

# Knowledge Book

Year 10

**Cycle Two**

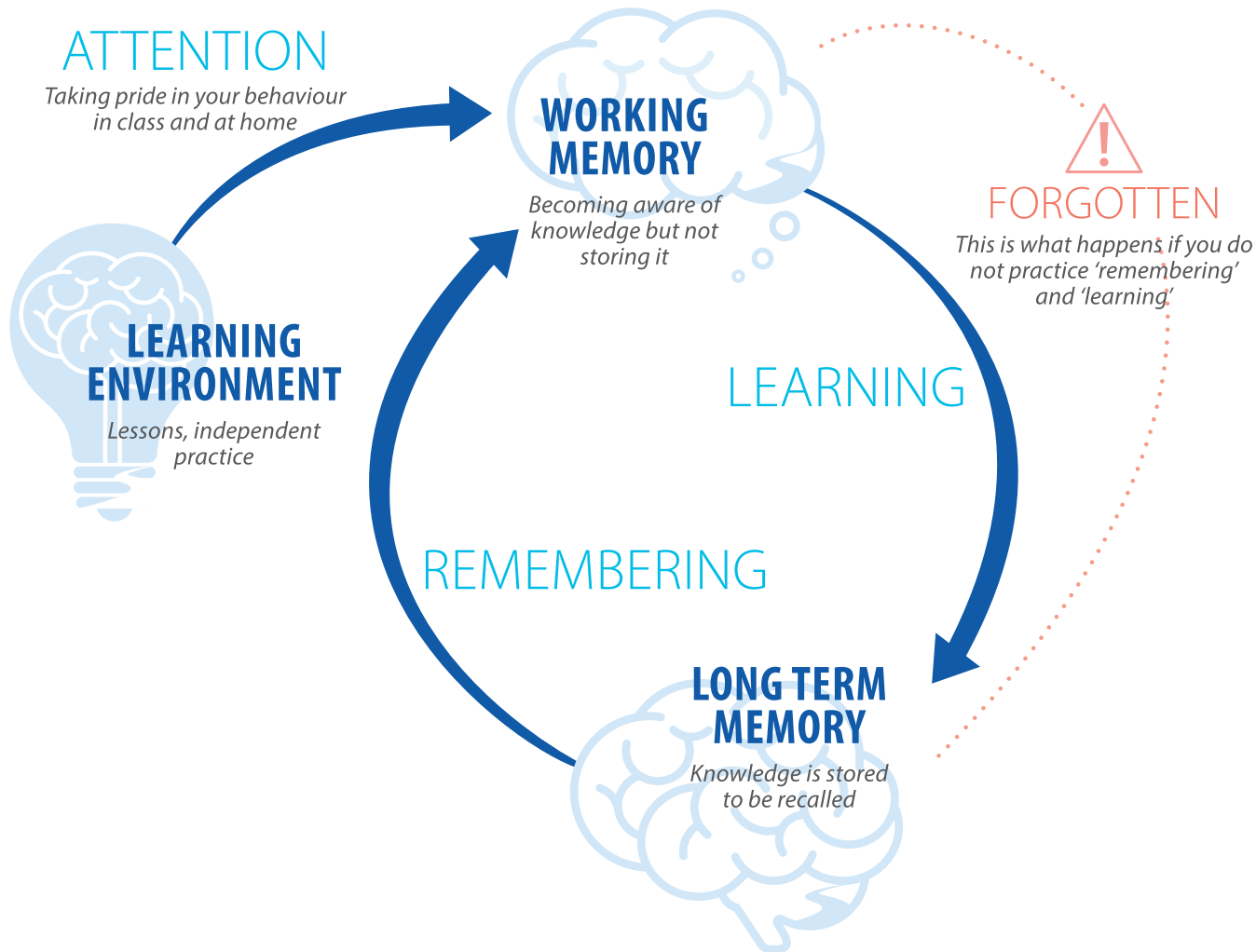
Name:



**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**.

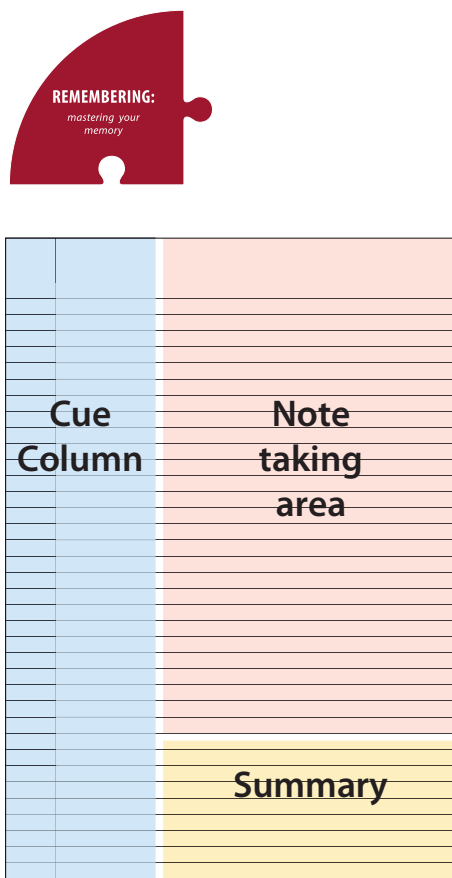
You can take practical steps to improve your ability to **learn** and **remember** key information and become the master of your memory.

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	10 minutes	10 minutes
<b>Monday</b>	Science	Spanish	Option P	Maths - SPARX			
<b>Tuesday</b>	Science	Spanish	English Literature	Maths - SPARX			
<b>Wednesday</b>	Science	Spanish	History or Geography	Option Q			
<b>Thursday</b>	Science	Spanish	English Literature	Option P			
<b>Friday</b>	WEB		English Literature	Maths - SPARX	History or Geography	Option Q	

### 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.






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## HOUSE WEEK, WEST EXE SCHOOL & BRITISH VALUES

	West Exe School Values	British Values	House Week Activities	Key Questions
House Week 1	<p><b>Citizenship</b></p>  <p>Through respect, responsibility and integrity we make the world a better place.</p>	<p><b>Democracy</b></p> <p>Understanding how citizens can influence decision-making through the democratic process.</p> <p><b>Rule of Law</b></p> <p>Appreciating that living under the rule of law protects individual citizens and is essential for their wellbeing and safety.</p>	<ul style="list-style-type: none"> <li>• School Parliament Elections</li> <li>• House Charity Vote</li> </ul>	<p>What is a good citizen?</p> <p>What behaviours would we expect of a good citizen?</p> <p>Do we need rules?</p>
House Week 2	<p><b>Compassion</b></p>  <p>Through kindness and empathy we care and show respect for ourselves and others.</p>	<p><b>Tolerance and Mutual Respect</b></p> <p>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.</p>	<ul style="list-style-type: none"> <li>• Charity Fundraising</li> <li>• Anti-bullying Ambassadors Activities</li> <li>• Green Team Activities               <ul style="list-style-type: none"> <li>• Mental Health</li> </ul> </li> <li>• Celebrating Diversity</li> </ul>	<p>What is tolerance?</p> <p>Is tolerance enough?</p> <p>How does our community proactively combat discrimination?</p>
House Week 3	<p><b>Compassion</b></p>  <p>We are brave in our actions and ambitions in our dreams.</p>	<p><b>Individual Liberty</b></p> <p>Understanding that the freedom to choose and hold other faiths and beliefs is protected by law.</p>	<ul style="list-style-type: none"> <li>• Transition Focused Activities               <ul style="list-style-type: none"> <li>• Sports Day</li> </ul> </li> <li>• Taster Sessions (being brave and trying new things)</li> </ul>	<p>What does it mean to succeed?</p> <p>How do individuals demonstrate courage in our community?</p> <p>How is our individual liberty protected?</p>

## BULLYING UPDATE - YEAR 10

**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 many forms including:**

- Emotional abuse
- Social media
- Social exclusion
- Threatening behaviour
- Name calling
- Cyberbullying
- Sexting
- Sexual exploitation



*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



# 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;

- Work experience
- Employer encounters
- CareerPilot sessions
- A Post-16 Destinations Fayre

We want to support you to start thinking about the opprtunities available beyond West Exe.

**Key:** Vocational Routes Academic Routes

**Traineeship:** Up to 6 months in preparation for an apprenticeship, involves work experience.

**Apprenticeship:** Employed and paid a wage whilst working towards a job specific qualification.

**Applied Vocational Subjects:** Practical courses related to a specific job or career area.

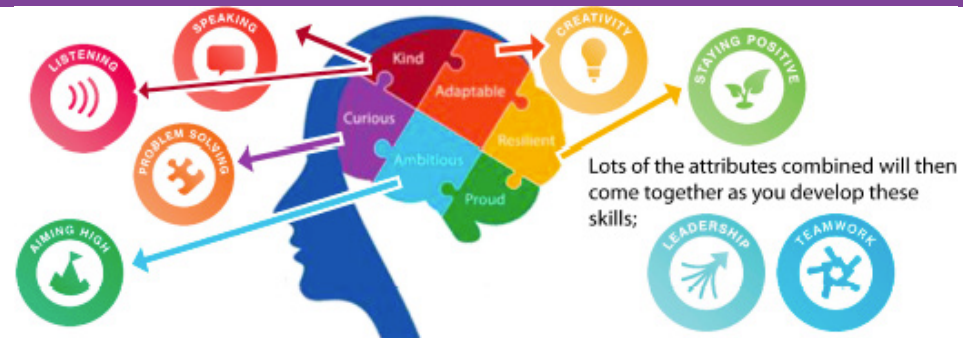
**T Levels:** A mix of classroom learning and "on-the-job" experience preparing for a specific job.

**A Levels:** Main academic route after GCSEs. Can be taken alongside vocational qualifications.

**International Baccalaureate (IB):** Internationally recognised 2 year course prepares for University or employment.

## 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.



## 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.

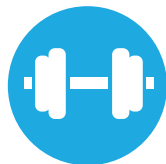
**Healthy body - healthy mind!** Links between physical activity and mental wellbeing. WES 10-a-day.

**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	Thinking (Mental) ME	Social ME
<p><b>Skill development:</b> Make a list of 5 new skills you have improved on during this cycle (e.g. shooting in handball or chopping technique in food). <input type="checkbox"/></p> <p><b>Attend an after-school club to help you develop and</b> improve these skills further. <input type="checkbox"/></p> <p><b>Developing fitness</b></p> <p>For one of the sports, you are covering in this cycle, <b>identify the main components of fitness needed.</b> <input type="checkbox"/></p> <p><b>Engage in periods of sustained physical activity.</b></p> <p>The NHS recommends that you do 2 types of physical activity each week:</p> <ol style="list-style-type: none"> <li>1. Aerobic exercise.</li> <li>2. Exercises to strengthen muscles and bones.</li> </ol> <p>Young people aged 5-18 should:</p> <ul style="list-style-type: none"> <li>• Aim to do 60 mins of moderate-vigorous physical activity each day across the week.</li> <li>• Take part in activities that develop movement skills, muscles and bones.</li> <li>• Reduce the time spent sitting or lying down - spread activity throughout the day. Monitor and regulate your screen time.</li> </ul> <p><b>Keep a log of your activity levels for a typical week - see if you meet the NHS guidelines.</b></p> <p><b>Monitor your screen time for a week.</b> <input type="checkbox"/></p> <p><b>Use equipment safely and hygienically.</b></p> <p><b>Think about the activities you are doing in this cycle and in each session be conscious of at least 2 safety considerations needed.</b> <input type="checkbox"/></p> <p><b>Cook a healthy meal from one of the recipes you have done in food this cycle.</b> <input type="checkbox"/></p>	<p>Making appropriate time for <b>rest, relaxation, and sleep</b> - Having routines that support positive mental health.</p> <p><b>Try to get 8-10 hours of good quality sleep a night!</b></p> <p><b>Rules, strategies and tactics.</b> Think about:</p> <ul style="list-style-type: none"> <li>• What are the main <b>rules</b> for the sport you are covering now? Write down 3 rules you have learnt. <input type="checkbox"/></li> <li>• Can you give an example of a <b>simple strategy or tactic</b> you have been using? <input type="checkbox"/></li> <li>• Can you give an example of a more <b>complex strategy or tactic</b> you have been using? <input type="checkbox"/></li> <li>• <b>Give 3 rules you must follow in the kitchen.</b> <input type="checkbox"/></li> </ul> <p><b>Terminology:</b></p> <p><b>Give 3 examples of terminology you have learnt in any of your SHN lessons.</b> <input type="checkbox"/></p> <p><b>Knowledge of muscles and bones</b> - how many muscles and bones can you label correctly? <input type="checkbox"/></p> <p><b>Being resilient</b> - positive growth mindset and never give up attitude- always looking to improve! <b>Give an example of how you have demonstrated resilience in your lessons.</b> If you found something challenging/ difficult but kept trying - How did you feel afterwards? <input type="checkbox"/></p>	<p><b>Leadership</b> - Taking responsibility within lessons (e.g. officiating, leading warm ups or practices or supporting food preparation in food lessons).</p> <ul style="list-style-type: none"> <li>• <b>Offer to be a leader for a lesson!</b> <input type="checkbox"/></li> <li>• <b>Help another person in a lesson to help them make progress.</b> <input type="checkbox"/></li> <li>• <b>Officiate a game.</b> <input type="checkbox"/></li> <li>• <b>Give feedback and support to another person.</b> <input type="checkbox"/></li> <li>• <b>Motivate and encourage others in a lesson.</b> <input type="checkbox"/></li> <li>• <b>Make an effort to INCLUDE another less confident person in your lesson. Help others learn - coaching.</b> <input type="checkbox"/></li> </ul> <p><b>Teamwork</b> - Working together - Work co-operatively, work collaboratively to achieve a goal. <input type="checkbox"/></p> <p><b>Give 2 examples of where you have shown good teamwork.</b> <input type="checkbox"/></p> <p><b>Communication</b></p> <p><b>Verbal</b> - give some feedback on a performance - <b>What went well? How could they improve it?</b> <input type="checkbox"/></p> <p><b>Non-verbal</b> - Use of whistle, signals as an official, use of a demonstration - <b>Try to do one of these each week.</b> <input type="checkbox"/></p> <div data-bbox="1615 1220 1789 1396" style="text-align: center;"> </div>



# 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...

### Diet

I could improve my diet by...

## Environment

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

Who can support you?

## Exercise

What exercise could I do? I need 60 minutes of exercise a day

I could add exercise to my day by...

## Mind

### What am I worrying about?

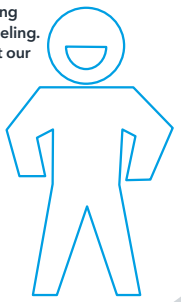
Is there anything I can do about it?

**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:

- Stand/sit tall with your shoulders back
- Hold your head up
- Smile

## 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...

## 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...

## 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.

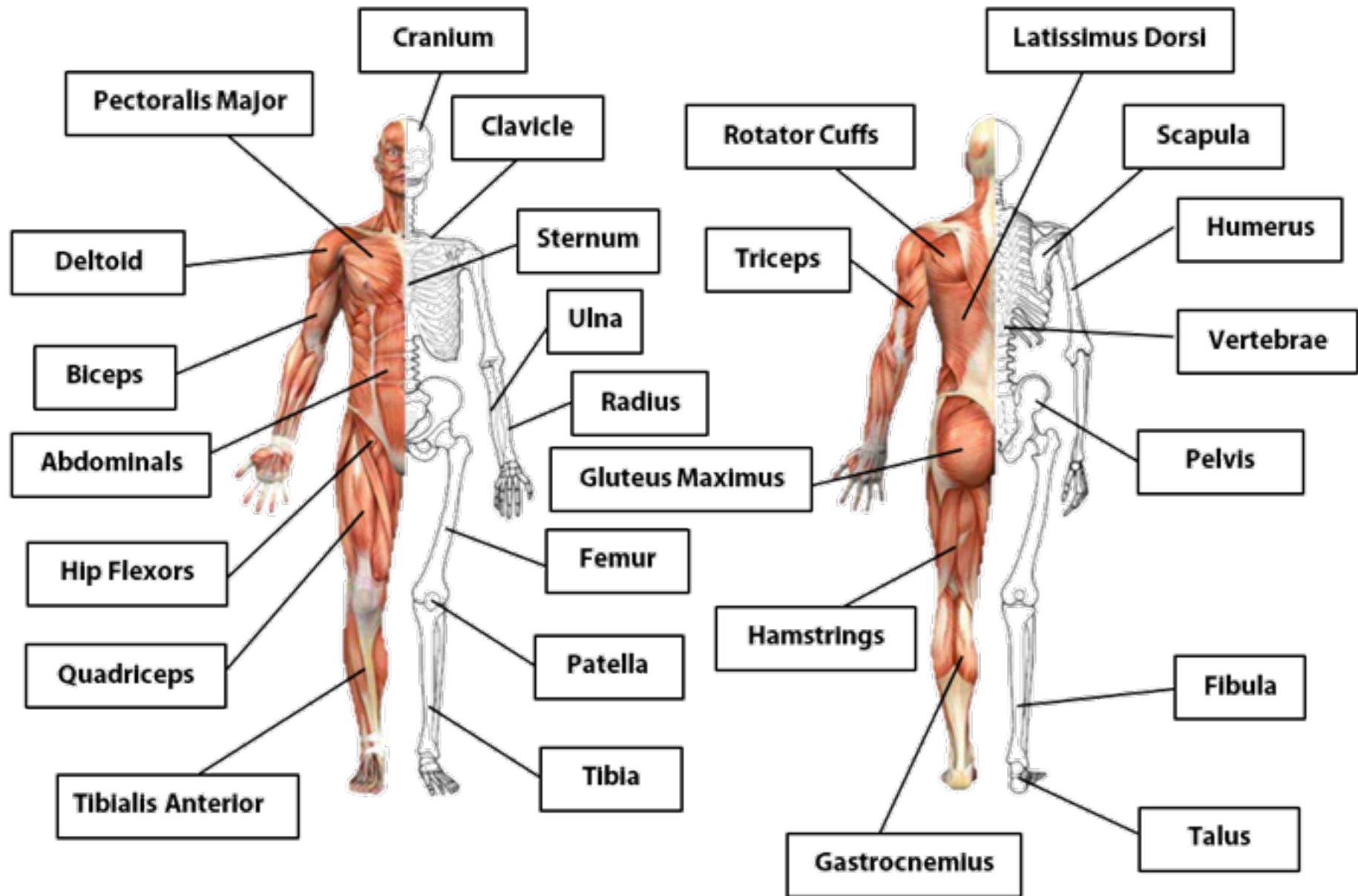
## Tips for learning new skills

- 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.

## New habits and actions

[Empty box for writing new habits and actions]

SPORT, HEALTH AND NUTRITION - Muscles and Bones



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	
<b>Following text at all times</b>	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.
<b>Switching the reader</b>	When you are given the instructions you are to take over the reading for a period of time. All pupils are expected to read.
<b>Holding the place</b>	Using your bookmarks to carefully note where you have stopped reading so that you can commence reading again swiftly once discussion is over.
<b>Checking the punctuation/emphasis</b>	Your teach may ask you to reread a section, paying attention to the pauses, exclamation marks and question marks written in the text.
<b>Pointing out the error</b>	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

**The 57 Bus - Dashka Slater (2017)**

**A true story of two teenagers and the crime that changed their lives.**

**Synopsis:** The 57 Bus begins as Richard and Sasha board the number 57 bus. They don't know each other, but they both ride the 57 bus home from school . Sasha is agender and their skirt draws the attention of Richard and his friends. As a prank, Richard holds a lit cigarette lighter to Sasha's skirt. The book follows the process of the court case and examines how people from different backgrounds are treated.

**Context:** Slater goes into depth about the targeting of trans and nonbinary Americans and the extraordinary number of hate crimes that community experiences, as well as Richard's trial and the fact that the media considered him a violent offender due to his skin colour.

**The Handmaid's Tale - Margaret Atwood (1985)**

**A masterly blend of adventure, character development and psychological penetration.**

**Synopsis:** Offred is a Handmaid in the Republic of Gilead. She may leave the home of the Commander and his wife once a day to walk to food markets whose signs are now pictures instead of words because women are no longer allowed to read. She must lie on her back once a month and pray that the Commander makes her pregnant, because in an age of declining births, Handmaids are only valuable for their ovaries.

**Context:** The Handmaid's Tale explore the consequences of a reversal of women's right. It follows a group of conservative religious extremists who take over power of America. It is considered as a one of the most powerful portrayals of a totalitarian society.





## Year 10 CYCLE 2 ENGLISH





Year 10 CYCLE 2 MATHS - Foundation Formula Quiz

Weeks 1, 2 & 3

Weeks 4, 5 & 6

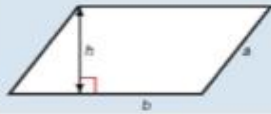
Weeks 7, 8 & 9

Areas

Rectangle =  $l \times w$



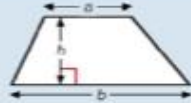
Parallelogram =  $b \times h$



Triangle =  $\frac{1}{2} \times b \times h$



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



Circles

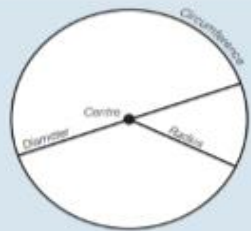
Circumference =

$\pi \times \text{diameter} = \pi d$

$2 \times \pi \times \text{radius} = 2\pi r$

Area of a circle =

$\pi \times \text{radius squared} = \pi r^2$

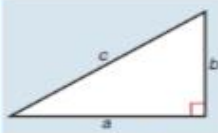


Right-angled triangles

Pythagoras' Theorem

For a right-angled triangle,

$a^2 + b^2 = c^2$



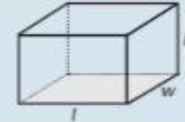
Trigonometric ratios (new to F)

$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$ ,  $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$ ,  $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$



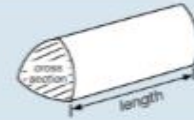
Volumes

Cuboid =  $l \times w \times h$



Prism =

$\text{area of cross section} \times \text{length}$



Cylinder =  $\pi r^2 h$



Compound measures

Speed

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



Density

$\text{density} = \frac{\text{mass}}{\text{volume}}$

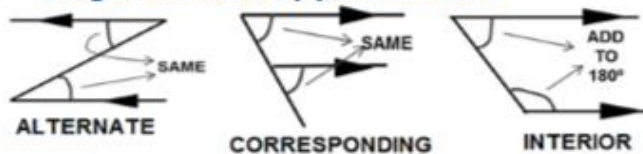


Pressure

$\text{pressure} = \frac{\text{force}}{\text{area}}$



Angles formed by parallel lines



Foundation Formula Quiz

Constructing Pie Charts

The angle to draw for each sector is

$\text{Angle} = \frac{\text{frequency}}{\text{total}} \times 360^\circ$

Angles in Polygons

$\text{Sum of Interior Angles} = (n - 2) \times 180^\circ$

Where  $n$  is the number of sides of the shape

Exterior Angles add up to  $360^\circ$

One exterior angle in a REGULAR polygon =  $\frac{360^\circ}{n}$

$\text{Interior} + \text{Exterior} = 180^\circ$

Other useful formulae

$\text{gradient} = \frac{\text{change in } y}{\text{change in } x}$

$\% \text{ change} = \frac{\text{difference}}{\text{original}} \times 100$

Types of numbers

SQUARE NUMBERS

→ 1, 4, 9, 16, 25, 36, 49, 64, 81, 100 etc  
(1x1) (2x2) (3x3) (4x4) (5x5) (6x6) (7x7) (8x8) (9x9) (10x10)

CUBE NUMBERS

→ 1, 8, 27, 64, 125 etc  
(1x1x1) (2x2x2) (3x3x3) (4x4x4) (5x5x5)

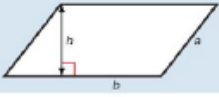
PRIME NUMBERS

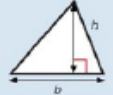
→ 2, 3, 5, 7, 11, 13, 17, 19, 23, 29 etc

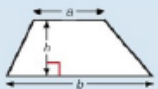
# Year 10 CYCLE 2 MATHS - Higher Formula Quiz

## Weeks 1, 2 & 3

### Areas

Parallelogram =  $b \times h$  


Triangle =  $\frac{1}{2} \times b \times h$  

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

### Circles

Circumference =  $\pi \times \text{diameter} = \pi d$   
OR  
 $2 \times \pi \times \text{radius} = 2\pi r$

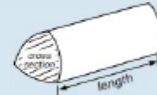
Area of a circle =  $\pi \times \text{radius squared} = \pi r^2$






Area of a Sector  
 $A = \frac{\theta}{360^\circ} \times \pi r^2$

Length of an Arc  
 $A = \frac{\theta}{360^\circ} \times \pi d$

### Volumes

Prism =  $\text{area of cross section} \times \text{length}$  

Cylinder =  $\pi r^2 h$  

Volume of pyramid =  $\frac{1}{3} \times \text{area of base} \times h$  

## Weeks 4, 5 & 6

### Angles in Polygons


Sum of Interior Angles =  $(n - 2) \times 180^\circ$   
Where  $n$  is the number of sides of the shape

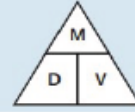
Exterior Angles add up to  $360^\circ$

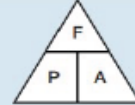
One exterior angle in a REGULAR polygon =  $\frac{360^\circ}{n}$

Interior + Exterior =  $180^\circ$

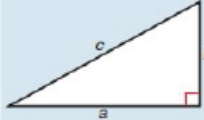
### Compound measures

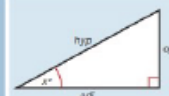
Speed  
speed =  $\frac{\text{distance}}{\text{time}}$  

Density  
density =  $\frac{\text{mass}}{\text{volume}}$  

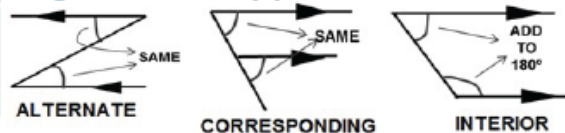
Pressure  
pressure =  $\frac{\text{force}}{\text{area}}$  

### Right-angled triangles

Pythagoras' Theorem  
For a right-angled triangle,  
 $a^2 + b^2 = c^2$  

Trigonometric ratios (new to F)  
 $\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$ ,  $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$ ,  $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$  

### Angles formed by parallel lines



## Weeks 7, 8 & 9

### Quadratic equations

The Quadratic Equation  
To solve a quadratic equation in the form:  
 $ax^2 + bx + c = 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

### Indices and surds

$$a^0 = 1 \quad a^{\frac{1}{2}} = \sqrt{a}$$

$$a^{-n} = \frac{1}{a^n} \quad a^{\frac{1}{n}} = \sqrt[n]{a}$$

$$\sqrt{a \times b} = \sqrt{a} \times \sqrt{b}$$

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

### Straight lines

$$\text{gradient} = \frac{\text{change in } y}{\text{change in } x}$$

Given a gradient of a line  $m$ , the gradient of the line perpendicular to it is:  $-\frac{1}{m}$

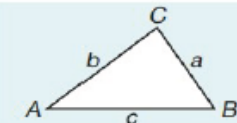
Perpendicular gradients multiply to give  $-1$ .

### Trigonometric formulae

Sine Rule  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

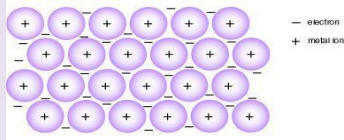
Cosine Rule  $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle =  $\frac{1}{2} ab \sin C$



$x$	$0^\circ$	$30^\circ$	$45^\circ$	$60^\circ$	$90^\circ$
$\sin x$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
$\cos x$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
$\tan x$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	Undefined (asymptote)

## Year 10 CYCLE 2 COMBINED SCIENCE

Year 10 Combined Science Cycle Two	Week One	Week Two																
<p><b>Key Vocabulary</b></p> <ol style="list-style-type: none"> <li><b>Alkali:</b> a solution containing excess hydroxide ions (OH<sup>-</sup>), turns litmus blue and has a pH greater than 7</li> <li><b>Anion:</b> negatively charged ion, one that has gained electron/s</li> <li><b>Anode:</b> positively charged electrode</li> <li><b>Base:</b> a substance that will react with an acid to form only salt and water</li> <li><b>Cathode:</b> negatively charged electrode, cations collect here. Reduction occurs here.</li> <li><b>Cation:</b> positively charged ion, one that has lost electron/s</li> <li><b>Electrode:</b> a rod made of a metal or graphite that carries the current into or out of the electrolyte</li> <li><b>Electrolysis:</b> a process in which electrical energy form a direct current supply decomposes electrolytes</li> <li><b>Filtrate:</b> a solution that is passed through a filter</li> <li><b>Filtration:</b> using a filter to separate insoluble substances from a liquid</li> <li><b>Ion:</b> an atom or group of atoms with an electrical charge due to the gain or loss of electrons</li> <li><b>Neutralisation:</b> a reaction in which an acid reacts with a base to produce a salt and water only</li> <li><b>Oxidation:</b> loss of electrons or the gain of oxygen</li> <li><b>Reduction:</b> gain of electrons or the loss of oxygen</li> </ol>	<p><b>1. Atomic structure</b></p> <table border="1" data-bbox="779 309 1377 528"> <thead> <tr> <th>Particle</th> <th>Charge</th> <th>Mass</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>Proton</td> <td>+ 1</td> <td>1</td> <td>Nucleus</td> </tr> <tr> <td>Neutron</td> <td>0</td> <td>1</td> <td>Nucleus</td> </tr> <tr> <td>Electron</td> <td>- 1</td> <td>1/1835</td> <td>Electron shell</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>There is always the same number of protons &amp; electrons in an atom.</li> <li><b>Atomic mass</b> = protons + neutrons</li> <li><b>Atomic number</b> = protons</li> <li><b>Mendeleev</b> 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 <b>isotopes</b>.</li> </ol>	Particle	Charge	Mass	Location	Proton	+ 1	1	Nucleus	Neutron	0	1	Nucleus	Electron	- 1	1/1835	Electron shell	<p><b>1. Ionic bonding:</b></p> <ol style="list-style-type: none"> <li>is the <b>transfer of electrons</b> to gain a full outer shell forming oppositely charge particles that attract due to <b>electrostatic forces of attraction</b></li> <li>occurs between a <b>metal</b> and a <b>non-metal</b></li> <li>forms substances with have <b>high melting</b> and <b>boiling</b> points</li> </ol> <ol style="list-style-type: none"> <li>When ionic substances are <b>molten</b> or dissolved in solution they <b>conduct electricity</b> because the <b>free electrons</b> can carry a <b>current</b>.</li> <li>For a substance to <b>conduct</b> electricity:             <ol style="list-style-type: none"> <li>It must contain <b>charged particles</b></li> <li>These particles must be <b>free</b> to move</li> </ol> </li> </ol>
Particle	Charge	Mass	Location															
Proton	+ 1	1	Nucleus															
Neutron	0	1	Nucleus															
Electron	- 1	1/1835	Electron shell															
	<p><b>Week Three</b></p> <p><b>1. Covalent bonding:</b></p> <ol style="list-style-type: none"> <li>takes place to form atoms with a <b>full</b> outer shell</li> <li>occurs between a <b>non-metal</b> and a <b>non-metal</b></li> <li>is when a <b>pair of electrons</b> is <b>shared</b> between <b>two atoms</b></li> </ol> <ol style="list-style-type: none"> <li><b>The structure and bonding</b> of substances results in <b>different properties</b> such as <b>melting point</b> and <b>boiling point</b>.</li> <li><b>Covalent</b> substances typically have:             <ol style="list-style-type: none"> <li>low melting points</li> <li>low boiling points</li> <li>poor conductivity of electricity</li> </ol> </li> <li>Examples of <b>simple covalent</b> structures include: hydrogen, water, methane, oxygen and carbon dioxide.</li> </ol>	<p><b>Week Four</b></p> <p><b>1. Metals and metallic bonding</b></p> <ol style="list-style-type: none"> <li>Metals are <b>malleable</b> which means they can be hammered and rolled into shape without shattering.</li> <li>Metals can <b>conduct electricity</b> because of the presence of free charge particles that can carry a current (<b>delocalised electrons</b>)</li> <li>Metals that can contribute a larger number of free electrons have higher conductive properties than those that contribute less. E.g .Mg<sup>2+</sup> compared to K<sup>+</sup></li> </ol> 																



## Year 10 CYCLE 2 COMBINED SCIENCE

Week Five	Week Six	Week Seven																		
<p>1. <b>Indicators</b> are used to determine whether a solution is <b>acid</b>, <b>alkaline</b> or <b>neutral</b>.</p> <p>2. <b>Acids</b> contribute <b>hydrogen ions (H<sup>+</sup>)</b> and have a <b>pH</b> between <b>1-6</b>.</p> <p>3. <b>Alkalis</b> contribute <b>hydroxide ions (OH<sup>-</sup>)</b> and have a <b>pH</b> between <b>8-14</b>.</p> <p>4. <b>Neutral</b> substances have a <b>pH</b> of <b>7</b>.</p> <p>5. The <b>higher</b> the <b>concentration</b> of <b>hydrogen ions</b> the <b>lower</b> the <b>pH</b>.</p> <table border="1" data-bbox="136 539 730 751"> <thead> <tr> <th colspan="3">Colours of different indicators in acid and alkali</th> </tr> <tr> <th>Indicator</th> <th>Acid</th> <th>Alkali</th> </tr> </thead> <tbody> <tr> <td>Universal indicator</td> <td>Red</td> <td>Blue</td> </tr> <tr> <td>Litmus</td> <td>Red</td> <td>Blue</td> </tr> <tr> <td>Phenolphthalein</td> <td>colourless</td> <td>Pink</td> </tr> <tr> <td>Methyl orange</td> <td>red</td> <td>yellow</td> </tr> </tbody> </table>	Colours of different indicators in acid and alkali			Indicator	Acid	Alkali	Universal indicator	Red	Blue	Litmus	Red	Blue	Phenolphthalein	colourless	Pink	Methyl orange	red	yellow	<p>1. A <b>base</b> is any substance that reacts with an <b>acid</b> to form <b>water</b> and <b>salt only</b> in a <b>neutralisation</b> reaction.</p> <p>2. <b>Acid + base → Salt + water</b></p> <p>3. <b>Copper oxide + sulfuric acid → Copper sulfate + water</b></p> <p>4. Add the <b>acid</b> in <b>excess</b> to ensure all the solid reacts.</p> <p>5. The <b>unreacted</b> solid (<b>residue</b>) is removed using a filter funnel.</p> <p>6. The liquid that has been filtered (filtrate) contains <b>salt</b> and <b>water only</b>.</p> <p>7. A <b>soluble</b> salt is one which will <b>dissolve</b> in <b>water</b>.</p>	<p>1. Alkalis are <b>soluble</b> bases.</p> <p>2. <b>Neutralisation</b> is a reaction between an <b>acid</b> and a <b>base</b>.</p> <p>3. <b>Acid + base → Salt + water</b></p> <p>4. <b>Acid + metal → salt + hydrogen</b></p> <p>5. <b>Acid + metal oxide → salt + water</b></p> <p>6. <b>Acid + metal hydroxide → salt + water</b></p> <p>7. <b>Acid + metal carbonate → salt + water + carbon dioxide</b></p>
Colours of different indicators in acid and alkali																				
Indicator	Acid	Alkali																		
Universal indicator	Red	Blue																		
Litmus	Red	Blue																		
Phenolphthalein	colourless	Pink																		
Methyl orange	red	yellow																		
Week Eight	Week Nine	Week Ten																		
<p>1. <b>Solubility</b> rules:</p> <ol style="list-style-type: none"> <li>all sodium, potassium and ammonium salts are soluble</li> <li>all nitrates are soluble</li> <li>all chlorides are soluble except silver and lead are soluble</li> <li>common sulfates are soluble except lead, barium and calcium</li> <li>common carbonates, hydroxides are insoluble except sodium, potassium and ammonium</li> </ol> <p>2. <b>Acid + metal carbonate → salt + water + carbon dioxide</b></p> <p>3. Test for <b>hydrogen</b>: place a <b>lit splint</b> over the top of a test tube, you will hear a <b>squeaky pop</b> if <b>hydrogen</b> is <b>present</b>.</p> <p>4. Test for <b>carbon dioxide</b>: <b>bubble</b> the gas through lime water, the solution will go <b>cloudy white</b> if it is present.</p>	<p>1. <b>Electrolysis</b> of copper sulfate can be completed using <b>graphite (inert)</b> or <b>copper electrodes</b>.</p> <p>2. The <b>products</b> of <b>electrolysis</b> depend on whether the <b>salt</b> is in <b>solution (dissolved in water)</b> or <b>molten</b>.</p> <p>3. <b>Positively charged cations</b> will collect at the <b>cathode</b>.</p> <p>4. <b>Negatively charged anions</b> will collect at the <b>anode</b>.</p> <p>5. If the salt is <b>molten</b> it <b>splits into</b> its <b>ions</b>, e.g., NaCl forms Na<sup>+</sup> and Cl<sup>-</sup>.</p> <p>6. If the <b>salt</b> is in solution the <b>water</b> will also <b>split</b> into its <b>ions</b> which <b>creates OH<sup>-</sup> and H<sup>+</sup></b>.</p>	<p>1. <b>Electrolysis core practical:</b></p> <p>2. <b>Wear goggles</b> to <b>prevent chemicals</b> getting into your <b>eyes</b>.</p> <p>3. With <b>copper electrodes</b></p> <ol style="list-style-type: none"> <li>the <b>anode loses mass</b> and the <b>cathode gains mass</b></li> <li>as the <b>current increases</b> the loss in <b>mass</b> of the <b>anode increases</b> and the <b>gain in mass</b> at the <b>cathode increases</b></li> </ol> <p>4. <b>With graphite electrodes:</b></p> <ol style="list-style-type: none"> <li><b>Copper metal</b> collects at the <b>cathode</b></li> <li><b>Oxygen</b> is produced at the <b>anode</b></li> </ol> <p>5. <b>Oxidation</b> occurs at the <b>anode</b></p> <p>6. <b>Reduction</b> occurs at the <b>cathode</b></p>																		



## Year 10 CYCLE 2 GEOGRAPHY - Changing Economic World (Paper 2)

### WEEK 1

**Development** is an improvement in living standards through better use of resources.

**Economic:** This is progress in economic growth through levels of industrialisation and use of technology.

**Social:** This is an improvement in people's standard of living, for example, clean water and electricity.

**Environmental:** This involves advances in the management and protection of the environment.

#### Measuring development

**Employment type:** The proportion of the population working in primary, secondary, tertiary and quaternary industries.

**Gross Domestic Product (GDP) per capita:** The total value of goods and services produced by a country in a year divided by its population.

**Literacy rate:** The percentage of the population over the age of 15 who can read and write.

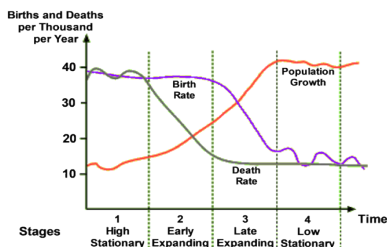
**Human Development Index (HDI):** A number that uses life expectancy, education level and income per person.

### WEEK 2

**LICs:** Poorest countries in the world. GNI per capita is low and most citizens have a low standard of living

**NEEs:** Countries are getting richer as their economy is progressing from the primary industry to the secondary industry. Greater exports leads to better wages.

**HICs:** These countries are wealthy with a high GNI per capita and high standards of living. These countries spend money on services.



- Stage 1:** High birth and death rates, low population growth
- Stage 2:** Birth rate remains high, death rate falls, population rising.
- Stage 3:** Low death rate, falling birth rate, increasing population.
- Stage 4:** Low birth and death rate, population steadies.
- Stage 5:** Falling death rate and low birth rate leading to natural decrease of the population.

### WEEK 3

#### Human factors affecting uneven development

**Aid:** Helps countries develop key projects for infrastructure faster. Improve services such as schools and hospitals. Too much reliance on aid hinders development though.

**Trade:** Countries that export more than the import have a trade surplus. Trading goods and services is more profitable than raw materials.

**Education:** Creates a skilled workforce, meaning people earn more money and can pay more taxes which helps to develop the country.

**Politics:** Corruption in local and national governments. Stability of the government can affect their ability to trade and to invest in services and infrastructure.

**History:** Colonialism has helped Europe develop but slowed the development of other countries. Countries which have already industrialised benefit economically today.

**Health:** Lack of clean water and poor healthcare means a large number of people suffer diseases. People who are ill cannot work so make little contribution to the economy.

### WEEK 4

#### Physical factors affecting uneven development

**Natural resources:** Fuel sources such as oil. Minerals and metals. Availability of timber. Access to safe water.

**Natural hazards:** Frequent hazards undermines development. Benefits from volcanic material and floodwater.

**Climate:** Reliability of rainfall to benefit farming. Extreme climates limit industry and affects health. Climate can attract tourists.

**Location/terrain:** Landlocked countries may find trade difficult. Mountainous terrain makes farming more challenging.

#### Consequences of uneven development

**Wealth:** People in HICs have higher incomes than those in LICs/NEEs

**Health:** Better healthcare means that people in HICs live longer.

**Migration:** If nearby countries have higher levels of development or are secure, people will move to seek better opportunities and standard of living.

### WEEK 5

#### Reducing the development gap

**Microfinance loans:** Involves people in LICs receiving small loans from traditional banks. Loans enable them to start their own businesses. Might not be effective at a large scale.

**Aid:** Given from one country to another as money or resources. Improve literacy rates, building dams, improving agriculture. Can be wasted by corrupt governments.

**Fair trade:** Movement where farmers get paid a fair price for the goods produced. Paid fairly so they can improve healthcare and schools. In reality, only a small proportion of extra money reaches the producers.

**Foreign-direct investment:** when one country buys property or infrastructure in another country. Leads to better access to finance, technology and expertise. Investment can come with ties that countries need to meet.

**Debt relief:** When a county's debt is cancelled or interest rates are lowered. Means more money can be spent on development. Locals might not always get a say. There might be ties from the donor country.

**Technology:** Includes tools, machines and affordable equipment. Renewable energy is less expensive and polluting. Requires investment in skills to operate machinery.



## Year 10 CYCLE 2 GEOGRAPHY - Changing Economic World (Paper 2)

### WEEK 6

#### CASE STUDY: Reducing the development gap in Jamaica

Jamaica is a LIC island nation in the Caribbean. Location makes Jamaica an attractive place for visitors to explore the tropical blue seas, skies and palm filled sandy beaches.

**Tourist economy:** In 2015, 2.12 million visited. Tourism contributes 27% of GDP and will increase to 38% by 2025. 130,000 jobs rely on tourism. Global recession in 2008 caused a decline in tourism.

**Multiplier effect:** Jobs from tourism have meant that more money has been spent in shops and other businesses. Government invested in infrastructure to support tourism. New sewage treatment plants reduced pollution.

**Development problems:** Tourists do not always spend very much money outside of their resorts. Infrastructure improvements have not spread to the whole island. Many people still live in poor quality housing and lack basic services such as healthcare.

### WEEK 7

#### CASE STUDY: Economic development in Nigeria



Nigeria is a NEE in West Africa, north of the equator. Most populous and economically powerful country in Africa. Economic growth has been based on oil exports.

#### Influences upon Nigeria's development

**Political:** Suffered instability with a civil war between 1967 and 1970. From 1999, more stable with free and fair elections. Stability encouraged investment from USA and China.

**Social:** Multi-cultural, multi-faith society. Mostly a strength, but diversity has caused regional conflicts from groups such as Boko Haram terrorists.

**Cultural:** Diversity has created rich and varied artistic culture as well as literacy and film (Nollywood). Successful football team.

### WEEK 8

#### CASE STUDY: Economic development in Nigeria

**Industrial structures:** Once based on agriculture, 50% of its economy is now manufacturing and services. A thriving manufacturing industry is increasing foreign investment and employment.

**The role of TNCs:** played an important role on Nigeria's economy (e.g. Shell). Profits often go to HICs. Oil spills have damaged fragile environments.

**Changing relationships:** Role with the African Union and UN. Growing links with China with huge investment in infrastructure. Main import includes petrol (EU), cars (Brazil) and phones (China).

**Environmental impacts:** 2008-2009 oil spill devastated swamps and ecosystems. Industry caused toxic chemicals to be discharged in open sewers risking human health. 80% of forest have been cut down increasing CO<sub>2</sub> emissions.

**Aid and debt relief:** Receives \$5 billion per year in aid. Aid groups have improved health centres, mosquito nets and protect against HIV/Aids

**Life expectancy increased from 46 to 53 years.**

### WEEK 9

#### CASE STUDY: Economic change in the UK



One of the largest economies in the world. Huge political, economic and cultural influences. UK has global transport links e.g. Heathrow and Eurostar.

**Causes of economic change:** Deindustrialisation. Globalisation which has meant that many industries have moved overseas, where labour costs are lower.

**Towards post-industrial:** the quaternary industry has increased whilst secondary decreased. Primary & tertiary stayed steady. Big increase in professional and technical jobs.

**Science parks:** groups of scientific and technical knowledge-based businesses on a single site. Access to transport routes. Educated workers. Attractive working environment. Clusters of high-tech businesses.

### WEEK 10

#### CASE STUDY: Economic change in the UK

**UK car industry:** Every year the UK makes 1.5 million cars. Factories owned by large TNCs e.g. Nissan. 7% of energy used in their factories is from wind energy. New cars more energy efficient and lighter. Nissan produces electric and hybrid cars.

#### Change to the rural landscape

**Social:** Rising house prices caused tension in villages. Unpopulated during the day causing loss of identity. Resentment towards migrant communities.

**Economic:** lack of affordable housing for local first time buyers. Sale of farmland increased rural unemployment.

Improvements to transport: £15 billion 'Road Improvement Strategy'. This will involve 10 new roads and 1600 extra lanes. £50 billion HS2 railways to improve connections between cities. £18 billion on Heathrow's controversial third runway.

**UK North/South divide:** wages lower and education worse in the north. Health better in south. Northern Powerhouse project to resolve regional differences.



YEAR 10 CYCLE 2A HISTORY - Early Elizabethan England Unit 1


Timeline of key dates		Key events / individuals	Key vocabulary
<b>1533</b>	Birth of Elizabeth to Henry VIII and Anne Boleyn	Elizabeth I: The Protestant daughter of Henry VIII and Anne Boleyn. Queen of England, 1558-88.	Catholics: Christians who remained loyal to the Pope. Spain, France and Scotland were all Catholic countries.
<b>1558</b>	Elizabeth accedes to the throne on the death of her sister, Mary Tudor	Mary Tudor or Mary I: Elizabeth's Catholic half-sister who was queen before Elizabeth (1553-1558). Philip II: The Catholic King of Spain.	Clergy: People who have been trained and approved for carrying out religious services in the Church. For example, priests.
<b>1559</b>	The Elizabethan religious settlement: the Acts of Supremacy and Uniformity	Mary, Queen of Scots: Elizabeth's Catholic cousin. Many English Catholics believed that she should be queen. Lord Darnley: Mary, Queen of Scots' first husband (a violent drunkard who was killed in 1567).	Court: The community of people who lived with the Queen, including advisers, officials, ladies-in-waiting and servants. Heir: The next-in-line to the throne, usually the monarch's oldest son.
<b>1568</b>	Mary, Queen of Scots flees to England	Bothwell (Earl of): Mary, Queen of Scots second husband and a suspect in the Darnley murder.	Illegitimate: To be born to unmarried parents. Catholics accused Elizabeth of being illegitimate because the Pope had not agreed to her parents' marriage.
		Mass: The name given to the Communion Service by Catholics.	
		Monarch: A king or queen.	
		Parliament: Summoned by the Queen when she needed laws passed or taxes raised.	
		Privy Council: The committee of ministers appointed by Elizabeth to advise her.	
		Protestants: Christians who had broken away from the Catholic Church and the power of the Pope.	
		Puritans: Extreme Protestants who wanted to remove all Catholic practices and rituals from the Church of England.	
		Reformation: The split in the Church in the 16 <sup>th</sup> century between Protestants and Catholics.	
		Secretary of State: The most important person in the Privy Council who organised all government business and who was in close contact with the Queen.	
		Taxation: Money collected by the government to pay for the running of the country.	
		Tudor: The name of the English royal family from 1485-1603.	

**Key to colours:**



Learn these words for week 2 / Learn these words for week 3 / Learn these words for week 4



## YEAR 10 CYCLE 2B HISTORY - Early Elizabethan England Unit 2

Timeline of key dates		Key events / individuals	Key vocabulary
1569	Revolt of the Northern Earls aims at placing Mary, Queen of Scots on the throne.	Earl of Northumberland & Earl of Westmorland: Leaders of the revolt of 1569 to overthrow Elizabeth and restore Catholicism.	Ambassador: Official envoy representing a state or country in a foreign land (e.g. a Spanish ambassador in England).
		Roberto Ridolfi: An Italian banker used by Mary, Queen of Scots to carry messages calling for an invasion of England.	Armada: Spanish word meaning a naval fleet or group of warships. Flyboat: A small, fast sailing boat.
1570	Pope Pius V excommunicates Elizabeth from the Catholic Church.	Duke of Norfolk: Key player in the Ridolfi plot. Planned to marry Mary, having restored Catholicism. Executed in January 1572.	Galleon: A large sailing ship with several decks, used in Spain between the 15 <sup>th</sup> and 18 <sup>th</sup> centuries, originally as a warship and later for trade.
		Francis Throckmorton: A young English Catholic who carried letters between Mary, Queen of Scots and the French and Spanish ambassadors. Executed in July 1584.	Governor General: Ruler of the Netherlands in the 16 <sup>th</sup> century in the absence of the monarch.
1571	The Ridolfi Plot.		Lord High Admiral: Appointed by the monarch to take control of all navy operations.
1583	The Throckmorton Plot.		Netherlands: European country on English Channel. Part of Spain's empire and therefore a threat to England.
1585	War begins between England and Spain.	Anthony Babington: A 25-year-old Catholic who carried letters for Mary. Part of a plot to assassinate Elizabeth. Executed in September 1586.	Pinnacle: A small ship with oars and sails.
		Robert Dudley: The Earl of Leicester. Sent to the Netherlands in 1585 and gave his support to Protestant rebels there.	Warning beacons: Fires lit at well-known locations on hills or high places, to warn of enemy ships or troops.
1586	The Babington Plot.		
1587	Execution of Mary, Queen of Scots.	Francis Drake: Son of a Devon farmer who gained fame as sailor and Protestant preacher. Circumnavigate the world in 1577-80. Vice Admiral of the fleet which defeated the Spanish Armada in 1588.	
	Drake's assault on the Spanish fleet in Cadiz harbour.		
1588	The Spanish Armada sent against England.		
<b>Key to colours:</b> <b>Learn these words for week 5 /</b> <b>Learn these words for week 6 /</b> <b>Learn these words for week 7</b>			

## YEAR 10 CYCLE 2C HISTORY - Early Elizabethan England Unit 3

Timeline of key dates		Key events / individuals	Key vocabulary
1572	Act for the Punishment of Vagabonds establishes harsh treatment of offenders	Vagabonds (top left): Travelling homeless beggars.	<b>Astrolabe:</b> An instrument used by sailors to calculate their position by the stars.
	Censorship of plays introduced. All acting companies had to have a royal licence.	William Shakespeare (top right): The most famous English playwright whose works were performed in The Globe theatre.	<b>Bullion:</b> Bars of gold and silver such as those being shipped to the Spanish Netherlands.
1576	Act for Relief of the Poor displays a more enlightened (kinder) attitude towards poverty.	Christopher Marlowe: Another famous Elizabethan writer of plays. His most acclaimed work was 'The Jew of Malta', a black comedy.	<b>Colonists:</b> People who have settled in a colony.
	The first theatre to be built since Roman times opened just outside London. It was named 'The Theatre'!	Francis Drake:(bottom left): Sailor, pirate (?) and privateer who cleared England's debt with the riches made from just one voyage.	<b>Colony:</b> A country (or piece of land) under the full or partial control of another, and occupied by settlers of that country.
1577	Drake begins his circumnavigation of the globe: the expedition lasts three years.	Walter Raleigh (bottom right): Sailor, explorer and visionary who wanted to create Virginia as a North American colony in Elizabeth's honour.	<b>Garrison:</b> A body of troops stationed in a fortified place such as a fort.
1585	The first attempt by Raleigh to establish the colony of Virginia. Starving colonists were rescued by Drake in 1586.		<b>Gloriana:</b> A name given to Elizabeth I because she was so gloriously successful.
1587	The second expedition to Virginia. When John White returned with supplies in 1590, the colonists had mysteriously disappeared.		<b>Latitude and longitude:</b> Imaginary lined circling the globe from horizontally (latitude) and vertically (longitude).
1558-1603	72 new grammar schools were founded during Elizabeth's reign. These were usually attended by sons of gentry, merchants and yeomen.		<b>Empire:</b> A collection of colonies. A <i>maritime</i> empire was one in which the ruling country had control of the seas.
By 1603	It was estimated that only 30% of men and less-than 10% of women could read and write.		<b>Masques:</b> Court entertainments in which famous events were shown through dance and mime.
			<b>Mutiny:</b> An open rebellion against authority, often among soldiers and sailors.
			<b>New World:</b> The 16 <sup>th</sup> century name for North and South America.
			<b>Piracy:</b> The practice of attacking and robbing ships at sea.
			<b>Religious crusade:</b> A holy war with a religious purpose, usually to capture and convert lands.
			<b>Vagabondage:</b> Vagrancy, homelessness, wandering without a purpose. Vagabonds were seen as a threat to society in the 16 <sup>th</sup> century and were often treated harshly.
			<b>Yeomen:</b> Farmers who owned their own land. Some grew quite wealthy during Elizabeth's reign.

**Key to colours:****Learn these words for week 8****Learn these words for week 9****Learn these words for week 10**

## Year 10 CYCLE 2 LANGUAGES







## Year 10 CYCLE 2 LANGUAGES

## Year 10 CYCLE 2A WEST EXE BACCALAUREATE - Work Skills

Week 1: Glossary	Week 2: Personal (soft) skills	Week 3: 21 <sup>st</sup> Century skills	Week 4: SMART Targets	Week 5: Interviews
<p><b>Personal skills / Soft skills:</b> Skills, values and qualities that are important in all jobs</p> <p><b>21<sup>st</sup> Century skills:</b> The skills identified as important for 21<sup>st</sup> century learners / workers</p> <p><b>Transferable skills:</b> Skills and abilities, which can be applied to a wide range of different courses and jobs</p> <p><b>SMART targets:</b> Goals that will help you successfully plan and complete a project</p> <p><b>CV:</b> A document that summarises a person's skills, character, experience and achievements</p> <p><b>Case interview:</b> An interview task where candidates are given a problem and have to come up with a solution</p> <p><b>Puzzle interview:</b> A question designed to see how quickly you can think on your feet and how you approach a difficult problem</p>	<p><b>Critical Thinking:</b> Employers want people who think creatively and make decisions using thoughtful analysis.</p> <p><b>Problem Solving:</b> Employers value problem solvers as they effectively and swiftly make rational decisions.</p> <p><b>Flexibility/Dependability:</b> Employers hire candidates who demonstrate reliability, responsibility, and trustworthiness; who adapt to change and are willing to help their colleagues.</p> <p><b>Interpersonal (People) Skills:</b> Employers want employees who are compatible with their employers, their colleagues, and clients.</p> <p><b>Motivated:</b> Employers seek employees who are motivated, positive and passionate about their job.</p>	<p><b>Ways of thinking:</b> Creativity; critical thinking; problem-solving; decision-making</p> <p><b>Ways of working:</b> Communication; collaboration</p> <p><b>Tools for working:</b> ICT; information literacy</p> <p><b>Skills for living in the world:</b> Citizenship; life and career skills; personal and social responsibility</p> <p><b>Transferable skills</b></p> <p><b>Interpersonal Skills:</b> Communication; leadership &amp; supervising; teamwork</p> <p><b>Exploration &amp; Implementation Skills:</b> Researching &amp; analysing; Problem solving &amp; decision making; planning &amp; organising</p> <p><b>Self-Management &amp; Values</b> Learning, improving &amp; achieving; enterprising; resilience, adaptability &amp; drive</p>	<p><b>Specific</b></p> <ul style="list-style-type: none"> <li>Well defined</li> <li>Clear to anyone that has a basic knowledge of the project</li> </ul> <p><b>Measurable</b></p> <ul style="list-style-type: none"> <li>Know if the goal is obtainable and how far away completion is</li> <li>Find out when you have achieved your goal</li> </ul> <p><b>Agreed upon</b></p> <ul style="list-style-type: none"> <li>Agree with everyone involved what the goals should be</li> </ul> <p><b>Realistic</b></p> <ul style="list-style-type: none"> <li>Within the availability of resources, knowledge and time</li> </ul> <p><b>Time-Based</b></p> <ul style="list-style-type: none"> <li>Enough time to achieve the goal</li> <li>Not too much time, which can affect project performance</li> </ul>	<p><b>Preparing for an interview</b></p> <ul style="list-style-type: none"> <li>Re-read the job description</li> <li>Consider why you want the job and your skills</li> <li>Research the company / job</li> <li>Consider your answers to common interview questions</li> <li>Practice your speaking voice and body language</li> <li>Prepare thoughtful questions for the interviewer</li> <li>Conduct mock interviews</li> <li>Plan travel arrangements</li> </ul> <p><b>Making a good impression</b></p> <p><b>Punctuality:</b> Arriving late gives a bad first impression</p> <p><b>Positivity and enthusiasm:</b> Answer questions with positive statements and be enthusiastic</p> <p><b>Body language:</b> Sit naturally, don't slouch, smile frequently and maintain eye contact</p> <p><b>Clarity:</b> Give clear and concise answers. Thinking time before answering</p>
<p style="text-align: center;"><b>What is a CV?</b></p> <ul style="list-style-type: none"> <li>Your CV is an advertisement for you</li> <li>It sells your skills, experience and personal qualities</li> <li>A CV can be: <b>Chronological</b> - show your education and work experience in date order</li> <li>Or a CV can be <b>Functional</b> - highlight your skills first</li> </ul>	<p style="text-align: center;"><b>What should go on my CV?</b></p> <ul style="list-style-type: none"> <li>Name and contact details</li> <li>Skills that will help you do the job well</li> <li>Qualifications</li> <li>Past jobs and work experience</li> <li>Interests that show the 'whole person'</li> <li>Referees – people who can back up what you</li> </ul>	<p style="text-align: center;"><b>Check your CV</b></p> <ul style="list-style-type: none"> <li>Spelling and punctuation</li> <li>Formatting</li> <li>Have you included all the right information?</li> <li>Are you using examples from your education, work experience, interests and achievements to demonstrate all your skills and personal qualities?</li> </ul>	<p style="text-align: center;"><b>CV tips: DO</b></p> <ul style="list-style-type: none"> <li>✓ Be positive and sell yourself</li> <li>✓ Highlight your relevant skills and experience</li> <li>✓ Use evidence</li> <li>✓ Be brief and to the point</li> <li>✓ Check spelling and grammar</li> <li>✓ Tailor your CV to each job</li> </ul>	<p style="text-align: center;"><b>CV tips: DON'T</b></p> <ul style="list-style-type: none"> <li>✗ Lie</li> <li>✗ Use more than two pages</li> <li>✗ Cram your CV into one page</li> <li>✗ Include your date of birth, gender or marital status</li> <li>✗ Leave gaps in your school or work record</li> </ul>



## Year 10 CYCLE 2B WEST EXE BACCALAUREATE - Exploring Influences

WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
<b>Gangs</b>	<b>Knife crime</b>	<b>County lines</b>	<b>Extremism</b>	<b>Radicalisation</b>
<p><b>Definition of gang culture:</b></p> <ul style="list-style-type: none"> <li>Street-based young people who see themselves as a group.</li> <li>Engage in criminal activity and violence.</li> <li>Lay claim over a territory.</li> <li>Have an identifying feature.</li> <li>Usually in conflict with other gangs.</li> </ul> <p><b>Profile of a gang member:</b></p> <p>Up to 6% of 10-19-year-olds belong to a gang in England and Wales:</p> <ul style="list-style-type: none"> <li>Aged between 12-25.</li> <li>98% are male.</li> <li>Concentrated in large cities.</li> <li>Glasgow and Liverpool, "predominantly white."</li> <li>Manchester and London, "predominantly black."</li> <li>Majority are truants or have been excluded from school.</li> <li>Tend to engage in a wide range of criminal activities.</li> <li>Most found in areas with high levels of deprivation, unemployment and lone parent families.</li> </ul> <p><b>Females and gangs</b></p> <p>Although girls women are still statistically far less likely to be involved in crime than men, that gap is narrowing. In recent years, girls and young women are forming breakaway girl-only gangs.</p>	<p><b>46,937:</b> Police-recorded offences involving a knife or sharp instrument in the 12 months to June 2021.</p> <p><b>10,383:</b> Offences recorded in London. This is a 31% drop compared to last year.</p> <p><b>4,945:</b> Offences recorded in the East of England. Knife crime has increased by 160% in this region in the last decade.</p> <p><b>1,535:</b> Offences recorded in Wales In the 12 months to June 2021.</p> <p><b>32%:</b> Increase in knife crime in England and Wales since 2011.</p> <p><b>105%:</b> Increase in knife crime in Wales in the last decade.</p> <p><b>221:</b> Police-recorded murders involving a knife or sharp instrument in the 12 months to March 2021.</p> <p><b>23:</b> Children aged just 17 or younger were murdered with a knife or sharp object in the 12 months to March 2020.</p> <p><b>4,091:</b> Recorded admissions requiring attention by a consultant in English hospitals in 2020/21 due to assault by a sharp object.</p> <p><b>12%:</b> Increase in admissions to hospitals in England for attacks by sharp objects in 2020/21 compared to 2014/15.</p>	<p><b>What is 'county lines'?</b></p> <p>It is a form of exploitation in which criminals groom and manipulate children into drug dealing. The 'lines' refer to mobiles used to control a young person who is delivering drugs, often to towns outside their home county.</p> <p><b>Age of victims of county lines</b></p> <p>Young people aged 14-17 are most likely to be targeted by criminal groups but there are reports of seven year olds being groomed into county lines. The grooming might start with them being asked to 'keep watch' but it soon escalates to them being forced to stash weapons, money, or become drug couriers.</p> <p><b>County lines is everywhere</b></p> <p>Most police forces report county lines activity in their area and they say the violence is getting worse. It's not just a 'big city' problem'.</p> <p><b>It affects all communities</b></p> <p>Children from any community can be groomed. However, those from poor households, who regularly skip school or have problems at home may be more at risk. Sadly, gender, age, ethnicity and background can still affect how professionals respond to the victims.</p>	<p><b>Extremism</b> is vocal or active opposition to fundamental British values, including democracy, the rule of law, individual liberty and mutual respect and tolerance of different faiths and beliefs.</p> <p><b>Radicalisation</b> is the process through which a person comes to support or be involved in extremist ideologies. It can result in a person becoming drawn into terrorism.</p> <p><b>How does radicalisation happen?</b></p> <p>The process of radicalisation may involve:</p> <ul style="list-style-type: none"> <li>Being groomed online or in person.</li> <li>Exploitation, including sexual exploitation.</li> <li>Psychological manipulation.</li> <li>Exposure to violent material and other inappropriate information.</li> </ul> <p><b>Vulnerability factors</b></p> <p>Anyone can be radicalised but there are some factors which may make a young person more vulnerable. These include:</p> <ul style="list-style-type: none"> <li>Being easily influenced or impressionable.</li> <li>Having low self-esteem or being isolated.</li> <li>Feeling that rejection, discrimination or injustice is taking place in society.</li> <li>Experiencing community tension amongst different groups.</li> <li>Being disrespectful or angry towards family and peers.</li> <li>Having a strong need for acceptance or belonging.</li> <li>Experiencing grief such as loss of a loved one.</li> </ul> <p><b>Indicators of radicalisation</b></p> <p>If a child or young person is being radicalised their day-to-day behaviour may become increasingly centred around an extremist ideology, group or cause. For example, they may:</p> <ul style="list-style-type: none"> <li>Spend increasing amounts of time talking to people with extreme views (this includes online and offline).</li> <li>Change their style of dress or personal appearance.</li> <li>Lose interest in friends and activities that are not associated with the extremist ideology, group or cause.</li> <li>Have material or symbols associated with an extreme cause.</li> <li>Try to recruit others to join the cause.</li> </ul>	

## INTRODUCTION OF GRAMMAR

NAME	DEFINITION	EXAMPLE
Types of Verbs	<b>Verb</b>	A verb expresses an action, state or a condition in a sentence. These can be either verbs of doing or being. The boy <b>ran</b> to the park. I <b>was</b> here long ago.
	<b>Auxiliary Verbs</b>	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 <b>is</b> reading a book. We <b>were</b> going to the beach. I <b>had</b> to eat the cake.
	<b>Modal Verbs</b>	These combine with other verbs to express necessity, possibility, and intention. You <b>should</b> know what modal verbs are. He <b>might</b> not know the milk has gone bad. I <b>ought</b> to stop eating so much cake.
	<b>Participles</b>	They are words formed from verbs and look like verbs, but they are used as adjectives (i.e. they describe a noun). <b>Past participles</b> end in 'ed'; <b>present participles</b> end in 'ing'. These will always be non-finite. In the house, there was a <b>screaming</b> witch. The worried man kept eating the cake. The <b>dying</b> woman reached for the hand of her <b>weeping</b> son.
	<b>Gerunds</b>	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	<b>Finite or Non-finite Verbs</b> 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. <i>First, identify the verbs...</i> In the park, Ben <b>sat</b> on the bench, <b>looking</b> at the ducks. <i>Then, change the tense...</i> In the park, Ben <b>sits</b> on the bench, <b>looking</b> at the ducks. Sat is finite - It had to change. Looking is non-finite - It didn't need to change	
Types/parts of sentence	<b>Main Clause/ Simple Sentence</b>	A main clause/simple sentence has <b>one</b> - and only one - finite verb and a subject. (It can have as many non-finite verbs as you like.) A <b>subject</b> is the thing doing the verb. The <b>crocodile</b> ate my friend. In the desert, <b>scorpions</b> hide. The <b>car crash</b> was unexpected and tragic.
	<b>Object</b>	A main clause can have an object, but it doesn't need one. The <u>object</u> is the thing that receives the verb - the subject affects it in some way. The <b>girl</b> kicked the <u>ball</u> . The <b>man</b> ate <u>all of the cake</u> .
	<b>Imperative Sentences</b>	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.
	<b>Compound Sentence</b>	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.
	<b>Complex Sentence</b>	Made up of two parts: a <u>main clause</u> and <b>one or more subordinate clause</b> . A <i>subordinating conjunction</i> always comes at the start of the subordinate clause. <u>The boy sat down</u> after he heard the news. <u>Nobody saw the alien</u> 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. <b>Ever.</b> She told me that if I didn't do my homework, she'd put me in detention. <b>Well, whatever.</b> "Where are you going?" "Home."
Phrases	Phrases	Whereas a clause has <b>BOTH</b> a subject and a finite verb, a phrase does not have <b>BOTH</b> 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 <b>when</b> 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 <b>where</b> 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.	<b>Thinking about her hot dinner</b> , the woman shifted on the cold seat. <b>Watching their daughters play football</b> , the two mothers shouted support.
	Past Participle Phrases (ED)	As above, but begins with an ED past participle.	<b>Scared he might not make it</b> , the boy ran to the toilet. The young couple hugged, <b>thrilled at the news of their pregnancy</b> .
	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 hanging 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 <i>really</i> interested - that it can replace commas too.









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