Knowledge Organiser

Year 8

Cycle 1

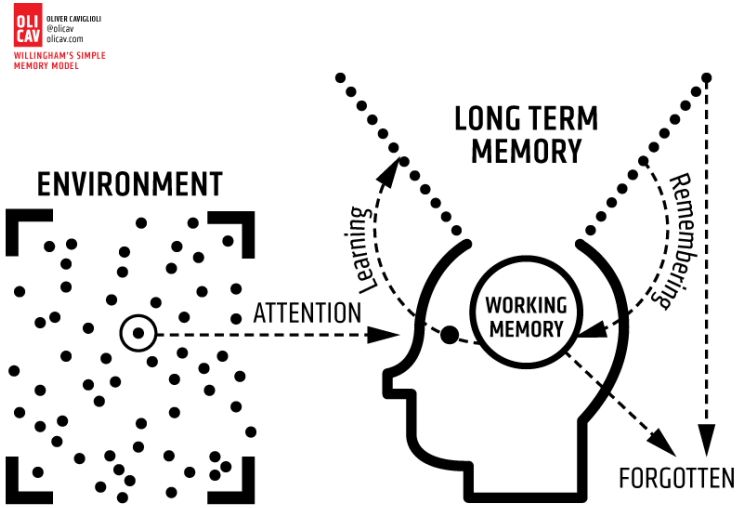
Name:

Inspiring Excellence

Using your Knowledge Organiser for homework

- Your Knowledge Organiser contains the essential knowledge that every student must know.
- Regular use of the Knowledge Organiser helps you to recap, revise and revisit what you have learnt in lessons.
- The aim is to help remember this knowledge in the long term and to help strengthen your memory
- You will use the Knowledge Organiser to help learn during homework.
- You will be assessed on the knowledge from your Knowledge Organiser; the more you revisit information the more likely it will be remembered for lessons, assessments and exams.

- For each homework you will be asked to look at a particular section of your Knowledge Organiser.
- Make sure you follow the homework timetable below so that you do the right homework for the right subjects each day.
- Each day (Monday to Friday) you will study 3 subjects for 20 minutes each.
- All Knowledge Organiser homework is completed in your blue Knowledge Workbooks
- All Maths and English homework is completed on SPARX and must be 100% completed each week.



Homework Timetable Year 8

	Monday	Tuesday	Wednesday	Thursday	Friday
Subject 1	Maths	History	Maths	English	Maths
Subject 2	English	Science	English	Science	Geography
Subject 3 Week A	French/Spanish	RPE	Drama	Food/3D Design	PE
Subject 3 Week B	French/Spanish	Art	Music	Computing	Life Skills

How to use your Knowledge Organiser

In your blue knowledge book you will always write the date, subject heading and ensure that they are underlined with a ruler.

Task 1: Questions

Where a subject includes questions to answer, you must answer these in your blue book. This is the main task to do as a minimum. If you have additional time, or where there are no questions, then do the following Tasks 2-4

Task 2: The Cover – Write – Check method

1. Study the relevant section of your Knowledge Organiser for several minutes.
2. Cover the Knowledge Organiser.
3. In your blue book, write out what you can remember.
4. Check the Knowledge Organiser to see if you got it right.
5. Correct any mistakes in purple pen.
6. Repeat the process – even if you got it 100% correct.
7. Complete sections that you have previously studied using the same process.

Task 3: Free recall

1. Pick a section of the Knowledge Organiser you have studied recently.
2. Without looking at the Knowledge Organiser write down everything you can remember about the topic.
3. Check the Knowledge Organiser to see how much you got right.
4. Correct any mistakes and add any missing parts in purple pen.

Task 4: Elaboration

1. Once you have completed the Cover – Write – Check method, add any additional details you can to your notes.
2. Remember your Knowledge Organiser only contains the core knowledge, there is much to learn beyond it so practise adding more detail when you can.

Year 8 Cycle 1

Knowledge Organiser Contents Page

CREATIVE ARTS

3D DESIGN – YR 8 – 3D LETTERS

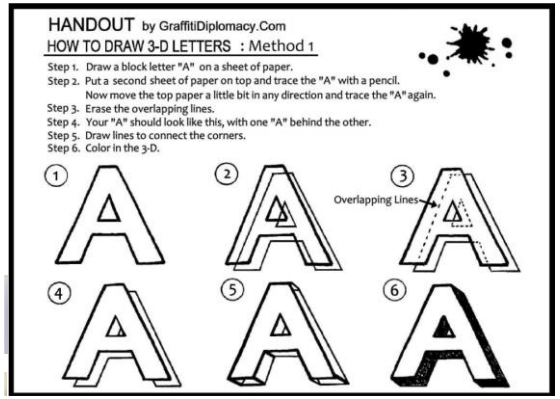
A. Visual Elements Keywords

Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. Shapes can be geometric or irregular.
Form	Form is a three dimensional shape, such as a cube, sphere or cone.
Tone	This refers to the lightness or darkness of something. This could be a shade, or how dark or light a colour appears.
Texture	This is to do with the surface quality of something. There are two types of texture: Actual texture really exists, so you can feel it or touch it; Visual texture is created using marks to represent actual texture.
Pattern	A design that is created by repeating lines, shapes, tones or colours.
Colour	Red, yellow and blue are primary colours, which means they can't be mixed using any other colours.

B. Key Knowledge 1:

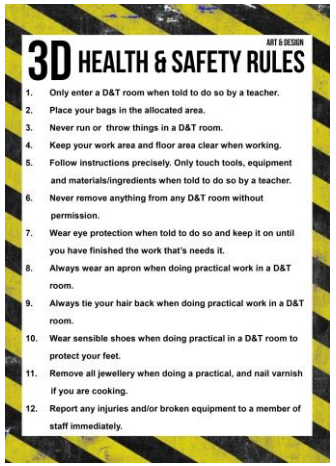
Use this guide to help practice your 3D lettering

Practice drawing letters 3D – try a variety of curved and straight letter forms



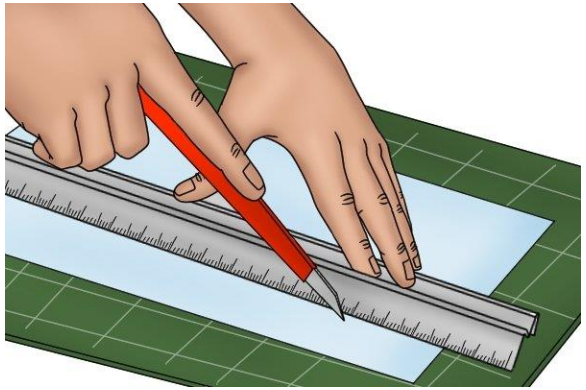
C. Key Knowledge 2: HEALTH & SAFETY RULES

Refer to your booklet for a larger version of the H&S Rules



D. Key Knowledge 3: Using a craft knife safely

- **Use a metal safety ruler**
- **Hold ruler firmly with fingers in the middle away from the edge**
- **Keep the blade against the ruler when cutting**



E. Expert Modelling:

What Visual Elements can you see in this work?
What equipment is needed to create a 3D letter?

F. Wider thinking / further reading:

https://www.youtube.com/watch?v=BfL5m9epBxg

Check out this tutorial on drawing 3D leeters

CREATIVE ARTS - ART & DESIGN
Project – YEAR 8 TRADITION & INNOVATION
Threshold Concept #4 – Artists use traditional methods to create art. They also experiment and rebel against the 'rules' to create new ideas

A. Visual Elements Keywords

Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
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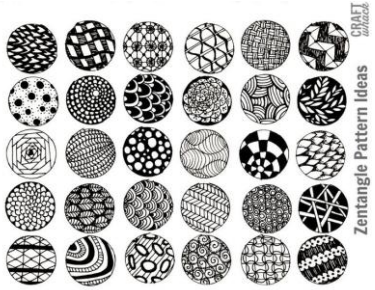
Colour	Red, yellow and blue are primary colours, which means they can't be mixed using any other colours.

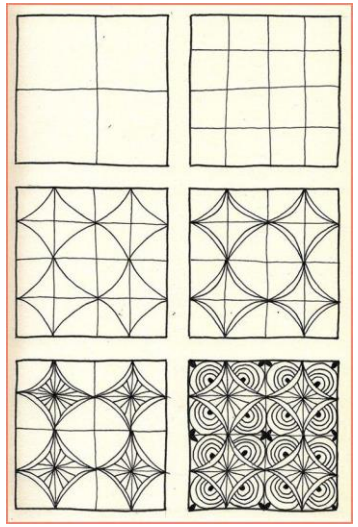
B. Key Knowledge 1: DAY of the DEAD FESTIVAL

The Day of the Dead is a Mexican holiday celebrated throughout Mexico, in particular the Central and South regions, and by people of Mexican heritage elsewhere.
Celebrations: Creation of altars to remember the dead, traditional dishes for the Day of the Dead
Date: Monday, 2 November 2020
Significance: Prayer and remembrance of friends and family members who have died
Observed by: Mexico, and regions with large Mexican population and Latin America

C. Key Knowledge 2:

Research Zentangle patterns and practice them using this grid technique to help you.

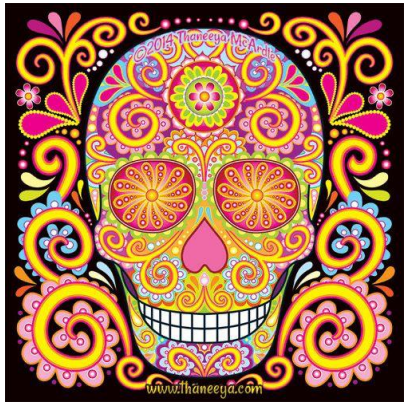


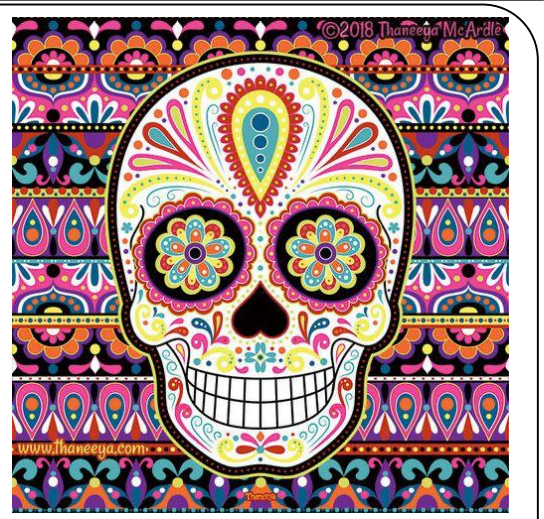


D. Key Knowledge 3:

Frida Kahlo 6 July 1907 – 13 July 1954) was a Mexican painter known for her many portraits, self-portraits, and works inspired by the nature and artifacts of Mexico. Artist **Frida Kahlo** was considered one of Mexico's greatest artists who began painting mostly self-portraits after she was severely injured in a bus accident. **Kahlo** later became politically active and married fellow communist artist Diego Rivera in 1929.

E. Expert Modelling: Thaneeya McArdle





What Visual Elements can you see in this work?

F. Wider thinking / further reading:

https://www.youtube.com/watch?v=_sSawpU81cI
What this short film about the Day of the Dead Festival

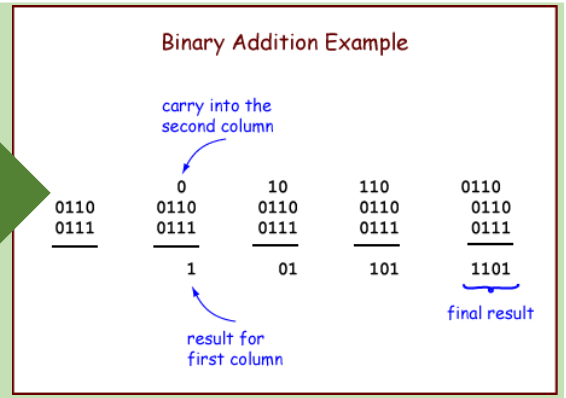
1.2.4 Data Storage

Binary

Binary is the language of the computer. Computers are made up of complex circuitry. These consist of billions of transistors that act as switches and they can only be in one of two states. ON (1) or OFF (0). In a binary number, the most significant bit is furthest to the left and the least significant bit is the furthest to the right.

Binary addition:

Addition		Result	Carry
0 + 0	=	0	0
0 + 1	=	1	0
1 + 0	=	1	0
1 + 1	=	0	1



Denary to Binary:

1 Denary (decimal) to Binary

Example: Convert 81 to an 8-bit binary number.

128	64	32	16	8	4	2	1
0	1	0	1	0	0	0	1

=81

TIP:

1. Best way to remember this is what numbers do we use to make the number 81?
2. In this example, **64+16+1 = 81**
3. Because we used these numbers, they are represented by **1**.
4. The others are represented by **0** as they were **not** used.

2 Binary to Denary (decimal)

Example: Convert the 8-bit binary number 00110111 into a denary (decimal) number.

128	64	32	16	8	4	2	1
0	0	1	1	0	1	1	1

\- + - + 32 + 16 + - + 4 + 2 + - = 55

TIP:

1. The blanks represent the 0's because they were not used in this calculation.
2. Once the numbers were identified, it was easy to input the 1's in the correct place.

Binary shift:

9 Binary Shift

When working directly with binary numbers, a binary shift to the left and right can be used for multiplication and division respectively.

A left shift will multiply a binary number by 2

For example, a left shift of 1 (binary number x2)

128	64	32	16	8	4	2	1
0	0	1	0	1	1	0	0

=44

128	64	32	16	8	4	2	1
0	1	0	1	1	0	0	

=88

A right shift does the opposite

It will divide a binary number by 2. For example, a right shift of 1 (binary number / 2)

Binary overflow

When numbers are added together, there is a risk that a binary overflow may occur. This is when there is not enough space to store a piece of data. For example, 255 bits can be stored in one byte. So the number 256.

1.2.4 Data Storage

Hexadecimal

In 1859, Nystrom proposed a hexadecimal (base 16) system of notation, arithmetic, and metrology called the Tonal system. Hexadecimal numerals are widely used by computer system designers and programmers because they provide a human-friendly representation of binary-coded values.

Hexadecimal to Binary:

5 Binary to Hexadecimal

Example: Convert 10110011 to hexadecimal.

Method

First you need to split them into two nibbles.

128	64	32	16	8	4	2	1
1	0	1	1	0	0	1	1

8	4	2	1
1	0	1	1

Add the first nibble 8 + 2 + 1 **= 11**

8	4	2	1
0	0	1	1

Add the first nibble 2 + 1 **= 3**

Remember is 11 is B in hex so the answer would be **B3.**

6 Hexadecimal to Binary

Example: Convert 5E to binary

Method - For this you must split them into two nibbles.

5E

8	4	2	1
0	1	0	1

This represents 5.

8	4	2	1
1	1	1	0

This represents E, which is hex for 14.

128	64	32	16	8	4	2	1
0	1	0	1	1	1	1	0

You bring them together to form an 8-bit binary number. So the answer is **01011110**

Hexadecimal to Denary:

3 Denary (decimal) to Hexadecimal

Example: How to convert 74 to hexadecimal. (Look at Hex table)

Method

1. How many digits represent hexadecimals? **16**
2. The formula would then be *number to be converted/number of digits* **(74/16)**
3. If the number is not equally divisible then we must check how many times it goes into 16.
4. In this example, 74 goes into 16 **4** times.
5. It means the first part of the hexadecimal number is 4.
6. What remains? 16 x 4 = 64 (74-64 = 10)
7. The remainder is 10 and in the hex table 10 is represented by **A**, and that completes the hexadecimal number.
8. Therefore the hexadecimal number of **74** is **4A**

4 Hexadecimal to Denary (decimal)

Example: Convert 5E to decimal

Method

1. How many digits represent hexadecimals? **16**
2. The formula would then be *first number*number of digits* **(5*16= 80)**
3. Find out the value of E which is 14.
4. Add the 14 to the 80
5. 80 + 14 = 94
6. Therefore the denary number of **5E is 94.**

Hex Table:

Denary	Hex
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

2.1.2 Designing, creating and refining algorithms

Constructing algorithms

Algorithms can be constructed in many different ways. It could be a basic list of instructions, pseudocode or as a flow chart.

Syntax and Logic errors:

Syntax error:

This error occurs when the syntax used does not meet the rules set by the language. A common example is a grammatical mistake (e.g. print spelt incorrectly)

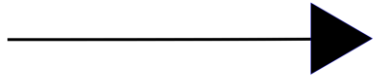
Logic error:

The program will appear to be working however, it might do what it's intended to do. A common example would be the use of an incorrect operator.

Flow chart symbols:

	**Start/Stop:** This signals the beginning and the end of each algorithm.
	**Input/Output:** Used if data is being inputted into the system. If any data needs to be displayed then output could be used. (e.g. print)
	**Process** This is used to process instructions. This could be used to store variables and their associated values. It could be used to process calculations.

Flow chart symbols:

	Decision This is used if there is a condition which could lead to an alternative path on the flow chart. Used for Selection Statements
	**Subroutine** This is used to identify any instructions that can be/or need to be re-used over and over again. (e.g. functions and procedures.)
	**Connector** The line used to link all the symbols together. This helps to establish a logical structure to the algorithm.

Year 8 Cycle 1 - Drama Knowledge Organiser

A. The Costermongers

Costermonger: is a street seller of fruit and vegetables in London and other British towns.
A Domestic Unit: refers to a dwelling that has no more than one family **unit** resident in place of permanent or semi-permanent, and which is used as a habitation
Cockney: A Cockney is a certain type of Londoner who speaks a distinctive Cockney dialect of English used in and around London (like the East End) by the working and lower-middle classes.
Poverty: the state of being extremely poor.
Pick Pocketing: the action of stealing from a person's pockets.
Rent: a tenant's regular payment to a landlord for the use of property or land.




C. Costume Vocabulary

Dress Rehearsal: Dress full costume/ lighting effects/ sound/ effects/ action rehearsal.
Costume Plot: A list or chart, made by the costume designer showing the characters appearing in each scene, and what they are wearing.
Costume and Props: Items worn during a performance to communicate location, time period or character: Clothing, Make-up, Face paint, Mask.
Hot Seating:

Cockney Rhyming Slang:
Apples and pears = Stairs
Army and Navy = Gravy
Bees and Honey = Money
Bottle and Stopper = Copper
Day's a Dawning = Morning
Trouble and Strife = Wife

D. Key Words & Definitions

Health and Safety: Ensuring the rehearsal space is appropriate for performance.
Technical Rehearsal: Rehearsing the ques of the performance in order to input lighting and sound.
Set Design: Backdrops, props, stage furniture.
Scene: A small section or portion of a play.
Stimulus: A starting point and approach to devising work.

Performance Skills:
Gesture: a defined movement which clearly communicates meaning.
Mime: the theatrical technique of suggesting action, character or emotion without words
Audience Awareness: being aware of the audience and not having your back to them.
Silence: complete absence of sound.
Stillness: the absence of movement or sound.

B. Developing Mood and Characterisation

Mood: is the overall feeling created **in** a **dramatic** performance.
Tension: A sense of anticipation or conflict within characters or character relationships, or problems, surprise and mystery in stories and ideas to propel dramatic action and create audience engagement.
Character: a person portrayed in a drama, novel, or other artistic piece.
Characterisation: how an actor uses body, voice, and thought to develop and portray a character. choreography: the movement of actors and dancers to music in a play.
Posture: is the position of a person's body when standing or sitting
Stance: way of standing. Gesture. movement of any part of the body to express idea, feeling. or mood.
Expression: Communicate ideas through actions and words using imagination and background knowledge

E. Lighting

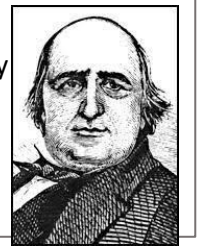
Strobe light: flashing light.

Par Can: A very cheap lantern, it is bright and gels can be used to set the mood.
General Wash: A general fill of light and colour across the stage.
Working Lights: Lights used by stage crew to aid work.

Challenge: How would you use space, sound and movement to communicate that you were nervous about not being able to pay the rent?

F. Performance Skills

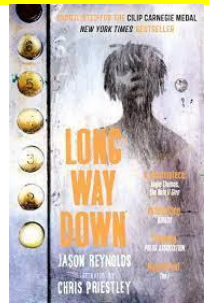
Non Verbal communication: the transfer of information through the use of body language
Thought Track: when a character steps out of a scene to address the audience about how they're feeling
Vocalisation: When an actor uses the voice to build their character considering: pitch, pace, tone, volume, emphasis, intonation, age, dialect, speech pattern, and personality
Audience engagement: to use performance skills to engage the audience in the performance.
Character Motivation: is what drives them or what they achieve
Challenge: Find out who Henry Mayhew is. If he was to ask questions to people in the Market, what might he say? Make a list of 4-6 questions.



Further reading: https://www.youtube.com/watch?v=b3ULEXI2Siw // https://victorianweb.org/history/work/costermonger.html

SPARX Reader Instructions - Stick Here

Start with Week 1. Each week, complete the next colour block. Write each word out 3 times and each definition once. Write as much of the 'digging deeper' information as you can remember. Check it all with a purple pen. Tick what is correct, fix what is wrong.

wk	keyword	definition	example			
Week 1	**Verb**	Words that show an action, occurrence or state of being.	The man **ran** (action). The man **became** a rocket (occurrence). The man **was** a rocket (state of being).			**Digging Deeper: Overview**  **Verse novel:** • A form of literature. • A story is told through the form of a poem rather than prose (written language in its ordinary form). • There will usually be lots of characters and description. • 'Long Way Down' was written by Jason Reynolds and published in 2017.
	Adverb	A word that modifies a verb.	The man ran **quickly.** The woman ate **hungrily.**			
	Adjective	A word that modifies a noun.	The **red** door. The **blue** sky.			
Week2	**Pronoun**	A word that replaces a noun.	Fred went to the shop. **He** bought some milk.		Week2	**Digging Deeper: Key theme**  **Love and Loyalty** • Will (main character) tells the story of his brother's death from a gang-related incident. • He travels in an elevator on his way to avenge his brother's death. • Throughout his journey to the ground floor, lots of people join the elevator. • They are the ghosts of people who died in similar incidents to his brother. • The book suggests that although it is good to have love and loyalty for people, it can be used in a destructive way.
	Simile **Sim/a/lee**	Where things are compared using 'like' or 'as'.	The sun glittered **like** a jewel. The sun was **as** glittery as a jewel.			
	Metaphor **Met/a/for**	Where things are compared by saying that something 'is' something else.	The sun **was** a jewel. The sun **is** a jewel.			

Week 3	**Noun**	The name of a person, thing or place.	**Billy** is in my class. Put the **pen** on the **table.** I am going to **Exeter** at the weekend.		Week 3	**Digging Deeper: Key theme** **Grief** • Will introduces the idea that people in the neighbourhood have to live by 'rules'. • These include things like no 'snitching' (telling the police), no crying and getting revenge where it is needed. • The book suggests that it is these 'rules' that cause the problems with violence. • This is ironic because the people who follow the rules think that they make sure that society is fair and just.
	Verse	Writing arranged with a metrical rhythm.	'Long Way Down' is a verse novel because the text has a rhythm.			
	Rhythm **Ri/th/m**	A strong, repeated pattern of sound.	'Long Way Down' has **rhythm** in its verses.			

Week 4	**Connective**	A word or phrase that connects words/sentences.	Similarly, however, on the other hand.		Week 4	**Digging Deeper: Key theme** **Perspective and reality** • All of the people in the elevator except Will are ghosts. • The book therefore offers an insight into a perspective that the audience would not have in real life- the viewpoints of the dead. • The message given is that what people believe to be true, and what is actually true, can be very different. • This is emphasised by the fact that Will spends a lot of time trying to avoid the ghost's difficult questions.
	Audience **Or/dee/un/s**	The person/people a text is written for.	'Long Way Down' was written for young people.			
	Purpose	The reason a text is written.	The **purpose** of the novel is to help prevent gun and gang violence.			
Week 5	**Dialogue** **Die/a/log**	Speech between two or more characters.	"May as well do the job properly," Oliver said with some satisfaction. "Oh, you boys ..." "Now come on, Will, your turn, isn't it?" "No, Edmund's." (From TWIB, Chapter 1)		Week 5	**Digging Deeper:** **Masculinity and coming of age** • Will is 15 and on the brink of coming of age. • When his brother is killed, he realises that he must mature more quickly than expected. • For Will, this means how capable he is of killing someone else. • The ghosts remind Will that he is still only a child and his idea of being masculine is misguided. • The irony is that acting in the way that Will wants to will not make him 'grow up', but will actually cut his life short.
	Genre **Shon/ra**	A style or category of literature.	'Long Way Down' belongs to the Young Adult fiction **genre.**			
	Simple sentence	A clause that contains a subject and a verb.	The man kicked the football. Subject Verb			
Week 6	**Narrative**	A spoken or written telling of events; a story.	The **narrative** of 'Long Way Down' is a boy is search of revenge for his brother's death.		Week 6	

	Compound sentence	Two main clauses joined with a connective.	The sun was shining and it was hot. Main clause Connective			**Digging Deeper: Key character** **Will Holloman**  • **The story is told from Will's perspective.** • **He is sensitive and loves language, but is desperate to grow up.** • **He thinks he can achieve this by following his other male family members; following the 'rules' of the neighbourhood.**
	Sonnet	A poem of 14 lines, usually having 10 syllables per line.	Shakespeare wrote lots of **sonnets.**			

Week 7	**Complex Sentence**	A main clause and a subordinate clause glued together with a comma.	Although it was raining, he went outside. Main clause Subordinate clause		Week 7	**Digging Deeper: Key character** **Shawn Holloman** • Will's older brother who was killed in a revenge attack. • Had a clean side of the bedroom, but a messy middle drawer. • Will thinks this represents Shawn's dark side. • Shawn gets into the elevator but doesn't speak to Will. Instead, he cries. • He simply asks if he will get out of the elevator with the ghosts.
	Speech	A formal address given to an audience.	"Friends, Romans, countrymen, lend me your ears". The first line of Mark Antony's **speech.**			
	Analysis **Ana/la/sis**	A detailed examination of something.	In English, we **analyse** texts to get an understanding of their deeper meaning.			
Week 8	**Enjambment** **En/jam/bu/ment**	Where the end of a line of poetry follows into the next without punctuation.	There is lots of **enjambment** in the novel to reflect the narrative.		Week 8	**Digging Deeper: Key anthology theme** **Power** • The ability to do something or act in a particular way. • Will wants to feel powerful, but is struggling. • He realises that he is still only a child and actually doesn't have the character to act upon the revenge. • We saw a loss of power when the animals in 'Animal Farm' were exploited. • Arthur Kipps lost power over his family to the woman in black. • Julius Caesar lost power when he was assassinated.
	Rhetorical Question	A question that is there to cause drama; it does not need an answer.	"Who is here so vile that will not love his country?" This is said to create tension, not because Brutus wants someone to answer.			
	Question mark	The punctuation that goes at the end of a sentence.	"Who is here so vile that will not love his country?" We know this is a question because it has a **question mark** at the end of it.			
Week 8	**Protagonist**	The main character in a story/narrative.	Julius Caesar is the **protagonist** in the play.			

	Triplet/Rule of Three	When three words/ phrases/ideas are used to create effect	"I came, I saw, I conquered"		
	Fronted Adverbial	An adverb, or phrase that works like an adverb, at the start of a sentence	**"After the funeral**, I want you to go to Eel Marsh House"(TWIB). *Is this an adverbial of time, manner or place?*		
Week 10	**Antagonist**	The character that goes against the main character creating conflict.	Cassius is a possible **antagonist** in Julius Caesar.		
	Tension	The feeling of nervousness or worry about what may happen in a story.	The audience feels **tension** when Arthur is about to open the nursery door.		
	Tone	The overall attitude or mood of a text.	The **tone** of the novel is often sombre.		

Digging Deeper: Key anthology theme

Conflict

- In English, we come across both **physical and internal conflict.**
- Lots of our studied poems are focused on war and the effects of this on soldiers.
- Examples include 'Bayonet Charge' and 'The Charge of the Light Brigade'.
- Other poems focus on internal conflict. This means that someone feels two opposite emotions/feelings at the same time.
- Examples include 'Poppies' and 'Kamikaze'.
- In 'Long Way Down', there is a physical conflict between gang members.
- Will is also having an internal conflict because he doesn't know what to do for the best.

Digging Deeper extension Tasks:

Either

- Write a diary entry from the perspective of Will or Shawn.

  OR
- Rewrite the main narrative of the story from someone else's perspective. For example, would Buck have seen Will's story in the same way?

  OR
- Create a poster that has a picture of the characters in the elevator

Week 1 & 2
Nutrition recall

Balanced diet definition: Eating a wide variety of foods in the right proportions, and the right amount of food and drink to achieve and maintain a healthy body weight.

8 tips for a healthy diet

1. Base your meals on higher fibre starchy carbohydrates.
2. Eat lots of fruit and veg.
3. Eat more fish, including a portion of oily fish.
4. Cut down on saturated fat and sugar.
5. Eat less salt: no more than 6g a day for adults.
6. Get active and be a healthy weight.
7. Do not get thirsty.
8. Do not skip breakfast.

VITAMINS AND THEIR FUNCTIONS

	Function (what does it do?)	Source (foods found in)
A	• Healthy skin • Helps us see in the dark	• Animals – liver and milk • Plants – carrots and red peppers
B	• Releases energy from food	• Bread, fish, broccoli, liver, milk, peas, rice
C	• Keeps connective tissue healthy • Helps absorb iron	• Oranges, blackcurrants, broccoli, red and green peppers
D	• Helps the body absorb calcium	• Butter, eggs, milk, oily fish

MINERALS AND THEIR FUNCTIONS

	Function (what does it do?)	Source (foods found in)
Calcium	Build strong bones and teeth	Yoghurt, cheese, milk, tofu
Sodium (salt)	Keeps the correct water balance in the body	Cheese, ready meals, salted nuts, bacon
Iron	Keeps red blood cells healthy	Dark green vegetables, beans, fish, egg yolk, red meat

Questions:

1. What colour is each section of the Eatwell guide?
2. What should we cut down on eating too much of?
3. What do the letters GERM stand for in proteins function in the body?
4. What do the letter PIE stand for in fats functions in the body?

Week 3 & 4
Diet, nutrition & Health

Over vs under-nutrition

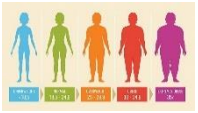
Over-nutrition – eating too much food, or too much of a certain food.
Under-nutrition - eating too little food or too little of a particular nutrient

Definitions:

- Obesity, or being obese, means being very overweight.
- Cardiovascular disease covers a group of diseases, including diseases of the heart and blood vessels.
- CHD (coronary heart disease) occurs when blood vessels to the heart become blocked with fatty deposits.
- Type 2 diabetes is the most common type of diabetes in the UK. It causes the sugar in the blood to get too high.

The main health problems linked to obesity?

- Type 2 diabetes
- Coronary heart disease
- Stroke
- Cancers
- Arthritis
- Depression



The main the risk factors are for CHD

- High blood pressure
- Smoking
- High cholesterol
- Diabetes
- Not exercising enough
- Being overweight or obese
- DNA
- Ethnic background

The signs of type 2 diabetes

- Feeling tired all the time
- Feeling thirsty
- Passing more urine than normal

Normal

Blocked

Questions:

1. What are the main health problems associated with obesity?
2. What is coronary heart disease? Explain
3. What is the difference between type 1 and 2 diabetes?
4. How can you treat type 2 diabetes?

Week 5 & 6
Allergies and intolerances

Definitions:

Allergen – a substance or food that may cause an allergic reaction.

Allergic reaction – Where the body reacts suddenly and often seriously to certain foods.

In the worst cases of food allergies, some people suffer severe reactions which can stop them breathing. They will need an injection of adrenaline from an EpiPen to help them recover.

Allergy information should be clearly shown on any ingredients list by highlighting the ingredient in bold.

The 2 main types of intolerance are lactose intolerance (dairy) and coeliac disease (gluten).

- Lactose intolerance = one of the most common. People who cannot digest lactose (natural sugar found in milk and other dairy foods).
- Intolerance to gluten is known as coeliac disease. Symptoms include Diarrhoea, Bloating and Weight loss

Questions:

1. What is the difference between a food allergy and intolerance?
2. Name 5 foods that could cause a food allergy?
3. What can happen to somebody who accidentally eats a food that they are severely allergic to e.g. nuts?

Plan a meal for a teenager who is a Coeliac. Explain what you would substitute and for what?

Week 7 & 8
Seasonality and food waste

Some foods are seasonal. This means that they are only available and grown at certain times of the year.

How is food wasted?

There are 2 main reasons we waste food at home:

1. We make too much
2. We don't use food before it goes off

Using leftovers

You could use leftover food to make another dish such as:

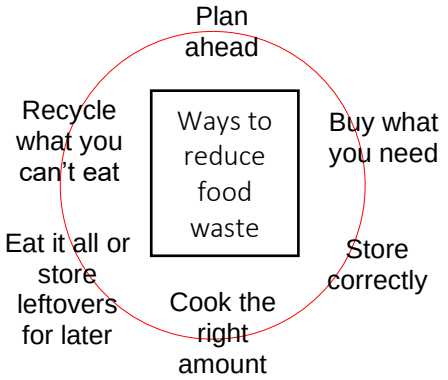
- Rice and pasta in salads
- Bread for breadcrumbs. Used to coat fishcakes, chicken goujons
- Potatoes used for bubble and squeak or frittata
- Chicken used in chicken curry or pie

Advantages of seasonal foods

- More likely to be grown in the UK
- Reduced food miles and carbon footprint
- Supports local businesses
- Can be fresher than buying out of season
- More available which makes them cheaper

Disadvantages of seasonal foods

- They can be used a lot during some seasons which means people could become bored of them
- There can be too much of some foods that will be wasted if they are not eaten



Questions:

1. What does 'seasonal' mean?
2. Give 2 advantages and 2 disadvantages of seasonal foods
3. What are the 4 seasons in the UK?
4. Create a meal that could be made using leftovers from a roast chicken dinner.

Week 1: 09/9/24, Week 2: 16/9/24

1. **Use the sentence builder to write 3- 5 sentences in French**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into French without looking**
4. **Correct in purple pen**

Verb	Noun	Opinion verb	Noun	connective	verb	opinion adjective
Je regarde (**I** watch) **Je ne** regarde **pas** (**I don't** watch) **Je ne** regarde **jamais** (**I never** watch) **Je ne** rate **jamais** (**I never** miss)	**les** émissions **de** sport (sports programmes) **les** émissions **de** télé-réalité (reality TV programmes) **les** émissions musicales (music programmes) **les** infos (**the** news) **les** séries (series) **les** jeux télévisés (game shows) **les** dessins animés (cartoons) **les** documentaires (documentaries)	**j'adore** **(I love)** **j'aime** **(I like)** **je déteste** **(I hate)** **je n'aime pas** **(I don't like)**	**les** émissions **de** sport (sports programmes) **les** émissions **de** télé-réalité (reality TV programmes) **les** émissions musicales (music programmes) **les** infos (**the** news) **les** séries (series) **les** jeux télévisés (game shows) **les** dessins animés (cartoons) **les** documentaires (documentaries)	**parce que** **car** **(because)**	**je trouve ça** **(I find it)**	amusant (funny) bien (good) barbant (boring) chouette (great) effrayant (scary) émouvant (moving) génial (great) intéressant (interesting) passionnant (exciting) stupide/idiot (stupid)

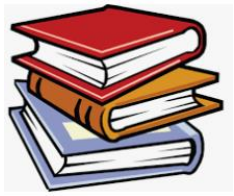
Week 3: 23/9/24, Week 4: 30/9/24

1. **Use the sentence builder to write 3- 5 sentences in French**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into French without looking**
4. **Correct in purple pen**

Verb		**Noun**	**Connective**	**Intensifier**	**Opinion adjective**	**connect ive**	**Opinion adjective**
J'aime **Je n'aime pas** **Je** regarde **Je ne** regarde **jamais** **J'ai une** passion **pour** (**I have a** passion **for**) **Je ne** supporte **pas** (**I can't** stand)	**les**	films **d'**action (action films) films fantastiques (fantasy films) comédies (comedy films) films musicaux (musicals) films **d'**amour (love films) films **d'**aventure films **de** science-fiction films **d'**arts martiaux (martial arts films) dessins animés (animated films)	**car je trouve ça (because I find it)**	**assez (quite)** **très (very)** **un peu (a bit)** complètement (completely) extrêmement (extremely) **vraiment (really)** hyper (super)	amusant (funny) **bien (good)** barbant (boring) chouette (great) effrayant (scary) émouvant (moving) génial (great) intéressant (interesting) passionnant (exciting) stupide/idiot	**et (and)** **mais (but)** **aussi (also)**	amusant (funny) **bien (good)** barbant (boring) chouette (great) effrayant (scary) émouvant (moving) génial (great) intéressant (interesting) passionnant (exciting) stupide/idiot
Je suis fan **de** (**I'm a** fan **of**) **Je ne suis pas** fan **de** (**I'm not a** fan **of**) 							

Week 5: 7/10/24, Week 6: 14/10/24

1. **Use the sentence builder to write 3- 5 sentences in French**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into French without looking**
4. **Correct in purple pen**

Time marker	Verb	Noun	Verb	Intensifier	Opinion Adjective	verb	Intensifier	Adjective
En ce moment (**at the** moment) Normalement (Normally) D'habitude (usually) Quelquefois (sometimes) 	**Je** lis (**I** read/ **I am** reading)	**un** roman policier (**a** crime novel) **un** roman de science-fiction (**a** sci-fi novel) **un** roman d'amour (**a** romantic novel) **un** roman fantastique (**a** fantasy novel) **un** roman d'aventure (an adventure novel) **un** livre sur **les** animaux (**a** book about animals) **un** livre d'épouvante (**a** horror/scary book) **un** magazine (**a** magazine) **un** journal (**a** newspaper) **une** BD (**a** comic book)	**et c'est (and it's)** **et je pense que c'est (and I think it's)** **et à mon** avis **c'est (and in my** opinion **it's)**	**assez (quite)** **très (very)** **un peu (a bit)** complètement (completely) extrêmement (extremely) **vraiment (really)** hyper (super) **trop (too)**	drôle (funny) triste (sad) effrayant (scary) intéressant (interesting) passionnant (exciting) émouvant (moving) ennuyeux (boring) difficile (difficult) nul (rubbish)	**mais c'est (but it's)**	**assez (quite)** **très (very)** **un peu (a bit)** complètement (completely) extrêmement (extremely) **vraiment (really)** hyper (super) **trop (too)**	drôle (funny) triste (sad) effrayant (scary) intéressant (interesting) passionnant (exciting) émouvant (moving) ennuyeux (boring) difficile (difficult) nul (rubbish)

Week 7: 21/10/24, Week 8: 4/11/24

1. **Use the sentence builder to write 3- 5 sentences in French**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into French without looking**
4. **Correct in purple pen**

Verb	Frequency	key phrase	connective	opinion phrase	Adjective
Quand je suis connecté (**When I am** online) 	quelquefois (sometimes) **tous les** soirs (**every** evening) **une** fois **par** semaine (**one** time **per** week) d'habitude (usually) souvent (often)	**Je fais des** achats (**I make** purchases) **J'**envoie **des** emails/**des** textos (**I** send emails/texts) **Je fais mes** devoirs (**I do my** homework) **Je** joue **à des** jeux **(I** play games) **Je fais des** quiz (**I do** quizzes) **Je** regarde **des** clips vidéos (**I** watch video clips) **Je** lis **des** infos (**I** read **the** news) **je** télécharge **des** chansons (**I** download songs) **Je** tchatte **en** ligne (**I** chat online)	**parce que** **(because)** **car** **(because**)	selon **moi c'est** (according to me it's) **je pense que c'est** **(I think it's)** **Je trouve que c'est** **(I find it's)** **à mon** avis **c'est** (**in my** opinion **it's**)	amusant (funny) **assez bien** **(quite good)** barbant (boring) chouette (great) pratique (practical) génial (great) intéressant (interesting) passionnant (exciting) stupide/idiot (stupid)

Week 9: 11/11/24, Week 10: 18/11/24

1. **Use the sentence builder to write 3- 5 sentences in French**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into French without looking**
4. **Correct in purple pen**

Time marker	Future tense verb	connective	Future tense verb 2	future tense	adjective
Demain (Tomorrow) Demain soir (tomorrow evening) Demain matin (tomorrow morning) Demain après-midi (tomorrow afternoon) **Ce** weekend (**this** weekend) 	**je vais** regarder **la** télé/**un** film (**I'm going to** watch TV/**a** film) **je vais** écouter **de la** musique (I'm going **to** listen **to** music) **je vais** surfer **sur** internet (**I'm going to** surf **on the** internet) **je vais** jouer **aux** jeux **en** ligne (**I'm going to** play games online) **je vais** poster **des** photos (**I'm going to** post photos) **je vais** télécharger **des** chansons (**I'm going to** download songs) **je vais** envoyer **des** textos (**I'm going to** send texts) **je vais** lire **mon** livre (**I'm going to** read **my** book) **je vais** dîner **en** famille (**I'm going to** eat **with my** family) **je vais faire mes** devoirs (**I'm going to do my** homework)	**plus tard (later)** **puis (then)** **ensuite (next)** **après (after)** **finalement (finally)**	**je vais** regarder **la** télé/**un** film (**I'm going to** watch TV/**a** film) **je vais** écouter **de la** musique (I'm going **to** listen **to** music) **je vais** surfer **sur** internet (**I'm going to** surf **on the** internet) **je vais** jouer **aux** jeux **en** ligne (**I'm going to** play games online) **je vais** poster **des** photos (**I'm going to** post photos) **je vais** télécharger **des** chansons (**I'm going to** download songs) **je vais** envoyer **des** textos (**I'm going to** send texts) **je vais** lire **mon** livre (**I'm going to** read **my** book) **je vais** dîner **en** famille (**I'm going to** eat **with my** family) **je vais faire mes** devoirs (**I'm going to do my** homework)	**ce sera (it will be)** **ce ne sera pas (it will not be)**	amusant (funny) **assez bien (quite good)** barbant (boring) chouette (great) pratique (practical) génial (great) intéressant (interesting) passionnant (exciting) stupide/idiot (stupid)

Year 8 Cycle 1 Geography Knowledge Organiser – Weather and Climate

<table>
<tr><th colspan="2">Week 1 – Friday 13th September 2024</th><th colspan="2">Week 2 – Friday 20th September 2024</th></tr>
<tr><th>Lesson 1 – Elements of weather</th><th>Lesson 2 – Factors affecting climate</th><th>Lesson 3 – High and low pressure</th><th>Key Word Practice</th></tr>
<tr>
<td>Key Terms:
Weather: The state of the atmosphere at a given point in time. For example, dry and sunny or rain.
Climate: The average weather for a place over a long period of time, typically 30 years. For example, desert, temperate, arctic.
Precipitation: Any moisture that falls from the sky.</td>
<td>Key Terms:
Latitude: The measurement on a globe or map of locations north or south of the Equator.

Altitude: The distance above sea level.</td>
<td>Key Terms:
Low Pressure: Air rising from the surface of Earth into the atmosphere.

High Pressure: Air falling from the atmosphere to Earth's surface.</td>
<td rowspan="3">TASK: For the 10 key words below, either write each one out 3 times using look, cover, write, check, OR define each one.

1. Weather

2. Climate

3. Temperature

4. Precipitation

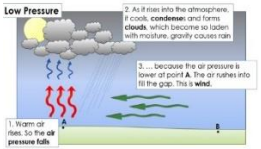
5. Latitude

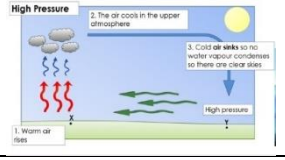
6. Altitude

7. Currents

8. Low pressure

9. Depression

10. High pressure</td>
</tr>
<tr>
<td>Content:
There are several different elements that make up the weather:
• Temperature: Measured in Degrees Celsius using a thermometer.
• Wind Speed: Measured in kmph, knots or mph using an anemometer.
• Wind Direction: Measured using a wind vane and shown as N,E,S,W.
• Precipitation: Measured in mm using a rain gauge.
• Cloud Cover: Estimated by eye and expressed in Octas.
• Pressure: Measured in millibars using a barometer.</td>
<td>Content:
• Latitude: The equator is warmer due to the sun being directly overhead. Temperature decreases the closest you get to the poles.
• Ocean currents: These can make places warmer or cooler depending on the direction. The Gulf Stream warms the UK.
• Altitude: The temperature decreases by 1°C every 100m
• Distance from the sea: The ocean generally has a cooling affect.
• Wind: The direction of this can make a place warmer or cooler.</td>
<td>Content:
Low pressure: Also called a depression. The air rises (evaporation), cools (condensation) causing clouds and precipitation.
 

High pressure: Cool air is sinking; this leads to clear skies and warm sunny weather in the summer but cold sunny weather in winter.
 
</td>
</tr>
<tr>
<td>Questions:
1. What is weather?
2. What is climate?
3. How is temperature and precipitation measured?
4. How is wind speed and direction measured?</td>
<td>5. What is latitude and altitude?
6. How does latitude and altitude affect climate?
7. How does ocean currents and distance from sea affect climate?
8. How does cloud cover affect climate?</td>
<td>Questions:
1. What is low pressure?
2. Draw a diagram of low pressure
3. What is high pressure?
4. Draw a diagram of high pressure
5. Copy out the 10 key words 3 times</td>
</tr>
</table>

Year 8 Cycle 1 Geography Knowledge Organiser – Weather and Climate

Week 3 – Friday 27th September 2024

Lesson 4 – Global pressure

Key Terms:
Insolation: The amount of solar radiation received in the Earth's atmosphere or at the Earth's surface.

Content:
The Equator receives the highest levels of insolation and is hot and the Polar regions receive the lowest levels of insolation and are cold.

Global air pressures:
- Low pressure at the Equator causing clouds and precipitation. It is hot and wet climate which is ideal for vegetation growth.
- High pressure at 30° causing cloudless skies. This means it is very hot and dry, so no plants grow, creating deserts.
- Low pressure at 60° causing clouds and precipitation. It is cool and wet.
- High pressure at 90° causing it to be very cold and dry.

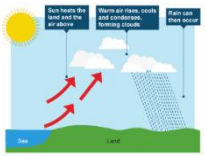
'Questions:
1. What is insolation?
2. Where is high and low insolation?
3. What's happening at the equator?
4. What's happening at 30 ° and 60°?

Lesson 5 – Types of rain

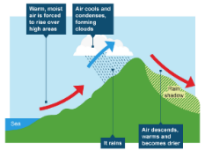
Key Terms:
Evaporation: The process of turning a liquid into vapour/gas.

Condensation: The process where water vapour is changed into a liquid.

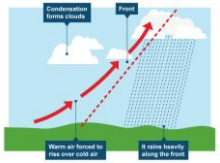
Content:
Convectional rainfall: Sun heats the land and air rises, cools, condenses and forms cloud and rain.



Relief rainfall: Warm air forced to rise, cools and condenses forming clouds and rain.



Frontal rainfall: Warm air forced to rise over cold air, condensing and forming clouds and rain.



5. What is evaporation and condensation?
6. Draw a diagram of convectional rainfall
7. Draw a diagram of relief rainfall
8. Draw a diagram of frontal rainfall

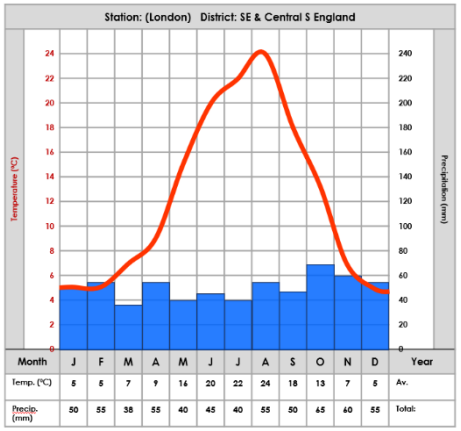
Week 4 – Friday 4th October 2024

Lesson 6 – UK climate graphs

Key Terms:
Climate Graph: A graph to show the average temperature and precipitation for a year for a given area.

Content:
Climate graphs have two **y axis:**
- **Red:** Temperature (Line)
- **Blue:** Precipitation (bars)

The months are along the **x axis**



Questions:
1. What is a climate graph?
2. What are on the two y axis?
3. What is on the x axis?
4. How is temperature and rainfall shown on a climate graph?
5. Copy out the 10 key words 3 times

Key Word Practice

TASK: For the 10 key words below, either write each one out 3 times using look, cover, write, check, **OR** define each one.

1. Insolation
2. High pressure
3. Low pressure
4. Evaporation
5. Condensation
6. Convectional
7. Relief
8. Frontal
9. Temperature
10. Precipitation

Year 8 Cycle 1 Geography Knowledge Organiser – Weather and Climate

<table>
<tr><th colspan="2">Week 5 – Friday 11th October 2024</th><th colspan="2">Week 6 – Friday 18th October 2024</th></tr>
<tr><th>Lesson 7 – Weather hazards</th><th>Lesson 8 – Formation of tropical storms</th><th>Lesson 9 – Hurricane Katrina (1)</th><th>Key Word Practice</th></tr>
<tr>
<td>Key Terms:
Meteorology: Science that deals with the atmosphere, weather, and weather forecasting.

Weather hazards: Meteorological events which can have an impact on people and property.</td>
<td>Key Terms:
Tropical Storm: A very powerful low-pressure weather systems that has strong winds and heavy rainfall.

Wind shear: Changes in wind speed and/or direction with height.</td>
<td>Key Terms:
Hurricane Katrina: A devastating tropical storm that hit the area around New Orleans, USA, on 25 August 2005.

Storm surge: A change in sea level that is caused by a storm.</td>
<td rowspan="3">TASK: For the 10 key words below, either write each one out 3 times using look, cover, write, check, OR define each one.

1. Meteorology

2. Drought

3. Blizzard

4. Tropical storm

5. Wind shear

6. Hurricane

7. Cyclone

8. Typhoon

9. Levees

10. Vulnerable</td>
</tr>
<tr>
<td>Content:
• Drought: Prolonged period of high pressure with no rainfall. Lead to crop failure
• Forest fires: Intense heat causes vegetation to dry out and vulnerable to burning. Australia 2019-2020 lead to 34 deaths.
• Mid latitude storms: Happen when warm and cold air meet causing intense low pressure. E.g.: Storm Denis 2020, £225 million in damages.
• Flood: Caused by prolonged or intense rainfall. Monsoon in Pakistan (2022) 1739 deaths, £15 billion damage.
• Blizzard: Cold weather and heavy snow e.g.: Beast from the East March 2018.</td>
<td>Content:
Tropical storms form when ocean surface temperature is above 27°c. This is usually between the Tropic of Cancer (23.5° North) and the Tropic of Capricorn (23.5° South).

Formation of a tropical storm:
1.Rapid evaporation and condensation cause large cumulous nimbus clouds to form.
2.Low wind shear means that these continue to grow.
3.More warm moist air is drawn in.
4.Cool air sinks in the middle creating the eye.
5.Start to spin due to the spin of the Earth.</td>
<td>Content:
Formation and background:
• Developed in the Atlantic.
• 400 miles wide & 100-175 mph winds
• New Orleans 2m below sea level.
• 8m storm surge.
Social impacts (people):
• 1,800 people died.
• 300,000 homes were destroyed.
• 3 million people had no electricity.
Economic impacts (money):
• $300 billion of damage.
• Oil platforms were destroyed.
• 80% the man-made levees, overwhelmed by extra water and broke.
• Cotton and sugar cane crops were destroyed.</td>
</tr>
<tr>
<td>Questions:
1. What are weather hazards?
2. What is a drought?
3. Outline examples of forest fires and mid latitude storms
4. What are floods and blizzards?</td>
<td>5. What is a tropical storm?
6. What are they called in the different oceans?
7. What temperature is needed to form tropical storms?
8. State the 5 steps in creating tropical storms.</td>
<td>Questions:
1. What is a storm surge?
2. Give 4 facts about the formation and background
3. Give 3 social impacts
4. Give 5 economic impacts
5. Copy out the 10 key words 3 times</td>
</tr>
</table>

Year 8 Cycle 1 Geography Knowledge Organiser – Weather and Climate

<table>
<tr><th colspan="2">Week 7 – Friday 25th October 2024</th><th colspan="2">Week 8 – Friday 8th November 2024</th></tr>
<tr><th>Lesson 10 – Hurricane Katrina (2)</th><th>Lesson 11 – Greenhouse effect</th><th>Lesson 12 – Causes of climate change</th><th>Key Word Practice</th></tr>
<tr>
<td>Key Terms:
Acre: An area of land around 4,000m^2

Superdrome: Multi-purpose stadium located in the centre of New Orleans and seats 83,000 people.</td>
<td>Key Terms:
Greenhouse effect: The trapping of the sun's warmth in a planet's lower atmosphere.
Enhanced greenhouse effect: Additional heat retained due to the increased amounts of greenhouse gases that humans have released into the earth's atmosphere.</td>
<td>Key Terms:
Climate change: Any change in global temperatures and precipitation (rainfall) over time, due to natural or human activity.
Orbital changes: The path the earth takes around the sun can change (closer and further away).</td>
<td rowspan="3">TASK: For the 10 key words below, either write each one out 3 times using look, cover, write, check, OR define each one.

1. Storm surge

2. Refuge

3. Atmosphere

4. Greenhouse effect

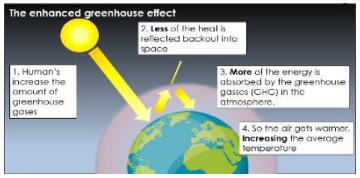
5. Enhanced greenhouse effect

6. Nitrous oxide

7. Methane

8. Climate change

9. Deforestation

10. Agriculture</td>
</tr>
<tr>
<td>Content:
Environmental impacts:
• The storm surge flooded large areas of the coast.
• Coastal habitats were destroyed.
• 7 million gallons of crude oil spilled.
• 1.3m acres of woodland destroyed.
Immediate responses:
• People boarded-up homes/used sheeting.
• 90% of people left the city.
• 10,000 people (who were too poor to evacuate) took refuge in the Superdome.
• Emergency services overwhelmed.
Long term response:
• 220 miles of flood walls & levees strengthened or replaced to lower the chances of severe flooding.</td>
<td>Content:
The natural greenhouse effect (GHE) is due to the gasses in our atmosphere. The greenhouse gases include:
• Carbon Dioxide
• Methane
• Nitrous Oxide
• Water vapour
The enhanced greenhouse effect is caused by human activity including burning fossil fuels, intensive agriculture, deforestation.
 
</td>
<td>Content:
Human causes of climate change:
Burning fossil fuels: Burned for electricity and transport (CO_2).
Deforestation: Less trees to absorb and store CO_2.
Agriculture: Causes gases like methane.
Physical causes of climate change:
Orbital changes: Earth orbiting the sun changes slightly taking us closer or further away from the sun.
Sunspots: The sun can emit solar flares which can send more radiation to Earth
Volcanic eruptions: Volcanoes can release ash which blocks light and reflects back into space making it cooler.</td>
</tr>
<tr>
<td>Questions:
1. What is an acre?
2. State 4 environmental impacts
3. State 4 immediate responses
4. State a long-term response</td>
<td>5. What is the greenhouse effect?
6. State 4 greenhouse gases
7. What is the enhanced greenhouse effect?
8. Draw a diagram of the enhanced greenhouse effect</td>
<td>Questions:
1. What is climate change?
2. What is deforestation?
3. State 3 human causes
4. State 3 physical causes
5. Copy out the 10 key words 3 times</td>
</tr>
</table>

Year 8 Cycle 1 Geography Knowledge Organiser – Weather and Climate

Week 9 – Friday 15th November 2024		Week 10 – Friday 22nd November 2024	
Lesson 13 – Impacts of climate change	**Lesson 14 – Climate change in Bangladesh**	**Lesson 15 – Reducing climate change**	**Key Word Practice**
Key Terms: **Wildfires:** A large, destructive fire that spreads quickly over woodland or brush. **Thermal expansion:** Warming ocean water expands and takes up more space therefore sea levels rise.	**Key Terms:** **Bangladesh:** An LIC in the north-eastern part of South Asia. Has a GNI of $6,840 (UK is $49,420). **Mangrove:** A low growing trees/ shrubs that grow in warm shallow, calm seas.	**Key Terms:** **Mitigation:** To reduce or stop climate change itself by stopping GHG being released into the atmosphere. **Adaptation:** Changing what we do to cope with climate change rather than stopping it. Actions taken by people	***TASK:*** For the 10 key words below, either write each one out 3 times using look, cover, write, check, **OR** define each one. 1. Thermal expansion 2. Wildfires 3. Tuvalu 4. Bangladesh 5. Mangrove 6. Dhaka 7. Bay of Bengal 8. Mitigation 9. Adaptation 10. Government
Content: **Location: California:** Wildfires are becoming more frequent. **Location: Tuvalu, South Pacific:** small islands are a 1m above sea level. Thermal expansion is causing the sea to rise. Fields are flooded, and the fish are gone. **Location: Switzerland, Alps:** Ski season is short and unpredictable due to snow melt or lack of snow. **Location: UK Somerset Levels:** The River Parrett floods most years, but it is getting worse and happening more often. **Location: Pakistan:** Rain is becoming unpredictable. 1739 deaths in 2022, the crops are flooded.	**Content:** **Physical Causes:** • Low lying and has 3 major rivers that flood naturally • 80% of the land is 1-2m above sea level. **Human Causes** • Removed mangroves and these are a natural sea defence. • Glacial melt is increasing due to climate change causing river levels to rise. **Impacts** • People are losing farmland, so they change jobs to fishermen. • People migrate to Dhaka away from the coast.	**Content:** **What can be done in Bangladesh?** • People could leave the coast and move to the city. • The government could make an agreement for Bhutan to plant trees which may absorb the precipitation and melt water. **What can the rest of the world do?** • Stop buying exotic foods. The transport releases CO^2. • People could walk, cycle, and use public transport rather than using their car. • Charities, people, and governments could plant more trees. • Governments could use renewable energy to reduce CO_2.	
Questions: 1. What is thermal expansion? 2. What is the impact in Tuvalu? 3. What is the impact in the Alps? 4. What is the impact in the UK?	5. Where is Bangladesh? 6. State 3 physical causes 7. State 3 human causes 8. State 2 impacts on Bangladesh	**Questions:** 1. What is mitigation? 2. What is adaptation? 3. What can Bangladesh do? 4. What can the rest of the world can do? 5. Copy out the 10 key words 3 times	

Week 1		Week 2	
Lesson 1- Charles I and reasons for his unpopularity	**Lesson 2- Why did Charles I and Parliament argue between 1629-40?**	**Lesson 3- What were the short-term causes of the Civil War?**	**Practice**
Key Phrases **Civil War-** A war between people from the same country **Divine Right of Kings-** belief that he had been appointed by God to be king.	**Key Phrases** **Cause-** Reason **why** something happens **Parliament (17th century)-** a group of people that advise the monarch **Long-Term Cause-** Things that have been going on for a long time before an event.	**Key Phrases** **Short-Term Cause-** things that happen immediately before an event that help cause it **Puritans**- strict Protestants who disagreed with the reforms that Archbishop Laud	**Task:** **Create a timeline of these key events that led to the English Civil War. You need to put them in chronological order.** Charles closes Parliament for 11 years- 1629 Charles I declared war on Parliamentarians. English Civil War begins - 1642 Charles raises taxes without the permission of Parliament- 1626 Charles I becomes King and marries Catholic princess Henrietta Maria - 1625 Charles I agrees to some changes e.g. calling Parliament every 3 years-1641 Parliament took control of the army- 1642
Content Charles I was the King of England from 1625-49. His royal line was the Stuarts, who were originally kings of Scotland. He married a Catholic French princess called Henrietta Maria and this caused many of his subjects to suspect that he was a secret protestant. He was executed in 1649 and reason given for his punishment was treason.	**Content** Charles I believed he had been appointed by God to rule- the Divine Right of Kings. He did not agree with Parliament questioning his decisions. Parliament had to agree to any taxes and Charles needed money. This gave Parliament power over Charles. Many arguments were also over religion. Puritans hated Charles because they thought he might be bringing Catholicism back.	**Content** In 1640, Parliament complained to Charles e.g. Parliament should be called every 3 years. Charles agreed to some things like ending Ship Money (an unpopular tax). Parliament then demanded more power with a list of MORE complaints called the **Grand Remonstrance.** In 1642, Parliament took control of the army. This caused 200 MPs to leave Parliament and join Charles' side.	
Read Charles' early reign https://www.bbc.co.uk/bitesize/articles/zxxgg7h#zffddp3 1. When did Charles become King? 2. Why was his marriage to Henrietta Maria concerning? 3. What was the Divine Right of Kings? 4. Who led a failed naval battle against the Spanish at Cadiz?	Read 1629-1640 https://www.bbc.co.uk/bitesize/articles/zxxgg7h#z9dssk7 1. What was Ship Money? 2. Why was appointing Archbishop Laud such an unpopular decision? 3. How did Charles anger Scottish Puritans?	Read 1640-1645 https://www.bbc.co.uk/bitesize/articles/zxxgg7h#zdqvvwx 1. What was the Grand Remonstrance? 2. How many MPs did Charles try to arrest? 3. Why did Charles declare war on Parliament in August 1642?	

Week 3		Week 4	
Lesson 4- What were the key factors that caused the English Civil War?	**Lesson 5- Mid-Cycle Assessment**	**Lesson 6- Overview of the English Civil War**	**Practice**
Key Phrases **Religious-** relating to religion **Political-** relating to power and government **Economic-** relating to money	**Key Phrases** **Point Sentence-** Answers the question directly **Evidence-** Includes historical detail **Explain-** Explain how the evidence supports your point	**Key Phrases** **Gentry-** name for landowners **Royalists or Cavaliers-** soldiers who fought for the King **Parliamentarians or Roundheads-** soldiers who fought for Parliament	**Cover and practice the spelling of the following words or write out their definitions:** 1. Gentry 2. Royalists 3. Cavaliers 4. Parliamentarians 5. Roundheads 6. Political 7. Economic 8. Religious 9. Short-term Cause 10. Long-term Cause
Content **Religious Reason-** Many people suspected Charles of bringing back Catholicism. Archbishop Laud introduced laws that made the Church more Catholic. **Political-** Parliament wanted more power. They seized control of the army to prevent Charles from closing Parliament again **Economic-** Charles was bad with money and introduced unpopular taxes like the ship tax.	**Content** There are three main factors when it comes to the outbreak of English Civil War. They are Religion, Economics and Politics (power). Some of the causes are long-term because they were bubbling under the surface for years (e.g. Puritans despising Charles for his Catholic-style changes in the Church) but others are short-term because they trigger the war (e.g. Parliament taking control of the army)	**Content** Parliament slowly takes over the majority of England by winning a succession of Battles. At the beginning of the war, the Royalists were much better but Charles wasn't a good military leader. Parliament did not have a proper army at the start but Oliver Cromwell emerged as a very good military leader. He formed and trained the New Model Army which was disciplined and well equipped.	
Play the History Detectives Game and answer the question below https://shorturl.at/uwZCs 1. How did Scottish Puritans view the Church of England? 2. What was the relationship like between Archbishop Laud and Parliament?	Watch the video Answer the questions https://www.bbc.co.uk/bitesize/articles/zxxgg7h#z9dssk7 1. What is PEE paragraph? 2. Which part of a PEE paragraph was the longest in the example? Point, Evidence or Explain?	Watch the video Answer the questions https://www.youtube.com/watch?v=UO5-vLVJG5Q 1. Who did the roundheads fight for? 2. Why do people say they were boring? 3. Who did the cavaliers support? 4. What does Cromwell say he will do?	

Week 5		Week 6	
Lesson 7- Is the Battle of Bovey Heath significant?	**Lesson 8- Did the English support the execution of Charles I?**	**Lesson 9- Was England Better off under Oliver Cromwell?**	**Practice**
Key Phrases and Content **Significance-** what is important from the past • **Novelty-** Is it new or original? **Applicability-** It's similar to something happening right now • **Memory-** They have been remembered in a particular way • **Effect-** Have a lot of people been effected by the event? A skirmish (a small fight) at Bovey Tracey saw Cavaliers escape Roundheads by distracting them with coins. The next day, Cromwell's forces won at Bovey Heath, capturing horses, soldiers, and cattle.	**Key Phrases** **Regicide-** the act of killing a King **Treason-** The crime of being disloyal to the Crown **Content** In 1649, King Charles I was put on trial for treason. He was found guilty and sentenced to death. There should have been 135 commissioners involved in the trial, but only 68 actually turned up. Following Charles' execution, there was an 11-year period when England was ruled without a monarch. Oliver Cromwell led England from 1653, taking the title of 'Lord Protector'.	**Key Phrases** **Tolerance-** willingness to accept behaviour and beliefs that are different from your own **Democracy-** allows people to be involved in running of the government **Content** Cromwell dismissed Parliament in 1654 for good. England was divided into 11 districts, each run by a military general-the army was in control. He allowed Puritan Christians in Parliament to make decisions that angered English people – such as banning Christmas and closing theatres. He gave people the freedom to publish what they like. He worked hard to reduce bribery and corruption in Government.	**Create 5 multiple choice questions. One for each of the topics below:** 1. Long-term Causes of the English Civil War 2. Short-term Causes of the English Civil War 3. Roundheads and Cavaliers 4. Battle of Bovey Heath 5. Cromwell's reign
Write down information about two important locations in Bovey Tracey from the Battle of Bovey Heath using this website. https://boveytraceyhistory.org.uk/civil-war/	Read The Execution Answer the questions https://www.bbc.co.uk/bitesize/articles/z3jyydm#zs8nn9q 1. When was Charles' execution? 2. Where did it take place? 3. Who ruled after Charles? 4. What title did Cromwell give himself?	Sort the facts in the content box into a table like this: **England was better off** | **England was worse off**	

Week 7		Week 8	
Lesson 10- Cromwell's actions in Ireland	**Lesson 11- Why was the monarchy restored?**	**Lesson 12- Introduction to the Industrial Revolution**	**Practice**
Key Phrases **Provenance-** a source's background- its Nature, Origin and Purpose (NOP) **Objective opinion-** not influenced by personal feelings but based on facts.	**Key Phrases** **Monarchy-** King or Queen **Lord Protector-** Name for the ruler in the absence of the monarchy	**Key Phrases** **Industrial Revolution-** A time of rapid change between 1750-1900 in the way that things are manufactured (made), going from being hand made at home to using machines in factories.	**Create a timeline of these key events of the Industrial Revolution. You need to put them in chronological order.** 1781- James Watt patents an improved steam engine making it useful as a power source in factories 1750- The Industrial Revolution begins in Great Britain 1876- Alexander Graham Bell invents the telephone 1811- The Luddites attack factories in Great Britain smashing machines in a protest against industry 1764- James Hargreaves invents the spinning jenny allowing a worker to produce multiple spools of thread at the same time 1712- The first steam engine is invented by Thomas Newcomen
Content English rulers colonized Ireland with Protestant settlers, causing rebellion and worsening relations, leading to Cromwell's military intervention in 1649. In September 1649, Cromwell's army attacked Drogheda. Cromwell's forces broke through, killing armed men and Catholic priests, and possibly civilians. Around 3,500 people died, and many survivors were enslaved. This brutality fuelled long-lasting Irish resentment toward the English.	**Content** Cromwell died in 1658. He was replaced by his son. Parliament did not believe Richard Cromwell could run the country so they refused to follow him. Instead Parliament invited Charles' son, Charles II, back from the Netherlands to be made King. This was known as **The Restoration** because the monarchy had been restored.	**Content** The Industrial Revolution, which took place between 1750 - 1900, was a period of great change in Britain. There were huge technological advances which had an impact on every aspect of life. These technological advances were happening while the British Empire was growing. Not all of these changes were positive. The population increased by 600%.	
Watch the video Answer the question https://www.youtube.com/watch?v=uonEk0EuVGU 1. Write down 4 brutal things Cromwell does or orders his soldiers to do	Read the section on Cromwell's death Answer the questions https://www.bbc.co.uk/bitesize/articles/zg6ccmn#zf733j6 1. Who replaced Oliver Cromwell when he died? 2. What was the Restoration? 3. What was Charles II like as a ruler?	Watch the video Answer the questions https://www.bbc.co.uk/bitesize/topics/zm7qtfr/articles/z6kg3j6#zwdqjsg 1. In which country did the Industrial Revolution start? 2. The invention of what type of engine sparked the Revolution? 3. How much did the population grow?	

Week 9		Week 10	
Lesson 13- What was factory life like?	**Lesson 14- Child Labour**	**Lesson 15- What were living conditions like?**	**Practice**
Key Phrases **Mill-** A factory **Labour-** work (particularly physical work)	**Key Phrases** **Child Labourer-** A child who completes hard physical labour in return for a small wage	**Key Phrases** **Overcrowding** – having too many people in one place **Sanitation-** process of keeping places hygienic e.g. sewage systems	**Cover and practice the spelling of the following words or write out their definitions:** 1. Industrial Revolution 2. Mill 3. Child Labourer 4. Sanitation 5. Overcrowding 6. Child Labourer 7. Monarchy 8. Long-term cause 9. Short-term cause 10. Provenance
Content In the 1800s, as factories spread across the North, many offered job opportunities to women and children. Working conditions were dangerous. Worker's hearing was damaged from the noise of the machines and small fibres from the cotton got into the air and gave people breathing difficulties. Wages depended on who you were. Men were paid the most, then women and then children. Most worked 16 hours a day, 6 days a week.	**Content** Children were used in many industries. In mining, children were used to open and close doors and had to work in the pitch black. In factories, children had to clean the machines while there were still running- this was very dangerous, many lost a limb. On farms, children often carried heavy loads and were treated very badly if they were orphans. Children also worked with chimney sweeps and were sent up chimney's to clean them.	**Content** Working-class housing was crowded together near the factories and other places of work. The conditions varied, but much accommodation was extremely unsanitary and unhealthy. Workers' diets were poor as they could not afford much fresh or nutritious food. In some industrial cities like Leeds, the average age of death could be as low as 14.	
Play the History detectives game Answer the questions https://shorturl.at/iJ9xh 1. Why were children dunked in water? 2. What does Edward Baines say about Children dying young in the mill?	Watch the video Answer the questions https://www.youtube.com/watch?v=1PmHBqtLFss 1. Where were the remains of 13 children found? 2. How young could children be employed from? 3. What sort of accidents happened? 4. What was cotton lung?	Watch the video Answer the questions https://www.youtube.com/watch?v=FDZe512gPeE 1. What did poor people share? 2. Where did the sewage go? 3. If they couldn't pay rent, where did people go?	

Week 11		Week 12	
Lesson 13- Jack the Ripper	**Lesson 14- Why didn't politicians improve the lives of the poor?**	**Lesson 15- Was the Industrial Revolution a good thing?**	**Practice**
Key Phrases **Metropolitan Police-** The police that covered London **Whitechapel-** an area of London known for its crime and poverty	**Key Phrases** **Politician-** a member of government **Representative-** aiming to represent something	**Key Phrases** **Legislation-** Laws **Trade Unions-** people from different trades who want to keep and improve their jobs and their working and living condition	**Create 5 multiple choice questions. One for each of the topics below:** 1. Living Conditions 2. Child Labour 3. Factory Conditions 4. Policing/ Jack the Ripper 5. Inventions in the Industrial Revolution
Content Between August and November 1888, five women were murdered in Whitechapel: Mary Ann 'Polly' Nichols, Annie Chapman, Elizabeth Stride, Catherine Eddowes and Mary Kelly. Their murderer became known as Jack the Ripper and was never caught. The Metropolitan Police in Whitechapel were criticised for failing to capture the murderer.	**Content** In 1780, only 3% of the population were allowed to vote. Some people lived in 'Rotten Boroughs' where only a few people voted but were represented by a whole MP (or two!) at Parliament. This gave those voters more power than they should have. It wasn't representative.	**Content** Steam engines had led to railways which made transportation easier. By 1866, 1300 miles of sewers had been built by Joseph Bazalgette. After 1901, no child under 12 was allowed to work. From 1870, the Education Act stated that children between 5 and 13 had to attend school. In 1861, Louis Pasteur discovered that germs cause disease.	
Read Policing in Whitechapel Answer the questions https://www.bbc.co.uk/bitesize/guides/zrx94xs/revision/6 1. What was H Division? 2. What was the role of the beat constable? 3. What does CID stand for?	Watch the video Answer the questions https://www.bbc.co.uk/bitesize/guides/zmgxsbk/revision/4 1. What was the average life expectancy in Manchester in 1842? 2. How much longer could a rich person expect to live? 3. Who did the middle class blame for the poor conditions?	Each of the sentences in the content box is a statement about something that was achieved during the Industrial Revolution. Write the statements out the order of their importance (your opinion.) Put the most important one first.	

Life Skills Knowledge Organiser

Lesson 1 and 2– Identity and Gender	Lesson 3 and 4 – Challenging stereotypes, prejudice and discrimination
Places to access support https://www.childline.org.uk/info-advice/your-feelings/sexual-identity/gender-identity/	**Places to access support** https://www.mind.org.uk/for-young-people/your-rights/understanding-my-rights/
Content: **Gender Identity** Gender identity is a way to describe how you feel about your gender. You might identify your gender as a boy or a girl or something different. This is different from your sex, which is related to your physical body and biology. **LGBTQ+** Lesbian, Gay, Bisexual, Trans, Queer / Questioning , + = Other **Biological Sex-** the physical anatomy and gendered hormones one is born with. **Sexuality**- A persons' sexual preference or orientation. Who they are attracted to. **Transgender**- A person whose gender identity is the binary opposite of their biological sex, who may undergo medical treatments to change their biological sex	**Content:** **Stereotype**- A generalised belief about a particular category of people. It is an expectation that people might have about every person of a particular group. **Discrimination-** The unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, sex, or disability. **Prejudice-** A preconceived opinion that is not based on reason or actual experience **The Equality Act (2010)** provides a legal framework to protect the rights of individuals and advance equality of opportunity for all. It provides Britain with a discrimination law which protects individuals from unfair treatment and promotes a fair and more equal society. It makes all people equal in regard to sex, age, race, sexuality, religion, disability (this means the same laws apply to everyone).
Questions 1. What is gender identity? 2. What does the Q stand for in LGBTQ+? 3. What is meant by 'biological sex'? 4. What does sexuality mean? 5. Where can you seek support if you are struggling with gender identity?	**Questions** 1. What is a stereotype? 2. Give an example of someone who might be stereotyped. 3. Who might experience discrimination? 4. What is meant by prejudice? 5. What is the Equality Act?

Lesson 5 and 6– Relationships and Managing Conflict	**Lesson 7 and 8 – Consent and Setting Boundaries**
Places to access support https://www.brook.org.uk/topics/relationships/	**Places to access support** https://www.healthforteens.co.uk/sexual-health/the-law-and-consenting-to-sex-just-the-facts-2/
Content: **Platonic Relationship-** A friendship or relationship where there is no romantic, intimate or sexual feelings i.e Friends and colleagues. **Intimate Relationship-** A relationship which can include a sexual attraction and sexual activity i.e boyfriend, girlfriend, married couples **Familial Relationship-** A relationship with someone who has a blood, kinship or legal tie to you i.e Parents, siblings etc. **Conflict-** a disagreement or argument **Strategies for resolving conflict:** • Stay calm • Listen to each other and take turns to talk • Be willing to compromise • Don't bring up past issues • Be honest with the other person • Be willing to move past the conflict • Acknowledge the other persons feelings • Give each other space if needed	**Content:** **Consent is:** Freely given. It's not okay to pressure, trick, or threaten someone into saying yes. Reversible. It's okay to say yes and then change your mind — at any time! Informed. You can only consent to something if you have all the facts. Enthusiastic. You should do stuff you WANT to do, not things people expect you to do. If someone doesn't seem enthusiastic stop and check in. Specific. Saying yes to one thing (like going to the bedroom) doesn't mean you're saying yes to other things (like having sex). **Personal boundaries** are the limits and rules we set for ourselves within relationships. **Personal Space** is the physical space immediately surrounding someone, into which encroachment can feel threatening or uncomfortable **Assertiveness**- having or showing a confident and forceful personality. **Self-awareness**- having conscious knowledge of your own character and feelings
Questions 1. What is a platonic relationship? 2. What does an intimate relationship mean? 3. Give an example of a familial relationship 4. Give two strategies to resolve conflict 5. Who can you talk to in school about managing conflict between friends?	**Questions** 1. How should consent be given? 2. Can consent be withdrawn at any time? 3. What is meant by someone's personal space? 4. Give an example of assertive language. 5. What does it mean to be 'self aware'?

Lesson 9 and 10– Sharing Images and Sexting

Places to access support
https://www.healthforteens.co.uk/relationships/sexting/sexting-just-the-facts/

Content:

Sexting- Sending sexually explicit photographs or messages via mobile phone.

Digital Footprint- A person's digital footprint cannot be deleted and can be accessed at any time through a simple social media or search engine search.

Taking, possessing or sharing a sexually explicit picture or video of **someone under 18** is **against the law**. A criminal caution or conviction for such an offence would result in being placed on the **Sex Offenders Register.**

It **doesn't matter if they gave you permission**, someone else sent it to you, you've never met them before, you are under 18 too or it's a selfie. **You and anyone else involved could be investigated by the police**, and this could even affect your future education and employment.

If you are **over 18 and you send an image of yourself to someone who is also over 18, this is not a crime**. However, you should consider the other consequences of sending and sharing images.

If someone is **pressuring you to send a nude pic this is wrong. It's a form of abuse** and can damage your confidence and self-worth.

Questions

1. What is sexting?
2. What is a digital footprint?
3. What could happen if you possess a sexually explicit picture of a person under 18?
4. If someone else sent you the picture could you still be convicted?
5. Is pressuring someone to send explicit images illegal?

Lesson 11 - Contraception

Places to access support
https://www.brook.org.uk/resources/
https://www.nhs.uk/conditions/contraception/

Content:

Sexual Consent- The giving of permission by a person to engage in any form of sexual activity including penetrative and oral sex.

Contraception- Methods that are used to prevent pregnancy from occurring during sexual activity.

Barrier methods: stop sexual fluids being transferred between partners. Only condoms protect against STIs and pregnancy. / Hormonal methods: hormones oestrogen and/or progestogen work to disrupt the process that leads to pregnancy. / Other / Permanent	Condoms	Internal or female condoms	Diaphragms and caps	Combined pill	Progestogen-only pill (mini pill or POP)	Contraceptive implant	Contraceptive injection	Contraceptive patch	Contraceptive vaginal ring	Intrauterine system (IUS or Mirena)	Intrauterine device (IUD)	Fertility awareness methods	Sterilisation (male & female)
Effectiveness (with correct use)	98%	95%	92-99%	99%	99%	99%	99%	99%	99%	99%	99%	75%	99%
Protects against STIs & pregnancy	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Use only when you have sex	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Use every day	✗	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗	✓	✗
May help with heavy periods	✗	✗	✗	✓	✗	✗	✗	✓	✓	✗	✗	✗	✗
Lasts for months or years	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓	✗	✓
Widely available	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Doesn't interrupt sex	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
Hormone free	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Easy to hide	✗	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
Mistake proof	✗	✗	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✓
LARC (long acting reversible contraception)	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓	✗	✗

Questions

1. What is sexual consent?
2. What is contraception?
3. Which form of contraception is 98% effective at preventing STIs and unwanted pregnancy?
4. Which form of contraception is the only contraception a male can use?
5. Where can you access further support?

EDUCATION SOUTH WEST

Y8C1 Key Maths Knowledge

Your Maths Homework is to complete your sparx

Use this guide to make sure you know **what to do, when to do it and how to do it**:

Maths homework is to complete **sparx**

What to do

- Do Sparx **on the days in the homework** timetable
- **Compulsory Homework:** You **must do this** part of your homework every week
- Optional/Target Homework: Do this to **gain loads of XP** and to improve your maths!

Top Tips

- Do your homework as soon as you can
- Watch the help video
- If you are stuck, speak to your maths teacher before hand-in or pop in to Sparx Support club during breaks

Always:

- Write down the date
- Write down your bookwork code
- Read the question carefully
- Show all your workings
- Highlight/underline your final answer
- Tick if correct/cross if wrong

We want you to do well with your maths and doing Sparx will help.

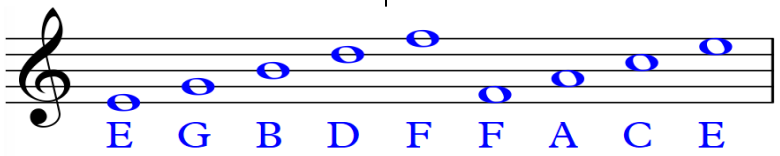
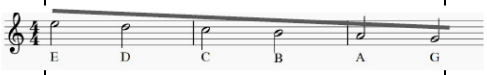
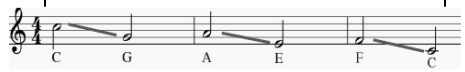
If you've tried something, watched the video and are still not sure how to do something make sure you ask for help!

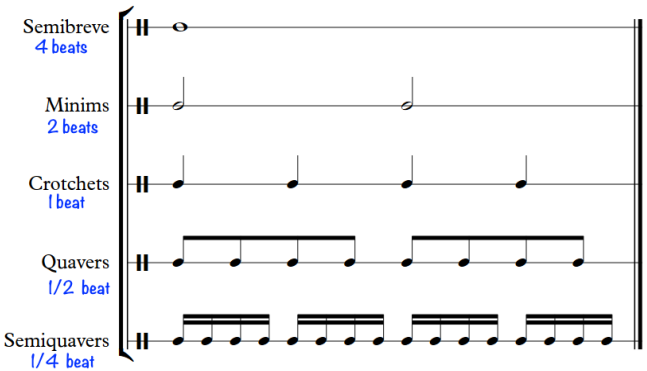
You're expected to complete it every week and catch up if you haven't.

EDUCATION SOUTH WEST

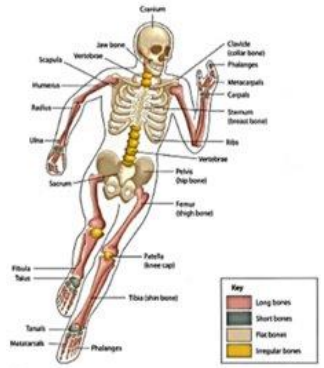
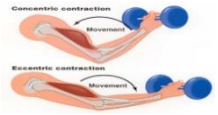
Y8C1 **Your Maths Homework is to complete your sparx**

Item	Description
The multiplication rule of indices	$a^m \times a^n = a^{m+n}$ (Add the indices)
The division rule of indices	$a^m \div a^n = a^{m-n}$ (Subtract the indices)
The brackets rule of indices	$(a^m)^n = a^{mn}$ (Multiply the indices)
'Expand' or 'Multiply out'	Means 'to rewrite an expression **without brackets'**
'Factorise'	Means 'to write an expression **with brackets'**
Area of a circle	$area = \pi \times radius^2$
Circumference of a circle	$circumference = \pi \times diameter$
Sector area	$area = \frac{angle}{360} \times \pi \times radius^2$
Arc length	$arc\ length = \frac{angle}{360} \times \pi \times diameter$
Average	The **mean**, **median** or **mode**. They measure the centre of a group of data.
Spread	The **range**. It measures how spread out a group of data is.
Estimating the mean from grouped data	Find the total of $\boldsymbol{midpoint \times frequency}$ Divide this total by the total of the frequencies

	Week 1	Week 2	Week 3	Week 4	Week 5
Year 8 Music – Arranging Music – Cycle 1	**KEYBOARD MUSIC** **THE BAROQUE PERIOD** The Baroque period was an important time in the history of the world. The dates of this musical period are 1600 – 1750. Galileo, Kepler and Newton were discovering new ways to explain the universe. In music, art, architecture, and fashion, fancy decoration and ornamentation became the rule. Both men and women wore wigs and coats with lace. **CHARACTERISTICS** **Famous composers** - J. S. Bach, Vivaldi, Handel, Monteverdi. **Instruments used** - Violin, Viola, Cello, Bass, Flute, Oboe, Bassoon, Trumpet, Horn, Harpsichord. **Musical features** - busy, ornate melodies, instruments play different melodies at the same time creating a POLYPHONIC texture. Pieces were often written for people to dance to.	**KEYBOARD MUSIC** **PACHELBEL'S CANON** **Facts about Pachelbel's Canon** Composed around 1690 Originally in the key of D major Has a repeating sequence of 8 chords Each time the chord sequence repeats a different melody is introduced Many modern pop songs have used the same chord sequence  	**KEYBOARD MUSIC** **HOW TO BUILD A CHORD** Chords are created by taking the 1st, 3rd and 5th notes from a scale: C major scale - C D E F G A B C major chord - C E G C minor scale - C D Eb F G Ab Bb C minor chord - C Eb G When you play the three notes together, you have a chord. The difference between a major and minor chord is the middle note of the chord. In a minor chord it is a semitone lower.	**KEYBOARD MUSIC** **ELEMENTS OF MUSIC** **Pitch** How high or low a note is. **Tempo** The speed of the music. **Texture** How many instruments / voices are playing – layers. **Timbre** The sounds or instruments used in a piece of music. **Dynamics** How loud or quiet a piece of music is. **Tonality** What key are we in? Major/Minor **Duration** How long a sound lasts. **Structure** How many different sections are there in a piece of music **Silence** No sound! – As important as sound.	**KEYBOARD MUSIC** **MELODY** **Melodies** have different characters. Some are **conjunct**, some are **disjunct**. **Conjunct =** move by small steps between notes:  **Disjunct =** move by leaps between notes: 

	Week 6	Week 7	Week 8	Week 9	Week 10
Year 8 Music – Arranging Music – Cycle 1	**VARIATION FORM** **WHAT IS VARIATION FORM** Variation Form is a compositional / arranging technique which dates back to the 18th century. Using various themes and melodies we will see how music can change through variating the instruments, style and key (Major + Minor). Variation Form is a popular plan used by composers when writing music. A composer takes an existing melody and will write a series of changes so that the original melody was disguised. Creating variations is one of the oldest forms in music. It became popular in the 17th century. It was an easy way of making pieces longer without having to compose new ideas.	**VARIATION FORM** **HOW CAN WE CHANGE A PIECE OF MUSIC?** • Using the Major or Minor key. • Add a drone or bass ostinato accompaniment. • Add extra notes to the melody – double notes. • Take some notes away. • Play some bars backwards. • Change the rhythm – jazz it up. • Play as a round. • Think of your own original idea. • Change the tempo – slow down or speed up.  	**VARIATION FORM** **PIECES OF MUSIC THAT USE VARIATION FORM** Can you name any pieces of music that use Variation Form? Research the links between Pachelbel's Canon, All together Now by the Farm and I'll see you when you get there. What are the links between these pieces? How many years apart are all three? Can you name any instruments used?	**VARIATION FORM** **KEYWORDS** **Theme** The main musical or melodic idea in a piece of music. **Variation** When one or more of the musical elements are manipulated to produce a different version of the theme **Melody** Another word for melody is 'tune'. A melody is a mixture of moving by step, and moving by leap. If the tune goes up in pitch, it is called '***ascending***'. If the tune goes down in pitch, it is called '***descending***'. **Major/Minor** There are 2 types of chord: **Major** (sounds happy) and **Minor** (sounds sad). The difference is 1 **semitone**. The middle note in a minor chord is a semitone lower	**VARIATION FORM** **KEYWORDS** **Canon** A canon is like a round. The same piece of music is played, then a second layer is played slightly after. Each melody is played fully and musically fits with the other layers. **Ostinato** A repeated melody or pattern **Drone** A drone is made up from 2 notes (usually low pitched) being played and held underneath a melody to provide a bass **Style/Genre** The characteristics to a piece of music **Round** More than one part playing the same music, but they start at different times

Year 8 Cycle 1 Sport and PE Knowledge Organiser

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 7 and 8	Week 9 and 10	Week 11 & 12
Major Bones	**Major Bones**	**Major Muscles**	**Types of Muscle Contraction**	**Muscles working in pairs**	**Types of movement**
 	**The functions of the Skeleton** **Remember the acronym:** Scary Skeletons Make Many People Petrified **Support** Bones keep us upright and support muscles and organs. **Shape** Skeleton gives us our height and build. **Mineral Storage** Bones store minerals such as calcium and phosphorus. **Movement** Muscles attach to and pull on bones to produce movement. Bones act as levers. **Protection** Bones protect vital organs – e.g. Cranium protects brain, ribs protect heart and lungs. **Production of red blood cells** Inner marrow of bones produces red and white blood cells. Red cells carry oxygen, white cells fight infections.	 **Can you label the major Muscles?** • latissimus dorsi • deltoid • pectorals • biceps • triceps • abdominals • hip flexors • gluteus maximus • hamstring • quadriceps group • gastrocnemius • tibialis anterior	**Isotonic Contraction** *Muscle changes shape and creates movement. There are 2 types; concentric & eccentric*  **Concentric Contraction** *Muscle contracts and shortens* **Eccentric Contraction** *Muscle contracts and lengthens – only used in the downwards phase of a movement.*  **Isometric Contraction** *Muscle contracts but the length of the muscle does not change. There is no movement e.g. holding a balance* 	**Antagonist & Agonist** Muscle are arranged in antagonistic pairs. One muscle contracts & shortens **(Agonist)** and a partner muscle relaxes and lengthens **(Antagonist)** to create a movement.   **Examples in the body** • *Biceps & Triceps* • *Quadriceps & Hamstrings* • *Hip flexors & Gluteus Maximus* • *Tibialis Anterior & Gastrocnemius*	**Flexion** **Decreasing the angle at a joint (bending)** **Extension** **Increasing the angle at a joint (straightening)**  **Abduction** **Taking a limb away from the body (abduct)** **Adduction** **Bringing a limb back towards the body (Add)**  **Rotation** **Turning a limb along its axis (circular)**  **Plantar flexion** **Pointing toes (P for Point)** **Dorsi flexion** **Toes towards the nose** 

Week 1	Week 2	Week 3	Week 4
Lesson 1 – What Is The Problem Of Evil?	**Lesson 2 – Is Suffering Necessary?**	**Lesson 3 – Responses to The Problem Of Evil**	**Lesson 4 – Who Was The Buddha?**
Key Terms: **Evil:** Morally bad or cruel. Believed by some to be contrary to the will of God. **Natural Evil:** Suffering that humans have no control over, which occurs naturally. E.g. Natural disasters. **Moral Evil:** Acts of humans considered to be morally wrong. E.g. Murder.	**Key Terms:** **Suffering:** Physical or mental pain that a person is feeling. **Free Will:** The ability to choose between different possible courses of action. **Necessary:** Absolutely essential; needed to achieve a particular result.	**Key Terms:** **Satan:** The Devil; a powerful evil being, believed by some to be the chief opponent of God. **Punishment:** A penalty or sanction given for a crime or offence. 	**Key Terms:** **Buddha:** The holy man on whose life and teachings Buddhism is based. **Enlightenment:** The state of understanding something; the highest spiritual state that can be achieved. 
Content: The Problem of Evil is the philosophical question of how to reconcile the existence of evil with an omnipotent, omniscient and omnibenevolent God. The Greek philosopher, Epicurus, claimed that the existence of evil proved there is no God.	**Content:** Suffering is a problem for everyone. We all suffer, no matter how lucky we are. Human beings experience pain, illness, loss and finally death. As human beings have free will, they have the ability to choose their actions. For many Christians, freedom of choice can lead to evil.	**Content:** Some religious people believe much of the suffering in this world is caused by humans misusing God's gift of free will, leading to wars, suffering and death of innocent people. Suffering is seen as a necessary risk that comes with designing people rather than robots	**Content:** Buddhism started with Siddhartha Gautama who came to be known as the Buddha. He was born into a life of luxury as a Prince and shielded from seeing any pain or suffering. Meditation is the way in which the Buddha gained enlightenment.
Questions: 1. What is evil? 2. What is the difference between natural and moral evil? 3. What is the Problem of Evil?	**Questions:** 1. What is suffering? 2. Is suffering necessary according to some religious believers? 3. What is Free Will and how can it justify suffering?	**Questions:** 1. What reasons do some religious believers give for humans, rather than God being responsible for evil? 2. Why does God allow suffering?	**Questions:** 1. What was the Buddha's upbringing like? 2. What four sights did he see when he left the Palace? 3. How did he achieve enlightenment?

Week 5	Week 6	Week 7	Week 8
Lesson 5 – What Are Dhamma & Dukkha?	**Lesson 6 – What Is Dependent Arising?**	**Lesson 7 – What Are The 3 Marks Of Existence?**	**Lesson 8 – What Are The 4 Noble Truths?**
Key Terms: **Dhamma:** Buddhist doctrine; often interpreted to mean the teachings of the Buddha. **Dukkha:** Suffering; life as unsatisfactory.	**Key Terms:** **Dependent Arising:** The Buddhist idea of reality; everything arises and is dependent on something else to exist.	**Key Terms:** **Anicca:** Instability or a lack of permanence. **Anatta:** No soul; people do and can change in life.	**Key terms:** **Four Noble Truths:** Four of the most important elements of the Buddhist teaching. **Noble Eightfold Path:** The path to be followed by a Buddhist; the Middle Way
Content: Rather than just physical pain, Dukkha refers to the unsatisfactory nature of the whole of life. Buddhists believe that life is unsatisfactory because of greed and selfishness. Buddhists believe that the things the Buddha taught (Dharma) have always existed. They believe that the Buddha was the first person to be able to understand the teachings fully. He was then able to pass them onto other people.	**Content:** Dependent Arising is a belief that is essential in fully understanding the Buddha's Dharma. It is the belief that everything that is in existence exists because other things are in existence. Therefore, everything is interconnected and everything affects everyone. Dependent Arising may influence the way a Buddhist behaves and have an impact on their moral conduct.	**Content:** The 3 Marks of Existence are sometimes known as the 3 Universal Truths. They are Anicca, Dukkha and Anatta. Anicca is concerned with how resilient a Buddhist is. Dukkha is belief in 3 types of suffering. Anatta is the belief that there is no soul but energy can be reborn.	**Content:** If you are ill and go to a Doctor, you want to know what is wrong, what has caused your illness, what will cure it and how to get treatment. The Buddha's teaching can be set out in the same way, as a cure for the world's illness: 1. All life involves suffering. 2. The origin of suffering is craving. 3. If craving ceases, suffering will also cease. 4. The Middle Way.
Questions: 1. What are Dhamma and Dukkha? 2. How do Buddhists use Dhamma to help them to overcome Dukkha?	**Questions:** 1. What is Dependent Arising? 2. How could the concept of Dependent Arising help to prevent or stop suffering?	**Questions:** 1. What are the 3 Marks of Existence? 2. How could the 3 Marks of Existence lead to Buddhists accepting the idea of suffering as part of life?	**Questions:** 1. What are the Four Noble Truths? 2. How can Dukkha be overcome according to the Four Noble Truths?

Week 9	Week 10	Week 11	Week 12
Lesson 9 – What Is Karma?	**Lesson 10 – Assessment Preparation**	**Lesson 11 – End of Cycle Assessment**	**Lesson 12 – Assessment Repair Work**
Key Terms: **Karma:** 'Action.' All actions have consequences. **Samsara:** The cycle of birth, life, death and rebirth. **Nirvana:** The ultimate goal of Buddhists, involving breaking free from the cycle of Samsara.			
Content: Buddhists believe that the ultimate goal is to reach Nirvana. This is not really a place but a state of being. Buddhists believe that we are trapped on a wheel of life. They believe that people will be reborn many times in order to have the opportunity to reach Nirvana, which is freedom from suffering. Buddhists believe that the rebirths that arise are a result of karma.			
Questions: 1. What is Karma? 2. How does the idea of Karma link to Buddhist ideas of what happens after death?			

Lesson 1 Nutrients

Diet – What you eat.

Food is needed for:

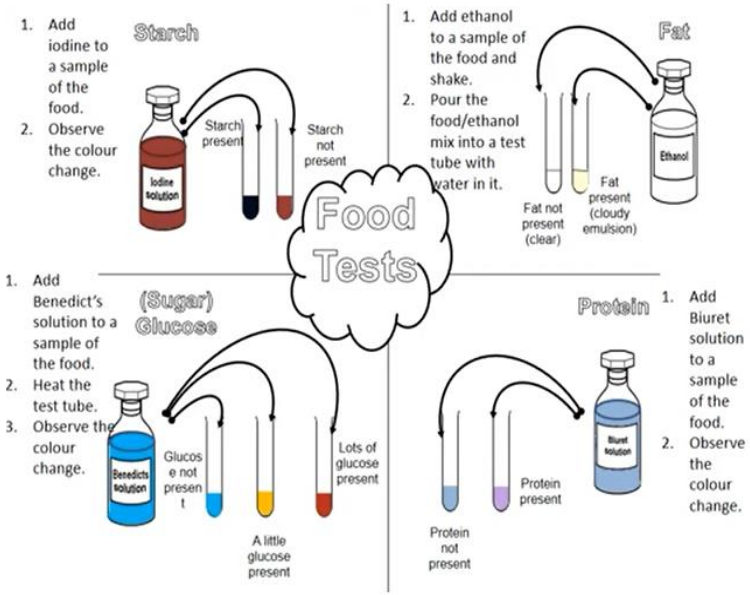
1) Energy
2) Growth & Repair
3) Health

There are 7 different food nutrients

Name of nutrient	Function
Carbohydrate	Energy
Vitamins	Health
Fats (lipids)	Energy & warmth
Fibre	Helps food move through digestive system
Protein	Growth & repair
Water	Helps keep cells hydrated
Minerals	Health

Lesson 2 Food Tests

Foods can be tested to identify which nutrients they contain



Lesson 3 Energy Requirements

On average, women should have around 2,000 calories a day and men should have around 2,500 calories a day.

We all need different amounts of energy (or calories) from food to be a healthy weight.

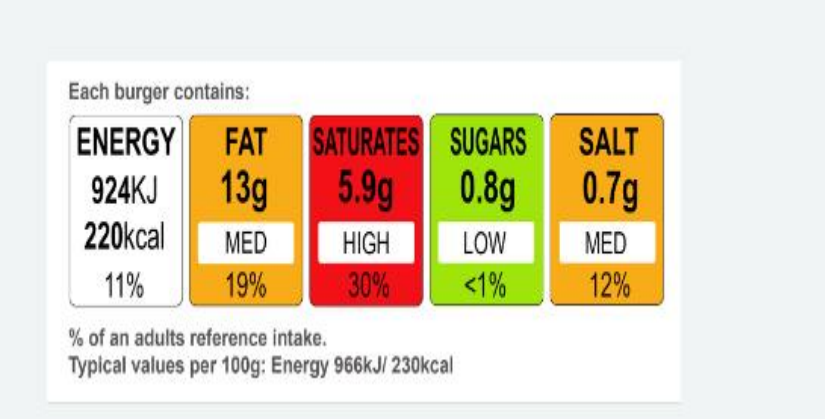
How much you need depends on lots of things, including how active you are.

Recommended Daily Nutritional Requirements for Different Age Groups

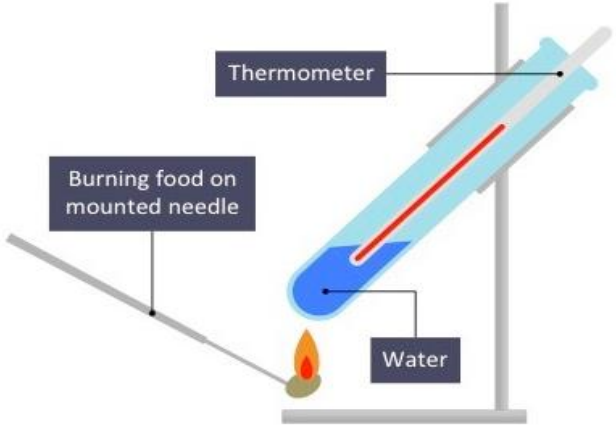
Category	Age (years)	Protein (g)	Fat (g)	Calories (kcal)	Calcium (mg)	Iron (mg)
Children	2–3	16.7	27	1060	600	9
Children	4–6	20.1	25	1350	600	13
Children	7–9	29.5	30	1690	600	16
Boys	10–12	39.9	35	2190	800	21
Boys	13–15	54.3	45	2750	800	32
Boys	16–17	61.5	50	3020	800	28
Adult (males)	Above 18	25	60	2320	600	17

Lesson 4
Comparing Energy in Foods

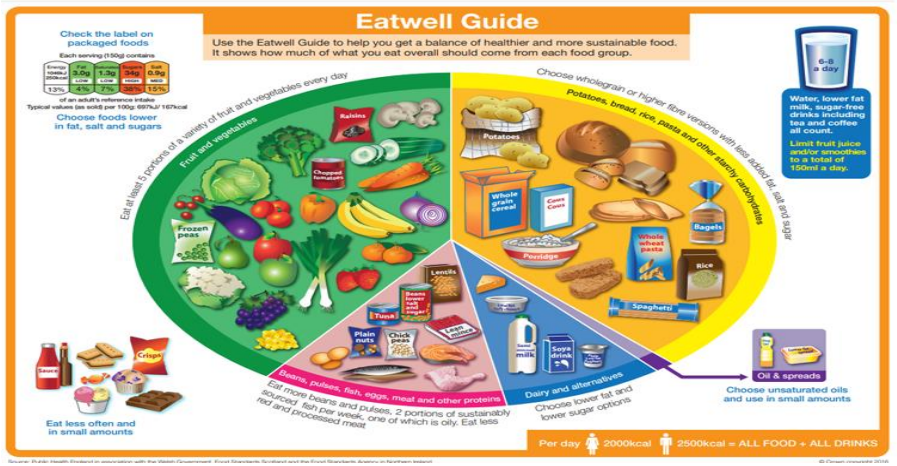
Food packaging gives us useful information about the food we are going to eat



We can compare energy content of a food by measuring how much heat energy is released when we burn it



Lesson 5
Unhealthy Diets



We need to eat a healthy balanced diet which contains the correct amounts of each of the food nutrients

Not eating enough of a nutrient means you have an unbalanced diet, and this can lead to a **deficiency.**

Obesity – if you take in more energy than you use, the excess energy is stored as fat.

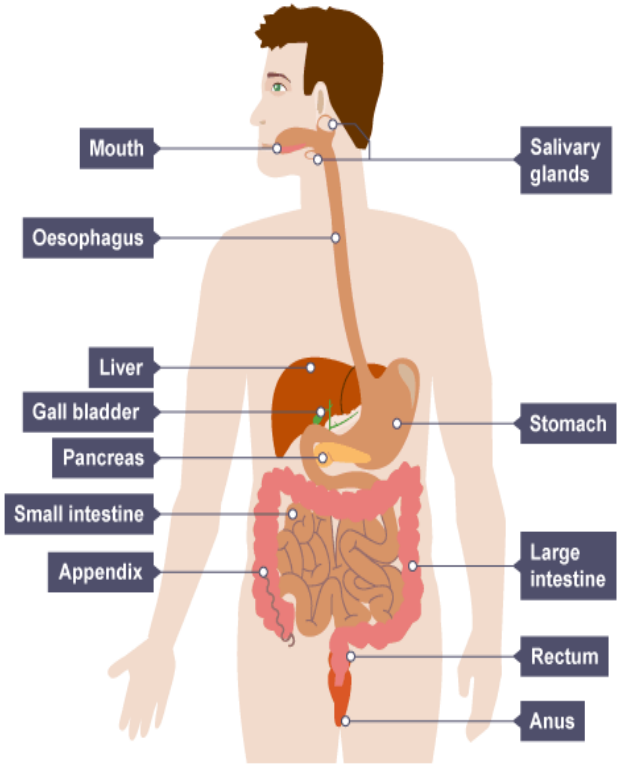
Overtime, this can lead to a person being overweight or obese.

Anorexia - An eating disorder where energy output and energy input are imbalanced, energy input is lower than energy output. Symptoms – extreme weight loss, thin appearance, fatigue, insomnia, dehydration

Lessons 6 & 7
Digestion

The digestive system breaks down food into tiny particles which are absorbed into the blood.

- These particles provide energy for the body to grow, repair itself and remain healthy.
- Food that cannot be broken down is released from the body as faeces (poo).



Organ	Function
Mouth	Chew food, break into smaller bits, start digestion off using enzymes in saliva.
Oesophagus	Tube connecting the mouth to stomach
Stomach	Sac where food is mixed with acidic juices to start digestion of proteins and kill microorganisms
Small intestine	Upper part is where digestion is completed. Lower part where nutrients are absorbed into the blood.
Large intestine	Water from food is removed here, and faeces made.

Lessons 8 & 9
Digestive Enzymes and Bacteria

Enzymes are biological **catalysts**, they speed up the digestion of **nutrients**

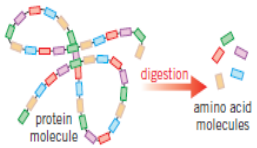
• Each enzyme is specific to each nutrient

• The way the enzyme and nutrient bind with each other is called a lock and key model

Carbohydrase's break down **carbohydrates** into **sugars**

Proteases break down **proteins** into **amino acids**

Lipases breakdown fats into **fatty acids** and **glycerol**



Gut Flora – the "good bacteria" that live in your digestive system, useful for digestion, helpful for immunity and boosts vitamin levels.

Answer these questions in full sentences in your homework book:

Lesson 1 1. Define diet 2. List 3 reasons we need to eat food 3. How many nutrients are in our food? 4. Which 2 nutrients provide energy? 5. Why do we need to include protein in our diet?	Lesson 2 1. Which reagent do we use to test for starch? 2. What colour does a food go if it is positive for starch? 3. How do we test for protein in a food? 4. Which food test involves using ethanol and water? 5. How do we test for sugar?	Lesson 3 1. How many calories should a woman eat in a day? 2. How much protein does a 5-year-old child need per day? 3. How many Kilo calories should a 11-year-old boy eat? 4. Which age group needs to eat the most protein every day? 5. Which age group need the least amount of fat per day?	Lesson 4 1. Where can we find information about the food we eat? 2. Look at something you have eaten today and write down how much energy, fat and sugar was contained in it.	Lesson 5 1. What is a balanced diet? 2. What happens if you don't eat enough of a nutrient? 3. What is obesity? 4. What is anorexia? 5. Give 2 symptoms of anorexia
Lesson 6 1. What is the function of the digestive system? 2. Where does digestion start? 3. What happens to your food in the mouth? 4. How does food get from your mouth to your stomach? 5. What happens in the stomach?	Lesson 7 1. What happens in the upper part of the small intestine? 2. What happens to nutrients in the lower part of the Small intestine? 3. Where is water removed from food? 4. Where is faeces made? 5. What is faeces?	Lesson 8 1. What are enzymes? 2. How do they help digestion? 3. Which type of enzyme breaks down carbohydrates? 4. What do proteases do? 5. What do lipases break down?	Lesson 9 1. What are proteins broken down into? 2. Why do we digest carbohydrates? 3. Name the 2 products of fat digestion. 4. Are all bacteria bad? 5. Why do we need gut flora?	

Lesson 1
Static Electricity

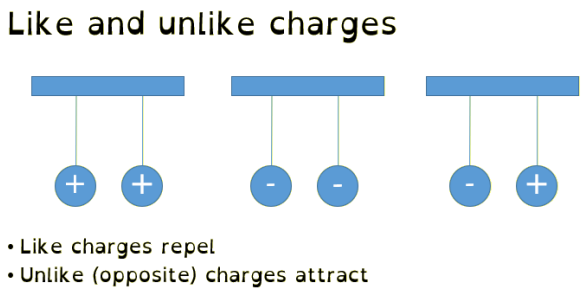
Static Electricity is when two objects are rubbed together, electrons are transferred from one object to the other. One object becomes positive and the other negative.

Charge is a property of matter and can be positive or negative.

Charged atoms are called **ions**.

Charge of materials

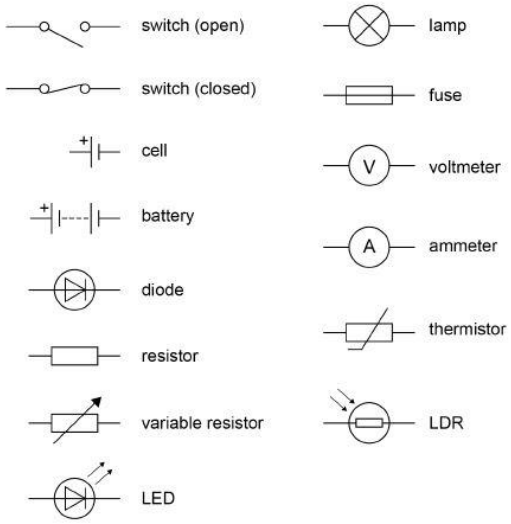
- A material which **loses electrons** will become **positively charged**.
- A material which **gains electrons** will become **negatively charged**.



Van der Graaf generator is an electrostatic generator which uses a moving belt to accumulate electric charge.

Lesson 2
Circuit Symbols

Standard circuit diagram symbols



Rules for drawing simple circuits

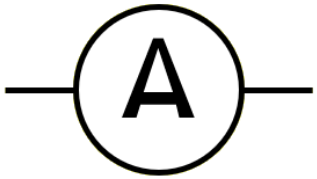
- All the wires in your circuit are straight lines.
- That the circuit is closed.

Lesson 3
Electric Current and pd

Current is the flow of charge – the movement of electrons. The electrons just keep going!

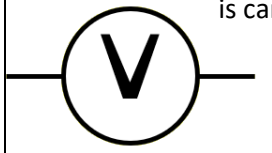
The **units** for current are **Amperes (A)** – sometimes just called **Amps**.

Current is **measured** with an **ammeter and the diagram symbol is below.**



Potential difference (p.d.) – sometimes called **voltage** is a measure of the energy carried around a circuit.

The higher the potential difference, the more energy that is carried by the electrons.

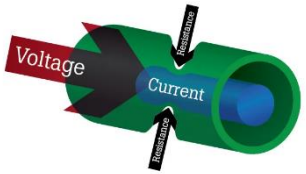


p.d. is **measured** with a **voltmeter.**

The **units** for **potential difference** are **volts (V)**

Lesson 4
Resistance

Resistance is a measure of how hard or easy it is for a current to flow.



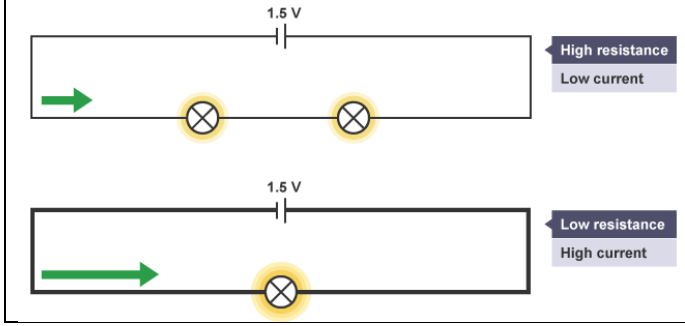
Resistance is measured in Ohms (Ω)

Resistance happens because the ions that make up a metal are constantly vibrating.

The more the electrons are slowed down the higher the resistance

The following factors effect resistance.

- As the length of the wire increases resistance increases
- As the thickness of the wire increases resistance decreases



Lesson 5
Circuit Models

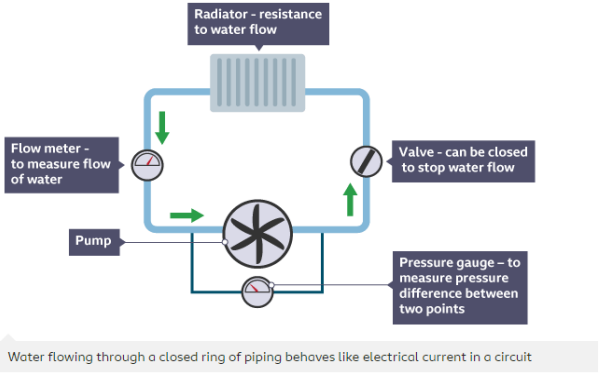
Models can be used to help us understand electrical circuits.

One example is the water model of electricity, using a central heating system:

the pump acts like the cell or battery
the pipes are like the wires
the radiator is like a component, for example a lamp, transferring energy to the room
the water flow is like the electrical current

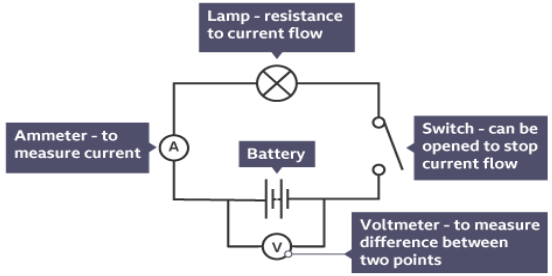
In many ways, electrical current behaves like water flowing through a closed ring of piping. The movement of the water through the pipe is like the movement of electrons through a circuit.

The diagram shows a central heating system.



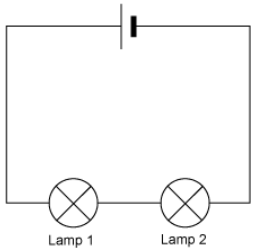
Water flowing through a closed ring of piping behaves like electrical current in a circuit

This circuit diagram represents the water model

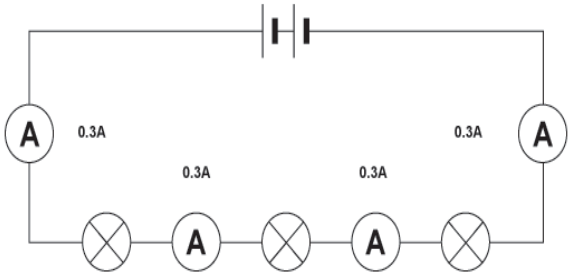


Lesson 6
Current in Series Circuits

You will Investigate how current changes in a series circuit and how increasing the **number of bulbs** in a **series circuit** decreases the brightness of the **bulbs**.



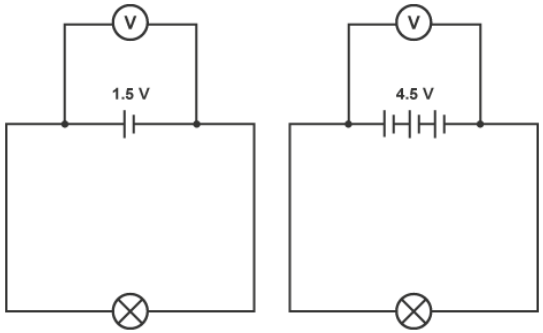
Current is the same everywhere in a series circuit



Lesson 7
Potential Difference in Series Circuits

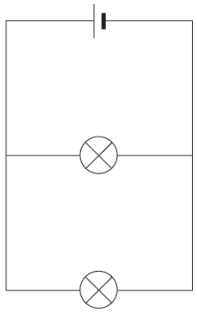
You can measure the potential difference across a cell or battery.

If the two or more cells point in the same direction, the more cells, the bigger the potential difference.

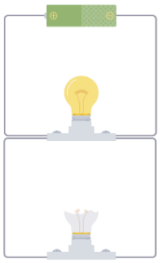


Each cell has a potential difference of 1.5 V, so three cells give 4.5 V

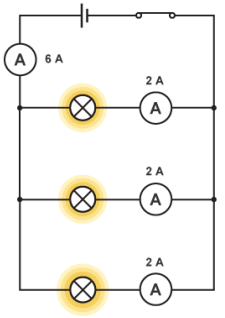
Lesson 8
Current in Parallel Circuits



A parallel circuit has more than one loop – there is more than one way for current to flow.

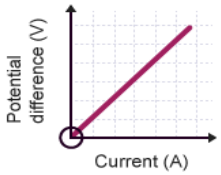
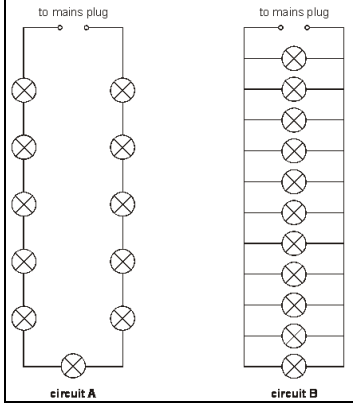
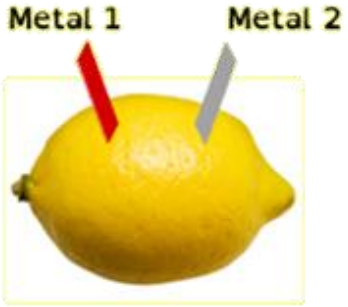


If one part of the circuit breaks – for example, a bulb blows – the rest of the circuit is still complete and a current will flow through that part.



The total current in a parallel circuit is equal to the sum of the currents in each branch.

6 Amps
3 Parallel circuits
2 Amps in each branch

Lesson 9 Potential Difference in Parallel Circuits	Lesson 10 Fruit Batteries
Potential difference (p.d.) – sometimes called voltage is a measure of the energy carried around a circuit. Potential difference changes at different places in a parallel circuit. If you plot a graph of current against potential difference for a wire, you get a straight line.  The gradient of the line is equal to the resistance of the wire Possible ways to set up fairy lights.  Circuit A – if one bulb breaks all go out, but needs fewer wires/less wire Circuit B – needs more wires/more wire, but if one bulb breaks the others stay on	If two metals are inserted into a fruit, a potential difference will flow.  Chemical energy within the fruit is transferred by an electric current to the voltmeter. Any citrus fruit such as lemons, limes, oranges and grapefruit will work because they all contain citric acid for the electrolyte. You can investigate which metal makes the best fruit battery out of Copper, Aluminium, Iron and Zinc.

Year 8 Science Electricity

Answer these questions in full sentences in your homework book:

Lesson 1 1. When does static electricity occur? 2. What are transferred as objects are rubbed together? 3. What is an ion? 4. What happens when an object gains electrons? 5. What happens when an object loses electrons?	Lesson 2 Draw and label the symbol for a… 1. Open switch 2. Cell 3. Lamp 4. Ammeter 5. Voltmeter	Lesson 3 1. Define current 2. What are the units for current? 3. Which piece of equipment is used to measure current? 4. What is potential difference**?** 5. Which piece of equipment is used to measure voltage?	Lesson 4 1. What is resistance in a circuit? 2. What unit is resistance measured in? 3. Why does resistance happen? 4. What happens to resistance as a wire gets longer? 5. Do thinner wires have more or less resistance?	Lesson 5 1. Why do we use models in science? 2. In the water model, what does the pump represent? 3. Which part of the water model represents the wires in a circuit? 4. Which part of the water model represents a lamp in a circuit? 5. Which part of the water model represents the electrical current in a circuit?
Lesson 6 1. What unit do we measure current in? 2. Which piece of equipment do we use to measure current? 3. Draw a circuit diagram with one cell, one lamp, 3 wires and 1 ammeter 4. What happens to the brightness of the bulbs as we increase the number of bulbs? 5. Does current change around a circuit?	Lesson 7 1. What unit do we measure potential difference in? 2. Which piece of equipment do we use to measure potential difference? 3. What happens to the potential difference of the bulbs as we increase the number of cells? 4. Where do we place a voltmeter in a circuit?	Lesson 8 1. How does a parallel circuit differ from a series circuit? 2. What happens if a bulb breaks in one part of a parallel circuit? 3. How do you calculate the total current in a parallel circuit?	Lesson 9 1. How do you measure the energy carried in a circuit? 2. Is pd the same all around a parallel circuit? 3. Why is a parallel circuit the best way to set up fairy lights on a Christmas tree? 4. What is the disadvantage of using a parallel circuit on fairy lights?	Lesson 10 1. How can you measure the potential difference in a fruit? 2. What type of energy is stored in the fruit? 3. What type of energy is this transferred to? 4. What type of acid do citrus fruits contain? 5. Which metals can you use in a fruity battery?

Lesson 1 Combustion

Combustion is a chemical reaction where a fuel reacts with oxygen.

Fuel: A chemical energy store that releases energy when burned in oxygen

fuel + oxygen → carbon dioxide + water

We can test for the products of combustion using chemical tests:

TEST	Observation
limewater	Turns cloudy in the presence of carbon dioxide
cobalt chloride paper	Turns from blue to pink in the presence of water vapour

Complete combustion occurs in excess oxygen.

Incomplete combustion occurs in a limited supply of oxygen.

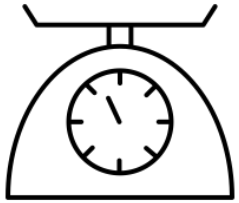
Lesson 2 Fuels Investigation

Independent Variable:
The one thing you **change** in an experiment.

Dependent Variable:
The thing you **measure** in an experiment.

Control Variable:
All of the things you **keep the same** in an experiment.

Mass is measured with a top pan balance and its units are grams (g) or kilograms (kg)



Temperature is measure with a thermometer and its units are degrees Celsius (°C)

Lesson 3 Fuel Pollutants

When fuels are burned, a number of atmospheric pollutants are produced.

Pollutant	Source
Carbon dioxide, CO_2	Complete combustion of any fuel containing carbon atoms
Carbon monoxide, CO	Incomplete combustion of any fuel containing carbon atoms
Particulate carbon, C (soot)	Incomplete combustion of any fuel containing carbon atoms
Unburned hydrocarbons	Hydrocarbon fuel molecules which have not been oxidised at all
Sulfur dioxide, SO_2	Combustion of a fossil fuel which contains sulfur impurities
Nitrogen oxides, NO_x	Oxidation of atmospheric nitrogen inside the engine of a car, lorry, etc

CO is toxic as it prevents oxygen binding with red blood cells

C (soot) irritates the lings and causes global dimming

SO_2 & NO_x produce acid rain: Acid rain harms and kills plants and animals, especially those that live in aquatic environments. It can also damage man-made objects like statues and buildings.

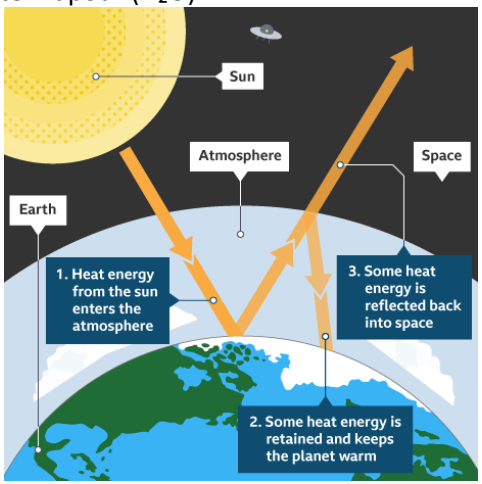
Lesson 4
Atmosphere & Greenhouse Effect

Greenhouse gases are gases in the atmosphere that act like a blanket around the Earth, trapping the heat that radiates from the surface of the Earth and preventing it from escaping back out into space.

This is called the greenhouse effect, and it's what keeps the Earth warm enough to sustain life. Without greenhouse gases, the Earth would be too cold at night for plants to grow or for animals to survive.

There are three main greenhouse gases:

- carbon dioxide (CO_2)
- methane (CH_4)
- water vapour (H_2O)



Lesson 5
Global Warming

As a result of human activities, the levels of greenhouse gases in the upper atmosphere are rising rapidly. These greenhouse gases are causing a lot more heat energy to be trapped in the atmosphere. As a result, the overall average temperature of the Earth is increasing. This is known as global warming.

How are greenhouse gases produced by humans:

- Burning Fossil Fuels
- Farming
- Deforestation

Global warming is leading to **climate change**, which is already having many serious impacts on our planet.

- More extreme weather events:
  - Heatwaves
  - Forest fires
  - Storms
  - Droughts
  - Floods
- More unpredictable weather
- Sea level rise

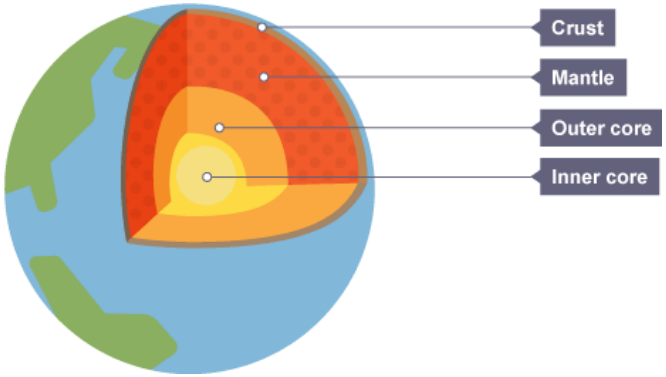
All of these factors are having an impact on habitats around the planet leading to the potential extinction of some plants and animals.

Lesson 6
Structure of the Earth

The Earth is a planet and is roughly the shape of a sphere. There are three layers that make up the Earth's structure.

The three layers, starting from the outside, are:

- the crust – the rocky outer layer
- the mantle – the semi-solid middle layer
- the core - the innermost layer which is divided into an inner core and outer core



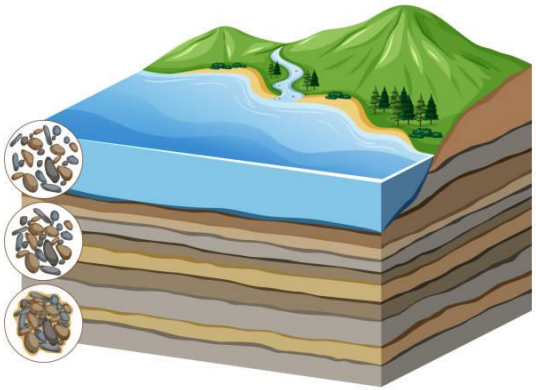
The crust is made of huge pieces of land called tectonic plates which fit together like a huge jigsaw. These plates move around very slowly. The tectonic plates only move a few centimetres each year.

Lesson 7
Sedimentary Rocks

The grains in sedimentary rocks are arranged in layers. The oldest layers are at the bottom and the youngest layers are at the top.

Chalk, limestone, shale, and sandstone are all examples of sedimentary rocks.

All these different sedimentary rocks are formed from the broken remains of other rocks that become joined together.



There are five processes that make a sedimentary rock:

- transport
- deposition
- sedimentation
- compaction
- cementation

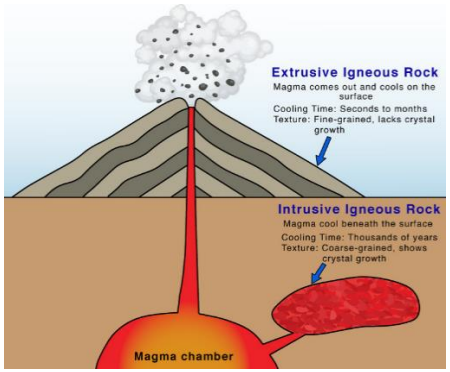
Lesson 8
Igneous Rocks

The inside of the Earth is so hot that rocks deep underground are often liquid.

Molten (liquid) rock underground is called **magma**.

Volcanoes can bring molten rock to the surface, which we call **lava**.

When the molten rock cools, it turns into a solid and igneous rock forms.



Extrusive igneous rocks are formed by magma that has erupted onto the surface as lava and then cooled quickly.

Intrusive igneous rocks are formed by magma that has cooled slowly, deep underground.

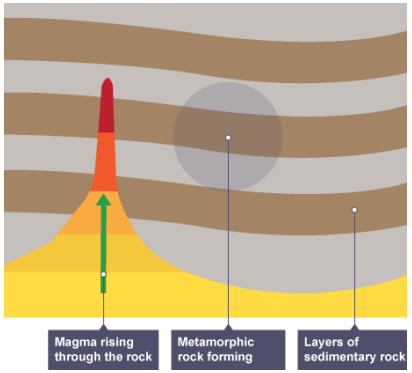
Lesson 9
Metamorphic Rocks

Metamorphic rocks are formed from other rocks which change due to heat or pressure.

The original rocks are usually sedimentary rocks or igneous rocks. Sometimes one metamorphic rock can be turned into a different metamorphic rock.

There are three stages involved in the formation of metamorphic rocks:

1. Earth movements cause rocks to be deeply buried or compressed.
2. This causes the rocks to be heated and puts them under great pressure.
3. They do not melt, but the minerals they contain are changed chemically, and form metamorphic rocks.



Lesson 10
Rock Cycle

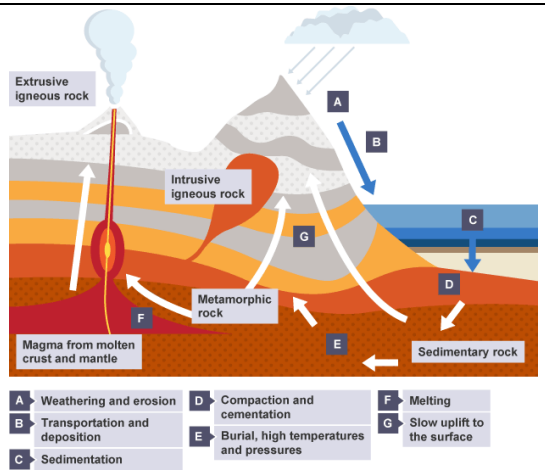
Rocks on Earth do not always stay the same.

Rocks are continually changing due to processes such as weathering, erosion and large earth movements. The rocks are gradually recycled over millions of years, changing between the different rock types.

This recycling of rocks is a process called the rock cycle.

Weathering is one of the many processes that occur in the rock cycle

Weathering breaks down rocks on the surface of the Earth.



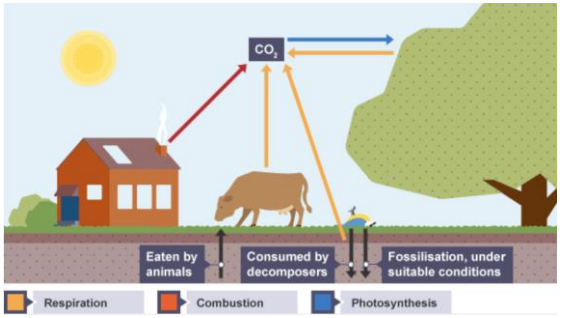
- Biological weathering
  This describes rocks being broken up by the roots of plants, or animals burrowing into them.
- Chemical weathering
  This describes rocks being broken up because substances in rainwater, rivers and seawater or the air, react with the minerals in the rocks.
- Physical weathering
  This describes rocks being broken up by changes in temperature, freezing and thawing of trapped water or the action of waves and rivers.

Another process of the rock cycle is **Erosion**.

Erosion is the process of moving the small pieces of rock formed by weathering. Erosion occurs from the action of water or wind.

Lesson 11
Carbon Cycle

The carbon cycle shows how atoms of carbon can exist within different compounds at different times and be recycled between living organisms and the environment.



Carbon dioxide is absorbed by producers to make carbohydrates in photosynthesis.

Animals feed on plants, passing the carbon compounds along the food chain. Most carbon they consume is exhaled as carbon dioxide during respiration. The animals and plants eventually die.

Dead organisms are eaten by decomposers and carbon in their bodies is returned to the atmosphere as carbon dioxide. In some condition's decomposition is blocked. The plant and animal material may then be available as fossil fuel in the future for combustion.

Answer these questions in full sentences in your homework book:

Lesson 1 1. What is the word equation for combustion? 2. What is a fuel? 3. What is the test for carbon dioxide? 4. What is cobalt chloride paper a test for? 5. When does incomplete combustion occur?	Lesson 2 What Is: 1. An independent variable? 2. A control variable? 3. Dependent variable? 4. Mass, measured with? 5. Temperature, measured with?	Lesson 3 1. How is carbon dioxide produced? 2. How is soot formed? 3. What problems can soot cause? 4. Why is carbon monoxide toxic? 5. What problems do NO_x and SO_2 cause?	Lesson 4 1. Name the three greenhouse gases. 2. Write out the formula of the three greenhouse gases. 3. What is the greenhouse effect? 4. True or false? Without the greenhouse effect life wouldn't be the same. 5. True or false? Carbon monoxide is a greenhouse gas.	Lesson 5 1. What is global warming? 2. How are humans causing global warming? 3. True or false? Global warming is causing climate change. 4. True or false? Climate change will not cause animals to go extinct 5. Name ways in which the climate may change.
Lesson 6 1. Name the layers of the earth. 2. Which layer of the earth contains two parts? 3. Which layer of the earth do we live on? 4. What are the names of the big pieces of crust that fit together like a jigsaw? 5. How far can these pieces move each year?	Lesson 7 1. Name the five processes that make a sedimentary rock. 2. State two examples of sedimentary rocks. 3. True or false? Sedimentary rocks are made from other rocks 4. True or false? The oldest layer in a sedimentary rock is at the top 5. True or false? Sedimentary rocks can be made from grains of sand.	Lesson 8 1. What is magma? 2. What is lava? 3. How does liquid rock turn into solid rock? 4. What is an extrusive igneous rock? 5. What is an intrusive igneous rock?	Lesson 9 1. How are metamorphic rocks formed? 2. True or false? Metamorphic rocks can be made from other metamorphic rocks? 3. True or false? Metamorphic rocks form when older rocks are melted 4. True or false? Metamorphic rocks are formed due to only heat 5. True or false? Metamorphic rocks are formed due to only pressure?	Lesson 10 & 11 1. What is weathering? 2. Name three types of weathering. 3. What is erosion? 4. How is carbon dioxide removed from the atmosphere? 5. Name one way carbon dioxide is released into the atmosphere.

Week 1: 9/09/24, week 2: 16/09/24

1. Use the sentence builder to write 3- 5 sentences in Spanish
2. Translate your sentences into English
3. Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking
4. Correct in purple pen

¿Qué hay en la foto? – What is on the photo?

<table>
<tr>
<td rowspan="2">En la foto
= In the photo

En el centro de la foto = in the middle of the photo

A la izquierda de la foto = on the left of the photo

A la derecha de la foto = on the right of the photo

Al fondo = in the background</td>
<td rowspan="2">hay = there is/are</td>
<td>X personas = X people
un hombre = a man
una mujer = a woman
un chico = a boy
una chica = a girl

un grupo de... = a group of...
un equipo de... = a team of...</td>
<td rowspan="2">creo que = I think that</td>
<td>está = he/she is feeling
están = they are feeling</td>
<td>alegre(s) = happy
triste(s) = sad

fenomenal(es) = amazing
fatal(es) = awful</td>
</tr>
<tr>
<td>comida = food
una bebida = drink

un libro = a book
un ordenador = a computer
un móvil = a mobile

ropa = clothing</td>
<td>es = it is</td>
<td>delicios@= delicious
asqueros@ = disgusting
san@ = healthy
malsan@ = unhealthy
nuev@ = new
viej@ = old
elegante = smart
fe@ = ugly</td>
</tr>
<tr>
<td>La foto = the photo

 
</td>
<td>tiene lugar = takes place</td>
<td>en = in</td>
<td>una empresa =a business
una escuela = a school
un estadio = a stadium
una fábrica = a factory
un gimnasio =a gym
un hotel = a hotel
un hospital = a hospital
un laboratorio = a laboratory
un mercado = a market
una oficina = an office
una tienda = a shop</td>
</tr>
</table>

Extension: Research 10 other jobs to add to the list – look up the word in a dictionary. Make a poster to help you learn them!

Week 3: 23/09/24, week 4: 30/09/24

1. **Use the sentence builder to write 3- 5 sentences in Spanish**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking**
4. **Correct in purple pen**

¿Qué vas a ser en el futuro? – What are you going to be in the future?

<table>
<tr><th>Verb</th><th>Noun</th><th>Connective</th><th>Verb</th><th>Noun</th></tr>
<tr><td rowspan="2">Voy a ser
=
I am going to be

Quisiera ser
=
I would like to be</td><td rowspan="2">abogad@ = lawyer
artista =artist
azafata = air host(ess)
camarero = waiter
cantante = singer
científic@ = scientist
enfermer@ = nurse
empresari@ = business(wo)man
estrella = star
futbolista = footballer
guía turístico = tour guide
ingenier@ = engineer
jefe = boss
mecánic@ = mechanic
médic@ = doctor
músic@ = musician
periodista = journalist
pintor = painter
policía = police officer
secretari@ = secretary
soldad@ = soldier
actor/actriz = actor/actress
profesor(a) (de…) = (…) teacher</td><td rowspan="2">porque = because</td><td>me encanta = I love
me gusta = I like
me interesa = I’m interested in
se me da bien = I’m good at

  </td><td>el inglés = English
el español = Spanish
el francés = French
la historia = history
la geografía = geography
la religión = RE/BVC
el derecho = law
la tecnología = technology
la informática = IT
la cocina = cookery
el deporte = sport
la educación física = PE
la música = music
el teatro = drama
el dibujo = art</td></tr>
<tr><td>me encantan = I love
me gustan = I like
me interesan = I’m interested in
se me dan bien = I’m good at</td><td>las matemáticas = maths
las ciencias = sciences
los idiomas = languages
los negocios = business studies</td></tr>
</table>

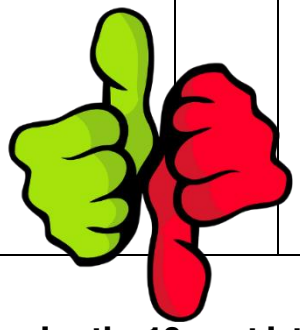
Extension: Research the European Day of Languages – make a poster to show the importance of languages

Week 5: 07/10/24, week 6: 14/10/24

1. **Use the sentence builder to write 3- 5 sentences in Spanish**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking**
4. **Correct in purple pen**

¿Cuáles son las ventajas y desventajas de ser profesor? What are the advantages and disadvantages of being a teacher?

Noun	Prep	Infinitive	Noun	Verb	Connective	Verb	Noun	Adjective
Una ventaja = **an** advantage	**de = of**	**ser = to be**	abogad@ = lawyer artista =artist azafata = air host(ess) camarero = waiter cantante = singer científic@ = scientist enfermer@ = nurse empresari@ = business(wo)man estrella = star futbolista = footballer guía turístico = tour guide ingenier@ = engineer jefe = boss mecánic@ = mechanic médic@ = doctor músic@ = musician periodista = journalist pintor = painter policía = police officer secretari@ = secretary soldad@ = soldier actor/actriz = actor/actress profesor(a) (de…) = (…) teacher	**es = is**	**que = that**	**es = is**	**un** trabajo = **a** job	artístico = artisitic complicado = complicated cómodo = comfy/convenient difícil = difficult duro = hard emocionante = exciting fácil = easy importante = important necesario = necessary responsable = responsable útil = useful variado = varied **bien** pagado = well paid **mal** pagado = badly paid
Una desventaja = **a** disadvantage								



Extension: Pick a Spanish speaking country (not Spain). Create a poster showing the 10 most interesting facts about the country

Week 7: 21/10/24, week 8: 04/11/24

1. Use the sentence builder to write 3- 5 sentences in Spanish
2. Translate your sentences into English
3. Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking
4. Correct in purple pen

¿Qué debes hacer para ser policía? = What do you need to do to be a policeman?

Connective	Verb	Noun	Auxiliary verb	Verb	Quantifier
Para = (in order) to	**ser = to be**	abogad@ = lawyer artista =artist azafata = air host(ess) camarero = waiter cantante = singer científic@ = scientist enfermer@ = nurse empresari@ = business(wo)man estrella = star futbolista = footballer guía turístico = tour guide ingenier@ = engineer jefe = boss mecánic@ = mechanic médic@ = doctor músic@ = musician periodista = journalist pintor = painter policía = police officer secretari@ = secretary soldad@ = soldier actor/actriz = actor/actress profesor(a) (de…) = (…) teacher	**necesito = I need** **necesitas = you (s) need** **necesita = he/she/it needs** **necesitamos = we need** **necesitáis = you (pl) need** **necesitan = they need** **voy a necesitar = I am going to need** **vas a necesitar = you (s) are going to need** **va a necesitar he/she/it is going to need** **vamos a necesitar = we are going to need** **vais a necesitar = you (pl) are going to need** **van a necesitar = they are going to need** **debo = I must/have to** **debes = you(s) must/have to** **debe = he/she/it must/have to** **debemos = we must/have to** **debéis = you (pl) must/have to** **deben = they must/have to** **voy a deber = I am going to have to** **vas a deber = you (s) are going to have to** **va a deber = he/she/it is going to have to** **vamos a deber = we are going to have to** **vais a deber = you (pl) are going to have to** **van a deber = they are going to have to**	cocinar = to cook construir = to construct cuidar = to care (for) diseñar = to design estudiar = to study escribir = to write hablar = to talk **pensar = to think** practicar = to practice repasar = to revise **saber = to know** trabajar = to work	**mucho = a lot** **poco= very little**

Extension: Research what happens in the *Día de Muertos* Festival. Create a poster showing what you have found

Week 9: 11/11/24, week 10: 18/11/24

1. **Use the sentence builder to write 3- 5 sentences in Spanish**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking**
4. **Correct in purple pen**

¿Qué es el trabajo ideal para ti? – What is the ideal job for you?

Verb	Noun	Verb	Adjective	Prep	Pronoun	Connective	Auxiliary Verb	Verb	Adverb
Ser = to be	abogad@ = lawyer artista =artist azafata = air host(ess) camarero = waiter cantante = singer científic@ = scientist enfermer@ = nurse empresari@ = business(wo)man estrella = star futbolista = footballer guía turístico = tour guide ingenier@ = engineer jefe = boss mecánic@ = mechanic médic@ = doctor músic@ = musician periodista = journalist pintor = painter policía = police officer secretari@ = secretary soldad@ = soldier actor/actriz = actor/actress profesor(a) (de…) = (…) teacher	**es = is**	ideal = ideal perfecto = perfect bueno = good malo = bad	**para = for**	**mí = me** **tí= you** **él = him** **ella = her** nosotros = us vosotros = you ellos/ellas = them	**porque = because**	**puedo = I can** **puedes = you (s) can** **puede = he/she/it can** **podemos = we can** **podéis = you (pl) can** **pueden = they can**	cuidar = to care for cocinar = to cook construir = to construct diseñar = to design escribir = to write hablar = to talk **hacer = to do** **pensar = to think** practicar = to practice **saber = to know** trabajar = to work	**bien = well** **mal = badly** rapidamente = quickly

Week 9: 11/11/24, week 10: 18/11/24

1. **Use the sentence builder to write 3- 5 sentences in Spanish**
2. **Translate your sentences into English**
3. **Now close your knowledge organiser and try to translate your 3 sentences back into Spanish without looking**
4. **Correct in purple pen**