

Year 8 Knowledge Organiser

Spring Term
2023-2024

Knowledge
is power 

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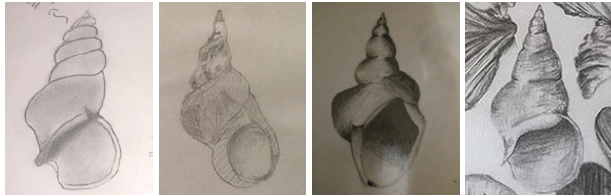
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The Formal Elements of Art

Line, Shape, Tone, Colour, Pattern, Texture and Form are the formal elements of art. Together, these help form a piece of artwork.

1. TONE

Gradient of shading from light to dark. Accurate use of tone helps artwork look realistic and shows form (3D). Using limited tones will make artwork look flat and dull.



No ← Accurate use of tone? → Yes

< TONAL SCALE >



2. COLOUR

Used to create different colours and to create a mood or atmosphere.



Primary colours = Red, yellow and blue

Secondary colours = Orange, purple, and green

Harmonious colours = colours next to each other

Complementary colours = colours opposite

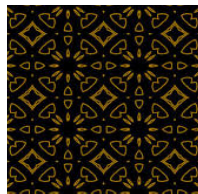
Warm colours = reds, yellows and oranges

Cool colours = purples, blues and greens

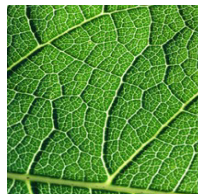
Monochrome = Using different tones of the same colour

3. PATTERN

Pattern is a design created by repeating lines, shapes, tones or colours. Patterns can be simple or complex and can be man-made, like a design on fabric, or natural, such as the markings on a leaf.



Man-made pattern



Natural pattern



4. LINE

Line is the path left by moving a drawing tool such as a pencil. A line can be horizontal, diagonal or curved. Line can be consistent in thickness or it can use thick and thin variation. The way you use line can represent texture, pattern and form.

5. TEXTURE

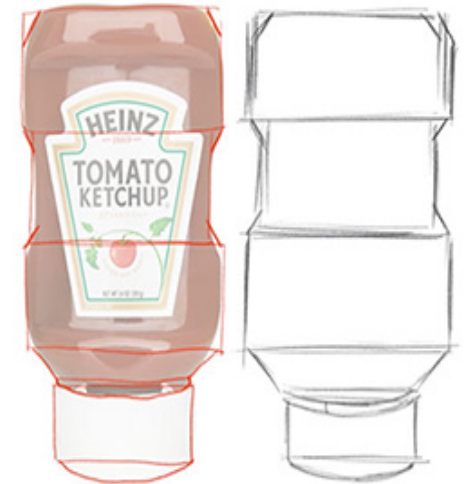
Giving you an insight into what the art feels like.



Texture makes your artwork look smooth, rough, furry, bumpy etc. We experience texture in two ways: optically (through sight) and physically (through touch).

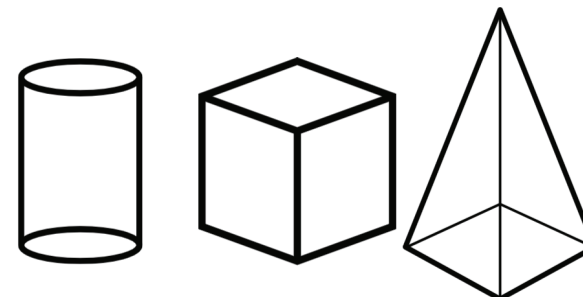
6. SHAPE

Shape is a 2D object. We can use shape to help construct artwork by breaking complex objects down into basic shapes before manipulating into the realistic shape. Starting with a structure ensures our outcomes are accurate.



7. FORM

Refers to 3D objects or making 2D work look 3D. You can do this by the way you break down the image into simple shapes.



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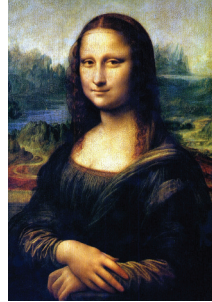
Understanding Art

When we look at a piece of art we judge it by how effectively the artist uses these art principles.



1. LANDSCAPE

Art showing the natural world, focusing on the ground and sky as well as natural forms such as trees, mountains, water etc. This is most commonly viewed in a landscape format.



2. PORTRAIT

A piece of art such as a photo, painting or drawing showing a person's face. The purpose of a portrait is to show the personality and mood of the person.

3. STILL LIFE

Art that focuses on still objects. Normally with a focus on flowers, household objects, or fruit.



4. FOREGROUND

The element within the artwork closest to you is the foreground.

5. BACKGROUND

The element within the artwork furthest from you is the background.



6. MIDDLE GROUND

The middle ground makes up the space in between the foreground and the background.

Top tip: when talking about the composition of a piece of art refer to the foreground, background and middle ground.



7. COMPOSITION

The way different elements within a piece of art are combined. This refers to the key subjects of the artwork and how they are arranged in relation to each other. For example, the composition on the left shows a shell in the foreground. It is placed in the centre with the bottom part of the shell coming off the page. Curved lines wrap around the shell and in the centre of the shell you can see a landscape of a beach / sea scene.

8. SCALE

The size of a piece of artwork or the size of objects within that piece of artwork. Drawing to scale means drawing at the actual size. If we scale down we are making it smaller or scaling up makes it bigger.



9. CONTRAST

The arrangement of opposite elements. Examples of contrast are light 'v' dark, smooth 'v' rough, large 'v' small. You can see on the image on the left that contrast has been created using colour. The majority of the image is in black and white. However, the apple is contrasting as it is in red.

10. ABSTRACT

Art that does not represent an accurate image of reality. Instead uses shapes, colours and forms to create a distorted outcome.



11. REALISTIC

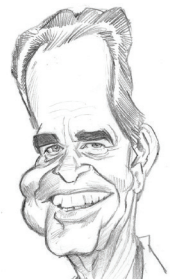
Art that represents an accurate image of reality. Essentially drawing what you see in front of you.

12. PROPORTION

The size of objects in relation to each other. How proportion is used will affect how realistic or abstract something looks.



Realistic



Stylised / Abstract

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Understanding Art

13. FOCAL POINT

Used to make a feature within a piece of art stand out. The viewer should naturally be drawn to the focal point. For example, in the image colour has been used to create a focal point, our eye is drawn to the white object first.



14. MOOD

Mood is the emotion / feeling you experience when looking at a piece of art. Types of emotion could be happiness, calm, sadness, or anger. Mood is often shown by the use of colour as we can associate colour with certain emotions / feelings. For example, blue could represent sadness or cold.

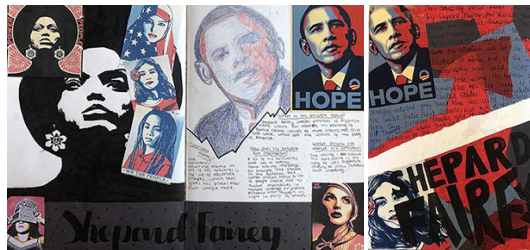


15. TYPOGRAPHY

Typography is how text is arranged within a piece of art. Typography can show aesthetics, emotions as well as communicating messages.

16. ARTIST RESEARCH

Looking at an artist's work and recording what the artwork is about. Including how the work inspires you as well as including your personal opinion about the artwork.



17. EXPRESSIVE

Showing thoughts / feelings within a piece of art rather than showing a realistic view. This can be conveyed using bold colours, mark making, or tone etc.



18. ART MOVEMENT

A range of titles that are given to artwork / artists which share the same themes, style, technique or timeframe. This can last a few months, years or decades. Art Movements are a way of grouping artists of a certain period or style together.

19. MEDIA / MEDIUM

The materials and tools used by an artist to create their artwork. For example, pen, acrylic paint, watercolour, collage, photography, pencil, oil pastel, charcoal, digital, posca pens, printing ink etc.



20. ANNOTATION

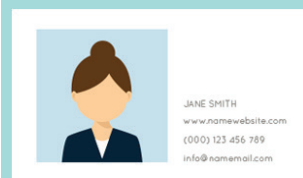
Written comments on your work that explain your thoughts and ideas. Annotation is important as it informs how you achieved a technique, records an idea you'd like to try or It can be used to communicate information to the examiner that helps explain your thoughts and ideas.

21. OBSERVATIONAL STUDY

To draw or paint as accurately as possible. The subject may be a still life, portrait or landscape and the image must be created from real life rather than a photograph or the artist's imagination.



BEFORE





AFTER




22. HIERARCHY

Shows the importance of elements within a piece of art. Hierarchy influences the order in which the audience views the artwork. Order can significantly impact the message people take away from the artwork.


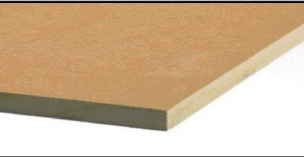

COMPUTER SCIENCE: Year 8			TOPIC: NETWORKS AND DATA REPRESENTATION		
TYPES OF NETWORKS			DATA REPRESENTATION DEFINITIONS		
1	What is a network?	A set of connected computers and other devices for the purpose of sharing resources	15	What is binary?	A number system that contains two symbols, 0 and 1. Also known as base 2
2	What is a LAN?	A Local Area Network – covers a small geographical area. The infrastructure is often owned by the individual/organisation	16	What is denary?	The number system most commonly used by people. It contains 10 unique digits 0 to 9. Also known as decimal or base 10.
3	What is a WAN?	A Wide Area Network – covers a large geographical area. WANs are made up of LANs joined together. The infrastructure is often owned by a Telecoms or other company rather than an individual	17	What is hexadecimal?	A number system that contains sixteen symbols, 0 to 9 and A to F. Also known as base 16.
4	What is a topology?	The layout of a network and the arrangements of components	18	What is a character set?	A mapping of keyboard characters to numbers used to represent those keyboard characters in a computer system
5	What is a peripheral?	Hardware that can be plugged into a computer e.g. a printer	19	What is ASCII?	American Standard Code for Information Interchange – A 7-bit character set for representing English keyboard characters
6	What is server?	'Supercomputer' – provides data to other computers	UNITS OF DATA REPRESENTATION		
7	What is a client?	Device on a network e.g. a computer	20	What is a bit pattern?	Any sequence of more than one bit
REQUIRED HARDWARE			21	What is a bit?	A single symbol in a binary number. Either 1 or 0
8	NIC	The Network Interface Card – is in each computer/device and allows connection to other devices on the network.	22	What is a nibble?	A bit pattern which is four bits long
9	Transmission media	What connects the computer/devices to each other. Copper cables, fibre optic cable or wireless signals	23	What is a byte?	A bit pattern which is eight bits long
10	Switch	A device on the network that receives signals from a computer/device and transmits the signal to its intended recipient	24	What is a Kilobyte?	1000 bytes
11	Router	A device used to connect different networks together	25	What is a Megabyte?	1000 Kilobytes
12	WAP	A Wireless Access Point – is a device that receives and transmits wireless signals on the network.	26	What is a Gigabyte?	1000 Megabytes
STAR AND MESH TOPOLOGIES			27	What is a Terabyte?	1000 Gigabytes
13	Star	 All devices are connected to a central switch or server that controls the network	28	What is a Petabyte?	1000 Terabytes
14	Mesh	 Where every device is connected to every other device	BINARY ADDITION		
			29	What is 1 + 0?	1 + 0 = 1
			30	What is 1 + 1?	1 + 1 = 0 carry 1

A: NATURAL Timber:		
<u>Deciduous Trees:</u>	<u>Coniferous Trees:</u>	
With Broad leaves that fall in Autumn.	With needles and are evergreen.	
Grows fully for ¼ of the year	Grows all year round. Slower in the Winter	
The growth rings are closer together	Trees grow tall and straight which makes it easier for the manufacturer to cut long straight planks of wood.	
They produce timber known as Hardwood .	They produce timber known as Softwood .	
Expensive as they take longer to mature.	Cheaper, widely available in DIY stores	






B:	HARDWOOD	PROPERTY	USE	C:	SOFTWOOD	PROPERTY	USE
1.	Beech	Does not splinter	Tool handles. Children toys.	1	Scots Pine	Knotty. Straight grained. Cheap.	DIY. Furniture. Door frames.
2.	Oak	Strong & Hard	Flooring, furniture, veneers.	2.	Spruce	Small hard knots. Not durable.	Indoor white furniture. Bedroom kitchen.
3.	Mahogany	Rare from S. Americas, Asia. Hard. Expensive	Furniture. Veneers.	3.	Yellow Cedar	Light weight, stiff stable.	Furniture, boat building, veneers, model making.
4.	Teak	Durable. Oily.	Outdoor furniture	4.	European Redwood	Strong, durable when preserved. Cheap.	General use, shelves, cupboards, roofs.
5.	Balsa	Light weight	Model making				

D:	IMAGE	NAME	ORIGIN	PROPERTIES	USE
1		Veneer: Is NOT a manufactured board.	1-10 mm thick strips of wood sliced/peeled in a roll from Natural Wood., soft or hard wood	Variable depending on the source wood type.	Added to manufactured boards to look expensive and aesthetically pleasing

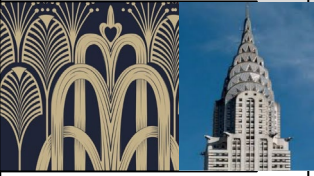



D: MANUFACTURED BOARDS:

	IMAGE	NAME	ORIGIN	PROPERTIES	USE
1.		Plywood	Veneer or Plys strips from many types of Natural timber . Layers are glued together at 90° angles.	Strong. Relatively cheap. Varying thickness. 3mm -24mm Large boards. 2400x1200mm	Construction, flooring, walls. Usually hidden/covered.
2.		MDF: Medium density Fibreboard	Made from powdered waste wood (80%) plus resin (glue). Dust when cut considered health risk.	Cheap. Varying thickness. Large boards. smooth surface. Easy to cut. Swells when wet	Furniture doors. Radiator covers. Wardrobes etc. Can be veneered or covered in Melamine to protect it.
3.		Chipboard	Made from waste wood from Plywood manufacture. Uses recycled wood.Plus resin (glue)	Cheap. Varying thickness. Large boards. Swells when wet.	Flatpack furniture. Kitchens. Coated with Melamine for waterproof and hardness .

E: TOOLS:

	IMAGE	NAME	USE:
1		Coping saw	Cutting thin wood and acrylic. Cutting intricate shapes.
2		Sand paper and block	Removing edges, shaping, preparation for painting.
3		Wood Plane	Stripping layers of wood away. Shaping and smoothing.
4		Files and rasps	Rasps: Removing excess wood Files: Smoothing and shaping.
5		Scroll saw	Fixed blade for cutting intricate shapes

F:DESIGN MOVEMENTS AND DESIGNERS:

Name	Date	IMAGE	MAIN FEATURES	DESIGNERS
ART DECO	1910-1939		Architectural Symmetry Metallic colours	RAYMOND TEMPLER: Jeweler WILLIAM VAN ALLEN: The Chrysler Building
POP ART	1947-1960		Graphics Fun Colour	ANDY WARHOL: Graphics, films ROY LICHENSTEIN: graphic-comic style art
MEMPH IS	1980-1986		Bright colours Shapes Fun Challenging the 'normal'	ETTORE SOTSASS: Furniture, fittings MICHEAL GRAVES: Furniture, Household goods, buildings
BAUHA US	1919-1933		Function over form Clean lines Little decoration	MARCEL BREUER: Furniture ANNIE ALBERS: Textiles, rugs

KEY WORDS		
1	Structure	Linear structure.
2	Genre	Horror, tragedy, fantasy
3	Body sculpting	Students work in pairs or groups with one student acting as a sculptor and their partner(s) acting as clay. The sculptor gently shapes the clay into a statue that reflects some aspect of the concept under discussion.
4	Ensemble	A group of actors who are on stage at all times during a performance and play an integral part in the show as a whole.
5	Representation	Through physical theatre techniques (still images and ensemble work) we can use our physicality to represent emotions and feelings to make a scene more effective. These representations do not have to be literal, but they can be more ambiguous and interesting.
6	Pace	Fast or slow
7	Gesture	A movement of part of the body, especially a hand or the head, to express an idea or meaning

KEY WORDS		
8	Gait	Walk
9	Posture	The position in which someone holds their body
10	Facial expression	Tells the audience the character's feelings and what they are thinking
11	Pause	An actor stops talking for a moment/beat during a line.
12	Pitch	high or low
13	Tone	reveals an emotion i.e. angry, scared
14	Volume -	loud or quiet
15	Accent -	shows where someone is from or gives clues as to their upbringing
16	Social/ cultural/ Historical context	The era just before Frankenstein was written. A period of history which involved the development of new ideas and scientific discovery. During this time people began questioning God. It also led to the Industrial Revolution. The play is adapted from a Romantic text – it features discussions over the beauty of nature. The Romantics believed in the power of God and the beauty of nature.

KEY WORDS		
17	Symbolism	Items and actions on stage that represents a message.
18	Backdrop	The background image, behind the set, on the back wall of the stage. This can set the imaginary location for the scene.
19	Symbols	The set design can also communicate abstract concepts, such as themes and symbols. As an example, a design could include a large, dead tree to suggest the themes of death in the play.
20	Stage furniture	Items of set that can be moved on stage but are not props .

Plot
<p>Frankenstein has been conducting experiments to 'build' a human out of dead body parts. He believes he can bring it back to life using electricity generated by the coming Storm. Clerval is horrified when he realises what Frankenstein is about to do, but is unable to stop him. Frankenstein finally succeeds in bringing the Monster to life. Unfortunately, he is repulsed by how ugly the Monster is, and rejects the Monster.</p> <p>When the Monster sees his image in the mirror, he is frightened by what he sees, and screams out. Sadly, the Monster loses his innocent faith in humanity and leaves the scene seeking revenge against everyone. The Monster tells Frankenstein that he feels betrayed, and asks Frankenstein to make him a companion – a bride to keep him company.</p> <p>Two years later, Frankenstein made a bride for the Monster. He has attached the wires to bring her to life, and is waiting for the storm to provide electricity. When Clerval discovers that Frankenstein is going to build another monster, he decides to detach the wires. The Monster arrives on the scene and fights with Clerval. The Monster is furious for ruining the experiment, and kills Clerval. Just as the Monster is about to bring his bride to life, Frankenstein pulls out a handful of wires and she falls back lifeless.</p> <p>The play ends with Captain Walton stating the Frankenstein died at the end of telling his story.</p>

	Mask Rules			Skills needed for Trestle Performance
1	Do not swing the masks on the elastic	7	Clocking the audience:	When performing with a trestle mask on you need to make sure you look at a different area of the audience so that they feel included throughout your performance
2	Face away from the audience when taking them on and off	8	Facing forwards:	You must face forwards at all times whilst performing wearing a mask otherwise the audience will see the side of the mask which breaks the illusion
3	Always face the audience clocking the audience in performance	9	Body Language:	The position of your body to show how you are feeling
4	Exaggerate your body language	10	Hand Gestures:	The use of hands to show personality
5	Do not talk with the mask on	11	Movement:	How you move your body to communicate characterisation
6	Do not put the masks on the floor face down	12	Costume and props:	use of these really help with characterisation when using Trestle Masks

Key Vocabulary

1	Reckless	Unconcerned about the consequences of actions.	11	Remorseful	Feeling sad or guilty.
2	Ambitious	A strong desire to achieve.	12	Despondent	Unhappy and with no hope or enthusiasm.
3	Immoral	Not conforming to accepted standards.	13	Vengeful	Expressing a strong wish to punish someone who has harmed you or your family or friends.
4	Arrogant	Unpleasantly proud and behaving as if you are more important than, or know more than other people.	14	Prologue	An introduction before the main action.
5	Naive	Having or showing lack of experience, judgement or information.	15	Monologue	A long speech by one actor in a play or film, or as part of a theatrical or broadcast programme.
6	Monstrous	Frightful, hideous and shocking.	16	Epilogue	A section or speech at the end of a book or play that serves as a comment on or a conclusion to what has happened.
7	Irrational	Not using a clear mindset or reason to think logical.	17	Tone	This suggests the mood and intention towards the listener – e.g. happy or aggressive are ways to describe the mood of someone's voice.
8	Innocence	Not having much experience of life and not knowing about the things that happen in life.	18	Solitude	The situation of being alone without other people.
9	Desperation	The feeling that you have when you are in such a bad situation that you are willing to take risks in order to change it.	19	Integrate	To mix with and join society or a group of people, often changing to suit their way of life, habits and customs.
10	Animalistic	If you compare a person or their behaviour to an animal.	20	Genre	A style or category of art, music, or literature.

	Acts	Plot
21	Prologue	The play opens with Captain Walton. He shares a memory: he recalls an expedition to the Arctic Circle. During this expedition, his ship and crew were halted because of thick ice. Walton describes how his men began to hear strange noises. Walton then recalls seeing a strange creature. This strange creature was being followed by a man – they pulled this man aboard. His name was Victor Frankenstein. Frankenstein is cared for by the crew, and he shares his story.
22	Act 1	Victor Frankenstein is busy working in his laboratory in Ingolstadt. He is joined by his friend Clerval. Frankenstein explains his work around animals and electricity to Clerval. Clerval is astonished by Frankenstein's findings and how electricity can affect body parts. Elizabeth arrives. She is concerned that Frankenstein has not been in contact with the family for months. His father is very ill. It is clear that Frankenstein has become obsessed with his work and attempts to create life. Frankenstein wishes to be left alone. However, Clerval comes back into the room – he is shocked by the Monster as he now comes to life. The Monster runs away.
23	Act 2	Agathe and Felix live a simple life in a cottage in the forest. Felix has to leave Agathe – he is concerned for her safety. Agathe is blind and they have heard of recent trouble in the nearby town. Felix leaves. The Monster has been collecting wood for the family. Agathe is unaware of the Monster's presence. However, the Monster picks up a mirror and is shocked to see his own appearance for the first time. Agathe, blind, talks to the Monster. She touches his face and believes that he has been disfigured. They share a conversation. Suddenly, Felix enters. He believes the Monster is attacking Agathe – he seizes his musket. Agathe defends the Monster, but Felix believes him to be evil. Consequently, the Monster leaves, exclaiming his need for revenge.
24	Act 3	Frankenstein is in his study in Geneva. Elizabeth enters. William is missing. A priest arrives, carrying William's body. The Monster arrives. He has strangled William in an act of revenge. The Monster explains that he feels betrayed and is lonely. The Monster informs Frankenstein that he has two years to create him a wife.

25	Act 4	Elizabeth and Clerval are concerned about Frankenstein's latest activities. They enter his laboratory, and here they discover that Frankenstein has created another life. Clerval explains to Elizabeth how Frankenstein created the Monster. Clerval vows to destroy the new creation, with Elizabeth exiting. The Monster arrives. Clerval tries to prevent the Monster's Bride from awaking, but the Monster kills him before he is able to. Elizabeth re-enters with servants. They try to shoot the Monster. Desperately, the Monster tries to awaken his bride, but Frankenstein prevents this from happening. In response, the Monster strangles Elizabeth. Frankenstein vows to <u>destroy the Monster</u> , following him to the ends of the earth.
26	Epilogue	Captain Walton returns to close the play. He informs us that not long after telling his story, Frankenstein dies. Walton witnesses the Monster enter the cabin. The Monster explains to Walton that he will head north, and that he hopes that his soul will not live on.

	Characters	Description
27	Victor Frankenstein	Young and idealistic. Victor is ambitious – he is a dreamer, full of strange ideas, who believes that his work will improve the world.
28	The Monster	Made of corpses, and he looks hideous. He is extremely strong and agile. Although the Monster commits violent acts, he is deeply misunderstood.
29	Captain Walton	An Arctic explorer. A man who has been in many dangerous places and survived, but coming across Frankenstein has shaken him.
30	Henry Clerval	The same age as Frankenstein. He is impressed by Victor's achievements, but is anxious about their effects
31	Elizabeth	A year or two younger than Frankenstein; she is devoted to his father and to William. She loves Frankenstein without understanding him.
32	Felix and Agatha	Political refugees. Agathe is blind. Despite being vulnerable, Agathe is kind and understanding. Felix is young, quick-tempered and fiery.

	Context	Explanation
33	Mary Shelley and the creation of the novel	Mary Shelley and the creation of the novel Shelley was married to a famous Romantic poet – Percy Bysshe Shelley. In 1816, the couple spent a summer with Lord Byron and other famous figures, where they wrote ghost stories. This is where Shelley developed the idea for Frankenstein.
34	Science and Religion	Parts of Europe were far more religious than the present day. Events that could not be explained were viewed as an act of God or from a supernatural force. However, science was beginning to break down these barriers. Consequently, some people thought that this, and science, was dangerous. Scientists, such as Luigi Galvani, were pushing boundaries. Galvani found that frogs' legs twitched as if alive when struck by electricity

	Themes	Explanation
35	Religion	Frankenstein goes against God by creating the monster – the novel warns against 'playing God'.
36	Prejudice	The monster suffers from prejudice from Frankenstein and all others he meets. He is judged to be evil before people have even spoken to him
37	Innocence	The monster is initially innocent until he learns destruction through humans.
38	Ambition	Frankenstein's ambition to create the monster – is ambition always good?
39	Loneliness	Many of the characters are lonely some by choice and some not.
40	Revenge	Both Frankenstein and the monster feel wronged and seek revenge even at the cost of their own safety, health and happiness.

Spelling Test Words – You will need to know how to spell all the words listed below.

1. Props: An object which is used on stage as part of the play.	31. Frankenstein: Ambitious scientist who created the Monster.
2. Stage Direction: An instruction telling an actor how to perform.	32. Grotesque: comically or repulsively ugly.
3. Lighting: How light is used on stage for effect.	33. Narrator: a person who recounts the events of a novel or play.
4. Dialogue: Speech spoken by characters.	34. Gothic: something that is characterised by mystery, horror or gloom.
5. Sound Effects: How sound is used on stage for effect.	35. Monstrous: inhumanly evil or wrong.
6. Curtain: A large piece of cloth, used to open and close the stage.	36. Predictions: Explaining what may happen next.
7. Stage: A raised floor where plays are performed.	37. Hideous: Extremely ugly.
8. Playwright: Someone who writes plays.	38. Epitomise: Be a perfect example of.
9. Actor: A person who performs as a character on stage.	39. Benevolent: Well-meaning and kind.
10. Actress: A person who performs as a character on stage.	40. Beginning: At the start.
11. Blackout: All stage lights are turned off to show the end of a scene	41. Animalistic: If you describe a person or their behaviour to an animal
12. Dramatic Irony: When the audience knows something that the characters do not.	42. Distraught: Very worried and upset.
13. Fourth Wall: The space between the actors and the audience.	43. Destruction: The action or process of causing so much damage to something that it no longer exists or cannot be repaired.
14. Scenes: This is what a play is broken up into	44. Expedition: A journey undertaken by a group of people with a particular purpose.
15. Shelley: Author of the play.	45. Fierce: Having or displaying an intense or ferocious aggressiveness
16. Genre: A style or category of art, music, or literature.	46. Heartfelt: A strong and deep feeling.
17. Protagonist: The main character.	47. Murder: Premeditated killing of one human being by another.
18. Crouching: Bent at the knees to avoid being seen.	48. Strangulation: Stopping the blood flow to a part of the body.
19. Dramatically: A way that relates to drama or the performance of drama.	49. Despondent: Unhappy and with no hope or enthusiasm.
20. Theme: An idea that recurs in or pervades a work of art or literature .	50. Sickening: Causing a feeling of disgust and nausea.
21. Ambition: A strong desire to do or achieve something.	51. Disgusting: Arousing revulsion.
22. Alienation: A state or experience of being segregated or alone.	52. Sympathy: Feeling of pity and sorrow for someone else's misfortune.
23. Revenge: Inflict hurt or harm on someone for an injury or wrong doing to oneself.	53. Creature: An animal
24. Isolation: Far away from people or places.	54. Athletically: Someone who is healthy and strong.
25. Prejudice: Preconceived opinion that is not based on reason or actual experience.	55. Ravenous: Extremely hungry.
26. Fallibility: the tendency to make mistakes or be wrong.	56. Self-Fulfilling Prophecy: Is a prediction that comes true at least in part as a result of a person's belief or expectation
27. Prologue: An introduction before the main action.	57. Demonstrating: Give an explanation on how something is presented.
28. Epilogue: A section or speech at the end of a book or play that serves as a comment on or a conclusion to what has happened.	58. Morality: Principles concerning the distinction between right and wrong or good and bad.
29. Monologue: A long speech by one actor in a play or film, or as part of a theatrical or broadcast programme.	59. Repulsion: A feeling of intense distaste or disgust.
30. Tension: Refers to a state of mental or emotional strain that arises from a conflict or uncertainty.	60. Innocent: Not guilty of a crime.

KEY VOCABULARY					
1	Performance	.how the film is acted.	6	Dystopian	imagining a society where there is a great injustice or suffering taking place.
2	Music and Sound Effects	how the music works with or against the scene, how sound effects are used to make it realistic.	7	Review:	A review is an assessment of a book, film or TV show that looks at it's strengths and weaknesses.
3	Cinematography:	Whether the camera work is good or not, including close up shots (zoomed in) and long shots (zoomed out.)	8	Target audience:	A particular group of people which something is aimed at.
4	Special Effects	an illusion created for film using props, camera work, green-screens and computer graphics.	9	Summarise:	To give a brief outline of the main events of something.
5	Tone:	the character, attitude or mood of a piece of writing.			

	The parts of a film review	Definition	Example
10	Introduction	<ul style="list-style-type: none"> what the film is about; who the director is) 	Free will is the purpose of the game in The Golden Compass, an expensive exercise in orienteering where witches and polar bears point the way to enlightenment . You'll have to look very hard to find the original intent of Philip Pullman's atheistic novel, but this isn't the overriding problem. It's that writer/director Chris Weitz fails to show its purpose.
11	Part 2	<ul style="list-style-type: none"> information about the plot and actors) 	Thank goodness for the star presence of Dakota Blue Richards. She is thoroughly engaging as Lyra, a young girl singled out as 'the one' to save all others from some awful yet indeterminate fate. It all sounds a bit messianic really, except that organised religion is seen as a force for evil. Nicole Kidman plays the government worker kidnapping children to save them from their 'daemons.' Among the abductees is Lyra's best friend and so she begins the voyage north.
12	Part 3	<ul style="list-style-type: none"> (strengths and weaknesses of particular features) 	Daniel Craig, who is Lyra's scientifically minded uncle, does not add much to the story, except hint at potential sequels . The main attraction of the film is the simple story of friendship and Lyra's journey of self-discovery. However, the curious characters she meets along the way helps to lighten Pullman's otherwise dark material. Sam Elliot is highly amusing as a cowboy aeronaut and the spectacle of Lyra being carried across the snowy lands on the back of a polar bear will appeal to the child in everyone. Towards the end, some impressive battle scenes up the excitement. Disappointingly, though, all this magic and mystery fails to lead to any great understandings. There are just too many questions raised and not enough answered. Approach this as not a lesson in the facts of life but a bit of childish escapism .
13	Concluding paragraph	when the film is out	The Golden Compass is out in the UK on 5 th December 2007.

Weekly Spelling Test Words – You will need to know how to spell all the words listed below.

1	Review: a formal assessment of something	31	Pressure: continuous physical force exerted on or against an object
2	Audience: the assembled spectators or listeners	32	Linger: stay in a place longer than necessary because of a reluctance to go.
3	Determine: cause (something) to occur in a particular way	33	Humiliated: make (someone) feel ashamed
4	Universal: relating to or done by all people or things in the world	34	Flawless: without any imperfections or defects
5	Unsuitable: not fitting or appropriate.	35	Approval: the action of approving something.
6	Accompanied: go somewhere with (someone) as a companion	36	Initial: existing or occurring at the beginning.
7	Annotate: add notes to (a text or diagram) giving explanation or comment	37	Limited: restricted in size, amount, or extent
8	Franchise: A film series or movie series	38	Critical: expressing adverse or disapproving comments
9	Regardless: despite the prevailing circumstances.	39	Complimentary: expressing a compliment; praising or approving.
10	Enlightenment: the action of enlightening or the state of being enlightened.	40	Pessimistic: tending to believe that the worst will happen.
11	Orienteering: sports that involve using a map and compass to navigate from point to point	41	Optimistic: hopefulness and confidence about the future or the success of something
12	Intent: intention or purpose.	42	Passionate: having, showing, or caused by strong feelings or beliefs.
13	Engaging: charming and attractive.	43	Humorous: causing laughter and amusement
14	Sequel: recorded work that continues the story	44	Adoration: deep love and respect.
15	Spectacle: a visually striking performance or display	45	Vibrant: full of energy and life.
16	Escapism: the tendency to seek distraction and relief from realities	46	Justify: show or prove to be right or reasonable.
17	Introduction: the action of introducing something	47	Exemplify: be a typical example of.
18	Concluding: bring or come to an end.	48	Character: a person in a novel, play, or film.
19	Particular: used to single out an individual member of a specified group.	49	Atmosphere: the tone or mood of a place or setting.
20	Beginning: the point in time or space at which something begins.	50	Terminology: words used when talking about a specific subject or topic.
21	Ceremony: a formal religious or public occasion	51	Clarity: the quality of being coherent and intelligible.
22	Dystopian: an imagined state or society where there is great suffering or injustice.	52	Performance: an act of presenting a play, concert, or other form of entertainment.
23	Tyrannical: exercising power in a cruel or arbitrary way.	53	Cinematography: the art of photography and camerawork in film-making.
24	Memorable: worth remembering or easily remembered	54	Summarise: give a brief statement of the main points
25	Reaping: cut or gather	55	Thorough: complete with regard to every detail
26	Assessed: evaluate or estimate the nature, ability, or quality of.	56	Repetitive: containing or characterized by repetition,
27	Dramatic: relating to drama or the performance or study of drama.	57	Forgetful: apt or likely not to remember.
28	Gymnasium: a room or building equipped for gymnastics, games, and other physical exercise.	58	Participate: take part in an action or endeavour.
29	Demonstration: an act of showing that something exists or is true by giving proof or evidence.	59	Valorous: showing great courage in the face of danger, especially in battle.
30	Silhouettes: the dark shape and outline of someone or something	60	Evaluate: form an idea of the amount, number, or value of; assess.

FOOD: YEAR 8			TOPIC: FOOD PREPARATION AND NUTRITION		
SKILLS & TECHNIQUES					
1	Make a dough	Bread- Kneading, proving, shaping	10	What are the 3 types of heat transfer?	I. Conduction II. Convection III. Radiation (infra-red and microwave)
2	Use of raising agents	Biological raising agents - yeast, chemical raising agents - baking powder			
3	Why do we cook food?	I. To aid digestion, II. To improve palatability (taste, texture and appearance), III. To avoid food contamination	HEALTH & SAFETY		
			11	Core temperature	Food must be cooked to 75C to kill bacteria
NUTRITION			12	How should dry foods be stored?	At room temperature in air tight containers
4	Macronutrients	Protein, Carbohydrate & Fat	13	How should chilled foods be stored?	In a fridge between 0-5C
5	Micronutrients	Vitamins & Minerals	14	How should frozen foods be stored?	In a freezer at - 18C
6	Eatwell guide	Visual tool showing how much of each food group to eat for a balanced diet	15	What is the danger zone?	Between 5 & 63 C Bacteria can reproduce quickly
FOOD SCIENCE			PROVENANCE & SUSTAINABILITY		
7	What is gelatinisation	When starch carbohydrate is heated in a liquid the starch granules soften and absorb water and the mixture thickens eg a cheese sauce	16	Food waste	Store food correctly, use in date order, use left overs
8	What is caramelisation	When sugar is cooked and turns brown	17	3 R's	Reduce, re-use, recycle
			18	Provenance	Where food is grown, raised, or reared
9	What happens to protein when cooked	It coagulates, eg egg white	19	Sustainability	Producing food in a way that protects the environment, makes efficient use of natural resources

GEOGRAPHY YEAR 8: UNIT 3 POPULATION AND MIGRATION

1. Demographics		
1	What is population?	The number of people in a particular area.
2	What is population density?	The number of people in an area per km ²
3	What does densely populated mean?	Places with many people in, which have a high population density; for example towns and cities.
4	What does sparsely populated mean?	Places with few people in, which have a low population density; for example villages and hamlets.
5	What is population distribution?	How people (population) are spread across space.
6	What does demographics mean?	Characteristics of a given population. For example, gender, age, employment.
7	What is the demographic transition model?	The demographic transition model (DTM) to show how a country's population structure changes over time
8	What is a population pyramid?	A type of bar chart used to show the age and gender structure of a country's population.
9	What is life expectancy?	How long a population/person is expected to live for
10	What is birth rate?	The number of live births per 1000, per year in a given area.
11	What is death rate?	The number of deaths per 1000, per year in a given area.
12	What is fertility rate?	The number of babies born per woman in their lifetime.
13	Who are the economically active?	People who are employed.
14	Who are the dependents?	The elderly and children who are not employed and depend on the economically active.
15	What is overpopulation?	A myth that the world has too high a population, when the issue actually is about distribution.

2. Migration:		
16	What is migration?	The long term movement of people from one place to another in which to live.
17	What is a push factor?	Reasons which push you away and migrate from an area. For example lack of education,
18	What is a pull factor?	Reasons which pull you towards an area and migrate to that area. For example better education
19	What is rural to urban migration?	A process whereby people move from living in rural places to move into urban places.
20	What is internal migration?	Where migration takes place within the same country. For example, moving from Manchester to London.
21	What is regional migration?	Where migration takes place within a specific area. For example, migration from London to Brighton, this is migration within the South East of England.
22	What is international migration?	Migration of people from one country to another.
23	What is an economic migrant?	A migrant who is in search of better employment opportunities.
24	What is an emigrant?	A people leaving a country.
25	What is an immigrant?	A person entering a country.
26	What is a refugee?	People forced to leave a place due to war, persecution or natural disasters (e.g. eruptions)
27	What is an asylum seeker?	A person who was forced to their country who is seeking protection from the host country (country they have moved to)
28	What are remittances?	Migrants sending money back home to their country of origin (country they came from)

GEOGRAPHY YEAR 7 UNIT 4: ENERGY AND CLIMATE CHANGE

1. Energy		
1	What is energy?	A type of power that creates the ability to do work.
2	What are biofuels?	Made of waste materials and plant oils- creates electricity.
3	What is nuclear energy?	Energy found in the nucleus of atoms.
4	What are fossil fuels?	These are fuels that are made of the remains of plants and animals over millions of years.
5	Name the three fossil fuels?	Coal, oil and natural gas
6	What is non renewable energy?	Energy which will run out. It is finite, such as fossil fuels.
7	What is renewable energy?	Energy which will not run out. It is infinite such as wind, solar, tidal.
8	How many years is left of each fossil fuel?	50 years – natural gas, 50 years – oil, 132 years - coal
7	What is green energy?	Energy that is produced in a way that does not harm the environment
8	How can we save energy?	Turning off lights, recycling, using energy saving light bulbs, insulation.

2. Climate change (part one)		
9	What is climate change?	The long term changes in temperature and rainfall on the Earth.
10	What is the evidence for climate change?	Tree rings, ice cores / cover and historical records.
11	What are green house gases?	Nitrous oxide, Methane and Carbon dioxide.
12	What is the greenhouse effect?	Natural process whereby the greenhouse gases keep the planet warm enough for life on Earth.
13	What is the enhanced greenhouse effect?	Human process whereby too many greenhouse gases overheat the Earth.
14	What are the natural causes for climate change?	Sunspot theory, eruption theory, orbital theory.
15	What human activities create greenhouse gases?	Burning fossil fuels, deforestation (cutting down trees), agriculture (farming), transportation, urban growth.
16	How do humans create more carbon dioxide?	Burning fossil fuels in factories
17	How do humans create more methane?	Rotting landfill sites and farming E.g. cattle ranching
18	How do humans create more nitrous oxide?	Fertilisers used in agriculture

3. Climate change (part two)		
19	How does climate change effect the poles?	Melting sea ice, melting shelf ice (glaciers), warmer oceans
20	How does climate change effect the land?	More extreme weather events – storms, hurricanes, droughts, floods.
21	How does climate change effect the oceans?	Warmer oceans, coral bleaching, more acidic oceans
22	How does climate change effect the atmosphere?	More storms, stronger storms, hotter temperatures, less snow and ice
23	What is mitigation?	Is stopping something happening at its source.
24	What is adaptation?	Changing lives to cope with the consequences.

4. Consequences of climate change:		
25	UK negative impacts from climate change?	UK sea levels could rise in low lying areas in East of England, Scottish ski resorts may lack snow, floods could become more likely, increased demand for water during hotter summers.
26	UK positive impacts from climate change?	Crops such as fruits could be grown in the UK. Winter heating costs will be reduced. Accidents on the roads in winter will be less likely to occur.
27	Global negative impacts from climate change?	Sea level rise will affecting millions of people; Tropical storms will increase; Species in areas (e.g. Arctic) may become extinct; Diseases such as malaria increase.
28	Global positive impacts from climate change?	Energy consumption may decrease due to a warmer climate; Longer growing season for agriculture; Frozen regions such as Canada may be able to grow crops.

KEY WORDS

1	Politics	anything related to how a country is led/governed and by whom.
2	Society	<i>anything related to the people in a place and how they live their lives</i>
3	Colony	a territory controlled by another country.
4	Empire	a group of territories/countries under the control of one leader.
5	Colonisation	the act of taking control of other territories/countries
6	Colonist	a person who helps to take control of a country
7	Enslaved people	people who are forced to work for an 'owner' without pay.
8	Reparations	money paid from one country to another to compensate them for damage done.
9	Exploit	take advantage for your own benefit
10	Indigenous people	the first people who lived in a territory, before any migration
11	Settlers	a person who moves to live in a new place
12	Culturalism	belief that your way of life is better than someone else's
13	Governor/Viceroy	person in charge of a colony, usually British and male
14	Famine	Extreme scarcity of food
15	Political dominance	taking control of the leadership and laws of a country.

KEY PEOPLE

16	Queen Elizabeth II	Monarch of Britain, 1952-2022 - ruled over the last days of the British Empire and oversaw the independence and transition to the Commonwealth.
17	Queen Victoria	Monarch of England, 1837-1901 - Queen and Empress during the height of the British Empire.
18	Edward Colston	Trader of enslaved people, whose statue has become the focus of the movement to remove statues linked to slavery.

KEY EVENTS

19	1600	Creation of the East India Company
20	1820s-1832	The Black War
21	1857	The Indian Mutiny or First War of Independence
22	1947	India became independent of Britain

CORE KNOWLEDGE

23	What did the British gain from Empire?	The British were able to move for a better life, businesses and the country made fortunes, it made Britain 'great' and gave them a sense of national pride
24	What sparked the Indian First War of Independence?	Rumours spread that the cartridges sepoys were using had beef/pork - sepoys rebelled against their British officers.
25	How did the British attempt to restore order in India after the War of Independence.	Queen Victoria became the Empress of India, the Viceroy was supported by the Indian Civil Service (British men had the most important positions).
26	Why did the British colonise Zimbabwe/Zambia (Rhodesia)?	<ul style="list-style-type: none"> - Cecil Rhodes wanted to exploit the area politically and economically. - He believed that native people of southern Africa were uncivilised, barbarous people, and that Anglo-Saxon (White, British) culture was superior.
27	Why did the British colonise parts of Ireland?	The elites of Britain were Protestant but the population of Ireland was largely Catholic. This led to a series of actions taken to take land from Catholics and encourage Protestants to move with the promise of land.
28	Why did the British colonise parts of Canada?	After the French surrendered their Canadian territories to Britain because of the Seven Years' War, the British expanded, and settled - the white European population rapidly outnumbered the 'First Nation' native population.

KEY WORDS

1	Alliance	a relationship formed between countries/leaders to benefit those countries/leaders.
2	Nationalism	Wanting your country to be the best or to be free from someone's empire.
3	Imperialism	The action of taking control of another country/area and its indigenous people.
4	Empire	a group of territories/countries/societies under the control of one ruler.
5	Militarism	Belief that it is necessary to always have a strong armed force for your country.
6	Arms Race	A competition between countries for the best and biggest military.
7	Mobilisation	a country preparing their soldiers for war.
8	Front (war)	the area where battles take place.
9	Conscription	forcing people to join the army.
10	Balkans	South-eastern region of Europe with a complex mixture of nationalities and ethnicities
11	Civilians	a person not in the military
12	Recruitment	the action of getting people to join the military
13	Propaganda	information that is used to influence people's' opinions, often for political gain.
14	Ideology	a system of ideas/beliefs.
15	Commonwealth	a group of countries who work together and were previously part of the British Empire.

KEY PEOPLE

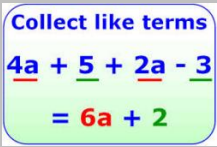
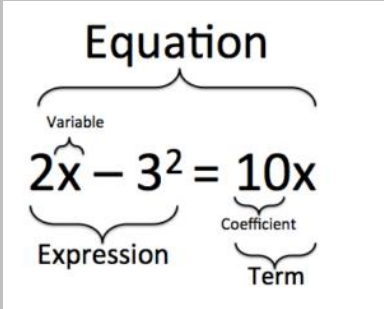
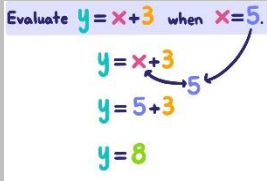
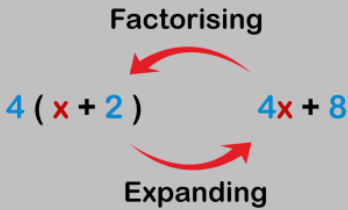
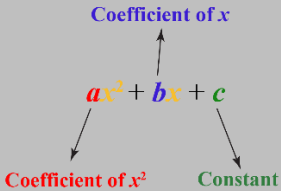
16	King George V	King of Britain 1910-1936
17	Kaiser Wilhelm II	Kaiser of Germany 1888-1914
18	Franz Ferdinand	Heir to the Austro-Hungarian throne until his death in 1914.
19	Gavrilo Princip	Serbian who assassinated Franz Ferdinand

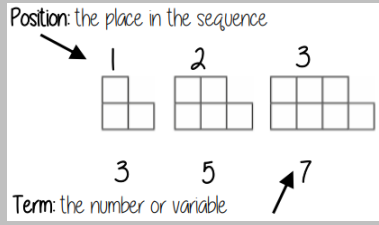
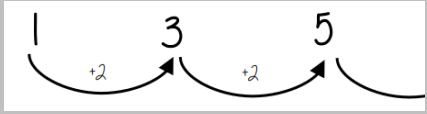
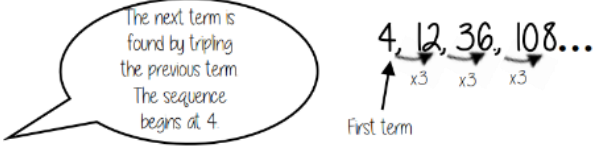
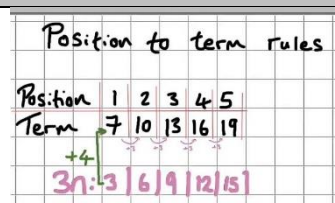
KEY EVENTS

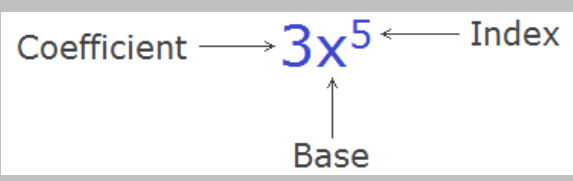
20	28th June 1914	Assassination of Archduke Franz Ferdinand by Princip
21	1914-1918	World War One
22	August 1914	Schlieffen Plan

CORE KNOWLEDGE

23	What was the Triple Alliance?	Formed in 1882, an alliance between Germany, Austria-Hungary and Italy
24	What was the Triple Entente?	Formed in 1907, an alliance between Britain, France and Russia.
25	Why did countries continue to build empires?	To maintain power, wealth and control - this caused competition between countries.
26	How did competition apply to the Arms Race?	Countries competed to build the best and most weapons.
27	What was the trigger to the First World War?	Franz Ferdinand was assassinated in 1914.
28	What was the Schlieffen Plan?	German plan designed to allow Germany to fight on two fronts.
29	How was nationalism important during WW1?	Populations began to believe that their culture and nation were superior to others.
30	How was militarism important during WW1?	A product of nationalism. In order to defend national borders and growing empire, or to encourage people to be patriotic , leaders such as the Kaiser invested heavily in their armed forces and made great displays of military power at home and abroad.

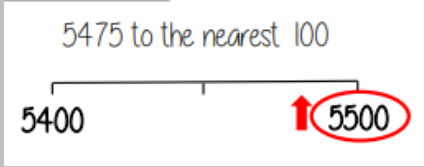
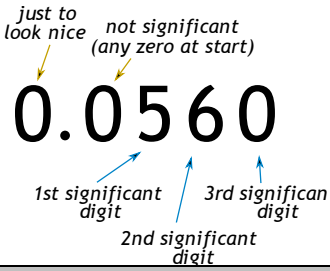
Maths: Year 8		Unit 7: Brackets, Equations, and Inequalities	Term: Spring Half Term 1
1	Term	A number and/or letter combination	
2	Simplify	Combining like terms through addition and/or subtraction	
3	Expression	A mathematical statement written using symbols, numbers or letters	
4	Equation	A statement showing that two expressions are equal	
5	Variable	A symbol for an unknown number	
6	Coefficient	The number in front of a variable	
7	Substitute	Replace a variable with a numerical value	
8	Solve		
9	Expand	Multiplying every term outside the bracket by everything inside the bracket	
10	Factorise	Dividing a common factor from terms to put brackets back into the expression	
11	Highest Common Factor	The largest factor that goes into two or more terms	
12	Binomial	An expression that has two unlike terms connected through addition or subtraction	
13	Quadratic	An expression where the highest index is a square (²)	

Maths: Year 8			Unit 8: Sequences	Term: Spring Half Term 1
14	Term	Single number or variable		
15	Position	Location of terms		
16	Sequence	A set of numbers that follow the same pattern		
17	Term-to-Term	A rule that tells how you get from one term to next		
18	Difference	Amount added or subtracted to get from one term to the next		
19	Linear	Increase/decrease by the same amount from one term to the next	<p>7, 11, 15, 19...</p> <p>How do I know this is a linear sequence? It increases by adding 4 to each term.</p>	
20	Fibonacci	Next term is sum of previous two terms	<p>Fibonacci Sequence – look out for this type of sequence</p> <p>0 1 1 2 3 5 8 ...</p> <p>Each term is the sum of the previous two terms.</p>	
21	Position-to-Term	A rule that tells how the position relates to the term		

Maths: Year 8			Unit 9: Indices	Term: Spring Half Term 1
22	Coefficient	The number in front of a variable		
23	Base	The large number with a small number floating next to it		
24	Index/Indices	The small, floating number after a number or variable		
25	Powers	The whole expression with a base and an index		

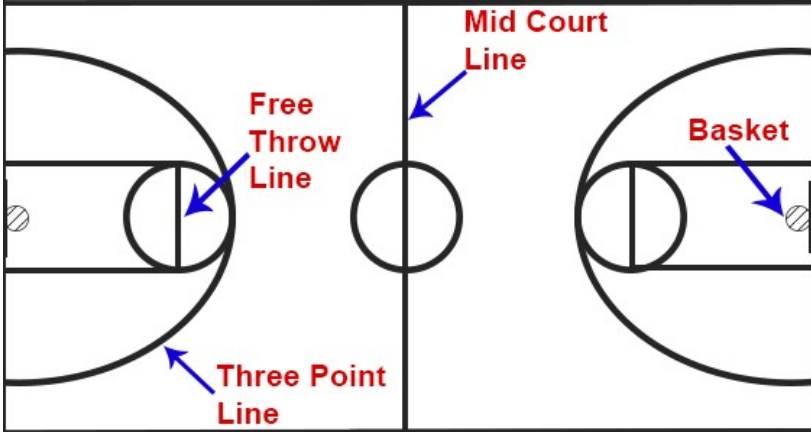
Maths: Year 8			Unit 10: Fractions and Percentages		Term: Spring Half Term 2						
26	Fraction	Part to whole comparison	<table><tr><th>percentage</th><th>fraction</th><th>decimal</th></tr><tr><td>30%</td><td>$\frac{3}{10}$</td><td>0.3</td></tr></table>	percentage	fraction	decimal	30%	$\frac{3}{10}$	0.3		
percentage	fraction	decimal									
30%	$\frac{3}{10}$	0.3									
27	Decimal	A number that is less than 1 represented by digits in place values smaller than units									
28	Percentage	An amount out of 100									
29	Numerator	The numerator is the number of parts you are counting. (top of fraction)	<table><tr><td>numerator (number of parts we have)</td><td>$\frac{2}{5}$</td><td>denominator (total parts in whole)</td></tr></table>	numerator (number of parts we have)	$\frac{2}{5}$	denominator (total parts in whole)					
numerator (number of parts we have)	$\frac{2}{5}$	denominator (total parts in whole)									
30	Denominator	the number of equal parts that make one whole unit. (bottom of fraction)									
31	Equivalent	Two numbers or calculations that are worth the same value									
32	Conversion	To change from one thing to another									
33	Multiplier	A decimal version of a percentage that can be used to multiply to find an answer									
34	Profit/Loss	An increase or decrease from the original amount									
35	Reverse Percentage	Finding the original amount from the final amount and percentage change									

Maths: Year 8		Unit 11: Standard Index Form	Term: Spring Half Term 2
	Coefficient	The number in front of a variable	<div><div>Coefficient → 3 × 5 ← Index</div><div>↑</div><div>Base</div></div>
	Base	The large number with a small number floating next to it	
	Index/Indices	The small, floating number after a number or variable	
	Powers	The whole expression with a base and an index	
	Standard Form	A way to write very large or very small numbers using a number between 1 and 10 (not including 10) and a power of 10	<div><div>Positive Power = Large Number</div><div>4.3 × 10⁶ = 4,300,000</div><div>Negative Power = Small Number</div><div>2.1 × 10⁻⁴ = 0.000 21</div></div>

Maths: Year 8		Unit 11: Standard Index Form	Term: Spring Half Term 2																																				
	Rounding	Replacing the number with an approximate value that has simpler representation																																					
	Significant Figures	Number of digits necessary to decide the accuracy of the number starting with the first non-zero digit																																					
	Integer	A whole number with no fractional or decimal parts; includes positives, negatives, and zero																																					
	Estimate	A value or calculation that is close to the actual answer																																					
	Root	A number that multiplies by itself to get another number	<table border="1"> <thead> <tr> <th>Perfect square</th><th>Square root</th><th>Perfect square</th><th>Square root</th></tr> </thead> <tbody> <tr> <td>1</td><td>$\sqrt{1} = 1$</td><td>81</td><td>$\sqrt{81} = 9$</td></tr> <tr> <td>4</td><td>$\sqrt{4} = 2$</td><td>100</td><td>$\sqrt{100} = 10$</td></tr> <tr> <td>9</td><td>$\sqrt{9} = 3$</td><td>121</td><td>$\sqrt{121} = 11$</td></tr> <tr> <td>16</td><td>$\sqrt{16} = 4$</td><td>144</td><td>$\sqrt{144} = 12$</td></tr> <tr> <td>25</td><td>$\sqrt{25} = 5$</td><td>169</td><td>$\sqrt{169} = 13$</td></tr> <tr> <td>36</td><td>$\sqrt{36} = 6$</td><td>196</td><td>$\sqrt{196} = 14$</td></tr> <tr> <td>49</td><td>$\sqrt{49} = 7$</td><td>225</td><td>$\sqrt{225} = 15$</td></tr> <tr> <td>64</td><td>$\sqrt{64} = 8$</td><td></td><td></td></tr> </tbody> </table>	Perfect square	Square root	Perfect square	Square root	1	$\sqrt{1} = 1$	81	$\sqrt{81} = 9$	4	$\sqrt{4} = 2$	100	$\sqrt{100} = 10$	9	$\sqrt{9} = 3$	121	$\sqrt{121} = 11$	16	$\sqrt{16} = 4$	144	$\sqrt{144} = 12$	25	$\sqrt{25} = 5$	169	$\sqrt{169} = 13$	36	$\sqrt{36} = 6$	196	$\sqrt{196} = 14$	49	$\sqrt{49} = 7$	225	$\sqrt{225} = 15$	64	$\sqrt{64} = 8$		
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BASKETBALL		
KEY WORDS		
1	Shooting	Throwing the Basketball towards the hoop.
2.	Marking	Following an opposition player so they can not receive, pass, dribble or shoot the Basketball ball.
3	Lay Up	A shot near the basket, off the backboard. For a layup, you run towards one side of the basket, jump, and lay the ball off the backboard into the hoop.
4	Set Shot	A shot with two hands, in which a player stands still and shoots the ball usually from chest level.
5	Free Throw	A basketball shot worth one point that must be made from behind a specific line and is given because of a foul by an opponent.
6	Dribble	Movement of the ball, caused by a player in control, who throws or taps the. ball to the floor. The dribble ends when the dribbler: Touches the ball simultaneously with both hands.
7	Dunk	To jump high in the air and push the ball down through the basket.
8	Intercept	Stealing the ball from your opposition when they are dribbling or passing.

BASKETBALL		
KEY RULES		
9	Double Dribble	If a player ends their dribble by catching the ball in both hands and then dribbles it again.
10	Travel	If a player takes too many steps without dribbling the ball.
11	Contact	A situation in which two players come together physically, such as when one player is guarding another, and hit each other with one or more body parts.
12	3 Second Rule	A offensive player cannot be in the lane for more than three seconds while his team has control of the ball.
13	Tip Off	The start of a game when the ball is thrown in the air and a player from each team jumps up and tries to get the ball.



Components of Fitness

Health Related Components of Fitness		
1	Cardiovascular Fitness	Ability to exercise your whole body for long periods of time, without tiring.
2	Muscular Strength	The amount of force a muscle can exert against a resistance.
3	Muscular Endurance	The ability to use voluntary muscles repeatedly, without tiring.
4	Flexibility	The range of motion of your joints or the ability of your joints to move freely.
5	Body Composition	The percentage of body weight that is muscle, fat or bone

Skill Related Components of Fitness		
6	Agility	The ability to control the movement of the whole body and change position quickly.
7	Balance	Keeping the body stable while at rest or in motion.
8	Coordination	The ability to use two or more body parts together.
9	Power	The ability to undertake strength performances quickly.
10	Reaction Time	The time between the presentation of a stimulus and the onset of movement.
11	Speed	The rate at which an individual can perform a movement or cover a distance.

FOOTBALL		
KEY WORDS		
1	Pass	Is to move (kick) the ball quickly among teammates in order to keep it away from your opponents
2	Opposition	Is the the other team (the opponents) in a game.
3	Strike	Is to shoot the ball at the goal with power and accuracy
4	Press/ Pressure	Is when pressure is applied on the player or the team that's in possession. It's a skill used in all areas of the pitch – to win the ball back, dictate play, or delay the opposition.
5	Marking	Is an organised defensive tactic which aims to prevent a member of the opposing team (usually a striker) from taking control of the ball.
6	Tackle	Is using your feet to stop and win the ball back from an opposition player.
7	Attack	Is the movement of the team in possession of the ball towards the goal to try and score a goal.
8	Defend	Is where outfield players primary role is to stop attacks during the game and prevent the opposition from scoring.
9	Player on	A shout to alert a teammate to alert them to the presence of an opposing player behind them.

FOOTBALL		
10	Volley	Is where a player's foot strikes the ball in the air towards their target, usually the goal.
11	Obstruction	Is blocking off an opponent from making a legitimate tackle on the player with the ball.
KEY RULES		
12	Kick off	Is a kick between two players to starts both halves of a match, both halves of extra time and restarts play after a goal has been scored.
13	Throw in	Is awarded to the opponents of the player who last touched the ball when the whole of the ball crosses over the sideline.
14	Goal Kick	IS a kick awarded when the ball passes over the goal line wide of the goal, having last touched a player of the attacking team.
15	Free Kick	Is a kick given to restart play after a foul occurs on the pitch outside of the penalty box that your team is attacking.
16	Corner	Is awarded when the ball passes over the goal line, having last touched a player of the defending team.
17	Handball	When the ball makes contact with a player's hand/arm in an illegal manner.

Principles of Training		
Principles of Training		
1	Specificity	The particular requirements of an activity, sport or position
2	Progressive Overload	Gradually increasing the amount of overload to improve fitness without injury.
3	Reversibility	Gradually losing fitness instead of progressing or remaining at the current level.
4	Training Thresholds	A safe and effective Heart Rate to train at to improve aerobic or anaerobic fitness.
5	Individual Needs	Meeting the needs of the person. Need to consider current fitness levels.
6	Frequency	How many times a week someone trains.
7	Intensity	Measures how hard someone trains. This could be measured by heart rate or the weight lifted.
8	Time	How long each training sessions lasts for.
9	Type	Method of training to achieve specific goals.

KEY WORDS		
1	Tawhid	The oneness of Allah
2	Risalahs	Communication between Allah and humankind.
3	Akhirah	The belief in life after death.
4	Judgement Day	The day each soul will be judged for their behaviour and beliefs on Earth.
5	Prophet Muhammad (PBUH)	The final prophet sent by Allah to give guidance to humans. Received revelations from Allah through Angel Jibril for 23 years
6	Prophet Ibrahim	He was brought up in a polytheistic culture but rejected that and affirmed his belief in one God.
7	Prophet Adam	Adam was the first human being and Muslims learn their role on Earth from the example of Adam, who was forgiven for his sin.
8	Sunni Muslims	Largest group within Islam, follow the Quran and Sunnah as sources of guidance and authority
9	Ummah	'brotherhood'; the community of Islam.
10	Six Articles of Faith	Six beliefs which underpin the Sunni faith.
11	Al Qadr	Belief that Allah knows everything and knows humans better than they know themselves
12	Shi'a Muslims	Muslim group who base their interpretation of Islam on the Imamate (a series of Imams and their teachings).
13	Five Roots of Usul ad-Din	Five beliefs which underpin the Shi'a faith
14	Sufis	The main worship hall in some religious buildings.
15	Angel Jibril	He revealed Allah's word to Prophet Muhammad (PBUH) on the Night of Power. He played a vital role in communicating the final version of Islam to Humanity.
16	Angel Mika'il	He is the Angel of Mercy.
17	Angel Izrail	Angel of death.
18	Shahadah	'First Pillar of Islam; the statement of faith.
19	Salah	Second Pillar of Islam, praying five times
20	Sawn	Fasting during the month of Ramadan.
21	Zakah	A welfare contribution of 2.5% of earnings or savings paid annually
22	Khums	One of the Ten Obligatory Acts for Shi'a Muslims- a contribution of 20% of all business profits
23	Hajj	The annual pilgrimage to Makkah.

KEY BELIEFS	
1.How do Muslims describe Allah?	Muslims believe that Allah has 99 names and these tell us his qualities. Allah is all powerful, Muslims believe that Allah knows every aspect of our character.
2.How does Allah communicate?	It takes place in three ways: Holy Books, Angels and Prophets.
3.What does belief in afterlife involve?	A belief in Judgement day and a belief in paradise and hell.
4.What are the Six Articles of Faith?	A belief in one God. belief in God's will, belief in angels, belief in Holy Books, belief in prophets, and belief in life after death.
5.What are the Five Roots of Usul ad-Din?	Belief in One God, Belief in guidance from Allah through prophets, Belief in Adalat, Belief in the Imamate. Belief in judgement day

Prophets and Angels	
1.Why Prophet Muhammad (PBUH) important to Muslims?	Prophet Muhammad (PBUH) was the last of the prophets – called the Seal of the Prophets. He received the word of the Quran.
2. How does Prophet Adam influence Muslims today?	When Adam disobeyed Allah, he repented and Allah forgave him. This shows Muslims that if they repent they will be forgiven for their deeds.
3.Why is Prophet Ibrahim important?	He rejected the belief in Idols to believe in one God.
4.What is the role of Angel Izrail?	Takes the souls from bodies when people die so they can enter the afterlife.
5.What did Angel Jibril do?	He revealed Allah's words (the Qur'an) to Prophet Muhammad (PBUH) on the Night of Power
6.What is the role of Angel Mika'il?	He is known as the giver of rain and food. He is believed to also reward people who do good deeds and asks Allah to forgive people's sins.

The Five Pillars of Islam

1.Why is Shahadah important?	It is a statement that sums up what all Muslims believe connecting everyone to the same Ummah.
2.Why is Salah important?	It teaches Muslims many qualities. It teaches discipline-to meet the correct prayer times and it teaches humility- realising that Allah is the most important figure in life
3.Why is fasting an important experience?	The Qur'an was revealed during the month of Ramadan and it also helps Muslims become more focused on their faith and an individual focus on becoming a better person. It also helps bring families and communities together
4.Why do Muslims give Zakah?	In Islam, all wealth is a gift from Allah and Muslims believe they will be judged by how they use it. That is why wealth should be used to help all people, especially those in need and it is also a test from Allah for those who have money to help those who don't.

PRE YEAR 8 TERM 2.2		The Existence of God	PAGE 1
KEY WORDS			
24	The argument from design	The argument states that because the universe is so complex and intricate, it cannot have happened by chance. It must have been planned by an intelligent being.	
25	Teleological	'understanding purpose'; another name for the argument from design.	
26	The first cause argument	Philosophical argument that aims to prove that the universe was formed by a creator. It states that ever event is caused nothing happens without something making it happen. The universe coming into existence is an event. Therefore, the beginning of the universe was caused and someone or something caused this and that would be God	
27	The argument from morality	.The argument states that all people have an instinctive sense of what is right and wrong and because people have a sense of right and wrong this must have come from someone or something outside ourselves.	
28	Big Bang	Scientific theory that the universe was created 13.6 billion years ago	
29	Morality	.Sense of right and wrong.	
30	Moral Code	Principles of right and wrong which govern behaviour.	
31	Objective	Independent of human beings.	
32	Infinite regress	A chain of events and their causes going back in time to the infinite past, with no beginning	
33	Moral Evil	Acts of cruelty done by humans, such as theft, murder or abuse.	
34	Natural Evil	Acts that cause suffering for which humans are not responsible, such as volcanoes, hurricanes or disease	
35	Theodicy	The attempt to explain how an omnipotent and omnibenevolent God can allow suffering	
33	Omnipotent	All-Powerful	
37	Omnibenevolent	All-loving	
38	Omniscient	All-loving	
39	Bodily resurrection	Muslims and Christians believe that our bodies are brought back for the Day of Judgement, then we will live forever either in heaven or Hell.	
40	Rebirth	The process of being reborn.	
41	Miracles	A good event which is contrary to the laws of nature and science.	

Arguments for the Existence of God	
1.What is the argument from design try to prove?	Through logic, philosophers attempt to prove the existence of God. The argument from design explains that because the universe is so complex it can't have happened by chance.
2. Why do some people agree with the argument from design?	Many people, especially religious people, find this argument convincing because it supports the belief of God existing.
3. What is wrong with the argument from design?	The argument doesn't prove that the universe was designed only that it is possible. Also, even if the universe was designed it doesn't prove that God designed it.
4.Why do some people agree with the argument from first cause?	It provides a logical explanation of how the universe came to be and the argument follows the rule of logic that every event is caused.
5.What is wrong with the argument from first cause?	One argument is that if everything has a cause then what caused God. Another argument is why should the universe have a single cause or explanation considering how complex and vast it is.

Arguments for and against the Existence of God	
1. What are the weaknesses of the argument of morality?	Some argue that morality is learned through primary and secondary socialisation. Also, others state that some individuals who are murderers, thieves have no sense of morality despite the argument stating that everyone has a universal moral code.
2.What are some strengths of the argument of morality?	Some people argue that it supports the idea that God is good and expects the same standard of people.
3.What is the difference between religion and science?	Science is the study of the natural, physical universe through experimentation and observation in order to establish facts. Religion consists of sets of beliefs about the purpose of the universe and life within it.
4. What are some scientific arguments against the existence of God?	Theories such as the Big Bang explains the origin of the universe and also the theory of evolution explains the development of life on Earth.

The Problem of Evil and Suffering and the ideas of immortality	
1.How can God allow suffering?	Many religious people argue that God can't be responsible for moral evil. Some people point out that some natural suffering is attributed to human causes and also suffering makes people's faith in God stronger.
2. What part of humans is considered immortal?	Some people believe in immortal life believe in a physical resurrection-that after death our souls will survive in a physical body. Others believe we have a soul, which is immortal and others believe that are mind is immortal.
3. Where might immortality be lived?	Many religious people believe that it will take place in heaven or hell. Others think we become one with the divine (God).

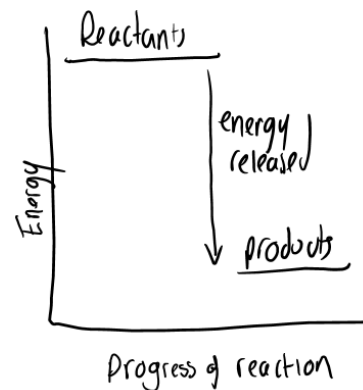
SCIENCE: BIOLOGY YEAR 8			TOPIC: ECOSYSTEMS		
Food chains			18	What is hibernation?	When animals sleep through winter to survive.
1	What is a food chain?	Shows the transfer of energy between organisms.	19	What is migration?	When animals move somewhere warmer or with more food.
2	What is a producer?	Organism that makes its own food using photosynthesis (e.g. plants).	20	What is prey?	An animal that is eaten by another animal
3	What is a consumer?	Organisms that rely on eating other organisms for food.	Inheritance		
4	What is a predator?	An animal that eats other animals.	21	What are characteristics?	A feature of an organism such as eye colour, hair colour or blood group.
5	What is prey?	An animal that is eaten by another animal	22	How do humans inherit characteristics characteristics?	When an egg cell with 23 chromosomes is fertilised by a sperm cell with 23 chromosomes to make an embryo with 46 chromosomes.
Food webs and Interdependence			23	What is fertilisation?	When an egg and sperm cell fuse together to make an embryo.
6	What is a food web?	A diagram showing a set of linked food chains.	24	Where is DNA found in animals and plants?	In the nucleus of every cell of an organism.
7	What is a habitat?	The area in which an organism lives.	25	What is a chromosome?	How DNA is packaged in our nucleus. It contains many genes.
8	What is an ecosystem?	The name given to the interaction between plants, animals, and their habitat in a particular location.	26	What is a gene?	A short section of DNA that codes for a characteristic e.g. eye colour.
9	What is a community?	The collection of the different types of organism present in an ecosystem.	Evolution and Natural Selection		
10	What is an environment?	The conditions found in a habitat.	27	What is evolution?	Development of a species over time
11	What is interdependence?	The way in which living organisms depend on each other to survive, grow, and reproduce.	28	What is natural selection?	Process by which the organisms with the characteristics that are most suited to the environment survive and reproduce, passing on their genes. Also known as 'survival of the fittest'.
12	What is bioaccumulation?	The build-up of toxic chemicals inside organisms in a food chain.	29	What is a species?	Organisms that have lots of characteristics in common, and can mate to produce fertile offspring.
13	What is a decomposer?	Organisms that break down dead plant and animal material, returning nutrients to the soil or water.	30	What is a fossil?	The remains of plants and animals that have turned to stone.
Competition			Biodiversity and Extinction		
14	What is competition?	When organisms compete for limited resources	31	What is biodiversity?	The variety of organisms living in an area.
15	What do organisms compete for?	Food Water Space- shelter Mates- to reproduce	32	What does extinct mean?	When no more individuals of a species are left anywhere in the world.
16	What is a population?	The number of plants or animals of the same type that live in the same area.	33	What does endangered mean?	When a population is small and at risk of extinction.
Adaptations					
17	What is an adaptation?	Features that make an organism more likely to survive in a specific environment.			

SCIENCE: BIOLOGY Y8			TOPIC: Health and Lifestyle		
Health			Digestive system		
1	What is a communicable disease?	A disease that can spread from one organism to another	22	What is the digestive system?	A group of organs working together to break down food
2	What is a non-communicable disease?	A disease that cannot spread from one organism to another.	23	In order, which organs are in the digestive system	Mouth, Oesophagus, Stomach, (Liver/pancreas), Small intestine, large intestine, rectum, anus
3	Give examples of communicable diseases	Malaria, COVID19, Influenza, Salmonella	24	What is digestion?	To break down food into small soluble molecules
4	Give examples of non-communicable diseases	Heart Disease, cancer.	25	What is the function of the small intestine?	To absorb soluble nutrients from the digestive system into the body (blood).
5	How can communicable diseases spread?	Direct contact, water, air, vector, unhygienic food.	26	What is the function of the large intestine?	To reabsorb water into the body
Healthy diet and Nutrients			27	What is an enzyme?	A biological catalyst that speeds up digestion.
6	What is energy measured in?	Joules (J) or Kilojoules (kJ)	28	Which enzymes break down carbohydrates, proteins and lipids?	Carbohydrase, protease, lipase
7	Why do we consume carbohydrates?	To provide energy	29	What do carbohydrates break down into?	Sugars (glucose)
8	Why do we consume lipids?	To store energy	30	What do proteins break down into?	Amino acids
9	Why do we consume proteins?	For growth and repair	31	What do lipids break down into?	Fatty acids and glycerol
10	Why do we consume vitamins and minerals?	To keep you healthy	Drugs and Smoking		
11	Why do we consume fibre?	To help food move through the gut.	32	What are medicinal drugs?	Medicine
12	Why do we consume water?	It is needed for all cells and bodily fluids like blood.	33	What are recreational drugs?	Drugs taken for fun
13	What is starch?	A type of carbohydrate found in plants, especially grains (pasta/rice) and potatoes.	34	Which organ system is controls the body's reactions?	Nervous system
14	What foods contain lipids?	Fats and oils	35	What is addiction?	When the body becomes dependent on a drug to feel normal
15	What foods contain protein?	Chicken, fish, eggs	36	What are withdrawal symptoms?	What the body feels when someone tries to stop taking a drug. E.g. headaches and nausea
16	What is the test and positive result for starch?	Iodine solution goes from orange to blue/black colour.	37	Give examples of illegal drugs	Herion, cocaine, cannabis, ecstasy
17	What is the test and positive result for sugar?	Benedict's solution goes from blue to orange/red.	38	Give examples of legal drugs	Medicines, alcohol, tobacco (cigarettes), caffeine
18	What is the test and positive result for lipids?	Ethanol goes from clear and colourless to cloudy.	39	What types of drugs are there?	Hallucinogenic, depressant, stimulant
19	What is the test and positive result for protein?	Biuret solution goes from blue to purple.	40	Name the parts of the respiratory system	Mouth/nose>trachea>bronchus>bronchioles>alveoli
20	How does obesity develop?	Eating foods with more energy than you use.	41	Why is smoking bad for you?	It increases risk of breathing problems, cancer, heart attack and stroke
21	What does deficiency mean?	Not having enough of a nutrient that can cause health problems.			

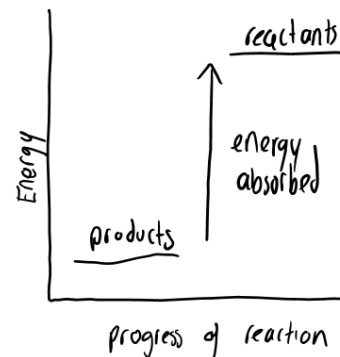
SCIENCE: CHEMISTRY YEAR 8			TOPIC: THE PERIODIC TABLE		
The structure of the periodic table			21	Why are alkali metals stored in oil?	To stop them reacting with oxygen
1	What is the periodic table?	An organised table showing the different elements	22	When alkali metals react with oxygen what happens to their appearance?	They turn dark in colour.
2	What two types of elements are there?	Metals and non-metals	23	How does the reactivity of alkali metals change down the group?	It increases
3	Who first prepared the modern periodic table?	A scientist called Mendeleev	Group 7		
4	What is a group in the periodic table?	The vertical columns	24	What type of elements do we find in group 1?	Non-Metals
5	What is a period in the periodic table?	The horizontal rows	25	What name is given to the group 7 elements?	The halogens
6	How are groups different to periods in the Periodic Table?	Groups are the columns whereas the periods are the rows	26	Give 2 physical properties of the halogens	They have low melting and boiling points, they form coloured vapors
7	Why did Mendeleev put some elements together in groups?	They had similar chemical and physical properties	27	How does the melting/boiling point of halogens change down the group?	Increases
8	Which sides of the period table shows metals and non-metals	Left shows metals, right shows non-metals	28	What happens to the colour of the vapour produced by the halogens as you go down the group?	It gets darker (yellow > green > brown > purple)
9	Are most of the elements metals or non-metals	Metals	29	Give 2 chemical properties of the halogens?	They are very reactive and toxic
10	What is a property?	A characteristic of something	30	When a halogen reacts with a group 1 element what is formed?	A salt (metal – non-metal compound)
11	What is a chemical property	The way an substance reacts with other chemical substances	31	What would the name of the salt be formed by iodine and potassium	Potassium iodide
12	What is a physical property	A property of a substance that can be observed or measured e.g. melting point, appearance, density	32	How does the reactivity of halogens change down the group?	It decreases
Group 1			33	Which is the most reactive halogen?	Fluorine
13	What type of elements do we find in group 1?	Metals	34	Halogens take part in displacement reactions. What is a displacement reaction?	A reaction where a more reactive element takes the place of a less reactive element in a compound
14	What name is given to the group 1 elements?	Alkali metals	Group 0		
15	Give 3 physical properties of alkali metals	They are shiny, not very dense, have low melting points and are soft	35	What type of elements do we find in group 0?	Non-Metals
16	How does the melting and boiling point of alkali metals change down the group?	It decreases	36	What name is given to the group 0 elements?	The Nobel gases
17	What are physical properties of the alkali metals makes them different to a typical metal	Low density, low melting point and softness	37	Give a physical properties of the Nobel gases?	The have low boiling points and are all gases at room temperature
18	When an alkali metal is added to water what are the products?	A metal hydroxide and hydrogen gas	38	Give a chemical properties of the Nobel gases?	They are very unreactive
19	Why are alkali metals called alkali metals?	They are metals that react with water to form alkalis (metal hydroxides)			
20	When alkali metals react with oxygen what product is formed?	A metal oxide			

Energy changes		
1	We can use the word exothermic to describe physical and chemical changes. What does this word mean?	It is a change where energy is released into the surroundings
2	Give an example of a physical process that is exothermic?	Freezing and condensing
3	We can use the word endothermic to describe physical and chemical changes. What does this word mean?	It is a change where energy is taken in from the system into the substance
4	Give an example of a physical process that is endothermic?	Melting and boiling
5	Does breaking bonds require or release energy?	Require
6	Does making bonds require or release energy?	Release
7	What is an exothermic reaction?	A reaction where energy is released into the surroundings
8	What is an exothermic reaction?	A reaction where energy is taken in from the surroundings
9	How can you measure the temperature change of a chemical reaction?	Use a thermometer to monitor the surroundings
10	What will happen to the temperature in an exothermic reaction?	It will increase
11	What will happen to the temperature in an endothermic reaction?	It will decrease
12	Give an example of an exothermic reaction	Combustion / neutralisation / metals and acids / respiration
13	Give an example of an endothermic reaction.	Thermal decomposition / photosynthesis
14	If more energy is needed for breaking bonds than is released from making bonds, which type of reaction will this be?	Endothermic
15	If less energy is needed for breaking bonds than is released from making bonds, which type of reaction will this be?	Exothermic
16	What is a reaction profile?	A graph that shows how the energy of the reactants and products changes in a reaction

16	Draw a reaction profile for an exothermic reaction	
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17	Draw a reaction profile for an endothermic reaction	
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SCIENCE: CHEMISTRY YEAR 8			TOPIC:	MATERIALS AND PROPERTIES		
Properties			20	How do we extract less reactive metals from their ores?	Displacement reactions	
1	What is a property?	A characteristic of something	21	How do we extract more reactive metals from their ores?	Electrolysis	
2	What is a chemical property	The way an substance reacts with other chemical substances	22	What is an alloy?	An alloy is a mixture of two or more elements, at least one of which is a metal.	
3	What is a physical property	A property of a substance that can be observed or measured e.g. melting point, appearance, density	23	How are the properties of alloys different to pure metals?	They are harder	
Non-Metals			Polymers			
4	Where are the non-metals in the periodic table?	To the right of the stepped line	24	What is a polymer?	A polymer is a molecule which has thousands of smaller molecules joined together in a repeating chain	
5	What are the physical properties of all non-metals	Non-conductive, dull	25	What do we call the small molecules that make up a polymer	monomer	
6	What is a simple molecule?	A non-metal molecule made of a small number of atoms bonded together	26	Are polymers metal or non-metal?	Non metals	
7	What are the properties of simple molecules?	Low boiling point	27	What type of molecule are polymers?	Simple molecules	
8	What is a giant molecule?	A molecule made of billions of atoms bonded together	28	How are natural polymers different to synthetic polymers?	Natural polymers are not manmade whereas synthetic polymers are manmade	
9	What is a are the properties of giant molecule?	A molecule made of billions of atoms bonded together	29	Give an example of a natural polymer	Wool, silk, DNA, hair, rubber	
Metals			30	Give an example of a synthetic polymer	Plastic (PVC), nylon	
10	Where are the metals in the periodic table?	On the left of the stepped line	Ceramics			
11	What are the physical properties of all metals?	Shiny and good conductor	31	What is a ceramic?	A material formed from a soft substance that is heated to make a hard material.	
12	What are the physical properties of group 1 and 2 metals?	Low density, lower melting point, soft	32	Is a ceramic metal or non-metals?	Non-metal	
13	What are the physical properties of the transition metals and other metals?	High density, high melting point, hard	33	What are four of the physical properties of ceramics?	Hard, brittle, stiff, solid (at room temperature), high melting point, strong, electrical insulator	
14	What are the chemical properties of group 1 and 2 metals?	Highly reactive	34	What are the chemical properties of ceramics?	They are very unreactive – they do not react with oxygen, water or acids.	
15	What are the chemical properties of the transition metals and other metals?	Less reactive	Composites			
16	Which metals are unreactive?	Gold, silver, platinum	35	What is a composite?	Synthetic materials materials are made from two or more different types of material.	
17	What is the reactivity series?	A list of metals in order of the most reactive to the least reactive	36	Why are composites made?	To have very specific properties	
18	Where do we find metals naturally?	In the earths crust				
19	What is a metal ore?	Naturally occurring rocks that contain enough metals or metal compounds to make it worthwhile extracting them				

Sound					
1	What causes sound?	Sound waves are produced by vibrations	16	State the function of the cochlea	Detects vibrations and transfers them into electrical signals
2	State the typical speed of sound in air	330 m/s	17	State the function of the auditory nerve	Carries signals from the ear to the brain
3	What is the definition of amplitude?	The amplitude of a wave is the maximum displacement of a point on a wave away from its undisturbed position	18	State the function of the pinner	The outer ear; direct sound vibrations into the ear
4	How does a change in amplitude affect a sound?	It changes the volume of the sound – louder or quieter	19	What is ultrasound?	Sound waves that have a frequency higher than the upper limit of hearing for humans – higher than 20000Hz (20kHz)
5	What is the definition of frequency?	The frequency of a wave is the number of waves passing a point each second	20	What is the auditory range?	The range of frequencies that can be heard – for humans this is 20 – 20000Hz
6	What happens to a sound when the frequency is increased?	The pitch increases	21	What is a wave?	A wave transfers energy without transferring matter
7	What happens to a sound when the frequency is decreased?	The pitch decreases	22	Define a longitudinal wave	A wave where the vibration is parallel to the direction of energy transfer
8	What is frequency measured in?	Hertz (Hz)	23	Give some examples of longitudinal waves	Sound, infrasound, ultrasound, p-waves
9	What is the definition of wavelength?	The wavelength of a wave is the distance from a point on one wave to the equivalent point on the adjacent wave	24	What is the symbol for wavelength?	λ (lambda)
10	State the unit of wavelength	Metre (m)	25	What is the symbol for frequency?	f
11	State the unit of loudness of sound	Decibels (dB)	26	What is the symbol for wave speed?	v
12	Name the 6 parts of the ear	Pinner, auditory canal, ear drum, bones, cochlea, auditory nerve	27	What is the unit and unit symbol for wave speed?	Metres per second (m/s)
13	State the function of the ear drum	Thin layer of membrane that picks up the vibrations of sound waves	28	What is the formula that links wave speed, frequency and wavelength?	Wave speed = frequency x wavelength $V = f \times \lambda$
14	State the function of the ossicle bones (hammer, anvil and stirrup)	Amplify the vibrations			
15	What is the cochlea?	Long coiled tube in the ear that is filled with liquid that picks up vibrations			

Light		
1	How does light travel?	As waves, in straight lines. It is a transverse wave
2	What is the speed of light in a vacuum?	300,000,000 m/s
3	Name the diagram used to show how light travels	Ray diagram
4	What are the key features of a ray diagram?	Straight lines with arrows to show the direction
5	What is the law of reflection?	Angle of incidence = angle of reflection
6	What is the incident ray?	The incoming ray
7	What is the normal line?	Line a right angle (perpendicular) to the surface, from which angles are measured
8	What is a transparent material?	Material that allows light to pass through it
9	What is a translucent material?	Material that allows some light to pass through it
10	What is an opaque material?	Material that allows no light to pass through it
11	What is refraction?	Change of direction of a wave when it passes from one medium into another
12	Why does light refract?	When a light ray enters a more or less dense medium it changes speed and therefore direction
13	How does light change direction when it enters a denser medium?	Towards the normal
14	How does light change direction when it enters a less dense medium?	Away from the normal
15	What is absorption?	When energy is transferred from a wave to a material

16	What is light scattering?	When light reflects off an object in different directions
17	Name 5 parts of the eye	Retina, iris, pupil, optic nerve, lens
18	State the function of the retina	Layer at the back of the eye with light detecting cells and where an image is formed
19	State the function of the pupil	Hole in the middle of the iris that allows light to pass through and enter the eye
20	State the function of the lens	Refracts light to focus on the retina
21	State the function of the optic nerve	Carries signals to the brain
22	What is the visible spectrum?	Band of colours of the rainbow made when white light is separated
23	Define a transverse wave	A wave where the vibration is perpendicular (at right angles) to the direction of energy transfer
24	Give some examples of transverse waves	Surface water waves, light, s-waves, electromagnetic waves (gamma, X-Ray, ultraviolet, visible light, infrared microwaves, radio)
25	What happens in transmission?	Waves pass through a material
26	What is colour?	A property of visible light determined by its frequency
27	Why do we see a green object as green?	It reflects green light and absorbs all other wavelengths
28	How does a blue filter work?	It transmits blue light and absorbs all other wavelengths

A. Adverbs and verbs		B. Food
1. Normalmente (normally)	desayun <u>o</u> (I eat for breakfast)	huevos (eggs)
2. Durante la semana (during the week)		jamón (ham)
3. Los fines de semana (at the weekend)	almuerz <u>o</u> (I eat for lunch)	salchichas (sausages)
4. Siempre (always)		tostadas con mantequilla (toast with butter)
5. Todos los días (every day)	cen <u>o</u> (I eat for dinner)	tostadas con mermelada (toast with jam)
6. A veces (sometimes)		galletas (biscuits)
7. Casi nunca (almost never)	com <u>o</u> (I eat)	fruta (fruit)
8. Nunca (never)		cereals con leche (cereal with milk)
9. Ayer (yesterday)	desayun <u>é</u> (I ate for breakfast)	zumo de naranja (orange juice)
	almorc <u>é</u> (I ate for lunch)	café o té (coffee or tea)
	cen <u>é</u> (I ate for dinner)	agua (water)
	com <u>í</u> (I ate)	carne (meat)
10. Mañana (tomorrow)	<u>voy a</u> desayun <u>ar</u> (I am going to eat for breakfast)	pescado (fish)
	<u>voy a</u> almorz <u>ar</u> (I am going to eat for lunch)	mariscos (seafood)
	<u>voy a</u> cen <u>ar</u> (I am going to eat for dinner_	verduras (vegetables)
	<u>voy a</u> comer <u>er</u> (I am going to eat)	pollo (chicken)
11. Nunca como carne (I never eat meat)	porque soy vegano/a (because I am vegan)	lentejas (lentils)
12. Nunca como pescado (I never eat fish)	porque soy vegetariano/a (because I am vegetarian)	arroz (rice)
13. Nunca como carne de cerdo (I never eat pork)	porque soy musulmán/+a (because I am muslim)	patatas fritas (chips/crisps)
14. Nunca como carne de vaca (I never eat beef)	porque soy hindú (because I am hindu)	pan (bread)
15. Nunca como lácteos (I never eat dairy)	porque soy alérgico/a (because I am allergic)	queso (cheese)
		pasta/pizza/curry
		pastel (cake)
		yogur (yoghurt)
		caramelos (sweets)

C. Opinions and reasons			
Me gusta comer (I like eating)	de todo (everything)	ya que	es/ son sano/a/ os/as (it is/they are healthy)
Me encanta comer (I love eating)			es/ son ligero/a/ os/as (it is/they are light)
Me chifla comer (I love eating)			es/ son riquísimo/a/ os/as (it is/they are delicious)
Me apetece comer (I feel like eating)			tienen mucho sabor (it has/they have a lot of flavor)
Prefiero comer (I prefer eating)			es/ son delicioso/a/ os/as (it is/they are delicious)
Mi comida favorita es el/la (My favourite food is)			es/ son picante/ s (it is/they are spicy)
			es/ son dulce/ s (it is/they are sweet)
No me gusta comer (I don't like eating)			es/ son asqueroso/a/ os/as (it is/they are disgusting)
Odio comer (I hate eating)			es/ son malsano/a/ os/as (it is/they are unhealthy)
Detesto comer (I detest eating)			es/ son grasiento/a/ os/as (it is/they are greasy)
No aguanto comer (I can't stand eating)	carne (meat)		es/ son demasiado salado/a/ os/as (it is/they are too salty)
			no tienen sabor (it doesn't have/they don't have flavor)

F. Question words
¿Qué? (What?)
¿Quién? (When?)
¿Cuándo? (When?)
¿Dónde? (Where?)
¿Por qué? (Why?)
¿Cómo? (How?)
¿Cuánto? (How much?)
¿Cuántos/as? (How many?)

D. Ordering at a restaurant
¿Usted, qué va a tomar? (What are you having? formal)
¿Qué vas a tomar? (What are you having?)
De primer plato voy a tomar... (For my starter I will have...)
De Segundo plato voy a tomar... (For my main I will have...)
De postre voy a tomar... (For dessert I will have...)
¿Y para beber? (And to drink?)
Para beber me gustaría... (To drink I would like...)
La cuenta, por favor (The Bill, please)
¿Cuánto es? (How much is it?)

E. Keeping fit	
Para mantenerme en forma (To keep in shape)	como comida sana (I eat healthy food)
	como mucha verdura (I eat a lot of veg)
	como mucha fruta (I eat a lot of fruit)
	casi nunca como comida basura (I almost never eat fast food)
	nunca bebo refrescos (I never drink fizzy drinks)
	bebo mucha agua (I drink a lot of water)
	hago deportes (I do sports)
	juego al fútbol (I play football)
	voy al gimnasio (I go to the gym)
	hago gimnasia (I do gymnastics)
	<u>no</u> hago <u>nada</u> (I don't do anything)

A Time phrases and verbs	
Por la semana (During the week)	llevo (I wear)
Los fines de semana (On the weekends)	suelo llevar (I tend to wear)
	llevamos (we wear)
El fin de semana pasado (Last weekend)	llevé (I wore)
Hace dos fines de semana (Two weekends ago)	llevamos (we wear)
El fin de semana próximo (Next weekend)	voy a llevar (I'm going to wear)
El fin de semana que viene (Next weekend)	vamos a llevar (we're going to wear)
	me gustaría llevar (I would like to wear)

B Clothes	C Descriptions
mi uniforme (my uniform)	a/de rayas (stripy)
un traje (a suit)	a/de cuadros (checked)
un chándal (a tracksuit)	de algodón (of cotton)
un vestido (a dress)	de cuero (of leather)
un abrigo (a coat)	de lana (of wool)
unos pantalones (trousers)	de seda (of silk)
unos vaqueros (jeans)	blanco/a/os/as (white)
unos zapatos (shoes)	negro/a/os/as (black)
una camiseta (a t-shirt)	amarillo/a/os/as (yellow)
una blusa (a blouse)	rojo/a/os/as (red)
una sudadera (a hoodie)	morado/a/os/as (purple)
una chaqueta (a jacket/blazer)	verde/s (green)
una falda (a skirt)	azul/es (blue)
una corbata (a tie)	gris/es (grey)
una camisa (a shirt)	marron/es (brown)
unas zapatillas de deportes (trainers)	naranja (orange)
unas botas (boots)	rosa (pink)

D Opinions		
me gusta mucho (I really like)	llevar (wearing)	mi uniforme (my uniform)
me fascina (I'm fascinated about)		ropa suelta (loose clothes)
		ropa ajustada (tight clothes)
		ropa de moda (fashionable clothes)
me encanta (I love)		ropa anticuada (old-fashioned clothes)
		ropa informal (informal clothes)
prefiero (I prefer)		ropa formal (formal clothes)
		ropa elegante (fancy clothes)
odio (I hate)		ropa casual (causal clothes)
		ropa deportiva (sportswear)
detesto (I detest)		ropa de trabajo (work clothes)
		el estilo punk (punk style)
no soporto (I can't stand)		el estilo hippie (hippy style)
		el estilo rapero (rapper style)

E reasons				
porque (because)	es (it's)	un poco (a bit)	bonito/a/os/as (nice)	
ya que (because)			bastante (quite)	precioso/a/os/as (beautiful)
				barato/a/os/as (cheap)
				estupendo/a/os/as (fantastic)
				nuevo/a/os/as (new)
dado que (because)		muy (very/really)	sencillo/a/os/as (simple)	
			único/a/os/as (unique)	
			elegante/s (elegant)	
			casual/es (casual)	
			cómodo/a/os/as (comfortable)	
debido a que (because)		extremadamente (extremely)	feo/a/os/as (ugly)	
			caro/a/os/as (expensive)	
			horroroso/a/os/as (horrible)	
			viejo/a/os/as (old)	
			raro/a/os/as (strange)	
			incómodo/a/os/as (uncomfortable)	
		asqueroso/a/os/as (disgusting)		