Knowledge Book

Year 10

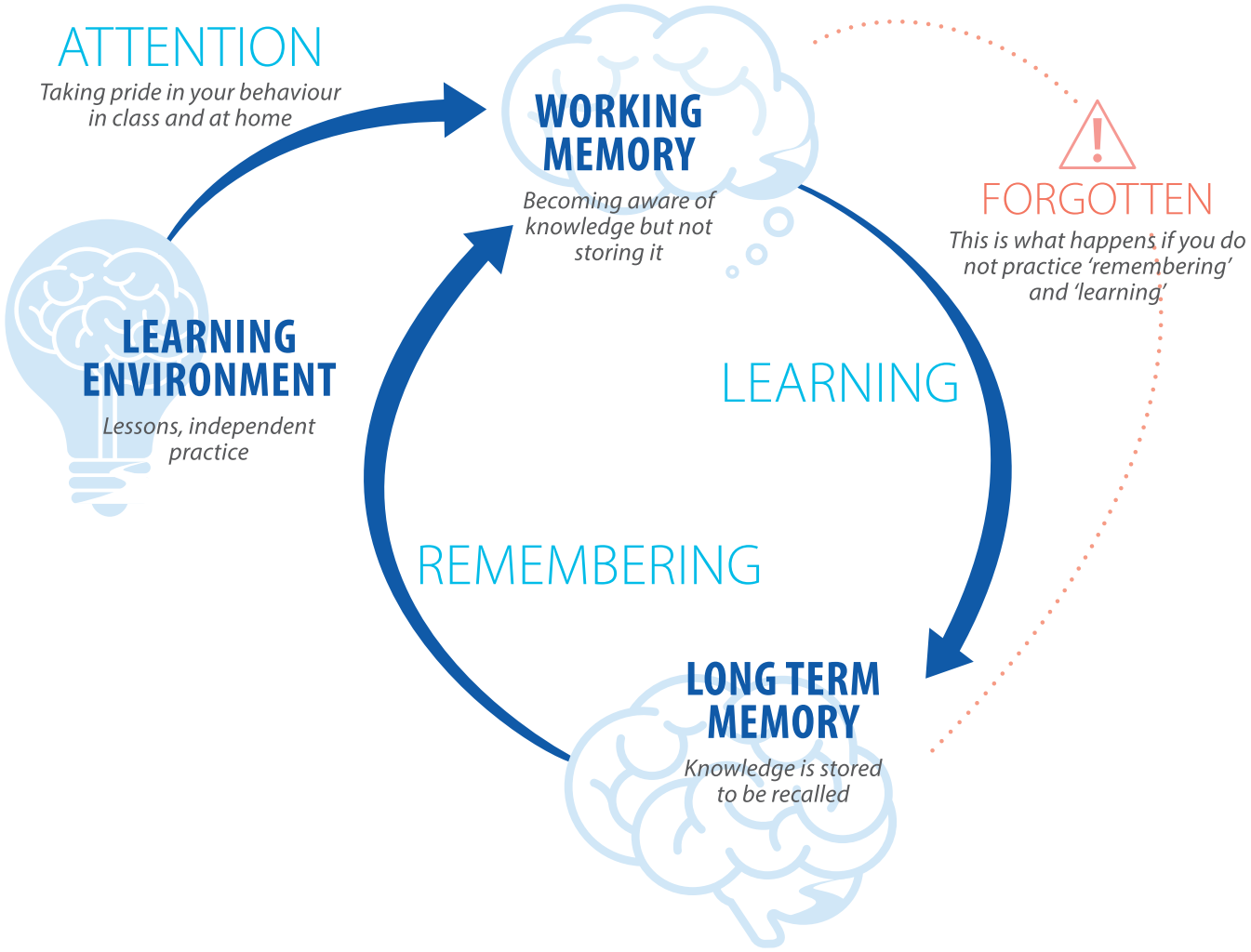
Cycle One

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.**

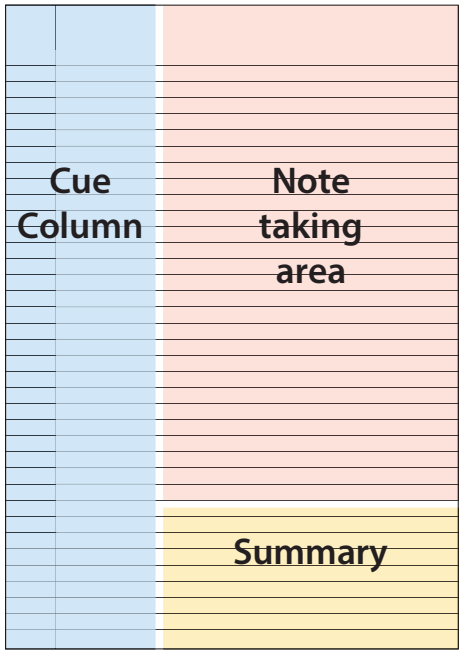
You can take practical steps to improve your ability to **learn** and **remember** key information and become the master of your memory.

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
Monday	Science	Spanish	Option P	Maths - SPARX			
Tuesday	Science	Spanish	English Literature	Maths - SPARX			
Wednesday	Science	Spanish	History or Geography	Option Q			
Thursday	Science	Spanish	English Literature	Option P			
Friday	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.


STAEDTLER
Mars plastic
Latex Free • Sans-latex • Libre de latex
CASIO
fx-83GT X
CLASSWIZ
-2
SHIFT
ALPHA
MENU SETUP
ON
OPTN
Abs
log
log
ln
sin
cos
tan
STO
ENG
S⇔D
M+
RESET
INS
UNDO
OFF
DEL
AC
nPr
nCr
Pol
Rec
Rnd
Ran#
RanInt
Ans
MathBits.com
Pritt
IMPROVED FORMULATION
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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 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 may 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

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;

- 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.

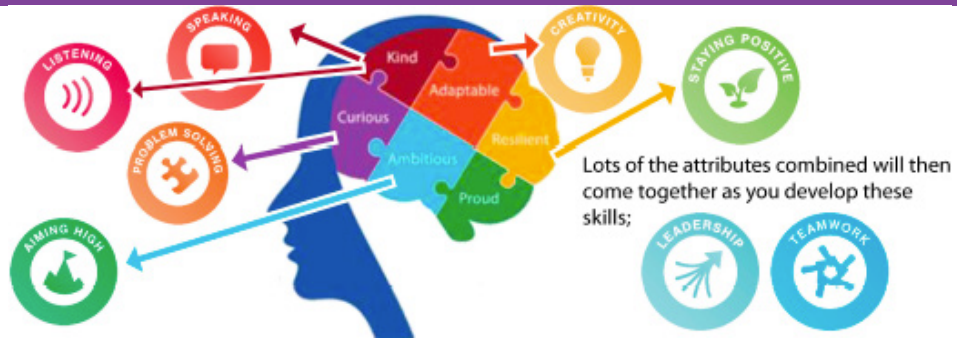
T Levels: A mix of classroom learning and "on-the-job" experience preparing for a specific job.

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

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…

Mind

What am I worrying about?

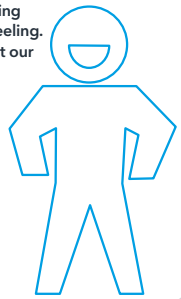
Is there anything I can do about it?

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

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.

New habits and actions

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…

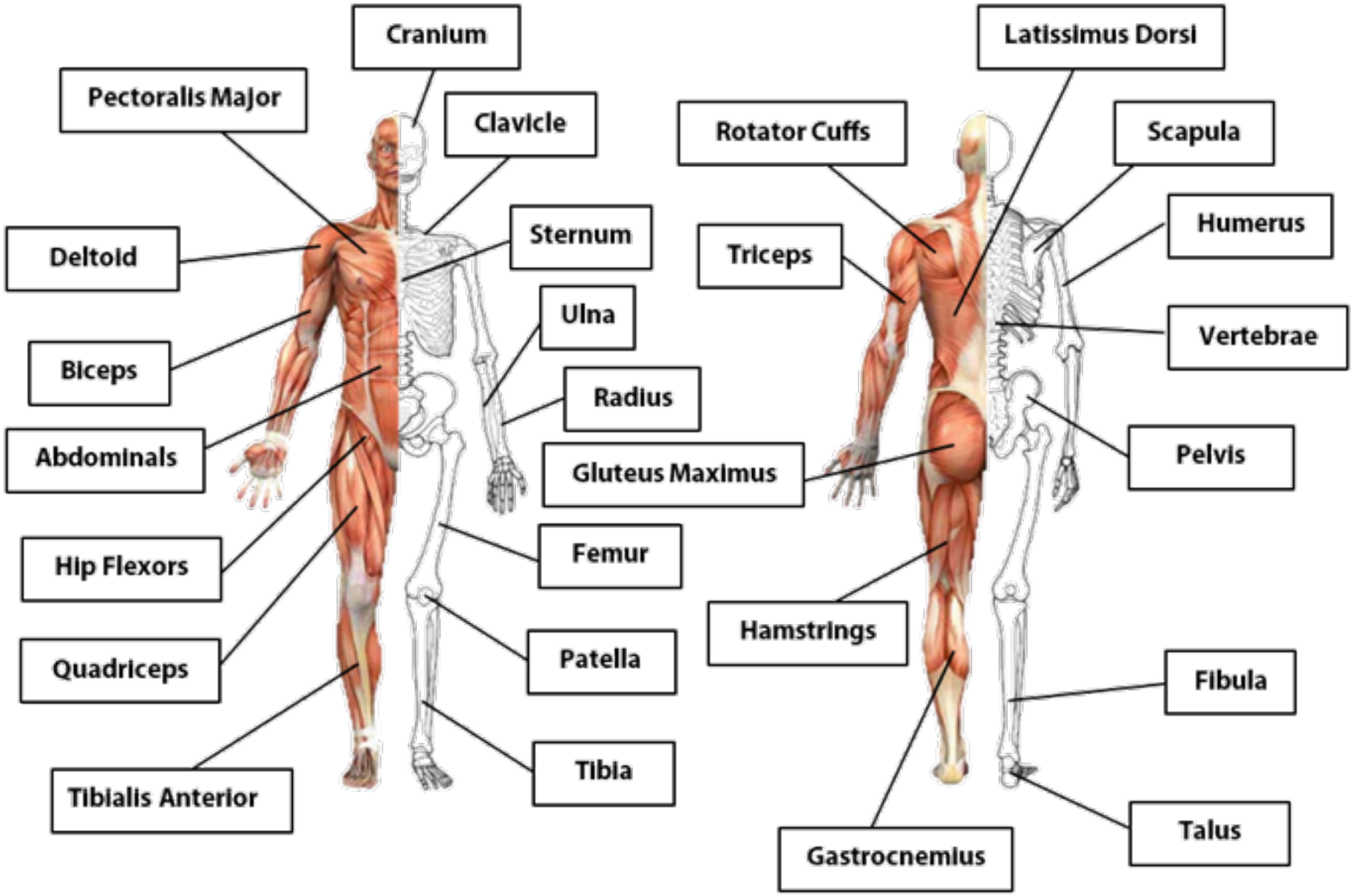
When we are organised we feel calmer. How could you be more organised?

What could you change at home

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.

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

Curious incident of the Dog - Mark Haddon (2003)

Although gifted with a superbly logical brain, for fifteen-year-old Christopher everyday interactions and admonishments have little meaning.

Synopsis: A murder mystery like no other, this novel features Christopher Boone, a 15 year-old who suffers from Asperger's syndrome. When he finds a neighbour's dog murdered, he sets out on a journey which will turn his whole world upside down.

Context: This book examines how difficult it can be some or people to navigate the hurdles of life. It also makes us consider how we can treat these people more gently and sensitively.

Heroes - Robert Cormier (2014)

The book gets to the heart of human nature and the moral issues and choices we have to make.

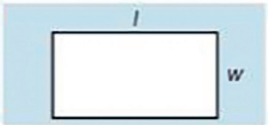
Synopsis: Francis Joseph Cassavant is eighteen. He has just returned home from the Second World War, and in a terrible accident he lost his face. He does have a gun and a mission: to murder his childhood hero.

Context: A serious well written YA novel exploring the nature of heroism, set in post WW2 USA but managing to retain a timeless quality.

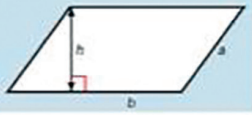
YEAR 10 CYCLE 1 MATHS: Foundation Formula Sheet

Areas

Rectangle = $l \times w$

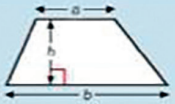


Parallelogram = $b \times h$



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

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



Circles

Circumference =

$\pi \times diameter = \pi d$

$2 \times \pi \times radius = 2\pi r$

Area of a circle =

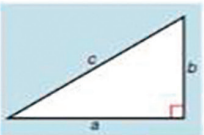
$\pi \times radius\ squared = \pi r^2$

Right-angled triangles

Pythagoras' Theorem

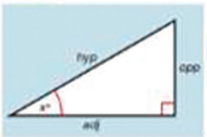
For a right-angled triangle,

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



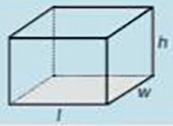
Trigonometric ratios (*new to F*)

$\sin x° = \frac{opp}{hyp}$, $\cos x° = \frac{adj}{hyp}$, $\tan x° = \frac{opp}{adj}$



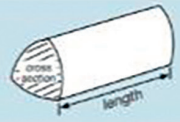
Volumes

Cuboid = $l \times w \times h$



Prism =

$area\ of\ cross\ section \times length$



Cylinder = $\pi r^2 h$

Compound measures

Speed

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

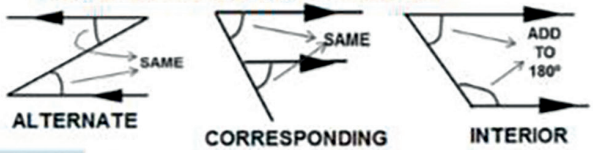
Density

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

Pressure

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

Angles formed by parallel lines



Constructing Pie Charts

The angle to draw for each sector is

$$Angle = \frac{frequency}{total} \times 360°$$

Angles in Polygons

Sum of Interior Angles = $(n-2) \times 180°$

Where n is the number of sides of the shape

Exterior Angles add up to 360°

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

$Interior + Exterior = 180°$

Other useful formulae

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

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

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)

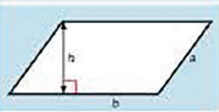
PRIME NUMBERS

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

YEAR 10 CYCLE 1 MATHS: Higher Formula Sheet

Areas

Parallelogram = $b \times h$



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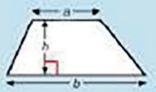


Circles

Circumference =

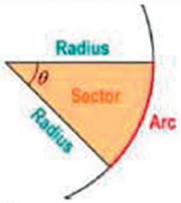
$\pi \times diameter = \pi d$

OR

$2 \times \pi \times radius = 2\pi r$

Area of a circle =

$\pi \times radius\ squared = \pi r^2$



Area of a Sector

$A = \frac{\theta}{360°} \times \pi r^2$

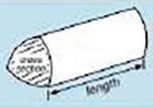
Length of an Arc

$A = \frac{\theta}{360°} \times \pi d$

Volumes

Prism =

$area\ of\ cross\ section \times length$



Cylinder = $\pi r^2 h$

Volume of pyramid =

$\frac{1}{3} \times area\ of\ base \times h$

Angles in Polygons

Sum of Interior Angles = $(n-2) \times 180°$

Where n is the number of sides of the shape

Exterior Angles add up to 360°

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

$Interior + Exterior = 180°$

Compound measures

Speed

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

Density

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

Pressure

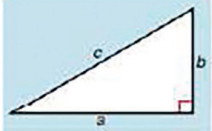
pressure = $\frac{force}{area}$

Right-angled triangles

Pythagoras' Theorem

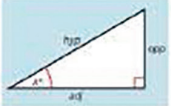
For a right-angled triangle,

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

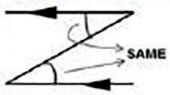


Trigonometric ratios (*new to F*)

$\sin x° = \frac{opp}{hyp}$, $\cos x° = \frac{adj}{hyp}$, $\tan x° = \frac{opp}{adj}$

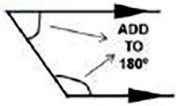


Angles formed by parallel lines



ALTERNATE

CORRESPONDING



INTERIOR

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

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

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

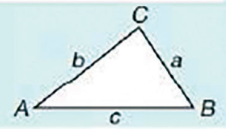
Perpendicular gradients multiply to give –1.

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°	30°	45°	60°	90°
$\sin x$	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 1 COMBINED SCIENCE

KEY VOCABULARY

1. **Asexual** - producing new organisms with one parent only. These organisms are genetically identical to their parent.
2. **Chemical Defence** - the use of chemical compounds by organisms to defend against attacks.
3. **Communicable Disease** - any disease that can spread from person to person.
4. **Diploid -** a cell or nucleus that has **2 sets** of chromosomes.
5. **Genome** - the complete set of gene present in a cell or organism.
6. **Genotype** - alleles for certain characteristic that are found in an organism.
7. **Haploid** - cells or nuclei with only **1 set** of chromosomes (sex cells).
8. **Immunisation** - making someone immune.
9. **Meiosis** - a form of cell division where one parent produces 4 haploid cells.
10. **Mitosis** - a form of cell division where one parent produces 2 diploid cells.
11. **Monohybrid Inheritance** - the study of how the alleles of just one gene are passed from parents to offspring.
12. **Non-communicable** - when disease cannot spread from animal to animal or person to person.
13. **Pedigree Charts** - show how genotypes are **inherited** in families though **generations.**
14. **Phenotype** - the characteristics produced by certain sets of alleles.
15. **Physical Barrier** - a barrier that makes it difficult for pathogens to get into the body.
16. **Punnett Square** - a diagram used to predict the characteristics of offspring.
17. **Zygote** - a fertilised egg cell.

WEEK 1

1. **Mitosis** produces **two genetically identical daughter cells.**
2. **The cells are diploid** and the process is **asexual.**
3. **Produces body cells** for **growth and repair.**
4. **Interphase:** DNA is replicated, happens first
   a. **Prophase:** nucleus starts to break down, spindle fibres appear.
   b. **Metaphase:** chromosomes line up at the centre of cell
   c. **Anaphase:** spindle fibres contract and chromosomes separate.
   d. **Telophase:** a membrane forms around each set of chromosomes to form nuclei.
   e. **Cytokinesis:** cell surface membrane forms (cell wall forms in plant cells).

WEEK 2

1. **Stem Cells:** cells that divide repeatedly and can then differentiate:
   a. **Embryonic:** early embryo cells that can produce any cell type.
   b. **Adult:** can only produce one type of cell, allow tissues to grow and replace damaged cells.
2. **Reflex Arc:** a neurone pathway consisting of a sensory neurone passing impulses to a motor neurone often via a replay neurone.
3. **Sensory Neurone:** a neurone that sends impulses from receptor cells to the central nervous system.
4. **Relay Neurone:** a short type of neurone found in the spinal cord and brain.
5. **Motor Neurone:** a neurone that sends impulses to effectors (muscles or glands).

WEEK 3

1. **Meiosis:** a form of cell division in which one parent cell produces 4 non-identical haploid daughter cells.
2. **The zygote cell** inherits different genetic information from each parent, which produces genetic variation between individuals.
3. **There are 2 types of species variation:**
   a. **Environmental Variation:** differences in organisms caused by the surroundings (acquired characteristics)
   b. **Genetic Variation:** differences in organisms caused mutation and sexual reproduction.
4. **DNA** (Deoxyribonucleic acid): a polymer made of 2 sugar-phosphate backbones joined to bases forming a double helix shape.

WEEK 4

1. **DNA Bases:** made up of nitrogen;
   a. **Joined by hydrogen bonds**
   b. **Complementary base pairs:**
      1. **Adenine with thymine (A-T)**
      2. **Guanine with cytosine (C-G)**
2. **Alleles:** different forms of the same gene each organism has 2 for each gene (Bb).
3. **Inherited characteristics can have dominant or recessive alleles.**
4. **Dominant:** an allele that is always expressed in the phenotype (capital letter).
5. **Recessive:** an allele that will only be expressed if both allele are recessive (bb).
6. **Male** sex chromosomes: **XY.**
7. **Female** sex chromosomes: **XX.**
8. **Genotype:** the alleles present (AA, Aa, aa).
9. **Phenotype:** the expression of the genotype (physical appearance.

YEAR 10 CYCLE 1 COMBINED SCIENCE

WEEK 5

1. **Heterozygous:** when the alleles for a gene are different in an organism (e.g. Rr).
2. **Homozygous:** when the alleles for a gene are the same in an organism (e.g RR, rr).
3. **Punnett squares** are used to work out the probability of offspring inheriting certain genotypes and phenotypes.
4. **Mutation:** change to a gene caused by a mistake in copying the DNA base pairs during cell division, or by the effects of radiation or a certain chemical.
5. **Human Genome project** produced a map of base pairs in 1 set of human chromosomes.
6. **Evidence** for evolution is found in fossils.
7. **Human evolution** is explained with the discovery of human-like fossils:
8. **Ardi -** 4.4my old, **Lucy** - 3.2my old**, Homo habilis & Homo erectus** found by Leakeys.

WEEK 6

Evolution

1. **Alfred Russel Wallace and Charles Darwin** both independently developed theories to explain how evolution happens.
2. **Darwin's theory of evolution**, states that simple life forms gradually evolved into more complex forms. The main steps in natural selection:
   - **a.** Individual organisms within a particular **species** show a wide range of **variation** for a characteristic.
   - **b.** Individuals with characteristics most suited to the changing environment are more likely to **survi**ve and to **breed** successfully. This is called **'survival of the fittest'.**
   - **c.** The characteristics (genes) that have enabled these individuals to survive are then **passed on to the next generation.**

WEEK 7

1. **Carl Linnaeus, 1735,** published his classification where he divided organisms into hierarchical groups, **Kingdom, genus and species.**
2. **Domains:** Archea, Bacteria, Eukarya.
3. **Artificial selection** is when humans choose organisms with useful **characteristics,**
4. **Plants and animals are often selectively bred for:** disease resistance, yield, environmental robustness, fast growth and flavour.
5. **Risks** include species with **very little variation** may be at higher risk of extinction if the environment changes.
6. **Genetic engineering** involves changing the DNA of one organism, often by inserting genes from another creating **genetically modified organisms (GMOs).**

WEEK 8

1. **Health is** "the state of complete physical, mental and social well being".
2. **Non - communicable:** a disease that cannot spread from person to person, e.g cancer.
3. **There are several types of these:**
   - **a. Genetic disorders** caused by faulty alleles passed to offspring.
   - **b. Malnutrition** when you eat too little of too much which can develop into a deficiency disease.
   - **c. Influenced by lifestyle factors** (diet, smoking, exercise, alcohol consumption, drugs) e.g. obesity, cirrhosis, CVD.
4. **Cardiovascular disease** is a result of poor circulatory system functioning. The fat mostly linked with CVD is the **abdominal fat** and the method used to measure it is **waist-to-hip ratio.** Treated with stents, bypass operations and medicines.

WEEK 9

1. **Communicable disease:** a disease that can spread from person to person, e.g. a cold.
2. **Pathogens** (disease causing organisms) cause communicable diseases
   - **a.** Viruses, bacteria, fungi, protists
3. **Cholera** is caused by **bacteria** and **spreads** in **water** and **causes diarrhoea.**
4. **Tuberculosis** is caused by **bacteria** and **spreads** in the **air** and **causes lung damage.**
5. **Malaria** is caused **by protists** and is **spread by animal vectors.**
6. **Chalara ash dieback** causes **leaf loss and bark lesions** in **trees, is caused by fungi and spreads in the air.**
7. **Malaria** causes **damage** to **blood** and **liver.**
8. **HIV and Chlamydia are sexually transmitted infections (STI)** are spread during **unprotected sex.**

WEEK 10

1. **The human body prevents the entry of pathogens via physical barriers (mucus, cilia, skin) and chemical defences (lysozymes, hydrochloric acid).**
2. **This is how the body responds when a pathogen enters the body:**
   - **a. Exposure** to a **pathogen**
   - **b. Antigens** trigger an **immune response**
   - **c. Antibodies and memory lymphocytes** produced
   - **d. Memory lymphocytes** remain in case there is a second encounter
3. **Antibiotics:** used to treat bacterial infections, work by inhibiting the cell processes of the bacterium.
4. **Antibiotic resistance:** The ability of a bacteria to survive exposure to an antibiotic. It is caused by mutation in their genes and is an example of natural selection.

YEAR 10 CYCLE 1 GEOGRAPHY - Challenge of Natural Hazards

WEEK 1

Plate tectonics

Plate margins are where two tectonic plates meet.

The surface of the Earth is called the **lithosphere** and contains the **oceanic crust** (5-10km thick) and the **continental crust** (20-100lkm thick).

The top layer of the **mantle** is called the **asthenosphere**

Constructive margin: two plates are moving apart. Magma is forcing its way to the surface along mid-ocean ridges. As it breaks through overlying crust, it causes earthquakes and forms volcanoes on the surface. The magma at constructive margins is very hot and fluid, meaning it flows a long way. This results in typically broad and flat shield volcanoes.

Destructive margin: Two plates are moving towards one another. The relatively dense oceanic plate subducted beneath the less dense continental plate. Friction between the two plates causes strong earthquakes. As the oceanic plate us pulled into the mantle, it melts. It breaks through the surface to form steep-sided composite volcanoes. Eruptions are violent and explosive.

Conservative margin: Two plates are moving past each other. Friction between the plates causes earthquakes. Earthquakes occur as stresses gradually build up over many years. They can be damaging as they occur close to the Earth's surface. The stress is released when the plates slip and shift. No magma escapes so there are no volcanoes.

WEEK 2

New Zealand (HIC) vs Haiti (LIC) earthquake

CHRISTCHURCH, NZ (22 February, 2011)

Conservative/fault system (mag 6.3, depth 5km).

Primary effects: 185 deaths; 3129 people injured; 100,000 properties were damaged; $28 billion of damage; water and sewage pipes damaged.

Secondary effects: schools closed for two weeks; Five Rugby World Cup matches cancelled; 50-100 years for economy to recover.

Immediate responses: around $6-7 million in international aid; 30,000 residents provided with chemical toilets.

Long-term responses: construction of around 10,000 affordable homes; water/ sewage restored by Aug 2011.

HAITI (12 January 2010)

Conservative margin (mag 7.0, depth 13km).

Primary effects: 3 million people affected; 220,000 deaths.

Secondary effects: Damage to the clothing industry/exports; cholera outbreaks; 1.3 million made homeless.

Immediate responses: Emergency rescue teams from Iceland; UN troops sent to distribute aid; temporary field hospitals set up.

Long-term responses: Schools rebuilt; small farmers being supported; still 1,300 camps one year later.

WEEK 3

Reducing the risks of tectonic hazards

VOLCANOES

Monitoring: Remote sensing detects heat and changes in the volcano's shape. Instruments detect gases released as magma rises and Seismographs record earthquakes.

Prediction: Due to high-tech monitoring, scientists are able to accurately predict eruptions e.g. Iceland 2010.

Protection: It is possible to use earth embankments or explosives to divert lava away from property e.g. Etna.

Planning: Authorities need to prepare emergency shelter, food supplies and form evacuation strategies. Exclusion zones can be designated.

EARTHQUAKES

Monitoring: Generally occur without warning. Some evidence that changes in water pressure, ground deformation and minor tremors happen prior to a quake but not reliable.

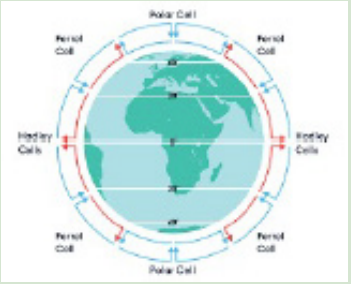
Prediction: Scientists studying historical records have identified locations at the greatest risk e.g. Istanbul, Turkey.

Protection: Main way to reduce risk. Construct buildings and bridges to resist ground shaking. Reinforced concrete columns with a steel frame.

Planning: Regular earthquake drills to help people keep alert and prepared. Fasten down furniture and know how to turn off mains gas in the home.

WEEK 4

Global atmospheric circulation



Global atmospheric circulation is what drives the world's weather. The cells, pressure belts and surface winds affect weather around the world.

At the equator, air is warmed by the direct sunlight and rises. It cools and condenses to form rain. This is where the tropical rainforest is found. At the top of the atmosphere, the air travels out towards the poles and sinks at 30°latitude. This forms the **Hadley cells.**

At 30°, the **Hadley cell** meets the **Ferrel cell.** Air is descending and becomes more stable, bringing high pressure and hot, dry conditions. This is where the deserts are found.

The air travels at low levels and rises at 60° line of latitude where it meets the **polar cells.** The air is forced to rise, bringing rain and unsettled conditions (low pressure).

At 90° (the poles) air descends again, bringing high pressure and dry conditions. Due to the low angle of the sun in the sky, the temperatures are cold.

WEEK 5

Tropical storms

Where? Tropical storms form over warm oceans (above 27°C). They form in the summer and autumn when sea temperatures are at their highest. Most form 5-10° north and south of the equator. Not enough 'spin' from the rotation of the Earth at the equator - known as the Coriolis effect. In tropical regions, the intense heat makes the air unstable, causing it to rise rapidly.

Causes

Strong upward movement of air draws water vapour up from the warm ocean; evaporated air rises and condenses to form thunderstorms; it releases heat which powers the storm; several smaller thunderstorms join together to form a giant spinning storm, when surface winds each 75mph it officially becomes a tropical storm; it develops an eye where air descends rapidly; the outer edge is the eyewall with the most intense weather conditions; the storms is carried across the ocean by the prevailing winds; on reaching the land, the storm's energy supply is cut off and friction with the land slows it down and it begins to weaken.

Some computer models suggest that the frequency of tropical storms may decrease in the future but their intensity might increase. This is linked to increases in sea surface temperatures, which have increased in the tropics by 0.25°C and 0.5°C. This means they might happen outside the current area.

YEAR 10 CYCLE 1 GEOGRAPHY - Challenge of Natural Hazards

WEEK 6

Typhoon Haiyan

In November 2013, a category 5 'super typhoon' hit the Philippines. Winds of up to 275km/h and waves as high as 15 metres. Province of Leyte took the full force with the city of Tacloban one of the worst affected places. Five metre storm surge.

Primary effects: 6300 people killed; 40,000 homes damaged or flattened (90% of Tacloban); 30,000 fishing boats destroyed; over 400mm of rain caused widespread flooding.

Secondary effects: 14 million people affected; 6 million lost their source of income; flooding caused landslides, cutting off aid to remote communities; outbreaks of disease; looting and violence in Tacloban.

Immediate responses: US aircraft carrier George Washington delivered aid; over 1200 evacuation centres set up to help the homeless; Philippines Red Cross delivered basic food aid; French, Belgian and Israeli field hospitals set up to help the injured.

Long term responses: 'Cash for work' programmes where people paid to help clear debris and rebuild the city; rice farming and fishing quickly re-established; thousands of homes have been built away from areas at risk of flooding; aid agencies such as Oxfam supported the replacement of fishing boats; more cyclone shelters built to accommodate people evacuated from coastal areas.

WEEK 7

Reducing the effects of tropical storms

Monitoring and prediction: Developments in technology have made it possible to predict/monitor tropical storms accurately and effectively. In the North Atlantic, two levels of warning issued by the National Hurricane Center in Miami.

Hurricane Watch - advises that hurricane conditions are possible.

Hurricane Warning - advises that conditions are expected and people should take immediate action.

NASA monitors weather patterns across the Atlantic using two unmanned aircraft called Global Hawk drones.

Supercomputers can now give five days warning and an accurate location within 400 kilometres.

Protection: Windows, doors and roofs reinforced to strengthen buildings; storm drains constructed in urban areas; sea walls to protect against storm surges; houses close to the coast built on stilts; Bangladesh has nearly 2000 cyclone shelters.

Planning: Raising individual and community awareness so people understand the dangers; in the USA, there is a National Hurricane Preparedness Week; families encouraged to create their own plan of action.

WEEK 8

Extreme weather in the UK

Somerset Levels floods (2014)

Located in SW England. Area of low-lying farmland and wetlands bordered by the Bristol Channel, Quantock Hills and Mendip Hills. Flooding has occurred naturally here for centuries.

Causes: Wettest January since records began. Succession of depressions across the Atlantic Ocean brought 350mm of rain in Jan/Feb. High tides and storm surges swept up the rivers from the Bristol Channel, spilling over the river banks. Rivers had not been dredged for at least 20 years and became clogged with sediment.

Social impacts: 600 homes flooded; 16 farms evacuated; villages such as Moorland cut off; power supplies cut.

Economic impacts: Damage more than £10 million; over 14,000 ha of agricultural land under water; railway line closed.

Environmental impacts: Floodwaters heavily contaminated with sewage and pollutants; debris had to be cleared.

Immediate responses: Villagers used boats to go shopping and attend school.

Long-term responses: £20 million Flood Action Plan launched; in March 2014, 8km of the River Tone and Parratt were dredged in increase capacity; road levels raised; river banks strengthened and pumping stations built.

WEEK 9

Causes of climate change

Natural causes

1 Orbital changes: Known as Milankovitch cycles.

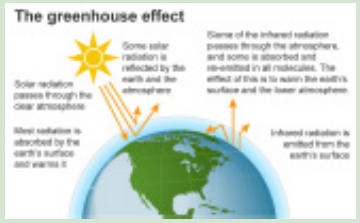
Eccentricity - orbit changes from being almost circular to being elliptical. A complete cycle takes 100,000 years.

Precession - Natural 'wobble' like a spinning top. Linked to countries e.g. Norway experience long days/nights. Cycle takes 26,000 years.

Axial tilt - Earth's axis tilted at 23.5 degrees. Over a period of 41,000 years, the tilt moves back and forth between 21.5 and 24.5 degrees.

2 Solar activity: Sunspot is a dark patch on the Sun. They increase from a maximum (more heat) and minimum over a period of 11 years.

3 Volcanic activity: Volcanic ash can block out the Sun, reducing temperatures. Acts as mirrors reflecting radiation from the Sun. Leads to volcanic winter.



Human causes: Increase in greenhouse gases from human activity e.g. burning fossil fuels; power stations; deforestation; car exhausts; decaying organic matter in landfill sites; rice farming and farm livestock.

WEEK 10

Managing climate change

Mitigation: reducing emissions and stabilising the levels of greenhouse gases.

Alternative energy sources: Hydro-electricity, nuclear power, solar, wind and tidal. Do not emit large amounts of CO2. Some renewable.

Carbon capture: Aims to capture up to 90% of the CO2 that would otherwise enter the atmosphere. Carbon gas is compressed and transported by pipeline to a well and stored in geological reservoirs.

International agreements: Paris Agreement (2015) - 195 countries adopted the first ever universal and legally bunding global climate deal. Agreed to keep temperature increase below 2°C.

Adaptation: Adapting to the climate change already in the pipeline; adjusting to future climate Changes in agricultural systems: New irrigation systems, shade trees planted to protect seedlings from strong sunshine, educating farmers in water harvesting. Changing the crops and varieties such as drought-resistant crops. Cost of adapting is more difficult for poorer subsistence farmers.

Reducing risk from rising sea levels: By 2100, sea levels are expected to rise by a further 26-82cm. Managed by restoring coastal mangrove forests, building houses raised off the ground on stilts, constructing sea walls.

YEAR 10 CYCLE 1A HISTORY - Medicine Through Time, c.1250-1500

Learn these words in weeks 1-3

TIMELINE OF KEY DATES

1348-49:

The Black Death struck Britain, killing at least 1/3 of the population.

- Symptoms: Buboes (swellings), fever/chills, headaches and vomiting.
- Ideas about its cause: Religion (God's punishment), astrology, miasma, volcanoes, imbalanced humours.
- Preventative methods / treatments: Praying, lucky charms, cleaning up streets, sitting in sewers, lighting fires, smelling herbs (to get ride of miasma).

KEY EVENTS / INDIVIDUALS

Hippocrates: An Ancient Greek doctor who developed the Four Humours Theory. He supported clinical observation and encouraged doctors to take the Hippocratic Oath.

Galen: A Greek doctor who worked in Ancient Rome. Galen developed Hippocrates ideas and wrote the first complete medical history. He proved that the brain controlled the body, but mad mistakes because he could not perform human dissections.

KEY VOCABULARY

Astrology: Basin ideas about illness upon the position of stars and planets.

Dissection: Cutting open (human) bodies to find out how the body works.

Monasteries: Religious buildings / homes for monks where care for the sick was provided.

Supernatural Medicine: Ideas and practice based upon Gods and Spirits. Supernatural practice included prayer, pilgrimage (travelling to holy site) and fasting.

Natural / Rational Medicine: Ideas and practice based upon research and evidence.

The Four Humours: A theory that the body was made up of four liquids (yellow bile, black bile, phlegm and blood) which needed to be balanced to ensure good health.

Theory of Opposites: Galen's idea that humours should be balanced with an opposite treatment (e.g. hot peppers for a cold).

Clinical Observation: The practice of doctors looking carefully at a patient's symptoms before prescribing a treatment.

The Hippocratic Oath: A promise that doctors would always do their best for their patients.

Barber Surgeons: Carried out blood-letting, pulling teeth and minor operations.

Flagellants: Religious extremists who whipped themselves in order to show God that they were sorry for their sins. In doing so, they hoped to avoid Black Death.

Miasma: 'Bad air'. It was believed that things such as dead animals, rotting food and waste caused illness.

Bloodletting: A treatment used to balance the humours.

Purging: Making a patient vomit or using a laxative to balance humours.

Apothecaries: Chemists who mixed up medicines and ointments.

Physicians University trained doctors, used only by the rich.

YEAR 10 CYCLE 1B HISTORY - Medicine Through Time, c.1500-1700

Learn these words in weeks 4-5

TIMELINE OF KEY DATES

1440: The printing press is first invented. It increased the number of books and reduced their cost, meaning new ideas could spread more freely.

1536: Henry VIII closed down the monasteries. This led to a decline in medical care in England.

1543: Vesalius's *Fabric of the Human* Body is published. It provided an accurate, layer-by-layer atlas of the anatomy.

1628: William Harvey's book, *An Anatomical Account of the Motion of the Heart and Blood in Animals* is published.

1660: The Royal Society was formed its wealthy members carried out experiments, publishing their findings.

1665: The Great Plague of London. Little has changed since 1348, although there was greater reaction from local councils.

1676: Thomas Sydenham's book, *Observationes Medicae* is published.

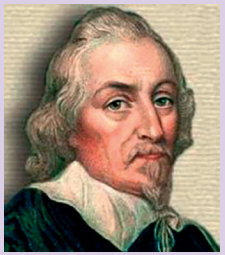
1685: King Charles II dies after medical treatments which included blood-letting, laxatives, cardiac tonic and essence of human skull.

KEY EVENTS / INDIVIDUALS

Andreas Vesalius: A Renaissance doctor who studied in Paris and Padua (Italy). He disproved some of Galen's mistakes by carrying out human dissections.

William Harvey: An English doctor who studied at Cambridge and Padua. He explained the circulatory system and corrected Galen's claim that the liver produced blood which was burned up by the body.

Thomas Sydenham: An English doctor who base his treatments on observation rather than old medical books. The first to diagnose scarlet fever. Known as 'The English Hippocrates'.



KEY VOCABULARY

Renaissance: The rebirth of learning (c.1500-1700), when people began to challenge and test old ideas.

Reformation: The split in the Christian Church (between Catholics and Protestants) which saw the power of the Church over medicine decline.

Pest Houses: Hospitals for people suffering from contagious diseases. These increased after the closure of the monasteries.

Theory of Transference: The idea that if a sick person rubbed an object on himself/herself, the disease would transfer to the object.

Licence: This piece of paper was needed by apothecaries and surgeons after 1500 to show that they have completed training.

Anatomy: The study of the human body.

Quarantine: A way of preventing the spread of the plague in 1665. Plague victims were kept inside guarded houses with watchmen outside.

Technology: 17th Century inventions such as water pumps and clocks help Harvey prove the workings of the heart.

Padua: An Italian University that encouraged experimentation and new ideas.

YEAR 10 CYCLE 1C HISTORY - Medicine Through Time, c.1700-1900

Learn these words in weeks 6-8

TIMELINE OF KEY DATES

1796: Edward Jenner conducts the first successful smallpox vaccination.

The Development of Anaesthetics:

1844: Laughing gas is used.
1846: Ether is used, but it has many limitations.
1847: Chloroform was first used by James Simpson.

1848: The First Public Health Act. It failed make an impact because its recommendations were optional.

1850: Microscopes has improved, allowing tiny images to be seen clearly.

1854: Amid an outbreak of cholera, John Snow proved that the disease was spread by contaminated water.

1854-56: The Crimean War. Florence Nightingale and her team transform hospital conditions and the nursing profession itself.

1859: First cottage hospitals opened. Nurses provide medical care and doctors (GPs) gave prescriptions.

1859: First cottage hospitals opened. Nurses provide medical care and doctors (GPs) gave prescriptions.

1861: Louis Pasteur demonstrated his Germ Theory.

1865-66: Carbolic Acid was used as an antiseptic, first on cloths and then as a spray.

The Identification of Specific Germs by Robert Koch:

1876: Anthrax.
1882: TB (Tuberculosis).
1883: Cholera.

1875: The 2nd Public Health Act is successfully passed, Its points included clean water, sewers, public toilets and street lighting.

1881: Pasteur publicly demonstrated his Anthrax vaccine on 50 sheep.

KEY EVENTS / INDIVIDUALS

Edward Jenner: A country doctor from Gloucestershire. Jenner prevented the spread of smallpox vis cowpox, inventing the first vaccination. Faced much opposition, but vaccinations were made compulsory in 1852.

Louis Pasteur: A French chemist who proved his Germ Theory. His work inspired many other leading doctors and continues to influence behaviour today (washing hands, ect).

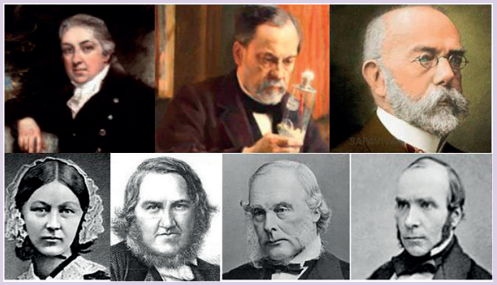
Robert Koch: A German doctor who built upon Pasteur's work by identifying the specific germs that cause specific diseases. He also made germ easier to see under microscopes by dyeing them.

Florence Nightingale: The English nurse who made her profession respectable. Nightingale reduced the dealth rates in Scutari (the British hospital in the Crimea) from 42% to 2%. She established the Florence Nightingale School of Nursing in 1860.

James Simpson: A professor of midwifery who discovered the chloroform was an effective pain reliever for women during childbirth.

Joseph Lister: A surgeon working in the Glasgow Royal Infirmary who used carbolic acid as an antiseptic.

John Snow: A well-respected London doctor who proved the link between cholera and infected water. When he removed the handle of water pump in Broad Street, deaths from cholera slumped.



KEY VOCABULARY

Vaccination: A means of preventing a patient from catching a disease. Usually, this is done by giving a weakened does of the disease.

Smallpox: The highly-contagious feared killer disease of the 1700s.

Cowpox: A non-fatal disease which, if caught, allows the body to protect itself from smallpox.

Cholera: A water-born disease that spreads through various epidemics (outbreaks) in the early-mid 1800s. People living in poorer, slum areas were worst affected.

Spontaneous Generation: The incorrect theory that germs randomly appeared from decaying matter. This was disproven by Pasteurs's germ theory.

Germ Theory: The idea that dust particles in the air carry germs which settle and cause disease/ decay. Pasteur proved this theory using two flasks of water.

Antiseptics: A liquid/substance that kills germs.

Anaesthetic: A pain-relieving drug.

Aspetic Surgery: Removing all germs from operating theatres. This was in place by 1900.

Laissez-faire: An attitude held by richer tax-payers before 1875 that should not have to pay to clean up the cities. The believed that the poor were responsible for their own living conditions and health.

Midwifery: Medical care given to women when giving birth.

YEAR 10 CYCLE 1D HISTORY - Medicine Through Time, c.1900-Present

Learn these words in weeks 8-10

TIMELINE OF KEY DATES

1895: The X-Ray is developed and will receive widespread use during the First World War (1914-1918).

1901: Blood types are discovered by Karl Landsteiner.

1909: Salvarsan 606 is developed as the first 'magic bullet' to cure syphilis.

1928: Penicillin is discovered by Alexander Fleming.

1932: The 2nd 'magic bullet' Prontosil is developed by Gerhard Domagk to cure certain types of blood poisoning.

1939: Florey and Chain continue Fleming's research into Penicillin.

1940: Penicillin is effectively testes on mice and (one year later) on a human patient.

1942: Mass production of penicillin is funded by the US government following America's entry into the Second World War.

1948: The National Health Service is launched by the Labour government.

1953: Watson and Crick discover the double-helix structure of DNA.

1965: Cigarette adverts are banned on television.

1988: The MMR (Measles, Mumps and Rubella) vaccination is introduced.

1990: James Watson led the Human Genome Project to identify and map every gene in human DNA.

2007: Smoking is banned in public places where people work. The legal age for buying tobacco rises from 16 to 18.

2016: Cigarette packaging is standardised and includes graphic warnings of danger.

KEY EVENTS / INDIVIDUALS

James Watson and Francis Crick: Cambridge scientists who, together with Maurice Wilkins, won the 1962 Nobel Prize in Medicine for their discovery of stricture of DNA. This was one of the most significant scientific discoveries of the 20th century.

Paul Ehrlich: A Nobel Prize-winning German-Jewish physician and scientist. Having worked with Robert Koch, he developed the first 'magic bullet'.

William Beveridge: The man whose 1942 report paved the way for the creation of the National Health Service.

Aneurin Bevan: The Minister of Health who oversaw the setting up of the National Health Service.

Alexander Fleming: First World War doctor who discovered penicillin whilst researching ways to kill bacterial infection.

Howard Florey and Ernst Chain: Australian and German-Jewish Oxford University scientist who developed penicillin into a mass-produced antibiotic.

KEY VOCABULARY

DNA: Acid found in every cell of the body containing codes which control the genes of each person. Testing DNA can help identify and treat conditions such as Down's Syndrome and Parkinson's Disease.

Lifestyle Factors: Everyday 'habits' which can negatively affect health such as drinking alcohol, smoking and poor health.

Technology: Inventions which have changed the way illness is diagnosed, prevented, treated and cures. Examples include X-Rays, incubators, pacemakers, MRI, CT and ultrasound scans, and hypodermic syringes.

Magic Bullet: A chemical compound that kills a specific disease inside the body without harming the patient.

Super-bacteria: Germs which have evolved to become resistant to antibiotics.

Sulphonamide: A key ingredient of Prontosil which also cured pneumonia, scarlet fever and meningitis.

Treatments: Hi-Tech medical and surgical treatments include radiotherapy and chemotherapy, kidney dialysis, fitting pacemakers and organ transplants.

Keyhole Surgery: Performing operations without needing to make large cuts into a patient thanks to tiny cameras and surgical instruments.

Antibiotic: A drug used to treat bacterial infections.

YEAR 10 CYCLE 1 SPANISH - ¡Vamos de Vacaciones!

	SPANISH	ENGLISH	LITERAL ENGLISH
WEEK 1	Para mi, las vacaciones son muy importantes. Me encanta descansar con mi familia.	For me, holidays are very important. I love to relax with my family.	*For me, the holidays are very important.* *Me it enchants to relax with my family.*
WEEK 2	Normalmente, vamos a Gales y viajamos en cache. A veces, vamos a España y viajamos en avión.	Normally, we go to Wales and we travel by car. Sometimes, we go to Spain and we travel by plane.	*Normally, we go to Wales and we travel in car.* *At times, we go to Spain and we travel in plane.*
WEEK 3	En el sur de España, siempre hace mucho calor y no llueve mucho. En Gales, hace fresco ya veces hay chubascos.	In the south of Spain, it is always hot and it doesn't rain much. In Wales, it's fresh and at times it's showery.	*In the south of Spain, always it makes much heat and not it rains much. In wales, it makes cool and at times there are showers.*
WEEK 4	Hace tres años, fui a Tenerife y me alojé en un hotel de cuatro estrellas. Yo tenfa una habitación individual con balcón y vistas al mar. También, había una piscina magnffica.	3 years ago, I went to Tenerife with my family and I stayed in a 4 star hotel. I had my own room with a balcony and sea-views. Also, there was a magnificent swimming pool.	*Ago three years, I went to Tenerife and myself I lodged in a hotel of four stars. I had a room individual with balcon and views to the sea. Also, there was a pool magnificent.*
WEEK 5	Lo pasamos bomba porque había mucho que hacer y hacía buen tiempo.	We had a whale of a time because there was lots to do and the weather was good.	*It we spent bomb because there was much that to do and it was making good weather.*
WEEK 6	Hicmos turismo, nadamos en el mar y un día hicimos una excursión en autocar que fue muy interesante. Lo que más me gustó fue la playa.	We did sightseeing, we swam in the sea and one day, we went on a trip by coach which was very interesting. What I liked the most was the beach.	*We did tourism, we swam in the sea and one day we did an excursion in coach that was very interesting. It that more myself pleased was the beach.*
WEEK 7	El año que viene, vamos a volver a Tenerife Pero, si tuviera el dinero, irfa a Mexico. Serfa un sueño realizado.	Next year, we are going to go back to Tenerife but, if I had the money, I would go to Mexico. It would be a dream come true.	*The year that comes,we are going to return to Tenerife but, if I had the money, I would go to Mexico.* *It would be a dream realised.*
WEEK 8	Es un país que tiene todo: es un pafs muy histórico y cultural pero también hay barrios modernos y sitios de interés.	It's a country that has everything: it's a very historical and cultural country but there are also modern areas and places of interest.	*It is a country that has all; it is a country very historical and cultural but also there are neighbourhoods modern and sites of interest.*
WEEK 9	Cancún tiene una vida nocturna muy animada y para el turista se recomienda probar la comida tradicional.	Cancun has a very lively night-life and for the tourist, trying the traditional food is recommended.	*Cancun has a life nocturnal very animated and for the the tourist itself recommends to try the food traditional.*
WEEK 10	Par desgracia, ahora mismo jestoy sin blanca!	Unfortunately, right now, I'm skint!	*For unfortunate, now same I am without white.*

WEEK 2 - TRANSPORT	
el aeropuerto	airport
el andén	platform
el autocar	coach
el avión	plane
barato	cheap
el barco	boat
la bici(cleta)	bike (bicycle)
el coche	car
la consigna	left-luggage office
el crucero	cruise
el equipaje	luggage
el ferrocarril	railway
el aire acondicionado	air conditioning
el tranvía	tram
las vacaciones	holidays
la sala de espera	waiting room
viajar	to travel
el viaje	journey
el metro	underground
la maleta	suitcase
la taquilla	ticket office
WEEK 7 - FUTURE HOLIDAYS	
si pudiera...	if I could...
si fuera rico...	if I were rich...
si fuera posible...	if it were possible...
comería	I would eat
comprarfa	I would buy
iría	I would go
me alojaría	I would stay
me gustaría	I would like
nadaría	I would swim
pasaría	I would spend
saldría	I would go out
viajaría	I would travel
visitaría	I would visit

WEEK 3 - THE WEATHER	
el invierno	winter
el otoño	autumn
la primavera	spring
el verano	summer
hace frío	it's cold
hace calor	it's hot
hace buen tiempo	it's good weather
hace mal tiempo	it's bad weather
hace sol	it's sunny
hace viento	it's windy
está nublado	it's cloudy
hay tormentas hay	it's stormy
chubascos	it's showery
llueve	it's raining
hace fresco	it's fresh
nieva	it snows
WEEK 8 - MY REGION	
el campo	the countryside
la costa	the coats
el desempleo	unemployment
la diversión	entertainment
muy poblado	crowded
nacer	to be bornn
nací	I was born
nació	he/she was born
la montaña	the mountains
el país	country
perscar	to fish
el río	river
la sierra	mountain range
tanto	so much / many
el norte	the north
el este	the east
el sur	the south
el oeste	the west

WEEK 4 - HOLIDAY ACCOMMODATION	
el albergue juvenil	youth hostel
alojarse	to stay (in a hotel)
el bañador	swimming costume
la cama de matrimonio	double bed
el camping	campsite / camping
la estación de servicio	petrol station
fatal	awful / terrible
el folleto	leaflet
el guía / la guía	guide (person)
la habitación doble	double room
la habitación individual	single room
la llave	key
la reserva	reservation
el saco de dormir	sleeping bag
los servicios	toilets
la tienda	tent
la pensión	boarding house / B&B
el pasaporte	passport
el papel higiénico	toilet paper
WEEK 9 - A TOURIST BROCHURE	
abierto	open
callado	quiet / reserved
cargar	to load
cerrar	to close I shut
la cocina	cuisine / cooking
conocer	to know
entero	entire / whole
gruñón	grumpy
pintoresco	picturesque
el recuerdo	memory / souvenir
la sombrilla	sunshade / parasol
el taller	workshop
tranquilo	peaceful
el valle	valley
el/la visitante	visitor

WEEK 5 & 6 - PAST HOLIDAYS	
el primer día	the first day
al día siguiente	on the next day
el último día	the last day
despué s	afterwards
luego/pues	then
más tarde	later
primero	first
por la mañana	in the morning
por la tarde	in the afternoon
por la noche	in the evening
bailar	to dance
comer paella	to eat paella
comprar recuerdos	to by souveniers
descansar en la playa	to relax on the beach
escuchar música	to listen to music
hacer turismo	to go sightseeing
ir a la playa	to go to the beach
ir de compras	to go shopping
ir de excursión	to go on an outing
ir de paseo	to go for a walk
montar en bici	to ride a bike
nadar en el mar	to swim in the sea
quedarse	to stay
sacar fotos	to take photos
salir a comer	to go a out to eat
tomar el sol	to sunbathe
visitar monumentos	to visit monuments
me encantó	I loved it
me gustó	I liked it
era	it was
había	there was
tenía	it had
WEEK 10, 11, 12 - ALL VOCABULARY	

YEAR 10 CYCLE 1A WEST EXE BACCALAUREATE - Work Skills

WEEK 1: Glossary	WEEK 2: Personal (Soft) Skills	WEEK 3: Transferable Skills	WEEK 4: 21st Century	WEEK 5: SMART Targets
Personal skills / Soft skills: Skills, values and qualities that are important in all jobs. **21st Century skills:** The skills identified as being important for 21st century learners and workers. **Transferable skills:** Abilities that can be applied to a wide range of different courses and jobs. **SMART targets:** Goals that will help you successfully plan and complete a project. **Case interview:** A interview where your are given a situation and have to give a solution for managing it. **Puzzle interview:** Involves questions which test how quickly you can think on your feet and how you approach tricky problems.	**Critical Thinking:** Thinking creatively and analytically to make thoughtful decisions. **Problem Solving:** Effectively and swiftly making rational decisions. **Flexibility/Dependability:** Reliability and trustworthiness; adapting to change and being willing to help colleagues. **Interpersonal (people) Skills:** Working well with employers, colleagues and clients. **Motivation:** Putting maximum effort into the work and learning from mistakes and failures.	**Interpersonal Skills** • Communication. • Leadership and Supervising. • Teamwork. **Exploration and Implementation Skills** • Researching and Analysing. • Problem solving and Decision making. • Planning and Organising. **Self-Management and Values** • Learning, Improving and Achieving. • Resilience, Adaptability and Drive • Enterprising.	**Ways of thinking:** • Creativity. • Critical thinking. • Problem-solving. • Decision-making. **Ways of working:** • Communication. • Collaboration. **Tools for working:** • ICT. • Information literacy. • Skills for living in the world: • Citizenship. • Life and career skills. • Personal and social responsibility.	**Specific** • Well defined. • Clear to anyone that has a basic knowledge of the project. **Measurable** • Know if the goal is obtainable and how far away completion is. • Find out when you have achieved your goal. **Agreed upon** • Agree with everyone involved what the goals should be. **Realistic** • Within the availability of resources, knowledge and time. **Time-Based** • Enough time to achieve the goal. • Not too much time, which can affect project performance.
What is a CV? • Your CV is an advertisement for you. • It sells your skills, experience and personal qualities. • A CV can be **Chronological** - show your education and work experience in date order. • Or a CV can be **Functional** - highlight your skills first.	**What should go on my CV?** • Your name and contact details. • Skills that will help you do the job well. • Qualifications. • Past jobs and work experience. • Interests that show the 'whole person'. • Referees - people who can back up what you say on your CV.	**What is a CV?** • Spelling and punctuation. • Formatting. • Have you included all the right information? • Are you using relevant examples, from school, work, other activities to demonstrate all your skills and personal qualities, linking these to the job you are applying for?	**CV tips: DO** ✓ Be positive and sell yourself. ✓ Highlight your relevant skills and experience. ✓ Use evidence. ✓ Be brief and to the point. ✓ Check spelling and grammar. ✓ Tailor your CV to each job.	**CV tips: DON'T** × Lie. × Use more than two pages. × Cram your CV into one page. × Include your date of birth, gender or marital status. × Leave gaps in your school or work record.
Types of job interview 1. The Traditional Interview 2. The Phone Interview 3. The Skype Interview 4. The Case Interview 5. The Puzzle Interview 6. The Lunch Interview 7. The Group Interview 8. The Working Interview 9. The Firing Squad (Panel interview) 10. The Career Fair Interview	**Preparing for an interview** • Carefully read the job description. • Think why you want that job. • Research the company and job. • Consider your answers to common interview questions. • Prepare thoughtful questions for the interviewer(s). • Conduct mock interviews. • Practice your body language and speaking voice. • Prepare your travel arrangements.	**4 ways to make a good impression** Punctuality: Arriving late gives a bad first impression. Positivity and enthusiasm: Answer questions with positive statements and be enthusiastic. Body language: Sit naturally, don't slouch, smile frequently and maintain eye contact. Clarity: Give clear and concise answers, evidencing your most relevant skills. Give yourself thinking time before answering.	**Sample interview questions** • Why do you want this course/job? • Describe yourself in 3 words. • What are your strengths? • What are your weaknesses? • Tell me about when you worked as part of a team. • What do you do outside of school? • What have you achieved that you are most proud of? • Where do you see yourself in 5 years?	**Tricky interview questions** • What type of animal / vegetable would you be? • In the future your name turns up on the front page of a newspaper - what would the story be about? • Sell me this pen. • Describe the colour yellow to someone who can't see. • You've been given an elephant. You can't give it away or sell it. What would you do with it?

YEAR 10 CYCLE 1B WEST EXE BACCALAUREATE - The Holocaust and Other Genocides

WEEK 6: The Holocaust

The Holocaust began in 1933 when Adolf Hitler came to power.

Jewish people were excluded from public life on September 15, 1935 when the **Nuremberg Laws** were issued. These laws also stripped German Jews of their citizenship and their right to marry Germans.

The Nazis ordered all Jews to wear a yellow **Star of David** on their clothing so they could be easily targeted.

Jews were forced to live in specific areas of the cities called ghettos. In the larger **ghettos**, up to 1,000 people a day were transported to **concentration camps** or **death camps.** Between 1933 and 1945, the Nazis created more than 40,000 camps.

Kristallnacht (9.11.1938). Nazis pillaged, burned synagogues, damaged Jewish-owned businesses, and attacked Jews in Austria and Germany. 267 synagogues were destroyed. 91 Jews were killed and 30,000 were sent to concentration camps.

11 million people were killed during the Holocaust (1.1 million children). 6 million were Jewish. Other groups targeted were Jehovah's Witnesses, disabled people, homosexuals and Roma.

Two-thirds of Jews living in Europe at the time of World War II were killed by the Nazis.

WEEK 7: Cambodia

The **Khmer Rouge** was a brutal regime that ruled Cambodia, under the leadership of **Marxist dictator** Pol Pot, from 1975 to 1979. **Pol Pot's** attempts to create a Cambodian "master race" through social engineering ultimately led to the deaths of more than 2 million people in the Southeast Asian country.

Hundred of thousands of workers on farm **collectives** established by Pol Pot died from disease, starvation or damage to their bodies sustained during back-breaking work or abuse from the ruthless Khmer Rouge guards overseeing the camps.

Pol Pot's regime also executed thousands of people it deemed as enemies of the state. Those seen as intellectuals, or potential leaders of a revolution were executed. Some were killed for appearing to be intellectuals, by wearing glasses or being able to speak a foreign language.

As a result, thousands of educated, middle-class Cambodians were tortured and executed in special centres, the most infamous of which was **Tuol Sleng** jail where nearly 17,000 men, women and children were imprisoned during the regime's four years in power.

During the Cambodian Genocide an estimated 1.7 to 2.2 million Cambodians were killed.

WEEK 8: Bosnia

Bosnia and Herzegovina declared its independence from the former Yugoslavia in spring 992. At the time, the population was made up of Bosniaks (Bosnian Muslims), Serbs, Croats and Yugoslavs.

The Serbs took brutal and violent action against both the Bosniaks and the Croats, with the intention of expelling both **ethnicities**. This is known as **ethnic cleansing.** The Serbs displaced, tortured and murdered these groups over the course of a three-year civil war.

In 1993, the U.N. declared that three Bosnian towns, Gorazde, Srebrenica and Zepa were safe havens, under the protection of international **peacekeepers.**

Bosnian Serbs attacked **Srebrenica,** overthrowing the Dutch peacekeeping forces meant to protect the region.

Over the course of four days, 15,000 men were hunted by Serbian forces. 8,000 men and boys were killed and buried in hidden mass graves.

During this time, an estimated 20,000 women and children were forced out of their homes and sent to Serbian-controlled regions or camps.

Over the course of three years, the civilian death toll reached 200,000. On top of this, another 2 million Bosnians were displaced from their homes.

WEEK 9: Rwanda

The Rwandan Genocide was one of the largest explosions of mass violence in modern history. Over the course of 100 days between April and July 1994, as many as a million ethnic **Tutsi** and moderate **Hutu** men, women, and children were slaughtered by members of the Hutu majority.

On April 6th, an aeroplane carrying the presidents of Rwanda and Burundi, both Hutus, was shot down, killing both. The assassination was blamed on the Tutsi minority. The Hutu radio channel, RTLM, announced the deaths, urging the Hutus to attack the Tutsi population.

Within a few hours of the assassination, the Rwandan military, dominated by Hutu radicals, took control. They urged Hutus to kill every Tutsi they came across. The effective use of **propaganda** created a Hutu population that followed instruction with deadly efficiency.

An estimated 800,000 people were killed by mid-May. The pace of the killings even outpaced that of the Holocaust.

The Rwandan Genocide is also noteworthy because the killings were carried out by individuals acting out orders from a central command. This often meant victims would have known their attackers personally, adding to gruesomeness of the genocide.

WEEK 10: Darfur

The Darfur Genocide is the mass slaughter of Darfuri men, women, and children in Western Sudan. The killings began in 2003 and became the first genocide of the 21st century.

The genocide is being carried out by a group of government-armed and government-funded Arab militias known as the **Janjaweed** (which loosely translates to 'devils on horseback').

Attacks on Darfuri villages commonly begin with Sudanese Air Force attacks using Russian-supplied Antonov bombers. Air campaigns are often followed by Janjaweed **militia** raids.

Villagers are either murdered or forced to flee. Looting, burning food stocks, enslaving women and children, and stealing livestock are common. Dead bodies are tossed in wells to contaminate water supplies and entire villages are burned to the ground.

As of spring 2020, over 480,000 people had been killed and more than 2.8 million people displaced

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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