Knowledge Book

Year 9

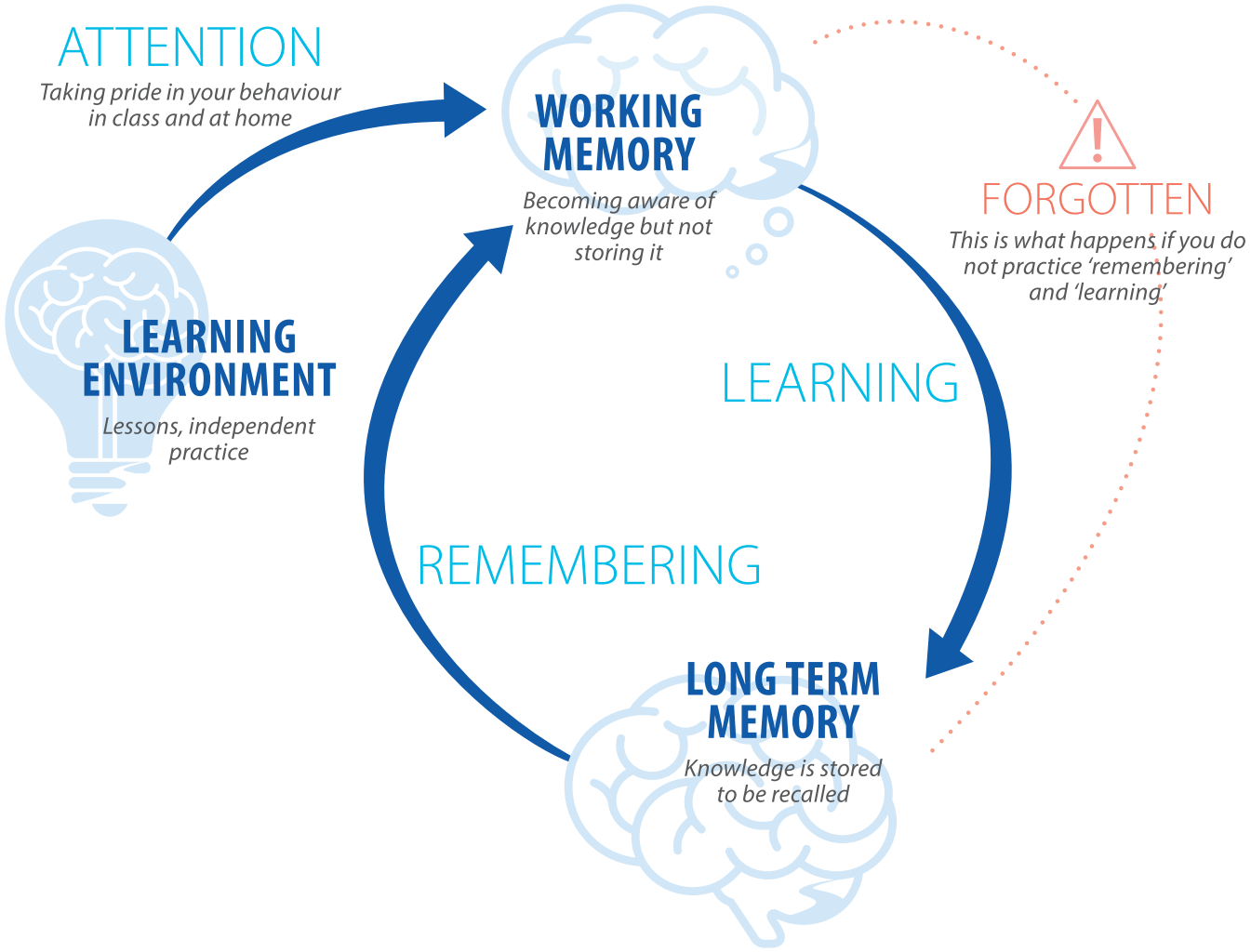
Cycle Two

Name:

West Exe School

community • opportunity • success

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.**

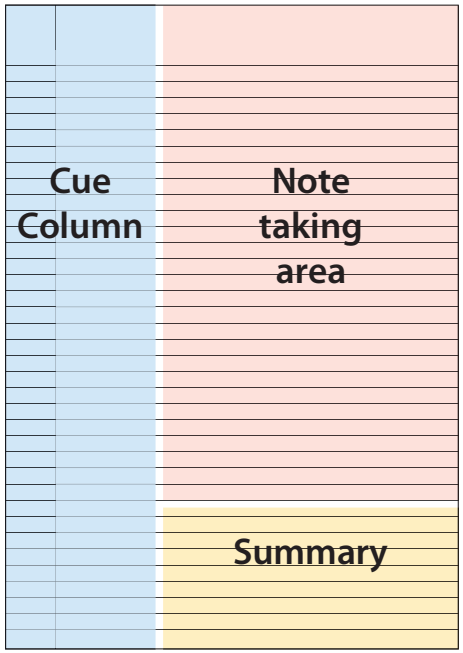
You can take practical steps to improve your ability to **learn** and **remember** key information and become the master of your memory.

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.



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.**

You are expected to spend one hour on extended practice each evening, with additional time on Friday and over the weekend.

There are four subjects to study each day, with five on Fridays.

You should spend 20 minutes on each subject. The exceptions to this are Science and Spanish, which you should study for 10 minutes each time they appear on your practice timetable.

You will be assessed on the knowledge in your knowledge book for every subject throughout each cycle. You will complete weekly Sparx Quizzes at home.

Extended Practice Timetable

- This is your extended practice timetable. You will need to do your knowledge organiser tasks, including your Sparx quizzes, for each subject on the timetabled day.
- Your tutor will check this the following morning.
- If you have not completed the tasks for each subject, you will receive a one-hour after school detention to be carried out later that day.

	10 minutes	10 minutes	20 minutes	20 minutes	20 minutes	20 minutes
Monday	Science	Spanish	English Literature	Maths - SPARX		
Tuesday	Science	Spanish	Option P	Maths - SPARX		
Wednesday	Science	Spanish	English Literature	Option Q		
Thursday	Science	Spanish	Geography	History		
Friday	Option P		English Literature	Maths - SPARX	Option Q	WEB

Maths Sparx Reminder

Sparx practice is set 8am on a Wednesday morning and 100% of compulsory and Target is to be completed by **8am the following Wednesday morning.** 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/after school on Monday. You are advised to start your tasks earlier than later. Support will be offered on a Friday and Monday at break in MA1 if you are struggling with any questions. Any student who has not completed 100% by **8am Wednesday morning** will be expected to attend Sparx after school catch up in MA1.

Educake:

Extended practice will be set via the Educake platform and will consist of two retrieval quizzes to be completed each week. The first quiz will be based on content you have covered recently in your science lessons, whilst the second will be based on content covered last year. Extended Practice quizzes will be set on the Monday and must be completed by the Sunday. You are expected to achieve an 80% pass mark for each quiz. To improve your score, you can re-take quizzes, use the support information and ask your class teacher for help.


STAEDTLER
Mars plastic
Latex Free • Sans-latex • Libre de latex
CASIO
fx-83GT X
CLASSWIZ
SHIFT
ALPHA
MENU SETUP
ON
OPTN
Abs
log
ln
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STO
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HOUSE WEEK & OUR WEST EXE VALUES

HOUSE WEEK, WEST EXE SCHOOL & BRITISH VALUES

	West Exe School Values	British Values	House Week Activities	Key Questions
House Week 1	**Citizenship**  Through respect, responsibility and integrity we make the world a better place.	**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	**Compassion**  Through kindness and empathy we care and show respect for ourselves and others.	**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	**Compassion**  We are brave in our actions and ambitions in our dreams.	**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?

BULLYING UPDATE - YEAR 9

Stop!

"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.

YOUNGMiNDS
fighting for young people's mental health

NSPCC HELPLINE
0808 800 5000
help@nspcc.org.uk

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.

One day I think these jobs might be interesting...

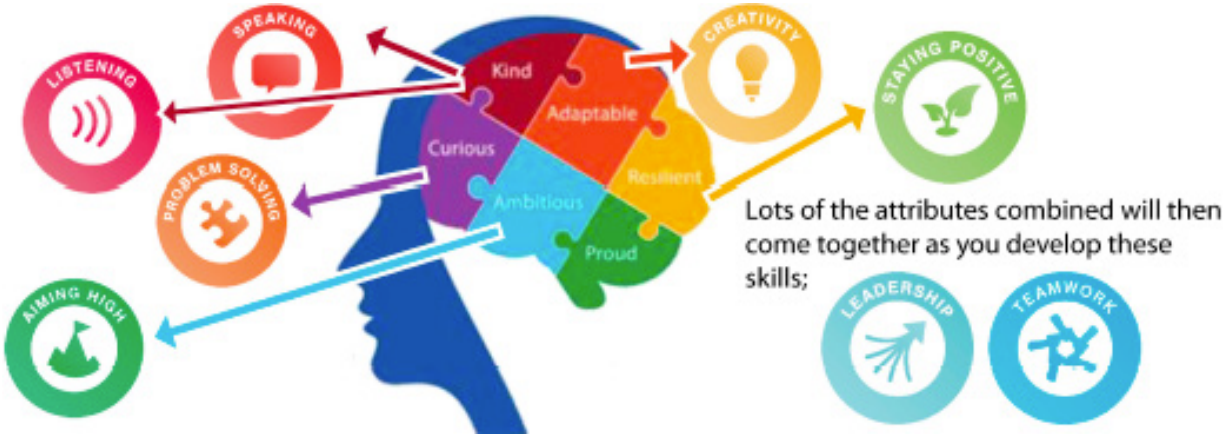
Opportunity

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

- Assembly on "Success in a changing world"
- Employer encounters
- CareerPilot sessions

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.



Lots of the attributes combined will then come together as you develop these skills;

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.

Healthy body - healthy mind! Links between physical activity and mental wellbeing. WES 10-a-day.

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

Understand the importance of sleep: 8- 10 hours to function effectively. Rest and recovery as an important part of exercise, performance and digestion.

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

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). ☐

Attend an after-school club to help you develop and improve these skills further. ☐

Developing fitness

For one of the sports, you are covering in this cycle, **identify the main components of fitness needed.** ☐

Engage in periods of sustained physical activity.

The NHS recommends that you do 2 types of physical activity each week:

1. Aerobic exercise.
2. Exercises to strengthen muscles and bones.

Young people aged 5-18 should:

- 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.

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. ☐

Use equipment safely and hygienically.

Think about the activities you are doing in this cycle and in each session be conscious of at least 2 safety considerations needed. ☐

Cook a healthy meal from one of the recipes you have done in food this cycle. ☐

Thinking (Mental) ME

Making appropriate time for **rest, relaxation, and sleep -** Having routines that support positive mental health.

Try to get 8-10 hours of good quality sleep a night!

Rules, strategies and tactics. Think about:

- What are the main **rules** for the sport you are covering now? Write down 3 rules you have learnt. ☐
- Can you give an example of a **simple strategy or tactic** you have been using? ☐
- Can you give an example of a more **complex strategy or tactic** you have been using? ☐
- **Give 3 rules you must follow in the kitchen.** ☐

Terminology:

Give 3 examples of terminology you have learnt in any of your SHN lessons. ☐

Knowledge of muscles and bones - how many muscles and bones can you label correctly? ☐

Being resilient - positive growth mindset and never give up attitude- always looking to improve! **Give 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? ☐

Social ME

Leadership - Taking responsibility within lessons (e.g. officiating, leading warm ups or practices or supporting food preparation in food lessons).

- **Offer to be a leader for a lesson!** ☐
- **Help another person in a lesson to help them make progress.** ☐
- **Officiate a game.** ☐
- **Give feedback and support to another person.** ☐
- **Motivate and encourage others in a lesson.** ☐
- **Make an effort to INCLUDE another less confident person in your lesson. Help others learn - coaching.** ☐

Teamwork - Working together - Work co-operatively, work collaboratively to achieve a goal. ☐

Give 2 examples of where you have shown good teamwork. ☐

Communication

Verbal - give some feedback on a performance - What went well? How could they improve it? ☐

Non-verbal - Use of whistle, signals as an official, use of a demonstration **- Try to do one of these each week.** ☐

YST ACTIVE IN MIND

Body

Hydration

I can drink more water by…

I need _____ water each day.

Sleep

I need _____ hours of sleep.

I could improve my sleep by...

Exercise

What exercise could I do?

I need 60 minutes of exercise a day

I could add exercise to my day by…

Diet

I could improve my diet by…

Environment

Your environment influences who you become, what you believe and do.

Who can support you?

How does technology affect your attention, mood, sleep and memory?

I will change my technology use by…

When we are organised we feel calmer. How could you be more organised?

What could you change at home

Mind

What am I worrying about?

Is there anything I can do about it?

No? Let it go.

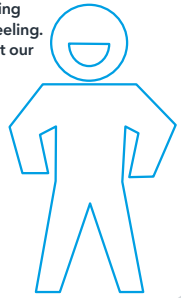
Yes? Do it now or make a plan about how and when you will do it.

Power poses

How we are sitting or standing tells our brain how we are feeling. Powerful postures can affect our mood and confidence. Think about someone who is confident or brave. What is their posture like?

Try this posture:

1. Stand/sit tall with your shoulders back
2. Hold your head up
3. Smile



Tips for learning new skills

1. Avoid distractions.
2. Make your environment comfortable.
3. Get some water to drink.
4. Prepare all your equipment and materials.
5. Use bright coloured paper and pens.
6. Use pictures and diagrams.
7. Practice in chunks of time, taking regular breaks.
8. Give yourself enough time.

Stressors

What are my stressors?

What stresses me out...

What happens to your mind and body when you feel stressed? Does your heart beat faster? Do your thoughts become confused? Write down all the things you notice.

What can you do to influence your body's response to stress?

Positive thoughts

Your brain changes based on what you think. We can help our brain to change positively by using positive statements. Complete the "I am..." in the box with the word you want to become. For example: "I am confident" or "I am calm"

I am...

Visualisation

Athletes practice their skills in their mind by imagining themselves winning. This helps their brain learn how to be successful. Create a picture in your mind of something you want to achieve. Draw the picture in the box of what you will visualise.

Mindfulness

Mindfulness helps our brain to be calm and to learn how to focus. Try this mindfulness exercise:

Trace your fingers around your opposite hand.

Breathe in, slide up

Breathe out, slide down

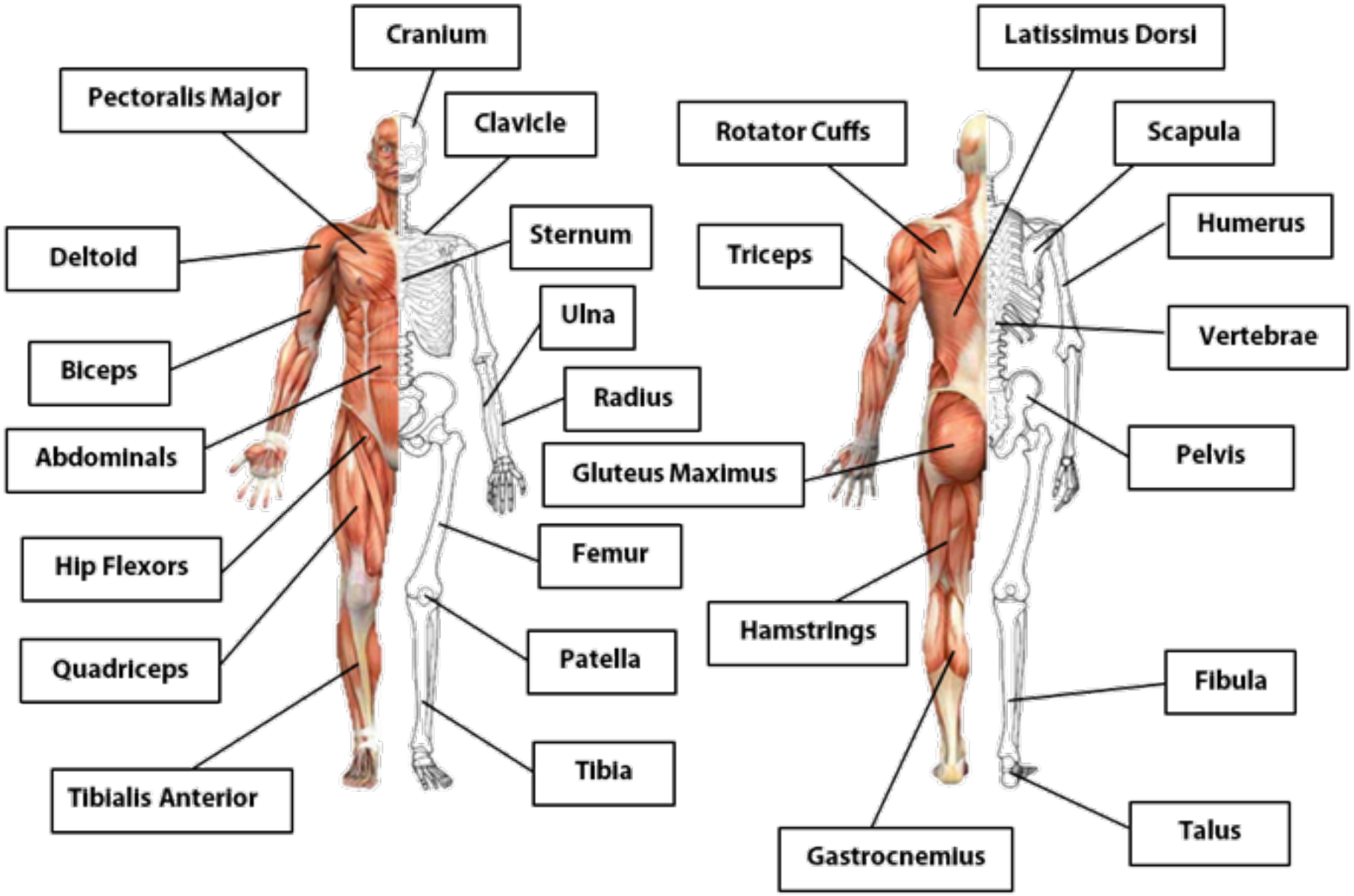
Grateful

When we focus on what we are grateful for our brain notices more of the things which help us to feel happy. Everyday write down one thing you are grateful for. What are you grateful for today?

I am grateful for...

New habits and actions

SPORT, HEALTH AND NUTRITION - Muscles and Bones



LITERACY ACROSS THE CURRICULUM

Literacy Marking Codes

	What it means	What you need to do in green pen
SP	Incorrect spelling	Find the correct spelling and write it in the margin three times
CL	Use a capital letter	Replace the lower case letter with a capital
O	Missing full stop or other missing punctuation	Add the punctuation in the correct place
//	New paragraph	Think why you need a new paragraph here (change of topic/time/place/speaker)
WW	Wrong word choice	The word you have chosen does not fit in this sentence - chose an alternative
?	Doe this make sense?	Re-write the sentence so it makes sense
HW	Handwriting is illegible	Re-write the selected words so they are legible and clear

Reading Consistencies

Following text at all times	Use your bookmark to follow the text. This way you know exactly where you are when you are asked to read and you wont lose your place during discussion. Use an overlay if you have one.
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.
Holding the place	Using your bookmarks to carefully note where you have stopped reading so that you can commence reading again swiftly once discussion is over.
Checking the punctuation/ emphasis	Your teach may ask you to reread a section, paying attention to the pauses, exclamation marks and question marks written in the text.
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 Mala la was ten years old the Taliban came to Swat Valley. Mala la 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 Mala la 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.

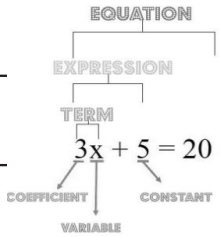
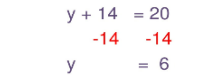
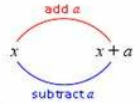
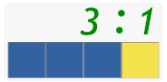
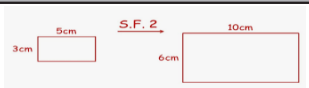
YEAR 9 CYCLE 2 ENGLISH

YEAR 9 CYCLE 2 ENGLISH

YEAR 9 CYCLE 2 MATHS

Word	Used in context	Definition	Example
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.	**3.333333333…….**
Irrational Number	π *is an* ***irrational number.***	A number that cannot be written as a simple fraction.	$\sqrt{7}, \pi$
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 ? → x 0.85 → New Price £102; ← ÷ 0.85 ←

YEAR 9 CYCLE 2 MATHS

Word	Used in context	Definition	Example
Term	*In the expression $4x - 7$, $4x$ is the **x-term** and 7 is the **number term**.*	A single number or variable (letter).	
Variable	*The **variable** in the expression $4x - 7$ is the letter x.*	A symbol (usually a letter) that represents an unknown number.	
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.	
(To) Solve	***Solve** the following equation to find the value for x*	Finding the value of an unknown variable.	
Inverse	*What is the **inverse** operation for addition?*	The process of undoing a calculation by doing the opposite operation.	
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.	
Inequalities	*There are four inequality symbols;* $>$ $<$ $\geq$ $\leq$	$>$ means "Greater/more than", $<$ means "Less than", $\geq$ mean "greater than or equal to" and $\leq$ 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 there is compared to another.	
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.	

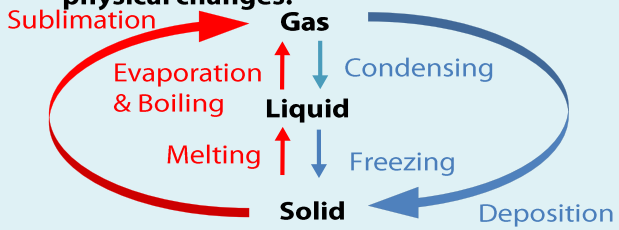
Year 9 Combined Science Cycle Two

Key Vocabulary

1. **Activation Energy –** the minimum amount of energy needed by colliding particles for a reaction to happen.
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.
3. **Crystallisation -** separating the solute from a solution by evaporation the solvent.
4. **Endothermic reaction** – a reaction where heat energy is given out.
5. **Enzymes** – are biological catalysts. They can be used in the production of alcoholic drinks.
6. **Exothermic reaction** – a reaction where heat energy is taken in.
7. **Filtration** – Using a filter to separate an insoluble solid from a liquid.
8. **Gas Pressure** – the force generated by particles colliding with the container walls.
9. **Insoluble** – cannot dissolve in that solvent.
10. **Isotope –** a different version of an atom with the same number of electrons and protons but a different neutron number.
11. **Mixture –** contains one or more elements/compounds that are not chemically joined. Can be separated into its components. Has sharp changes in boiling point due to its different components.
12. **Pure substance –** composition cannot be changed, is the same in all parts of the substance so it has gradual changes in its properties. Ie. Boiling point.
13. **Soluble** – can dissolve
14. **Solute –** the thing being dissolved
15. **Solvent –**the liquid the solute dissolves in.

Week One

1. **Solid -** Particles in fixed positions, regular arrangement, vibrate in fixed positions when heated. Lowest energy.
2. **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.
3. **Gas –** Random arrangement of particles, not touching, moving fast in all directions.
4. **Changes between the states are known as physical changes.**



Week Two

1. **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. **Used to make sea water drinkable**
2. **Fractional distillation** – evaporation followed by condensation. A method to separate a mixture from liquids with different boiling points into different fractions.
3. **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.
4. $R_f =$ $\frac{\text{distance moved by the spot}}{\text{distance moved by the solvent}}$

Week Three

1. **Atomic structure**

Particle	Charge	Mass	Location
Proton	+ 1	1	Nucleus
Neutron	0	1	Nucleus
Electron	- 1	1/1835	Electron shell

2. There is always the same number of protons & electrons in an atom.
3. **Atomic mass** = protons + neutrons
4. **Atomic number** = protons
5. **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**.

Week Four

1. Electrons occupy shells in order and fill the shell closes to the nucleus first. There is a limit to the number of electrons:
    1. 1st shell – 2 electrons
    2. 2nd shell – 8 electrons
    3. 3rd shell – 8 electrons
2. You can work out which group an element is in by the number of electrons in the outer 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 COMBINED SCIENCE

Week Five

1. **Conservation of mass** states that the mass of reactants will always be **equal** to the mass of the products (symbol equations must be balanced).
2. 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).
3. **Empirical formulae** – simplest whole number ratio of elements in a compound.

a. Write the mass for each element in the question.
b. Record the RAM for each element.
c. Calculate the number of moles (No of moles = question mass/RAM)
d. Divide all elements by the smallest No of moles.

Week Six

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, Cl_2)

Week Seven

1. **Group 0 (Noble gases) -**

a. are inert (unreactive) because they have a full outer shell,
b. have a low density,
c. colourless,
d. poor conductors of heat
e. are non-flammable.

2. **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)**

3. Factors that affect the rate of reaction –

a. Temperature
b. Pressure
c. Catalyst
d. Surface Area : Volume ratio
e. Concentration

Week Eight

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.

Week Nine

Rate of Reaction Core practical

1. Effect of surface area on rate of reaction -

a. Independent variable: size of marble chip
b. Dependent variable: time taken
c. Control variable: concentration & type of acid, temperature, mass of marble chips

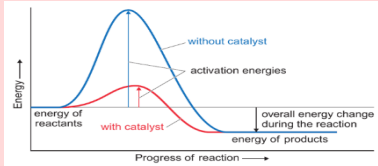
2. Effect of temperature on rate of reaction –

a. Independent variable: temperature of sodium thiosulfate & hydrochloric acid
b. Dependent variable: time taken for cross to disappear
c. Control variable: concentration & type of acid, volume of reactants, strength of cross

Week Ten

Catalyst

1. **Catalysts** are substances that speeds up the rate of a reaction without altering the products, being used up itself or affecting the final mass of the products.
2. They lower the amount of activation energy required for a reaction to start.
3. More reactant particles with have enough energy so more successful collisions will take place, speeding up the rate of reaction.
4. Enzymes are an example of a catalyst as they help speed of digestion.



C This reaction profile shows that a catalyst lowers the activation energy.

YEAR 9 CYCLE 2 GEOGRAPHY - Urban World

WEEK 1

Urbanisation: the process of towns and villages developing and becoming bigger as their population increases. More than half of the world's population now lives in towns or cities.

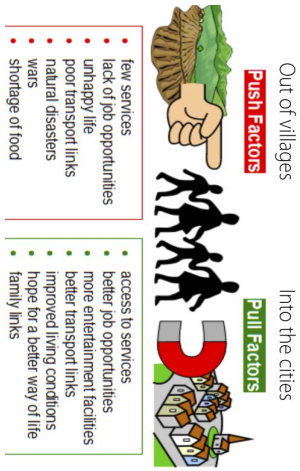
Megacity: a city with a population of over 10 million people. The largest megacity in the world is Tokyo in Japan with 37.4 million people[1]

Rural-urban migration: the movement of people from the villages (rural areas) into the towns and cities (urban areas). It is most common in NEE and LICs. Caused by push and pull factors.

Internal growth: growth within a city that results from births among the resident population rather than people moving into the city.

WEEK 2

Rural-urban migration



WEEK 3

Informal sector: jobs where people do not pay tax and have no legal working rights, for example selling fruit at a street market.

Informal housing: housing built on land that does not belong to those who are building it. Often land which may be unsuitable for the purpose: river beds, land close to industrial activity, land on steep or unstable slopes or next to transport networks.

Infrastructure of often poor and there are problems with electricity and sanitation. This informal housing is often known as slums or squatter settlements.

It is estimated that 1 in 7 people on the planet currently lives in a slum. In Some developing countries, it is as much as 90% of the urban population.

WEEK 4

Dharavi is located in Mumbai and is India's largest slum. It has nearly one million people crammed into one square mile.

Water full of diseases – high levels of typhoid, diphtheria.

Doctors deal with 4000 cases per day of sickness caused by poor sanitation.

85% of people have a job in the slum.

There are 15,000 one-room factories in the slum with a turnover of $1 billion per year.

In the UK, 23% of our waste is recycle; in Mumbai it is 80%. Most of that happens in Dharavi.

Strong sense of community in the slum – small village squares, flower baskets.

Plans to replace Dharavi slum with tower blocks of flats. The land is very valuable.

WEEK 5

Jakarta, the Indonesian capital, is home to 10 million people but it is one of the fastest-sinking cities in the world.

It sits on swampy land with 13 rivers running through it. Flooding is frequent.

By 2050, 95% of North Jakarta will be under water.

Northern Jakarta has sunk 2.5 metres in 10 years, which is double the global average for coastal megacities.

North Jakarta houses one of Indonesia's busiest sea ports.

The dramatic rate of sinking is partly down to the excessive extraction of groundwater for use as drinking water, bathing and every day use. Piped water is not reliable to people pump water from aquifers underground.

WEEK 6

A **world city** is one considered to be an important hub in the global economic system.

Characteristics of world cities:

- Headquarters of transnational corporations.
- Centre for business innovation
- Major centre for manufacturing
- Home of an important stock exchange or major banks
- Highly rated universities, often specialising in research, which links to a high quality healthcare provision.
- Cultural opportunities including opera and ballet
- E g Sydney, Australia

WEEK 7

Exeter has a population of 128,900.

Princesshay shopping centre and the high street was redeveloped between 2005 and 2007 costing £225 million.

There were concerns about the visual impact of a major city centre redevelopment on the historic buildings e.g. the cathedral.

The redevelopment included the conservation of the historic City Wall dating from Roman times.

Princesshay consists of 50 shops, restaurants and café and over 100 flats and apartments.

Future plans to regenerate Sidwell Street with a four star hotel opposite John Lewis and 250 build-to-rent homes.

Around 35,000 people commute into Exeter on a daily basis.

WEEK 8

A **sustainable city** offers a good quality of life to current residents but doesn't reduce the opportunities for future residents to enjoy.

Key features of a sustainable city:

- Public transport as an alternative to cars.
- Walking and cycling is safe.
- Renewable resources are used instead of non-renewable.
- Water is seen as a resource and recycled wherever possible.
- New homes are energy efficient.
- Access to affordable housing.
- Community links are strong and communities work together to deal with issues such as crime.
- Areas of open space.
- Cultural and social amenities are accessible for everyone.

WEEK 9

Masdar City, in the UAE, relies on solar energy and other renewable sources.

Started in 2006, the city was envisioned to cover 6km^2 and estimated to cost $18-22 billion. Final completion is now estimated to be 2030.

The city will be home to 45,000-50,000 people and 1,500 businesses.

As of 2016, fewer than 2,000 people are employed there.

The city has terracotta. The temperature in the streets is 15-20°C cooler than surrounding desert.

A wind tower sucks in air from above and pushes a cool breeze through the streets.

Buildings are clustered together to shield people from the sun.

Masdar is powered by a 22-hectare field of solar panels.

WEEK 10

The world's northernmost town in **Longyearbyen** which is located in the Norwegian archipelago of Svalbard. It has 2,400 citizens.

It was established a mining town.

Longyearbyen is around 650 miles from the North Pole.

There are more polar bears than there are people.

The sun does not rise at all for four months of the year.

The town has all the amenities of a modern town, including a school, church and restaurants.

Longyearbyen is home to the famous Doomsday Seed Vault which stores every known crop on the planet.

No burials of people have happened in Longyearbyen for over 80 years due to the icy conditions and permafrost preventing bodies from decomposing[1]

YEAR 9 CYCLE 2 HISTORY - To what extent was the early 20th century the era of dictators?

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

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.

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)

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

5 – Key words 2

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 newspapers, posters, radio and film, to put ideas into people's minds and therefore shape attitudes.

6 – Key words 3

Sturmabteilung (SA): better known as the Brownshirts or Storm Troopers. The SA got their nickname from the colour of the shirts they wore. From 1921 to 1933 the SA disrupted the meetings of Adolf Hitler's political opponents as well as defended the halls where Hitler was making a speech in public.
Schutzstaffel (SS): Led by Heinrich Himmler, the SS was the most important of these organisations and oversaw the others. Initially set up as Hitler's personal bodyguard service, the SS was fanatically loyal to the Führer. It later set up concentration camps

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.

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 citizenship.
-Outlawing marriage and sexual relations between Jews and Germans.
-Taking 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.

9 – Comparison

Similarities	Differences
Blamed scapegoats (Hitler blamed Jews & communists; Stalin blamed Kulaks & professionals	Hitler rose to power in Weimar Republic (democracy), then made it into a new government
Killed enemies who were in their way (Stalin's Great Purge; Hitler's Night of the Long Knives)	Soviet Union was already in place as a communist dictatorship; Stalin just succeeded Lenin as Soviet leader.
Came to power legally (Hitler/Nazis through elections & appointments; Stalin through Communist Party promotion)	Hitler used economic emergency of Great Depression to increase popularity and power.
Used propaganda and censorship to build totalitarian states	Stalin was firmly in control of USSR before the Great Depression began.
Built up the military and economy	

10 – Comparison

YEAR 9 CYCLE 2 LANGUAGES - Mi tiempo libre

	Spanish	*English*	*Literal English*
1	Para mí el tiempo libre es muy importante y la música es mi pasión. **Me ayuda a descansar y relajarme.**	In my opinion, free time is very important and music is my passion. **It helps me to unwind and relax.**	*For me, the time free is very important and the music is my passion.* ***Me it helps to unwind and relax myself.***
2	También soy teleadicto y me chiflan los concursos. En cuanto al cine, suelo ver las películas de terror porque son entretenidas.	Also, I am a TV addict and I love game shows. As for the cinema, I usually watch horror films because they are entertaining.	*Also, I am TV addict and me they whistle the competitions. In regards to the cinema, I tend to watch the films of terror because they are entertaining.*
3	Este fin de semana pienso ir al cine con mi amigo que se llama Jorge. ¡Qué genial!	This weekend I am thinking of going to the cinema with my friend who is called Jorge. How great!	*This end of week I think to go to the cinema with my friend who calls himself Jorge. What great!*
4	Vamos a comer fuera y va a ser guay. Para mí, prefiero ir a restaurantes de comida rápida **pero mi madre dice que es importante comer bien.**	We are going to eat out and it is going to be cool. Personally, I prefer to go to fast-food restaurants **but my mum says that it's important to eat well.**	*We are going to eat out and it is going to be cool. For me, I prefer to go to restaurants of food fast* ***but my mum says that it is important to eat well.***
5	**¿Mi opinión de la comida? Pues,** las hamburguesas son sabrosas y me gusta el chorizo porque es picante.	**My opinion of food? Well,** burgers are tasty and I like chorizo because it is spicy.	***My opinion of the food? Well,*** *the hamburgers are tasty and me it likes the chorizo because it is spicy*
6	Idealmente me gustaría ser vegano **porque me preocupa el medio ambiente y** no suelo comer carne frecuentemente.	Ideally I would like to be vegan **because I worry for the environment and** I don't usually eat meat frequently.	*Ideally me it would like to be vegan* ***because me it worries the environment and*** *I do not tend to eat meat frequently .*
7	Para el cumpleaños de mi padrastro vamos a comer en un restaurante típicamente español **donde preparan platos sabrosos. Le encanta la comida española**. Vamos a pasarlo muy bien.	For my step-dad's birthday we are going to eat in a typical Spanish restaurant **where they prepare tasty dishes. He loves Spanish food.** We are going to have a great time.	*For the birthday of my step-father we are going to eat in a restaurant typically Spanish* ***where they prepare plates tasty. Him it enchants the Spanish food.*** *We are going to spend it very well.*
8	**Con respecto a los deportes,** juego al baloncesto diariamente porque soy miembro de un equipo local. Este domingo, **si no tengo deberes,** haré vela con mis amigos.	**In terms of sport,** I play basketball daily because I am a member of a local team. This Sunday**, if I don't have homework**, I will go sailing with my friends.	***With respect to the sports****, I play at the basketball daily because I am member of a team local. This Sunday****, if I don't have homework****, I will do sailing with my friends.*
9	A mi hermana, le gusta nadar **y el fin de semana que viene habrá un torneo de natación.** Hace mucho entrenamiento **y estoy seguro que ganará.**	My sister, she likes to swim **and next weekend there will be a swimming tournament**. She is doing lots of training **and I am sure that she will win**	*To my sister, her it likes to swim* ***and the end of week that comes there will be a tournament of swimming****. She does a lot of training* ***and I am sure that she will win .***
10	El deporte puede ser muy beneficioso para su vida. **Te aprende la importancia de contar de los démas, cumplir las reglas y desarollar los habilidades sociales.**	Sport can benefit your life greatly. **It teaches you the importance of relying on others, obeying rules, and developing social skills.**	*The sport can be very beneficial for your life.* ***You it learns the importance of counting of the others, obeying the rules and developing the skills social.***
11	**Vale la pena- ¡no se ganó Zamora en una hora!**	**It's worth it– Rome wasn't built in a day!**	***It is worth the pain, Zamora not was won in an hour!***

YEAR 9 CYCLE 2 LANGUAGES

Week 1- La música	
cantar	to sing
disfrutar	to enjoy
grabar	to record
tocar	to play(instrument)
al aire libre	open air
las canciones	the songs
un cantante	a singer
en directo	live
una entrada	a ticket
la letra	lyrics
la música	music
el ritmo	the rhythm

Week 6- Mis opiniones	
afortunadamente	fortunately
frecuentemente	frequently
normalmente	normally
tristemente	sadly
picante	spicy
rico	delicious/tasty
sabroso	tasty
salado	salty/savoury
sano	healthy
la basura	rubbish, junk
el gusto	taste

Week 7 - Una cena especial	
la comida	lunch/ food
el huevo	egg
la lata	tin/can
la mantequilla	butter
el perrito caliente	hot dog
el té	tea
las verduras / legumbres	vegetables

Week 2- El cine y la tele	
ver	to watch
una comedia	a comedy
un concurso	a game show
un dibujo animado	a cartoon
un documental	a documentary
las noticias	the news
una serie policíaca	a crime series
una telenovela	a soap
una película..	a (…)film
…de aventuras	adventure
…de animación	animated
…de amor	love
…de ciencia ficción	science fiction
…extranjera	foreign
los personajes	the characters
la banda sonora	the sound track
agradable	pleasant
disafiante	challenging
emocionante	exciting
entretenido	entertaining

Week 8- El deporte en el futuro	
mañana	tomorrow
este viernes	this Friday
la semana próxima	next week
el año próximo	next year
diré	I will say
entrenaré	I will train
haré	I will do
iré	I will go
pondré	I will put
practicaré	I will practise
querré	I will want
sabré	I will know
tendré	I will have
vendré	I will sell
habrá	there will be
será	it will be

Week 3- Mis planes	
pienso	I'm thinking of
espero	I hope
voy a	I'm going
quiero	I want
me gustaría	I would like
te gustaría	you would like
asistir	to attend/attending
charlar	to chat/chatting
cocinar	to cook/cooking
ir	to go/going
jugar	to play/playing (sport)
leer	to read/reading
llevar	to take/taking
venir	to come/coming

Week 9- El deporte en el mundo	
el alpinismo	rock climbing
la carrera	race
el concurso	competition
el jugador	player
el partido	match
la salud	health
seguro	sure
contestar	to answer
ganar	to win
probar	to try, to test

Week 10- Los beneficios	
empezar	to start
romper	to break
seguir	to follow
el campeón	champion
el esfuerzo	effort
la pelota	ball
la suerte	luck
las zapatillas	trainers
duro	hard
equilibrado	balanced
junto con	together with

Weeks 11 & 12- All vocabulary

Weeks 4 & 5- Comer fuera	
el atún	tuna
el bacalao	cod
la barra	loaf
el bistec	steak
los calamares	squid
la camarera	waitress
el camarero	waiter
el cerdo	pork
la cerveza	beer
los champiñones	mushrooms
la chuleta	chop
la cuchara	knife
el cuchillo	spoon
la cuenta	the bill
los espeguetís	spaghetti
la fresa	strawberry
las gambas	prawns
el gazpacho	chilled soup
los mariscos	seafood
el melocotón	peach
el pescado	fish
la piña	pineapple
el plátano	banana
la ración	portion
la salsa	sauce
el tenedor	fork
el vaso	glass
el vino tinto	red wine
¿cuánto cuesta?	How much is it?
de primero	firstly
de segundo	secondly
de postre	for dessert
voy a tomar	I'm going to have
traer	to bring

YEAR 9 CYCLE 2 SEPERATE SCIENCE

Year 9 Separate Science Cycle Two

Key Vocabulary

1. **Activation Energy –** the minimum amount of energy needed by colliding particles for a reaction to happen.
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.
3. **Crystallisation -** separating the solute from a solution by evaporation the solvent.
4. **Endothermic reaction** – a reaction where heat energy is given out.
5. **Enzymes** – are biological catalysts. They can be used in the production of alcoholic drinks.
6. **Exothermic reaction** – a reaction where heat energy is taken in.
7. **Filtration** – Using a filter to separate an insoluble solid from a liquid.
8. **Gas Pressure** – the force generated by particles colliding with the container walls.
9. **Insoluble** – cannot dissolve in that solvent.
10. **Isotope –** a different version of an atom with the same number of electrons and protons but a different neutron number.
11. **Mixture –** contains one or more elements/compounds that are not chemically joined. Can be separated into its components. Has sharp changes in boiling point due to its different components.
12. **Potable** – safe to drink
13. **Pure substance –** composition cannot be changed, is the same in all parts of the substance so it has gradual changes in its properties. Ie. Boiling point.
14. **Soluble** – can dissolve
15. **Solute –** the thing being dissolved
16. **Solvent –**the liquid the solute dissolves in.

Week One

1. **Solid -** Particles in fixed positions, regular arrangement, vibrate in fixed positions when heated. Lowest energy.
2. **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.
3. **Gas –** Random arrangement of particles, not touching, moving fast in all directions.
4. **Changes between the states are known as physical changes.**
5. **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.
6. **Fractional distillation** - separates a mixture of liquids with different boiling points into different fractions.

Week Two

1. **Paper chromatography –**

a. 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.
b. Pure inks only have one dye/spot.
c. Insoluble inks stay on the sample line.
d. Rf can be calculated to compare inks.
e. $R_f = \frac{\text{distance moved by the spot}}{\text{distance moved by the solvent}}$

2. Waste and ground water is made **potable** through sedimentation, filtration & chlorination.
3. Sea water can be made potable by using distillation.

Week Three

1. **Atomic structure**

Particle	Charge	Mass	Location
Proton	+ 1	1	Nucleus
Neutron	0	1	Nucleus
Electron	- 1	1/1835	Electron shell

2. There is always the same number of protons & electrons in an atom.
3. **Atomic mass** = protons + neutrons
4. **Atomic number** = protons
5. **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**.

Week Four

1. Electrons occupy shells in order and fill the shell closes to the nucleus first. There is a limit to the number of electrons:
    1. 1st shell – 2 electrons
    2. 2nd shell – 8 electrons
    3. 3rd shell – 8 electrons
2. You can work out which group an element is in by the number of electrons in the outer 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

1. **Conservation of mass** states that the mass of reactants will always be **equal** to the mass of the products (symbol equations must be balanced).
2. 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 non-enclosed system).
3. **Empirical formulae** – simplest whole number ratio of elements in a compound.
   a. Write the mass for each element in the question.
   b. Record the RAM for each element.
   c. Calculate the number of moles (No of moles = question mass/RAM)
   d. Divide all elements by the smallest No of moles.
4. **Number of moles (mol) = mass (g) / Molar mass**

Week Six

1. **Group 1 (Alkali metals)** – all have:
   a. 1 electron in their outer shell & form 1^+ ions
   b. **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,
   c. are soft, float on water
   d. relatively low melting points.
2. **Group 7 (Halogens)** – all have:
   a. 7 electrons in their outer shell & form a 1^- ion,
   b. **reactivity decreases** as you go down the group. The **force of attraction** decreases making it harder to attract extra electrons,
   c. are all diatomic (travel in pairs, Cl_2)
3. **Group 0 (Noble gases) -**
   a. are inert (unreactive) because they have a full outer shell,
   b. have a low density, colourless, poor conductors of heat & are non-flammable.

Week Seven

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

1. **Exothermic** –
   a. heat energy is given out,
   b. bonds are made.
   c. more heat energy is released in forming bonds in products than is required in breaking bonds.
   d. **neutralisation** and **displacement** reactions are always exothermic.
2. **Endothermic** –
   a. heat energy is taken in,
   b. bonds are broken.
   c. Less energy is released in forming bonds in the products than required in breaking bonds in the reaction.
3. **Precipitation** reactions and **salts dissolving in water** can be either exothermic or endothermic.

Week Nine

1. **Formation** of **ionic** bonds –
   a. Formed by **transferring** electrons between atoms creating **ions** with a + or – charge.
   b. Cations are positively charged ions.
      a. Group 1 metals form +1 cations
      b. Group 2 metals form +2 cations
   c. Anions are negatively charged ions.
      a. Group 6 non-metals form -2 anions
      b. Group 7 non-metals form -1 anions
2. **Structure** of ionic compounds
   a. Regular arrangement of ions
   b. Held together by strong electrostatic forces between oppositely-charged ions.
3. **Properties** of ionic compounds
   a. High melting & boiling points due to forces.
   b. Conduct electricity when molten or dissolved.

Week Ten

1. **Formation** of **covalent** bonds –
   a. when a pair of electrons is **shared** between two atoms forming **molecules**.
   b. Molecules can form simple of giant structures.
2. **Simple** covalent structures –
   a. Low melting & boiling points due to weak intermolecular forces between molecules.
   b. Poor conductors of electricity
3. **Giant** covalent structures –
   a. **Diamond** – each C atom forms four bonds linking layers of atoms, which are v strong.
   b. **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 2A WEST EXE BACCALAUREATE - People Skills

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 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

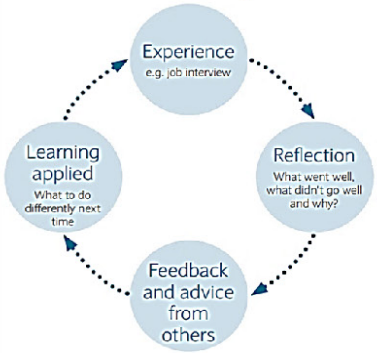
Personal values: A set of beliefs held by an individual

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



A model of behaviour

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 wrong

Courage: Doing something even if it scares you or makes you 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 saying 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 just 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 yourself – 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 feelings
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 2B WEST EXE BACCALAUREATE - Prejuduce and Discrimination

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.

Week 7

Key words

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 from this group

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 open-minded 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

Week 9

Types of prejudice

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 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.

INTRODUCTION OF GRAMMAR

	NAME	DEFINITION	EXAMPLE
Types of Verbs	**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.
	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.
	Modal 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.
	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
Types/parts of sentence	**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 *verb*.	The **crocodile** *ate* my friend. In the desert, **scorpions** *hide*. The **car crash** *was* unexpected and tragic.
	Object	A main clause *can* have an object, but it doesn't need one. The object is the thing that receives the *verb* - the subject affects it in some way.	The **girl** *kicked* the ball. The **man** *ate* all of the cake.
	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.
	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 main clause and one or more **subordinate clause.** A *subordinating conjunction* 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.**

Types/parts of sentence	**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.**
	Embedded Clause/Phrase	**Clauses** and phrases 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.
	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	**Phrases**	Whereas a clause has **BOTH** a subject and a finite verb, a phrase does not have **BOT**H 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.
	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.
	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.
Advanced Punctuation	**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.
	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.
	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 *really* interested - that it can replace commas too.

Notes

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West Exe School

community • opportunity • success