddenly, the building exploded. The building exploded suddenly. The building, suddenly, exploded.		
uation	Semi-colon	Semi colons link two main clauses to form one sentence. They need to be related by topic or action. It does not link a sentence to a subordinate clause or phrase. You do not use a capital letter after a semi-colon.	This is how you use a semicolon; it is easy when you know how. My mother is from Italy; my father is from Poland.		
Advanced Punctuation	Colon	Colons introduce information, expanding or embellishing a point that has already been made. The information on each side is essentially the same but after the colon, there's usually more detail. You can imagine the colon being a stand in for the phrase 'let me tell you about it'.	It is very cold outside: there are icicles handing from my front door and the post man arrived by sled! I am allergic to two things: eggs and honey.		
Advan	Dashes	The dash is a punctuation mark used for emphasis and effect: it can be used to replace a colon, a semicolon, an ellipsis, brackets or a comma.	The dash is a versatile tool - it can replace a semi-colon or colon. You might also want to know - if you're <i>really</i> interested - that it can replace commas too.		

