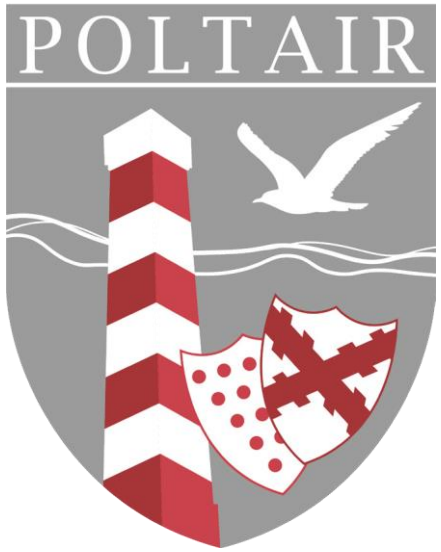


Year 7
Learning Cycle 1

Student Name:_____

Contents

How to Use your Learning Cycle

Planner

Poltair School believe that the Learning Cycle Planner should be used daily for classwork and home learning. The Learning Cycle Planner will inform students and parents of topics that are being covered in class during each learning cycle, enabling all students to extend their learning outside of the classroom.

Students should be using their Learning Cycle Planner as a revision guide for assessments and using their SORT strategies to revise for each subject prior to assessments.

Learning Cycle 1
1/9/24 - 20/12/24

Knowledge check
2/12/24 – 13/12/24

At Poltair we SORT it!

How to Use your Learning Cycle Knowledge Organiser

Poltair School believe that the Learning Cycle Knowledge Organiser should be used daily for classwork and home learning. The Learning Cycle Knowledge Organiser will inform students and parents of topics that are being covered in class during each learning cycle, enabling all students to extend their learning outside of the classroom.

Students should be using their Learning Cycle Knowledge Organiser as a revision guide for assessments and using their SORT strategies to revise for each subject prior to assessments.

What are the SORT strategies?

Select	Organise	Recall	Test
Select your revision materials by topic/subtopic. Traffic light your PLC sheets to identify areas of weakness or gaps (Red/Amber) that need to be prioritised.	Organise and condense any class notes, revision guides and revision.	Use active recall and spaced repetition to memorise your knowledge organisers until you can recall the information e.g.. Look, cover, write or self-testing	Use low stakes online tests/quizzes and answer high stakes past paper/sample questions to check and apply knowledge and understanding
Strategies			
• How to use your PLC • How to schedule your home learning and stick to it! • How to select the correct knowledge to study	• Cornell Notes • Flash cards • Mind mapping • Revision clocks • Dual coding	• Look cover & test • Leitner system • Blurt it • Transform it	• Low stakes • Self-quizzing • Quiz each other • Online quizzes • High stakes • Exam style questions

How to use SORT

Step 1: Select	Step 2:Organise	Step 3: Recall	Step 4: Test
a. Use the daily planner on page 10 to identify all the times when you will complete your home learning and when you will complete independent revision b. RAG each of the PLCs so you identify your RED topics – the ones that you are unsure of or you do not fully understand c. Write your RED topics into your daily planner for when you will revise that subject	When you revise for a specific topic use your knowledge organiser, revision guide, website etc. to organise the key knowledge you need to learn. Use any organisation strategy, such as: • Flashcards • Mindmaps • Cornell Notes • Revision Clocks • Summarise For more details go to the SORT webpage: https://www.poltairschool.co.uk/sort	Once you have summarized the knowledge, you need to actively memorise it. This is the most important part of the revision process! You could use any of the following strategies to help: • Lietner System • Blurt It • Look, say, cover, write, test	The last step in revision is to be confident that you can recall and retrieve the knowledge. To do this you need to test yourself. Quick and simple ways are to ask someone else to quiz you on the knowledge or to complete an online quiz. You can also answer past exam questions. If you can not confidently recall the knowledge you will need to repeat step 3.

At Poltair we SORT it!

ATTENDANCE FOCUS

POLTAIR

ATTENDANCE FOCUS

POLTAIR

Attendance Reflection Sheet

What is your current attendance?	
How many sessions have you missed of school?	
How many 'I' coded sessions have you had?	
How many 'M' coded sessions have you had?	
How many 'L' coded sessions have you had?	
How many 'U' coded sessions have you had?	
How many 'O' coded sessions have you had?	
How many ' ' coded sessions have you had?	
How many ' ' coded sessions have you had?	
How many days does this equate to so far this year?	
If this attendance contimued how many days off would you have this year?	

Possible strategies to REACH MY attendance Goals

- I will make attending school every day a priority.
- I will keep track of my attendance and absences.
- I will set my alarm clock for _____a.m.
- I will attend school everyday unless I am truly sick.
- I will find a relative, friend or neighbour who can take me to school if I miss the bus.
- If I am absent, I will contact my teachers to find out what I missed.
- I will set up medical and dental appointments for weekdays after school. If I must make a medical appointment during the school day, I will try to attend school for most of the day.
- When I am struggling with a challenge that is keeping me from school I will confide in an adult at school and seek help.

To improve my attendance, I commit to the following:

1.	
2.	
3.	
What attendance do you want to end this term with?	
What is your end of year attendance target?	
What is our minimum expected attendance to be rewarded?	

Home Learning timetable - when I am going to complete my home learning

	Mon A	Tues A	Weds A	Thurs A	Fri A	Mon B	Tues B	Weds B	Thurs B	Fri B
7X1	Eng/MFL	Comp/Geog	Ma/Creative		Sci/His		Ma	Eng/RE		
7X2	Eng/MFL	Ma/	Geog	Comp/His	Sci/RE	Ma/	Eng		Creative	
7X3	Ma/Sci	Eng/MFL	His	RE	Geog		Eng	Ma/Comp		Creative
7X4	Eng/Sci	Ma/MFL	His	Creative		Ma/	Eng/Comp	Geog		RE
7Y1	Eng/Sci	MFL/Geog		Ma/His	Comp/ Creative		Eng/RE	Ma/		
7Y2	Eng/Comp	Sci/Geog	Ma/MFL	His		Ma/RE	Eng/Creative			
7Y3	Ma/His	Eng/Geog	Sci/MFL		Comp/	Ma/RE	Eng/		Creative	
7Y4	Eng/Geog	Ma/His	Sci/MFL	Comp/RE			Eng/Creative	Ma/		

Expected time home learning will take:

Subject	Homework
English (Eng)	60 minutes (weekly)
Mathematics (Ma)	60 minutes (weekly)
Science (Biology/Chemistry/Physics)	30 minutes (every two weeks)
Computing (Comp)	30 minutes (every two weeks)
Spanish (MFL)	30 minutes (every two weeks)
Geography (Geog)	30 minutes (every two weeks)
History (His)	30 minutes (every two weeks)
Creative Learning (Music/DT/Art/Performing Arts) – Creative	30 minutes (every two weeks)

My Computer passwords:

Platform	Username	Password

Revision Planner

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Time	Saturday	Sunday
8.30am - 4pm						8.30am - 4pm		
4pm - 5pm						4pm - 5pm		
5pm - 6pm						5pm - 6pm		
6pm - 7pm						6pm - 7pm		
7pm - 8pm						7pm - 8pm		
8pm - 9pm						8pm - 9pm		

Summative Assessment Timetable

Lesson		02/12	01/12	04/12	05/12	06/12	09/12	10/12	11/12	12/12	13/12
		B					A				
		Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
1	7X1	Spanish		RE				Computing	Drama		
	7X2				Music						
	7X3	Spanish		Drama	Art	Music				RE	
	7X4	Spanish	Computing							DT	
	7Y1								Drama	Mathematics	
	7Y2	Art			Science	Food					
	7Y3	RE			Science				DT		Mathematics
	7Y4							Food		Computing	
2	7X1	Art				History	English			Mathematics	
	7X2					Geography	English	Art		Mathematics	
	7X3					DT	English				
	7X4	Drama			Spanish		English	Music		Mathematics	
	7Y1	Spanish				History					
	7Y2	Spanish			Geography		Computing				
	7Y3	Spanish			History					Food	
	7Y4	Spanish			History						
3	7X1				Geography	Science					
	7X2				DT	Science				Food	RE
	7X3	Food		Computing	History	Science			Mathematics		
	7X4				Geography	Science					
	7Y1		DT	Food	Geography	Science		Art		Music	
	7Y2		History						Mathematics		
	7Y3		Drama		Art			Geography			Computing
	7Y4				Drama	Science	English			Art	Mathematics
4	7X1				Music	DT	Food				
	7X2				Drama	History				Computing	
	7X3				Geography						
	7X4	Art	Food		History						
	7Y1						English				Computing
	7Y2	RE	Music				English	DT		Drama	
	7Y3						English			Music	
	7Y4		DT				Geography		Music	RE	

Personal Learning Checklists

English

Key Ideas	S	O	R	T
What is a myth?				
Am I able to recall the key characters and plot of Theseus and the Minotaur and Perseus and Medusa?				
How can I use verbal and non-verbal features to deliver a verbal interpretation of a Greek Myth?				
What is Freytag's pyramid?				
Can I remember and use a range of sentence structures?				
Am I able to recall the key characters and plot of Coraline?				
What is a quotation and how do I use it?				
What is a thesis introduction?				
How do I write a what, how, why paragraph?				
How is the Other Mother presented in the novel?				
What are the key conventions of a film review?				

Mathematics

Key Ideas	S	O	R	T
I know the different types of data				
I can draw/interpret frequency tables and two-way tables				
I can draw and interpret stem and leaf diagrams				
I can find averages from a list				
I can find averages from a table				
I can compare data using averages				
I can add and subtract negative numbers				
I can multiply and divide negative numbers				
I can identify multiples and factors				
I know the first 12 squared numbers, the first 5 cubed numbers and what this means				
I can write a number as a product of its prime factors				
I can find the HCF and LCM of a number from the product of its prime factors				

Mathematics

Key Ideas	S	O	R	T
I can form expressions				
I can substitute into expressions				
I understand key algebraic vocabulary				
I can collect like terms				
I can multiply terms				
I can expand a single bracket				
I can expand and simplify two single brackets				
I can factorise into a single bracket				
I can order decimals				
I can round to decimal places				
I can estimate				
I can add, subtract, multiply and divide with decimals				
I can multiply and divide by powers of 10				
I can convert between metric units of length				

Personal Learning Checklists

Science - Matter

Key Ideas	S	O	R	T
I can state the scientific lab rules				
I can identify the independent, dependent and control variables in an investigation				
I can describe the particle model for solids, liquids and gases				
I can describe the changes of state				
I can construct and interpret graphs to show a cooling curve				
I can describe and explain why particles move from a high to low concentration				
I can compare the properties of pure and impure substances				
I can define solutions, solvent and solutes				
I can identify separating techniques and describe how they are used				
I can measure the melting and boiling points of unknown substances to identify them				

Science – Life science

Key Ideas	S	O	R	T
I can use a microscope to observe animal and plant cells				
I can describe the structure and function of cell organelles in an animal and plant cell				
I can explain how and why cells are specialised				
I can describe how the body changes during puberty				
I can describe the process of fertilisation				
I can describe the stages in the menstrual cycle				
I can explain the factors affecting gestation				
I can describe the structure of DNA and understand the importance of scientific discovery of DNA				

Science - Energy

Key Ideas	S	O	R	T
I can name at least 8 energy stores				
I understand that energy cannot be created or destroyed, only transferred between stores				
I can apply my knowledge of gravitational potential energy and kinetic energy to describe the energy transfers occurring on a rollercoaster				
I can describe how energy is transferred in a domestic appliance				
I understand the how heat can be transferred through a material				
I can identify whether heat is being transferred by conduction, convection or radiation.				

Personal Learning Checklists

Art

Key Ideas	S	O	R	T
I understand tone, texture, shape, pattern, scale, line and composition.				
I understand how Van Gogh used line to create tone, texture and pattern.				
I can experiment with a range of materials to create tone, texture and pattern.				
I can explain how to develop my ideas.				
I can explain how my ideas are linked to Van Gogh.				
I can explain how to create a mono print.				

Computing

Key Ideas	S	O	R	T
I know how to select different applications for different purposes.				
I know that Excel is used for analysing data and creating charts.				
I know the differences between a Pie Chart and a Bar Chart				
I understand that computers have input, output and storage.				
I can name computer input and output devices.				
I can define what a network is.				
I can explain the difference between the internet and World Wide Web.				

Design Technology

Key Ideas	S	O	R	T
I can use ideas from existing designs as inspiration.				
I can identify and include an example of biomimicry in my design.				
I can use tools safely and with precision.				
I can ensure that I make a significant contribution within my team.				
I can manage and respond appropriately to challenges presented by testing.				

Personal Learning Checklists

Drama

Key Ideas	S	O	R	T
I can used accurate facial expressions and gestures in my performance				
I can use gait and movement appropriately to show intention and mood				
I can think about how each stock character would act				
I can think about how the audience will understand the story				

Food

Key Ideas	S	O	R	T
I understand how to ensure a hygienic and safe kitchen.				
I can explain the importance of knife safety and knife skills to prevent injury.				
I can identify the five different sections of the eat well guide.				
I understand the importance of a healthy diet.				
I can name and describe a number of common pieces of equipment in the kitchen				
I can describe the difference between the bridge hold and claw grip.				

Geography

Key Ideas	S	O	R	T
I can name and locate the continents and oceans				
I can use compass bearings to describe the location of a place				
I can explain the advantages and disadvantages of tourism in Cornwall				
I can explain the formation of a stack				
I can understand the impacts of pirate fishing upon the marine ecosystem				
I can identify the Anuta tribe is under threat from climate change				
I can locate the Mariana Trench on a world map				
I can explain the impacts of tourism in Kenya				
I can describe the location, climate and species of Svalbard				

Personal Learning Checklists

History

Key Ideas	S	O	R	T
I can state examples of early Empires				
I can explain what an Empire is				
I can give features of the 3 Empires (Byzantine, Islamic, European)				
I can state similarities and differences between these Empires				
I can explain the succession crisis of 1066				
I can give examples of William of Normandy's control in England				
I can explain the changes William of Normandy made to England				

Music

Key Ideas	S	O	R	T
I am able to understand the four different families of instruments and how they make a sound.				
I know what the definitions of the musical elements are.				
I know what 'timbre' is and how to identify different instruments just by their sound alone.				
I am able to understand what 'dynamics' are and can identify where they change.				
I am able to hear where the 'tempo' changes in a piece of music.				
I can understand what 'duration' is and when a note is long or short.				
I am able to identify the 'texture' of a piece of music by how many sounds are happening at once.				
I know what an orchestra is and what a conductor does.				

Religious Studies

Key Ideas	S	O	R	T
I can explain why we study religion				
I can outline the importance of the covenants with Abraham and Moses for Jewish people				
I can explain what kosher and Shabbat mean and how they impact Jewish people's lives				
I can explain why Christians believe Jesus was the Messiah				
I can explain why there are different denominations in Christianity				
I can outline the origins of the Bible				
I can explain why we study religion				

Personal Learning Checklists

Spanish

Key Ideas	S	O	R	T
I understand the rules for correct Spanish pronunciation				
I can confidently introduce myself in Spanish				
I can confidently talk about the people in my family				
I understand the rules for adjective agreement and word order				
I understand the meaning of all of the question words				
I can describe the people in my family				
I can form the verb tener in the present tense (to have)				
I can form the verb ser in the present tense (to be)				
I know how to form regular verbs in the present tense				
I can describe my typical day				

English - Greek Myths

1. Characters

1a = Theseus A hero. He was sent by his mother to Athens to find his father, an epic journey during which he encountered many adventures.

1b = Minotaur The monstrous son of Minos, king of Crete, with the body of a man and the head of a bull. He was kept in a twisting labyrinth underneath the king's palace and would only eat human flesh.

1c = Perseus A hero. Polydektes fell in love with his mother – Danae – and tricked Perseus into fetching the head of the Gorgon Medusa.

1d = Medusa A fearsome Gorgon (monster figure), turned from a beautiful woman into the ugliest creature ever seen by Athena. Her gaze could turn a man to stone.

1g = Hercules One of the most famous Greco-Roman legendary heroes and son of Zeus. Famous for his strength and his 12 labours.

1h = Poseidon God of the sea, storms and horses.

2. Plot

2a = Theseus and the Minotaur To feed the monstrous son of King Minos, each kingdom of Greece was forced to send seven men each year. King Aegeus' son, Theseus, was chosen much to his father's distress. Princess Ariadne, Minos' daughter, became infatuated with Thesesus. Telling Ariadne that he returned her love, he asked her to help him defeat the Minotaur and, as a result, they would run away and get married. She gave him her crown to light his way, a golden thread to find his way out of the maze and a bronze sword to kill her brother, the Minotaur. Defeating the Minotaur mercilessly, Theseus escapes the labyrinth and takes Ariane, to Naxos, where he abandons her.

2b = Perseus and Medusa Believing that Perseus would be an obstacle to the courtship of his mother, Polydektes tricks Perseus into retrieving the head of the Gorgon Medusa. He is marked out as a favourite of the Gods by Athene and Hermes, travels to the Graiai to ask them to direct him to some nymphs and his helped by the nymphs who give him winged sandals, a sword and to add to his own shield of polished bronze. Finding Medusa in her cave, in a valley littered with stone people, Perseus challenges her. Keeping his eyes on the shield, his arm guided by Athene, he swings his sword and decapitates the Gorgon. He escapes with his grim trophy: Medusa's head.

2c = Heracles The goddess Hera, determined to torment for Hercules, made him lose his mind. In a confused and angry state, he killed his own wife and children. When he awakened from his madness, Hercules was shocked and distraught at what he'd done. He prayed to the god Apollo for guidance, and the god's oracle told him he would have to serve Eurystheus for twelve years, in punishment for the murders. As part of his sentence, Hercules had to perform twelve Labours, feats so arduous that they seemed impossible. Fortunately, Hercules had the help of Hermes and Athena, sympathetic deities who supported him when he needed help. By the end of these Labours, Hercules was, without a doubt, Greece's greatest hero.

English - Greek Myths

3. Vocabulary

3a = betray (verb) To not be loyal to a person or your country; to hurt someone by going against a promise or doing something morally wrong

3b = viciously (adverb) In a deliberately cruel or violent way

3c = divine (adjective) From or connected to God or the heavens

3d = withering (verb) Become dry, shrivelled, shrunken or wrinkled; to decay or waste away

3e = avaricious (adjective) Extremely greedy; desperately wanting something you don't have

3f = preyed (verb) To hunt and kill, usually for food

3g = honour (noun) Great respect and glory; special attention for someone who has done something admirable

4. Subject Vocabulary

4a = myth (noun) A traditional story, especially one concerning the early history of a people or explaining a natural phenomenon, and typically involving supernatural beings or events

4b = allegory (noun) A story that can be interpreted to reveal a hidden meaning, typically a moral or political one

4c = abstract noun (noun) A noun referring to an idea, feeling, quality, or state rather than a concrete object e.g. love, admiration

4d = simile (noun) An expression including the words "like" or "as" to compare one thing with another

4e = exposition (noun) Background information at the start of a plot to introduce setting, time, characters' backstories, prior events

4f = climax (noun) The point of the most tension or drama in a narrative

4g = resolution (noun) The ending and conclusion of a story's plot

5. Sentences

5a = Simple, Compound, Complex

Simple: one independent clause containing one main verb and putting forward one idea **The Gorgon screamed.**

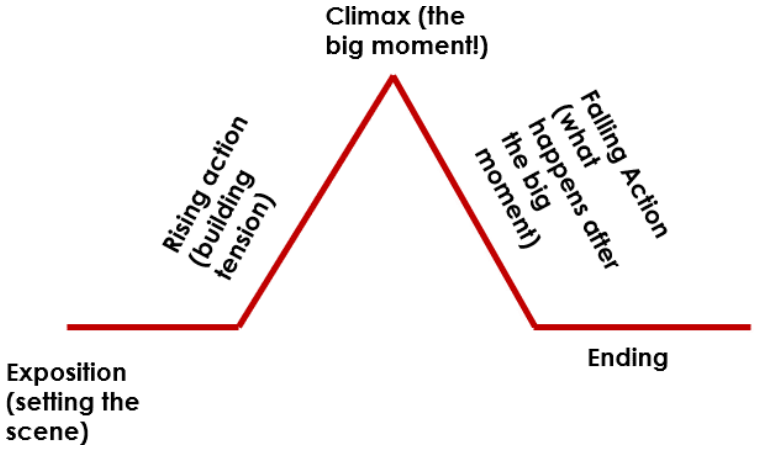
Compound: two independent clauses linked with a coordinating conjunction (and, but, or) **She kissed him and she slipped away.**

Complex: an independent clause and one or more subordinate (or 'dependent') clauses. **To her surprise, she was alone. She sat up, contemplating where Theseus could be.**

5b = Sentence starters

Double adjective	Anxious and alone, he looked around the maze.
The more... the more...	The more she tempted him, the more his resolve grew.
Description; detail	She was hideous; her face was nightmarish and her teeth rotten.
Simile	Like an eagle, he flew majestically through the air.

6. Freytag's Pyramid



English - Coraline

1. Characters

1a = Coraline The main protagonist. A young, adventurous girl who finds a locked door when she is exploring her new house and enters another world. When she realises the other mother – the witch-like creator of the other world – has kidnapped her parents, she challenges her in order to get them back. Coraline develops as a character throughout the novel, learning to be brave and to appreciate her family.

1b = Coraline's Mother and Father Busy and hard-working parents who turn down Coraline's requests to play and do not indulge her whims, much to Coraline's frustration.

1d = The Old Man Upstairs Coraline's neighbour, who is too busy training his mouse circus to give Coraline much attention.

1e = Miss Spink and Miss Forcible Coraline's eccentric neighbours and retired theatre actresses. After reading Coraline's tea leaves one afternoon, Miss Spink gives Coraline the stone with the hole through it which will later prove to be extremely useful.

1f = The Other Mother The antagonist. A supernatural 'beldam' who looks like Coraline's real mother but with black button eyes. She creates the other world to lure Coraline away from the real world, kidnaps her real
parents and attempts to trap Coraline in her world – along with the souls of other children she has kidnapped – forever.

1g = The Other Father At first, a more attentive, warmer version of her Coraline's father who is revealed to be a creation of the other mother who has instructed him to harm Coraline. Completely under the other mother's control, he cannot fight against her.

1h = The Cat A haughty-looking cat who Coraline spots in the real world while exploring and who talks to Coraline in the other world, helping her defeat the other mother.

1i = The Ghost Children Two girls and a boy whose souls have been hidden by the other mother and who have been trapped in the other mother's world for a long time—centuries, in some cases.

2. Vocabulary

2a = haughty (adjective) Acting in a way that shows arrogance and belief that you are better than others

2b = ominous (adjective) Giving a worrying impression that something bad is going to happen

2c = unkempt (adjective) Having an untidy, messy appearance

2d = triumphantly (adverb) In a way that shows great happiness or joy because of an achievement or victory

2e = deception (noun) The act of misleading someone; hiding the truth

2f = manipulate (verb) Control or influence a person cleverly or unfairly

2g = fiendish (adjective) Extremely cruel or evil

2h = nefarious (adjective) Wicked and evil

2i = eccentric (adjective) Slightly strange and peculiar, relating to someone's actions, beliefs or way of living

2j = grotesque (adjective) Odd or unnatural in shape, appearance, or character

2k = beldam (noun) Old-fashioned word meaning an ugly or evil old woman

3. Subject Vocabulary

3a = novel (noun) An extended printed story about imaginary characters and events.

3b = protagonist (noun) The main character in a novel, play or film.

3c = antagonist (noun) The principal opponent of the main character,

3d = setting (noun) Where or when a story is set, usually introduced at the exposition (beginning) of a story along with the characters.

3e = genre (noun) A type or category of book. If a writer wants to write a certain genre of book, they use certain conventions (important features that appear in most books in the genre). 'Coraline' belongs to the fantasy genre.

3f = conflict (noun) In literature, a struggle between two opposing forces that a character must overcome to achieve their goal

3g = gothic (noun) In literature, writing that creates mystery and fear; characters and settings that are crafted to unsettle the reader

3h = magic-realism (noun) In literature, a novel written in a realistic style which includes impossible or unlikely events.

3i = intertextuality (noun) The relationships or links that may be found among different books or texts.

3j = language (noun) Words or methods (techniques) used by writers to present their meanings or create effects.

English - Coraline

4. Plot

4a = Chapter 1 Coraline explores her new house and meets her eccentric neighbours. She discovers a locked door. She opens the door to find a brick wall but later finds it open when she follows a spider-like creature. She dreams of rats singing an unsettling song.

4b = Chapter 2 The crazy old man upstairs tells Coraline that the mice have a message for her: "Don't go through the door." Coraline visits Miss Spink and Miss Forcible, who predict her future and give her a stone with a hole in it as a talisman.

4c = Chapter 3 Coraline's mother takes Coraline shopping. Back at home, alone, Coraline retrieves the key for the door. When she opens the door, she enters a long dark corridor. At the other end, she finds another world, very similar to her own, and meets her other mother and other father, who resemble her own parents but they have black buttons for eyes.

4d = Chapter 4 In the other world, Coraline meets the cat who now talks to her. Coraline's other mother and father tell her that she can stay forever in the other world if she allows them to replace her eyes with buttons. She declines and returns home.

4e = Chapter 5 Coraline returns home to find no sign of her parents. She is woken by the cat, who leads Coraline to a mirror where she sees her parents – trapped. Coraline tells the cat a story about her father's bravery – saving her from a bees' hive. Coraline and the cat return to the other world. The other mother locks the door – trapping Coraline.

4f = Chapter 6 Coraline finds a snow globe with two little people in it on the mantlepiece. Walking outside, she realises that the world is not complete. Returning to the house, the other mother asks Coraline to play a game but Coraline refuses, nor will she love her. The other mother eats live beetles then locks Coraline in a mirror.

4g = Chapter 7 Coraline hears three voices belonging to children who have been imprisoned by the other mother. The children explain that the other mother stole their hearts and souls. One suggests that she could find their souls as she looks for her parents. She falls asleep and hears one voice telling her to look through the stone.

4h = Chapter 8 Coraline's other mother retrieves her and Coraline notices that her hair is writhing around her head like snakes. Coraline proposes a challenge: if she loses, she'll stay in the other world and replace her eyes with buttons, but if she wins then the other mother must let Coraline, her parents, and the children go. The game begins and Coraline searches for the children's souls and her parents. She finds one soul – using the stone with the hole in it. Next, she finds a horrifying creature in a sac, holding another soul, which she retrieves.

4i = Chapter 9 Coraline moves outside. Her other mother is now very angry – who gives her the key to the empty flat. She enters and finds a grub-like creature, once the other father, who has been punished by the other mother by being left in the flat to die. He warns Coraline to run as he has been forced to harm her. Coraline escapes.

4j = Chapter 10 The other crazy old man appears to be bundled in a coat but soon falls apart and is revealed to be hundreds of rats – the largest of which holds the last marble with the soul in it. She chases it but falls over. The cat appears with the decapitated rat and the marble. The cat becomes frightened. She picks him up, reassuring him.

4k = Chapter 11 Coraline finds the other mother, who tells her that she loves her. She shows the other mother the marbles with the souls inside. Coraline pretends that she thinks her parents are hidden in the tunnel between the worlds and the other mother opens the door, gloating. Coraline throws the cat at the other mother's face, grabs the snow globe and runs into the corridor. With the help of the ghost children, she manages to close the door but hears something falling to the floor.

4l = Chapter 12 Coraline is awoken by her real mother. In her pocket, she finds three marbles, the stone with the hole in it, the black key, and the snow globe, now empty. She ties the key around her neck. That night, she dreams she is at a picnic with the three children. They warn her that Coraline's challenge with the other mother is not yet over, That night, she is awoken by a scuttling sound: the other mother's severed hand.

4m = Chapter 13 Coraline's tea leaves are read again by Miss Spink and Forcible, who tell her they are making the shape of an outstretched hand. That night, the hand scratches at the window and she realises that she is again in danger. She says she wants to have a picnic with her dolls. She spreads a sheet over the well, placing the key in the middle, lures the hand to her and traps it with heavy planks once it falls in. She falls asleep contentedly that night, listening to the music of the mice circus.

English - Coraline

6. What, How, Why Paragraphs

WHAT is the writer saying about character/theme/ setting?	In the first chapter, the setting is presented as unpleasant. Gaiman describes features of the garden as nauseating, telling the reader that the toadstools "smelled dreadful" if they were stood on. This suggests that despite being an intrepid explorer, Coraline might want to avoid the garden as it is not an inviting and enjoyable place. The sensory imagery highlights the revolting nature of Coraline's new environment. Gaiman might have wanted to hint that there is something unsettling about Coraline's new house.
HOW are they revealing information and creating effects for the reader? Quotation? Language methods?	
WHY have they chosen to do this? Purpose? Context?	

7. Authorial Intent

Neil Gaiman wrote this novel for a purpose and uses the story and characters to send a message to his readers...

7a = To celebrate... courage and resilience in the face of adversity.

7b = To recognise... that relationships with those people closest to us – even at their most frustrating and challenging – should not be taken for granted.

7c = To criticise... deception and selfishness, and to highlight how these flaws can corrupt and leave someone bitter and lonely.

8. Thesis Introductions

Thesis introductions are our way of beginning extended answers about characters or themes.

They include:

- A summarised answer to our question.
- An idea about why the writer presented the character / theme in the way s/he did

Example:

How does Gaiman present the Other Cat in 'Coraline'?

Despite appearing aloof at first, the Other Cat becomes one of Coraline's closest allies. He helps her but is also supported by Coraline in return. Gaiman does this to encourage his readers to recognise that friendships are important but not always easy.

9. Conventions of Reviews

When writing reviews, we should include:

- Brief plot summary (avoiding spoilers!)
- Opinions supported with evidence and examples.
- Precise terminology relating to films (character, voiceover, music).
- Paragraphs including an introduction and conclusion.
- Correct punctuation and grammar.

10. Vocabulary for Film Reviews

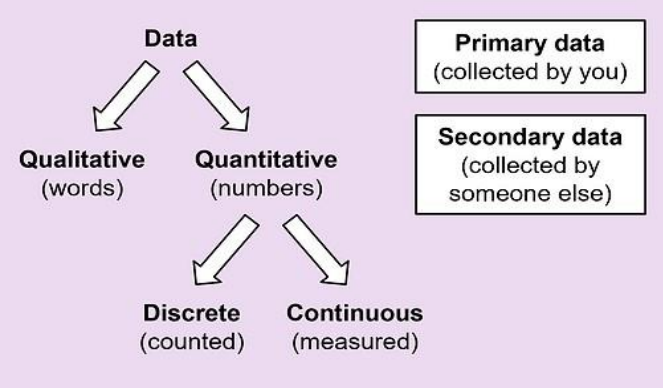
☺	☹
Captivating	Confusing
Gripping	Lacklustre
Powerful	Uninspiring
Intense	Monotonous
Mesmerising	Unsuitable

Mathematics

Key Terms	Description
Primary Data	Data which has been collected by yourself
Secondary Data	Data which has been collected by somebody else
Discrete Data	Can be counted
Continuous data	Cannot be counted
Qualitative data	Talks about something's qualities. Usually is words
Quantitative data	Measures quantities. Is numbers.
Frequency	How many times something occurs
Inequality	When one thing is inequal to another- one is bigger than the other
Average	A measure of central tendency
Prime number	A number whose only factors are one and itself
Factor	A number which can be multiplied to reach the starting number
Multiple	When a number is multiplied by any integer
Integer	Whole number
Negative number	A number which is less than zero
Variable	A letter which is used to represent an unknown quantity
Expression	An algebraic statement including terms and operations
Term	A collection of variables and numbers

Mathematics – Analysing and displaying data

1. Types of Data



2. Grouping data

It is sometimes appropriate to sort data into groups

Class (Rs.)	Tally Marks	Frequency Students
20 - 30	𝍸	5
30 - 40	𝍸 |||	8
40 - 50	𝍸 ||||	9
50 - 60	𝍸 𝍸	10
60 - 70	𝍸 |	6
70 - 80	||	2
Total		40

3. Two-way tables

All rows and columns sum to their total

	Baseball	Basketball	Football	Total
Male	13	15	20	48
Female	23	16	13	52
Total	36	31	33	100

4. Stem and Leaf diagrams

Stem and leaf diagrams break numbers into their stem and their leaf

They must include a key

Key : 2	0 means 20
Stem	Leaf
0	1 4
1	3 6 6 7
2	0 2 5
3	6 7 7 7 8
4	0 1 3

5. Averages from a list

Mode: most common item in the list

Median: middle item when the list is ordered

Mean: Add all numbers together and divide by the quantity of items in the list

Range: largest value – smallest value

6. Averages from a table

Number of people	Frequency	Number × Frequency
1	5	1 × 5 = 5
2	6	2 × 6 = 12
3	3	3 × 3 = 9
4	2	4 × 2 = 8
	n = 16	Total = 34

Mean = $\frac{34}{16}$

7. Mean from a table

On your calculator:

Menu > 2.Statistics

1: 1-Variable

Fill the table

OPTN

3: 1-Varibale

$\bar{x}$is the mean

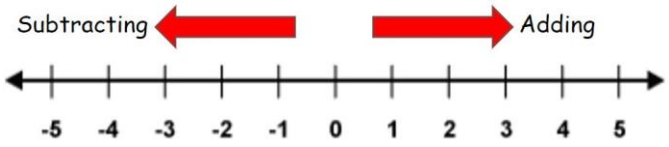
8. Comparing data using averages

"On average " - compare the medians

Consistency – smaller range = more consistency

Mathematics – Number skills

1. Directed number: add and subtract



2. Directed number: add and subtract

-1 + -3 = -1 - 3 = **-4**

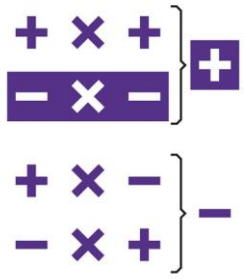
Mixed means minus

-3 - -6 = -3 + 6 = **3**

It's not mixed, so it's not minus

3. Directed number: multiply and divide

Calculate (-3) × (-2)



▶ (-3) × (-2) = +6

4. Multiples and Factors

1 × 12 = 12
2 × 6 = 12
3 × 4 = 12

Factors of 12 = 1, 2, 3, 4, 6, 12

6 × 0 = 0
6 × 1 = 6
6 × 2 = 12
6 × 3 = 18
6 × 4 = 24
6 × 5 = 30
6 × 6 = 36
6 × 7 = 42
6 × 8 = 48
6 × 9 = 54
6 × 10 = 60

A few Multiples of 6

5. Squared Numbers

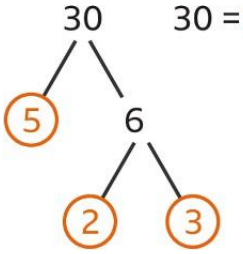
×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

6. Cubed Numbers

$1^3 = 1 \times 1 \times 1 = 1$
$2^3 = 2 \times 2 \times 2 = 8$
$3^3 = 3 \times 3 \times 3 = 27$
$4^3 = 4 \times 4 \times 4 = 64$
$5^3 = 5 \times 5 \times 5 = 125$
$6^3 = 6 \times 6 \times 6 = 216$
$7^3 = 7 \times 7 \times 7 = 343$
$8^3 = 8 \times 8 \times 8 = 512$
$9^3 = 9 \times 9 \times 9 = 729$
$10^3 = 10 \times 10 \times 10 = 1000$

7. Prime factor decomposition

1. Break number down into factor pairs
2. Circle prime numbers



30 = 2 × 3 × 5

8. Find HCF

12 = 2 x 2 x 3
18 = 2 x 3 x 3

LCM = 2 X 2 X 3 X 3

Common factors

LCM = 36

HCF = 2 x 3 = 6

9. Find LCM

12 = 2 x 2 x 3
18 = 2 x 3 x 3

Common factors

HCF = 2 x 3 = 6

HCF x all of the numbers leftover in the lists which are not highlighted

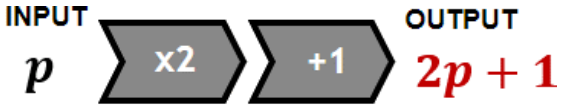
LCM= 6 x 2 x 3

LCM = 36

Mathematics – Expressions, functions & formulae

1. Forming expressions

Letters represent unknown numbers



$$p \times 2 = 2p$$

$$\Rightarrow 2p + 1$$

2. Substitution

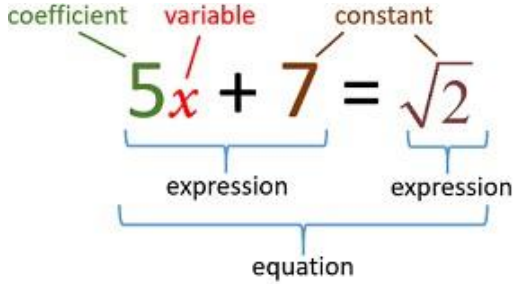
$3a - 2b \quad (a = 10 \quad b = 4)$

$= 3(10) - 2(4)$

$= 30 - 8$

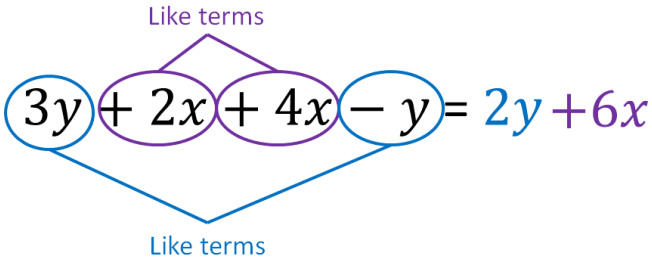
$= 22$ ✓

3. Algebraic vocabulary



Terms: $5x$, 7, $\sqrt{2}$

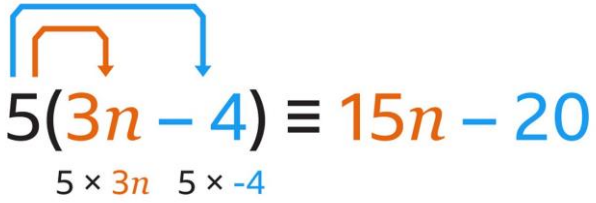
4. Collecting like terms



5. Multiplying terms

$$4a \times 5b = 20ab$$

6. Expanding single bracket



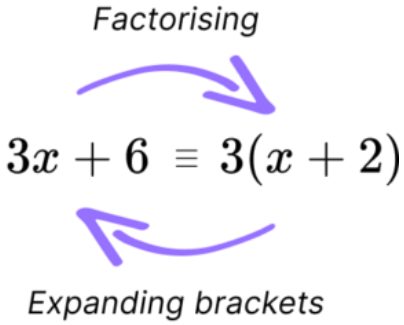
7. Expand and Simplify

$4(x + 1) + 7(x + 3)$

$= 4x + 4 + 7x + 21$

$= 11x + 25$

8. Factorising



Mathematics – Decimals and measures

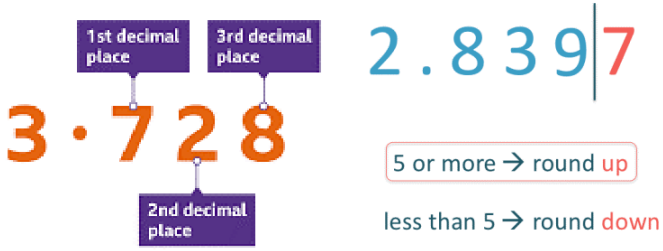
1. Ordering decimals

STEP 1: Stack the numbers being compared. Line up the decimal points. 4.8 4.826 4.08 4.006	**STEP 2:** Add zeros so that each number has the same number of decimal digits. 4.800 4.826 4.080 4.006
STEP 3: Compare each place value one by one. If a number is the same, move to the next place. 4.800 4.826 4.080 4.006	**STEP 4:** Order the numbers from least to greatest or greatest to least. Here, they are ordered from least to greatest. 4.006, 4.080, 4.800, 4.826 Remove the zeros you previously added. 4.006, 4.08, 4.8, 4.826

2. Rounding to decimal places

Identify the digit in the dp given

Go to the next digit decide whether to round up



3. Estimating

Round all numbers to 1sf

Complete calculation with rounded numbers

307 + 991 ≈ 1300
300 + 1000
1300

4. Adding and subtracting decimals

$$\begin{array}{r} 12.5 \\ +\ 6.23 \\ \hline 18.73 \end{array} \qquad \begin{array}{r} 5.2 \\ -\ 3.6 \\ \hline 1.6 \end{array}$$

Line up the decimal points.

Use zeros as place holders if you need

5. Multiplying decimals

3.4 x 2.86

x10 x100

$$\begin{array}{r} 286 \\ \times\ 34 \\ \hline 1144 \\ 8580 \\ \hline 9724 \end{array}$$

9724 ÷ 10 ÷ 100
= 9.724

Multiply as if no decimal point

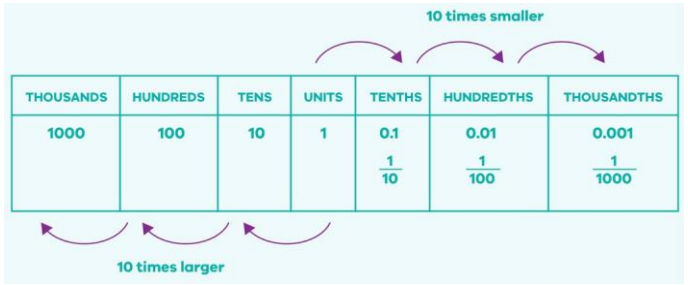
Answer has as many decimal places as in the question

6. Multiplying and dividing with powers of 10

Multiply- each digit shifts left

Divide- each digit shifts right

Decimal point remains in position



7. Dividing by decimals

Write division as a fraction

Use powers of 10 for equivalent fractions until integer on denominator

8.75 ÷ 0.7

x10

$\frac{8.75}{0.7} = \frac{87.5}{7}$

x10

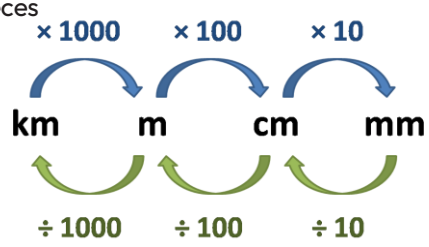
$$7\overline{)87.5} = 12.5$$

8. Metric conversions of length

Cent means 100

Mili means 1000 pieces

Kilo means 1000 of



Mathematics - Calculator Features

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Square numbers: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

Cube Numbers : 1, 8, 27, 64, 125

Prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47...

Useful features on your calculator:

FACT: this express a number as a product of its prime factors

RATIO (menu 4): this will find missing values within equivalent ratios

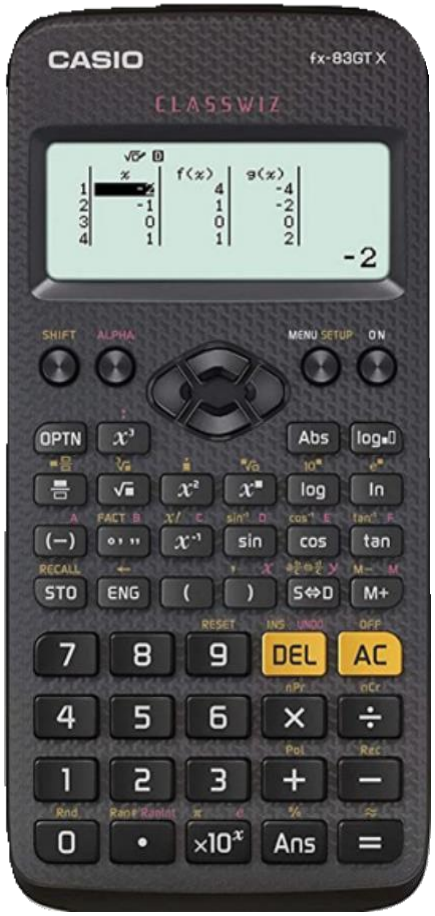
Table (menu 3): This is where you can generate values within a table- useful for plotting graphs and generating terms of a sequence

Statistics (menu 2): this will find all of the averages from a table of data

°'": This Is the time button and can do conversion between time units, as well as calculations with different times

Fraction button: can be used for any calculations with fractions

S-D: Converts decimal answers to fractions and vice vera



Mathematics

Sparx Maths

- Homework will be set on Tuesdays and will be due on the following Tuesday morning at 7:30am
- You must complete 100% of the homework- if you have not got 100% of the questions correct, then you have not done your homework
- You will receive a merit for completion of your homework
- If you complete one of the extra homework's- XP Boost or Target, you will receive another merit.- they must be 100% complete
- Sparx clinics will run Monday, Tuesday, Thursday in Arc 2- where a Mathematics teacher will be on hand to support you, if you are unsure
- It is your responsibility to seek help BEFORE the deadline, if you get stuck
- Your bookwork will be checked in lessons- you must write full workings
- You must bring your homework book to the first lesson after Tuesday 7:30am- if you do not have your book, then you have not completed your homework

Science – The periodic table

Group 1 – **Alkali Metals**

Group 7 – **Halogens**

Group 0 – **Noble gases**

Group number – tells you the number of **electrons** in an elements **outer** shell.

Elements in the **same group** have **similar properties**.

Mass Number = number of **protons** and **neutrons** added together.

Element **symbol**

Element **name**

Atomic / Proton Number = number of **protons** which is the same as the number of **electrons**.

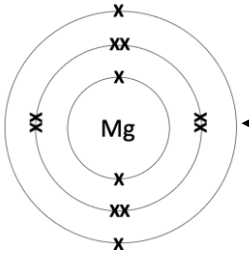
relative atomic mass
atomic symbol
name
atomic (proton) number

Neutrons = Mass number – Atomic number

Non-Metals

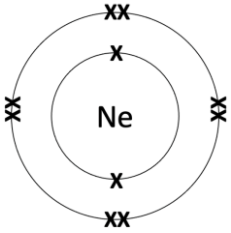
Transition Metals

1												3	4	5	6	7	0
1 H hydrogen 1																	4 He helium 2
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl chlorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[97] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	139 La* lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	[227] Ac* actinium 89	[267] Rf rutherfordium 104	[270] Db dubnium 105	[269] Sg seaborgium 106	[270] Bh bohrium 107	[270] Hs hassium 108	[278] Mt meitnerium 109	[281] Ds darmstadtium 110	[281] Rg roentgenium 111	[285] Cn copernicium 112	[286] Nh nihonium 113	[289] Fl flerovium 114	[289] Mc moscovium 115	[293] Lv livermorium 116	[293] Ts tennessine 117	[294] Og oganesson 118

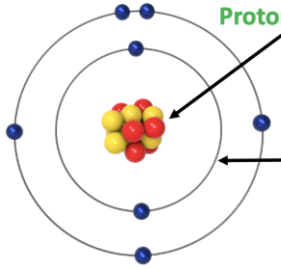


Magnesium (Mg) has **12 electrons** in total. It is in **group 2** so has 2 electrons in its **outer** shell. Mg's electronic configuration is 2,8,2.

Noble gases have a **full outer shell** of electrons E.g., Neon (Ne)



Subatomic Particle	Mass	Charge
Proton	1	+1
Neutron	1	0
Electron	Negligible	-1



Nucleus:
Protons and Neutrons

Shells:
Electrons

Science – How science works

1. Key Terms	Description
Independent variable	The variable you change in an investigation
Dependent variable	The variable you measure in an investigation
Control variable	The variable you keep the same in an investigation
Hypothesis	A prediction of what will happen in an investigation
Reliability	We use control variables to ensure a reliable experiment
Reproducible	To re-do our experiment and get similar results due to a reliable method
Mean	Doing an experiment 3 times then dividing by 3 to get an average
Fair test	An experiment where only the independent variable changes.
Anomalous result	Result that does not fit with the rest of the data.

2. The Variables

1. ***Repeatable*** – The **same** person gets the **same results** after repeating the experiment using the same method and equipment.
2. ***Reproducible*** – Similar results can be achieved by **someone else** or using a **different method**/piece of equipment.
3. ***Accurate*** – Results are close to the true answer
4. ***Precise*** – data is **close** to the **mean** (or the average!)

For data to be reliable, it must be **repeatable** and **reproducible**

Independent variable – the thing we change!

Independent variable – I want to see if how hot water is increases the rate of diffusion from a teabag. So, I am changing the temperature (degrees Celsius) of water.

Control variables – these are things we **keep the same** to ensure a reliable experiment (one we can repeat and reproduce.

Variable | Example

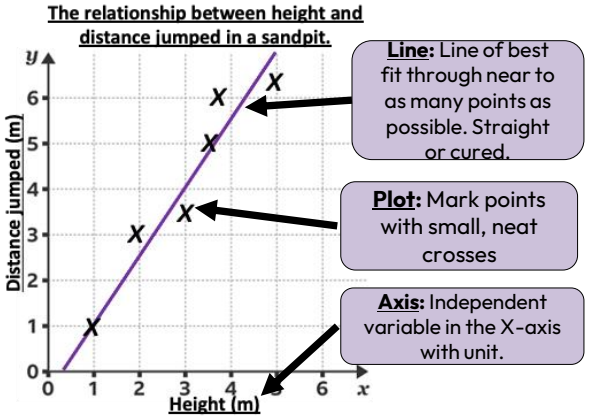
Control variables – I want **keep everything else the same**, e.g., the type of teabag, the volume of water (mL) used, the timer started at the same time, the same end point.

Dependent variable – the thing we are **measuring** overall.

Dependent variable – I want to know if increasing water temperature increases the rate of diffusion from a tea bag. Therefore, I want to **measure** the rate of diffusion!

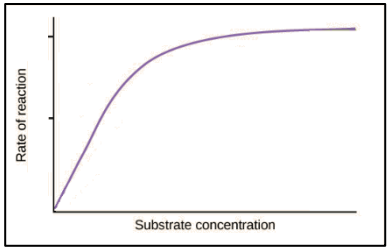
3. Graphs

Scaling – Even scale
Plot – Small crosses 'x'
Line of best fit – on line graphs
Axis – Titles and units
Title - Appropriate graph title



4. Drawing conclusions from Graphs

1. State the relationship between the independent and dependent variable, e.g., 'as the time increases the product formed increases.'
2. Use statistics to support your answer. 'For example, at 10 minutes there was 50g of product, compared to 160g at 20 minutes'
3. Is the graph the same throughout or does it change? Split it into sections and describe each.

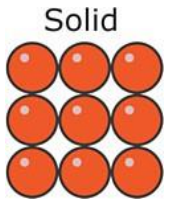


Model Answer: As the substrate concentration increases, the rate of reaction increases. For example… The rate increases more rapidly initially, then increases more slowly until the rate stays the same.

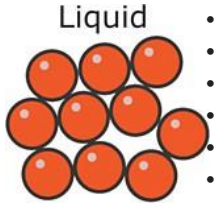
Science – Matter (Chemistry)

1. Key Terms	Description
States of matter	Shows how solids, liquids and gases change state
Boiling	When a liquid turns into a gas
Melting	When a solid turns into a liquid
Freezing	When a liquid turns into a solid
Evaporating	When a liquid turns into a gas
Condensing	When a gas turns into a liquid
Sublimation	When a solid turns into a gas without becoming a liquid first.
Chromatography	Is a separation technique used to separate mixtures of soluble substances
Filtration	Is used to separate an insoluble solid from a pure liquid or a solution.
Distillation	Is a separation technique used to separate a solvent from a mixture.
Pure substance	A substance made of only one type of particle
Impure substance	A substance made from more than one element or compound (Mixture)

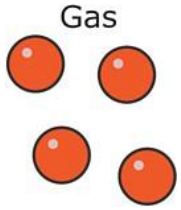
2. The particle model



The particles in **solids**:
- Are tightly packed
- Cannot usually be compressed.
- Are in a regular arrangement.
- Move only by vibrating about a fixed position.
- Have a fixed shape
- Have a fixed volume
- Have strong forces of attraction holding them together



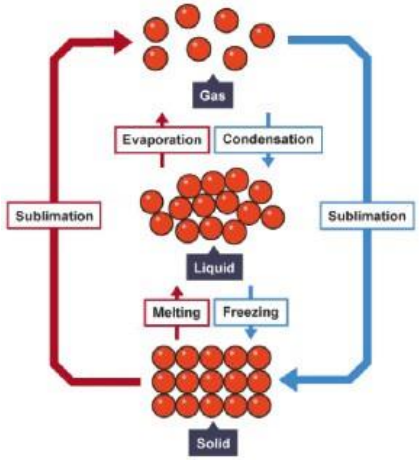
The particles in liquids :
- Are in a random arrangement
- Are close together
- Cannot usually be compressed.
- Can move over each other/flow
- Do not have a fixed shape
- Have a fixed volume
- Have moderate forces of attraction between particles



The particles in gases:
- Are widely spaced
- Are in a random arrangement
- Can be easily compressed.
- Move fast and in all directions.
- Do not have a fixed shape
- Do not have a fixed volume
- Have very weak forces of attraction between particles

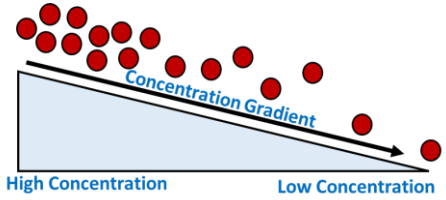
Science - Matter

3. Changes of states



4. Diffusion

Diffusion is the movement of particles from a **high concentration** (more) to an **area of low concentration** (less) down a **concentration gradient**.



6. Further reading and websites

The particle model of matter:

https://www.bbc.co.uk/bitesize/topics/z9r4jxs

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Pure and impure substances:

https://www.bbc.co.uk/bitesize/topics/zych6g8

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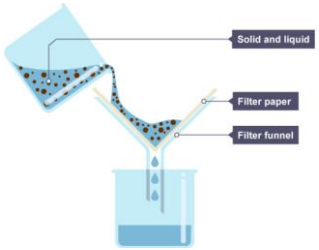
5. Filtration & Evaporation

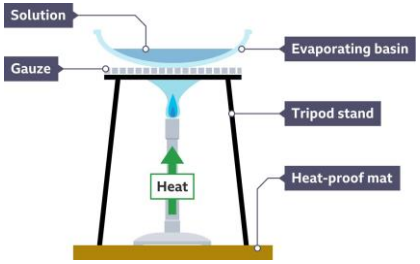


Filtration is the process of separating solids from liquids using .

- The process can be used to separate an insoluble solid, for example stone or sand grains from a liquid.

When a mixture of sand and water is filtered:

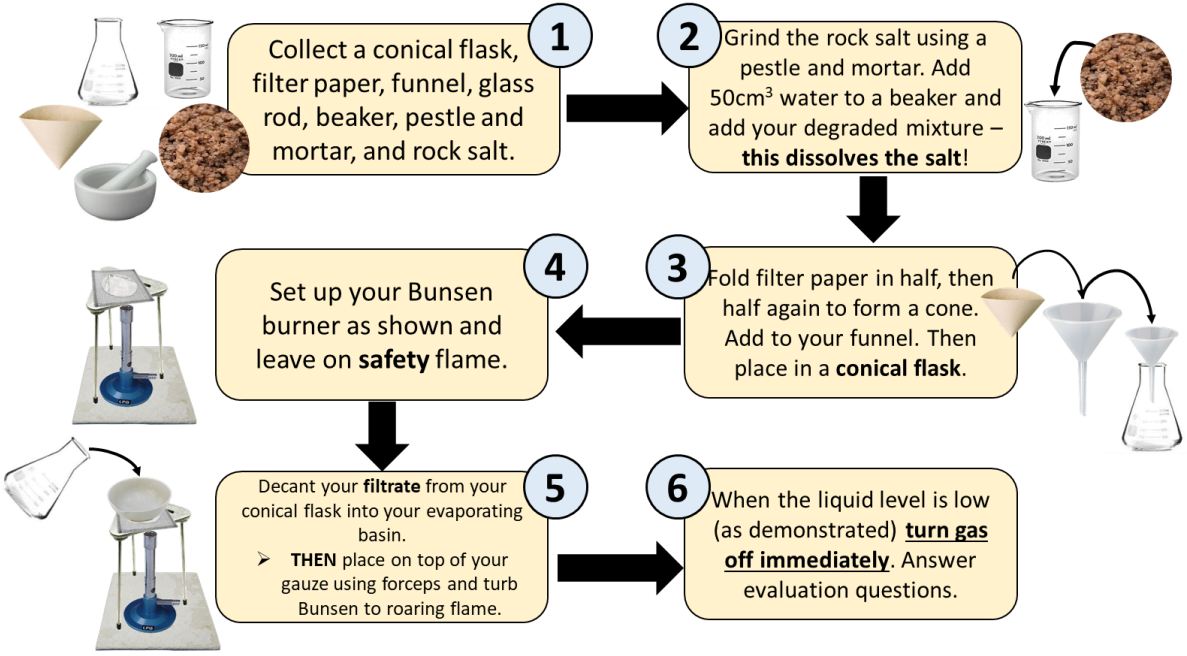
- The sand stays behind in the filter paper, it becomes the residue
- The water passes through the filter paper, it becomes the filtrate



Evaporation can be used as a technique to separate soluble solids from a liquid .

The solvent is the liquid, and when the solution is heated, the solvent evaporates. The solute is left behind as crystals.

In a lab the heat is usually supplied by a Bunsen burner, and the solution is heated in an evaporating basin.



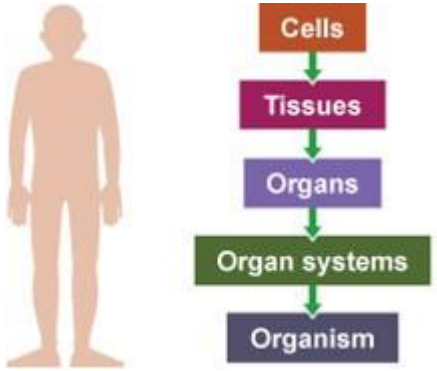
Science – Life Science (Biology)

1. Key Terms	Description
Microscope	A scientific instrument that is used to see tiny objects, such as cells, magnified several hundred times or more
Specialised cells	Cells which have a particular adaptation to allow them to complete a specific function
Offspring	An animal's young
Sexual fertilisation	A process in which new organisms are created by combining the genetic information from two individuals of different sexes
DNA	The store of genetic information for all living things, passed from parents to offspring
Ova	Female gametes
Sperm	Male gametes
Hormones	Chemical messages produced by glands. They travel in the blood to a target organ where they take effect
Uterus	The part of the female reproductive system where a fertilised egg cell develops into an embryo and then a fetus. Also called the womb.
Oviduct	Tubes in the female reproductive system which link the two ovaries to the uterus. Also called the fallopian tubes.

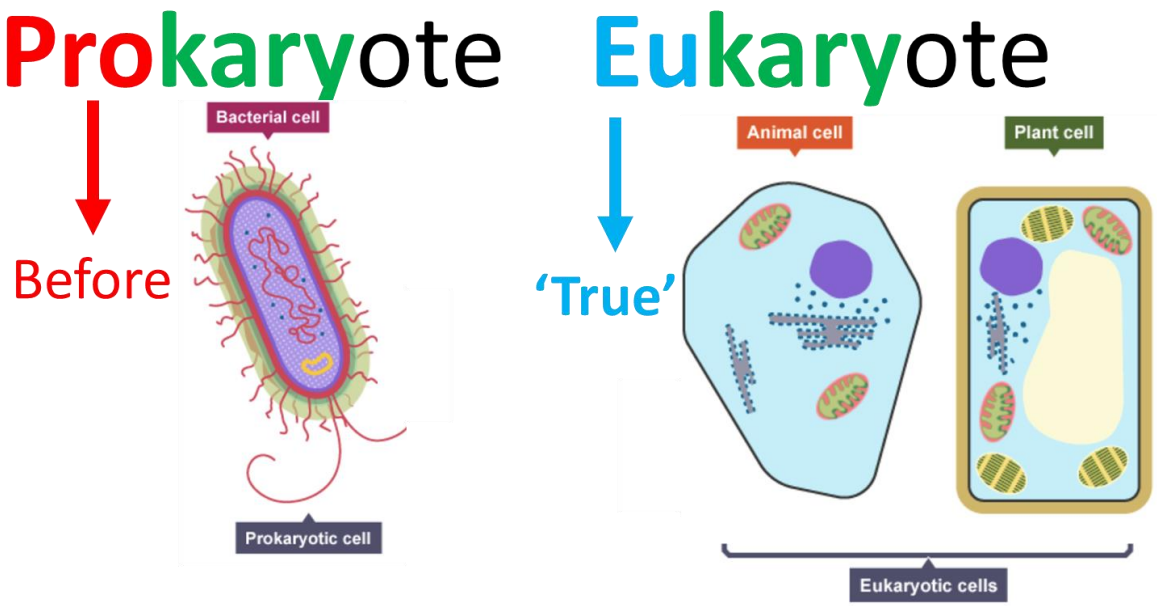
2. Levels of Organisation

Multicellular animals and plants consist of different types of cells organised in a hierarchy as tissues, organs and systems.

- A cell is the smallest unit of life.
- A tissue is a group of cells working together to perform a function.
- An organ is a group of tissues working together to perform a function.
- An organ system is a group of organs working together to perform a function
- An organism is a group of organ systems working together to perform a function

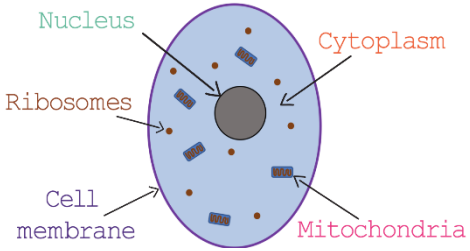


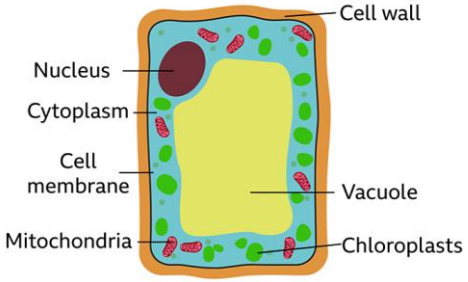
3. Cells – Eukaryotic and Prokaryotic

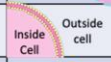


Science - Life Science

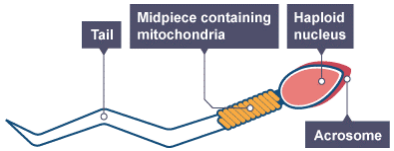
4. Animal, Plant, and Bacterial Organelles





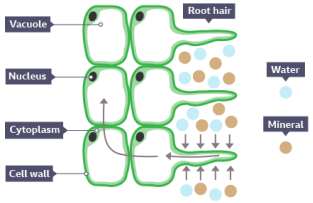
Organelle	Organelle Image	Function	Image	Plant?	Animal?	Bacteria?
Nucleus		Where **DNA** is found and controls cell activity.		Yes	Yes	
Cell membrane		Controls what **goes in** and **out** of our cells		Yes	Yes	Yes
Mitochondria		Releases **energy** from (from aerobic respiration)		Yes	Yes	
Chloroplasts		The site of photosynthesis, contains green pigment chlorophyll.		Yes		
Nucleoid		A **linear strand** of DNA suspended in the cytoplasm.				Yes
Cytoplasm		**Gel-like substance** where **reactions** take place.		Yes	Yes	Yes
Ribosomes		Where **proteins** are made.		Yes	Yes	Yes
Cell Wall		Provides structure and support.		Yes		Yes
Vacuole		Contains cell sap, salts and sugars.		Yes		
Plasmid		Extra **circular strands** of **DNA.** E.g., antibiotic resistance.				Yes

5. Specialised Cells



Sperm cell – Animal Cells

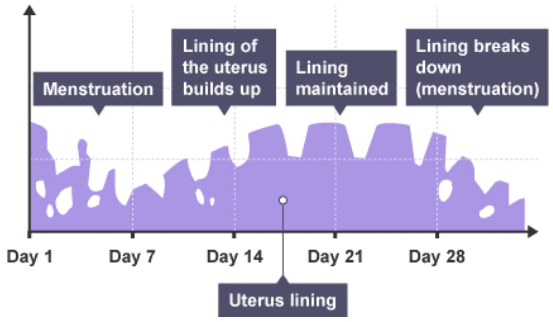
- Long tail – for swimming
- Many mitochondria – release energy from aerobic respiration for swimming.
- Digestive enzymes in the acrosome – digest egg membrane.



Root hair cell - Plants

- Large surface area – to absorb more water and minerals
- Lots of mitochondria – release energy from aerobic respiration for active transport.

6. The Menstrual Cycle



7. Further Reading

Animal and plant cells

https://www.bbc.co.uk/bitesize/topics/znyycdm/articles/ zkm7wnb

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Specialised animal cells

https://www.bbc.co.uk/bitesize/topics/znyycdm/articles/zfj3rwx

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Human reproduction

https://www.bbc.co.uk/bitesize/topics/zybbkqt/articles/ zwb6xbk

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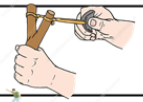
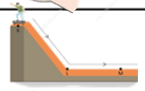
Science – Energy (Physics)

Key Terms	Description
Energy	The ability to do work, measured in joules (J).
Work	This is done when energy is transferred.
Conservation of energy	Energy can not be created or destroyed it can only be conserved
Kinetic energy	The amount of energy in the kinetic energy store depends on the speed of the object.
Gravitational potential energy	The amount of energy in the gravitational potential energy store depends on the height of the object.
Power	The energy transferred each second, measured in watts (W).
Conduction	Energy transfer by heating through a solid due to collisions between particles.
Convection	When particles with a lot of thermal energy in a liquid or gas move and take the place of particles with less thermal energy.
Radiation	The transfer of heat energy by electromagnetic waves without involving particles.

2.Energy stores

Law of conservation of energy – energy can not be created or destroyed, only transferred between stores.

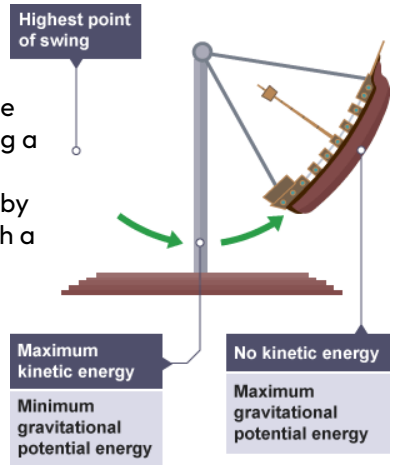
Energy Store	Image	Description	Examples
Magnetic		Energy stored when repelling poles have been pushed closer together or when attracting poles have been pulled further apart.	Fridge magnet, maglev trains
Internal (thermal)		Total Kinetic and Potential energy of particles in an object.	Human body, hot coffee, stoves.
Chemical		Energy stored between bonds, such as those between molecules.	Food, muscles, electrical cells.
Kinetic		Energy of moving objects.	Runner, Bus, comets.
Electrostatic		Energy stored when repelling charges are moved closer or attracting charges pulled further apart.	Thunderclouds, Van De Graaf.
Elastic Potential		Energy stored when an object is stretched or squashed.	Drawn catapults, compressed balloon.
Gravitational Potential		Energy stored of an object at height.	Aeroplanes, kites, book on a table.
Nuclear		Energy stored in the nucleus of an atom.	Uranium nuclear power.

Science - Energy

3. Energy transfers in a rollercoaster

Energy can be transferred between stores in 4 ways:

- Mechanically (by a force doing work) e.g., moving a book.
- Electrically (work done by moving charges through a potential difference).
- Heating
- Radiation (e.g., light or sound)

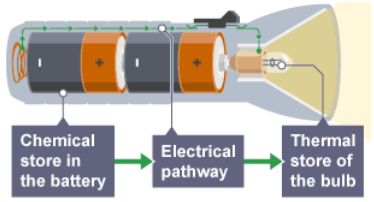


4. Energy transfers in domestic appliances

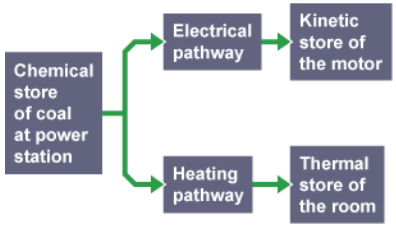
No energy transfer is 100% efficient – some energy is always wasted, often as heat or sound.

In a torch, the chemical energy stored in the battery is transferred:

- Usefully to light store in the bulb
- Wastefully into the thermal store of the filament bulb (electrical transfer)



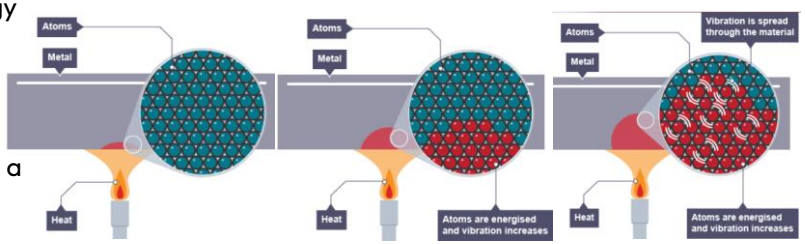
In a vacuum cleaner, energy is usefully transferred from the power station to make the motor spin. Some of the energy is transferred less usefully into the room through sound and heat.



5. Conduction

Conduction is the transfer of energy through a solid material, by transferring kinetic energy from one particle to another.

- Metals have free electrons.
- Higher temperature → higher kinetic energy store of particles.
- This means electrons will flow through a metal and transfer energy.
- This is why metals are good thermal conductors (allow heat to pass through easily)

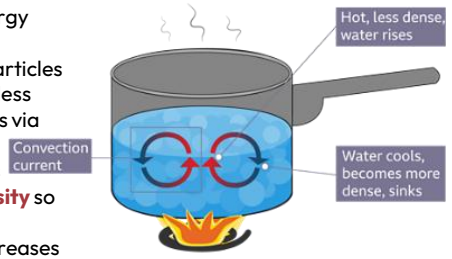


6. Convection and radiation

Convection is the transfer of energy through a moving liquid or gas.

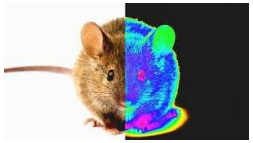
Convection

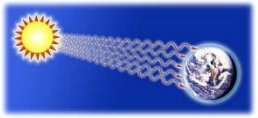
- Higher temperature → higher kinetic energy store of particles.
- More energetic particles move away from less energetic particles via diffusion.
- Warmer fluid/gas becomes less **density** so rises.
- Temperature decreases as particles rise, so particles lose kinetic energy and become more dese so fall.
- → Convection Current.



Radiation

- All objects emit infrared radiation.
- The hotter an object is, the more infrared radiation it gives off.
- We can't see infrared only feel it as heat.
- Anything with a temperature above absolute zero has heat energy.





7. Further reading and websites

Heat Energy:

https://www.bbc.co.uk/bitesize/topics/zm9mxbk/articles/zmxrbqt#ztjd8hv

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Heat Transfer:

https://www.bbc.co.uk/bitesize/articles/zh63ydm#z3mxm39

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Science - How to Approach 6 Mark Questions

1. Matter

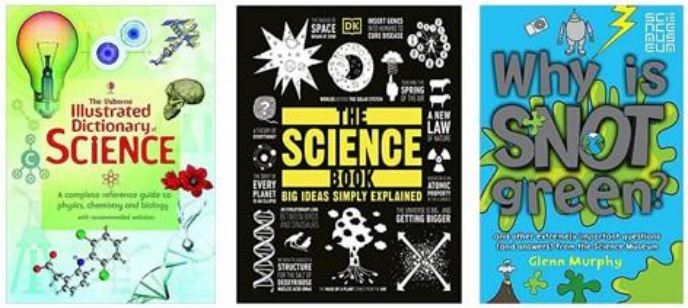
Question	Identify and explain the properties of _____
Info	You could be asked this question for solids, liquids and gases. To answer you need to: 1. Describe its shape and if it can flow. 2. Link the state of matters shape and ability to flow to the forces of attraction between the particles. 3. Describe its density and if it can be compressed. 4. Link the density and ability to be compressed of the state of matter to the closeness of the particles.
Top tip	Link the properties of the states of matter to the arrangement of particles.
Model answer	**Identify and explain the properties of a gas.** 1. A gas can flow and will completely fill a container that they are in. 2. This is because there are very little forces of attraction between the molecules and so they are able to move freely. 3. A gas has a very low density and can be squashed and compressed. 4. This is because the particles are very far apart and so there is lots of space between them.
Practice	1. Learn and practice the model answer above. 2. Prepare and learn model answers to identify and explain the properties of solids and gases.

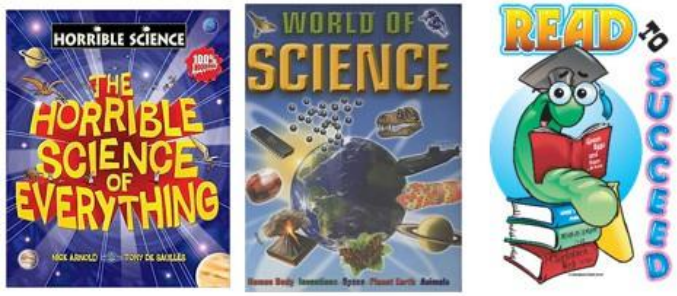
2. Cells

Question	Explain how a _____ cell is adapted for its function
Info	You could be asked this question for any of the following specialised cells: • Sperm cell • Nerve cell • Muscle cell • Red blood cell • Root hair cell • Xylem • Phloem To answer this question you will need to do the following: 1. Identify the function (job) of the specialised cell. 2. Describe an adaption that the cell has. 3. Explain how this adaptation helps the cell complete its function. 4. Continue to describe another adaptation the cell has and explain how this helps complete its function until you can think of no more adaptions.
Top tip	If you are explaining why a cell has lots of mitochondria use the following phrase: **"The cell has lots of mitochondria, for respiration to release more energy"**
Model answer	**Explain how a sperm cell is adapted for its function.** The function of the sperm cell is to carry the father's genetic information and fertilise the egg. Adaptations the sperm cell have include that it is streamlined to reduce the cells energy requirements to travel to the egg. Another adaptation is that the nucleus contains 1 set of chromosomes, this preserves the chromosome number when the egg is fertilised. Athird adaptation is that the sperm cell has a acrosome that contains digestive enzymes that enables the sperm to penetrate the egg. Finally, the sperm cell has lots of mitochondria, for respiration, to release more energy for the cell.
Practice	1. Learn and practice the model answer above. 2. Prepare and learn model answers to explain how the following cells are adapted for their function: nerve cell, muscle cell, red blood cell, root hair cell, xylem and phloem

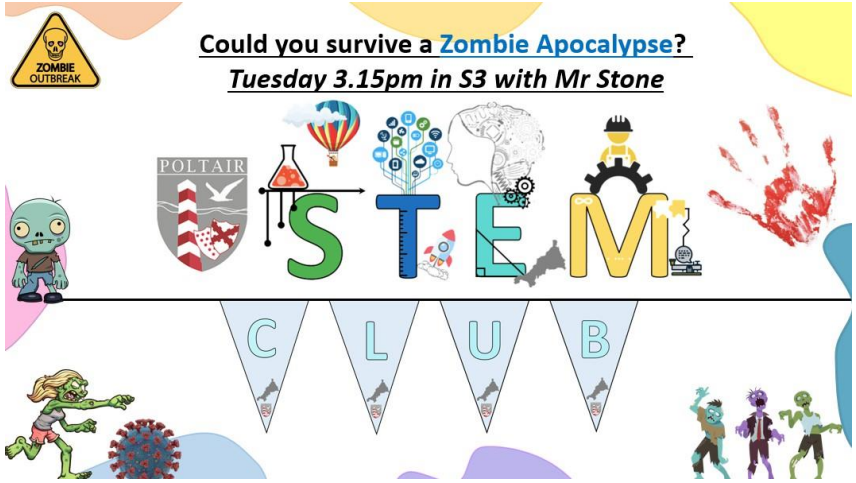
Science - Life Science

1. Science reading opportunities





2. STEM club: Science, technology, engineering, Maths



4. Science discovery Websites

Spectacular Science
National Geographic

https://kids.nationalgeographic.com/videos/topic/spectacular-science

Discover Natural History Museum

https://www.nhm.ac.uk/discover.html

Conversations – Eden Project
https://www.edenproject.com/learn/eden-at-home

Cornwall Wildlife Trust

https://www.cornwallwildlifetrust.org. uk/

Art

1. Tier Three Vocabulary

Key Words	Definitions
Tone	How the light falls on an object. From dark to light.
Texture	What is the object made from?
Pattern	Repeating marks that can represent texture.
Cross-hatching	A technique where you draw lines in a criss-cross pattern.
Stippling	A technique where a series of small individual dots are used to create texture.
Charcoal	A material that is made from charred wood that is used to create dark and rich marks.
Oil Pastel	A richly-pigment waxy stick that creates vibrant and blendable marks.
Ink	A wet material with vibrant colour.
Continuous Line	A drawing technique where the tool does not leave the paper.

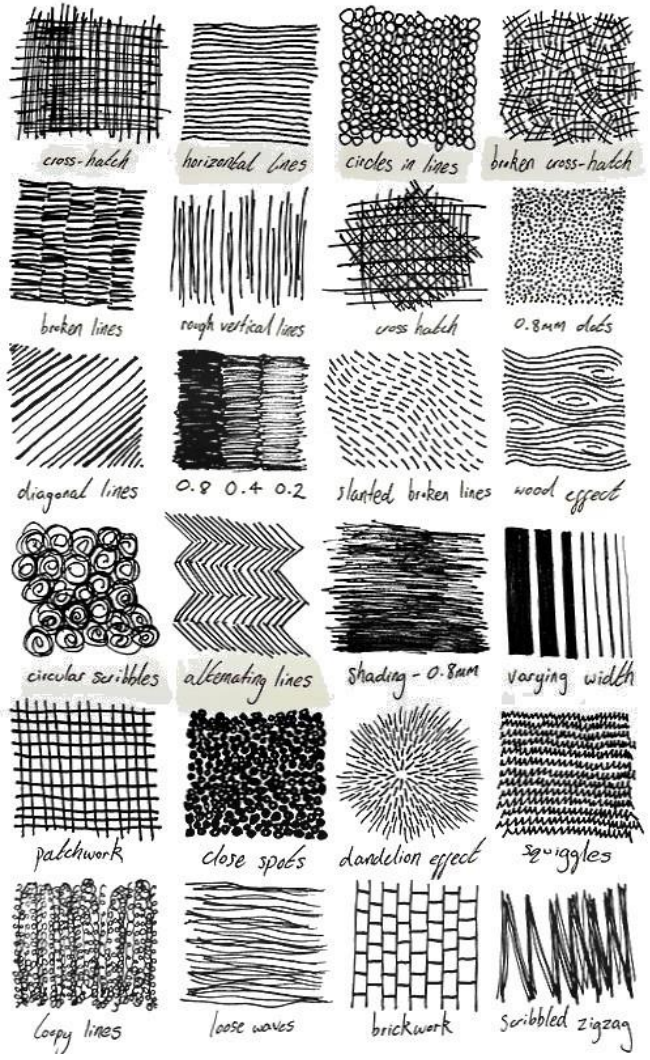
2. What will I learn?

You will be introduced to a range of mark making materials, techniques and processes. You will develop your observational drawing skills. You will be experimental and create an abstract response inspired by Helen Wells and Van Gogh.

The definition of mark making is not fixed or limited to the materials that you find in the art cupboard. Marks- lines, dots, scratches, scribbles, patterns, textures, rubs, bumps, brushstrokes, pixels etc.- can be made in all sorts of ways, with and infinite number of tools and techniques.

3. Mark Making

There are lots of unique patterns that can be made with different types of tools and materials. Below are some interesting examples of different ways you can use these tools and materials to create texture and pattern in a drawing.



4. Artists that make Marks

Vincent Van Gogh

Van Gogh used pattern to interpret texture in his works.

Helen Wells

Wells is an illustrator who uses pattern to create texture.

5. Links and Further Reading

Lesson:How Does Mark Making Affect Your Paintings
is.gd/markmaking

Article:Mark Making: Inspired by the Masters to Find Artistic Voice
is.gd/markmakingarticle

Revise:Mindmap Maker
is.gd/flashcardsmaker

Computing

1. Computing tools, Hazards and Safety

Stay safe in the lab by not drinking or eating, only going on the applications you have been asked to use.

Use the correct computing tool for the job:

Word - for writing documents and letters
Excel - for working with numbers
PowerPoint - presentations

2. Cyber Bullying and Staying Safe

Definition of Cyberbullying:
"willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices"

What to do if you are worried:

- Don't respond to and don't forward cyberbullying messages.
- Keep evidence of cyberbullying. .
- Block the person who is cyberbullying.
- Tell a trusted adult
- Use the report button

3. Passwords and Copyright

Computing Laws:

Copyright Law © – any work you produce is automatically protected from being used by others without your permission. Includes Images, writing, designs.

Creative Commons CC– allows you to give some permissions for others to use your work.

4. Excel Spreadsheets

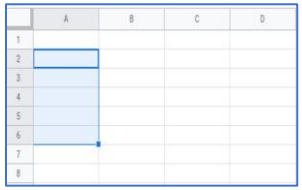
A Spreadsheet (Excel) can help store and organise data.
This makes it easier to understand trends and find out information.

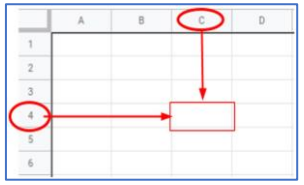
Cells are the squares in the table. They are referenced by using the Column letter then the Row number.

Rows are labeled 1,2,3

Column headers are labeled A, B, C...

A collection of cells is called a Range.





Spreadsheets have tools to quickly create different types of graphs, such as pie charts and bar charts

5. Working with Data

Use the SUM function to give a total	=SUM(B3:B23)
Want an Average?	=AVE(B3:B23)
Use the MIN and MAX function to find the larges or smallest value	=MAX(B3:B23) =MIN(B3:B23)
Use the CountA function to count the number of values	=COUNTA(B2:B15)

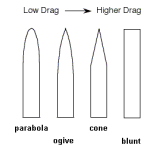
Design Technology - Rockets

1. Tier Three Vocabulary

Key Words	Definitions
Brief	A set of instructions given to a designer by a client saying what they want their product to be like.
Design	An idea of how to meet the needs of the brief.
Specification	A document with the details of a product's required characteristics, and all the processes, materials and other information needed to design the product.
Biomimicry	Biomimicry is where nature inspires a designer to design a product in a particular way. For example, adding wings.
Prototype	The first working model of a design used for testing, development and evaluation.
Propulsion	A force used to push an object in the direction that it needs to travel.
Component	A part of an object that has been designed or constructed (made).
Aerodynamics	The way an object moves through air.
Weight	The downward force on an object caused by gravity.
Refine	To make changes to a design in order to improve it.
Wing Shape	The shape and angle of a wing including its tips (ends).

2. Factors that affect distance rocket travels

Nose Shape	The shape of the nose affects the aerodynamics and air resistance of your rocket.
Wings & Body Shape	Wings and body shape affect the stability of our rocket and may stop it from spinning.
Mass	The greater the mass of your rocket, the greater the force needed to move it.
Air Resistance	If your rocket cannot move smoothly through the air, it will travel a shorter distance.
Force of Propulsion	The force of propulsion from the launcher system will be the same for your rocket so work on improving the other factors.

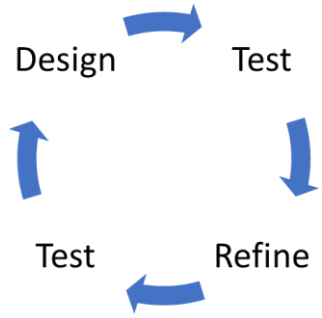


3. Prototyping

Designers are often challenged to produce brand new solutions to problems. As a result, they have to test their ideas by making and using smaller, cheaper prototypes from readily available materials. After testing has been successfully completed, full-scale production can start on the full-sized product.

If the prototype doesn't work or the client doesn't like it, it can be refined/ redesigned quickly and cheaply.

4. Design and Refine



5. Workshop Safety

- Leave your bags in the bag space so that people don't trip over them.
- Never run in a workshop.
- Don't play with the vice on the workbench as it can easily pinch your skin.
- Tell the teacher if there is sawdust/metal filings on your workbench – Don't blow them or brush away with your hand.
- Don't touch tools without permission from the teacher

6. Links and Further Reading

Designing:
https://www.bbc.co.uk/bitesize/guides/z6jkw6f/revision/15

Rockets:
https://www.youtube.com/watch?v=aTd2f59TSVo

Revise:Mindmap Maker
is.gd/mindmapmaker

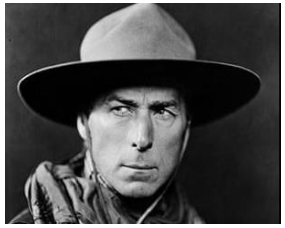
Drama - Silent Movies

1. Key Words	Definitions
Facial Expressions	The different ways our face moves and changes to show our emotions or covey messages without speaking.
Gestures	The movements of our body, such as hand or head movements, that we use to communicate or express something.
Gait	The way a person walks, including their stride and rhythm.
Still Image	A frozen moment captured in a picture or a scene where all the actors are motionless.
Thought Tracking	A technique used in theatre or literature to reveal a character's inner thoughts or feelings by directly stating them.
Short Monologue	A brief speech or performance by a single person that expresses their thoughts, emotions, or ideas.
Mime	The art of performing or storytelling using only body movements and facial expressions, without using words.
Freytag's Pyramid	A storytelling structure consisting five parts - exposition, rising action, climax, falling action, and resolution – that creates a dramatic arc in a narrative.
Stimulus	Something that triggers or provokes a response or reaction, often used in theatre.
Devise	The process of creating or inventing a piece of theatre.

2. Stock Characters

Comical Cops	The Heroine	The Villain	The Hero
These characters were often portrayed as bumbling and clumsy police officers who provided comic relief. They were known for their exaggerated gestures, slapstick humour, and humorous attempts at solving crimes or maintaining order.	The heroine was typically portrayed as an innocent woman in need of rescue or protection. She often found herself in dangerous situations. The heroine displays qualities of courage, kindness and resilience while facing challenges.	The villain is the main baddie in the story. They are frequently depicted as cunning, ruthless, and morally corrupt. They would oppose the hero and often conspire to harm the heroine or achieve their wicked goals. Villains use dramatic gestures!	The hero was the central character of the story, often portrayed as brave, noble, and morally upright. They would fight against injustice, protect the heroine, and ultimately triumph over the villain. The hero will be strong, courageous and just!



3. Freytag's Pyramid

Freytag's Pyramid was invented by the German novelist and playwright as a way of breaking down a story into five main distinct sections (highlighted in red below). This is an effective way of looking at how so many stories are told to an audience.

4. Silent Movies History

The silent movie era spanned approximately three decades, beginning in the 1890s and culminating in the late 1920s.

Actors used exaggerated body language and facial expressions, along with written dialogue on title cards, to tell stories without spoken words. They covered various genres and captivated audiences through visual storytelling. While sound replaced silent movies, they remain a significant part of film

5. Links and Further Reading

The Silent Era – Crash Course Film History
https://www.youtube.com/watch?v=ROOV9tucra0

Charlie Chaplin in 'The Lion's Cage.'
https://www.youtube.com/watch?v=79i84xYelZI

Charlie Chaplin in 'The Kid'
https://www.youtube.com/watch?v=qNseEVlaCl4

Food - Hygiene & Safety

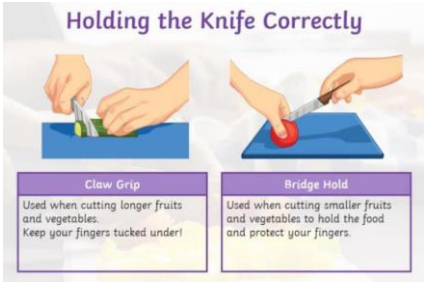
1. Key Terms	Description
Hygiene	Keeping things clean and germ-free, especially when it comes to food and cooking.
Safety	Taking precautions to make sure that no one gets hurt or sick while working with food or in the kitchen.
Bridge Hold	A way of holding a knife where you grip the handle with your hand and rest your index finger on the blade for better control.
Claw Grip	Holding food with your fingers curled like a claw to keep it stable and stop your fingers from getting cut while cutting or chopping.
Knife/Knives	Sharp tools with a blade used for cutting and slicing food.
Nutrients	Important stuff found in food that gives our bodies energy and helps us grow and stay healthy.
Balanced Diet	Eating different types of food in the right amounts to get all the nutrients our bodies need.
Protein	A nutrient found in foods like meat, fish, eggs, and beans that helps our bodies build and repair tissues.
Fat	A type of nutrient that gives us energy, keeps us warm, and helps our bodies absorb certain vitamins, found in foods like butter, oil, and meat.
Carbohydrates	A type of nutrient found in foods like bread, pasta, and potatoes that gives our bodies energy to do stuff.

2. Eatwell Guide

The Eatwell Guide is a great way of ensuring that you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

3. Knife Skills

There are different ways of cutting food depending on the type of food you are cutting. Below are two of the most common methods: the Claw Grip, and the Bridge Hold.



4. Safety in the Kitchen

Safety is extremely important when it comes to working in the kitchen. There are a few key things to keep in mind to ensure that everyone stays safe while cooking. First, always wash your hands with soap and water before handling any food to prevent the spread of germs. It's also essential to handle knives and other sharp objects with caution, using proper techniques and focusing on what you're doing. When using the stove or oven, be mindful of hot surfaces and use oven mitts or potholders to protect your hands. Additionally, make sure to turn off appliances and unplug them when you're finished using them. Lastly, be aware of potential hazards like spills, cords, and loose clothing that can cause accidents, and keep a clean and tidy workspace to avoid trips and falls.

5. Preparing the Food Handler

It is important to make sure that if you are about to handle food that you prepare yourself. You need to make sure that your hands are cleaned and surfaces where food will touch is clean too. It is important to make sure that the chopping boards you use to prepare meat is on a separate chopping board. Any food needs to be stored at the right temperature as well.

6. Links and Further Reading

Video:The Eatwell Guide

http://y2u.be/7MIE4G8ntss

Article:Safety in the Kitchen

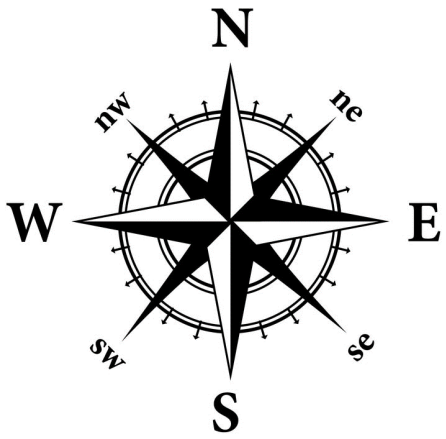
https://cpdonline.co.uk/knowledge-base/safeguarding/kitchen-safety-rules-for-children/

Revise:Mindmap Maker

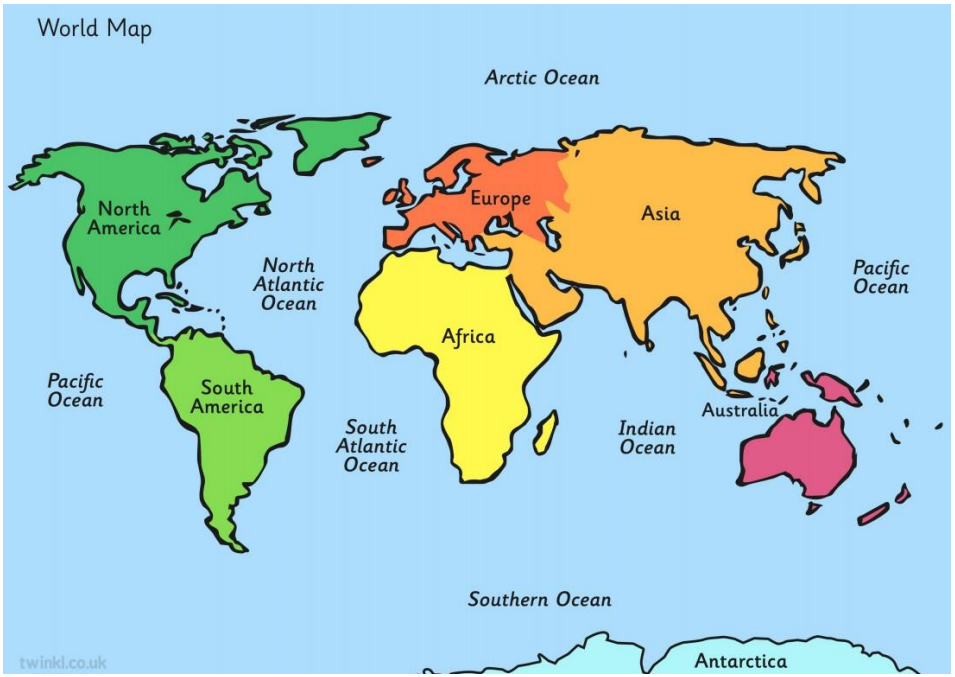
is.gd/mindmapmaker

Geography - Fantastic Places

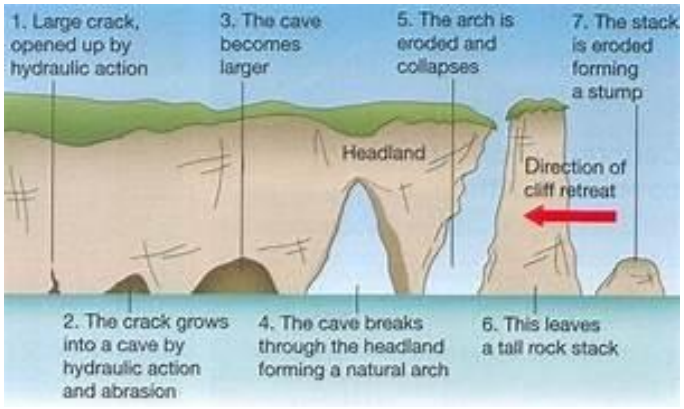
1. Compass Bearings



2. Continents & Ocean



3. Formation of a stack



4. Anuta Tribe

The island of Anuta is one of almost a thousand islands that make up the Melanesian nation of the Solomon Islands. Together, this group of islands cover a land mass of 28,400 square kilometres. Anuta island has been known as 'te fatu sekeseke', the slippery stone, due to it being such a small spot in the ocean - just half a mile in diameter and 70 miles from the next populated island, so hard to find and so easily 'slid' away from.

5. Mariana trench

Is the deepest part of the world's oceans. It is located in the western Pacific Ocean, to the east of the Mariana Islands. The deepest spot is located in the western Pacific, near Guam is called the Challenger Deep and at a depth of 11305m below sea level.

6. Kenya Fact File

Kenya is a country that is directly on the equator and is the eastern portion of Africa.

Climate

Kenya has a diverse climate. There are cooler coastal towns and mountain ranges and warmer, dry plains lands in the north.

Sports

Since Kenya is warm, they are involved in many outdoors sports like soccer, rugby, cricket and running.

Animals

The most famous Kenya animals are known as 'The Big 5': lions, leopards, elephants, buffalos and rhinos.

Kenya

Mount Kenya is the reason this country is named Kenya. It is the second highest peak in Africa at about 17,000 feet.

Geography - Urban

1. Site and Situation

Site is the land which a settlement is built on.

Situation is where a settlement is located in relation to other surroundings, mainly human, features

Some Settlement advantages

Bridging Point Where a river was shallow enough to be crossed or narrow enough to easily build a bridge

Dry Point In especially wet areas, settlements were built on slightly raised land to avoid flooding.

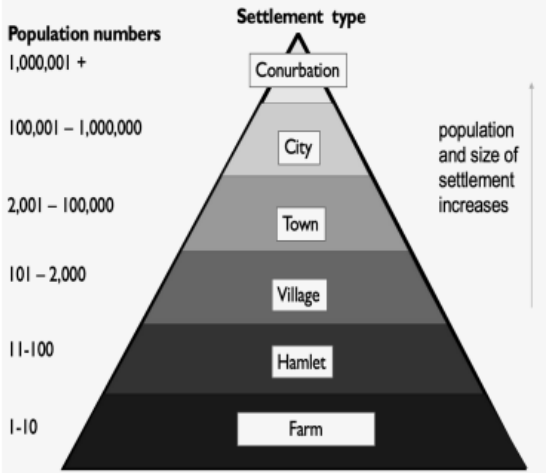
Nodal Point Where natural routes meet, such as several valleys or at a the confluence of two rivers

Defensive In order to protect themselves from attack, settlements were built within a river meander, with the river giving protection on three sides, e.g. Shrewsbury, or on a hill with good views, e.g. Edinburgh

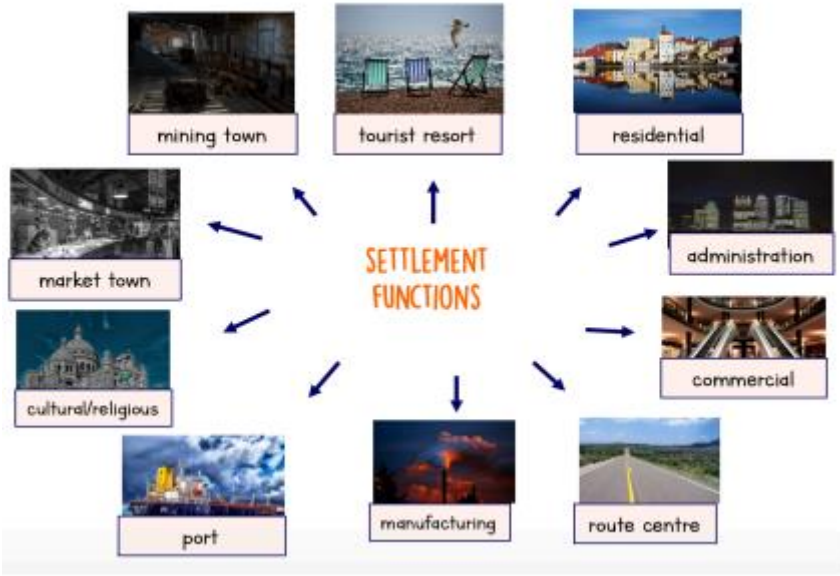
2. What is a settlement

A settlement is a place where people live

The settlement hierarchy is a way of ordering settlements from their largest to smallest

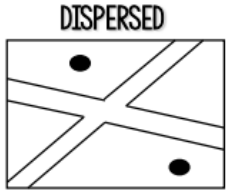


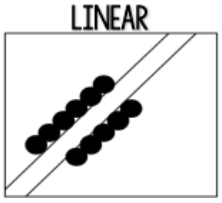
3. Functions of settlements

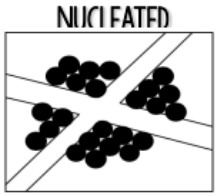


4. Settlement Patterns

Settlements can be different sizes, shapes and can have different functions. They also look different in different countries. This can be because of cultures, climate, wealth or history.





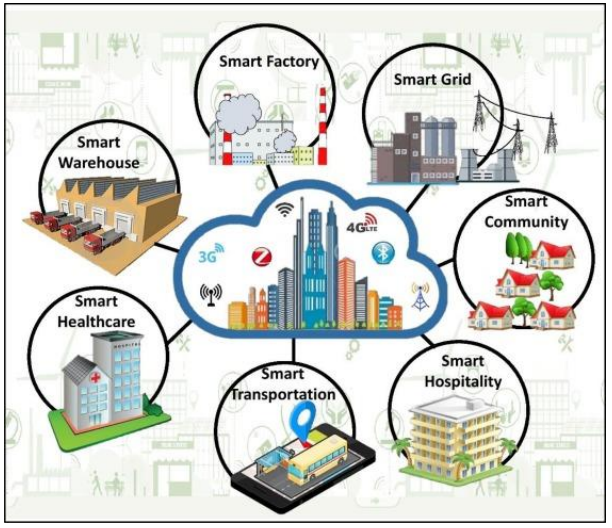


5. Favellas

Favella A heavily populated urban area. Conditions are usual poor; housing is substandard and the facilities are limited. They are built in unwanted areas of a city.

Shanty Town/Slum The same as a favella the name they used in Brazil, a slum is the word they use in India, and the term shanty town is used in other areas, such as Mexico.

6.



History – Enquiry Question: What makes a successful civilisation?

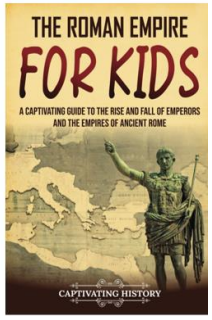
1. Key Terms	Description
Empire	A large group of states or countries under the control of a single power
Emperor	Person responsible for running an Empire
Society	The sum of people living together in a community
Royal Mint	The official maker of British coins
Agriculture	Farming
Hierarchy	A social order; greater power at the top, lesser power at the bottom
Academics	Those with a high level of education
Scholar	Someone who is a specialist in a particular subject (especially humanities)

2. Core Knowledge

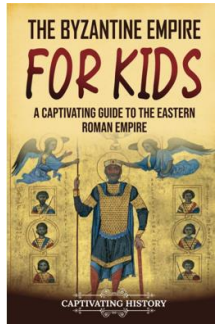
1. Which Empire was the most successful by 750AD?	The Islamic Empire: A lot of Maths came from them (Algebra/Numbers) First hospitals were there
2. Which Empire grew from that of the old Roman Empire?	The Byzantine Empire: Ruled by the Emperor Constantine. Capital City was Constantinople
3. Which Empire was renowned for its knowledge and wisdom?	The Islamic Empire: It had a House of Wisdom with thousands of books
4. Which Empire was extremely wealthy, even having its own coins?	The European Empire: It was wealthy because the King had strong central control over the land which was rich in farmland. The King had a royal mint.
5. Which Empire protected the rights of women?	The Byzantine Empire: There were laws that protected the property and rights of women- equal to men.
6. Which Empire used mostly wood for buildings over stone?	The European Empire: It was the Islamic and Byzantine Empires that built huge temples and palaces out of marble and stone.
7. Which Empire had a capital which was considered 'cosmopolitan'?	The Islamic Empire: This Capital considered cosmopolitan because of trade. People from as far as Spain and India came to the empire to trade.
8. Which Empire had a rigid hierarchy of power?	The European Empire: The order of power was, King- Earls- Thegns- Ceorls – Peasants.
9 Which Empire saw the biggest loss of academics and scholars?	The Byzantine Empire: This led to a decline in the culture as buildings were left in disrepair.
10 Which Empire had the Capital city with the largest population?	The Islamic Empire: The population was 1 million. This shows it had all the amenities a city would need and could sustain the number

Historical Skills we will develop in this enquiry:

- ✓ Our understanding of similarity and difference
- ✓ Our ability to use our knowledge to explain



Captivating History
The Roman Empire for Kids



Captivating History
The Byzantine Empire for Kids

These are suggestions of reading that might help boost your history knowledge for the current enquiry. Anything you can read linked to our enquiry questions is amazing and if you tell your teacher what you've been reading and make suggestions to us for books then we will be rewarding Merits!
Remember to check out the library; there are some fantastic history books in there too!

Emperor Constantine coin

The Round City, Baghdad

History – Enquiry Question: What was the impact of the Norman Conquest?

1. Key Terms	Description
Change	Things are no longer the same as they were
Continuity	Things remain (continue) to be the same as they were
Monarchy	System of having a King or Queen in charge of the country.
Angles	People from Germany who were early settlers to England (Angleland)
Jutes	Scandinavian settlers to England, probably from Jutland
Anglo-Saxon	English or Saxons of Britain were a cultural group who spoke Old English and lived in what is now England and southeastern Scotland in the early middle ages
Witan	Powerful group bit like parliament, they help to run the country and support the King
Heir	Next in line for the throne (to be King/Queen)
Feudal System	A system of society (hierarchy) where the King is at the top and the peasants and serfs are right at the bottom. Everyone has to swear an oath to the person above them in the system to keep them in their place

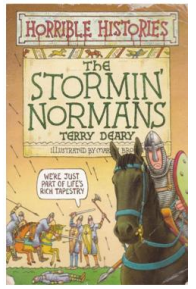
2. Core Knowledge

1 What was Anglo-Saxon culture like?	Anglo-Saxons often told stories at the fireside and loved to share riddles! They often went hunting, horse racing, playing musical instruments.
2 What was Anglo-Saxon daily life like?	Village life, people lived in small, thatched cottages which were usually one room.
3. What happened in England when Edward the Confessor died with no heir?	There was a succession crisis
4 Who was given the crown in January 1066 by the Witan?	Harold Godwinson
5 Who was defeated at the Battle of Hastings?	Harold Godwinson
6 Who crowned himself King of England on Christmas Day 1066?	William of Normandy (William the Conqueror)
7 What does the Feudal System mean?	Land use system
8 What was the first type of castle that William introduced to England after 1066?	Motte and Bailey
9 What methods of control did William use?	Creation of the Feudal System, use of Castles, Harrying of the North to stop any further rebellions, increasing use of the death penalty
10 What were some of the impacts of the Norman conquest?	French introduced into the English Language; landscape changed due to Castle creation

Historical Skills we will develop in this enquiry:

- ✓ Our understanding of similarity and difference
- ✓ Our ability to use our knowledge to explain

Horrible Histories -
Smashing Saxons
Terry Deary (Author)
Martin Brown (illustrator)



Horrible Histories -
The Stormin' Normans
Terry Deary (Author)
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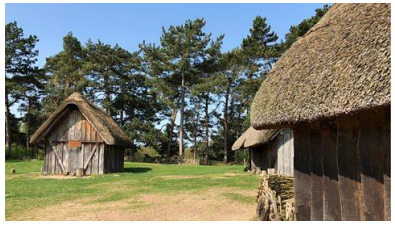
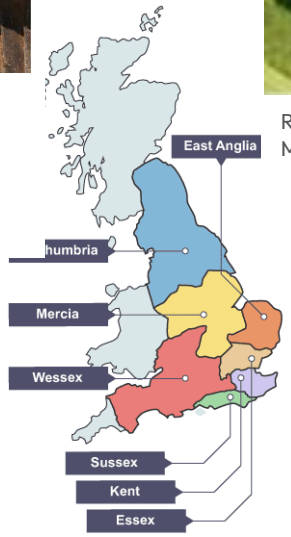


West Stow is a reconstruction of an Anglo-Saxon village and shows how people would have lived

Restormel Castle, once a Norman Motte and Bailey Castle

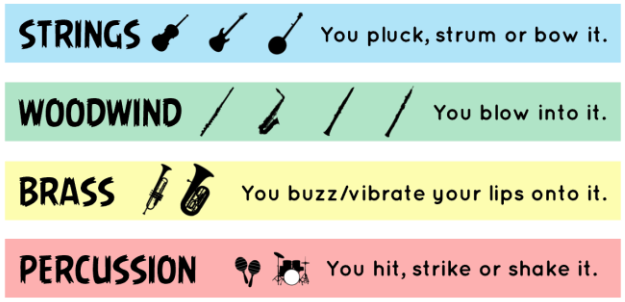


Music - It's Elementary

1. Key Words	Definitions
String Family	A family of instruments where you strum, pluck or bow the string to make a sound.
Woodwind Family	A family of instruments where you blow into it to make a sound.
Brass Family	A family of instruments where you buzz or vibrate your lips onto it to make a sound.
Percussion Family	A family of instruments where you hit, strike or shake it to make a sound.
Conductor	A person who directs a large group of musicians to keep them in time and tell them when to play.
Orchestra	A large group of musicians that contain strings, woodwind, brass and percussion.
Soundscape	A piece of music that uses a combination of sounds to create an immersive atmosphere
Acoustic	An acoustic instrument doesn't require electricity to make its sound.
Electric	An electric instrument uses electricity in order to amplify (make louder) its sound.
Digital	A digital instrument cannot make a sound at all unless it uses electricity.
Musical Elements	The musical elements are the building blocks of all music – they describe how music is played.

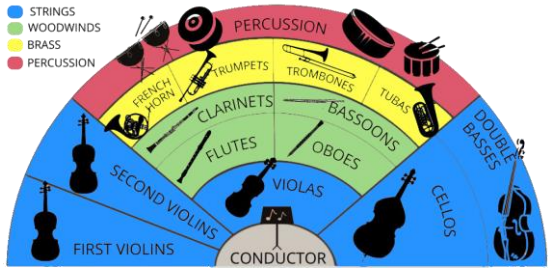
2.Instrument Families

Every instrument in the world falls into one of **FOUR FAMILIES**, and this is based on how each instrument **MAKES A SOUND**. This is **NOT** based on what they are made from.



3. Orchestra

An orchestra is a large group of musicians that all play at the same time. The percussion and the brass instruments are grouped at the back as they can usually play the loudest sounds, whereas the woodwind and the string instruments are at the front as they are typically quieter.



4. The Musical Elements

Timbre	The unique sound an instrument makes.	Rhythm	The different combinations of long and short sounds.
Dynamics	How loud or soft a sound is – also called the volume.	Attack & Decay	How a sound starts and how it stops.
Tempo	How fast or slow a sound is – also called the speed.	Silence	The gaps within music where there is no sound.
Duration	How long or short a sound is – also called the length.	Structure	How the music is built – how does it start, develop, and end.
Texture	How thick or thin a sound is – how many instrument at once.	Melody	The main tune of the music.

5. Soundscapes

A soundscape is where a composer uses sounds and music in order to evoke an image to a person's mind. Often, we associate different instruments and sounds to different environments and locations. For example, the church organ might make us think of a graveyard or something spooky, whereas a ukulele might make us think of a beach!

6. Links and Further Reading

Lesson:An Introduction to the Elements of Music

is.gd/musicalelements

Article:BBC Concert Orchestra Wows Young Audience

is.gd/orchestraarticle

Revise:Mindmap Maker

is.gd/mindmapmaker

Religious Studies

1. Key Words	Definitions
Covenant	A promise/agreement between two people or groups of people.
Abraham	The founder of monotheism. Jews believe that Abraham made a covenant with God to make his descendants God's chosen people.
Moses	Led the Israelites out of slavery in Egypt and received the Ten Commandments, marking a new covenant with God and the beginning of Judaism.
Torah	The Jewish holy book.
Synagogue	A Jewish place of worship.
Kosher	Things that are permitted within Jewish law.
Shabbat	The Sabbath (day of rest).This runs from Friday sunset until Saturday sunset.
Messiah	Chosen one/chosen saviour
Salvation	A means of being saved
Denominations	Different groups within a religion that have slightly different beliefs/practices
Protestant	Christian denominations in which authority is generally based on the Bible, rather than Church tradition/teaching. (e.g. Anglican, Methodist, Baptist).
Catholic	Christian denomination headed by the Pope
Orthodox	Christian denomination most commonly found in Eastern Europe

2. Covenants

God had promised Abraham that he would have many descendants, but he and his wife Sara were very old and had no children. Despite this, Sara gave birth to a son, Isaac. Some years later, God told Abraham that he must sacrifice Isaac. Abraham trusted God and so he prepared to do what he was asked. Just as he was about to kill his son, the Angel Gabriel appeared and told him to sacrifice an animal instead. Because of his loyalty, God made a covenant with Abraham, promising that he would take care of his descendants and that they would be his people. Abraham's descendants went on to become the people of Israel and later the Jewish people.

Many years later, the Israelites were slaves in Egypt. They were led to safety by Moses, who with God's help parted to Red Sea to create a safe escape route for them. Whilst they were wandering in the desert trying to return to their promised land, God spoke to Moses and gave him a set of rules (including the Ten Commandments). This formed the basis of a new covenant with the Jewish people and is the reason that Jews follow the 613 laws found in the Torah.

3. Kosher Food Laws

Many of the 613 laws given to Moses are about things that Jewish people should/shouldn't eat. Food that Jewish people are permitted to eat is called kosher.

The laws include:

- Jews should not eat pork
- Jews should not eat any animal that has a cloven (split) hoof
- Jews should not eat meat and dairy in the same meal
- Jews should not eat shellfish

4. Shabbat

Shabbat begins at sunset on a Friday and lasts until sunset on a Saturday. During this time, Jews are not permitted to do any work and should be more focussed on God. This comes from the Ten Commandments, which say 'Remember the Sabbath and keep it holy'.

Many Jews will avoid cooking, driving and using any electrical equipment on Shabbat as although it does not require work in modern times, these are things that would have required work in ancient times.

5. Differences between Orthodox and Reform Jews

Orthodox	Reform
No work at all during Shabbat.	It is personal choice whether things like driving are done on Shabbat.
All rabbis are male. Prayers can only be led by men.	Women can lead prayers and become rabbis.
Kosher food laws are observed very strictly.	Some people may choose not to eat kosher food, or to eat some foods that are not kosher.
God is always referred to as 'He'.	Female pronouns are sometimes used to refer to God.

SCAN ME

Religious Studies

1. Who was Jesus?

Jesus Christ was born in a town called Bethlehem over 2,000 years ago. He is also sometimes called Jesus of Nazareth. Christians believe that he is the son of God and was sent to save humans from sins they had committed. He was born to two ordinary Jewish people called Mary and Joseph.

Once he was an adult, Jesus travelled all over the country teaching people about God and encouraging people to respect and love one another. He also performed miracles, healed sick people and told amazing stories about God. Christians believe that he is the Messiah that was promised in the Old Testament.

When he travelled, Jesus chose 12 men to travel with him as his companions. Eventually, they were called his disciples.

Jesus was crucified by the Romans for calling himself the son of God. This meant he was nailed to a cross and left to die. This is why the cross is now a very important symbol of Christianity.

His body was buried in a tomb, which was found empty three days later. Christians believe this is because he was resurrected and went back up to heaven to join God. Christians now celebrate the day of Jesus' resurrection every year as Easter Sunday.

2. Why do Christians believe that Jesus was the Messiah?

Messiah means chosen one.

Christians believe that Jesus was chosen by God and sent to earth to save human beings from sin.

When Jesus was crucified, Christians believe that he took the blame for all of humankind's sin, making it possible for people to be forgiven by God and therefore have eternal life in heaven.

3. What is the Bible and who wrote it?

The Bible is the Christian holy book. The word "bible" comes from the Latin and Greek words for "book," (biblia and biblos, respectively).

But it is really a 'book of books.' The Bible is a collection of sixty-six different writings, from different authors, writing at various times.

The Bible consists of two main parts:

- The Old Testament
- The New Testament

The Old Testament tells the history of the Jewish people and the New Testament tells the story of Jesus and the early Church.

Around forty different authors contributed to the Bible, which was written over a period of 1600 years.

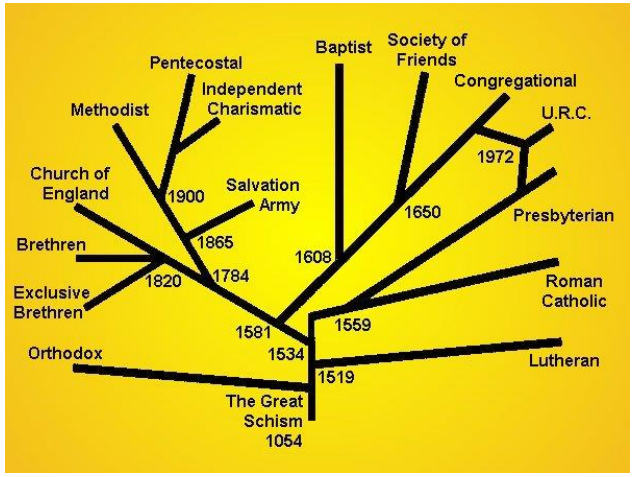
4. Why are there different groups of Christians?

Over time, differences in the core beliefs of the main denominations of Christianity have led to splits within the Church.

In 1054, the Orthodox Church in the East and the Roman Catholic Church in the West split.

In the 16th Century, people began to protest against corrupt practices within the Catholic Church in Europe and called for reform. These groups became known as Protestants. In England, Henry VIII's disagreement with the Pope over the ending of his marriage to Catherine of Aragon led to Henry making himself the head of the Church and eventually to the establishment of the Protestant Church of England.

Today there are a number of different Protestant Churches including Baptists, Methodists and Quakers.



Spanish

Numbers

1. uno
2. dos
3. tres
4. cuatro
5. cinco
6. seis
7. siete
8. ocho
i 9. nueve
10. diez
11. once
12. doce
13. trece
14. catorce
15. quince
16. dieciséis
17. diecisiete
18. dieciocho
19. diecinueve
20. veinte
21. veintiuno
22. veintidós
23. veintitrés
24. veinticuatro
25. veinticinco
26. veintiséis
27. veintisiete
28. veintiocho
29. veintinueve
30. treinta
31. treinta y uno

The alphabet

a = ah
b = beh
c = theh
d = deh
e = eh
f = effeh
g = heh
h = atcheh
i = ee
j = hota
k = kah
l = eleh
m = emeh
n = eneh
ñ = enyeh
o = o (hot)
p = peh
q = koo
r = erreh
s = esseh
t = teh
u = oo
v = oobeh
w = oobeh dobleh
x = eh kis
y = ee gri egah
z = theta

2. Classroom language

Español	Inglés
¿Cómo se dice…. En español/ inglés?	How do you say… in Spanish/ English?
¿Cómo se escribe…?	How do you spell…?
¿Cómo se pronuncia?	How do you pronounce (it)?
¿Me das …. ?	Can you give me…?
¿Puedes repetir?	Can you repeat that?
¿Puedo ir a mi clase de música?	Can I go to my music class?
(No) entiendo	I (don't) understand
Lo siento	I'm sorry
(Casi) he terminado	I have (almost) finished
por favor	please
gracias	thank you
Objetos en la clase	Classroom objects
un bolígrafo	a pen
una regla	a ruler
un móvil	a mobile phone
un cuaderno	an exercise book

3. Essential grammar

Español	Inglés
Tener	To have
tengo	I have
tienes	you have
tiene	he/ she/ it has
tenemos	we have
tenéis	you (pl) have
tienen	they have
¿tienes…?	do you have?
Ser	To be
soy	I am
eres	you are
es	he/she is
somos	we are
sois	you (pl) are
son	they are

Phonics - Sound Symbol Correspondence (SSCs)

These sounds never change!

a = cat e = egg i = feet o = hot u = woo

ca - ce - ci - co - cu
Stick your tongue out like the English /th/ for /ce/ and /ci/ and also z, /que/ = ke - /qui/ = key

ga - ge -gi - go - gu
Soft /g/ sound, except for /ge/ and /gi/ these are pronounced like a Spanish /j/ in the back of your throat. Soft /gue/ = get and /gui/ = geese

h = silent, ll = like an English y, v like an English b, ñ = ny, roll your rs if they come at the beginning of a word, or are a double rr

Spanish

1. Days and Dates

Hoy es...	Today is...
lunes	Monday
martes	Tuesday
miércoles	Wednesday
jueves	Thursday
viernes	Friday
sábado	Saturday
domingo	Sunday
enero	January
febrero	February
marzo	March
abril	April
mayo	May
junio	June
julio	July
agosto	August
septiembre	September
octubre	October
noviembre	November
diciembre	December

¿Cuándo es tu cumpleaños?
Mi cumpleaños es el .... de .....

2. Who I live with

En mi familia hay...	In my family there is...
(No) tengo...	(I (don't) have...
Vivo con...	I live with
mi	my
mis	my
padre	father
padrastro	stepfather
cuidador	carer
hermano mayor	older brother
hermano menor	younger brother
hermanastro	stepbrother
tío	uncle
abuelo	grandfather
primo	cousin
madre	mother
madrastra	stepmother
hermana mayor	older sister
hermana menor	younger sister
hermanastra	stepsister
tía	aunt
abuela	grandmother
prima	cousin
gemelo	twin
soy hijo único	I'm an only child (boy)

3. My animals

(No) tengo...	I (don't) have...
Me gustaría tener...	I would like to have
Tenía...	I used to have ...
un gato	a cat
un perro	a dog
un pájaro	a bird
un pez	a fish
un conejo	a rabbit

Personalisation

1.

2.

3.

Colores	**Colours**
marrón	brown
negro	black
blanco	white
gris	grey
rojo	red
rosa	rose
verde	green
azul	blue
naranja	orange
amarillo	yellow

1.

2.

4. Describing people (tener)

Tengo el pelo...	I have the hair...
Tiene el pelo...	He/she has the hair...
marrón	brown
rubio	blond
negro	black
gris	grey
pelirrojo	red
corto	short
largo	long

1.

2.

Tengo los ojos...	I have the eyes...
Tiene los ojos...	He/she has the eyes...
marrones	browns
grises	
verdes	
azules	

1.

(No) llevo gafas	I (don't) wear glasses
(No) lleva gafas	He/she (doesn't) wear glasses

¿Puedes describir las personas con quien vives?

Spanish

5. Describing people (ser)

¿Cómo eres?	What are you like?
¿Cómo es?	What is he/she like?
(No) soy...	I am (not)...
(No) es	he/ she is(n't)
muy	very
bastante	quite
un poco	a little
alto	tall
bajo	short
1.	
2.	
(No) soy...	I am (not)...
(No) es	He/she is (not)....
amable	kind
simpático	nice
amable	friendly
callado	quiet
divertido	fun
aburrido	boring
feliz	happy
1.	
2.	

6. A typical day

¿A qué hora...?	At what time ...?
a	at
a la una	at one o'clock
a las dos	at two o'clock
a las tres y media	at half past three
a las siete y cuarto	at quarter past four
a las ocho menos diez	at ten to eight
muy temprano	very early
por la mañana	in the morning
por la tarde	in the afternoon
al mediodía	at midday
normalmente	normally
de vez en cuando	from time to time
todos los días	every day
a menudo	often
a veces	sometimes
los domingos	on Sundays
los martes	on Tuesdays
los fines de semana	at the weekends

7. Key Grammar

Possessive adjectives	
mi/mis	my
tu/tus	your
su/sus	his/ her/ their
nuestro/a	our
nuestros/as	our + plural
su/ sus	their
Connectives	
cuando	when
y	and
o	or
también	also
pero	but
además	in addition
sin embargo	however
porque	because
dado que	given that
ya que	as (because)

The present tense Chop and Swap
Remove the 'ar/er/ir' from the end of the verb, put a new ending back

-ar verbs *(I speak = hablo)*	
I	o
you	as
he/ she	a
we	amos
you (pl)	áis
they	an
-er verbs *(I drink = bebo)*	
I	o
you	es
he/ she	e
we	emos
you (pl)	éis
they	en
-ir verbs *(I live = vivo)*	
I	o
you	es
he/ she	e
we	imos
you (pl)	ís
they	en

key -ar verbs		key -er verbs		key -ir verbs		Personalisation
hablar	to talk	aprender	to learn	vivir	to live	
bailar	to talk	leer	to read	abrir	to open	
ayudar	to help	beber	to eat	describir	to describe	
escuchar	to listen	comer	to drink	escribir	to write	
estudiar	to study					

Sports – Basketball

Key Knowledge, Skills and Tactics

1. Ball familiarisation - getting used to the ball, how it bounces/feels/travels on the hand / floor as you dribble and move the ball.
2. Basic Movements - being able to move in the basic manners such as running forwards towards the basket, backtracking when defending
3. Passing and Receiving - being able to pass a ball backwards and forwards with teammates using a variety of passing techniques whilst static and on the move.
4. Dribbling (controlled) - Being able to move with the ball, bouncing it as you move, keeping the ball under control and under your possession as you make progress up the court and await a passing or shooting option to open.
5. Shooting (set shot) - an attempted shot at the basket with a sturdy base, using your dominant hand to build power in your shot and your non-dominant as an accuracy assistant.

Key Vocabulary

Travelling
Warm up
Accurately
Pivot
Passing
Receiving
Control
Dribble
Set shot
Adjustment

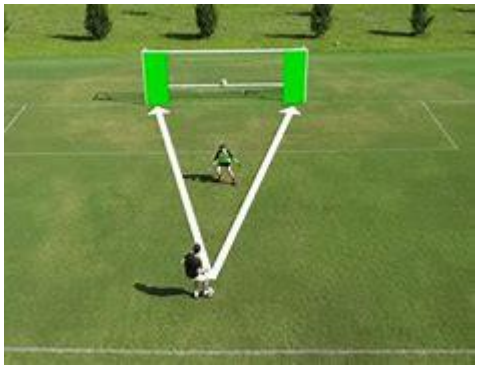
Sports – Football

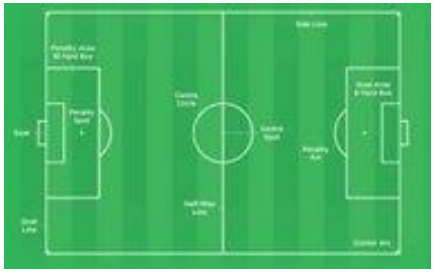
Key Knowledge, Skills and Tactics

1. Ball Familiarisation – getting used to the ball, how it rolls/bounces/flies/feels on the foot as you touch and kick the ball.
2. Passing, receiving and dribbling – being able to engage with these skills among a team or with a partner to move the ball around and in your team's possession to move up the pitch towards the goal.
3. Different part of the foot – being able to use the different parts of your foot to control/kick/change direction of the ball. Using your instep, sole, and laces to complete different skills.
4. Basic passing – being able to pass to a teammate along a shorter distance with accuracy and power relevant to the distance being passed.
5. Shooting – being able to strike the ball towards the goal in an attempt to score a goal.
6. Tackling – being able to make a tackle to dispossess the opponent and win the ball back.
7. Small-sided games – Being able to combine these skills and the teamwork elements to compete in small-sided games

Key Vocabulary

Accurately
Warm up
Dribble
Kick off
Throw in
Trap
Control
Outwit
Passing
Receiving
Heart rate





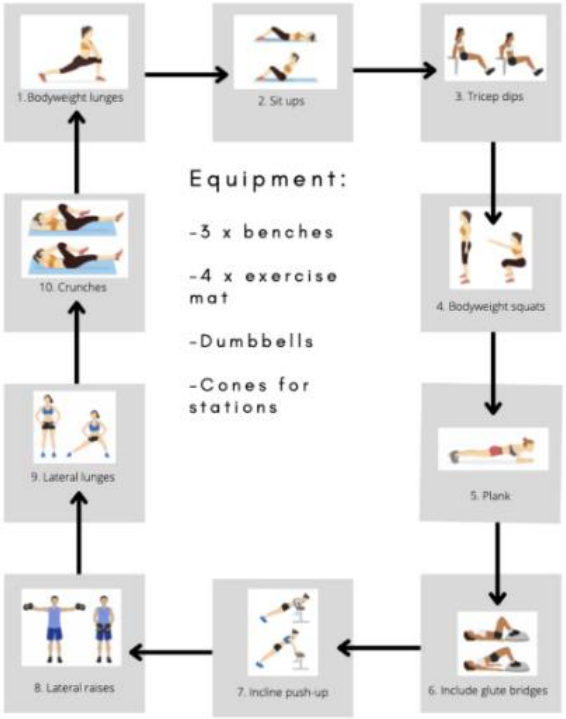
Sports – HRE

Key Knowledge, Skills and Tactics

1. Warmups/stretching - learning how and why we undertake a high-quality warm up before engaging in physical activity. Considering why we stretch our muscles before activity including the benefits of doing so.
2. Heart Rate – understanding what our heart rate is, and how we can measure. Recorded in BPM (beats per minute) and calculated by finding your pulse (either radial/carotid arteries found in the wrist/neck) and counting the number of beats in 15 seconds and then multiplying this number by 4.
3. Basic Drills – to begin combining exercise with heart rate changes. Completing some basic movements/exercises that we can then continue practicing the recording of heart rate and determine the impact of exercise.
4. Testing – completing some fitness tests targeting different components of fitness to determine where students sit in relation to normative data for their age and sex. This would help students identify any strengths and weaknesses that they may need to know before compiling any fitness training programmes.
5. Circuit Training – a method of training that incorporates a series of workstations each consisting of a different exercise/movement/activity that are completed in an often-cyclical sequence
6. Fatigue – understanding what fatigue is and the impact that this has on your body.
7. Short/long term effects on the body - considering the short term and long-term effects of exercise on the body and how we can design exercise programmes to target specific benefits/avoid consequences.

Key Vocabulary

Warm up
Testing
Stretching
Heart rate
Circuit training
Speed
Stamina
Flexibility
Fatigue



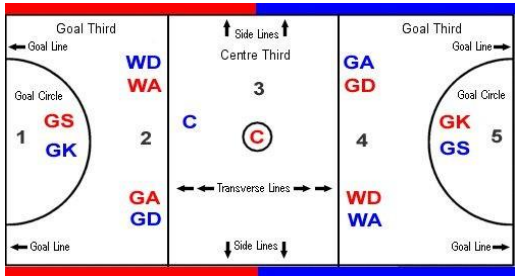
Sports – Netball

Key Knowledge, Skills and Tactics

1. Ball Familiarisation - For students to feel confident with the ball at their hands and understand the size and shape of the ball.
2. Passing and Receiving – To perform a chest pass, bounce pass and shoulder pass with accuracy within a game.
3. Footwork and Pivoting – To understand the rule of footwork when passing and moving within a game. To ensure when pivoting the correct foot is lifted to adhere to footwork rules.
4. Passing and Receiving On the Move - To be able to confidently move up and down the court, finding space to allow a successful pass to be received. Students to ensure skills are carried from footwork and pivoting to ensure passing on the move is successful.
5. Dodging - To understand the benefit of dodging as an attacking move. Student uses low stance to transfer bodyweight, drop the shoulder, draws defender one way and changes direction to allow player to move into space.
6. Shooting – Students to use correct shooting method. Extend the ankles, knees and elbows. Flex the wrists as the ball is released off the fingers. Straighten your legs by extending the knees at the same time as you release the ball. End the shot standing on tiptoes with your arms extended and fingers pointing towards the ring.
7. Games – For students to carry over all skills used and successfully apply to games.

Key Vocabulary

Comprehend
Accurately
Passing
Receiving
Pivot
Footwork
Dodging
Shooting



Sports – Rugby

Key Knowledge, Skills and Tactics

1. Ball familiarisation- develop awareness within rugby through handling drills.
2. Passing and retrieving- passing the ball backwards to be caught or passed onto teammates. Retrieving the ball from a variety of scenarios within rugby and reacting appropriately.
3. Attacking play- using footwork and communication to effectively outwit an opposition player.
4. Tackling- safe and effective tackling should be kept low, arms wrapped and head to one side of the opposition player.
5. Rucking- a method of securing the ball and controlling the breakdown.
6. Scrums (3-Man)- one method to restart the game following an infringement by the opposition following the prompts: crouch, bind, set to win the ball.

Key Vocabulary

Comprehend
Knock-on
Outwit
Tackle
Ruck
Defend
Attack
Warm up