



Avonbourne Boys' & Girls' Academies

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Knowledge Organiser

Year 8 - 2026/27

Student Name: _____

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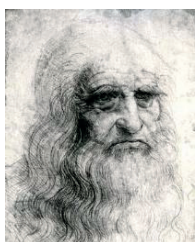
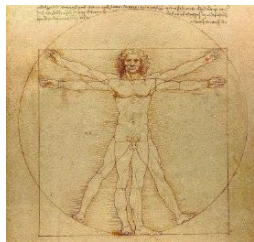
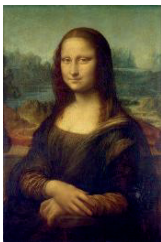
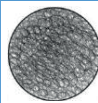
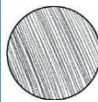
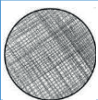
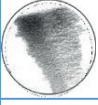
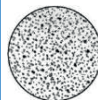
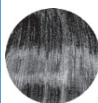
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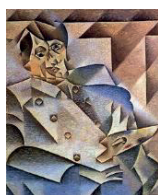
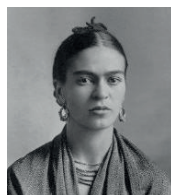
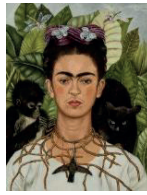
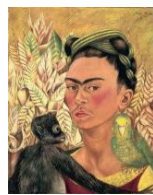
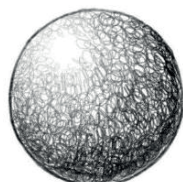
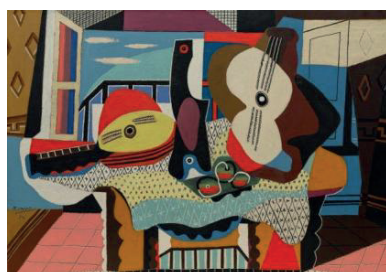
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Art

Art Year 8 Autumn Term – Portraiture and Anatomy

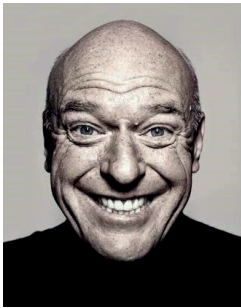
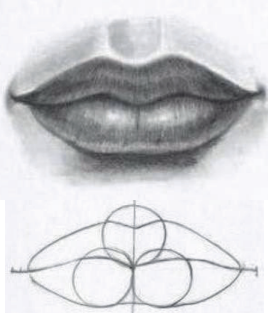
Leonardo Da Vinci		Pencil Techniques			Key Terms		
			Scumbling	Using small circular motions to create tone		Shape	A two-dimensional enclosed space built with line.
Date of birth	15th April 1452 (Florence, Italy)		Hatching	Closely spaced parallel lines		Proportion	The size relationship between different elements
Date of death	2nd May 1519 (France		Cross Hatching	Intersecting parallel lines		Chalk	A white soft earthy limestone (calcium carbonate) formed from the skeletal remains of sea creatures.
Nationality	Italian		Blending	Intermingling colours or values to create a gradual transition or to soften lines.		Charcoal	A porous black solid, consisting of an amorphous form of carbon, obtained as a residue when wood, bone, or other organic matter is heated in the absence of air.
Materials	Painter, draftsman, sculptor, architect, engineer.		Smudging	Smudging or smearing the pencil graphite after you have applied it to your drawing		Anatomy	Study of the human body
Education	Basic reading writing and maths		Pointillism / Stippling	Small dots placed closer or further apart to achieve a desired tone		Symmetry	When one side of an object mirrors the other.
	Apprenticed to Andrea del Verrocchio at 15		Highlights	Using a rubber to create a illuminated section, showing strong contrast from light and shadow		Accuracy	The extent to which one piece of work looks like another.
	Studied engineering, physics, chemistry, biology, maths, geology.		Directional Marks	Creating a sense of movement/direction with lines		Portrait	A painting, drawing, photograph, or engraving of a person, especially one depicting only the face or head and shoulders
Art Movement	Renaissance					Gradient	A smooth variation in tones from light to dark
Relationships	Never married					Observational drawing	Drawing from life. In art we recognise the benefit of drawing from objects that are sitting directly in front of you.
Inspiration	Anatomy, the human body and a desire for knowledge					Measuring	The process of finding the exact size, amount, or degree of something often using a ruler
Context, Concepts and Characteristics	Michelangelo, Leonardo da Vinci, Raphael knew each other and inspired by each other					Estimating	When we roughly calculate or judge the value
	The Vitruvian Man' created by Da Vinci was a guide for drawing figures, and the measuring the proportions of the human body					Contrast	The difference between the darkest black and the brightest white
	his sketchbooks reveal many ideas and inventions hundreds of years ahead of their time					Shadow	The dark shape that is created when an object blocks light
						Profile	The side view of a face
						Wash	A lighter layer of colour created by mixing paint with water
						Pencils	
						In art we use B pencils	

Art Year 8 Spring Term – Cubism and Culture

Juan Gris		Frida Kahlo		Cubism	
  		  		Key Features	Fragmentary images with multiple viewpoints Overlapping planes Subdued colours Emphasised lines by adding gradients
Date of birth	23rd March 1887 (Spain)	Date of birth	6th July 1907 (Mexico)	Analytical Cubism	Early Phase of Cubism (1908-1912) Artworks look more severe Made of interweaving planes which structurally dissect the subject, viewpoint by viewpoint, resulting in a fragmentary image of multiple view- points and lines Simplified palette of colours using muted tones of blacks, greys and ochres
Date of death	11th May 1927	Date of death	13th July (1954)		
Materials	Oil on Canvas, Gouache Paint, Crayons.	Materials	Oil paint		
Locations	Lived and worked most of his life in Paris, France	Education	Attended national preparatory school in New Mexico where she was one of 35 female students		
Education	Studied mechanical drawing at University in Madrid	Art Movement	Magical Surrealism	 	
Art Movement	Cubist	Relationships	Married Diego Rivera, unable to have children	Synthetic Cubism	Later Phase of Cubism (1912-1914) Simple shapes and brighter colours Often includes collage Began when artists started to add textures and patterns in their paintings
Relationships	Married to Josette Gris, son Georges Gonzalez – Gris	Inspiration	Herself and Mexican culture		
Inspiration	Artists and Matisse use of colour	Context, Concepts and Characteristics	Contacted Polio as a child Was hit by a bus as a teenager which resulted in many operations		
Context, Concepts and Characteristics	Artist friends such as Henri Matisse, Pablo Picasso and Georges Braque Studied painting with artist Jose Maria Carbonero	The Day of the Dead and Mexican symbolism			
Skill Building Tasks		Mexican holiday where family members gather to remember and pray for loved ones that have died. Families build ‘alters’ honouring the deceased relatives. These include calaveras (stone skulls), mari- golds and the favourite food/drink of the deceased family member.			
	Practice drawing a realistic eye. Ensure you press lightly with your 	Hummingbird	Freedom		
		Marigolds	Guide the human spirit using colour and smell		
		Mexican hairless dog/ monarch butterfly	Travelling spirit		
		Monkey	Protector		
	Draw a circle with your compass and practice using scumbling to create shadow and tone on the sphere Stretch: create the same shadows with only Hatching or Stippling	Black cat	Death or unlucky	 	

Art Year 8 Summer Term – Noh Mask and Totem Poles

Noh Mks		
What?	Masks used in traditional Japanese ritual and performance	
Dates	Dated back to the 8th Century	
Location	Japan	
Materials	Wood, cloth or clay	
Purpose	To represent characters/emotions during performance	
Value	Noh Masks are extremely valuable and are commonly passed down as heirlooms through families	
Types of Noh Mask		
Kishin Mask	Onna-Men Mask	Okina Mask
		
Demon masks	Women masks	Old men masks
Usually embellished with patterns, horns or colours	Commonly the most varied and popular masks	Oldest type of Noh masks
Usually display an angry expression/animalistic features	Categorised by age and character	Commonly have facial hair made from animal hair
Tints		
Tints are made by mixing a colour into white		

Key Terms	
Expression	The changes in facial features depending on mood/ emotion
Exaggeration	Representing something as being larger, better, or worse than it really is
Noh	Japanese traditional theatre
Symbolism	Use of an image or idea to represent something different.
Carving	Designs created by removing and incising using tools.
Commemorate	Recall and show respect for
Totem Pole	carved wooden pole used to honour important members of a tribe. Originated in northwest America
Potlatch Ceremony	ceremony used to honour deceased and distribute gifts and wealth.
Carving	Designs created by removing and incising using tools.
Animal Characteristics	Features taken from animals, symbolic of a character.
Skill Building tasks	
	
Use the portrait guide in your KO to draw an expressive mask based on the above reference	Practice drawing lips using the guide above. Add shadow and

Totem Poles	
	
What?	Hand carved columns first made by the early Native American tribes of the Northwest. Depicting supernatural beings and animals.
Date	Date back to the 19th century
Place	Pacific coast of the United States, the coast of British Columbia and all the way up to southern Alaska.
Material	Wood (tree trunk)
Function	To honour a deceased elder who was of great importance to the tribe, they are inspired by the animals inhabiting the northwest coast of America.
Key characteristics	Simplified features
	Blends human and animal characteristics together
	Animals are often shown sitting
	Common use of colour
	Carved by expert carvers and their apprentices. The experts would commonly carve the first 10ft as they knew this would be closely examined
	The animals are often symbolic of the deceased persons spirit
	Totems are comprised of 3D details
Size	It varies from 5 feet high and a few inches wide to 10 feet high and a few feet wide



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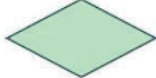
Computer Science

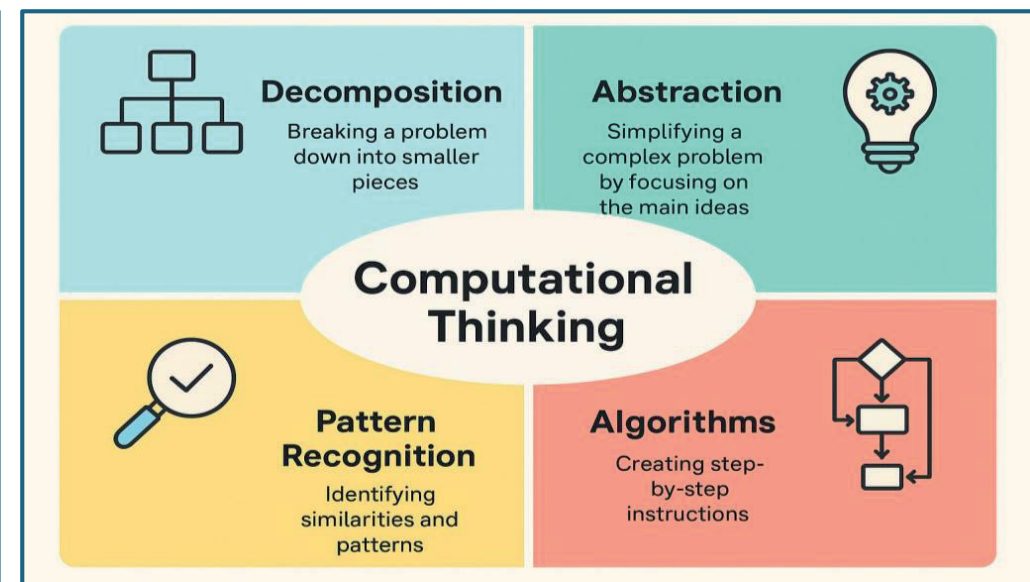
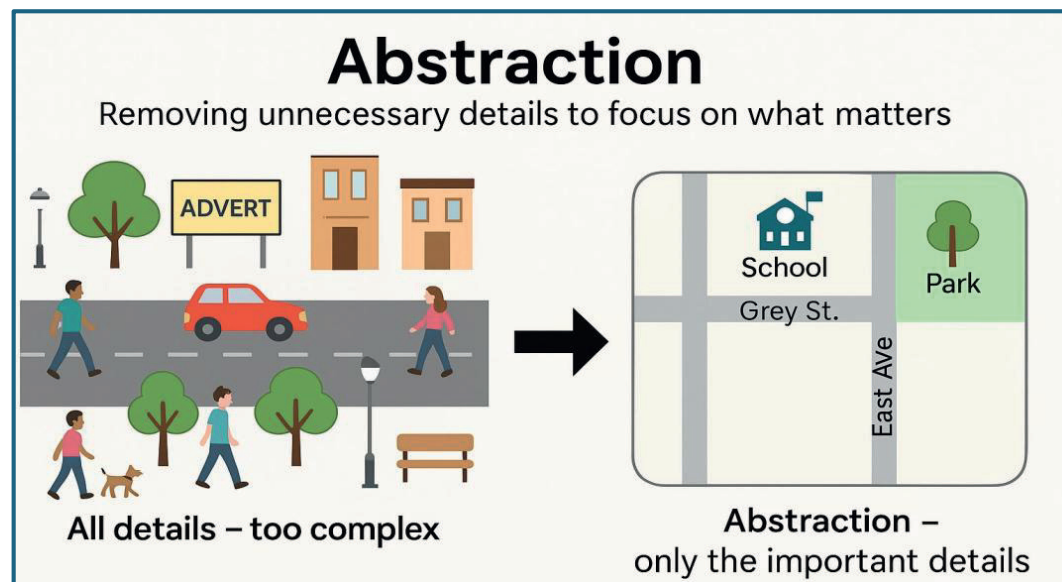
Computer Science – Computational Thinking

Key Vocabulary Terms

Autumn 1

Computational Thinking	A problem-solving approach that involves breaking down complex tasks into smaller, manageable parts to develop logical solutions.
Decomposition	The process of breaking a complex problem or system into smaller, more manageable components to simplify understanding and solution development.
Abstraction	The practice of removing unnecessary details from a problem to focus on the most important aspects relevant to finding a solution.
Debugging	The process of identifying and fixing errors or issues within a program or algorithm to ensure correct functionality.
Pattern Recognition	Identifying similarities or trends within problems to make predictions and develop efficient solutions.
Algorithm	A step-by-step set of instructions designed to solve a problem or complete a task systematically.

Symbol	Name	Function
	Oval	Represents the start or end of a process
	Rectangle	Denotes a process or operation step
	Arrow	Indicates the flow between steps
	Diamond	Signifies a point requiring a yes/no
	Parallelogram	Used for input or output operations



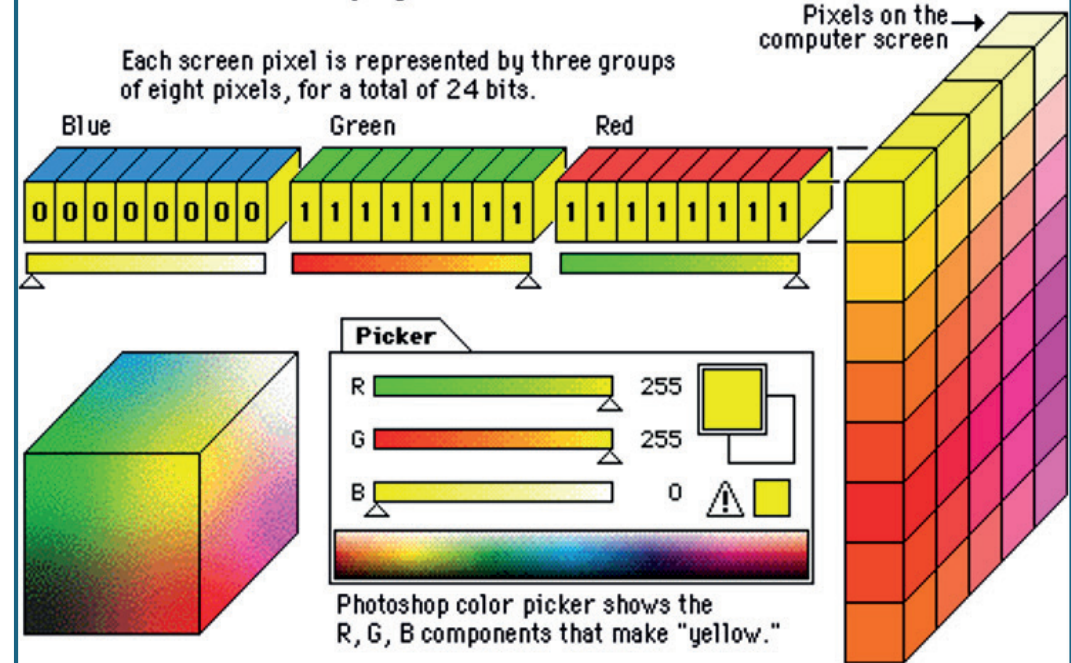
Computer Science – Data Representation

Key Vocabulary Terms

Autumn 2

Binary	A number system that uses only two digits, 0 and 1 , to represent data in computers.
Denary	The standard base-10 number system used in everyday life, using the digits 0–9 .
Character Set	A defined collection of characters that computers can recognise and process, such as letters, numbers, symbols, ASCII, and Unicode.
ASCII	A character encoding standard that represents text characters using binary numbers.
Bitmap Image	An image made up of pixels, where each pixel stores colour information as binary data.
Resolution	The number of pixels in an image, usually shown as width × height, which affects its clarity and quality.

24-bit “true color” displays



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

Place Values

Binary – Uses base 2, so each place value is multiplied by two, the above represents the number 202.
(128 + 64 + 8 + 2)

Denary – Uses base 10, so each place value is multiplied by ten, the number on the right is also 202.
(2 × 100) + (2 × 1)

100	10	1
2	0	2

Feature	ASCII	Unicode
What is it?	A simple character set used by computers.	A larger character set used by modern computers.
Characters included	Mainly English letters, numbers, and basic symbols.	Characters from many languages, plus symbols and emojis.
Size	Small.	Very large.
Example	A, B, 7, ?	A, 你, €, 😊
Used for	Basic English text.	Text from around the world.
Key idea	Good for simple English characters.	Can represent almost any character.

Computer Science – Python Programming

Key Vocabulary Terms

Spring 1

Sequence	The order in which instructions are executed in a program, ensuring the correct flow of logic.
Selection	A programming construct that allows decisions to be made based on conditions, using if and else statements.
Iteration	The process of repeating a section of code multiple times using loops such as for and while.
Condition	A test in a program that is either true or false.
Operator	A symbol used to perform an action or comparison, such as +, -, ==, or >.
Boolean	A value that can only be true or false.

Key Vocabulary Terms

Spring 2

RNG	Random Number Generator - The use of the random library to generate unpredictable outcomes in a program.
Debugging	The process of finding and fixing errors in a program to ensure it runs correctly.
IDE	Integrated Development Environment - A software tool that provides coding assistance, debugging features, and execution support for programming languages.
Syntax Error	A mistake in the rules of the code that stops the program from running.
Logic Error	A mistake where the program runs but gives the wrong result.
Comment	Text in code that explains what the code does but is ignored by the computer.

Python Programs

Username and Password Checker

```
username = "admin"
password = "1234"

user_input = input("Enter username: ")
pass_input = input("Enter password: ")

if user_input == username and pass_input == password:
    print("Access granted")
else:
    print("Access denied")
```

Weather Helper

```
weather = input("What is the weather today?")

if weather == "rain":
    print("Take an umbrella!")
elif weather == "snow":
    print("Wear your scarf, hat and gloves!")
else:
    print("Enjoy the lovely day!")
```

Random Number Generator

```
import random

number = random.randint(1,6)
if number == 1:
    print("One")
elif number == 2:
    print("Two")
```

Computer Science – Graphic Design & HTML

Key Vocabulary Terms

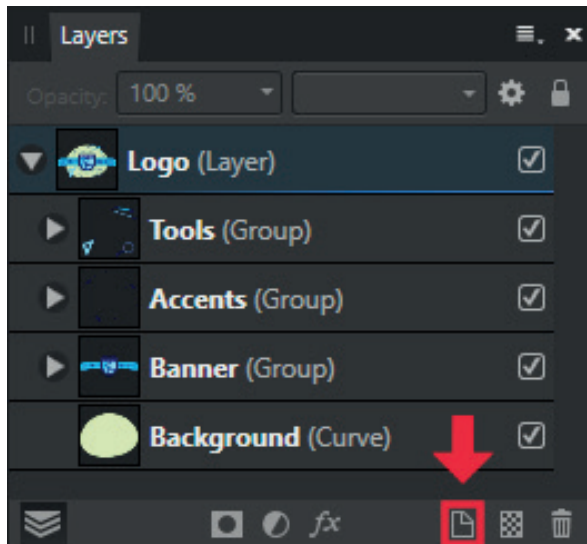
Summer 1

Design Brief	A document outlining the goals, target audience, and requirements for a creative project.
Layers	Separate elements in a digital design that can be arranged, edited, and manipulated independently.
Image Editing	The process of modifying an image using software tools to adjust aspects such as colour, size, and attributes.
Composition	The arrangement of visual elements within a design to create a balanced and effective layout.
Typography	The style and arrangement of text in a design, affecting readability and visual impact.
Contrast	The difference between elements, such as colours, shapes, or sizes, to create visual interest and focus.

Key Vocabulary Terms

Summer 2

HTML	A markup language used to structure content on the web.
Tag	A command within HTML that defines how elements appear or function.
Attribute	Additional information applied to an HTML tag to modify its behaviour, such as colour, size, or link destinations.
Hyperlink	A clickable link that connects one webpage to another.
Image Source (src)	An attribute that defines the file path of an image used in a webpage.
CSS	A stylesheet language used alongside HTML to control the visual appearance of webpages.



Layers

Affinity

Layers allow us to have an image which is made up of various sections. This means that we can edit one section of the image without it affecting the rest of the file.

We can think of these like cutouts when creating a collage, each part makes up the whole.

```
3 <html>
4 <head>
5   <title>F1 Website</title>
6   <link rel="stylesheet" href="styles.css" />
7   <link rel="icon" href="favicon.ico" type="image/x-icon" />
8   <script type="text/javascript" src="script.js"></script>
9 </head>
10
11 <body>
12   <!-- Add HTML markup elements for your web site below -->
13   <h2>Welcome to F1 Website!</h2>
14   <div>A website about formula 1</div>
15 </body>
16 </html>
```



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Design and Technology

Year 7 Design and Technology (Food) – Nutrition

Hygiene and safety	
Hazard	Anything that could cause harm
Food Poisoning	Illness caused by bacteria in food.
Bacteria	Single celled organisms, some can cause food poisoning
Cross Contamination	The spread of bacteria from one place to another
Food Hygiene	Food hygiene is the practice of handling, preparing, and storing food in a way that prevents foodborne illnesses
Personal Hygiene	Personal hygiene is practices such as washing your hands before handling food, never coughing, or sneezing over food, or where food is being prepared or stored.
Safety	This means working in a way to prevent any accidents or injuries such as tying back long hair, putting bags away, using the right equipment for the job

Practical skills	
Claw hold	Your little finger and thumb hold the food down and the knife briefly runs over your knuckles, keeping your finger tips safe from sharp blades.
Bridge hold	The food is held by the fingers and thumb creating a bridge. The knife should go through the bridge to cut the food.
Rubbing in	Using the fingertips to rub a solid fat such as butter or margarine into flour to create a fine breadcrumb texture
Boiling	The method of cooking food in boiling water. The boiling point of water is typically considered to be 100 °C
Baking	The method of preparing food that uses dry heat
Marinading	A mixture of oil, spices, or similar ingredients, in which food is soaked to flavour or soften it.

Chopping boards	
Red	Raw meat and poultry
Blue	Raw fish
Green	Salad vegetables and fruit
Brown	Root vegetables
Yellow	Cooked meat, poultry and fish
White	Dairy and bakery products



Eatwell guide food groups	
Yellow	Potatoes, rice, bread, pasta, and other starchy carbohydrates
Blue	Dairy and alternatives
Green	Fruits and vegetables
Pink	Beans, pulses, fish, eggs, meat and other proteins
Purple	Oils and spreads

Year 8 Design and Technology (Food) – Food Science

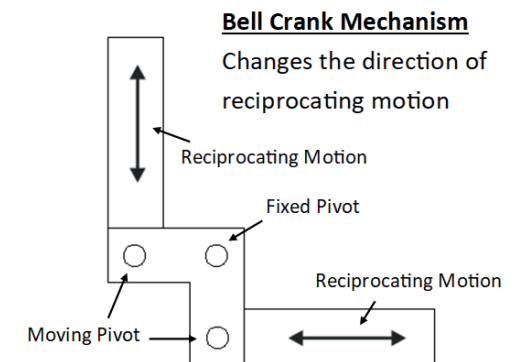
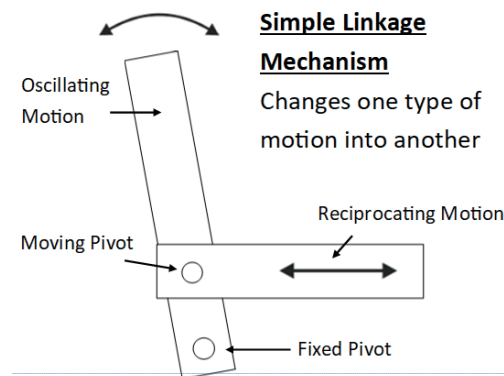
Hygiene and safety		Practical skills	
The 4 Cs	Principles in keeping food safe – cross contamination, cleaning, cooking, chilling	Kneading	Kneading is when you work the dough, usually by hand, for the purpose of developing the glutens in the flour, which is what gives bread its texture
Pathogens	A pathogen is an organism that causes disease	Melting	Changing a solid into a liquid when heat is applied.
Danger zone	Single celled organisms, some can cause food poisoning	Zesting	Scraping off the outer coloured part of the peel of (a piece of citrus fruit) to use as flavouring.
Binary fission	The spread of bacteria from one place to another	Stir fry	Frying food quickly over high heat in a lightly oiled pan (such as a wok) while stirring continuously.
Food poisoning	Illness caused by bacteria or other toxins in food, typically with vomiting and diarrhoea	Breading	Coating food in breadcrumbs (using egg and flour to help the breadcrumbs stick) before frying or baking.
Contaminate	Contamination is when unwanted bacteria, objects, or chemicals get into food making it unsafe to eat	Nutrition	
Pests	Pests are animals or insects that need to be kept out of the kitchen as they can carry food poisoning causing bacteria. Their hair and faeces could also contaminate the food.	Nutrients	A substance that provides nourishment essential for the maintenance of life and for growth.
Food science		Micronutrients	Micronutrients are vitamins and minerals needed by the body in very small amounts. However, their impact on a body's health are critical.
Food science	Food science is the study of the physical, biological (including microbiological) and chemical makeup of food.	Macronutrients	Macronutrients are the nutrients we need in larger quantities that provide us with energy: in other words, fat, protein and carbohydrate.
Raising agents	Substances that are added to baking mixtures which react chemically to release carbon dioxide which helps the product rise.	Protein	Protein is needed for the growth and repair of our cells. Its secondary function is providing energy.
Yeast	One celled fungus. They are used by bakers because they can produce carbon dioxide to make bread to rise.	Carbohydrates	Carbohydrates provide us with our main source of energy. They also provide use with fibre, which is important for our gut health.
Carbon dioxide	A chemical compound composed of one carbon and two oxygen atoms produced by raising agents to make a mixture rise.	Fats	Fat is needed for warmth, insulation, and protection in the body. It is also a secondary source of energy
Coagulate	The change in the structure of protein (from a liquid form to solid or a thicker liquid) brought about by heat, mechanical action or acids.		

Year 7 Design and Technology (Graphics) – Mechanical Card

ACCESSFM	
Aesthetics	How a product looks
Cost	How much a product costs to make or buy
Customer	Who a product is aimed at
Environment	Where a product will be used
Size	How big a product will be
Safety	How safe a product is, and how safe the manufacture of a product is
Function	What a product does
Materials	What a product is made from

The Design Process	
Task analysis	Picking apart a task to try and solve the problem within it
Mood board	A collection of images to help you when designing
Product Analysis	Investigating and evaluating products to find out more about them
Design brief	A statement saying what you are going to design and make
Specification	A list of points saying what your project is going to be and do
Model	Making part of your product to check that you like it and to check that it works

Mechanisms	
Motion	The ways in which things move
Mechanism	A device that you can make to transform one type of motion into another
Bell crank	Part of a mechanism that allows reciprocating motion to change direction
Collar	Holds the arms of a mechanism in place
Pivot point	The point that motions move around
Split pin	A small metal component used to make pivot points on cards
Linear	Motion that moves forwards in one straight line
Rotary	Motion that moves in a circular path around a fixed point
Oscillating	Motion that swings back and forth from a fixed point
Reciprocating	Motion that moves continuously, and repetitively, back and forth, up and down, or left to right



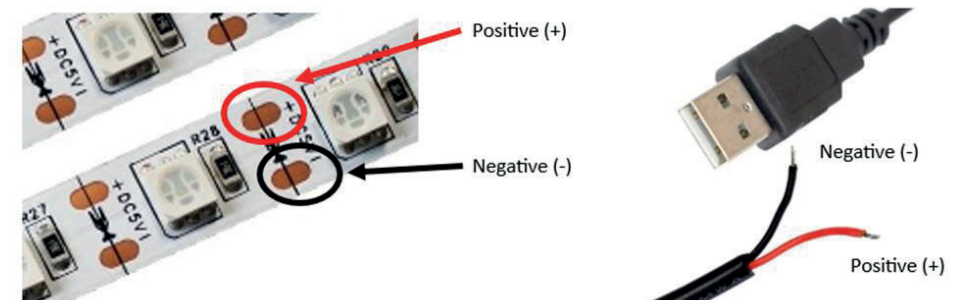
Year 8 Design and Technology (Product Design) – Mood Light

CAD/CAM	
CAD	Computer Aided Design
CAM	Computer Aided Manufacture
CNC	Computer Numerically Controlled
2D design	A programme on the computer that can be used to create drawings to be laser cut and engraved.
Laser cutter	A machine that uses a high-powered laser to cut and engrave materials

Materials and Equipment	
Acrylic	A polymer that can be recycled. Comes in lots of colours and different levels of transparency
Softwood	A type of timber from faster growing trees that is softer and easier to cut, as well as being cheaper
Led strip	An electronic component – a strip of LED lights that can be soldered on to
USB cable	A cable that will connect to a USB port to power the light
Solder	Thin metal that can be melted to form a connection in an electronic circuit
Soldering Iron	A pen – shaped device with a hot end used for melting solder onto circuits.

Workshop Tools	
Pencil 	Marking out equipment – used to make marks on timber.
Ruler 	Measuring equipment – used to measure accurate sizes
Tri Square 	Marking out equipment – used to mark out an accurate right angle
Bench Hook 	Cutting equipment – used to put your timber on to stabilise it when cutting
Tenon Saw 	Cutting equipment – used to cut straight lines in wood
Vice	Workshop equipment – used to hold you work still while you are marking, measuring or cutting
Sander	An abrasive machine used for smoothing out the surface of timber
Pillar drill	A machine used to drill holes
Hand held drill	A hand help power tool used for drilling holes

Soldering the LED light strip correctly

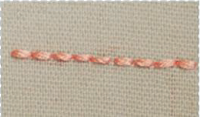
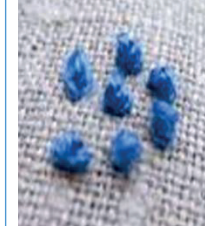
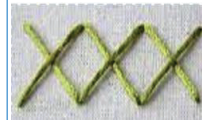


Year 7 Design and Technology (Textiles) – Embellished Seascapes

Key Terminology

Embellish	To make (something) more attractive by the addition of decorative details or features.
Embroidery	The method used for decorating fabrics with a needle and a thread.
Pattern	A repeated decorative design.
Organic shapes	Shapes with a natural look and a flowing, curving appearance.
Geometric shapes	Precise and regular, like squares, rectangles, and triangles. Often found in human-made things.
Simplify	To make something less complicated.
Composition	The arrangement of elements within a work of art.
Thread	A long, thin strand of cotton, nylon, or other fibres used in sewing or weaving.
Bondaweb	A soft adhesive used for joining fabric layers together
Moodboard	A collection of visual images to show your thoughts and ideas
Textile artist	An artist / designer who creates their pieces using fabrics, stitches and other textile materials

Types of Stitch

				
Back Stitch	Running Stitch	Satin Stitch	French Knots	Cross Stitch

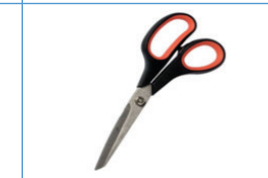
Francesca Colussi Cramer



A textile artist and designer based in North Wales, UK.

- Studied Literature and Women's History in Italy, then went to do a degree in textile design in the UK
- Her design work has been acquired by fashion and interior design brands such as Boden, Ikea and Nike.
- She transforms and re-purposes found images, vintage postcards and photographs through a contemporary, three-dimensional viewpoint
- She has exhibited at New Designers in London, and Premiere Vision in Paris

Textiles Equipment

			
Ironing Board	Sewing Machine	Tape Measure	Pin Cushion
			
Pins	Needle	Iron	Fabric Scissors

Year 8 Design and Technology (Textiles) – Aerial Weaving

Key Terminology

Weave	The process of interlocking two threads to create a fabric
Loom	A tool used to weave cloth and tapestry. It stretches the warp threads to help weave in the weft threads.
Warp	The yarn that is wound onto the loom.
Weft	The yarn that is woven over and under the warp threads.
Balanced Weave	A weave containing equal amounts of warp and weft.
Beat	To apply downward pressure on the weft threads.
Interlock	A weaving technique in which two weft ends loop around each other when they meet.
Tension	The amount of tautness put on the warp threads.
Weaver's knot	A simple knot used by weavers so that threads may be clipped close to the knot without coming apart.
Yarn	Fibrous threads used to make fabric
Slit	Weaving two colours horizontally and leaving a gap between them.
Fibres	A natural or synthetic filament that may be spun into yarn, such as cotton or nylon.
Natural fibres	Any hair-like, raw material from an animal, vegetable or mineral source that is spun and converted into yarn, such as cotton or silk.
Man made fibres	A type of fibre that is made artificially, such as polyester or rayon.

Tammy Kanat



- Large scale textile artist inspired by the Australian landscape
- Started as a jewellery designer before moving to textiles
- Enrolled in the Australian Tapestry Workshop in 2011
- Exhibition in 2014 "Spirit" for her hand-woven wall art
- Gained international recognition through social media
- Artworks are inspired by organic shapes found in nature - tree trunks and geological formations such as agate
- Inspired by the textile artist Sheila Hicks

Types of Weaving



Tabby

Soumak

Interlock

Types of Fabric



Woven fabric

Non-woven fabric

Knitted textiles



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English

English – Social Justice Poetry

Chanting – Key Subject Vocabulary		Chanting – Key ROA Terminology	
Term	Definition	Term	Definition
Oppression (noun)	Continued, cruel, and unjust treatment which takes away peoples' rights and freedoms.	Refrain	A repeated line, or number of lines, in a poem.
Dictatorship (noun)	A government run by a dictator (someone who has absolute power and uses this power in an unfair and cruel way).	Extended Metaphor	A metaphor that is developed throughout a poem.
Collective Responsibility (noun)	A situation where individuals are held responsible for the wellbeing of everyone in society.	Juxtaposition	Two or more contrasting ideas, images or words are placed side by side.
Discrimination (noun)	When a person or group are treated unfairly because of a certain characteristic.	Free Verse	Poetry without a formal rhythm or rhyme scheme.
Social Justice (noun)	Fairness in society.	Enjambment	The flowing over of one poetic line into the next with no punctuation.
Big Ideas			
Poem	Big Idea (S1)	Moment (S2)	Method (S3)
Caged Bird	Big Idea 1: Angelou presents oppression as restrictive, restrained, and repressive.	'His wings are clipped , and his feet are tied '	Verbs 'clipped' 'tied': Suggest that the bird is imprisoned and cannot fly freely.
		'The caged bird sings with a fearful trill of things unknown but longed for still'	Refrain: Creates a cyclical structure and reflects how oppression is an unending cycle.
	Big Idea 2: Angelou portrays oppression as miserable and soul destroying.	'A bird that stalks down his narrow cage can seldom see though his bars of rage '	Sibilance, Rhyming Couplet: Rigid rhyme scheme reflects the rigid oppression.
		'A caged bird stands on the grave of dreams '	Metaphor, Oxymoron: The oxymoron suggests that oppression has corrupted and destroyed the joy of dreaming.
Not My Business	Big Idea 1: Osundare presents the dictatorship as violent and unjust.	'And dragged Danladi out'	Alliteration, First Name: Repeated plosive 'd' sounds echo the violent acts of dictators. First name humanises the victim, creating sympathy and outrage.
		' No query, no warning, no probe'	Triple/Tricolon: Emphasises how many freedoms/rights the dictatorship has taken from people.
	Big Idea 2: Osundare presents the dictatorship as brutal.	'And stuffed (Akanni) down the belly /Of a waiting jeep'	Metaphor: Suggests the Jeep is a predatory monster devouring its prey.
		'Beat him soft like clay '	Simile: Demonstrates how people are being shaped and controlled by others.

English – Animal Farm

Chanting – Key Subject Vocabulary		Chanting – Key ROA Terminology	
Term	Definition	Term	Definition
Communism (noun)	All people live as equals.	Allegory	A story with both a literal and a symbolic meaning.
Totalitarianism (noun)	Centralised control by a dictator.	Rhetoric	The art of persuasive speaking or writing.
Dictator (noun)	A leader who possesses absolute power.	Fable	A story that teaches a moral lesson.
Democracy (noun)	A form of government in which all people have a right to vote.	Satire	Using humour to criticise.
Proletariat (noun)	The working class.	Propaganda	Material used to make people think a certain way.
Bourgeoisie (noun)	The wealthy, middle class who control means of productions e.g. factories.		
Big Ideas			
Big Idea (S1)		Moment (S2)	
Big Idea 1: Napoleon is an example of a totalitarian leader who rules with fear and violence, proving that too much power can lead to corruption .	'All animals are equal but some animals are more equal than others.'		Oxymoron: Exposes the corruption of Napoleon by revealing how he believes he is superior to the other animals
	'there would be no more debates.'		Declarative: Creates a dominant, assertive tone and suggests that Napoleon is a dictator who will not listen to his people.
Big Idea 2: Boxer is portrayed as a victim of totalitarian leadership who sacrifices his own life for the sake of others.	'Boxer worked harder than ever .'		Hyperbole: Emphasises the effort Boxer puts into his work and shows how he is willing to do anything to help others.
	'Boxer refused to take even a day off work, and made it a point of honour'		Verb 'refused': Shows how Boxer prioritises work over his own health creates sympathy for him.
Big Idea 3: Squealer is presented as cunning, scheming and manipulative ; he uses propaganda to persuade the animals to his way of thinking.	"Jones would come back! Yes, Jones would come back!"		Repetition/Exclamative: Squealer is trying to frighten the other animals to manipulate them into agreeing with him.
	'It is for your own sake that we drink that milk and eat those apples.'		Pronouns: 'We' suggests that the animals are a team and manipulates them into feeling guilty for accusing the pigs of selfishness.
Key Themes			
Power and Corruption		Totalitarianism	Equality and Inequality
			

English – Shakespeare

Chanting – Key Subject Vocabulary		Chanting – Key ROA Terminology	
Term	Definition	Term	Definition
Malevolence (noun)	Evil hostility.	Dramatic Irony	When the audience understands something about a character's actions or an event, but the characters do not.
Infamous (adjective)	Well known due to a bad reputation.	Soliloquy	A speech in drama when a character speaks directly to the audience, expressing their inner thoughts and feelings.
Notorious (adjective)	Well known or famous for a bad quality or deed.	Machiavellian	Cunning, scheming or unscrupulous, especially in politics.
Amorality (noun)	A lack of moral principles.	Usurp	To take a position of power illegally or by force.
Great Chain of Being (noun phrase)	Hierarchy of everything as decided by God.	Anaphora	The repetition of a word or phrase at the start of clauses or poetic lines.
Big Ideas			
Big Idea (S1)	Moment (S2)	Method (S3)	
Big Idea 1: Shakespeare presents Richard as power hungry, once he gains power, he feels determined to keep that power at all costs.	‘Plots I have laid, inductions dangerous, By drunken prophecies, libels and dreams .’	Tricolon: Emphasises how many methods Richard has used to gain power.	
	‘I’ll have her; but I will not keep her long.’	Verbs 'have' 'keep': Show Richard's power over Anne as he claims ownership of her and refuses to release her from his power.	
Big Idea 2: Moreover, Shakespeare characterises Richard as villainous as he is willing to go to any length to betray his family in order to become king.	‘I am determined to prove a villain.’	Declarative: Creates an assertive, confident tone and suggests that he will be villainous no matter what.	
	‘I that am rudely stamped .’	Verb 'stamped': Suggests that he has been permanently marked by God, so has no choice but villainy.	
Big Idea 3: Shakespeare initially presents Lady Anne as a victim of gender stereotypes: Elizabethan women had no power and needed a husband to support them and retain their position in society.	‘To take her in her heart’s extremest hate,’	Superlative: Highlights the lack of choice women had as, despite her extreme hatred of him, Anne is forced into marrying Richard.	
	‘For thou hast made the happy earth thy hell ,’	Religious imagery: Emphasises the suffering Anne experiences and creates sympathy for her.	
Key Themes			
Power	Evil	Gender	
			

English – Creative Writing

Chanting – ROA Grammar		Chanting – Key ROA Terminology	
Term	Definition	Term	Definition
Concrete Noun	General names (e.g. table, chair).	Simile	Comparison using like or as.
Abstract Noun	Ideas you cannot touch (e.g. freedom, love).	Metaphor	Comparison stating one thing is another.
Collective Noun	A name for a group.	Foreshadowing	Hinting at future events.
Proper Noun	A specific name (e.g. London). Always capitalised.	Personification	Giving human qualities to non-human things.
Noun Phrase	A noun and its describing words.	Pathetic Fallacy	Nature mirroring human emotions.
Crafting Creative Sentences			
More, More, More Sentences/Less, Less, Less Sentence		Nor, Nor, Nor Sentence	
What is it? A complex sentence that uses the words more or less at the start of three clauses that follow on from each other. The repetition of words at the start of consecutive clauses is also known as anaphora .		What is it? This sentence use negatives to emphasise a point. ‘Nor’ is used as a conjunction here highlighting other things that are absent or untrue. This is useful to stress a point you are making; it is adding emphasis.	
What does it look like? <i>The less the light trickled through, the less it caught the thin branches, the less it touched the oddly shaped rocks at the feet of the trees.</i>		What does it look like? <i>Not a single animal, not the rabbits I had seen on the meadow, nor the mice whispering in the grass, nor even the spiders and beetles came so deeply into the forest’s reach.</i>	
The So So Sentence		Three Verb Sentence	
What is it? This is a sentence that embeds two phrases that begin with so. It will add emphasis to the focus of your sentences.		What is it? Verbs are words that indicate a physical action (e.g. write), a mental action (e.g. think) or a state of being (e.g. exist)	
What does it look like? <i>There was the faintest glimmer, so small, so distant, it didn’t seem to exist.</i>		What does it look like? <i>The monstrous fungi billowed, swelled, rose up and up, surrounding the base of every tree.</i>	
ROA Core Skills			
Writing		Speaking	
			
			

English – Creative Writing

Chanting – Gothic Terminology		Chanting – Key ROA Terminology			
Term	Definition	Term	Definition		
Gothic Fiction	Stories featuring dark settings, fear and decay.	Simile	Comparison using like or as.		
The Sublime	The overwhelming beauty and terror of nature or a powerful force.	Metaphor	Comparison stating one thing is another.		
Vulnerability	Feeling small, insignificant or at risk.	Foreshadowing	Hinting at future events.		
Foreboding	A feeling that something bad is coming.	Personification	Giving human qualities to non-human things.		
Ominous	An atmosphere that suggests looming danger.	Pathetic Fallacy	Nature mirroring human emotions.		
Core ROA Reading Terminology					
Term	Definition	Example			
Antithesis	The use of direct opposites.	Juxtaposing the ‘cold night’ outside with the ‘bright fire’ inside in <i>The Monkey's Paw</i> .			
Epistolary Form	A story told through a series of documents.	Using diary entries , letters , and journals in <i>Dracula</i> to make the story feel like real evidence .			
The Supernatural	Elements that cannot be explained by science or the laws of nature.	The malevolent monkey’s paw or the three female vampires that Jonathan Harker encounters.			
Constructs	Viewing the text as a deliberate creation: the writer makes specific choices to manipulate the reader.	Stoker deliberately building a crumbling, remote castle setting to create a frightening atmosphere.			
Register	The level of formality in the language used e.g. formal vs casual.	Using a formal register with words like ‘parlour’ and ‘possessed’ to make a family seem respectable.			
Tone	The writer's attitude or the specific mood they create for the reader.	Shifting from an amiable (friendly) tone to one that is ominous (threatening/sinister).			
ROA Core Skills					
Writing		Reading		Speaking	
					

English – Dystopian Fiction

Chanting – Key Subject Vocabulary

Term	Definition
Dystopia	An imagined place or state in which everything is bad.
Utopia	An imagined place or state in which everything is good.
Nihilism	The belief that life is meaningless.
Tyranny	Cruel, unreasonable or oppressive rule or government.
Fatalistic	The belief that all events in life are predetermined.

Chanting – Key ROA Terminology

Term	Definition
Dehumanise	To take away someone's humanity.
Exposition	The opening of a narrative where setting and characters are introduced.
Foreshadowing	Hints that suggest what will happen later in a narrative.
Semantic Field	A group of words linked to a theme or idea.

Key Themes

Power



Control



Mystery



Big Ideas

Story	Big Idea (S1)	Moment (S2)	Method (S3)
Examination Day	Big Idea 1: Slesar presents Dickie as unique and intelligent in a world which values conformity.	'What makes it green though? The grass?'	Interrogatives: Repeated questions imply that Dickie is curious about the world.
		'He was an alert-eyed youngster'	Adjective: Implies that Dickie is very intelligent as he is aware of everything around him.
	Big Idea 2: Ultimately, Slesar warns the reader about the risks of totalitarian governments , suggesting that excessive power leads to corruption.	'Your classification number is 600-115'	Noun Phrase: Dehumanises Dickie and emphasises the callous cruelty of the totalitarian society.
		'The room was as cold and official as a courtroom'	Simile: Highlights how the government uses their power to judge and punish citizens.
The Lottery	Big Idea 1: Tessie's protests foreshadow the horrific outcome of the lottery, highlighting her powerlessness and vulnerability .	'You didn't give him time enough to take any paper he wanted. I saw you. It wasn't fair!'	Short Sentences/Exclamative: Creates a sense of urgency and reflects Tessie's terrified panic.
		'I think we ought to start over' Mrs Hutchinson said, as quietly as she could.	Adverb: 'Quietly' conveys Tessie's vulnerability as she has realised that her protests are futile and will not be heard.
	Big Idea 2: Arguably, Jackson creates a sense of mystery during the exposition of the story through the characterisation of the villagers.	'their jokes were quiet and they smiled rather than laughed'	Auditory Imagery: Creates an uneasy, eerie silence that suggests there is a hidden danger.
		' clung to the hands of their older brothers or sisters'	Verb: Suggests a desperate need for support and comfort making us wonder why the children are afraid.



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Religious Studies

1. Key Vocabulary

Term	Definition
Abu Bakr	The first Caliph chosen by Sunni Muslims after Muhammad's death
Ali	Muhammad's cousin and son-in-law, considered by Shia Muslims as his rightful successor
Allah	The Arabic word for God in Islam
burqa	A full-body covering worn by some Muslim women for reasons of modesty
caliph	A leader in Sunni Islam who succeeded Muhammad in leading the Muslim community
charity	Giving to those in need, especially through zakat
Constitution of Medina	A document created by Muhammad to establish peace and cooperation in Medina
Eid-al-Fitr	A festival marking the end of Ramadan
Fatima	Muhammad's daughter, especially respected in Shia Islam
Hadith	Recorded sayings and actions of Muhammad
Hajj	A pilgrimage to Makkah that Muslims aim to complete once in their lifetime
hijab	A headscarf worn by some Muslim women as a sign of modesty
Hijrah	The migration of Muhammad and his followers from Makkah to Medina
imam	A leader in Shia Islam or someone who leads prayer in Sunni Islam
Islam	A monotheistic religion revealed to the Prophet Muhammad

2. Key Vocabulary

Term	Definition
Jahannam	Hell; a place of punishment after death for those who reject faith or do wrong
Jannah	Paradise; a place of reward after death for the righteous
Kaaba	The sacred cube-shaped structure in Makkah that Muslims face during prayer
Khadija	Muhammad's first wife and the first person to accept Islam
Makkah	The birthplace of Muhammad and the holiest city in Islam

3. Religious Authority

Term	Definition
Qur'an	The holy book of Islam, believed to be the literal word of God
Surah	A chapter of the Qur'an
Muhammad	The final prophet in Islam, believed to have received the Qur'an
Sunnah	The example of Muhammad's life used as a guide by Muslims

4. Tools for studying religion

Term	Definition
Theology	Theology is the study of God and ideas about God. Theologians look at how ideas about God influence beliefs in religions and the actions people will do.
Social Scientists	Social Scientists use evidence to see how people are influenced by society. Social Scientists look at patterns in what people believe about God and how this may change due to time and place.

RE – Introduction to the Dharmic Faiths

1. Key Vocabulary

Term	Definition
atman	The Hindu idea of the soul, the true self, which is reincarnated through a cycle of many lifetimes.
Bhakti Yoga	Hindu spiritual path of devotion focusing on loving and worshipping the divine.
Brahman	(In Hindu Dharma) the one, divine ultimate reality.
Buddha	A title meaning “Enlightened One.” It refers to Siddhartha Gautama.
Buddhism	Dharmic faith that teaches people how to end suffering by following the Buddha’s teachings.
dastar	A turban worn by some Sikhs to show respect for their faith and identity.
dharma	Often translated as ‘duty’, it includes human behaviour, justice and living in harmony with the world.
Diwali	Hindu festival of lights celebrating the victory of good over evil in the Ramayana.
Gurdwara	A Sikh place of worship where people pray, sing and share food.
Guru	A spiritual teacher. In Sikhi, there were ten human Gurus who taught important lessons.
Hindu	A person who follows Hindu Dharma.
Hindu Dharma	A Dharmic faith that teaches people how to live well by following their duty (dharma), seeking truth and aiming for spiritual freedom (moksha).
Jnana Yoga	A spiritual path in Hindu Dharma that focuses on learning about God through study, thinking and wisdom.

2. Key Vocabulary

Term	Definition
karma	In Hindu Dharma, the idea that actions and choices have consequences; good actions lead to positive outcomes in future lives and bad actions lead to suffering.
Karma Yoga	A spiritual path in Hindu Dharma that focuses on doing your duty and helping others without being selfish.
Krishna	Hindu deity known for his wisdom, kindness and playful nature (an avatar of Vishnu). He taught Arjuna in the Bhagavad Gita.

3. Religious Authority

Term	Definition
Bhagavad Gita	(One of many Hindu sacred texts) narrative in which Lord Krishna teaches Arjuna about life, duty, and making good choices.
Vedas	Oldest and most important texts in Hindu tradition. Ancient scriptures including hymns, prayers and teachings.
Siddhartha Gautama (The Buddha)	A man who became the Buddha after discovering how to overcome suffering.
Guru Nanak	The first Sikh Guru and the founder of Sikhi.

4. Tools for studying religion

Term	Definition
Theology	Theology is the study of God and ideas about God. Theologians look at how ideas about God influence beliefs in religions and the actions people will do.
Social Scientists	Social Scientists use evidence to see how people are influenced by society. Social Scientists look at patterns in what people believe about God and how this may change due to time and place.

RE – Hindu Dharma

1. Key Vocabulary

Term	Definition
Brahman	The one, divine ultimate reality. Everything comes from Brahman and returns to it.
Atman	The Hindu idea of the soul — the true self that lives on after the body dies.
Moksha	Freedom (liberation) from the cycle of birth, death and rebirth (the ultimate goal in Hindu Dharma), where the soul becomes one with the divine.
Deity	Preferred term for a god or goddess. In Hindu Dharma, there are many deities, each representing aspects of Brahman.
Monotheism	Belief in one God. Some followers of Hindu Dharma include monotheistic ideas, even though there are many deities.
Polytheism	The belief in many gods.
Pantheism	The belief that God is present in everything; in nature, people, and the universe.
Brahma	Hindu deity of creation, part of the Trimurti (Brahma, Vishnu, and Shiva).
Vishnu	Hindu deity known as the protector of the universe (one of the Trimurti). He appears in many forms (avatars) to help restore balance in the world.
Shiva	Hindu destroyer deity. He helps make way for the new and brings balance (one of the Trimurti).

2. Key Vocabulary

Term	Definition
Trimurti	Three main deities in Hindu Dharma (Brahma the creator, Vishnu the protector, and Shiva the destroyer), who together keep the universe in balance.
Avatar	A deity appearing on Earth in human or animal form to help restore balance and protect good.
Vedas	Oldest and most important texts in Hindu tradition. Ancient scriptures including hymns, prayers, and teachings.

3. Religious Authority

Term	Definition
Bhagavad Gita	One of many Hindu sacred texts. A narrative in which Lord Krishna teaches Arjuna about life, duty, and making good choices.
Vedas	Oldest and most important texts in Hindu tradition. Ancient scriptures including hymns, prayers and teachings.
Dharma	A person's duty; doing what is right for you, your role, and your community.

4. Tools for studying religion

Term	Definition
Theology	Theology is the study of God and ideas about God. Theologians look at how ideas about God influence beliefs in religions and the actions people will do.
Social Scientists	Social Scientists use evidence to see how people are influenced by society. Social Scientists look at patterns in what people believe about God and how this may change due to time and place.

RE – Buddhism

1. Key Vocabulary

Term	Definition
Buddha	A title meaning 'Enlightened One'. It refers to Siddhartha Gautama.
Buddhism	Dharmic faith that teaches people how to end suffering by following the Buddha's teachings.
Siddhartha Gautama	A man who became the Buddha after discovering how to overcome suffering.
Caste	A system that divides people into social groups based on birth.
Four Sights	The four things Siddhartha Gautama saw (an old man, a sick person, a dead body and a holy man) that made him realise that life involves suffering.
Ascetic	A person who lives a very simple life, often giving up comfort and pleasures to focus on spirituality.
Middle Way	The Buddha's teaching that people should avoid extremes (too much luxury or too much suffering) and live a balanced life.
Bodhi Tree	The tree under which Siddhartha Gautama meditated and became enlightened.
Tripitaka	The main Buddhist holy texts, also known as the 'Three Baskets', which contain the Buddha's teachings.
Four Noble Truths	The Buddha's key teachings explaining that life involves suffering, what causes it and how to overcome it.
Dukkha	A Buddhist word meaning suffering, dissatisfaction or unhappiness in life.
Nirvana	A peaceful state of mind in Buddhism where there is no more suffering or desire.
Eightfold Path	Eight habits taught by the Buddha to help people live a good life and reach enlightenment.

2. Key Vocabulary

Term	Definition
Dharmachakra	A symbol of Buddhism known as the 'Wheel of Dharma', representing the Buddha's teachings.
Meditation	A practice where people focus their mind to become calm, aware and closer to understanding life.
Three Jewels	Also known as the Three Refuges: the Buddha (teacher), the Dharma (teachings) and the Sangha (community).
Five Precepts	Five basic rules Buddhists try to follow, such as not harming living things, and telling the truth.
Metta	Loving-kindness: showing care and goodwill towards all living beings.
Karuna	Compassion: actively helping others to reduce their suffering.
Theravada	A branch of Buddhism that focuses on the original teachings of the Buddha and individual enlightenment.
Mahayana	A branch of Buddhism that focuses on helping all beings reach enlightenment.
Bodhisattva	A person who is close to enlightenment but chooses to stay and help others achieve it first.

3. Tools for studying religion

Term	Definition
Theology	Theology is the study of God and ideas about God. Theologians look at how ideas about God influence beliefs in religions and the actions people will do.
Social Scientists	Social Scientists use evidence to see how people are influenced by society. Social Scientists look at patterns in what people believe about God and how this may change due to time and place.



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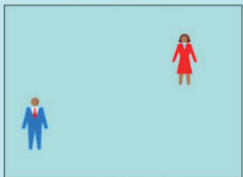
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Geography

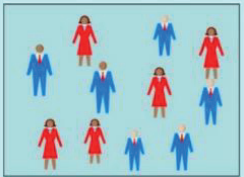
Geography – Population

1. How is our population distributed globally?

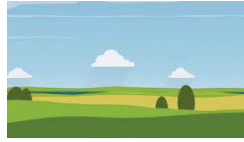
Term	Definition	Example
Population distribution	The spread of people across an area	Even or uneven
Population density	Number of people per km ²	Sparse or dense



Sparsely populated = few people per km²



Densely populated = many people per km²



Rural = Countryside



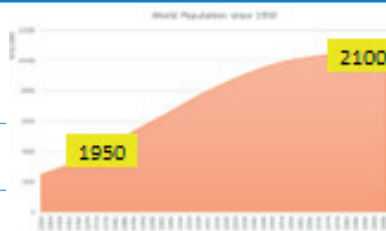
Urban = Towns/cities

2. What influences population distribution?

Physical factors	Relief	Steep ground is expensive to build on (no shelter).
	Climate	Too cold or too hot to grow crops (no food).
	Soil fertility	Crops do not grow if soil is infertile (no food).
Human factors	Job opportunities	If few jobs, people cannot gain an income (make money).
	Basic services	People are attracted to good quality education and healthcare.

3. How is the world's population changing?

Population explosion	World population has exploded since 1950 and will peak in 2100. Growth is mostly in LICs/NEEs.
Natural increase	When birth rates are greater than death rates.
Birth rate (BR)	Number of babies born per 1,000 of the population, per year.
Death rate (DR)	Number of people who die per 1,000 of the population, per year.
Overpopulation	Too many people for the resources available in an area. No food = starvation. No clean water = disease like cholera.



4. Why do birth and death rates change over time?

Factors affecting birth rate

Access to contraception	This means that women are able to stop themselves becoming pregnant, therefore they may choose to have less babies (birth rate decreases).
Expensive childcare	This means that working people may only be able to afford to pay for one child to be looked after, therefore they may be unable to have lots of babies (birth rate decreases).

Factors affecting death rate

Access to safe drinking water	This means that people do not have to drink dirty water. Therefore, they are less likely to become sick from diseases such as cholera (death rate decreases).
Access to food	This means that people can get the food that they need to stay healthy therefore people are less likely to be weak/sick and die (death rate decreases).

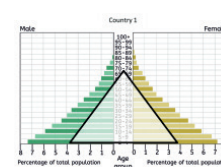
Factors that affect both birth rate and death rate

Access to healthcare	Fewer children die young, and fewer babies are born, as more are surviving.
Access to education	Girls understand how not to have babies, and health awareness also improves.

5. What are population pyramids?

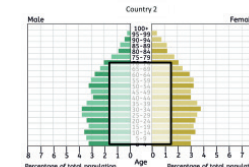
Population structure	Number of people in each age range, separated into gender.
Economically active	Working age, so pay taxes to the government (16-65 years old)
Young dependents	Not yet working and paying taxes (15 and under).
Elderly dependents	No longer working and paying taxes, retired, receiving a pension (65+).

How do population pyramids change over time?



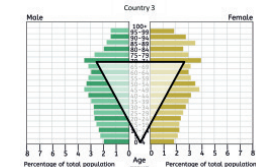
LIC

Wide base = high birth rate
Low height = low life expectancy
Triangle shape



NEE

Narrowing base = decreasing birth rate
Taller height = longer life expectancy
Rectangle shape



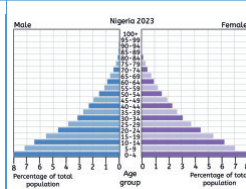
HIC

Very narrow base = very low birth rate
Very tall height = very long life expectancy
Upside down triangle shape

Geography – Population

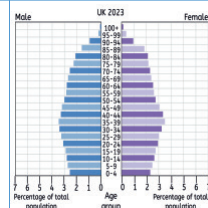
6. What are youthful and ageing populations?

What do their population pyramids look like?



Youthful Population Nigeria

- Wide base = High birth rate
- Short height = Low life expectancy



Ageing Population The UK

- Narrow base = Low birth rate
- Tall = High life expectancy

Advantages	· Large future workforce · Increased tax revenue in the future · Future business development	· The grey pound · Family support with childcare · Jobs created in health and social care
Disadvantages	· Strain on education · Strain on natural resources · Overpopulation / overcrowding	· Pressure on healthcare · Strain on housing supply · Increasing cost of pensions
Solutions to the problems	· Invest in education / hire more teachers · Invest in healthcare (reduce infant mortality) · Improve women's rights and careers information	· Increase the retirement age · Increase tax on the working populations · Access to free childcare for families

7. What is migration?

Term	Definition
Migration	The movement of people from one place to another.
Immigrant	A person who comes to live in a foreign country.
Emigrant	A person who moves out of a country.
Legal migration	The movement of people into a country with official permission.
Illegal migration	The movement of people into a country in violation of the laws of that country.
International migration	The movement of people from one country to another.
Internal migration	The movement of people within one country.
Forced migration	Where the person has no choice but to leave their home for their own survival.
Voluntary migration	Where the person choose to leave, usually for social or economic reasons.

8. Why do people migrate?

Term	Definition
Source country	Where a migrant moved from.
Host country	Where a migrant has moved to.
Push factor	Negative factors that make a person leave a place.
War and conflict	This means that people may become injured, therefore they feel unsafe and flee.
Drought	This means that it is difficult to grow food, therefore people may starve so leave the area.
Pull factor	Positive factors that make a person go to a place.
Higher wages	This means that people earn more money, therefore they can send remittances back to the source country.
Access to education	This means that people gain more skills, therefore they may get a higher paid job in the future.

9. Case study of migration: India to UK

Source country: India		Host country: The UK
Push factors from India (source)	Conflict in Kashmir	This means that people could die. Therefore, they feel unsafe and leave.
	Drought in Bihar	This means that people cannot grow food. Therefore, they may become hungry and starve.
Pull factors to UK (host)	World renowned universities, e.g. Cambridge	This means people can get a good education. Therefore, they will have more skills and can earn more money in the future.
	Wages are 32 times higher than in India	This means people can earn more money for doing the same job, therefore allowing them to send money back to families in India as remittances.
Impacts on source (India)	Positive	\$89 billion remittances sent back in 2021.
	Negative	Fewer working age people, so less taxes are paid.
Impacts on host (UK)	Positive	Skilled workers in the NHS, reducing waiting times.
	Negative	Increased racial discrimination against people from Indian heritage.

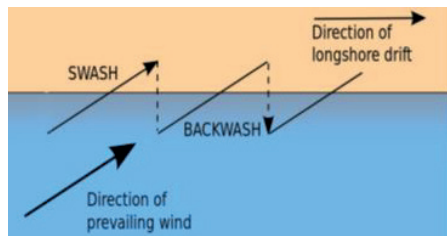
Geography – Coasts

1a. Waves

Key term	Definition
Prevailing wind	The most frequent wind direction.
Swash	Movement of the waves UP the beach in the direction of the prevailing wind.
Backwash	Movement of the waves DOWN the beach at a right angle due to gravity.
Fetch	Distance the wave has travelled.

2. Which processes occur along the coastline?

Key term	Definition
Erosion	The wearing away of rock
Hydraulic power	The force of the water compressing air into cracks causes bits to break off.
Abrasion	Sediment scraping against the cliff (like sandpaper) removing small bits.
Attrition	'Smashing' of sediment against each other becoming more rounded
Solution	Acids in sea water dissolve certain types of rock, such as limestone or chalk, causing them to gradually erode over time.
Weathering	The break down of rocks where they are (in situ)
Mechanical weathering	The breaking up of rock without changing its chemical composition (freeze thaw is caused by the repeated freezing and thawing of water in a crack).
Biological weathering	The breaking down of rock caused by plant and animal activity.
Chemical weathering	The breaking down of rock due to weak acids in the water, dissolving the rock over time.
Deposition	Dropping of material. Occurs when there is a loss of energy in the water.
Transportation	The movement of material.
Longshore drift	The zig zagged movement of sediment along the coastline.



1. Prevailing wind blows at an angle to the coastline.
2. Swash moves sediment up the beach at the same angle as the prevailing wind.
3. Backwash moves sediment down the beach at 90° due to gravity.
4. This repeats and sediment is transported along the coast.

1b. Constructive waves

- Build up the beach
- Strong swash, weak backwash
- Low, long waves

1c. Destructive waves

- Destroy the beach
- Weak swash, strong backwash
- Tall, short waves



3. Erosional landforms

Landform	Formation
Headlands and bays	• Some coastlines have bands of harder and softer rocks (discordant) at 90° to the sea. • Destructive waves erode the coast by abrasion and hydraulic power. • Softer rock erodes faster and retreats creating a bay. • Harder rock erodes slower, remaining stuck out as headlands.
Crack, Cave, Arch, Stack, Stump.	• Destructive waves attack the base of a cliff through hydraulic power and abrasion opening up cracks. • Cracks widen creating a cave (further hydraulic power & abrasion). • The cave is enlarged by further erosional processes, eventually cutting through the headland to make an arch. • Weathering weakens the arch, which is unsupported. Eventually it will collapse due to gravity. • A stack is formed. Eventually this will collapse and form a stump.

Geography – Coasts

4. Depositional landforms

Landform	Formation
Beaches	- Beaches form when deposition occurs. - There needs to be a source of sediment nearby like soft cliffs. - Constructive waves deposit material in sheltered areas (bays).
Sand beaches	- Formed in lower energy environments. - Waves lack enough energy to transport heavier sediment to the shoreline. Wider and flatter beach profile.
Shingle beaches	- Formed in higher energy environments. - Waves have enough energy to transport heavier shingle to the shoreline. Steep and narrow beach profile.

5. What are the causes and effects of coastal erosion?

	Knowledge	Understanding
Causes	Differing geology	Soft rock erodes faster than hard rock (headlands & bays).
	No management	If there is no coastal management, erosion is more likely.
Effects	Communities	People can't sell their homes. People have to leave their community, feel isolated.
	Environment	Loss of coastal habitats, lowers biodiversity. Beaches are removed (coastline more vulnerable).

7. Case study: Bournemouth Beach Management Scheme 2015 – 2032

Why does Bournemouth need coastal management?	- Soft rock – Eocene sands and clay. - Without management coastline would erode at 1 metre per year. - Beach vital for tourism (tourists spend £413 million each year) - Cliffs are collapsing (e.g. East Cliff 2016) - Protects 3,114 homes and 109 businesses		
	Knowledge	Understanding This means that...	Understanding Therefore...
How has the coast been managed?	Hard engineering - 53 groynes to be replaced.	Reduces longshore drift creating a wide beach.	Wave energy is reduced by the large beach, before reaching the cliffs behind.
	Soft engineering - 3 lots of beach nourishment; once every 5 years.	Replaces sediment lost through longshore drift.	Wider beach absorbs more wave energy.
How successful was this management?	Groynes more successful - groynes trap the sediment and create a wider beach.	9,000 jobs have been created for local people.	People have a higher income and pay more tax to the government.
	Groynes less successful - trapped sediment starves the beaches at Barton on Sea.	More coastal erosion occurs at Barton on Sea.	Houses are at risk of cliff collapse there instead.
	Beach nourishment more successful - Wide beaches attracting tourists.	£413 million is brought into the area.	Councils receive more income through tax improving the area.
	Beach nourishment less successful - needs to be completed often, 3 times every 5 years.	Can be expensive – costing over £50 million.	Less income can be used to improve infrastructure in Bournemouth such as roads.

6. How do we manage our coastline? Hard and soft engineering.

Type	Definition	Type	Description	Explanation
Hard engineering	Man-made structures built to control the sea. Reduces flooding and erosion.	Sea walls	A hard wall made from concrete.	Reflects the waves energy back out to sea.
		Rock armour	Boulders piled up along the coast.	These get eroded rather than the coast.
		Gabion cages	Wire cages filled with rocks.	These absorb wave energy.
		Groynes	Wooden fences going out into the sea.	Reduces longshore drift, leading to a wider beach.
Soft engineering	A natural approach to managing the coast.	Beach nourishment	Sand from elsewhere is added to beaches.	Wider beaches reduce erosion and flooding behind.
		Dune regeneration	Restoring sand dunes by planting marram grass.	Stabilises the sand to prevent it eroding.

Sea wall



Rock armour



Gabion cages



Groynes



Beach nourishment



Dune regeneration

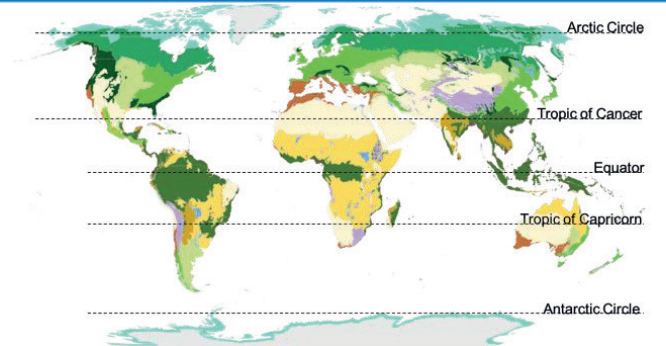
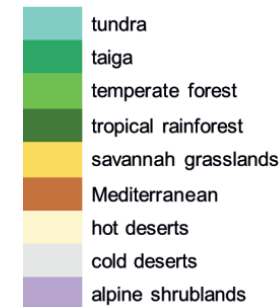


Geography – Ecosystems

1. Key terms

Ecosystem	A specific community of plants and animals interacting with their environment (e.g. a pond).
Biome	A large-scale ecosystem that is a large area of the world, sharing similar landscapes, plants and animals.
Flora	Plants
Fauna	Animals
Climate	The long-term weather conditions of an area.
Weather	The day-to-day conditions of the atmosphere.

2. Global Biomes



3. Why is it hotter near the Equator than the Poles?

Solar insolation The amount of the sun's energy received by a place.

1. The earth is curved. This means that lower latitudes receive more solar insolation than higher latitudes. This is known as differential heating.

2. Regions near the Equator receive more direct sunlight, so the heat energy is concentrated on a smaller area.

3. Regions near the Poles receive less direct sunlight, so the same amount of energy is spread over a bigger surface area. This makes it colder.



4. Why do some places get more rain than others?

Evaporation When water is heated, turns to water vapour, and rises into the atmosphere.

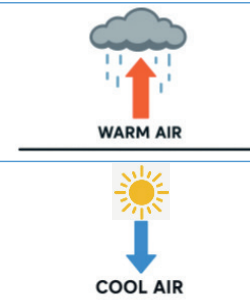
Condensation When water vapour cools and turns back into liquid water droplets.

Warm air = Solar insolation is high, so the air is warm and evaporation is high. Warm air always rises. As it rises, it cools, condenses and forms clouds. This leads to rain.

E.g. Tropical Rainforest Biome.

Cool air = Solar insolation is low, so the air is cool. Cold air sinks and there is little evaporation, so no clouds form. This creates clear skies and very little rain.

E.g. Polar biome.

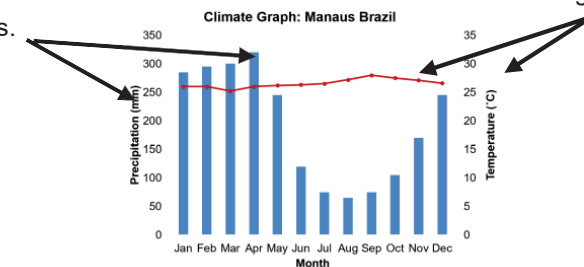


5. What is a climate graph?

Term	Definition
Temperature	Shown by the red line graph.
Precipitation	Shown by the blue bars.
X axis	The horizontal bottom edge of a graph. Shows months on a climate graph.
Y axis	A vertical edge on a graph. Climate graphs have 2 vertical y axis (left and right). Left shows precipitation (rain) and right shows temperature

To read precipitation, use the bars and the left vertical axis.

To read temperature, use the red line and the right vertical axis



Geography – Ecosystems

6. What are the features of the Hot Desert?

Location	On and around the Tropics; Sahara Desert has the Tropic of Cancer through.
Climate	Hot in the day (45°C), cold at night (0°C). Very little rain (<250mm a year).
Biodiversity	Very low – most live near oases (lakes) for water.

7. Plant and animal adaptations in the Hot Desert

Knowledge		Understanding This means that...	Understanding Therefore...
Flora - Cactus 	Covered in spines.	Smaller surface area than leaves.	Can photosynthesis without losing as much water.
Fauna – Camel 	Large, fatty hump.	Has a store of energy.	Can go for a long time without eating or drinking.

8. Opportunities and threats in the Hot Desert

Knowledge		Understanding This means that...	Understanding Therefore...
Opportunities			
Mining	Gold and iron ore can be found in the desert.	Can be sold for profit.	Increasing tax revenue for the government.
Tourism	Some local people own camels.	They can sell camel rides to tourists.	Allowing them to gain an income to buy food.
Threats			
Climate change	Some areas are getting hotter and receiving less rain.	Some animals, such as the Egyptian turtle cannot survive.	They may go extinct.
Population growth	Many people live in deserts, and this is increasing.	More people use more water (e.g. from wells).	Groundwater stores (lakes) are drying up.
Human management			
The Great Green Wall	8,000 km of trees are being planted.	The roots will help to hold water in the soil.	Allowing the wells to refill and more water to be available.

9. What are the features of the Coral Reef?

Location	Found between 30° north and south of the equator, in shallow saltwater (<60m).
Climate	Ocean temperature must be between 23°C and 29°C (warm) for coral to survive.
Biodiversity	Very high – 25% of all marine species.

10. Plant and animal adaptations in the Coral Reef

Knowledge		Understanding This means that...	Understanding Therefore...
Flora - Seagrass 	Leaves are thin and flat.	Sunlight can reach all parts of the leaf easily.	They can photosynthesise efficiently underwater.
Fauna – Clown fish 	Small in size (6-10cm long).	Can fit into small spaces between corals.	Clown fish can hide from predators quickly.

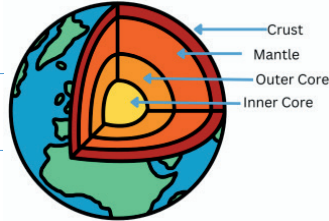
11. Opportunities and threats in the Coral Reef

Knowledge		Understanding This means that...	Understanding Therefore...
Opportunities			
Scientific Research	Many reef species are used in cancer medicines.	Large profits can be made from trade.	Increasing tax revenue for the government.
Natural coastal barrier	Coral reefs absorb wave energy.	Waves are less powerful behind reefs.	Coastal erosion is reduced.
Threats			
Overfishing	Many people live in the Coral Triangle.	Too many fish are being taken for human food.	Ocean food webs are at risk – leading to extinction.
Coral bleaching	Rising sea temperatures make coral expel their algae.	Coral lose their main source of food.	Coral starve and die.
Human management			
Marine Protected Areas	Fishing, mining and tourism are restricted and carefully monitored.	Humans can still take some fish, but only in small amounts.	Food webs and biodiversity is protected for the future = sustainable.

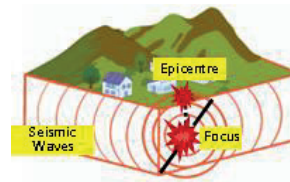
Geography – Tectonics

1. What is planet Earth made of?

Key term	Definition
Crust	Outer layer made of rock. Split into plates. Can be continental (thick, less dense) or oceanic (thin, dense).
Mantle	Thickest layer made from molten rock (magma).
Outer core	Made from liquid nickel and iron.
Inner core	Centre of the Earth made from solid nickel and iron. 5500°C.
Convection currents	Heat currents in the mantle which make tectonic plates move due to friction.



3. How do earthquakes form?



Focus	The point underground where the earthquake occurs.
Epicentre	The point on the Earth's surface directly above the focus.
Seismic waves	The energy released from earthquakes.

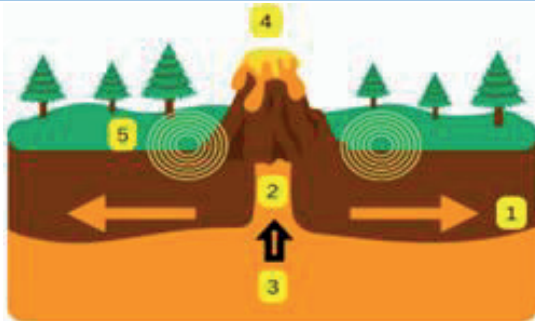
Reducing the impacts of earthquakes

Prediction	Difficult to predict earthquakes. Monitoring of past earthquakes and patterns.
Protection	Buildings can be built to be earthquake resistant (e.g. rubber shock absorbers and steel braces, retrofitting). Very effective but expensive, unaffordable for LICs.
Planning	Planning for earthquakes includes rehearsing drills (drop/cover/hold), having emergency bag ready, training emergency services and knowing what countries to ask for help with responding.

2a. What happens at the plate margins?

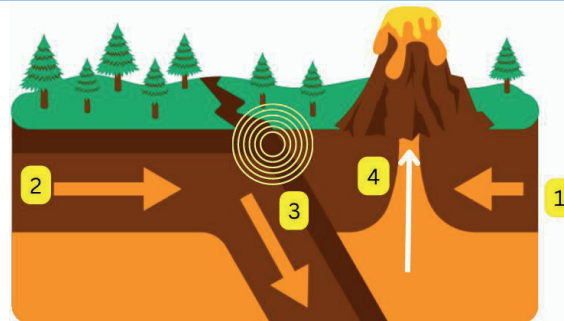
Tectonic plates	The Earth's crust is made of slabs of rocks (7 major and 8 minor plates) that sit on top of the mantle. The plates fit together like a giant puzzle.
Plate margin / Plate boundary	Where two tectonic plates meet and either collide, move apart or slide past each other.
Global distribution	Tectonic hazards mainly occur along the plate margins. Earthquakes occur at all margins, but volcanoes are found only on destructive and constructive.

2b. Constructive ← →



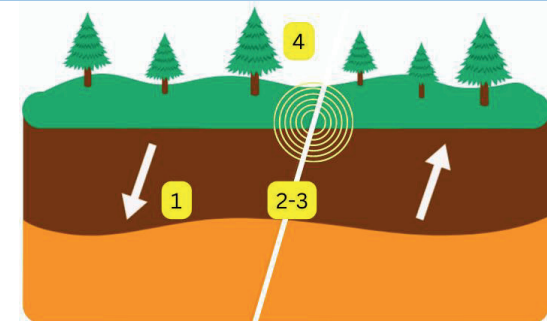
- Two tectonic plates are **pulled apart**
- Gap in crust created.
- Magma rises from mantle to fill gap
- Lava erupts from a **shield volcano**.
- Friction creates low magnitude (energy) earthquakes.

2c. Destructive → ←



- Oceanic and continental plates **move towards each other**
- Oceanic plate (denser) subducts under continental plate.
- Pressure builds up causing earthquakes.
- Subducted crust melts and magma rises
- Lava erupts from a **composite volcano**.

2d. Conservative ↗ ↘



- Tectonic plates slide past each other.
- Plates get caught on each other.
- Friction occurs and pressure builds up.
- Energy is suddenly released as seismic waves... an earthquake! (**No volcanoes** on conservative margins)

Geography – Tectonics

4. Effects (impacts) and responses

Effects (impacts)	Primary Effect	The initial impact of a natural event on people and property, caused directly by the natural event.
	Secondary Effect	The after-effects that occur as indirect impacts of a natural event.
Responses	Immediate response	The reactions of people as the disaster happens and in the immediate aftermath.
	Long-term response	Later reactions that occur in the weeks, months and years after the event.

5. What affects the number of deaths from an earthquake?

Level of development	Physicality of the earthquake
- Poor building materials means buildings are more likely to collapse. - Emergency services not being trained means that responses will be slower. - Lack of insurance to pay for repairs means that repairs may take longer / not be done.	- Epicentre being close to a densely populated area means that more people can get hurt. - High magnitude earthquakes have more power and are more damaging. - The focus being shallow means less seismic energy has been lost before people are affected.

6. What are the two types of volcano?

Composite volcano - Destructive Margin 	Shield volcano - constructive margin 
Tall but narrow base. Steep slopes.	Short but wide base. Gentle slopes.
Thick layers of lava, lots of ash.	Gentle eruptions (more frequent).
Violent eruptions (less frequent).	Thin layers of lava, little ash.
Volcanic hazards: ash cloud (air travel can be affected), pyroclastic flow, lava flow, volcanic bombs.	

7. Monitoring Volcanoes

Monitoring volcanoes leads to accurate predictions of eruptions, reducing the risks.	
Warning signs	As magma rises.
Earth vibrations	100s of small earthquakes. Seismometer is used.
Temperature	Ground and water get hotter - Thermal imagery is used (satellites).
Change in gases	Near an eruption, more sulphur in gas samples.
Ground deformation	Changes to the shape of the volcano are measured using laser beams.

8. Why do people live near tectonic hazards?

Earthquakes	Volcanoes
In LICs, people are too poor to move elsewhere.	In LICs, people are too poor to move elsewhere.
In HICs people feel safe due to EQ resistant buildings and regular drill practice.	The heat from magma below the ground can be used to generate electricity (geothermal energy).
Earthquakes occur very rarely.	Soils near volcanoes are fertile, good for crops.

9. Case study: Earthquake in Japan 2024

Background information	When? 1 st January 2024 Where? Noto Peninsula Magnitude (power)? 7.6 on the Richter Scale		
	Japan is a HIC – GNI per capita \$39,030 per year Japan is located on a destructive plate boundary. Earthquake and seismic activity is common in Japan.		
	Knowledge	Understanding This means that...	Understanding Therefore...
Primary Effect	6,445 homes were destroyed.	People became homeless.	The government built 4,943 temporary houses.
Secondary Effect	40,000 households lacked running water one month after the earthquake.	Many people relied on bottled water for their daily needs.	Bottled water became more expensive.
Immediate Response	Japan's early warning system sent text messages to residents in Noto.	People had time to prepare (e.g. cover their heads).	Fewer people died.
Long-term Response	The government spent \$690million rebuilding homes and businesses.	People could return to work quickly.	Taxes could continue to be paid, helping with rebuilding costs.



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History

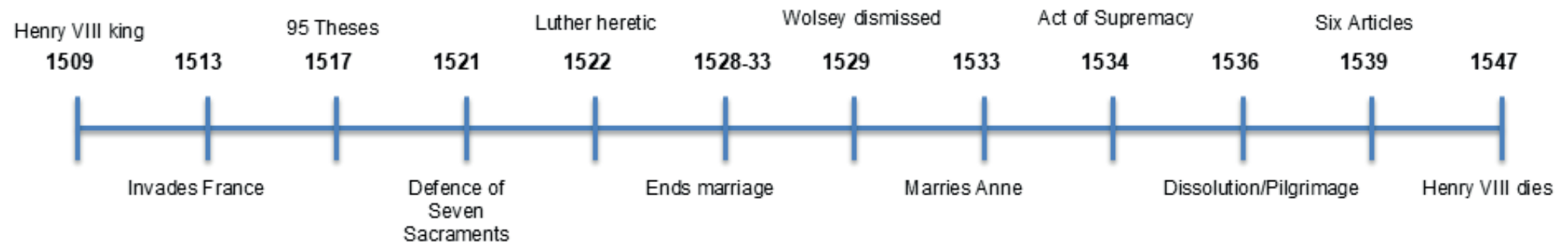
History – Henry VII and the Reformation

1	Who was the head of the Catholic Church?	The Pope
2	What is a certificate personally signed by the head of the Catholic Church, which a Christian could buy to gain forgiveness for their sins called?	An indulgence
3	Who was forbidden from reading the bible in the Catholic Church?	Ordinary people
4	What term means the dishonest behaviour by those in power?	Corruption
5	In which country did the Protestant European Reformation begin?	Germany
6	What was the name of the document Martin Luther pinned to a church door in 1517?	The 95 Theses
7	What did Luther criticise about the Catholic Church?	Selling of indulgences
8	What invention led Luther's ideas to spread so quickly across Europe?	Printing press
9	What did the pope declare Martin Luther was in 1522?	A heretic
10	Which new Christian faith emerged in the 1500s?	Protestantism
11	Which king founded the Tudor dynasty?	Henry VII
12	How did the founder of the Tudor dynasty unite the houses of York and Lancaster?	Married Elizabeth of York
13	In which year did Henry VIII become king?	1509
14	Which sport is Henry VIII most associated with?	Jousting
15	In which year did Henry VIII invade France?	1513
16	Who was Henry VIII's Lord Chancellor and chief adviser from 1515 to 1529?	Thomas Wolsey
17	Who was Henry VIII's first wife?	Catherine of Aragon
18	Who had Henry VIII's first wife previously been married to?	Henry VIII's older brother, Arthur
19	What peace conference did Henry VIII's Lord Chancellor organise in 1520?	Field of the Cloth of Gold
20	Why was a male heir so important to Henry?	To maintain Tudor control

History – Henry VII and the Reformation

21	Who did Henry VIII fall in love with whilst still married to Catherine of Aragon?	Anne Boleyn
22	Who did Henry VIII have to get permission from to divorce?	The Pope
23	Who was responsible for negotiating a divorce with the Pope on Henry VIII's behalf?	Thomas Wolsey
24	What was the term used for Henry's desire for a male heir?	His Great Matter
25	In which year did Henry VIII marry his second wife?	1533
26	What was Henry VIII's new title in the 1534 Act of Supremacy which meant England had broken with Rome?	Supreme Head of the Church of England
27	Which oath did Henry VIII force people to swear after 1534?	Oath of Supremacy
28	What term describes the closure of all religious houses in England by Henry VIII?	Dissolution of the Monasteries
29	Which ministers proposed the closure of all religious houses in England?	Thomas Cromwell
30	What did Foxe and Cranmer convince Henry of?	God wanted kings to be dominant in their countries
31	What happened to those who refused to swear the Oath of Supremacy?	They were executed
32	How did churches change in England?	A lot plainer, no statues
33	Where was an English bible placed?	In every church
34	In which year was Anne Boleyn executed?	1536
35	What was the public rebellion called in 1536?	The Pilgrimage of Grace
36	Who led the public rebellion in 1536?	Robert Aske
37	Who was Henry VIII's third wife?	Jane Seymour
38	Which 1539 act of parliament moved the English church back towards Catholic practices?	The Six Articles
39	Who were Henry VIII's last three wives?	Anne of Cleves, Catherine Howard, Catherine Parr
40	In which year did Henry VIII die?	1547

History – Henry VII and the Reformation



Why did the Protestant Reformation emerge in the early 16th Century?

A split in the church occurred. Those who protested against the Catholic Church became Protestants: a different type of Christian who rejected the authority of the Pope. This was known as the Protestant Reformation.

- **Corruption:** Indulgences were being sold (a certificate personally signed by the Pope, which a Christian could buy to gain forgiveness for their sins), belief in relics, monks and nuns lived in luxury, clergy wore vestments of fine silk, Catholic churches were richly decorated.
- **Desire for religious change:** Mass and bible were only in Latin- only the richest could understand this. Only priests were allowed to read from the bible. People wanted religion to be simpler, where they felt more connected to God.
- **Printing press:** Copies of Martin Luther's 95 Theses were able to be produced and spread throughout Europe. This meant his criticisms of the church and ideas influenced others.

Why did Henry VII break with Rome?



Love for Anne Boleyn – Henry had fallen in love with Anne Boleyn and desperately wanted her as his wife. The Pope did not allow Henry to divorce Catherine of Aragon. Henry therefore created his own religion so that he didn't need the Pope's permission to marry Anne.



Desire for a male heir – Henry knew the importance of having a male heir to secure dynastic succession and maintain Tudor control of the throne. Catherine of Aragon was past childbearing age, and so Henry needed a new younger wife who might be able to give him the son he desired.



Money – Henry had been carrying out an expansive foreign policy- this cost a lot of money and meant taxes had to be raised to pay for the wars. By breaking with Rome Henry no longer had to pay taxes to the Pope, and officially owned the church land and the wealthy monasteries.



Power – Henry wanted to be a powerful king and did not want to be told what to do by the Pope, or worse, Charles V the Holy Roman Emperor. Breaking with Rome meant that Henry had authority over everyone within his realm, and the Pope had no influence within England.



Religion – Henry believed in the importance of doctrine in religious services, and believed God wanted monarchs to be the head of the church in their own country. These are ideas that matched with Protestantism, and he was heavily influenced by prominent protestants to reform religion.

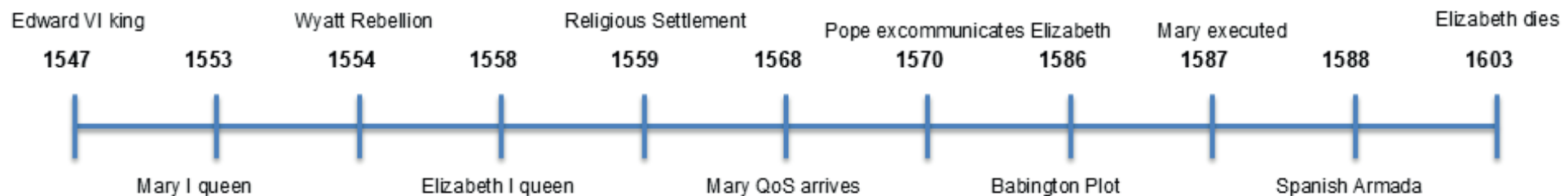
History – Late Tudor England

1	Was Edward VI Catholic or Protestant?	Protestant
2	How old was Edward VI when he became king?	9
3	Which language were church services & the Bible in under Edward I's reign?	English
4	Was Mary I Catholic or Protestant?	Catholic
5	Who was Mary I's mother?	Catherine of Aragon
6	Who did Edward VI name his heir in an attempt to keep England Protestant?	Lady Jane Grey
7	Who was Mary I's husband?	Philip II of Spain
8	Which language were church services in under Mary I's reign?	Latin
9	Who was head of the Church during Mary I's reign?	Mary I
10	What was the main method Mary used to kill Protestant rebels?	Burning at the stake
11	How many Protestants did Mary I kill for refusing to follow religious instructions?	283
12	In which year did Elizabeth I become Queen of England?	1558
13	Who was Elizabeth I's mother?	Anne Boleyn
14	Which three pieces of legislation made up Elizabeth I's Religious Settlement?	Act of Supremacy, Act of Uniformity, Royal Injunctions
15	What was the aim of Elizabeth's Religious Settlement?	To please both Catholics and Protestants
16	Who were the Puritans?	Strict Protestants
17	Name two issues that Puritans had with the Religious Settlement.	Vestments and crucifixes
18	What were Puritan meetings held to discuss criticisms of the church called?	Prophesying
19	How did Elizabeth I punish Puritan printer John Stubbs?	Had his right hand chopped off
20	Which second cousin of Elizabeth I's arrived in England in 1568?	Mary, Queen of Scots

History – Late Tudor England

21	Why did Mary, Queen of Scots pose a threat to Elizabeth's reign?	She had a legitimate claim and strong Catholic support
22	Which 1569 revolt against Elizabeth I came from her own nobles?	Revolt of the Northern Earls
23	What did the Pope ask Catholics to do in his 1570 Papal Bull?	End Elizabeth's reign
24	What was the punishment for being a Catholic priest in England from 1585?	Execution
25	Which 1586 plot aimed to remove Elizabeth I & replace her with Mary QoS?	Babington Plot
26	How many Catholics were killed during Elizabeth I's reign?	180
27	What triggered King Philip II's desire to invade England?	Mary, Queen of Scots' execution
28	In which year was the Spanish Armada launched against England?	1588
29	Who commanded the Spanish invasion fleet despite little experience?	Duke of Medina Sidonia
30	At which battle did the smaller English ships outmanoeuvre the Spanish?	Battle of Gravelines
31	Which tactic was used to cause panic amongst the Spanish fleet?	Hellburners (fire ships)
32	How many Spanish ships were lost in storms off the Scottish and Irish coasts?	60
33	How did Elizabeth I use the Armada victory to strengthen her religious policy?	Propaganda showing God was on the Protestant's side
34	Which historian wrote <i>The Time Traveller's Guide to Elizabethan England</i> ?	Ian Mortimer
35	What was the main concern of the rural poor?	Starvation
36	Why were towns dangerous for the Elizabethan poor?	Disease and crime
37	Which part of Elizabethan government entertained the monarch and was a centre of style and fashion?	The court
38	What were Elizabeth's journeys around England to stay in nobles' houses called?	Royal progresses
39	Which historian wrote <i>Black Tudors</i> ?	Miranda Kaufmann
40	Which African trumpet player played at many royal events in Tudor England?	John Blanke

History – Late Tudor England



What was the most significant threat to Elizabeth's religious settlement?



The Puritans: Some Puritans refused to accept any Catholic practices- forced Elizabeth to back down over the crucifix. Archbishop Grindal encouraged prophesyings (meetings which strongly criticised Elizabeth's church). They set up a new separatist church in 1580. Produced increasingly extreme publications calling for the reorganisation of the church.



The Catholics: Leading Catholic nobles led plots against Elizabeth, including Westmorland, Northumberland and Babington. Only a threat after given direction from the Pope and when Mary Queen of Scots arrived in England.



Mary Queen of Scots: The great-niece of Henry VIII and a devout Catholic- the Catholics wanted Mary Queen of Scots to be on the throne. Arrived in England in 1568 after having fled from Scotland. Was a figurehead for many rebellions that planned to assassinate Elizabeth, including the 1586 Babington Plot.



The Pope: In April 1570 Pope Pius V issued a papal bull, excommunicating Elizabeth from the church and called on the Catholics to end her rule. Some saw this as a religious duty to rise up against Elizabeth.



Spain: King Philip II of Spain wanted England to remain a Catholic country so proposed marriage to Elizabeth, but was rejected. Philip attempted to invade England with the Spanish Armada- due to ongoing tensions in the Netherlands, raids on Spanish ships, and being leading defender of Catholicism.

Why did the Spanish Armada fail?



Spanish weaknesses: The Duke of Medina Sidonia was inexperienced in naval battle and was even seasick leading to many errors in his planning and tactics. The Spanish reinforcements were not in Calais when they should have been resulting in the English being able to gain on them. Spanish cannons were slow to reload and could only fire from a shorter range.



English strengths: The English used hellburners to create chaos amongst the Spanish crescent defensive formation, causing them to panic, separate, and flee. English galleons were small, fast, and manoeuvrable allowing them to outsail the larger Spanish ships. English ships were also armed with new cannons which could fire at a greater distance and easy to reload.



Weather: Storms around the Scottish and Irish coasts led to the destruction of approximately half of the Spanish fleet. This was due to the Spanish fleeing north after the Battle of Gravelines where there was no safe harbour/shelter. Elizabeth used the weather as propaganda and 'evidence' that God was on the side of the Protestants allowing them to beat the Spanish.

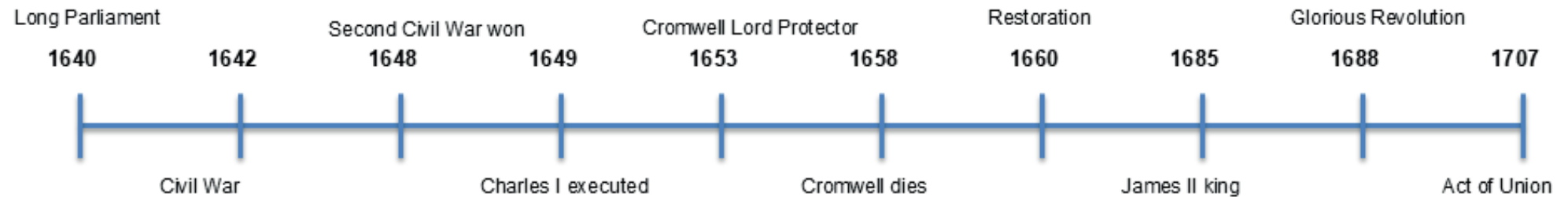
History – England: A World Turned Upside Down

1	Crowning James I in 1603 led to a 'union of the crowns' between which countries?	England and Scotland
2	Which royal dynasty ruled England from 1603 to 1714?	The Stuarts
3	On what day was the Gunpowder Plot planned to take place?	5 th November 1605
4	Which religion did the gunpowder plotters belong to?	Catholicism
5	What discovery did Monteagle's letter lead to?	The gunpowder plot
6	How did James I's religious policy change following the Gunpowder Plot?	More anti-Catholicism
7	Which theory claims the monarch is appointed by God and has absolute power?	Divine Right of Kings
8	Who did Charles I marry after becoming king in 1625?	Henrietta Maria
9	Which period began in 1629, during which Charles I ruled without calling Parliament?	The 11 Year's Tyranny
10	Which Archbishop of Canterbury started to reintroduce Catholic practices into the Church of England from 1633?	Archbishop Laud
11	Which tax did Charles I use to raise money without the permission of Parliament?	Ship money
12	Which member of Parliament was imprisoned in 1637 for refusing to pay ship money?	John Hampden
13	Which Puritan opponent of Laud was imprisoned, branded, and had his ears cut off?	William Prynne
14	Which personal court did Charles I use to not give defendants a fair trial?	Star Chamber
15	What did Archbishop Laud introduce to Scotland in 1637, sparking the Bishop's War?	A new prayer book
16	Which puritan MP led the most radical demands to limit Charles I's power?	John Pym
17	What was the MPs' list of demands reducing the king's power in 1640 called?	Grand Remonstrance
18	What event signalled Charles I's loss of power, leading him to flee London?	Failed arrest of 5 MPs
19	In which year did the English Civil War break out?	1642
20	Which two big battles did the Parliamentarians win?	Battle of Marston Moor (1644), Battle of Naseby (1645)

History – England: A World Turned Upside Down

21	What nickname was given to Royalist cavalymen?	Cavaliers
22	What nickname was given to Parliamentary soldiers?	Roundheads
23	What full-time, professional army did Oliver Cromwell form during the Civil War?	New Model Army
24	Which religion did many members of Parliament's army belong to?	Puritan
25	Who did Charles I surrender to in 1646, believing they would treat him fairly?	Scotland
26	What did Charles I's escape from prison in Hampton Court Palace lead to in 1648?	The Second Civil War
27	What event saw all but the most radical MPs expelled in December 1648?	Pride's Purge
28	How many MPs signed Charles I's death warrant?	59
29	In which year was Charles I executed?	1649
30	What title was given to Oliver Cromwell as head of the English state in 1653?	Lord Protector
31	What style of government did Cromwell pursue through his 11 Major-Generals?	Military dictatorship
32	What did Parliament declare England to be after the execution of the monarch?	A commonwealth
33	What declaration did Charles II make prior to his restoration as King?	Declaration of Breda
34	In which year did Charles II's restoration take place?	1660
35	What religion was James II?	Catholic
36	Who did Parliament secretly write to?	William of Orange
37	What 'bill' did William and Mary have to accept?	Bill of Rights
38	What year was the Act of Union?	1707
39	Who did the Jacobites support?	The Stuarts
40	How many women were executed for witchcraft during the English Civil War?	100

History – England: A World Turned Upside Down



Parliament – Charles I believed in the 'divine right of kings' and did not believe that Parliament had the right to question his policies or try to limit his power. He ruled without calling Parliament during the 'eleven years tyranny'. MP John Hampden became a hero for Parliament for refusing to pay ship money. Parliament refused to grant Charles money to raise an army to fight in Scotland, instead presenting him with a list of demands known as the 'Grand Remonstrance'. Charles tried and failed to have John Pym and four other leading radical MPs arrested, showing how his relationship with Parliament had truly broken down. The King opposed challenges to his power.



Money – Parliament tried to control when Charles could raise taxes for himself, but he ignored them. Charles used 'ship money' to raise taxes to spend on himself during the 'eleven years tyranny', creating a lot of anger amongst ordinary people and MPs. He spent this money on fine art, clothing and palaces. Charles needed money to fight in Scotland, so had to recall Parliament, who refused to grant new taxes. Many areas started to refuse to pay 'ship money', crippling Charles' finances. Parliament wanted to be able to control England's finances which was a major point of disagreement with the King as it damaged his authority.



Religion – Charles had married Henriette Maria, a French Catholic princess, which angered the Protestant population who were worried he would make England more Catholic. Charles appointed William Laud as Archbishop of Canterbury who brought many aspects of Catholic services back to the Church of England. Laud imprisoned, branded and cut the ears off William Prynne and others for criticising his religious reforms. He enforced a new prayer book in Scotland which caused a rebellion known as the Bishops War. Puritan MPs demanded in the Grand Remonstrance that Charles give up control of religious reforms, he could not accept this.

History – England: A World Turned Upside Down

How far did England change between 1649 and 1707?



Power

England changed significantly. The execution of Charles I in 1649 showed that a monarch could be removed and punished by Parliament. During the Interregnum, England was ruled without a monarch, first by the Rump Parliament and then by Oliver Cromwell as Lord Protector. This showed that political authority no longer depended solely on monarchy. Although the monarchy was restored in 1660, its power was limited. The Glorious Revolution proved that Parliament could remove a monarch without civil war, and the Bill of Rights confirmed that monarchs could not rule without Parliament's consent. By 1707, the Act of Union created a new state, the Kingdom of Great Britain, with Parliament at Westminster firmly established as the centre of power.



Society

England changed the least in this area. Despite major political events, ordinary people continued to believe in witchcraft, the Devil and superstition. During the Civil War, fear and instability led to the witch craze, with around 100 women executed. This shows that while governments and systems of power changed, everyday beliefs and social attitudes remained deeply rooted.



Religion

Religion remained a major source of tension, showing both change and continuity. During the Interregnum, Cromwell imposed strict Puritan rule, which caused resentment and opposition. After 1660, the Church of England was restored as the main religion, showing a return to traditional Protestantism. However, when James II, a Catholic, became King, his attempts to give equal rights to Catholics increased conflict with Parliament. The Bill of Rights (1689) and the Act of Settlement (1701) ensured that no Catholic could become monarch, choosing Sophia of Hanover and her heirs instead of James II's Catholic son.

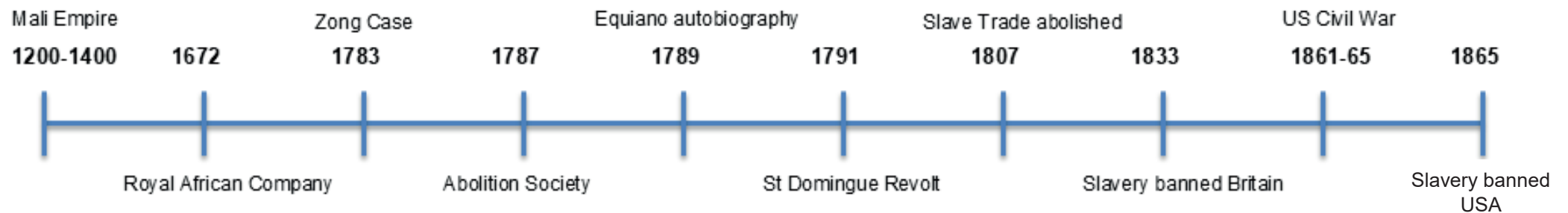
History – The Transatlantic Slave Trade

1	Approximately what years were the slave trade?	1500-1850
2	Which European country was the first to trade people?	Portugal
3	How many Africans arrived in the Americas between 1500-1850?	11 million
4	Why did the slave trade begin?	Workers needed on plantations
5	What was the king of Benin called?	Oba
6	What is the term for when a person's freedoms have been taken away, and they are a slave?	Enslave
7	Which two African kingdoms were powerful in the Medieval Period	Benin and Songhai
8	Who was enslaved in West African kingdoms before 1500?	Prisoners of war
9	What was the role of African kings and warrior tribes in the Slave Trade?	Capturing Africans for trade
10	How many Africans arrived in the Americas between 1500-1850?	11 million
11	Which ocean separates Africa and the Americas?	Atlantic
12	Which shape was the Slave Trade based on?	Triangle
13	What was the route between Africa and the Americas called?	Middle Passage
14	How many months would the journey take between Africa and the Americas?	6-10 weeks
15	What diseases were common board these ships?	Dysentery, Malaria and Scurvy
16	What was stage 1 of the trade triangle?	Europe to Africa
17	Which three products were usually grown in the West Indies/Caribbean?	Tobacco, Sugar and Coffee
18	Which crop was usually grown in the southern states of the USA?	Cotton
19	Which role took control of the enslaved people's daily lives?	Overseer
20	Give an example of a punishment for attempting to run away.	Mutilation, flogging, irons

History – The Transatlantic Slave Trade

21	What was the average life expectancy of an enslaved person?	26 years
22	Where did enslaved people live?	Small wooden cabins
23	Give one peaceful method of resistance used by enslaved people.	Singing, language, religion, hair
24	Where did the most successful revolt take place in the 1700s?	St. Domingue (renamed Haiti)
25	Who led the Haitian Rebellion?	Toussaint L'Ouverture
26	Which Black abolitionist's autobiography on slavery became a bestseller?	Olaudah Equiano
27	Which method was popular in Britain for showing public support for abolition?	Petitions
28	Which MP introduced yearly bills to Parliament from 1794-99?	William Wilberforce
29	Which abolitionist sketched slave ships and spoke about the terrible conditions?	Thomas Clarkson
30	What is the term for a decision made by Parliament to formally put an end to a system?	Act
31	What is the term for an end/destroy something?	Abolish
32	Who was the first Black woman to publish her experiences of slavery in Britain?	Mary Prince
33	Which religious group supported abolition?	The Quakers
34	Which economist argued against the economic success of slavery?	Adam Smith
35	What was the free market economic argument against slavery?	Free, paid people would be motivated to work harder, increasing profits
36	What did British people boycott after discovering how it was made?	Sugar
37	In which year did parliament make the Slave Trade illegal in Britain?	1807
38	In which year did parliament make owning enslaved people illegal?	1833
39	What was the name of that act that made Slave Trade illegal in Britain?	Slave Trade Act
40	What was the name of the law that made owning enslaved people illegal?	Slave Abolition Act

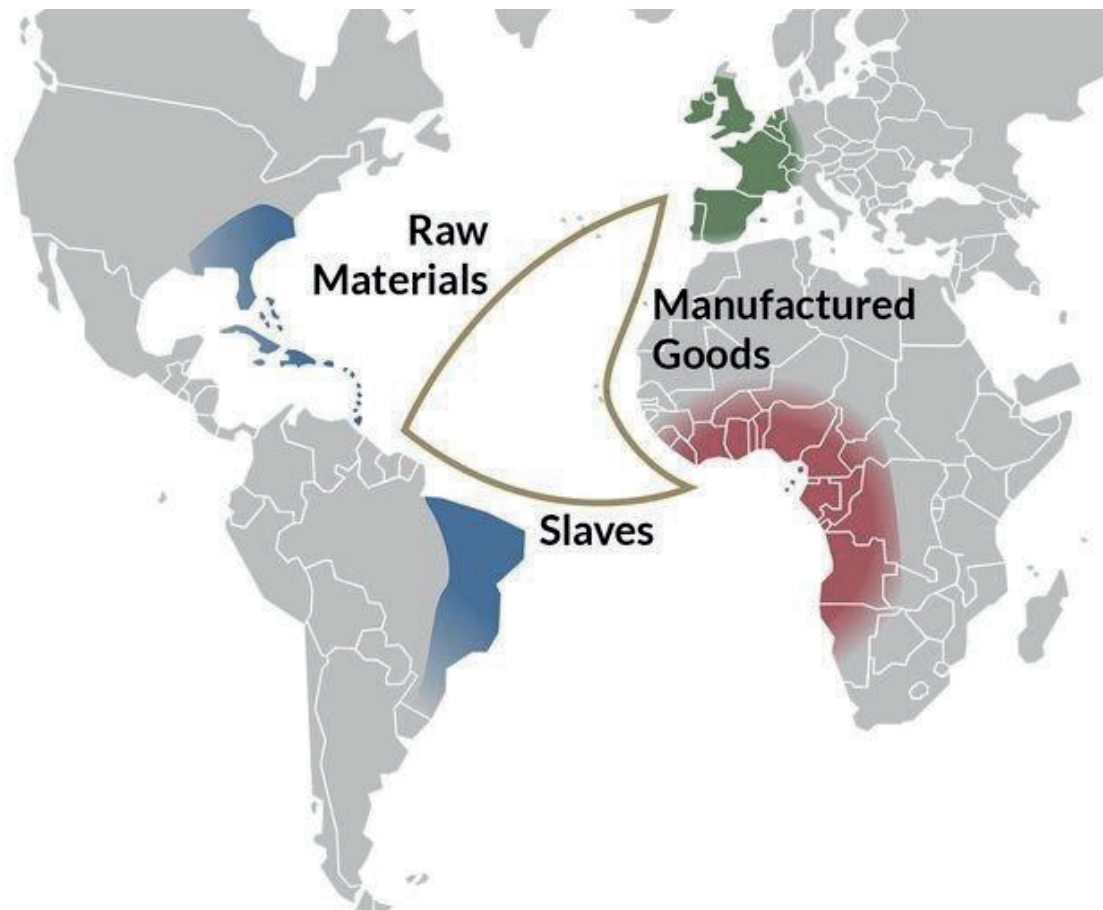
History – The Transatlantic Slave Trade



How did the Transatlantic Slave Trade work?

1. African kingdoms traded Africans for manufactured goods such as guns.

2. Enslaved Africans transported across the Atlantic in terrible conditions (Middle Passage).



3. In the Americas, enslaved people sold at auctions and then used on plantations, growing raw materials (cotton, sugar).

4. Ships collect raw materials and sail back to Britain.

5. Raw materials were either sold for a profit or made into manufactured goods. Some taken to Africa to exchange for more slaves.

History – The Transatlantic Slave Trade

How was enslavement resisted?



Passive resistance Aimed to reduce the profits of the owner. Enslaved people would pretend not to understand, feign illness, break tools, steal goods. Cultural resistance, such as playing African music, gave enslaved people a shared identity, challenging their dehumanising situation.



Running away Underground railroad offered routes of escape from the south to the north - Harriet Tubman as a key conductor. In Jamaica, runaway slaves formed communities called maroons.



Armed Revolt Uncommon due to high risk of punishment. Occurred on 10% of slave ships, most famously Amistad. Most successful was on St Domingue in 1791 – became first Black led nation in Caribbean. News of rebellions highlighted cruelty of slavery and fuelled abolition movements.

Why was slavery abolished?



Black Actions News of revolts (Haitian Revolution, Amistad) highlighted the conditions of enslaved people, creating popular support for abolition. Speeches and books by formerly enslaved people, such as Olaudah Equiano, raised awareness about the truth of slavery. There were growing numbers of freed Black people living productive lives in Britain (10, 000 by 1800) dispelling many racist ideas about Black people.



White Abolitionists Growing pressure on parliament to abolish the Slave Trade, led by William Wilberforce and PM William Pitt. Regular petitions to parliament from campaigners. Society for the Abolition of the Slave Trade founded 1787. Increasingly those involved with maintaining slavery taken to court and enslaved people were freed, with work done by Granville Sharp.



Economics and Social Attitudes Adam Smith's ideas of free market economics suggested that paid workers would be motivated to work harder, leading to better profits. Sugar could be produced more cheaply outside of slave plantations, eliminating the 'need' for slaves. Boycotts against sugar in Britain when it was discovered how it was grown. Enlightenment ideas stressed equality of people and to challenge traditional thinking. It became increasingly popular to support the abolition of slavery.

History – The Industrial Revolution

1	Between approximately which years was the Industrial Revolution?	1750-1900
2	What term is defined by a period of change?	Revolution
3	The population increased from around 10 million in 1750 to what by 1900?	40 million
4	Which area was Enclosure a change to?	Agriculture
5	What did Jethro-Tull create?	Horse-drawn seed drill
6	What new form of power became available?	Steam
7	Who developed the steam engine?	James Watt
8	What was burned to make steam?	Coal
9	Where were factories built near?	Water supplies
10	Before the 1700s, what were roads like?	Muddy tracks/ Impassable
11	What were Turnpike Trusts introduced to improve?	Roads
12	What were the motorways of the 18 th century?	Canals
13	What was the most effective form of transport?	Railways
14	What George Stephenson design in 1825?	The Rocket
15	Which railway was completed in 1825?	Liverpool to Manchester
16	What year did the Great Exhibition take place?	1851
17	What was Britain known as in the middle of the 19 th century?	Workshop of the World
18	What term describes the 'process of improving or creating something that is a new technology'?	Innovation
19	Which invention by James Hargreaves in 1764 revolutionised cotton spinning?	Spinning Jenny
20	Who is credited for creating the first factory and ending the domestic system?	Richard Arkwright

History – The Industrial Revolution

21	Which inventor developed a method to stop barnacles sticking to ships and helped improve bridge foundations?	Sarah Guppy
22	Which engineer designed the Great Western Railway and built famous bridges such as the Clifton Suspension Bridge?	Isambard Kingdom Brunel
23	Which social class of women and children were expected to work?	Working class
24	Which social class was at the top of society in the Victorian era?	Upper class
25	How did the upper class typically earn their wealth?	Inheritance, land and investments.
26	Which group of six agricultural workers from Dorset were arrested and sent to Australia in 1834 for forming a trade union?	Tolpuddle Martyrs
27	What medical condition did match girl workers develop?	Phossy Jaw
28	Give 2 terms of the 6-point People's Charter.	Vote for every man over 21, Secret ballot, MPs do not have to own property, MPs to be paid, Equal constituencies, Yearly elections.
29	In what century did women and children begin to work in factories?	1800
30	What conditions did women work in?	Harsh and dangerous, working up to 80 hours a week, few breaks and poor food.
31	Why did employers prefer women workers?	They were cheaper to employ than men.
32	Where else did women work other than factories?	Mines
33	How did single, working class women benefit from the Industrial Revolution?	They had greater independence compared to previous generations.
34	What was the 'dual burden' women faced?	Working as well as looking after the home/children.
35	How were middle and upper class women affected by the Industrial Revolution?	They were not really affected as they generally did not work and focused on social activities instead.
36	Who provided schooling for child workers?	Robert Owen
37	Which act did the Government introduce in 1833?	Factory Act
38	What was the most common punishment for children not working fast enough?	Beating
39	How many hours was an average work shift in a factory?	12-14 hours
40	Why did factory owners want to employ children?	They were cheap, had small hands

History – The Industrial Revolution

What caused the Industrial Revolution?

The Agricultural Revolution increased food production through enclosure, new machinery like Jethro Tull's seed drill, and selective breeding. This meant fewer workers were needed on farms, so many people moved to towns and cities to work in factories. It also supported a growing population from 10million in 1750 to 40million in 1900.



The British Empire brought wealth and resources. Britain imported goods such as cotton, sugar, and tobacco from its colonies, which were either sold for profit or used in factories. This trade helped fund industrial development.



The Transatlantic slave trade: ports such as Liverpool playing a major role. Enslaved people produced raw materials like cotton on plantations. Because they were not paid, plantation owners made large profits, which helped to finance industry in Britain.

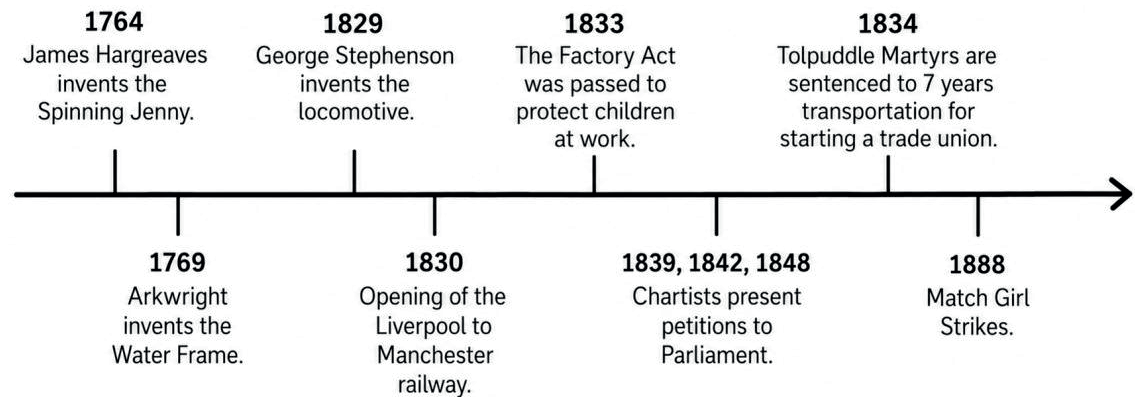


Britain's environment and policies: Britain had large supplies of natural resources such as coal and iron, essential for powering machines and building factories. After the Glorious Revolution, Parliament allowed greater freedom for new ideas, encouraging invention, innovation and investment.



Technology: James Hargreaves invented the Spinning Jenny, increasing thread production. Richard Arkwright developed the Water Frame, leading to the growth of factories. Isambard Kingdom Brunel improved transport through railways (Great Western Railway), bridges (Clifton Suspension Bridge), and steamships. Sarah Guppy contributed important engineering ideas such as bridge foundations. These inventions increased production and improved transport systems.

Industrial Revolution 1750–1900



Transport: Before 1700, roads were muddy and unreliable. Turnpike Trusts improved road quality and made travel easier. Canals, known as the “motorways of the 18th century,” allowed goods to be transported more safely and in larger quantities. Biggest change came with railways. Steam power, developed by James Watt, led to faster transport. 1829, George Stephenson designed the *Rocket*. By 1830, the Liverpool to Manchester Railway opened, making travel quicker, cheaper, and more reliable, with time even becoming standardised across Britain.

Did the Industrial Revolution lead to progress?



Social: Many women and children worked long hours in dangerous conditions for low pay, showing little improvement in living standards. Protests such as the Chartist Movement (a working-class movement for the right to vote) and strikes like the Match Girls highlighted dissatisfaction among workers. Although events like the Great Exhibition of 1851 showed Britain's wealth and success, this prosperity was not shared equally.

History – The British Empire

1	Which term describes a group of countries ruled over by one ruler or 'mother country'?	Empire
2	Which term describes a country ruled over by another country?	Colony
3	Which term describes a policy of increasing a country's power by colonising other countries, often using military force?	Imperialism
4	What percentage of world land did the British Empire control at its peak?	24%
5	What strength did Britain have that enabled it to build its empire?	A powerful navy
6	Who lived in Canada before European colonisation?	First Nations people
7	Who discovered the Americas in 1492?	Christopher Columbus
8	In which year did John Cabot claim land for Britain in Canada?	1497
9	Which trade made Canada important to Europeans?	Beaver pelts
10	Which British company was given exclusive trading rights over a large area of Canada?	Hudson's Bay Company
11	Which 2 countries competed for control over Canada?	Britain and France
12	What percentage of First Nations people in Canada died of European diseases?	60%
13	Name 2 Canadian policies towards First Nations people.	Reservations and residential schools
14	Which colony successfully fought for independence in 1776?	America
15	Which phrase describes Britain's shift to focus on Asia, Africa and Australia after losing some Western colonies in 1776?	'Swing to the East'
16	Which phrase shows the size of the British Empire?	'The empire on which the sun never sets'
17	Which dynasty ruled India before the British arrived?	The Mughals
18	Which British company gained power in India?	East India Company
19	What are Indian troops who fought for the British company's army called?	Sepoys
20	After which 1757 battle did a British company have political power in India?	Battle of Plassey

History – The British Empire

21	After the 1857 Sepoy Mutiny, who replaced the company as ruler of India?	Queen Victoria
22	What is the period of British rule in India between 1858 and 1947 known as?	The British Raj
23	What was the impact of the 1919 Amritsar massacre, where up to 1000 Indians were shot?	Indian nationalism increased
24	Which term describes peoples who lived in Australia for at least 50, 000 years before European arrivals?	Aborigines
25	What did Britain want to use Australia for?	A penal colony
26	By what percentage was Australia's indigenous population reduced in the first 10 years after British colonisation in 1788?	90%
27	What is the name of conflicts fought between indigenous people and settlers in Australia?	Frontier wars
28	Which conflict on Tasmania saw around 800 indigenous people killed between 1824 and 1830?	The Black War
29	Which term describes indigenous children taken from their parents to be raised with white families?	Stolen generations
30	Which term describes the European competition for African colonies in the late 1800s?	Scramble for Africa
31	In 1870, what percentage of Africa was controlled by Europeans?	10%
32	By 1900, what percentage of Africa was controlled by Europeans?	90%
33	Which 1884 conference carved up Africa between European powers?	The Berlin Conference
34	Which group of people were not represented at the 1884 conference?	African representatives
35	Who was sent to African colonies to convert them to Christianity?	Missionaries
36	Which piece of technology helped Britain to defeat resistance in Africa?	Maxim gun
37	Which war weakened Britain economically and militarily meaning it could no longer afford to run its empire?	WW2
38	Which term describes the process of countries gaining independence?	Decolonisation
39	In which year did India gain independence?	1947
40	Which voluntary association is mostly made up of former British colonies?	Commonwealth

History – The British Empire

How did people experience the British Empire?



Canada – Home to different groups of First Nations people. John Cabot claims Newfoundland for Britain 1497. Interest from both France and Britain in beaver pelt trade. At first worked alongside First Nations people but conflict increased over land ownership disputes. 60% of First Nations die from European diseases. Attempts to both segregate and assimilate First Nations people with white settler society via reservations and residential schools.



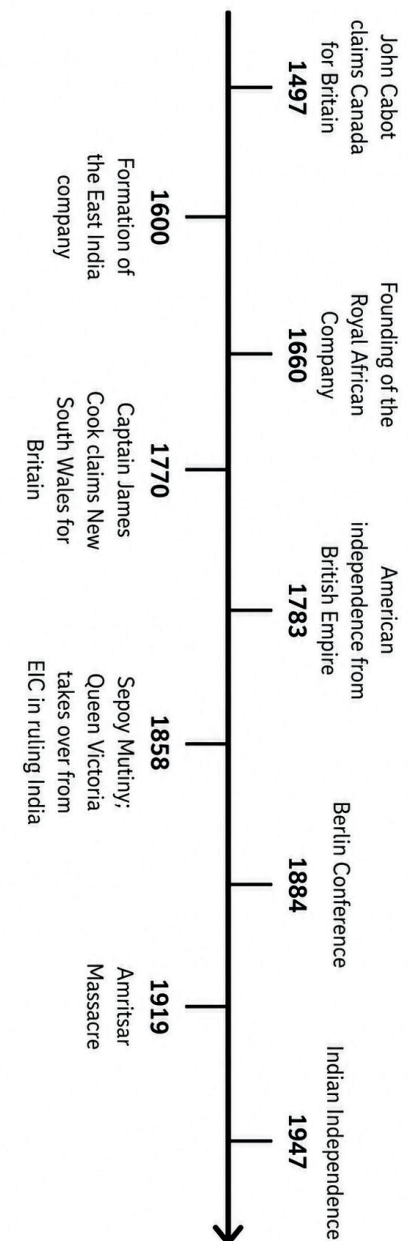
India – Ruled by the Mughal Emperor prior to colonisation, a tolerant Muslim rule in a mostly Hindu country. East India Company starts to gain power, French interests defeated at Battle of Plassey, and then controls large areas of India. EIC employees influenced by Indian culture. After Sepoy Mutiny, Britain begins ruling India. During the Raj, rule was more distant with racist attitudes. 1919 Amritsar Massacre saw up to 1000 Indians shot due to growing nationalism and calls for independence, not achieved until 1947.



Australia – Home to different tribes of Aborigines for at least 50,000 years. Captain James Cook claimed New South Wales for Britain without consulting Aborigines. Intended as a penal colony though many white settlers followed original convicts. Aborigines fought back against settlers taking their land and resources in frontier wars. 90% of Aborigines died within first 10 years of colonisation from disease and violence. Forced to live on reserves, with some children taken and raised by white families.



Africa – Divided into many different ethnic and tribal areas. Scramble for Africa among European nations 1880 with 1884 Berlin Conference - no African representatives present. Africa carved up with little thought given to ethnic and tribal boundaries. European languages, religions and political structures imposed on African territories + Christian missionaries sent. British army weapons like the maxim gun ensured any resistance was crushed with force.



History – The British Empire

What is the legacy of the British Empire?

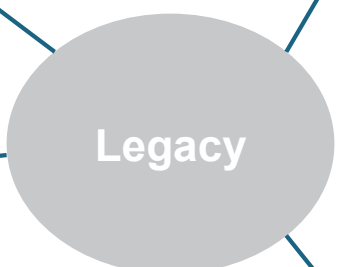
Military/diplomatic

Britain's imperial past is also reflected in its current military power and the desire to maintain this. For example, much is made of the global deployment of the Royal Navy to conflict areas and on humanitarian missions.

Economic

Empire explains how some of our richest families and institutions and cities became wealthy. Cities such as Glasgow, Liverpool, and Bristol developed and grew wealthy as a result of the empire. The City of London gained its position as the world financial centre as a result of the empire. It initially developed to finance trading and manufacturing throughout the formal and informal British Empire. Banks and insurance companies, shipbrokers and engineering companies all developed to support imperial trade.

Legacy



Social

Empire explains why we have a diaspora of millions of Britons spread around the world. It is due to the empire that English sports such as cricket, rugby, and football are played all over the world. Less than 5% of the most senior jobs in the UK are held by people from ethnic minorities. They are virtually absent from leadership of key areas such as healthcare, education, and criminal justice. 1/3 of companies in the FTSE 100 Index still lack any ethnic minority representation on their boards.

Political

The Foreign and Defence secretaries have influence disproportionate to Britain's size as a nation. Britain has a permanent seat on the UN Security Council despite not having the attributes of other members of the Security Council such as a large population, a lot of territory, a wealthy economy.



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Mathematics

Mathematics – Number

Key Term	Definition
Ascending	Increasing in size (or numerical value)
Compare	To look at two or more numbers and say what is similar or different.
Composite Numbers	A positive integer with more than two factors.
Consecutive	Describing things which follow each other in a particular order.
Cube Numbers	The result of multiplying a number by itself twice. 1, 8, 27, 64, 125, 216, 343, 512, 729, 1000
Decimal Places	The number of digits to the right of a decimal point in a decimal number.
Degree of Accuracy	Describing how precise or accurate a value is, in terms of number of decimal places or significant figures.
Denominator	The bottom number of a fraction. Must be an integer.
Descending	Decreasing in size (or numerical value)
Difference	The result of a subtraction.
Divisible	One number is divisible by another if it is capable of being divided exactly, without a remainder.
Equivalent	Of equal value.
Estimate	To find an approximate answer to a calculation by rounding the numbers involved, commonly to 1 significant figure.
Evaluate	To find the numerical value of.
Factor	An integer that divides another integer exactly, without a remainder.
Factor Pair	A set of two factors that have a particular product.
Fraction	A number which represents part (or parts of) a whole.
Highest Common Factor	The largest number that divides exactly into two or more numbers.
Improper Fraction	A fraction where the numerator is larger than the denominator.

Key Equivalents		
FDP Conversion	$1 = \frac{1}{1} = 100\%$	$0.75 = \frac{3}{4} = 75\%$
	$0.5 = \frac{1}{2} = 50\%$	$0.2 = \frac{1}{5} = 20\%$
	$0.1 = \frac{1}{10} = 10\%$	$0.\dot{3} = \frac{1}{3} = 33.\dot{3}\%$
	$0.25 = \frac{1}{4} = 25\%$	

Key Term	Definition
Indices	The power of a number which shows how many times the number is multiplied by itself.
Inequality	The relationship between two numbers that are not equal to each other, shown using the symbols $<$, $>$, $\leq$, $\geq$ or $\neq$.
Integer	A whole number including positive and negative numbers and zero.
Lowest Common Multiple	The smallest number which appears in the list of multiples for two or more numbers.
Mixed Number	A number formed of both an integer (whole number) and a fraction.
Multiple	The result of multiplying a number by an integer, i.e. the times tables of a number.
Numerator	The top number of a fraction. Must be an integer.
Order of Operations	BIDMAS —Brackets, Indices, Division & Multiplication and Addition & Subtraction.
Power of 10	The product of multiplying 10 by itself, a number of times.
Prime Number	A positive integer with only two factors, 1 and itself. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
Product	The result of a multiplication.
Proper Fraction	A fraction in which the numerator is less than the denominator.
Remainder	In division, the amount leftover when a number does not divide exactly.
Square Numbers	The result of multiplying a number by itself. 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225
Square Root	The particular factor of a number which can be multiplied by itself to produce that number.
Sum	The result of an addition.
Unit Fraction	A proper fraction with a numerator of 1.
Significant figures	The significant figures of a number are the digits which carry meaning (i.e. are significant) to the size of the number. The first significant figure of a number cannot be zero .

Mathematics – Number

Key Term	Definition
Equivalent Fractions	Fractions which have different numerators and denominators but represent the same value.
Percentage Increase/ Decrease	Calculating a percentage of an amount and either adding this onto (increasing) or subtracting this from (decreasing) the original amount.
Percentage Change	To calculate the percentage change, use the following: $\frac{\text{difference}}{\text{original}} \times 100$
Percentage Multiplier	The number you multiply a quantity by to increase or decrease it by a percentage. E.g. to increase by 10% the multiplier is 1.1.
Significant figure	The significant figures of a number are the digits which carry meaning (ie. are significant) to the size of the number. The first significant figure of a number cannot be zero .

Key Term	Definition				
Cube Root	The particular factor of a number which can be multiplied by itself twice to produce that number.				
Key units of measurement	<table> <tr> <td>Time 1 hour = 60 minutes 1 minutes = 60 seconds 1 hour = 3600 seconds</td><td>Length 1 cm = 10mm 1m = 100cm 1km = 1000m</td></tr> <tr> <td>Mass 1kg = 1000g 1 tonne = 1000kg</td><td>Area 1cm² = 100mm² 1m² = 10000cm²</td></tr> </table>	Time 1 hour = 60 minutes 1 minutes = 60 seconds 1 hour = 3600 seconds	Length 1 cm = 10mm 1m = 100cm 1km = 1000m	Mass 1kg = 1000g 1 tonne = 1000kg	Area 1cm ² = 100mm ² 1m ² = 10000cm ²
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Notes to add examples:

Mathematics – Algebra

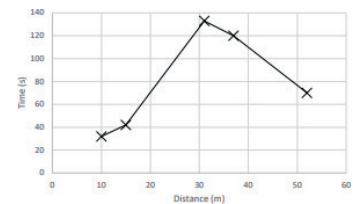
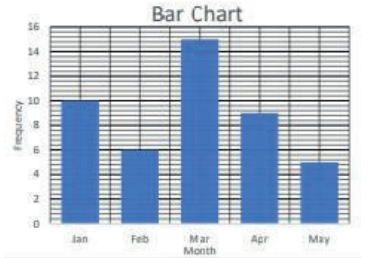
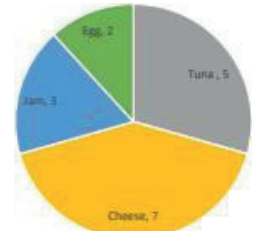
Key Term	Definition
Algebra	A branch of mathematics in which letters are used to represent numbers.
Coefficient	A constant value which multiplies a variable. Always written before the variable.
Constant	A fixed number on its own.
Equation	A mathematical statement in which two expressions with equal values are connected by an equals sign.
Expand	To remove the brackets from an expression by multiplying terms and simplifying as necessary.
Expression	An algebraic expression is made up of two or more terms combined by operators.
Factorise	To rewrite an expression in brackets. Completed by finding the highest common factor, placing this outside the bracket and dividing by this to get an expression for inside the bracket.
Formula	An equation that shows the relationship between two or more variables.
Identity	An equation that is true for all values.
Linear	Contain only variables with a power of one, such as x
Simplify	To write an expression or fraction in a more concise form using the rules of algebra.
Solution	The value or values that can be substituted for the unknown in an equation to make it true.
Solve	To find the solution(s) to an equation by isolating the unknown.
Subject	The dependant variable in a formula or equation, identifiable by being on its own on one side of the equals sign.
Substitution	The process by which symbols are replaced by numbers in order to evaluate an expression or formula.
Term	A constant, variable or coefficient and one or more variables.
Unknown	A value that is not known in an equation.
Variable	A symbol, often a letter, whose value can vary.

Key Term	Definition												
Inverse operation	The opposite operation that is being performed on a variable.												
Term	A constant, variable or coefficient and one or more variables.												
Inequality	<table border="1"> <thead> <tr> <th colspan="2">Inequality Symbols</th></tr> </thead> <tbody> <tr> <td>$\neq$</td><td>not equal</td></tr> <tr> <td>$<$</td><td>less than</td></tr> <tr> <td>$\leq$</td><td>less than or equal to</td></tr> <tr> <td>$>$</td><td>greater than</td></tr> <tr> <td>$\geq$</td><td>greater than or equal to</td></tr> </tbody> </table>	Inequality Symbols		$\neq$	not equal	$<$	less than	$\leq$	less than or equal to	$>$	greater than	$\geq$	greater than or equal to
Inequality Symbols													
$\neq$	not equal												
$<$	less than												
$\leq$	less than or equal to												
$>$	greater than												
$\geq$	greater than or equal to												

Key Term	Definition
Direct Proportion	If two quantities are in direct proportion, as one increases, the other increases by the same percentage.
Inverse Proportion	If two quantities are inversely proportional, as one increases, the other decreases by the same percentage.
Scale Factor	A number by which a shape is enlarged
Ratio	Comparing the size of one part to another. The ratio of a to b is written as a:b.
Equivalent ratio	Equivalent ratios are found by multiplying/dividing all parts of the ratio by the same value.

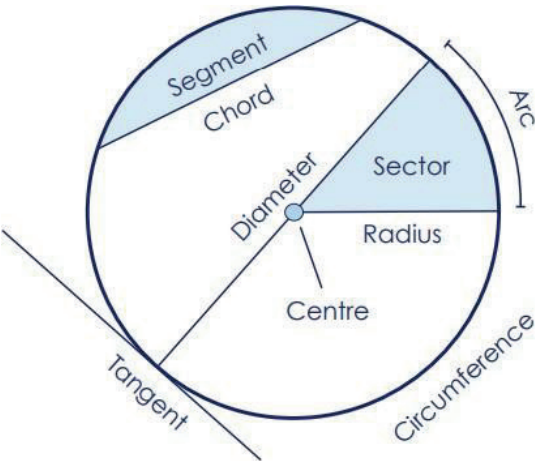
Mathematics – Statistics

Key term	Definition
Average	A single number or value that is used to represent a set of data. There are three main averages we focus on: mode, median and mean.
Data	Information in the form of facts and numbers.
Data point	A single item from a data set.
Data Set	A collection of data which all refers to the same category or topic.
Intersection	The numbers of elements that belong to both/all sets. In a Venn Diagram, this is where the circles overlap.
Mean	The sum of all the values in a data set, divided by the number of values in the data set.
Median	The middle value in an ordered list.
Mode	The most common value. It is possible to have more than one mode, or no mode.
Qualitative Data	A type of data that can be grouped under named categories, often described as data that can be described.
Quantitative Data	Types of data that can be represented numerically, often described as data that can be counted.
Range	The difference between the smallest and largest value.
Two-way Table	A diagram in which frequencies for two categories may be organised; one variable in rows and the other in columns.
Venn Diagram	A diagram in which circles are used to illustrate the relationships between different sets. Must have a box drawn around it.

Key Term	Definition	Examples																					
Frequency Table	A table showing how often something occurs. Can include tally charts.	<table border="1"> <thead> <tr> <th>Score</th><th>Tally</th><th>Frequency (f)</th></tr> </thead> <tbody> <tr> <td>1</td><td> </td><td>4</td></tr> <tr> <td>2</td><td> </td><td>9</td></tr> <tr> <td>3</td><td> </td><td>6</td></tr> <tr> <td>4</td><td> </td><td>8</td></tr> <tr> <td>5</td><td> </td><td>3</td></tr> <tr> <td>6</td><td> </td><td>1</td></tr> </tbody> </table>	Score	Tally	Frequency (f)	1		4	2		9	3		6	4		8	5		3	6		1
Score	Tally	Frequency (f)																					
1		4																					
2		9																					
3		6																					
4		8																					
5		3																					
6		1																					
Line Graph	Uses lines to join points on a graph to represent a data set.																						
Bar Chart	A way of displaying data using horizontal or vertical bars which are the same width and have gaps between them.																						
Pie Chart	A method of displaying proportional information by dividing a circle up into different-sized sectors.																						

Key Term	Definition
Frequency	How many times something occurs.
Continuous data	Data that can take any value. E.g. height, weight, length.
Discrete data	Data that can only take certain values. E.g. shoe size.

Mathematics – Geometry & Measure

Key Term	Definition
Parts of a circle	
Arc	A section of the circumference.
Sector	The area bounded by two radii and an arc.
Chord	A straight line joining any two parts of the circumference.
Circumference	The distance around the outside of the circle.
Diameter	A straight line going from one end of the circle to another passing through the centre.
Segment	The area bound by the circumference and a chord.
Tangent	A straight line that touches the circumference at a single point.
Pi (π)	The ratio of a circle's circumference to its diameter.

Key Term	Definition
Circumference	The perimeter of the circle. $C = \pi d$
Radius	$diameter \div 2$
Diameter	$2 \times radius$
Perimeter of semi-circle	$p = \frac{\pi d}{2} + d$
Perimeter of quarter circle	$p = \frac{\pi d}{4} 2r$
Perimeter of three-quarter circle	$p = \frac{3}{4} \pi d + 2r$
Area of a circle	$A = \pi r^2$
Area of a semi-circle	$A = \frac{\pi r^2}{2}$
Area of a quarter-circle	$A = \frac{\pi r^2}{4}$
Area of three-quarter circle	$A = \frac{3\pi r^2}{4}$

Mathematics – Geometry & Measure

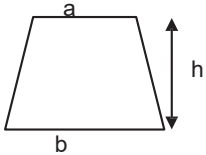
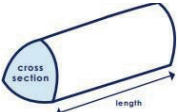
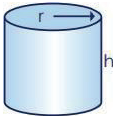
Key Term	Definition
Acute Angle	An angle less than 90°.
Adjacent	Next to, or near.
Area	A measure of the space inside a closed two-dimensional shape.
Axes	The straight lines on a graph used to define the position of a point. The x-axis goes across (horizontal). The y-axis goes up (vertical).
Centimetre (cm)	A metric unit of length equal to one hundredth of a metre. 100cm = 1m
Compound Shape	A shape made up of two or more geometric shapes.
Coordinate	An ordered pair of points that show an exact position on a set of axes. Written (x, y).
Exterior Angle	An angle between one side of a shape and a line extending from an adjacent side.
Irregular Polygon	A polygon with unequal length sides and angles.
Kilometre (km)	A metric unit of length equal to one thousand metres. 1 km = 1000m
Line of Symmetry	A line that can divide a shape into identical halves, which are mirror images of each other.
Metre (m)	The base unit of length in the international system of units.
Midpoint	The point exactly halfway between two points.
Millimetre (mm)	A metric unit of length equal to one thousandth of a metre. 10mm = 1cm
Obtuse Angle	An angle measuring between 90° and 180°.
Order of Rotation	The number of times that a shape appears identical during a turn of 360°.
Origin	The point with coordinate (0, 0).
Parallel	Two lines that will never cross and that will remain the same distance apart.
Perpendicular	Two lines that meet at an angle of 90°.

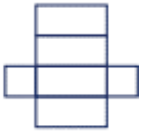
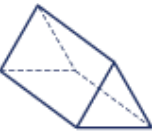
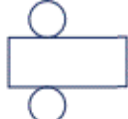
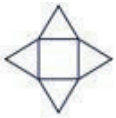
Key terms	Definition
Perimeter	The total distance around the outside of a closed two-dimensional shape.
Polygon	A closed two-dimensional shape made up of all straight edges.
Protractor	An instrument used to measure angles.
Quadrilateral	A two-dimensional shape with four sides.
Reflex Angle	An angle measuring between 180° and 360°.
Regular Polygon	A polygon with sides of equal length and angles of equal size.
Right-angle	A 90° angle.
Rotational Symmetry	A symmetry in which a shape may be rotated about a central point and appears identical after a turn of less than 360°.
Square Units	Units used to measure area.
Triangle	A two-dimensional shape with three sides.
Vertex	A point on a polygon at which two lines meet to form an angle.

Key terms	Definition
Angles around a point	Angles around a point sum to 360°.
Angles on a straight line	Angles on a point on a straight line sum to 180°.
Angles in a triangle	Angles in a triangle sum to 180°.
Angles in a quadrilateral	Angles in a quadrilateral sum to 360°.

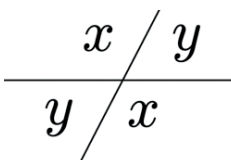
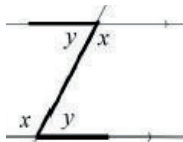
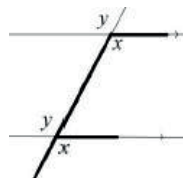
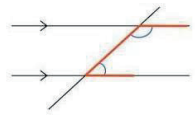
Key terms	Definition
Area of a rectangle or square	Length x width
Area of a parallelogram	Length x perpendicular height
Area of a triangle	$\frac{b \times h}{2}$, Where b is the base and h is the perpendicular height.
Area of a trapezium	$\frac{a+b}{2} \times h$, where a and b are parallel sides. h is the perpendicular height.

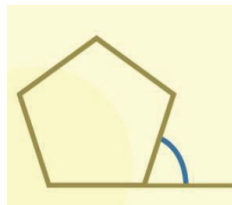
Mathematics – Geometry & Measure

Key Term	Definition
Area of a trapezium	$\frac{a + b}{2} \times h$ 
Face	A face is a single flat surface.
Edge	An edge is a line segment between two faces.
Volume	The amount of 'space' a solid object occupies. Units: mm³, cm³, m³, etc. The volume of a prism $V = \text{Area of Cross Section} \times \text{Length}$  The volume of a <i>cylinder</i> = $\pi r^2 h$ 
Volume of a cube / cuboid	Length x width x height
Prism	A 3D shape with a constant cross-section.
Cross-section	The 2D shape that is consistent throughout the prism

Key Term	Definition	Shape	Net
Cube	6 square faces 12 edges 8 vertices		
Cuboid	6 rectangular faces 12 edges 8 vertices		
Triangular Prism	5 faces 9 edges 6 vertices		
Cylinder	3 faces 2 edges 0 vertices		
Square-based Pyramid	5 faces 8 edges 5 vertices		
Triangular-based Pyramid	4 faces 6 edges 4 vertices		
Cone	2 faces 1 edge 1 vertex		
Sphere	1 face 0 edges 0 vertices Half a sphere is known as a hemisphere.		

Mathematics – Geometry & Measure

Key Term	Definition
Vertically Opposite Angles	Vertically opposite angles are equal. 
Alternate Angles	Alternate angles are equal. 
Corresponding Angles	Corresponding angles are equal. 
Co-Interior Angles	Co-Interior angles add up to 180° . 

Key Term	Definition
Sum of all angles in Polygons	n is the number of sides. $(n - 2) \times 180$
Internal angle in regular polygon	$\frac{(n - 2) \times 180}{n}$
External angle	The angle between a side of a polygon and an extended adjacent side. 
Exterior angle regular polygon	$\frac{360}{n}$



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French

French – Unit 5 Où es-tu allé en vacances?

TIME PHRASE (1)	VERB (2)	DESTINATION (3)	VERB (4)	TRANSPORT (5)	VERB (6)	ACCOMMODATION (7)
L'année dernière <i>Last year</i>	je suis allé(e) <i>I went</i>	en France <i>to France</i>	j'ai voyagé <i>I travelled</i>	en avion <i>by plane</i>	je suis resté(e) <i>I stayed</i>	dans un hôtel <i>in a hotel</i>
L'été dernier <i>Last summer</i>	il est allé <i>he went</i>	en Espagne <i>to Spain</i>	il a voyagé <i>he travelled</i>	en voiture <i>by car</i>	il est resté <i>he stayed</i>	dans un camping <i>in a campsite</i>
Il y a deux mois <i>Two months ago</i>	elle est allée <i>she went</i>	en Italie <i>to Italy</i>	elle a voyagé <i>she travelled</i>	en train <i>by train</i>	elle est restée <i>she stayed</i>	dans une auberge de jeunesse <i>in a youth hostel</i>
	on est allé <i>we went</i>	en Écosse <i>to Scotland</i>	on a voyagé <i>we travelled</i>	en car <i>by coach</i>	on est resté <i>we stayed</i>	dans une tente <i>in a tent</i>
	ils sont allés <i>they went</i>	en Allemagne <i>to Germany</i>	ils ont voyagé <i>they travelled</i>	en bateau <i>by boat</i>	ils sont restés <i>they stayed</i>	dans un camping-car <i>in a camper van</i>
Normalement <i>Normally</i>	je vais <i>I go</i>	en Pologne <i>to Poland</i>	je voyage <i>I travel</i>	en ferry <i>by ferry</i>	je reste <i>I stay</i>	dans un appartement <i>in a flat</i>
Pendant les vacances <i>During the holidays</i>	on va <i>we go</i>	en Roumanie <i>to Romania</i>	on voyage <i>we travel</i>	à pied <i>on foot</i>	on reste <i>we stay</i>	dans un gîte <i>in a holiday cottage</i>
		en Hongrie <i>to Hungary</i>		à vélo <i>by bike</i>		
Dans le futur <i>In the future</i>	je vais aller <i>I'm going to go</i>	au Portugal <i>to Portugal</i>	je vais voyager <i>I'm going to travel</i>		je vais rester <i>I'm going to stay</i>	
Si j'ai de la chance <i>If I'm lucky</i>	on va aller <i>we are going to go</i>	au Canada <i>to Canada</i>	on va voyager <i>we're going to travel</i>		on va rester <i>we're going to stay</i>	
		aux États-Unis <i>to America</i>				
		aux Pays de Galles <i>to Wales</i>				
		aux Pays Bas <i>to Holland</i>				

French – Unit 6 Qu'est-ce que tu fais dans ton temps libre?

FREQUENCY (1)	VERB (2)	REASON (3)	CONNECTIVE (4)	VERB (5)	REASON (6)
Normalement <i>Normally</i>	je bavarde avec mes amis <i>I chat with my friends</i>	parce que c'est amusant <i>because it's fun</i>		je ne bavarde pas avec mes amis <i>I don't chat with my friends</i>	car c'est ennuyeux <i>as it's boring</i>
De temps en temps <i>From time to time</i>	je sors avec mes amis <i>I go out with my friends</i>	parce que c'est gratuit <i>because it's free</i>		je ne sors pas avec mes amis <i>I don't go out with my friends</i>	car c'est monotone <i>as it's dull</i>
Une fois par semaine <i>Once a week</i>	je joue aux jeux vidéo <i>I play video games</i>	parce que c'est relaxant <i>because it's relaxing</i>	mais <i>but</i>	je ne mange pas au resto <i>I don't eat at the restaurant</i>	car c'est cher <i>as it's expensive</i>
Rarement <i>Rarely</i>	je fais de la gymnastique <i>I do gymnastics</i>	parce que c'est passionnant <i>because it's exciting</i>	cependant <i>however</i>	je ne joue pas de la guitare <i>I don't play guitar</i>	car c'est difficile <i>as it's difficult</i>
Souvent <i>Often</i>	je lis des romans <i>I read novels</i>	parce que c'est sain <i>because it's healthy</i>	pourtant <i>yet</i>	je ne regarde pas de film <i>I don't watch a film</i>	car c'est répétitif <i>as it's repetitive</i>
Toujours <i>Always</i>	je promène mon chien <i>I walk my dog</i>	parce que je suis sportif/sportive <i>because I'm sporty</i>	d'autre part <i>on the other hand</i>	je ne regarde pas de film <i>I don't watch a film</i>	car c'est nul <i>as it's rubbish</i>
Tout le temps <i>All the time</i>	je vais au cinéma <i>I go to the cinema</i>	parce que je suis paresseux/paresseuse <i>because I'm lazy</i>		je ne fais pas de natation <i>I don't do swimming</i>	car c'est une perte de temps <i>as it's a waste of time</i>
	j'écoute de la musique <i>I listen to music</i>	parce que je suis créatif/créative <i>because I'm creative</i>		je ne fais pas d'équitation <i>I don't do horse riding</i>	
	je regarde la télé <i>I watch TV</i>			je ne lis pas le journal <i>I don't read the news paper</i>	

French – Unit 7 Comment est ta routine?

FREQUENCY (1)	VERB (2)	TIME (3)	CONNECTIVE (4)	INFINITIVE VERB (5)
Tous les jours <i>Every day</i>	je me réveille <i>I wake up</i>	à sept heures <i>at 7am</i>		
Pendant la semaine <i>During the week</i>	je me lève <i>I get up</i>	à sept heures cinq <i>at 7:05am</i>		je voudrais avoir plus de temps au lit. <i>I would like to have more time in bed.</i>
Le week-end <i>At the weekend</i>	je me lave <i>I have a wash</i>	à sept heures dix <i>at 7:10am</i>		je voudrais avoir plus de temps chez moi. <i>I would like to have more time at home.</i>
Le matin <i>In the morning</i>	je me douche <i>I have a shower</i>	à sept heures et quart <i>at 7:15am</i>	mais <i>but</i>	je voudrais avoir plus de temps au collège. <i>I would like to have more time at school.</i>
L'après-midi <i>In the afternoon</i>	je me brosse les dents <i>I brush my teeth</i>	à sept heures vingt <i>at 7:20am</i>	cependant <i>however</i>	je voudrais me lever plus tard. <i>I would like to get up later.</i>
Le soir <i>In the evening</i>	je m'habille <i>I get dressed</i>	à sept heures vingt-cinq <i>at 7:25am</i>	d'autre part <i>on the other hand</i>	je voudrais me coucher plus tôt. <i>I would like to go to bed earlier.</i>
Puis <i>Then</i>	je me peigne <i>I comb my hair</i>	à sept heures et demie <i>at 7:30am</i>		je voudrais pouvoir me baigner. <i>I would like to be able to have a bath.</i>
Ensuite <i>Next</i>	je prends le petit-déjeuner <i>I have breakfast</i>	à huit heures moins vingt-cinq <i>at 7:35am</i>		je voudrais rentrer chez moi plus tôt. <i>I would like to go home earlier.</i>
Après ça <i>After that</i>	je rentre chez moi <i>I get home</i>	à huit heures moins vingt <i>at 7:40am</i>		je voudrais aller au collège plus tard. <i>I would like to go to school later.</i>
Plus tard <i>Later on</i>	je me couche <i>I go to bed</i>	à huit heures moins le quart <i>at 7:45am</i>		

French – Unit 8 Qu'est-ce que tu vas faire dans le futur?

TIME	VERB	PLAN	REASON
Dans le futur <i>In the future</i>	Je vais <i>I'm going to</i>	me marier <i>get married</i>	car ce serait mon rêve <i>because it would be my dream</i>
A l'avenir <i>In the future</i>	Je veux <i>I want to</i>	étudier à l'université <i>study to university</i>	car ce serait bien payé <i>because it would be well-paid</i>
Dans dix ans <i>In ten years</i>	Je voudrais <i>I would like to</i>	avoir des enfants <i>have children</i>	car ce serait amusant <i>because it would be fun</i>
Quand je serai grand(e) <i>When I'm older</i>	J'espère <i>I hope to</i>	avoir une maison/une voiture <i>have a house/a car</i>	car ce serait enrichissant <i>because it would be rewarding</i>
Après le collège <i>After school</i>	J'ai l'intention de <i>I intend to</i>	avoir ma propre entreprise <i>have my own business</i>	car ce serait une bonne expérience <i>because it would be a good experience</i>
		habiter à l'étranger <i>live abroad</i>	
		voyager <i>travel</i>	
		être content(e)/riche <i>be happy</i>	



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Spanish

Spanish – Unit 5 ¿Adónde fuiste de vacaciones?

TIME (1)	VERB (2)	LOCATION (3)	EXTRA DETAIL (4)	OPINION (5)
La semana pasada <i>Last week</i>	fui <i>I went</i>	a Madrid/Benidorm/Barcelona <i>to Madrid/Benidorm/Barcelona</i>	con mi familia <i>with my family</i>	Fue estupendo. <i>It was brilliant.</i>
El año pasado <i>Last year</i>	fuiste <i>you went</i>	a España/Irlanda/Escocia/Gales <i>to Spain/Ireland/Scotland/Wales</i>	con mis amigos/amigas <i>with my friends</i>	Fue fenomenal. <i>It was fantastic.</i>
El verano pasado <i>Last summer</i>	fue <i>he/she went</i>	a Francia/Italia/Alemania/Noruega <i>to France/Italy/Germany/Norway</i>	con mi clase <i>with my class</i>	Fue genial. <i>It was awesome.</i>
Hace un mes <i>A month ago</i>	fuimos <i>we went</i>	a Argentina/Ecuador/Columbia <i>to Argentina/Ecuador/Columbia</i>	con mi mejor amigo/a <i>with my best friend</i>	Fue inolvidable. <i>It was unforgettable.</i>
Hace dos años <i>Two years ago</i>	fuisteis <i>you all went</i>	a Turquía/Egipto/Portugal <i>to Turkey/Egypt/Portugal</i>	Hizo buen tiempo. <i>It was good weather.</i>	Fue maravilloso. <i>It was wonderful.</i>
Hace poco <i>Not long ago</i>	fueron <i>they went</i>	a la playa/a la costa/a las montañas <i>to the beach/to the coast/to the mountains</i>	Hizo mal tiempo. <i>It was bad weather.</i>	Me gustó. <i>I liked (it).</i>
En mis últimas vacaciones <i>In my last holidays</i>		a un país del Caribe <i>to a Caribbean country</i>	Hizo (mucho) calor / frío. <i>It was (very) hot / cold.</i>	Me encantó. <i>I loved (it).</i>
		a un país de habla hispana <i>to a Spanish speaking country</i>	Hizo sol / viento. <i>It was sunny / windy.</i>	Fue regular. <i>It was OK.</i>
		a un país donde hace calor <i>to a country where it is hot</i>	Llovió sin parar. <i>It rained non stop.</i>	Fue un desastre. <i>It was a disaster.</i>
				Fue horrible. <i>It was awful.</i>
				Fue un rollo. <i>It was very boring.</i>
				Fue una pesadilla. <i>It was a nightmare.</i>

Spanish – Unit 6 ¿Qué te gusta hacer en tu tiempo libre?

TIME (1)	OPINION (2)	VERB (3) + ACTIVITY (4)
Una vez / dos/ tres veces por semana <i>Once/twice/three times a week</i>	me gusta <i>I like</i>	jugar al fútbol, baloncesto... a los videojuegos, al ordenador, a la consola <i>to play football, basketball, videogames, on the computer, on the console</i>
El fin de semana <i>At the weekend</i>	no me gusta <i>I don't like</i>	tocar el piano, la guitarra <i>to play piano, guitar</i>
Después del instituto <i>After school</i>	me encanta <i>I love</i>	hacer natación, ballet, gimnasia, equitación, atletismo <i>to do swimming, ballet, gymnastics, horse riding, athletics</i>
Por la tarde <i>In the afternoon</i>	me apasiona <i>I have a passion for</i>	ver la tele, series, películas <i>to watch telly, series, films</i>
De vez en cuando <i>From time to time</i>	detesto/odio <i>I hate</i>	escuchar música en mi móvil <i>to listen to music on my phone</i>
Los lunes/martes/miércoles/jueves/viernes/sábados/ domingos <i>on Mondays/on Tuesdays/ on Wednesdays/ on Thursdays/ on Fridays/ on Saturdays/ on Sundays</i>		salir <i>to go out</i>
Todos los días / cada día <i>Everyday</i>	el mejor deporte es... <i>the best sport is...</i>	pasear al perro <i>to walk the dog</i>
	el peor deporte es... <i>the worst sport is...</i>	leer revistas, libros, mensajes <i>read magazines, books, messages</i>
		compartir fotos en Instagram <i>to share photos in Instagram</i>
		charlar en redes sociales <i>to chat in social media</i>

Spanish – Unit 7 ¿Cómo es tu rutina diaria?

TIME PHRASES (1)	VERB (2)	TIME PHRASES (1)	
Normalmente <i>Normally</i>	Me despierto <i>I wake up</i>	A la una	<i>At 1</i>
A veces <i>Sometimes</i>	Me levanto <i>I get up</i>	A las...	<i>At ...</i>
A menudo <i>Often</i>	Me lavo <i>I have a wash</i>	dos	<i>2</i>
Una vez / dos/ tres veces a la semana <i>Once/twice/three times a week</i>	Me lavo los dientes <i>I brush my teeth</i>	tres	<i>3</i>
El fin de semana <i>At the weekend</i>	Me ducho <i>I shower</i>	cuatro	<i>4</i>
Después del instituto <i>After school</i>	Desayuno <i>I have breakfast</i>	cinco	<i>5</i>
De vez en cuando <i>From time to time</i>	Voy al instituto <i>I go to school</i>	seis	<i>6</i>
Los lunes/los martes/los miércoles/ <i>On Mondays/on Tuesdays/on Wednesdays</i>	Termino el instituto <i>I leave school</i>	siete	<i>7</i>
Todos los días / cada día <i>Everyday</i>	Vuelvo a casa <i>I return home</i>	ocho	<i>8</i>
Después <i>Afterwards</i>	Meriendo <i>I have a snack</i>	nueve	<i>9</i>
	Ceno <i>I eat dinner</i>	diez	<i>10</i>
	Hago los deberes <i>I do my homework</i>	once	<i>11</i>
	Me relajo <i>I relax</i>	doce	<i>12</i>
	Me acuesto <i>I go to bed</i>	y media	<i>half past</i>
		y cuarto	<i>quarter past</i>
		menos cuarto	<i>quarter to</i>
		de la mañana	<i>of the morning</i>
		de la tarde	<i>of the afternoon</i>
		de la noche	<i>of the evening</i>
		por la mañana	<i>in the morning</i>
		por la tarde	<i>in the afternoon</i>
		por la noche	<i>in the evening</i>

Spanish – Unit 8 ¿En qué trabajas?

JOBS (1)		WORK PLACES (2)	
Mi madre/hermana es...	<i>My mum/sister is...</i>	Trabaja en...	<i>He/she works...</i>
Mi padre/hermano es...	<i>My dad/brother is...</i>	• una escuela • una oficina • una fábrica • un hospital • al aire libre	• <i>in a school</i> • <i>In an office</i> • <i>in a factory</i> • <i>in a hospital</i> • <i>outdoors</i>
Cocinera/o	<i>A cook</i>		
Enfermera/o	<i>A nurse</i>		
Bombero/a	<i>A firefighter</i>		
Dependiente	<i>A shop assistant</i>		
Camarera/o	<i>Waiter/waitress</i>	Está en paro	<i>S/he is unemployed</i>
Médica/o	<i>Doctor</i>	Está jubilada/o	<i>S/he is retired</i>
Obrera/o	<i>Builder</i>		
Electricista	<i>Electrician</i>		
Conductora/conductor (de taxi/de bus)	<i>(Taxi/bus) driver</i>		
Abogada/o	<i>Lawyer</i>		
Mecánica/o	<i>Mechanic</i>		
Profesora/Profesor	<i>Teacher</i>		
Madre/padre a tiempo completo	<i>Stay-at-home mum/dad</i>		



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Dance

Dance – Year 8

PHYSICAL SKILLS		EXPRESSIVE SKILLS		TECHNICAL SKILLS	
POSTURE	The way the body is held	PROJECTION	The energy the dancer uses to connect with and draw in the audience.	ACTION CONTENT	Performing the movements in the choreography such as travelling, turning, gesture and floor-work accurately.
ALIGNMENT	Correct placement of body parts in relation to each other.	EYE FOCUS	Use of the eyes to enhance performance or interpretative qualities.	DYNAMIC CONTENT	Accurately performing the quality of the movements such as soft, strong, sharp, gently.
BALANCE	A steady or held position achieved by an even distribution of weight.	SPATIAL AWARENESS	Consciousness of the surrounding space and its effective use.	SPATIAL CONTENT	Accurately performing the actions in the correct place e.g.. levels, directions, pathways, shapes, designs and patterns.
COORDINATION	The efficient combination of body parts	FACIAL EXPRESSION	Use of the face to show mood, feeling or character.	RELATIONSHIP CONTENT	Accurately portraying the ways in which dancers interact; the connections between dancers.
CONTROL	The ability to start and stop movement, change direction and hold a shape efficiently.	PHRASING	The way in which the energy is distributed in the execution of a movement phrase.	TIMING CONTENT	Accurate use of time or counts when matching movements to sound and/or other dancers.
FLEXIBILITY	The range of movement in the joints (involving muscles, tendons and ligaments).	MUSICALITY	The ability to make the unique qualities of the accompaniment evident in performance	RHYTHMIC CONTENT	Repeated patterns of sound or movement performed accurately.
MOBILITY	The range of movement in a joint; the ability to move fluently from action to action.	SENSITIVITY TO OTHER DANCERS	Awareness of and connection to other dancers.	STYLISTIC ACCURACY	Performing the choreography in a way which highlights the key features of the chosen style/s
STRENGTH	Muscular power.				
STAMINA	Ability to maintain physical and mental energy over periods of time				
EXTENSION	Lengthening one or more muscles or limbs.				
ISOLATION	An independent movement of part of the body.				

Dance – Year 8

AURAL SETTING		CHOREOGRAPHIC DEVICES		RELATIONSHIPS	
Song	A piece of music with someone singing lyrics	MOTIF & DEVELOPMENT	A movement phrase encapsulating an idea that is repeated and developed using relationships and choreographic devices throughout the dance.	LEAD & FOLLOW	When one dancer begins a phrase of movement and a second dancer or group of dancers repeat the phrase after the lead dancer.
Instrumental	A piece of music which has no sung or spoken words.			MIRRORING	When two or more dancers perform the same phrase of movement on the opposite side, as if a reflection of each other.
Orchestral	A piece of music performed by a full orchestra	REPETITION	Performing the same action or phrase again.	ACTION & REACTION	One/Group of Dancer/s performs an action or series of actions and another dancer/dancers perform a different action in response.
Spoken Word	The use of a speech/poem/story spoken out loud (this could be over music)	CONTRAST	Movements or shapes that have nothing in common.	ACCUMULATION	When a dancer performs a series of movements and others join in at different times until all perform in unison.
Silence	No audible sound	HIGHLIGHTS	Important moments of a dance.	COMPLIMENT & CONTRAST	Perform actions or shapes that are similar to but not exactly the same as another dancer's followed by movements or shapes that have nothing in common (or vice versa).
Natural Sound	Use of sounds created by nature (birdsong, wolf howl, rain etc)	CLIMAX	The most significant moment of the dance.	COUNTERPOINT	When dancers perform different phrases simultaneously
Found Sound	A 'non-musical' sound used creatively in a piece of music	MANIPULATION OF NUMBER	How the number of dancers in a group is used.	CONTACT	When two or more dancers perform whilst physically connected to each other.
Body Percussion	Using the human body to create percussive sounds	UNISON & CANON	A combination of two or more dancers performing the same movement at the same time and same movements overlapping in time.	FORMATIONS	Shapes or patterns created in space by dancers
		FRAGMENTATION	Use of parts of a phrase or motif.		
		RETROGRADE	Reversing a movement phrase.		



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Drama

Drama – Skills

Vocal Skills

Term	Definition
Accent	The way a character pronounces words according to their location or social class
Emphasis	Adding stress to a word or phrase to enhance importance and communicate meaning
Pace	How quickly or slowly a person speaks
Pause	A moment of silence whilst speaking that can build tension or communicate another meaning
Pitch	How high or deep the voice is
Volume	How loud or quite the voice is
Tone	The way a character speaks to show emotion
Projection	The distance a voice travels
Clarity	How clearly the voice can be heard

Key Terminology

Term	Definition
Ensemble	A group of musicians, actors, or dancers who perform together.
Script	The written text of a play, film, or broadcast.
Improvise	To create and perform (music, drama) spontaneously or without preparation
Character	A person portrayed in a drama, novel, or other artistic piece.
Fourth Wall	The imaginary wall at the front of the stage separating the audience from the performers.
Ensemble	A group of musicians, actors, or dancers who perform together.
Script	The written text of a play, film, or broadcast.
Improvise	To create and perform (music, drama) spontaneously or without preparation

Physical Skills

Term	Definition
Hand Gestures	Use of the hands to communicate meaning
Body Language	Use of the body to communicate meaning
Facial Expressions	Use of the face (Eye brows, Mouth and Eyes) to communicate meaning and emotion to the audience
Posture	Use of the back to show status or age
Gait	How an actor walks to show emotion or character
Eye Contact	Use of the eyes to show relationship towards another character
Proxemics	The distance between characters to show relationships
Levels	Use of different heights to show status
Control	How well you use your body during a performance to stay in character

Types of Staging

Term	Definition
End on	The audience is seated along one end of the stage, directly facing it.
Traverse	The audience is on two sides of the stage, facing towards each other.
In the round	The stage is completely surrounded by the audience.
Promenade	Performance area may be set in various locations in a venue. Audience follows the action on foot, moving from one location to another.
Thrust	The audience are sitting on three sides of the action of the play.
End on	The audience is seated along one end of the stage, directly facing it.
Traverse	The audience is on two sides of the stage, facing towards each other.

Drama – Topic Knowledge

Features of a Script		Key Information	
Term	Definition	Term	Definition
Playwright	The person who wrote the script or play	Shakespeare	A British playwright regarded as the greatest English writer ever to live
Dialogue	The lines the characters say in the script	Frantic Assembly	A physical theatre company who prioritise movement over dialogue. They have created techniques such as chair duets and round by througs
Stage Directions	Parts of the script that tell the actors what to do or where to move, usually in italics or brackets	Antagonist	Being actively hostile to another character
Cast List	A list of all the characters found in the script	Tension	A feeling of suspense or anticipation created during a scene
Acts and Scenes	The different sections or parts of the script that split the play up	Audience Awareness	Knowing where your audience is and facing them during the performance
Narrator	The narrator acts as a guide for the audience giving them information about the play	Corpsing	Breaking character and laughing during a performance
Setting	Tells the reader what location or time period the piece is set in	Placard	Written text used during a performance to give the audience extra information
Context	Tells the reader background information about a character that helps them get into role		

Drama Writing Techniques	
Answering the Question	Always read the question carefully and underline the key words. Make sure every paragraph answers the question.
Drama Terminology	Use subject-specific vocabulary to show your understanding. The more accurate drama vocabulary you use, the higher your marks are likely to be.
The Actor's Skills	Write about how actors use their voice and body. Always explain why the actor used the skill and what effect it had.
Explaining, Not Describing	Don't just say what happened—explain why it mattered. ❌ The actor shouted. ✅ The actor shouted to show anger and make the audience feel uncomfortable.
Strong Sentence Starters	"The actor used...", "This showed...", "This created...", "The audience would feel...", "This suggests..."
Audience Impact	Every drama choice should create an effect on the audience. Use phrases like "This makes the audience..." or "This suggests..."



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Music

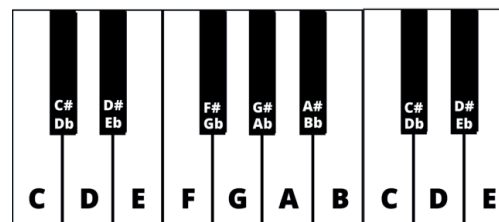
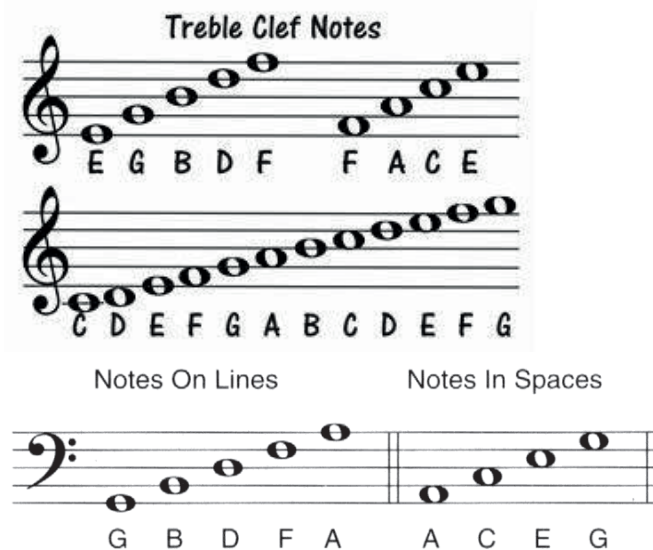
Music – Elements, performance and notation

The musical elements	
Dynamics	The volume of music e.g. loud or quiet.
Rhythm	The pattern of beats in music.
Pitch	The movement of the notes between high and low within a piece of music.
Structure	The different sections within a piece of music e.g. verse/chorus.
Melody	The main tune within a piece of music.
Instrumentation	The different instruments used within a piece of music.
Texture	The different layers of sound happening at once.
Tonality	The character of a piece of music as determined by the key in which it is played.
Tempo	The speed of the music
Harmony	The use of chords sounding together at the same time and the device used to analyse them.
Sonority	The colour, character or quality of sound produced
Articulation	How to play a note—if it should be short and spikey or smooth.

Performance Knowledge	
Accuracy	Being secure in terms of rhythm and/or pitch, playing at an appropriate tempo resulting in a fluent performance.
Expression and interpretation	An expressive performance in keeping with the chosen style, effective communication and sustained audience interest and maintaining a balanced performance.
Technical Control	Having a secure vocal/instrumental technique and intonation (where appropriate) throughout the whole performance, ensuring secure control of sonority (tone) with the use of contrast fully appropriate to the music.
Performance directions	The tempo, dynamic and articulation markings found on a score that tells you how to perform the piece expressively.
Balanced Performance	When you can hear all parts of the performance.
Intonation	Accuracy of pitch and projection when creating the sound on your voice or instrument. If the sound quality is poor due to a lack of technical control this is also known as poor intonation.
Fluency	Performing with the correct rhythm/timing, without hesitation.
Stylistic Awareness	Having an awareness of the genre specific conventions that are required e.g. particular articulations or performance techniques.

Music Notation			
Symbol	Term	Rest	Definition
	Semiquaver		A note lasting for 1/4 of a beat.
	Quaver		A note lasting for 1/2 a beat.
	Crotchet		A note lasting for one beat.
	Minim		A note lasting for two beats.
	Dotted minim		A note lasting for three beats.
	Semibreve		A note lasting for four beats.

Music Notation	
Metre	The pulse within music that is consistently present in which you organize into regular patterns to ensure everyone is in time.
Time signature	Numbers at the beginning of the piece that tell you how many beats and which type of beat you are counting in.
Key signature	The flats and sharps at the beginning of a piece of music, before the time signature, that tell you what key the piece is in and any accidentals.
Accidentals	They symbols that raise or lower a pitch by one semitone.
Dotted notes	The dot increases the duration of the basic note by half of the original note. For example, a dotted crotchet is 1.5 beats because a crotchet is 1 beat and half of 1 is 0.5.

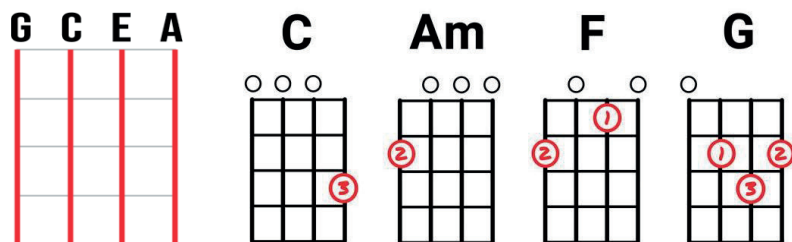


Music – History of Popular Music

Popular Music Sub-genres

Rhythm and blues	Originally, this term referred to a genre of commercial music that developed in African-American communities in the 1940s.
British Invasion	A style of popular music that emerged in the 1960s. Musicians often emphasize the artistic merit of their music.
Soul	A style of music that developed in America during the 1950s and 60s. It combined elements of jazz, rhythm and blues, and gospel. The vocals are often emotionally charged and melismatic.
Pop	An accessible style of music that emerged in the 1950s as development of rock and roll. The songs are typically written with the intention of maximizing sales and commercial success.
Motown	A record label in Detroit that was heavily associated with soul music. It consistently produced hit songs in the 1960s.
Disco	A style of music that originated from funk in the 1970s. It is syncopated, with a four-on-the-floor beat and fast hi-hat patterns.
Glam rock	A style of rock that emerged in the 1970s. It emphasized elaborate costumes and the theatrical aspects of performance.
Funk	A development of soul, jazz and rhythm and blues that emerged in the 1960s.
Heavy Metal	A genre of rock music characterized by loud dynamics, a thick texture, extended guitar solos and a heavy beat. The lyrics are often aggressive.
Punk rock	A type of rock music developed in the 1970s. Songs are often short, with sparse instrumentation and political lyrics.

Ukulele Strings and Chord Diagrams



Melodic and metre devices

Conjunct	Melody moving in steps.
Disjunct	Melody moving in leaps.
Ascending	A melody moving higher in pitch.
Descending	A melody moving lower in pitch.
Riff	A short repeating memorable musical pattern
Hook	A motif or short musical idea that creates the main focus in the music
Octave	A leap of 8 notes
Call and response	One musical phrase is followed by another slightly different musical phrase in question and answer
Chromatic	Continuous movement between notes a semitone apart.
Melodic motif	A short pattern in the melody, helps to make it 'singable' and memorable. Usually repeated in the song.
Melodic contrast	A section in the melody that has different musical ideas than other lines, this is usually a change in rhythm, or melody shape
Melodic repetition	A section where the melody is repeated to make it memorable. This could be alongside repeated lyrics.
Regular Phrasing	Phrasing is where a group of notes are played or sung together as one musical thought. Regular phrasing means these groupings are either 2, 4 or 8 bars
Scale	A set of tones where you can build melodies and harmonies — example C Major scale

Structure

Intro/Outro	Start/end of a song. Usually last 4 or 8 bars. Outros may fade out (gradually reduce in volume).
Verse	Section of a pop song that repeats the chords and melody but changes lyrics. It tells the story of the song.
Chorus	Section of a pop song that repeats the chords, melody and lyrics. It contains the main theme or message of the song and usually contains the hook and or riff.
Bridge/middle 8	Joining section in a pop song, to create contrast. It usually has a contrasting chord sequence and melody as well as contrasting rhythmic ideas.
Instrumental	A section in a pop song where there are no vocals, usually includes an improvisation over the chords of the chorus.
12 bar blues	A song structure that lasts for 12 bars, originating from the United States and influenced by African American struggles with equality.
32 bar song form	A traditional pop song structure that lasts for 32 bars.

Music – Theme and Variation

Harmony and Rhythmic devices

Primary triads	Chords 1 4 and 5 of the scale
Secondary triads	Chords 2 and 6 of the scale
7th Chords	Triads where the flattened 7th is added
Tonic	The home note of the song. The first note in the scale and key that the song is played in.
Vocal harmony	Where two different vocal lines are sung at the same time to create notes of a chord
Syncopation	Notes that are played off the beat
Rhythmic ostinato	A short repeating rhythmic pattern
Triplet	3 notes are played within the time of 2.
Chord sequence	The order of the chords that creates the harmony of the song.
Harmonic Rhythm	How often chords change, whether every beat or every bar etc.
Modulation	A move to another key, usually using
Inversion	Playing a chord where another note in the chord is played in the bass.
Cadence	A progression of (at least) two chords that concludes a phrase, section, or piece of music. The most common are perfect to make a strong finish (V—I or G to C in C major) plagal to make an 'amen' finish (IV-I or F to C in C major) and imperfect to make the phrase feel unfinished (I-V or C to G major).
Relative minor	The relative minor of a particular major key, or the relative major of a minor key, is the key which has the same key signature but a different tonic.

Texture

Monophonic	Music consisting of one line
Homophonic	Melody line is accompanied by other parts to create the harmony.
Theme and Variations	Where music is organised with a theme, followed by versions of the theme that has been changed.

Tempo Italian terms

Tempo	The speed of the music
Largo	Very slowly
Adagio	Slowly
Andante	At a walking pace
Moderato	Moderately
Allegro	Fast
Vivace	Quick and lively
Presto	Very fast
Accelerando	Gradually speeding up
Rallentando	Gradually slowing down

Melodic compositional devices

Ornamentation	Decorative notes added to the melody. Most common are trills, where notes move fast between the original pitch and the one higher and grace notes, where the note above is added and played quickly before the original note of the melody.
Note addition	Adding a note to a melody. This could be one or more passing notes or notes that fit the chords.
Note subtraction	Taking a note away from a melody.
Retrograde	To play a musical idea backwards
Passing note	A note that is placed between two notes of a chord to fill the gap. Making the melody move by step.
Trill	An ornament that consists of rapid alternation between one tone and another tone either a step or a semitone away from the first tone.



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Physical Education

Year 8 Physical Education

Curriculum

PE Vision	To develop competent and confident performers who continue to maintain healthy active lives beyond their academic career.
Competence	The ability to do something successfully or efficiently.
Confidence	Feelings / belief in abilities and qualities.
Fit to Lead	Develop communication, cooperation, confidence, leadership and understanding of tactics. Activities Studied- Badminton, Netball
Fit to Perform	Develop actions, skills and techniques. Activities Studied- Handball, Basketball
Fit for Life	The importance of a balanced, healthy, active lifestyle. Activities Studied- Health Related Fitness (HRF)

Keywords

Motivation	Helps you keep going, even when you are tired or not winning.
Tactics	Are planned strategies used to beat an opponent or defend your goal.
Self-assessment	Helps you reflect on how well you performed and what you can improve.
Feedback	Information from teachers, coaches or peers can help you understand what you are doing well and what needs improvement.
Peer assessment	Allows you to support your classmates by giving constructive feedback.
Anticipation	Is reading the game to predict what your opponent will do next.

Year 8 Physical Education

Warm Up

Warm- Up	Simple exercise routine that is performed before a workout session. Exercises to prepare the body for exercise so that the chances of injury are reduced
Pulse Raiser	The starting activity of a warm-up. It consists of exercises that slowly increase the heart rate and body temperature. This is performed at low intensity
Pulse Raiser Activity	Gentle jog, skipping. Jog, weave, twist, turn. (If the activity has another way of moving apart from running, use that form of movement e.g., swimmers = slow swim, cyclists = short bike ride).
Mobiliser	Activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses.
Mobiliser activities	Open the gates, ankle rotations, wrist rolls, arm rotations/circles, skipping, side steps, High knees, heel flicks
Preparation Stretches	Stretching that takes place before the training session or match takes place
Preparation Stretching Activities	Hamstring sweeps, deltoid stretch, tricep stretch, lunges, quadricep stretch.
Game Related/Skill rehearsal	The last phase of a warm-up. Practicing the actions that are about to be used in the game or activity. This is performed at high intensity
Game related/skill rehearsal activities	Finger tag, stuck in the mud, splat, end-zone, passing drills

Year 8 Physical Education

Warm-up Benefits

Increase muscle temperature	Help the muscles to be more elastic and flexible, reducing the risk of injury.
Increase heart rate	Help to speed delivery of oxygen to working muscles.
Increase flexibility	Stretching will help to increase how much movement can happen at joints
Increase speed of muscle contraction	Help the muscles to work quicker and reduce reaction time.
Increase motivation	Thinking about the task will increase the performers drive to perform well
Increase concentration	Thinking about the task will help the performer to focus and concentrate on the activity
Increase confidence	Practicing skills in a warm-up will improve confidence and speed up reaction time.

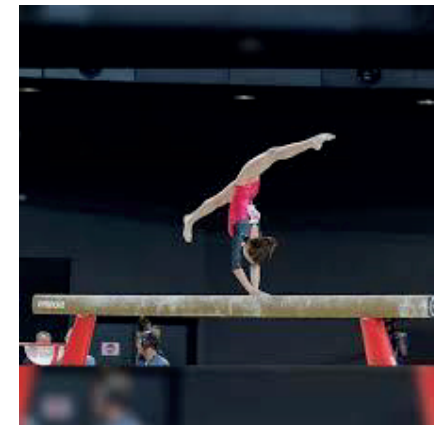
Cool Down

Cool down	Easy exercise done after an activity to allow the body to return to a resting condition
Pulse lowering (first part of cool-down)	Gradually lowering the heart rate and body temperature. A slow walk or jog
Stretching (second part of cool-down)	Return muscles that have been used back to their normal length



Year 8 Physical Education

Components of Fitness	
Agility	The ability to change the position of the body quickly and control the movement.
Balance	The ability to maintain the body's centre of mass above the base of support.
Coordination	The ability to use two or more body parts together
Power	The ability to perform strength performances quickly
Reaction time	The time taken to respond to a stimulus
Speed	The ability to put body parts into motion quickly
Muscular Strength	The maximum force exerted by a muscle or muscle group against a resistance
Muscular Endurance	The ability to use voluntary muscles repeatedly without tiring.
Cardiovascular Endurance	The ability of the heart and lungs to deliver oxygen to the working muscles over a prolonged period of time



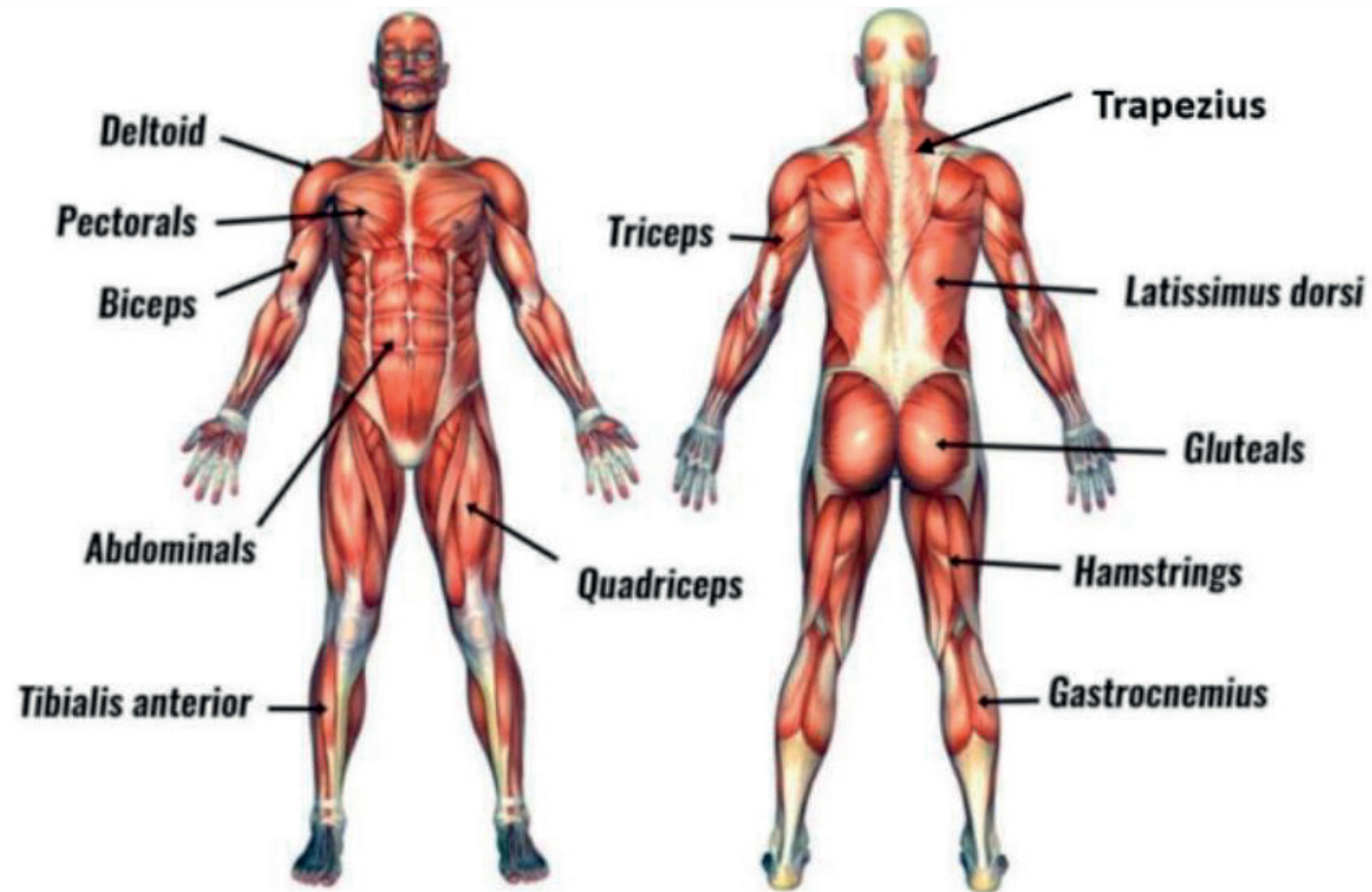
Year 8 Physical Education

Nutrition		Example
Nutrition	Substances in food that the body needs to grow, stay healthy, and function properly.	
Balanced Diet	A diet that includes the right amounts of all the necessary nutrients from different food groups.	
Vitamins & Minerals	Essential nutrients that help keep the body healthy and support different body functions.	Fruit and vegetable
Fats	Foods that give you energy and help keep your body warm.	Butter, olive oil, nuts, avocado (in small amounts)
Hydration	Drinking enough water to keep your body working properly.	
Protein	Nutrients that help the muscles grow and repair itself, found in meat, eggs, beans, and nuts.	Chicken, fish, eggs, beans, lentils
Carbohydrates	Foods that give you energy, like bread and fruit.	Bread, rice, pasta, potatoes
Vegetables	They give you vitamins, help you stay strong, and keep your body working well.	Apples, bananas, carrots, broccoli
Dairy	help keep your bones strong.	Milk, cheese, yogurt



Year 8 Physical Education

Major Muscles of the Body





Avonbourne Boys' & Girls' Academies

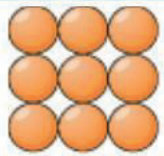
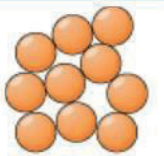
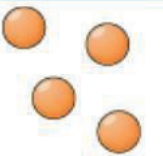
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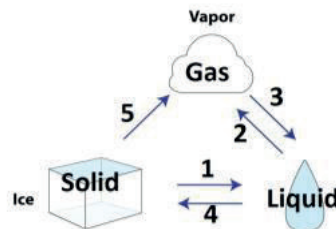
Science

Science – Heating and Cooling

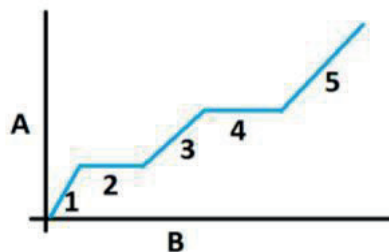
Particle model

			
Organisation (Pattern)	Regular pattern	No pattern, random arrangement	No pattern, random arrangement
Spacing (Touching?)	All touching, close together	Close together but may still be touching	Wide spaces between, far apart
Motion (Movement of molecules)	Vibrate in a fixed position	Move and slide around each other	Move quickly in all directions

1. Melting
2. Boiling
3. Condensing
4. Freezing
5. Sublimation



1. Solid
2. Melting
3. Liquid
4. Boiling
5. Gas



- A. Temp.
B. Heat absorbed

Types of Energy Stores

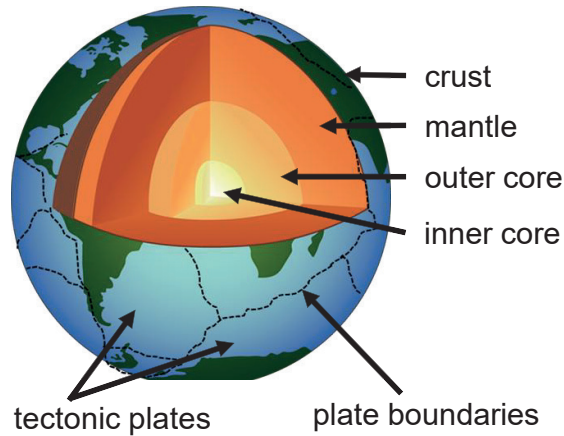
	Term	Definition
Stores	Kinetic	Energy stored in a moving object
	Gravitational potential	Energy stored in an object in a gravitational field.
	Chemical	Energy stored in the bonds of substances; typically fuels or food, i.e. energy is released when burned
	Elastic potential	The potential stored in a spring or something stretchy that will spring back after being released
	Nuclear	Energy stored in nuclei of atoms, released through nuclear fission or fusion.
	Magnetic	The potential energy stored in a magnetic field
	Electrostatic	The energy stored when like charges are moved closer together/unlike charges are pulled
	Thermal	Associated with changes in temperature and/or changes of state of objects.
Transfers	Mechanical	A force moving an object through a distance
	Electrical	When an electric current flows through a device
	Heating	By conduction, convection, or radiation
	Radiation	Energy transferred by electromagnetic radiation (e.g. light)

Heat transfer

Conduction	The transfer of heat through a material by transferring kinetic energy from one particle to another through collisions
Convection	The transfer of heat energy through a fluid (liquid or gas) – warmer fluid is less dense and rises above cold fluid
Radiation	Infra-red radiation emitted from a hot object

Science – Earth and the atmosphere

Structure of the Earth



Layer	State	Composition	Thickness (km)	Temperature (°C)
crust	solid	rocks and minerals	5 to 70	0 to 30
mantle	solid	rocks and minerals	2900	1400 to 3000
outer core	liquid	molten iron and nickel	2200	4400
inner core	solid	solid iron and nickel	1200	5430

Continental drift

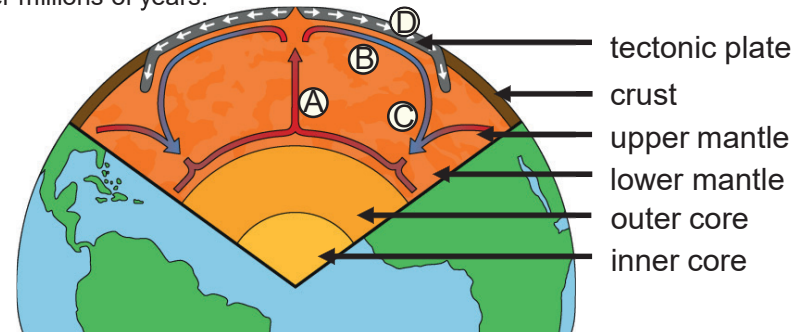
The theory of continental drift is the theory that the continents were once connected in a land mass (Pangaea) but have broken apart and drifted away over time.

Three pieces of evidence that support the theory are:

- The coastlines of many continents appear to fit together like a jigsaw puzzle.
- There were similar types of rocks across continents that are now far apart.
- There were identical plant and animal fossils found on different continents that are now far apart.

Convection currents

- Hot, less dense rock rises towards the upper mantle.
- In the upper mantle, the hot rock spreads and moves sideways.
- As it cools, it becomes more dense and sinks back down, creating convection currents.
- These convection currents cause the tectonic plates above to shift. As a result, the continents slowly change position over millions of years.

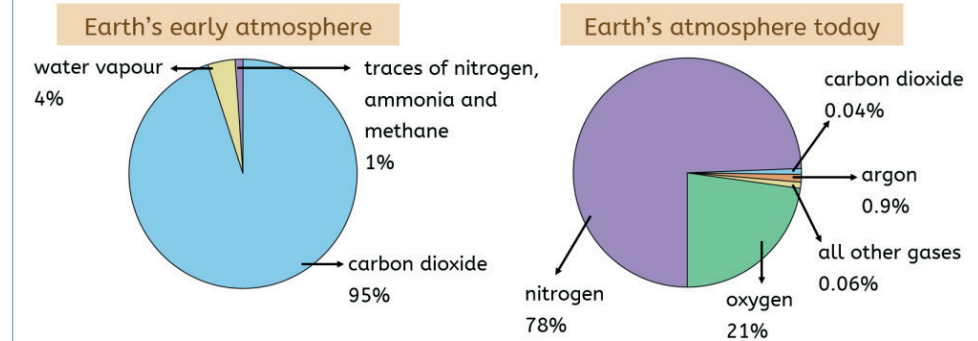


Science – Earth and the atmosphere

Rocks and the rock cycles

Igneous rock	Igneous rocks are formed when molten rock crystallises. - If molten rock cools slowly, it will form rock with large crystals. - If molten rock cools quickly, it will form rock with small crystals.
Extrusive	Molten rock above the Earth's surface is called lava and forms extrusive igneous rock when it cools and crystallises.
Intrusive	Molten rock below the Earth's surface is called magma and forms intrusive igneous rock when it cools and crystallises.
Metamorphic rock	- Metamorphic rocks form from existing rocks, deep within the Earth's crust due to high temperature and pressure, causing chemical changes in minerals. - Over millions of years, sedimentary and igneous rocks transform into metamorphic rocks, often near tectonic plate boundaries.
Sedimentary rock	Sedimentary rocks are formed through: weathering → transportation → deposition → sedimentation → compaction → cementation Layers, called strata, can be seen in sedimentary rock.
Weathering	Weathering is the slow breakdown of rocks while they are in place. It can be biological (by living organisms), chemical (by chemical reactions) or physical (by forces e.g. freeze-thaw). Erosion is the movement and carrying away of rock fragments.
Fossils	Fossils are the preserved remains or traces of a dead organism that was alive millions of years ago. Fossils can be trace fossils (preserved imprints or evidence), body fossils (actual remains) or mineralised fossils (when hard parts are replaced by minerals). Fossils are found in sedimentary rocks. High temperatures and pressures destroy fossils, so they are not found in metamorphic or igneous rocks.

Earth's atmosphere



The greenhouse effect

Fossil fuels	Fossil fuels are natural resources formed over millions of years from the remains of dead organisms, such as plants and animals. Fossil fuels are non-renewable energy resources because they take a very long time to replenish.
The greenhouse effect	The greenhouse effect is the natural warming of the planet to habitable temperatures, caused by greenhouse gases. The enhanced greenhouse effect is the unnatural warming of the Earth due to increased greenhouse gases in the atmosphere.
Global warming	Global warming is the increase in Earth's average temperature, caused by the enhanced greenhouse effect.
Climate change	Climate change is the change in the Earth's long-term weather patterns, including precipitation, wind and temperature. It leads to social, economic and environmental impacts.

Science – Forces and Motion

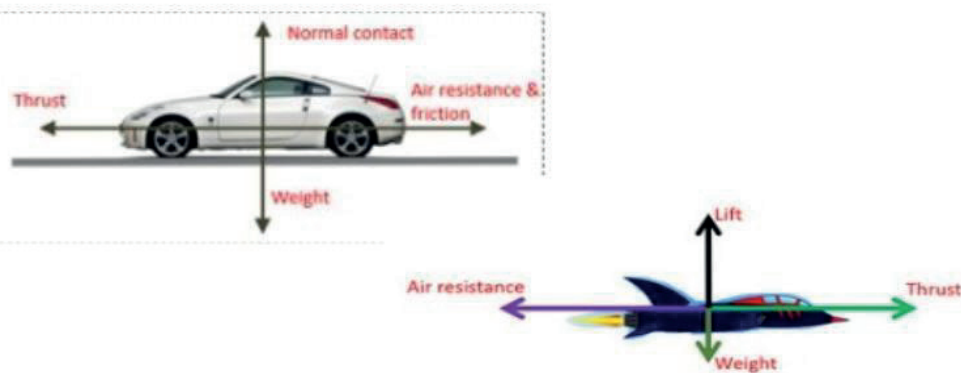
Types of force

Weight	The force acting on an object due to gravity.
Normal reaction force	The force exerted by a surface to support an object resting on it, acting perpendicular (at a right angle) to the surface.
Thrust	A force that causes an object to move forward.
Upthrust	The upward force exerted by a fluid (liquid or gas) on an object that is submerged or floating in it.
Air resistance (Drag)	The force that opposes the motion of an object through the air.
Friction	A force that opposes motion between two solid surfaces in contact.
Water resistance	A force which acts to slow down or stop objects that are moving through liquid.
Tension	A pulling force that acts along a stretched object, like a rope, string, or cable, when it's being pulled from both ends.
Lift	The upward force that opposes gravity, enabling objects like airplanes and birds to stay aloft.
Magnetic force	A non-contact force of attraction or repulsion that exists between magnets or between a magnet and a magnetic material.
Electrostatic force	A non-contact force of attraction or repulsion between charged objects.

Force diagrams

Force diagrams should always include three pieces of information about each force:

- Direction - Use arrows to state the direction of the force
- Size - The longer the arrow the bigger the force
- Name - Label your force arrow with a name of the force



Key terms

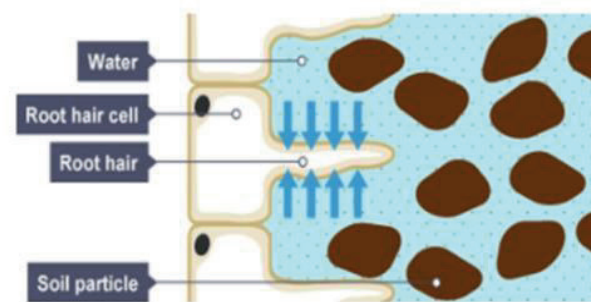
Mass	A measure of how much matter an object is made up of. It is measured in kilograms (kg) .
Weight	The force of gravity pulling on every kg of mass. It is measured in Newtons (N) .
Gravitational field strength	How strongly gravity pulls on an object in a specific location.
Pressure	A measure of how spread out a force is.
Force	A push or pull that acts on an object due to an interaction with another object. This interaction can be either a contact force, where objects are physically touching, or a non-contact force, where objects are separated. Forces are measured in Newtons (N) using a Newton metre .
Speed	A measure of how quickly an object travels a given distance.
Velocity	The same as speed, but tells us the direction we are travelling in as well (ie forwards or backwards).
Balanced forces	Balanced forces acting on an object will cause it to stay stationary or travel with constant speed.
Unbalanced forces	Unbalanced forces acting on an object will cause it to accelerate, decelerate or change direction.
Stationary	An object that is not moving.
Constant speed	An object moving at a speed that does not change, meaning it doesn't speed up or slow down.

Key equations

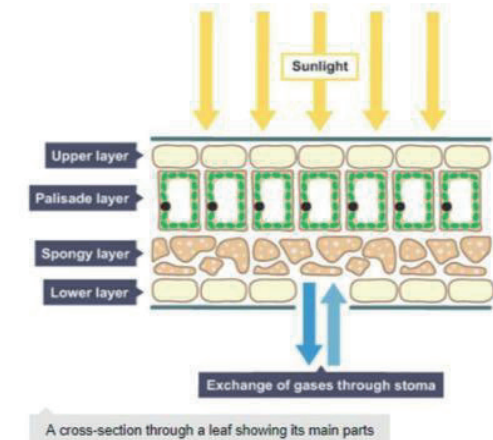
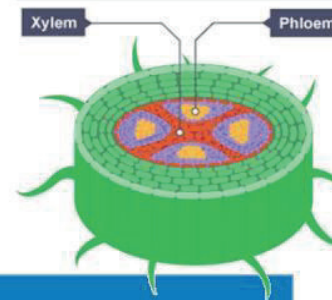
$W = m \times g$	weight (N) = mass (kg) x gravitational field strength (N/kg)
$p = F/A$	pressure (N/m ²) = Force (N) / Area (m ²).
$V = d/t$	Speed (m/s) = distance (m) / time (s)

Science – Plants and Photosynthesis

Features of a plant leaf	
Thin	Short distance for carbon dioxide to diffuse into the leaf
Waxy Layer	Prevents water loss by evaporation
Palisade cells	Contain a lot of chloroplasts to absorb light
Chloroplasts contain chlorophyll	Absorbs light
Stomata	Allows carbon dioxide to diffuse into the leaf (and oxygen to diffuse out)
Guard cells	Open/close stomata depending on conditions
Network of tubes (xylem & phloem)	Transports water (xylem) and food (phloem)



Water is absorbed from the soil by root hair cells



A cross-section through a leaf showing its main parts

Key Theme	Definition
Effect on the atmosphere	Photosynthesis helps keep: •levels of oxygen high; •levels of carbon dioxide low.
Chloroplasts	•Photosynthesis takes place in the chloroplasts. •Chloroplasts contain chlorophyll which absorbs the energy transferred by light waves for photosynthesis
Equation	The equation for photosynthesis is: carbon dioxide + water → glucose + oxygen
Requirements for photosynthesis.	These are the things that plants need for photosynthesis: •carbon dioxide – absorbed through their leaves; •water - from the ground through their roots; •light (a source of energy) - from the Sun.

Respiration vs Photosynthesis

Respiration	glucose + oxygen → carbon dioxide + water
Photosynthesis	carbon dioxide + water → glucose + oxygen The equation for photosynthesis is the <u>opposite</u> of the equation for aerobic respiration

Exchange of Substances

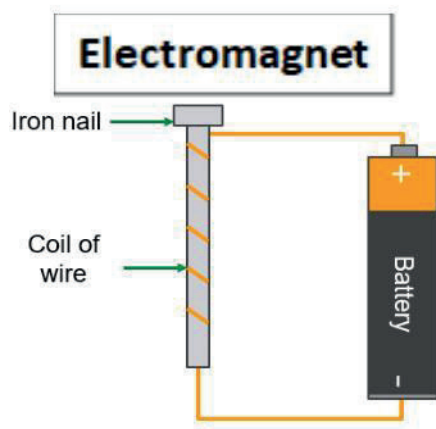
Water	•Water is absorbed into the roots by a process called osmosis, which does not use energy. - It is transported through tubes (xylem) to the leaf; •The roots contain cells called a root hair cells:
Minerals	•Minerals are absorbed into the roots by a process called active transport, which uses energy.
Carbon Dioxide	•Enters leaf by diffusion through the stomata. •Guard cells control the size of the stomata •Stomata closes in hot, windy or dry conditions. •Spongy layer has gaps between cells; •Allows carbon dioxide to diffuse to other cells in the leaf; •Allows oxygen produced in photosynthesis diffuse out of the leaf.

Science – Electricity

Key terms	
Key words	Definition
Current	The flow of electrical charge per second
Electron	Subatomic particle, with a negative charge
Potential difference	Tells us the amount of energy being carried by the electrons and the amount of energy they are transferring to the components it is measured in volts (V) using a Voltmeter
Resistance	Resistance opposes the flow of current in a circuit.
Factors affecting resistance in a wire	- as the length increases the resistance increases - as the cross-sectional area increases, resistance decreases - as the temperature increases the resistance increases - the material of the component effects the resistance
Conductor	An electrical conductor is a material which allows electrons to flow
Insulator	Material that does not allow electrons to flow through it easily.
Series circuit	Circuit with only one branch
Parallel circuit	Circuit with multiple branches

Electromagnets

Solenoid	A coil of wire carrying an electric current to create a magnetic field
Electromagnet	A magnet made by wrapping a coil of wire around an iron bar and passing an electric current through the coil
Increasing the strength of an electromagnet	- use an iron core - increase the number of coils - increase the current



Symbol	Component
	Cell
	Battery
	Voltmeter
	Ammeter
	Lamp
	Resistor
	Switch
	Variable Resistor

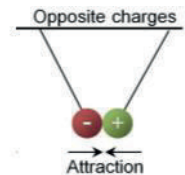
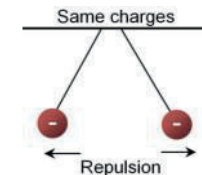
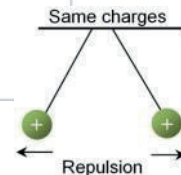
V, I and R in Series and Parallel

Components connected in...	Current	Potential Difference	Resistance
Series - one branch	In a series circuit, the current is the same in all parts of the circuit	The potential difference is shared between the components	The more resistors , the greater the resistance. The total resistance of two components is the sum of the resistance of each component. $R_{\text{total}} = R_1 + R_2 + R_3$
Parallel - multiple branches	The current in a parallel circuit is shared between the branches	In a parallel circuit, the potential difference across each branch is the same as the potential difference of the cells	Total resistance is less than the smallest resistance of R_1 and R_2 and R_3

Static Electricity

Static electricity Static electricity is caused when electrons are transferred from one insulator to another by friction

- Static charges**
- If an object gains electrons, it becomes negatively charged
 - if an object loses electrons, it becomes positively charged
 - opposite charges attract, like charges repel



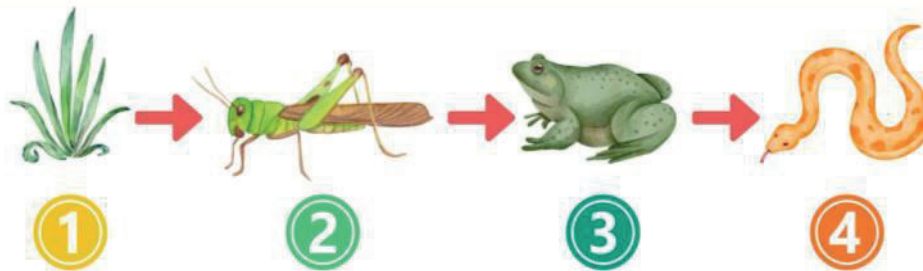
Equations

Potential difference (V) = current (A) x resistance (Ω) ($V = IR$)

Power (W) = current (A) x potential difference (V) ($P = IV$)

Science – Interactions and interdependence

Food Chains		
Number on diagram	Part of food chain	Definition
1	Producer	The start of a food chain, usually a plant, they produce their own food via photosynthesis
2	Primary consumer	The first consumer in the food chain; they feed on the producer
3	Secondary consumer	The second consumer in the food chain; they feed on the primary consumer
4	Tertiary consumer	The third consumer in the food chain. This consumer does not usually have any predators and is the end of the food chain



Classification	
Key term	Mnemonic
Kingdom	K eep
Phylum	P onds
Class	C lean
Order	O r
Family	F rogs
Genus	G et
Species	S ick
Binomial name	The scientific name given to a species. It is always the genus and then the species written in italics, with the genus capitalised. E.g. <i>Panthera leo</i>

Key Terms	
Environment	All the conditions surrounding a living organism e.g. water, soil, temperature
Habitat	The place in which an organism lives
Population	Total number of a single species living in the same habitat
Community	The populations of all the different organisms living in the same habitat
Ecosystem	The interaction between the community and the habitat in which organisms live
Interdependence	Within a community each species depends on other species for food, shelter, pollination, seed dispersal etc
Photosynthesis	The process plants use to produce food using sunlight (carbon dioxide + water → glucose + oxygen)
Herbivore	An organism which only eats plants
Carnivore	An organism which only eats other animals
Omnivore	An organism with a diet made up of both plants and animals
Predator	An animal that hunts, kills and eats other animals for food
Prey	Organisms that predators hunt and kill for food
Extinction	When there are no more individuals of a certain species left alive
Species	An organism which is able to breed to produce fertile offspring
Variation	The differences between organisms of the same species e.g. environmental or inherited
Adaptation	Organisms have features that enable them to survive in the conditions in which they normally live
Competition	Plants compete for light, space, water and mineral ions. Animals compete for food, mates and territory
Bioaccumulation	The gradual build up over time of a chemical in a food chain
Pesticides	These are not broken down in the food chain and accumulate. The further up the food chain, the higher the concentration of toxic chemicals. Examples are mercury and DDT
Quadrat	A grid used during sampling to count the number of organisms in an area

Science – Interactions and Interdependence

Biodiversity	
Biodiversity	The variety of all the different species of organisms living in the same ecosystem
Factors that reduce biodiversity	Destruction of habitats, global warming, waste and deforestation.
Maintaining biodiversity	Breeding programmes, protection and regeneration of habitats, keeping hedgerows in farmers' fields, reduction of deforestation and carbon dioxide emissions, recycling rather than using landfill

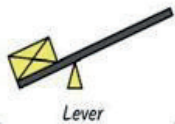
Natural Selection	
Charles Darwin	Wrote the theory of natural selection in his book 'On the Origin of Species' in 1859.
Natural selection	The idea of 'survival of the fittest' where the organisms best adapted for survival in their habitat will survive, reproduce and pass on the successful genes to offspring.
Evolution	The change of inherited characteristics within a population over time through natural selection, which may result in the formation of a new species.

Extinction	
Factor	Reason
New disease introduced	A species is not adapted to fight off a new disease
New predators	A species is not adapted to avoid being preyed upon.
Change in the physical environment	A species is not adapted to the change in its environment e.g. loss of shelter or food

Key terms	
Decay	the state or process of rotting or decomposition. Factors that increase decay: 1) Oxygen so decomposer can re-spire. 2) warm temperature so decomposer are active 3) Moisture—chemical reactions to take place.
Microorganism	A microscopic organism
Biomass	A measure of the total mass of living material in each trophic level
Food web	The interconnection of food chains and a graphical representation of what-eats-what in an ecological community.

Science – Forces in Action

Simple machines are ways to multiply a force, so that more work can be done with a lower input force. See examples of simple machines below.



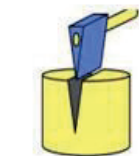
Lever

A board resting on a pivot, or fulcrum. A force is applied to one side, and is multiplied on the other side. Examples include a see-saw.



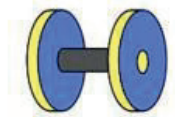
Inclined Plane

Used to raise heavy objects by reducing the force needed to lift the object. Examples include ramps and slides.



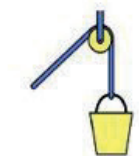
Wedge

An object that tapers from a wide to a narrow edge used to change the direction of the force from downwards to outwards. Examples include axes and chisels.



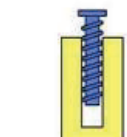
Wheel and Axle

An object which multiplies the force using a round, rotating wheel around a pole, or axle. Examples include bicycle wheels and rolling pins.



Pulley

A pulley is a rope which passes over a wheel, and allows the user to both multiply a force and change its direction so heavy objects can be lifted up. Examples include elevators and zip lines.



Can be described as an inclined plan wound around a cylinder, this can change the size and direction of a force. Examples include

Moments

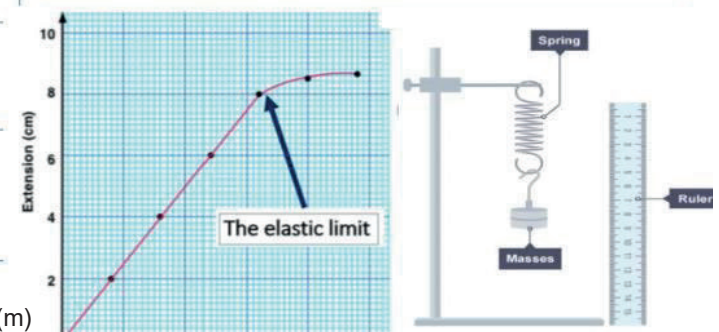
Moment	The turning effect of a force around a fixed point, known as a pivot.
Balanced moment	When the clockwise moment is equal to the anti-clockwise moment. The moments are balanced.
Unbalanced moment	The clockwise and anticlockwise moments are not equal. There will be motion in the direction of the larger moment.
What affects the size of moments	Distance—the greater the distance between the force and the pivot, the greater the moment Force applied—the greater the force applied, the greater the moment
Equation	Moment (Nm) = Force (N) x perpendicular distance (m)

Maths skills

Unit conversions	100cm in 1m
Work done equation	Work done (J) = Force (N) x distance (m)
Hooke's Law	Force (N) = spring constant (N/m) x extension (m)
Moments	Moment (Nm) = Force (N) x distance (m)
Equation	Moment (Nm) = Force (N) x perpendicular distance (m)

Hooke's Law

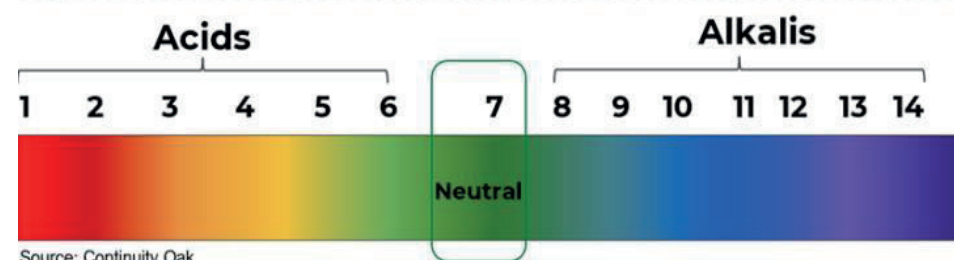
Hooke's Law	Extension is directly proportional to the force applied
Directly proportional	If one value increases, the other value also increases at the same rate. E.g. if one value doubles, the other value also doubles.
Practical method (diagram below shows set-up)	- hang the spring from a stand and clamp - measure its length with a ruler; - hang a mass from the spring and measure its new length - Work out: extension - new length – original length; - keep adding more masses, measuring the new lengths each time
Elastic deformation	When a force is applied to an object and it changes shape, but returns to its original shape when the force is removed. Can be either extension or compression.
Elastic limit	When too much force is applied and the object will not return to its original shape.



Science – Acids and alkalis

Chemical reactions	
Term	Definition
Reactant	Chemicals at the start of a reaction
Product	Chemicals at the end of a reaction
Chemical reactions	A new substance is formed. Difficult to reverse the reaction.
Physical reactions	Usually a state change or mixture, relatively easy to reverse the reaction or separate the mixture.
Evidence of chemical reaction	• Change of colour • Change of odour • Light and/or heat given off • Formation of gases, often appearing as bubbles or fizzing in liquids • Formation of a precipitate (insoluble particles) • The change is difficult or impossible to reverse
Conservation of mass	Mass cannot be created or destroyed. The mass of the products is equal to the mass of the reactants.

Acids and alkalis	
Acid	Contain H ⁺ ions, and have a pH of less than 7
Alkali	A soluble base that contains OH ⁻ ions, have a pH of more than 7
Base	A substance that will neutralize an acid.
pH scale	A scale which measures how acidic a substance is based on the concentration of H ⁺ ions. It goes from 1 to 14.
Indicator	A substance that changes colour in an acid or an alkali
Litmus indicator	Turns red in an acid, turns blue in an alkali.
Universal indicator	Tells us the pH of a substance using the pH scale depending on the colour it turns. Red/orange in an acid, green in neutral, blue/purple in an alkali



Source: Continuity Oak

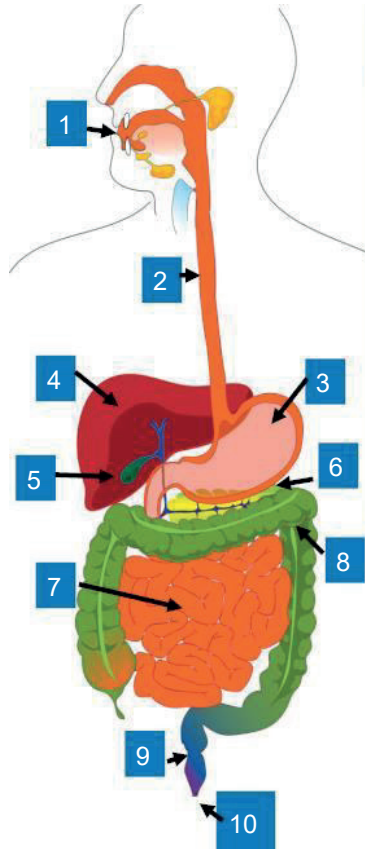
Chemical equations	
Term	Definition
Metals and acids	Metal + acid → metal salt + hydrogen
Acid and alkali	Acid + alkali → salt + water
Oxidation	Metal + oxygen → metal oxide

Titration	
Term	Definition
Titration	A method of identifying the exact volume of acid needed to neutralise an alkali
Method	1. Fill burette with acid to the 100cm³ line 2. Add a known volume and known concentration of alkali to a conical flask below the burette. 3. Add a couple of drop of indicator to the conical flask (usually use phenolphthalein) 4. Open the tap on the burette and allow acid to gently pour in, swirling the conical flask until the solution turns colourless. 5. Repeat again, this time stopping the flow of acid before the measurement recorded before, and drop the acid in slowly until the colour change is observed. 6. Repeat 3 times and calculate the mean volume of acid added.

Science – Digestion and Nutrition

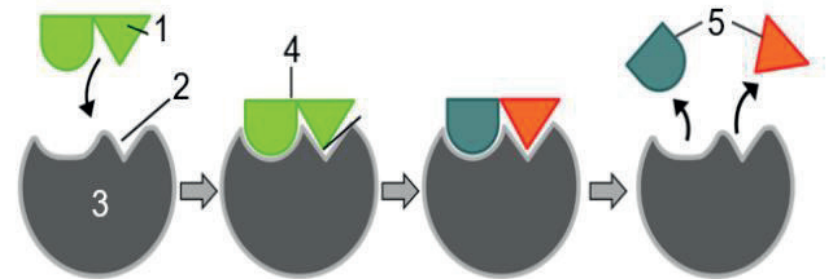
Parts of the digestive system

#	Organ	Function
1	Mouth	Mechanical digestion by chewing. Saliva from salivary glands, contains the enzyme amylase.
2	Oesophagus	Muscular tube which moves ingested food to the stomach by peristalsis
3	Stomach	Mechanical digestion by churning. Cells in the lining of the stomach release acid to kill bacteria and produce the enzyme protease.
4	Liver	Produces bile (neutralises stomach acid and emulsifies fats).
5	Gall bladder	Stores bile.
6	Pancreas	Produces and releases digestive enzymes.
7	Small intestine	Where large molecules are broken down into small soluble molecules that can diffuse into the blood. It has a large surface area, good blood supply and thin membranes so nutrients can diffuse quickly into the blood.
8	Large intestine	Where water is absorbed into the blood stream.
9	Rectum	Where faeces is stored.
10	Anus	Ring of muscle allowing faeces to exit the body.



Digestive enzymes

Enzyme	Site of production action	Site of	Substrate	Product
Carbohydrase - e.g. amylase	Salivary glands, pancreas and small intestine wall	Mouth, small intestine	Carbohydrates	Simple sugars
Protease	Stomach, pancreas, small intestine wall	Stomach and Small intestine	Proteins	Amino acids
Lipase	Pancreas, small intestine wall	Small intestine	Lipids	Glycerol and fatty acids



Chemical Food Tests

Nutrient	Chemical test	Positive result
Starch	Iodine solution	Iodine solution turns from orange/brown to blue black
Sugar	Benedict's solution & heat	Benedict's solution turns from: blue to green /yellow/brick red
Fat	Ethanol & shake, then water & shake	Ethanol turns cloudy white
Protein	Biuret reagent	Biuret reagent changes from blue to purple

Nutrient groups

Nutrient	Function
Carbohydrate	Quick release energy
Protein	Growth and repair
Fat	Energy store, insulation and organ protection
Vitamins and minerals	Maintain health e.g. calcium for strong teeth and bones
Fibre	Helps digestive system run smoothly, by helping the food to pass through the gut
Water	Needed for cells and body fluids

Lock and Key model

Number	Organ
1	Substrate
2	Active site
3	Enzyme
4	Enzyme-substrate complex
5	Products

Science – Space

Earth and Gravity

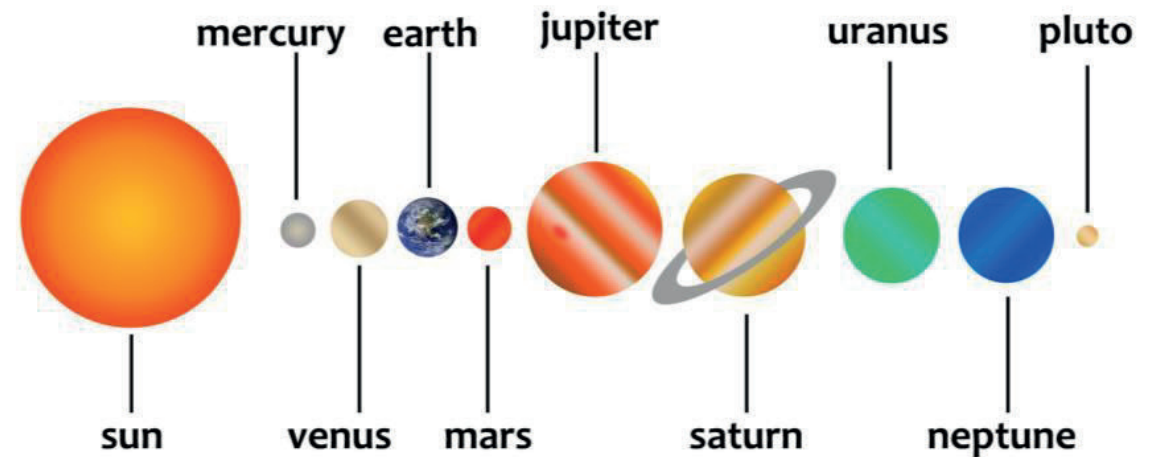
Keyword	Definition
Gravity	A non-contact force that pulls objects towards the center of a planet or star.
Orbit	The curved path of a celestial object around a star, planet, or moon.
Seasons	Periods of the year with different weather patterns caused by Earth's tilt.
Day Length	The duration of daylight in a 24-hour period, varying with the Earth's tilt.

The Universe

Keyword	Definition
Light Year	The distance light travels in one year (about 9.46 trillion (km)).
Big Bang Theory	The leading explanation of how the universe began from a singularity.
Universe	All of space and time, including all matter and energy.

The Solar System

Keyword	Definition
Planet	A celestial body orbiting a star, massive enough to be rounded by its gravity.
Comet	A small icy body that releases gas or dust and orbits the Sun.
Asteroid	A rocky object orbiting the Sun, mostly found in the asteroid belt.
Gravitational Field Strength	The force of gravity on a mass at a specific location.



Stars and Galaxies

Keyword	Definition
Star	A luminous ball of gas held together by gravity, undergoing nuclear fusion.
Galaxy	A massive system of stars, gas, and dust bound together by gravity.
Nuclear Fusion	The process that powers stars, where nuclei combine to form heavier elements.