Avonbourne Boys' & Girls' Academies

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Knowledge Organiser

Year 7 - 2025/26

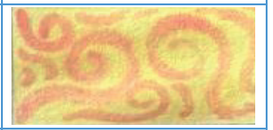
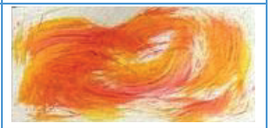
Student Name: _

Need to ask your teacher about any of these topics? Make a note here!

Table of Contents

Art Year 7 Autumn Term—Formal Elements

Painting Techniques

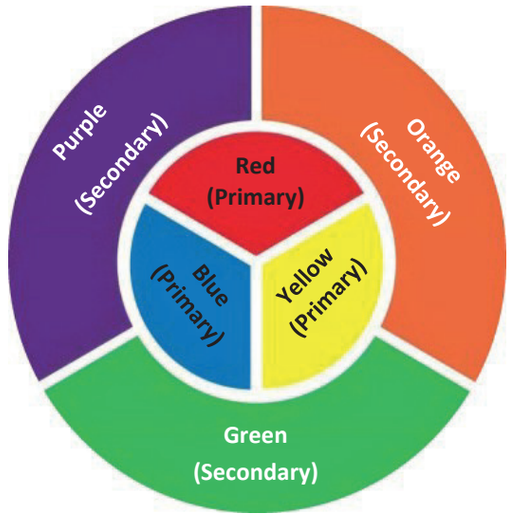
Drip and Drag	Dripping paint onto paper and using the bottom of the brush to drag the paint into a design	
Wet Brushing	Using a wet brush or wet background to apply paint to	
Dry Brushing	Using a dry textured brush to paint	
Sgraffito	Scratching through a layer of paint to reveal the surface underneath	
Sponging	Using a sponge to apply paint to a background	
Blending	Creating a smooth blend from light to dark	
Wash	A lighter layer of colour created by mixing paint with water	

Tint and Tones

Tints	A lighter tint made by adding a **colour to white**	
Tones	A darker tone by varying the pressure of your pencil	
Gradient	A smooth transition of one colour or value to another	
Texture	Describes how something looks and feels. E.g. scratchy, smooth.	

The Colour Wheel

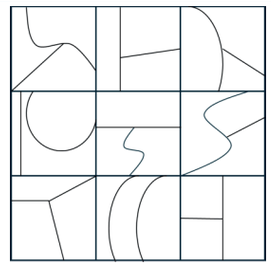
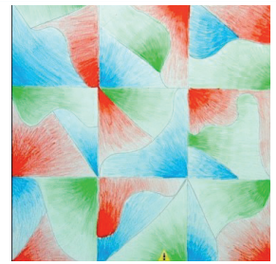
The Colour Wheel	A circle with different coloured sections showing the relationship between colours
Primary Colours	A set of colours which all other colours are made from
Secondary Colours	Made by mixing two primary colours together



Brush Care

Washing your brush	To avoid damage to your brush when cleaning move the brush from side to side
Controlling your brush	Hold your brush near the bristle/metal end for better control when painting
Supporting your hand	When painting use the table to support your hand

Skill Building tasks

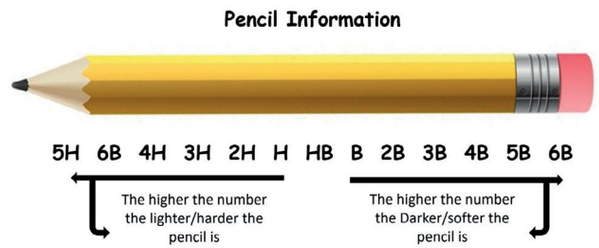
	Creating a gradient from dark to like with a pencil
	Create a gradient of harmonious colours
	

Create a 15x15 grid and draw in some different curved/straight lines. Once completes add gradients of coloured pencil in each section of the grid

Pencil Information

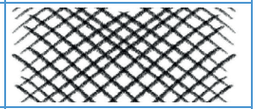
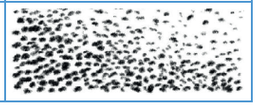
HB	Stands for **Hard Black**
Lighter tones	Created by applying less pressure to the pencil and holding it further from the lead
Darker tones	Created by applying more pressure to the pencil and holding the pencil closer to the lead

In art we use B pencils (HB, B , 2B, 3B, 4B, 5B, 6B, 7B, 8B)

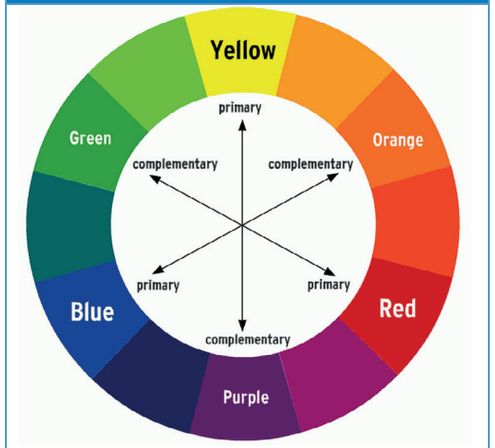


Art Year 7 Spring Term - The Art Timeline

Mark Making Techniques

Hatching	
Cross hatching	
Directional lines	
Stippling/Pointillism	

Colour Theory



Complementary colours	Colours that are opposite on the colour wheel

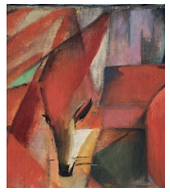
R+G **Y+P** **B+O**

Harmonious colours	Colours that are adjacent on the colour wheel

R+O+Y **Y+G+B** **B+P+R**

Franz Marc





Date of birth	8th February 1880 (Germany)
Date of death	4th March 1916 (France) (Aged 36)
Nationality	Germany
Materials	Oil Paint
Education	Studied Fine Art at the Academy of Arts Munich
Art Movement	Expressionist
Relationships	Married twice
Inspiration	Animals, fauvism and impressionism art movements as well as artist such as Van Gogh and Robert Delauney
Context, Concepts and Characteristic	Helped invent camouflage while in the army during WW1 to hide military equipment
	Died in the battle of Verdun
	Faught in WW1
	Exclusively painted animals

Vincent Van Gogh

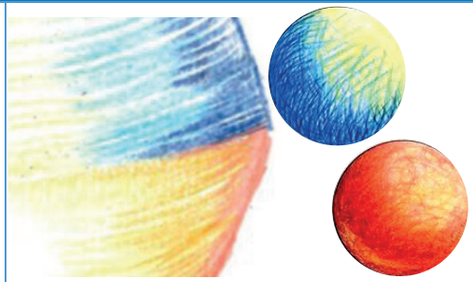



Date of birth	30th March 1853 (Netherlands)
Date of death	29th July 1890 (France) (Aged 37)
Nationality	Dutch
Materials	Oil Paint
Education	Self taught
Art Movement	Post Impressionism
Relationships	Never married, Lived with his brother and his brothers wife
Inspiration	Everyday objects people and places
Context, Concepts and Characteristics	Was only an artist for the last 10 years of his life
	Suffered with his mental health and at the age of 37 he shot himself in the chest and subsequently died
	He created around 2,100 artworks most of which were created in the last 3 years of his life
	He cut of a portion of his left ear after a heated argument with his friend Gaugin

Key Words

Expressive	Effectively conveying thought or feeling. Can be expressed through colour or mark making. For example, Blue = sadness, yellow = happiness. Straight /jagged lines = angry, smooth/ soft = calm
Adjacent	Next to or adjoining something else.
Dynamic	A sense of movement
Art Movement	A period in history characterized by a shared artistic style, philosophy, or set of ideas adopted by a group of artists.
Camouflage	A technique Franz Marc helped create while in the army during WW1

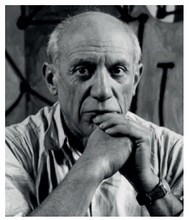
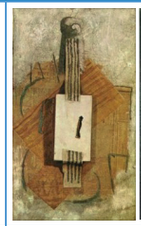
Skill Building tasks

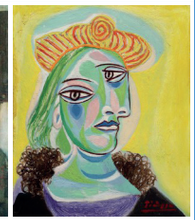



Practise drawing the sunflower as lightly as possible with a pencil	Draw another sunflower lightly. Then practise layering harmonious colours to create light and shadow on the flower

Art Year 7 Summer Term

Pablo Picasso



Date of birth	25th October 1881 (Spain)
Date of death	8th April 1973 (France) (aged 91)
Nationality	Spanish
Materials	Sculptor, Painter, Invented collage
Education	Studied under his art teacher father, Studied at the Barcelona school of fine arts at 13 then later studied at The Real Academia de San Fernando
Art Movement	Cubism, Surrealism and Post impressionism
Relationships	Married twice
Inspiration	Inspired by other cultures and artists around the world
Context, Concepts and Characteristic	Beloved that only children could be truly expressive
	Co founded the cubist art movement
	Was 'hot housed' by his art teacher father

Key Words

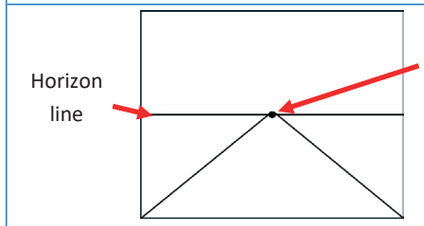
Abstract	**Completely abstract**
Art that does not attempt to represent external reality.	Completely abstract art does not resemble anything at all.
	

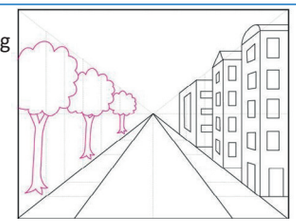
Key Words

Collage	A piece of art made by sticking various different materials such as photographs and pieces of paper or fabric on to a backing.
Hot Housed	To educate or teach to a high level at an earlier age than is usual
Still Life Drawing	Art that represents inanimate objects like fruit, cut flowers, utensils, and other everyday items

Perspective drawing

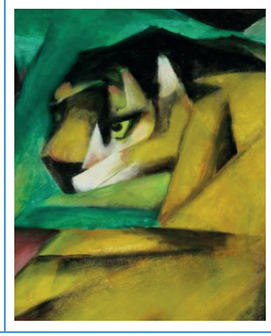
A technique used in visual arts to create the illusion of depth and space in a two-dimensional image by representing three-dimensional objects or scenes





Perspective	Representing three-dimensional objects on a two-dimensional surface so as to give the right impression of their height, width, depth, and position in relation to each other.
Foreground	The part of a view that is nearest to the observer, especially in a picture or photograph
Background	The part of the picture, scene or design that forms a setting for the main figures or objects, or appears furthest from the viewer
Horizon line	Represents the viewer's eye level
Vanishing point	The point on the horizon line where parallel lines appear to converge, creating the illusion of depth and distance
2D	Two dimensional
3D	Three dimensional

Skill Building tasks

		Draw a small box. Lightly sketch out the section of Van Goghs painting to the left. Add colour by using yellow, blue and green as well as mark making techniques	
Draw a flower using the support in you KO, use only mark making techniques to add colour			Draw a box. Draw the section of Franz Marcs painting as accurately as you can. Press lightly with your pencil

Computer science—Autumn 1– Intro to computer systems

1A. Digital literacy and tools of use			
	Key term	**Definition**	**Example**
Teams (workbook)	**Microsoft Teams**	A digital platform used for communication and collaboration, where students and teachers can chat, share files, have video calls, and work together on assignments. It helps organize lessons, assignments, and discussions in one place, making it easier to stay connected and work on school projects.	Microsoft teams provides a platform for the work book and channels for students to use both in and out of school. **If out of school make sure to log into Microsoft 365 before going to teams.**
	Class notebook	A digital notebook in Microsoft Teams where teachers and students can take notes, organize class materials, and work together. It allows students to keep all their classwork in one place, and teachers can share resources and give feedback directly in the notebook. It's a helpful tool for staying organized in lessons.	You will have a section for each half term with pages for each lesson of that term inside it. EG. Autumn 1 section could have 3 lessons inside it appropriately named lesson 1,2 & 3
	channel	Sections within a Microsoft Teams group where students and teachers can have specific discussions, share files, and work on assignments. Each channel can be used for different topics or projects, making it easier to stay organized and find information related to a particular subject or task.	The **"General"** channel is dedicated to providing announcements or for students who need extra help, they can post questions here and get support from their peers or the teacher.
Online (storage)	**Sync**	Short for "synchronize," it means keeping your files and information up to date across different devices. In Teams and OneDrive, syncing makes sure that any changes you make to a document or file on one device (like your laptop) are automatically updated and available on all other devices (like your phone or tablet). This helps you always have the most current version of your work, no matter where you access it from.	You work on a project in Word on your laptop, save it to **OneDrive**, and make some changes. Later, you open the document on your tablet through **Teams**, and the latest changes are there because the file synced automatically. Any updates you make on one device sync to all others, ensuring you always have the most recent version.
	OneDrive	A cloud storage service from Microsoft where you can save your files online instead of just on your computer. This means you can access your work, pictures, and documents from any device, anywhere, as long as you're connected to the internet. It also helps keep your files safe and makes it easier to share them with others.	You create a science report on your computer and save it to **OneDrive**. Later, you need to review it while at the library, so you log into **OneDrive** from a different computer. Your report is there, ready to edit. Since it's stored in the cloud, you can access it from any device with internet, and it's automatically backed up, so you don't lose your work.
Email (send & receive)	**Email**	A way of sending digital messages, documents, and other files over the internet. It's like sending a letter, but much faster and online. You can write messages, attach files (like pictures or documents), and send them to anyone with an email address.	You finish your art project and want to share it with your teacher. You take a picture of your artwork, attach it to an **email**, write a message explaining the project, and send it to your teacher's email address. The teacher receives it almost instantly and can view your work and reply, all without needing to meet in person.
	Attachment	Files (like documents, pictures, or videos) that you send along with an email. Instead of just writing a message, you can attach files to share with the person you're emailing, so they can download or view the files directly from the email.	You've written a report for your science class and need to send it to your teacher. Instead of just writing a message, you **attach** the report file to the **email**. Your teacher can then download the attached document and read it directly from the email, rather than just reading your message.

Computer science—Autumn 1– Intro to computer systems

1B Digital literacy and tools of use			
	Key term	**Definition**	**Example**
Files (folder structure and layout)	**File explorer**	A tool on a PC that helps you find, organize, and manage your files and folders. It's like a digital filing cabinet where you can see all the documents, pictures, and other files on your computer. You can use it to open, move, copy, and delete files, and create new folders to keep everything organized.	You want to find your history essay on your computer. You open **File Explorer**, where you can see all your folders and files. You go to the "Documents" folder, find your essay file, and double-click to open it. If you want to organize it, you can create a new folder called "History Essays" and move the file there to keep everything neat.
	Folder	A virtual container in File Explorer where you can organize and store your files. It's like a digital drawer or folder where you can keep documents, pictures, and other types of files together. You can create different folders for different subjects or projects to help keep everything tidy and easy to find.	You have several school projects on your computer, like one for history, one for science, and one for English. To keep them organized, you create three separate folders in **File Explorer**: one called "History," another called "Science," and the last called "English." You then move the files related to each subject into the correct folder, making it easier to find them later when you need them.
	File type	The different formats that files can be saved in, which tell your computer what kind of file it is and which program should open it. In File Explorer, you'll see file types by their extensions (like .jpg for images, .docx for Word documents, or .mp4 for videos). Each file type has a specific purpose, and you can use the right program to open or edit them.	**jpg** – A common file type for images. If you have a photo you took on your phone and saved on your computer, it would likely be a **.jpg** file. You can open it with an image viewer like **Photos** or an editing program like **Paint**. **docx** – A file type for Word documents. If you wrote an essay in **Microsoft Word**, it would be saved as a **.docx** file. You can open it with **Microsoft Word** to read or edit it.
	Password Management	The practice of safely storing and organizing your passwords so you can easily access them without forgetting or losing them. Password managers are tools or apps that help you keep track of your usernames and passwords for different websites or services. This way, you only need to remember one main password, and the manager takes care of the rest, keeping your accounts secure.	Imagine you have accounts for your email, online shopping, gaming, and social media. Each account has its own password, which can be hard to remember. Instead of writing them down or trying to remember each one, you can use a **password manager** like **LastPass** or **1Password**. These tools store all your passwords securely in one place, and you only need to remember the master password for the manager. When you need to log into a website, the password manager fills in the correct password for you. This keeps your accounts safe and saves you the hassle of trying to remember every single password.

Computer science—Autumn 1– Intro to computer systems

1C Digital literacy and tools of use			
	Key term	**Definition**	**Example**
Email (send & receive)	**Email**	A way of sending digital messages, documents, and other files over the internet. It's like sending a letter, but much faster and online. You can write messages, attach files (like pictures or documents), and send them to anyone with an email address.	You finish your art project and want to share it with your teacher. You take a picture of your artwork, attach it to an **email**, write a message explaining the project, and send it to your teacher's email address. The teacher receives it almost instantly and can view your work and reply, all without needing to meet in person.
	Attachment	Files (like documents, pictures, or videos) that you send along with an email. Instead of just writing a message, you can attach files to share with the person you're emailing, so they can download or view the files directly from the email.	You've written a report for your science class and need to send it to your teacher. Instead of just writing a message, you **attach** the report file to the **email**. Your teacher can then download the attached document and read it directly from the email, rather than just reading your message.

Computer science—Autumn 2– Online safety

2A Online Safety			
	Key term	**Definition**	**Example**
Malware and Security Threats	**Malware**	Short for "malicious software," it's any software that is designed to harm your computer or steal your information. It can come in the form of viruses, spyware, or ransomware, and can slow down your computer, damage files, or steal personal details. It's important to have antivirus software to protect your computer from malware.	**Virus Example**: A virus might infect your computer through an email attachment that looks like a document but actually contains harmful code. When you open it, the virus can spread to other files or even corrupt data on your computer. **Spyware Example**: Spyware is a type of malware that secretly monitors what you do on your computer. For example, a piece of spyware might track your online activity, logging passwords and credit card numbers, then send that information back to hackers without you knowing. **Trojan Horse Example**: A Trojan horse may appear as a free game or app that you download, but once installed, it opens the door for hackers to gain access to your personal files, or even control your computer without your knowledge. **Worm Example**: A worm spreads by copying itself to other computers over a network, like a school or work network. It doesn't need to be attached to a file like a virus; it can simply exploit weaknesses in the computer's software to spread and cause damage.
	Phishing	A type of online scam where hackers try to trick you into giving away personal information, like passwords or credit card numbers, by pretending to be someone you trust. They might send fake emails or messages that look real, asking you to click on links or provide sensitive details. It's important to always check if a message is from a trusted source before sharing any information.	**Fake Social Media Message Example**: You receive a direct message on social media that looks like it's from a friend or a popular company. The message asks you to click on a link to verify your account or update your password. The link leads to a fake login page, capturing your password when you try to log in.

Computer science—Autumn 2– Online safety

2B Online Safety			
	Key term	**Definition**	**Example**
Legal issues and Responsibilities	**Data Protection**	Laws and practices that ensure personal information, like your name or address, is kept safe and only used in the right way. Websites and companies have to protect your data from being misused or shared without your permission.	**Data Protection Example**: Think of **data protection** like locking up your personal diary to keep others from reading it. If a company asks for your email address, they must keep it safe and only use it for the purpose you agreed to (like sending you updates). For instance, when you sign up for an online game, the website must protect your personal information like your name and age from being shared with others without your permission.
	Copyright	A legal rule that protects original works like books, music, or art from being copied or used without permission. If someone creates something, they own the rights to it, and others need permission to use or share it.	**Copyright Example**: If you create a drawing and post it online, that drawing is **copyrighted**. This means no one can copy, share, or sell your artwork without asking for your permission. For example, if someone tries to print your art on T-shirts and sell them without asking you first, that would be illegal because your artwork is protected by copyright.
	Digital Footprint	The trail of information you leave behind when you use the internet. This includes things like the websites you visit, the posts you make, or the comments you leave online. It's important to be careful with what you share, as it can stay online forever.	**Digital Footprint Example**: Imagine you leave a trail of footprints every time you walk through the sand. A **digital footprint** is similar—it's the trail of information you leave behind when you use the internet. For example, if you post a picture on social media, it becomes part of your digital footprint. Even though you might delete it later, it could still be saved somewhere online, and others might find it years later.
	Cyberbullying	Using the internet or digital devices to hurt or upset others. It can include sending hurtful messages, posting mean comments, or spreading rumours. It's important to be kind online and report any bullying you see.	**Cyberbullying Example**: **Cyberbullying** happens when someone uses the internet or text messages to be mean or hurtful to others. For instance, if someone sends a nasty message to a friend on social media, or spreads rumors online, that's cyberbullying. It's important to treat others kindly online, just like you would in person, and to tell a trusted adult if you see or experience cyberbullying.

Computer science—Autumn 2– Online safety

2C Online Safety			
	Key term	**Definition**	**Example**
Responsible use of Technology	**Screen Time**	The amount of time you spend using screens, like on your phone, computer, or TV. Too much screen time can affect your health, so it's good to take breaks and balance it with other activities.	**Screen Time Example**: If you spend 3 hours a day playing video games or watching TV, that's your **screen time**. It's important to balance this by taking breaks, going outside, or doing other activities like reading or exercising to keep your body and mind healthy.
	Secure Password	A strong password that is hard for others to guess. It should be a mix of letters, numbers, and special characters, and it's important to avoid using the same password for multiple accounts to keep your information safe.	**Secure Password Example**: A **secure password** could be something like `P@ssw0rd!123`, which is difficult for someone to guess because it includes uppercase and lowercase letters, numbers, and special characters. It's also a good idea to have a unique password for each of your accounts so that if one gets hacked, the others are still safe.
	Cookies	Small pieces of data that websites store on your computer to remember information about you, like your preferences or login details. While they can make browsing easier, it's important to be careful, as some cookies can track your activity across different sites.	**Cookies Example**: When you visit a website, like an online store, the website might save a **cookie** on your computer to remember your login details or what items you've added to your shopping cart. This makes it easier when you return, as you don't have to log in again. However, be cautious because some cookies track your online activity, so it's good to check your browser settings for privacy.

Computer science—Autumn 2– Online safety

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Computer science—Spring 1&2–Computer Hardware & Components

3A Computer Hardware & Components			
	Key term	**Definition**	**Example**
Defining a Computer	**Computer**	A **computer** is an electronic device that performs a wide range of tasks by processing data and running programs. It can do things like play games, browse the internet, and run software applications.	When you use a computer to write an essay, it processes the information you type and displays it on the screen.
	Input	**Input** refers to the data or commands that you give to a computer. This can be done through various input devices like a **keyboard**, **mouse**, **microphone**, or **touchscreen**.	When you type on a keyboard to write an email, the text you enter is the input.
	Processing	**Processing** is the action a computer takes to turn input into output. It is the part where the computer works through the data, performing tasks like calculations, sorting, or making decisions.	when you press "Enter" to search on Google, the computer processes the search term and finds relevant results.
	Output	**Output** is the result that the computer provides after processing input. This is usually displayed on a screen, printed on paper, or played as sound.	After you search for something on Google, the list of websites shown on your screen is the output of your search.
	Data	**Data** is the raw, unprocessed information that a computer works with. It can come in many forms, such as text, numbers, images, or sound.	When you write a message in a chat, the text you type is considered data.
	Information	**Information** is data that has been processed or organized in a way that makes it meaningful and useful, like a report, an image, or a video that tells you something.	After sorting the data you entered into a spreadsheet, you might get a chart or graph showing the information in a clear way, such as sales trends over time.
Types of Hardware	**Hardware**	**Hardware** refers to the physical parts of a computer or device that you can touch, such as the keyboard, screen, and internal components like the CPU. Without hardware, a computer wouldn't work.	**The monitor** displays images, and the **keyboard** lets you input text.
	Input Device	An **Input Device** allows you to send information into a computer.	examples include the **keyboard** (for typing), the **mouse** (for pointing and clicking), the **microphone** (for recording sound), and the **camera** (for taking pictures or video).
	Output Device	An **Output Device** displays or plays the information that the computer processes.	Examples include a **monitor** (which shows images and text on the screen), **speakers** (which play sound), and a **printer** (which prints documents on paper).

Computer science—Spring 1&2–Computer Hardware & Components

3B Computer Hardware & Components			
	Key term	**Definition**	**Example**
Computer Components	**Motherboard**	The **Motherboard** is the main circuit board in a computer where all the other components, like the **CPU**, **RAM**, and **storage devices**, are connected. It allows them to communicate and work together,.	Motherboards hold the infrastructure of the computer similar to how a city holds public transport systems allowing travel from one part to another
	CPU (Central Processing Unit)	The **CPU** is the “brain” of the computer. It carries out instructions from programs and handles tasks like processing data and making decisions.	When you click a button to open a program, the **CPU** processes that command and opens the program.
	RAM (Random Access Memory)	**RAM** is temporary memory that stores data the computer is currently using. When you open a program, it gets loaded into **RAM** so the **CPU** can access it quickly.	When you open a game, the game's data is loaded into **RAM** to make it run smoothly.
	Secondary Storage	**Secondary Storage** refers to devices used to store data permanently, even when the computer is turned off.	Examples include **hard drives**, **solid-state drives (SSDs)**, and **USB drives**, which store files, photos, and other data long-term.
	GPU (Graphics Card)	The **GPU** is a specialized component responsible for rendering images, animations, and videos on your screen. It handles graphics-intensive tasks, especially for activities like **gaming** or **video editing**	. For example, when you play a game, the **GPU** renders the 3D graphics and smooth animations you see.

Computer science—Summer 1–Block Based Programming

4A Block Based Programming & Concepts			
	Key term	**Definition**	**Example**
Computational Constructs	**Sequence**	Sequence is the order in which commands or instructions are executed in a program. When you write a program, the computer follows the sequence of steps you give it, one by one, to complete a task. For example, if you're baking a cake, the sequence would be: mix ingredients → pour into a pan → bake.	A program that prints out the steps for making a sandwich: 1. Take two slices of bread 2. Add peanut butter 3. Add jelly 4. Close the sandwich
	Iteration	Iteration is the process of repeating a set of instructions in a program. This is done using loops. For example, if you want a character to move 10 steps, you might use iteration to repeat the action of moving one step 10 times.	A loop that moves a character 10 steps in a game: for i in range(10): move_character(1)
	Selection	Selection is a decision-making process in programming, where the program chooses between two or more actions based on a condition. For example, an "if" statement checks if something is true or false and then makes a decision based on that, like "If the player score is greater than 10, show a victory message."	A game that shows a victory message if the player's score is greater than 10: if score > 10: print("Victory!")

4B Block Based Programming & Concepts			
	Key term	**Definition**	**Example**
Visual Programming	**Sprite**	A sprite is a graphical object in a program, often used in games or animations. It can be anything from a character to a moving object. Sprites can be programmed to perform actions, like moving or changing colours.	A character sprite moving across the screen: A cat sprite moves 5 steps to the right when you press a key.
	X-axis	The X-axis is the horizontal line on a graph or screen. In visual programming, it represents movement left and right. The more you move to the right, the larger the number on the X-axis becomes.	Moving a sprite to the right along the X-axis: The sprite starts at (0,0) and moves to (5,0).
	Y-axis	The Y-axis is the vertical line on a graph or screen. In visual programming, it represents movement up and down. The higher you go, the larger the number on the Y-axis becomes.	Moving a sprite upwards along the Y-axis: The sprite moves from (0,0) to (0,5) when you press the "up" arrow key.
	Coordinates	Coordinates are a set of numbers that tell you where something is on the screen. They usually consist of two numbers: one for the X-axis (horizontal position) and one for the Y-axis (vertical position). For example, coordinates (0,0) would be the starting point, usually the bottom-left corner of the screen.	**Starting Position**: (0,0) This is where the character begins, typically the center or corner of the screen. **Move Right**: (50, 0)After moving 50 units to the right, the character's new position is (50, 0)**Move Up**: (50, 100)Then, moving 100 units up from (50, 0) gives the character a new position at (50, 100).
	Block	A block is a visual programming element that represents a single instruction or command. In block-based programming languages like Scratch, blocks fit together like puzzle pieces to create a program. Each block has a specific function, like moving a sprite or changing a colour.	**Move Block** **A common block in block-based programming is the Move block. This block instructs a sprite (or object) to move by a certain amount on the screen.** **Example:** **Block: "Move 10 steps"** **Description: This block tells the sprite to move 10 steps forward. When attached to the script, this would move the sprite on the screen by 10 units.**

Computer science—Summer 1–Block Based Programming

4B Block Based Programming & Concepts			
	Key term	**Definition**	**Example**
Programming Concepts	**Variable**	A variable is like a storage box that holds a value, such as a number or text. You can change what's inside the box (the value) during the program. For example, you might have a variable called "score" that starts at 0 and increases every time you score points in a game.	**Variable Name: score** **Initial Value: 0** **Purpose: To keep track of the player's score as the game progresses (increases by 10 after every coin picked up)**
	Data	Data is the raw facts and figures that a computer processes. This can be numbers, text, images, or sounds that a program uses to perform tasks. For example, if you are playing a game, the data might be the player's score, level, and actions.	**Imagine you're playing a simple platformer game. In this game, the following data is used:** **Player's Score (Number data): Keeps track of how many points the player has scored in the game.** **Player's Name (Text data): Stores the player's name that they enter at the start of the game.** **Background Image (Image data): Displays the background of the game.** **Sound Effects (Sound data): Plays sounds when events like jumping, collecting items, or taking damage occur.**
	Logic	Logic is a way of thinking that helps computers make decisions. It's often used in programming with "if" statements to check if something is true or false, and then take action based on that decision. For example, "If the score is greater than 10, show a message saying 'You win!'"	**Here's how logic works in a program:** **If statements check a condition.** **If the condition is true, the program executes a specific action.** **If the condition is false, the program can either do nothing or perform a different action (often using else or else if statements).**
	Boolean	A Boolean is a type of data that only has two possible values: True or False. It's used to help make decisions in programming, like in "if" statements. For example, a Boolean might check if the player has won, and if it's true, the game will display a winning message.	**Check if the player has won** **if has_won:** **print("You Win!") # This message will be shown if the Boolean is True** **else:** **print("Keep Playing!") # This message will be shown if the Boolean is False**

Computer science—Summer 1–Block Based Programming

4C Block Based Programming & Concepts			
	Key term	**Definition**	**Example**
Programming Concepts	**Variable**	A variable is like a storage box that holds a value, such as a number or text. You can change what's inside the box (the value) during the program. For example, you might have a variable called "score" that starts at 0 and increases every time you score points in a game.	**Variable Name: score** **Initial Value: 0** **Purpose: To keep track of the player's score as the game progresses (increases by 10 after every coin picked up)**
	Data	Data is the raw facts and figures that a computer processes. This can be numbers, text, images, or sounds that a program uses to perform tasks. For example, if you are playing a game, the data might be the player's score, level, and actions.	**Imagine you're playing a simple platformer game. In this game, the following data is used:** **Player's Score (Number data): Keeps track of how many points the player has scored in the game.** **Player's Name (Text data): Stores the player's name that they enter at the start of the game.** **Background Image (Image data): Displays the background of the game.** **Sound Effects (Sound data): Plays sounds when events like jumping, collecting items, or taking damage occur.**
	Logic	Logic is a way of thinking that helps computers make decisions. It's often used in programming with "if" statements to check if something is true or false, and then take action based on that decision. For example, "If the score is greater than 10, show a message saying 'You win!'"	**Here's how logic works in a program:** **If statements check a condition.** **If the condition is true, the program executes a specific action.** **If the condition is false, the program can either do nothing or perform a different action (often using else or else if statements).**
	Boolean	A Boolean is a type of data that only has two possible values: True or False. It's used to help make decisions in programming, like in "if" statements. For example, a Boolean might check if the player has won, and if it's true, the game will display a winning message.	**Check if the player has won** **if has_won:** **print("You Win!") # This message will be shown if the Boolean is True** **else:** **print("Keep Playing!") # This message will be shown if the Boolean is False**

Computer science—Summer 2–Scratch to Python

5A Scratch to python			
	Key term	**Definition**	**Example**
Programming Constructs	**Variable**	A container in a program that holds a value, like a number or a word. You can change or update this value whenever you need to. For example, you could have a variable called `score` that starts at 0 and increases every time you score points in a game.	**# Define a variable called 'score' and set its initial value to 0** **score = 0** **#Increase the score when the player scores points** **score += 10 # The score is now 10** **print(score) # Output: 10**
	Functions	A function is a block of code that does a specific task. You can give it a name, and then whenever you want it to do its job, you call that function. Functions help organize code and make it easier to reuse. For example, a function could be written to draw a shape, and you can call it anytime you need that shape to appear.	**# Define a function to greet a player** **def greet_player(name):** **print(f"Hello, {name}! Welcome to the game.")** **# Call the function with a player's name** **greet_player("Alice") # Output: Hello, Alice! Welcome to the game.**
	If's	An "if" statement helps the program make decisions. It tells the computer to do something only if a certain condition is true. For example, you could use an "if" statement to check if a player's score is greater than a certain number, and if it is, the program could say "You win!"	**# Define a player's score** **score = 15** **# Check if the player's score is greater than 10** **if score > 10:** **print("You win!") # Output: You win!**
	Loops	A loop is a way to repeat a part of the program multiple times without writing the same code over and over. For example, you might use a loop to make a character move across the screen step by step until it reaches the end. Loops help make programs shorter and easier to manage.	**# Use a loop to print numbers from 1 to 5** **for i in range(1, 6):** **print(i)** **# Output:** **# 1** **# 2** **# 3** **# 4** **# 5**

Computer science—Summer 2–Scratch to Python

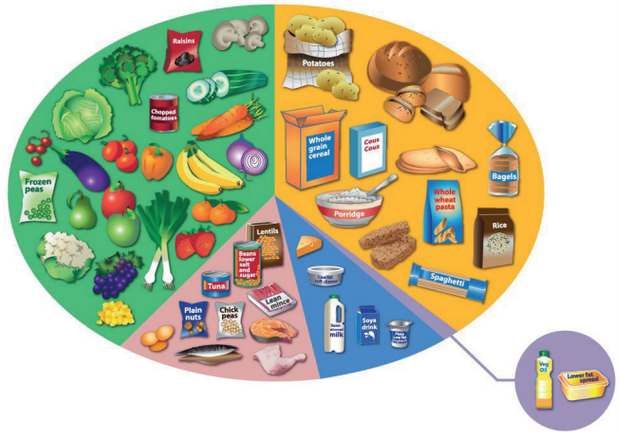
5B Scratch to python			
	Key term	**Definition**	**Example**
Programming Concepts	**Python**	Python is a popular, beginner-friendly programming language that is used for creating all kinds of programs, from simple games to complex websites. Python is known for its clear, easy-to-read code, making it a great language for beginners to start learning programming.	**Python language example** **print("Hello, world!") # Output: Hello, world!**
	Syntax	Syntax is the set of rules that determines how you write code in a particular programming language. It's like grammar in a language – if the syntax is wrong, the computer won't understand the code. For example, in Python, you need to use indentation to show where your code blocks start and end.	**# Incorrect syntax: Missing parentheses** **print "Hello, world!" # This will cause an error in Python 3.x** **# Correct syntax:** **print("Hello, world!") # Output: Hello, world!**
	Data Type's	Data types define what kind of information a variable is storing.	**Different data types in Python** **age = 25 # Integer** **name = "Alice" # String** **is_student = True # Boolean**
	Input	Input is the data or information you give to a program, often through the keyboard, mouse, or other devices. For example, when you type your name into a game, that's input, and the program will process it and respond.	**# Ask the user for their name and store the input in a variable** **name = input("What is your name? ")** **# Display a greeting message** **print(f"Hello, {name}!") # If the user types "Alice", the output will be: Hello, Alice!**
	Output	Output is the result that the program shows or gives back to you after it processes the input. This could be a message on the screen, a sound, or something else. For example, if you enter a number into a calculator program, the output would be the result of the calculation.	**Print("hello") print will output the message hello to your screen**
	Turtle	Turtle is a Python library that lets you create drawings and graphics using a special cursor called a "turtle." You can tell the turtle to move around the screen, draw lines, and create shapes, making it a fun way to learn how to code. It's a great way to practice programming while creating visual art.	**# Move the turtle to draw a square** **for _ in range(4):** **t.forward(100) # Move the turtle forward by 100 units** **t.left(90) # Turn the turtle left by 90 degrees** **# Hide the turtle cursor** **t.hideturtle()** **# Keep the window open until clicked** **screen.exitonclick()**

Design and Technology - Year 7 Food

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



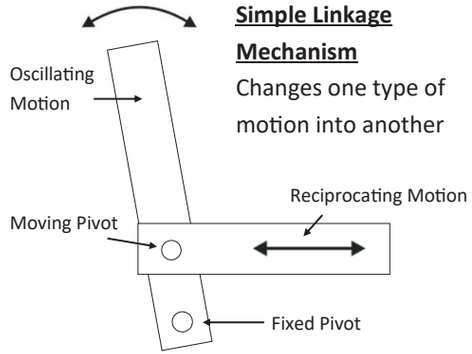
Eatwell guide food groups	
Yellow	Potatoes, rice, bread, pasta, and other starchy carbohydrates
Blue	Dairy and alternatives
Green	Fruits and vegetables
Pink	Beans, pulses, fish, eggs, meat and other proteins
Purple	Oils and spreads

Design and Technology - Mechanical Card

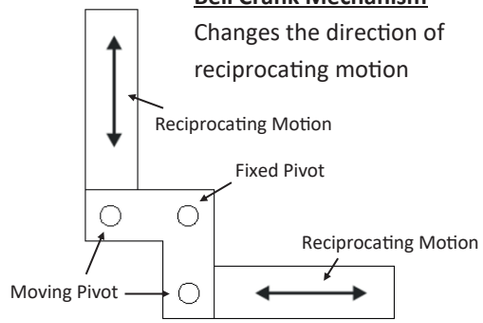
ACCESSFM	
Aesthetics	How a product looks
Cost	How much a product costs to make or buy
Customer	Who a product is aimed at
Environment	Where a product will be used
Size	How big a product will be
Safety	How safe a product is, and how safe the manufacture of a product is
Function	What a product does
Materials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



Simple Linkage Mechanism
Changes one type of motion into another

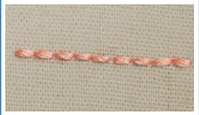
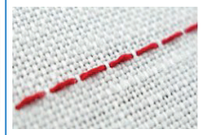


Bell Crank Mechanism
Changes the direction of reciprocating motion

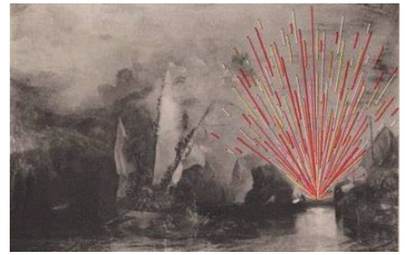
Design and Technology (Textiles) - Embellished Seascapes

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 7 English Knowledge Organiser – Autumn 1 – Jane Eyre

Chanting – Key Subject Vocabulary

1	**Pious (adjective)**	Devoutly religious.
2	**Tyrannical (adjective)**	Exercising power in a cruel way.
3	**Inexplicable (adjective)**	Unable to be explained or accounted for.
4	**Patriarchal (adjective)**	A society or controlled by men.
5	**Oppression (noun)**	When someone is treated unfairly and doesn't have control over their own life.

Chanting - Key ROA Terminology

1	**Simile**	Comparison using "like" or "as".
2	**Metaphor**	Comparison stating one thing is another.
3	**Foreshadowing**	Hinting at future events.
4	**Personification**	Giving human qualities to non-human things.
5	**Pathetic fallacy**	Nature mirroring human emotions.

Big Ideas	Moments	Methods/Effect
Big Idea 1: Bronte illustrates Jane's intense love of reading as a means of escaping her isolated reality.	'With Bewick on my knee, I was then **happy: happy** at least in my own way. I feared nothing but interruption'	***repetition*** The repetition of 'happy highlights Jane's limited but personal source of joy.
	'**Each picture told a story**; mysterious often to my undeveloped understanding and imperfect feelings'	***symbolism*** The "pictures" represent a world and feelings Jane is too young to fully understand.
Big Idea 2: Bronte presents female independence as significantly limited due to the constraints of a patriarchal society and restrictive gender expectations.	'While Adele played with her nurse, and Mrs Fairfax made jellies in the storeroom, **I climbed the three staircases**.'	***metaphorical staircase*** Climbing the stairs symbolises Jane's upward social mobility and her journey towards a different life.
	'**Millions** are condemned to a stiller **doom** than mine, and **millions** are in silent revolt against their lot.'	***repetition / metaphor*** ''Millions" repeats to show many suffer a quiet, unseen hardship ("stiller doom") and resist inwardly ("silent revolt").
Big Idea 3: Bronte uses the character of Jane to criticise class systems in Victorian England.	'I desired **liberty**; for **liberty** I gasped; for liberty I uttered a prayer; it seemed **scattered on the wind** then faintly blowing.'	***symbolism, Repetition*** The repeated word "liberty" shows how desperately Jane wants freedom, but it feels delicate and easily lost, like something "scattered on the wind".
	'It was those I longed to **surmount**; all within their **boundary** of rock and heath seemed prison ground, exile **limits**.'	***metaphor*** The setting is described as a prison, showing Jane feels trapped.

Key Themes in Jane Eyre

Love vs Hate	Social Class	Personal Growth
		

Year 7 English Knowledge Organiser – Autumn 2 – Short Stories

Chanting – Key Subject Vocabulary

1	**Elaborate (adjective)**	Involving many carefully arranged parts or details.
2	**Prose (noun)**	Written or spoken language.
3	**Recur (verb)**	To occur repeatedly.
4	**Pervade (verb)**	Spread through and in every part of an object.
5	**Macabre (adjective)**	Disturbing and horrifying due to death.

Chanting - Key ROA Terminology

1	**Simile**	Comparison using "like" or "as".
2	**Metaphor**	Comparison stating one thing is another.
3	**Foreshadowing**	Hinting at future events.
4	**Personification**	Giving human qualities to non-human things.
5	**Pathetic fallacy**	Nature mirroring human emotions.

Big Ideas	Moments	Methods
Big Idea 1: Mary Maloney waits for her husband, showing the typical gender roles and marriage expectations of the time.	'Mary Maloney was **waiting** for her husband to come home from work.'	*The **dynamic verb** 'waiting' adds a sense of anticipation and movement, making the action clear and engaging, and highlighting Mary's emotional state.*
	'There was a **slow smiling** air about her, and about everything she did.'	*The **sibilant sounds** in 'slow smiling' create a soft, soothing, and almost hypnotic effect, emphasizing the calm and serene nature of Mary's demeanor.*
Big Idea 2: Patrick's news blindsides Mary, leaving her to raise their unborn child alone, as he prioritises finances over emotions.	'And I know it's kind of a bad time to be telling you, but there **simply** wasn't any other way.'	*The **adverb,** 'simply' emphasises the cold and heartless nature of Patrick's decision to leave Mary,*
	'Of course, I'll give you **money** and see you're looked after.'	*The **noun** "money" highlights the materialistic nature of the offer, prioritising financial support over emotional care.*
Big Idea 3: Mary undergoes a dramatic role reversal, shifting from passivity to violent action and cleverly concealing her actions.	'**Without any pause** she swung the big frozen leg of lamb high in the air .'	*The **prepositional phrase**, 'without any pause'* Illustrates Mary's quick and decisive action.
	'Why don't you eat up that lamb that's **in the oven?** It'll be cooked just right by now.'	*By using an **interrogative question**, Mary cleverly diverts attention from the crime to the meal, effectively concealing the evidence."*

Key Themes in Roald Dahl's Short Stories

Appearance vs Reality

Power

Gender

Year 7 English Knowledge Organiser – Spring 1 – Poetry

Chanting – Key Subject Vocabulary

1	**Rhythm**	Stressed and unstressed syllables.
2	**Form**	The structure of the poem.
3	**Metre**	The beat and rhythm of a poem's lines.
4	**Stanza**	A verse in a poem.
5	**Enjambment**	A line of poetry, ending without punctuation.

Chanting - Key ROA Terminology

1	**Simile**	Comparison using "like" or "as".
2	**Metaphor**	Comparison stating one thing is another.
3	**Foreshadowing**	Hinting at future events.
4	**Personification**	Giving human qualities to non-human things.
5	**Pathetic fallacy**	Nature mirroring human emotions.

Big Ideas	Moments	Methods and Effect
Firstly, in Anthem for Doomed Youth, Owen presents war as brutal, dehumanising, and shocking.	"What passing-bells for **these who die as cattle?"**	***Simile/Dehumanisation*** *The simile's dehumanisation emphasizes the brutal, animalistic nature of death in war.*
	"Only **the monstrous anger of the guns."**	***Personification*** *The personification highlights the overwhelming and hostile power of the artillery, portraying them as terrifying on the battlefield.*
Furthermore, in Anthem for Doomed Youth, Owen presents war as futile, and a destroyer of traditional values.	**'No** mockeries now for them; **no** prayers nor bells;'	***Anaphora*** *The anaphora of "no" at the start of the phrases creates emphasis, making the lack of prayers and bells feel cruel and unnatural..*
	And each slow **dusk a drawing-down** of blinds.'	***Alliteration*** *The alliteration of "d" creates a feeling of melancholy and reinforcing the poem's theme of futile death and loss.*
Finally, in Anthem for Doomed Youth, Owen presents war as violent, chaotic, and devastating.	The shrill, **demented choirs** of **wailing** shells"	***Metaphor/Personification*** *Metaphor ("choirs") and personification ("wailing," "demented") create a horrifying, unified yet twisted sound of tormented, aggressive artillery fire.*
	'"The stuttering **rifles' rapid rattle''**	***Alliteration*** *The repetition of the harsh "r" sound in "rifles' rapid rattle" creates an onomatopoeic effect, vividly mimicking the sharp, quick bursts of gunfire.*

Key Themes in War Poetry

Power 

Freedom 

Conflict 

Year 7 English Knowledge Organiser – Spring 2 – Creative Writing

ROA Grammar

1	**Concrete noun**	General names (e.g., dog, city).
2	**Abstract noun**	Ideas you can't touch (e.g., freedom, love).
3	**Collective noun**	A name for a group.
4	**Proper noun**	Specific names (e.g., London). Always capitalised.
5	**Noun phrase**	A noun and its describing words.

Chanting - Key ROA Terminology

1	**Simile**	Comparison using "like" or "as".
2	**Metaphor**	Comparison stating one thing is another.
3	**Foreshadowing**	Hinting at future events.
4	**Personification**	Giving human qualities to non-human things.
5	**Pathetic fallacy**	Nature mirroring human emotions.

Creative Sentences

More, More, More Sentences/ Less, Less, Less 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 does it look like?
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.

Nor, Nor, Nor Sentence

What is it?
This sentence use negatives to emphasis 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?
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.

The So So 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 does it look like?
There was the faintest glimmer, so small, so distant, it didn't seem to exist.

Three Verb Sentence

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?
The monstrous fungi billowed, swelled, rose up and up, surrounding the base of every tree.

ROA Core Skills



Year 7 English Knowledge Organiser – Summer 1 – Creative Reading

ROA Grammar

1	**Adverb**	A word that describes verbs.
2	**Dynamic verb**	A word that describes an action.
3	**Stative verb**	A word that describes a state of being.
4	**Present tense**	An action that is currently happening.
5	**Past tense**	An action in the past.

Chanting - Key ROA Terminology

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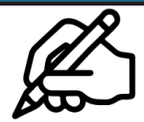
Core ROA Reading Terminology

1	**characterisation**	The creation and construction of a fictional character.	His booming laughter.
2	**narrator**	The person or object telling the story.	The wind howled its mournful tale.
3	**explicit characterisation .**	The author tells you directly what the character is like.	The little puppy was playful.
4	**implicit characterisation**	The author shows you what the character is like through their actions and interactions.	His smile never reached his cold, dead eyes.
5	**first-person narrative**	The story is told by a character within the story. This character uses pronouns like "I," and "me,"	My breath hitched when the doorknob slowly turned.
6	**third-person narrative**	The story is told by someone outside the story. This narrator uses pronouns like "he," "she," "it," and "they."	Darkness pressed in, and he felt a prickle of fear.
7	**omniscient narrator**	A narrator who writes in the third person and has access to the thoughts and feelings of the characters/the plot.	A chill snaked up her spine; danger waited unseen.

ROA Core Skills



Year 7 English Knowledge Organiser – Summer 2 – Rhetoric

Chanting – Key Subject Vocabulary

1	**Persuasion**	Influencing thoughts or actions.
2	**Audience**	The people you are trying to persuade.
3	**Ethos**	Trust and character
4	**Pathos**	Feelings and emotions.
5	**Logos**	Logic and reason.

Chanting - Key ROA Terminology

1	**Simile**	Comparison using "like" or "as".
2	**Metaphor**	Comparison stating one thing is another.
3	**Foreshadowing**	Hinting at future events.
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Rhetorical Devices	Definition	Example
anaphora	The **repetition of a word or phrase** at the beginning of successive clauses or sentences.	***We shall*** *not fail.* ***We shall*** *not yield.* ***We shall*** *not falter.*
hyperbole	Over-the-top **exaggeration** for emphasis.	It took **forever** to get through that traffic!
literary analogy	A **comparison** of a **character or story** from literature with something that is similar.	***Alice's journey through Wonderland*** *is like* ***Dorothy's trip to Oz***

Aristotle's Triad

Ethos	Logos	Pathos
		

Ethics - Abrahamic Religions 1

1. What are worldviews?	
Worldview	The way a person views the world, influenced by religion, upbringing and society.
Allegory	A story that contains a hidden meaning.
Literal view	To take something as factually true, without need for interpretation.

2. Religion in the UK	
Census	An official count of a population e.g. where religious data is collected.
2021 results	• 46% Christian • 6% Muslim • 2%- Hindu, Buddhist, Sikh and Jewish • 37%- No religion
Secular	Non-religious nature e.g. a secular school.

3. The story begins– Genesis 1-3	
Creation	God created universe in 6 days/rested on the 7th.
Pinnacle	The most important part e.g. humans were the 'pinnacle' of creation.
Adam	• Hebrew for 'man'. • Made from dust & given "breath of life" (soul).
Eve	Made from Adam's rib as a 'companion'.
Tree of Knowledge of Good and Evil	A tree bearing forbidden fruit in the Garden of Eden. Serpent said if they eat they fruit they'll become 'like God'.
God's punishments	• Adam had to work the ground for food. • Eve had to obey her husband. • Both would "return to dust" one day.
"Wounded victor"	A promise made by God that a descendant of Eve will defeat the serpent.

4. Descent into sin	
The murder of Abel	• Cain murders his brother Abel because God prefers Abel's offering (lamb) over Cain's (vegetables).
The Flood	• God decides to reverse creation into a "watery chaos" as it has become so sinful. • Rains for 40 days and 40 nights.
Preserve goodness	• God does not take pleasure in the flood. • He wants to preserve the only 'goodness' that is left.

5. Abraham	
Covenant	• A promise made between humans and God. • Abraham promises to be a monotheist and God will 'bless' his descendants.
Sarah	Abraham's wife and mother of Isaac.
Hagar	Sarah's handmaiden and mother of Ismail.
Sacrifice	Abraham shows faith by being willing to sacrifice his son.

6. Emergence of Judaism– Exodus	
Moses	Raised by Pharoah's daughter when Israelites were slaves in Egypt.
10 Plagues	10 disasters God sent to punish Pharaoh e.g. darkness.
Passover	• Festival that remembers when God sent 10th plague. • Israelites put lamb's blood on their door so their child would be spared.
Red Sea	God parts the Red Sea to allow the Israelites to escape Pharoah's army.

Nature of God	Omnipotent	Omniscient	Omnibenevolent	Original Sin	The Fall	Imago Dei	Ex Nihilo	Genesis
God's characteristics and qualities.	All-powerful.	All-seeing.	All-loving.	The Christian idea that all humans inherited sin through Adam and Eve.	The 'fall' of humans from a state of innocence to a state of sin.	Latin for 'image of God'.	Latin for 'out of nothing'.	First book in the Torah and Christian Old Testament.

Ethics - Abrahamic Religions 2

1. Exodus 2 & Leviticus	
10 Commandments	10 laws given to Moses by God that establish a new covenant.
40 years in the wilderness	Israelites worship a 'golden calf' 613 mitzvot (laws) created in 'Leviticus' to keep a state of purity.
Tabernacle	A portable temple where God's presence can be experienced.
Day of Atonement	A sacrifice (scapegoat) is made to make up for Israelites' sins.
Miriam	Sister of Moses and female leader who helped the Israelites cross the wilderness.

2. Exile and Isaiah	
King David	A King of Israel– created a strong army but had a weakness for women.
King Solomon	Son of David. Built the first temple but introduced idols.
Exile	The Israelites were taking into slavery as punishment for their idolatry.
Isaiah	A prophet who makes predictions about a 'messiah' who will save the Israelites.
Prophecies	• "pierced for our sins" • "born of a virgin"

3. Israel in Jesus' time	
Temple	The tabernacle from the desert is now a permanent temple in Jerusalem.
Roman Empire	The Romans ruled over Palestine and the Jews e.g. collected taxes.
Pharisees	Jewish leaders who were strict with the 613 mitzvot (laws).
Jesus changing the Old Law	Stopped the woman caught in adultery being stoned to death. "Hate your enemies" became "Love your enemies."

4. Jesus' Final Days on Earth	
Last Supper	• Jesus' final Passover meal with bread and wine. • "I tell you the truth- one of you will betray me"
Crucifixion	• Arrested and then crucified by Romans. • Crown of thorns placed on His head. • "Forgive them Father for they know not what they do"
Atonement	• Jesus' death healed the rift between humans and God. • He is the "wounded victor" from Genesis.

5. Ibrahim in Islam	
Arabia	Hagar discovers the Zam Zam well and so people settle in Mecca.
Ibrahim the prophet	• Ibrahim and his son Ismail build the first Kaaba. • Ibrahim's footprints can be found next to the Kaaba.
Prophet Muhammad	• Received revelation on the Night of Power. • Taken on the Night Journey. • Rededicated the Kaaba to Allah.

6. Jerusalem as a crosswords	
Jerusalem	A city in Israel that is holy for Jews, Muslims and Christians.
Western Wall	The only remaining part of the Temple.
Church of the Holy Sepulchre	A church built on the location of the crucifixion and the tomb where Jesus was buried.
Al Aqsa Mosque	A mosque where Prophet Muhammad was transported to on the Night Journey.

Sacrifice	Monotheism	Salvation	Covenant	Blasphemy	Atonement	Prophet	Sin	Polytheism
Giving something up as an offering to God.	The belief in one God	To be saved from evil.	Conditional promises made to humanity by God.	The offence of speaking against or insulting God.	The action of making up for a sin.	Someone who received messages and revelations for God.	Something that goes against God's laws.	The belief in more than one god.

Ethics - Judaism

1. Introduction to Judaism	
Key beliefs	• Monotheism– The oneness of God is stated in the Shema prayer. • Jesus is not the messiah that Isaiah spoke of. • Torah is the first 5 books of the Hebrew Bible.
Orthodox	More likely to follow the strict rules within the Torah e.g. the 613 mitzvot. May have a mezuzah that contains the Shema prayer on every doorframe.
Reform	More likely to interpret the laws differently.
Talmud	• Also known as the 'oral Torah'. • Record of conversations on how to apply the laws e.g. how to keep Sabbath 'holy'. • 'Wrestle' with the truth like Jacob wrestled with the angel.

2. The synagogue	
Synagogue	Building where Jewish people gather for worship.
Reform	
Female rabbis	Both men and women can be rabbis. Could be inspired by Miriam.
Seating	Men and women sit together during worship services.
Service	The Torah will be read in the native language of the country.
Orthodox	
Rabbis	Only men can be rabbis as historically they were the ones who studied the Torah.
Seating	Men may sit downstairs and women upstairs. Or they will be separated with a curtain called a mechitza.
Service	The service will be longer and will be read in Hebrew. Stand facing Jerusalem and recite Amidah prayer.

3. Bar and Bat Mitzvah	
Bar Mitzvah	• Coming of age ceremony for boys in Judaism. • Wears tefillin for first time and reads from the Torah.
Reform	
Age	Both boys and girls are seen as adults at 13 years old.
Gender	Both genders have a ceremony– girls have a bat mitzvah ceremony.
Orthodox	
Age	Boys become adults at 13 and girls are adults at 12.
Gender	Only boys have the ceremony. They can now lead prayers at home and set an example.

4. Shabbat	
Shabbat	A holy day of rest from Friday evening until Saturday evening.
Origins	In Genesis, God made the seventh day 'holy'. 10 Commandments- "Keep the Sabbath holy"
Key practices	• Light candles. • Eat a family meal including 'challah' bread to represent food God gave in wilderness. • May visit the synagogue. • Wine drank from kiddush cup.
DIFFERENCES BETWEEN ORTHODOX/REFORM	
• Orthodox will be stricter– no electricity, timers on ovens, walk to synagogue. • Orthodox only break rule to save life (pikuach nefesh). • Reform may use some electricity, drive etc.	

5. Pesach/Passover	
Origins	• Remembers Exodus when Moses lead the Israelites out of Egypt. • Named after the angel of death 'passing over' their doors at the 10th plague.
Key practices	• Seder Meal– Lamb bone=sacrifice, charoset= cement, salt water=tears, matzah=unrisen bread. • Ring the Exodus story in Hebrew. • Recline on cushions to be thankful for comfort and not slavery.

6. Social Justice	
Tikkun Olam	Hebrew phrase for 'world repair'.
Social Justice	Jews should fight for fairness in society. It is humans, not God, who will restore the Earth.
Teaching	"When you lay siege to a city…do not destroy its trees by putting an axe to them "
Honi and the Carob Tree	Honi sees a man planting a carob tree and comments that it will take 70 years to bear fruit. The man is planting the tree so future generations can enjoy carob.

Ethics - Life of Jesus

1 .The Birth of Jesus	
Roman Empire	The Romans ruled over Palestine and the Jews e.g. collected taxes.
Pharisees	Jewish leaders who were strict with the rules of the Torah.
Messiah	The Jewish people were waiting for a saviour.
Incarnation	The Christian belief that Jesus is God in human flesh.
Jesus' birth	• Virgin Mary= mother. • Born in a stable & visited by shepherds and kings. • Celebrated at Christmas. • Known as 'Emmanuel' and the 'Son of God'.

2. Jesus' Ministry	
Sermon on the Mount	Jesus' longest recorded speech where he taught how humans should live.
Changing Old Law to New Law	• To fulfil the law with agape love. • Not just "Do not murder" but do not be angry. • Do not seek "Eye for an eye" but "turn the other cheek."
Beatitudes	Eight blessings that happen when people live according to Jesus' teaching e.g. • *'blessed are the poor',* • *'blessed are the peacemakers'*
Interpretations	• Some disagree about whether these rules can be followed in reality.

3. Crucifixion	
Last Supper	• Jesus' final Passover meal with his disciples– flat bread and wine. • Jesus predicts that somebody at the table will betray Him.
Eucharist	The sacrament where Christians eat bread and wine to remember the body and blood of Jesus Christ.
Crucifixion	• Arrested and then crucified by the Romans • Forced to carry his cross. • A 'crown of thorns' placed on His head and pierced with a spear.
Atonement	Jesus' death healed the rift between humans and God.
Prophecy	Fulfils Isaiah's prophecy "pierced for our sins".

4. Resurrection	
Resurrection	Jesus rises from the dead 3 days after the crucifixion.
Discovery at the tomb	Two women try to anoint Jesus' body but the tomb is empty. Two angels tell them "He is risen".
Doubting Thomas	A disciple who refused to believe Jesus resurrected unless he could "See the nail marks in his hand and put my hand into his side" (which Jesus let him do).
Road to Emmaus	Two disciples on the road to Emmaus did not recognise Jesus until he broke the bread and wine.
Easter	The festival where the resurrection is celebrated (Maundy Thursday= eucharist, Good Friday= mourning, Easter Sunday= celebrate resurrection).

5. Ascension and Pentecost	
Ascension	• Jesus leads his disciples to a Hill in Bethany. • He returns to Heaven, 40 days after resurrecting. • 40 represents a fresh start in the Bible. • He reassures his disciples 'I will be with you always.'
Pentecost	• The Holy Spirit comes to Earth like a "gust of wind". • "Tongues of fire" appear above the disciples' heads and they can speak many languages. • 3000 people convert to Christianity. • Jesus' followers can start 'The Great Commission' to convert others.

Ethics - Christianity

1. Origins of Christianity		
Paul the Apostle	Responsible for the spread of Christianity across the Roman Empire.	Saw a blinding light and a vision of Jesus.
Phoebe	A trusted Christian leader who St Paul wrote about in his letters.	
Lydia	The first converted Christian in Europe– St Paul baptised her.	
Constantine	The first Roman emperor to convert to Christianity. Stopped Christians being persecuted.	He and his entire army had a vision of a cross in the sky.
Council of Nicaea	A meeting held to discuss whether Jesus was God or the Son of God.	
Nicene Creed	A formal statement which sets key Christian beliefs e.g. the Trinity.	

2. The Reformation	
Reformation	A 16th century movement initiated by Matin Luther to reform (change) the Catholic Church.
Protestant	
Leader	There is no one world leader.
Ordination	Both men and women can become priests in some Protestant churches.
Sacraments	Baptism and eucharist are important but not necessary for salvation.
Catholic	
Leader	The Pope is the worldwide leader. Pope Francis is the 266th.
Ordination	• Only men can become priests as the disciples were male. • All bishops are through a line– • Apostolic Succession'.
Sacraments	Baptism and eucharist are necessary for salvation and the others should be performed where possible.

3. How does Jesus's life affect Christians today – festivals	
Christmas	• Celebrates the incarnation of Jesus. • Celebrated with nativity plays and scenes. • Advent calendars. • YouGov poll 2023– 88% of British people celebrate Christmas even though only 46% are Christian.
Easter	• Celebrates the resurrection of Jesus. • Good Friday– Christians will mourn Jesus and some may act out the journey he took to the cross. • Easter Sunday– Celebrate his resurrection through church services and Easter eggs. • Traditions vary- in Greece, people throw pots out the window to represent getting rid of possessions.

4. How does Jesus's life affect Christians today – prayer	
Prayer	To communicate with God.
Lord's Prayer	• The prayer Jesus taught to his disciples during the Sermon on the Mount. • "Our Father who art in Heaven" • "Give us this day our daily bread" • "Forgive us our sins"
Influence on the UK	• May be said as a way of comfort or connecting to God. • Banned in a cinema advert in 2015.

5. The Bible – a literal interpretation	
Creation	The world was made in exactly 7 days as it says in Genesis.
Morality	There are traditional roles for men and women and only men and women should be married.
Bible interpretation	• The Bible is God's exact words as revealed to prophets. • "Scripture is God breathed"

6. The Bible – a progressive interpretation	
Creation	Genesis is a metaphor– they believe in a combination of God and science.
Morality	Some aspects of the Bible are outdated e.g. the rules in Leviticus.
Bible interpretation	The Bible should be read carefully– some is mistranslated, some is poetry.

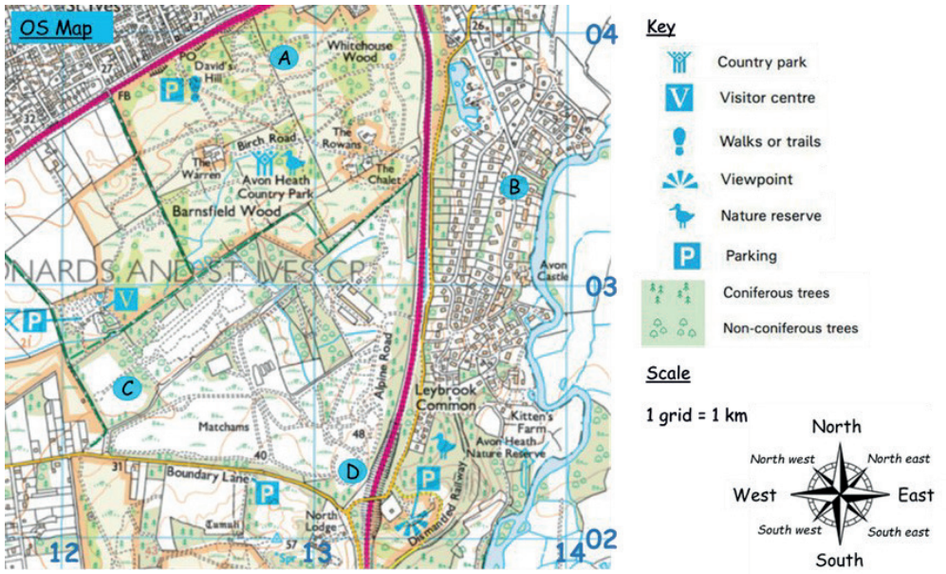
Geography - Introduction to Geographical Skills

1. Where am I?	
Key term	**Definition**
Country	Land that is controlled by a single government (e.g. UK).
Continent	Large solid area of land made up of many countries (Africa, Asia, Europe, South America, North America, Antarctica, Australia).
United Kingdom	A country made up of 4 nations; England, Wales, Scotland and Northern Ireland.

2. Where on Earth?	
Key term	**Definition**
Equator	Imaginary line around the middle of the Earth at 0^{O}.
Northern Hemisphere	The half of the Earth above the Equator.
Southern Hemisphere	The half of the Earth below the Equator.
Lines of latitude	Horizontal, imaginary lines around the Earth's surface, parallel to the Equator.
Lines of longitude	Vertical, imaginary lines around the Earth's surface. The Prime Meridian is at 0^{o}.
Tropic of Cancer	The line of latitude at 23.5^{o} north of the Equator.
Tropic of Capricorn	The line of latitude at 23.5^{o} south of the Equator.
Polar Circles	The lines of latitude at 66^{O} north and south. North = Arctic Circle. South = Antarctic Circle.

4. Relief	
Relief	The height and shape of the land
Contour lines	Orange lines on an OS Map, indicating relief
Spot height	An altitude point on an OS map

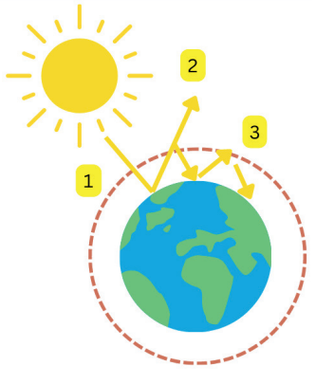
3. What are grid references?	
Key term	**Definition**
Grid reference	A position on a map that has been divided into squares, shows location.
4 figure grid references	Used to pinpoint a location on a map to a certain square. *E.g. On the OS map point A is at 12 03.* • **L** Find the bottom left corner of the grid • **E** Eastings first (read the number along the corridor) • **N** Northings next (read the number up the stairs)
6 figure grid reference	• Used to pinpoint a location more accurately within a square. *E.g. on the OS map point A is at 12**9** 03**9**.* • Find the 4 figure grid reference and leave a gap: 12_ 03_ • Imagine the grid is divided into 10 along, count how far along 12**9** 03_ • Imagine the grid is divided into 10 up, count how far up 12**9** 03**9**
Straight-line distance	• The straight-line distance between 2 points on a map. *E.g. A to B = 1.1km* • Hold a piece of paper against the two points • Mark on the piece of paper each point • Hold the paper against the scale/ grid to find the distance
Actual distance	The distance following the turns of a road / path.



Geography - Introduction to Global Climate

1. What is the Greenhouse Effect?

1. The atmosphere is made up of **greenhouse gases**, such as carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and water vapour (H2O).
2. The Sun's rays **(solar radiation)** travel through the atmosphere to Earth.
3. As the Sun's rays **reflect** off the Earth, some escape to space and some are **trapped**.
4. This **balance** is needed to keep the Earth **warm enough for life**.

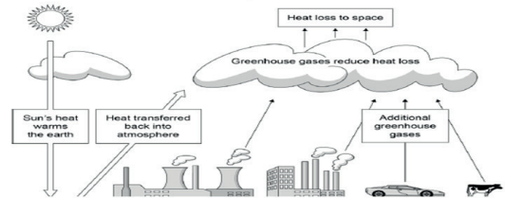


2. What is the Enhanced Greenhouse Effect?

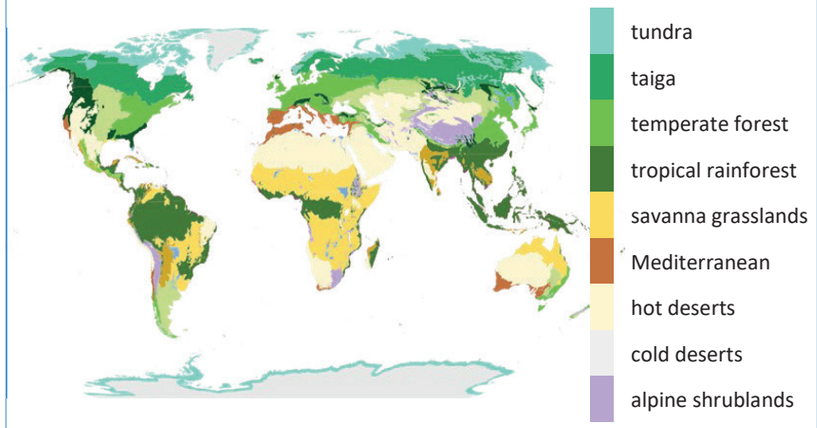
1. Many **human activities release greenhouse gases.**
2. These **greenhouse gases** are released into the atmosphere, and they trap more of the sun's rays than would normally be trapped.
3. This makes the global temperature increase.

Human causes of short term climate change:
Burning fossil fuels by using cars (and other transport), plus coal and gas power stations. All of which release CO_2 into the atmosphere.
Increased agriculture (farming) means more dung so more methane.
Deforestation means less trees to absorb CO_2.
Waste Disposal means more methane CO_2. Is released into the atmosphere when burnt or rots.

Developed countries are the biggest contributors to the enhanced greenhouse effect. This is because they have more technology and money to do the things above.



4. Biomes



3. Managing climate change: Mitigation

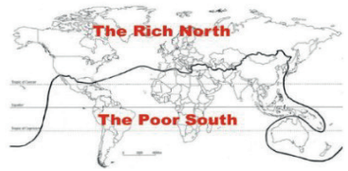
Mitigation	Trying to stop climate change from happening, by reducing greenhouse gases.		
Strategy	**Description**	**Positive**	**Negative**
Alternative energy sources	Using wind farms, solar energy, nuclear and tidal.	Reduced CO_2 and associated effects, also they will not run out (infinite).	Unreliable so will need to use fossil fuels when they are not working. Expensive initially, so higher bills.
Afforestation (planting trees)	Encouraging people to plant trees, which absorb CO_2	More carbon dioxide will be removed from the atmosphere and locked within vegetation.	Takes time for trees to grow and there is not enough available land to plant as many trees as would be needed to reverse climate change.

5. Biome characteristics

Tundra	Taiga	Temperate forest	Tropical rainforest	Savanna grasslands	Mediterranean	Hot deserts	Cold deserts	Alpine shrublands
The coldest of all the biomes. There is very little rain or snow the temperatures are freezing.	Known as snow forest, is a biome characterised by coniferous forests mostly of pines and spruces.	The deciduous forest regions are exposed to warm and cold air, which cause this area to have four seasons.	Tropical rainforests are hot and wet all year round.	The savannah is hot all year round with a long, dry season.	Dry summers and rainy winters.	Deserts are dry all year round.	Cold winters with very little rain. Permanent ice caps cover this region.	Alpine biomes are mountain regions worldwide, including the Andes, Alps, and Rocky Mountains.

Geography - Development

1. What are HICs, NEEs and LICs?

Key Term	Definition	
The Brandt Line	An imaginary line created in the 1980s splitting the world into the Rich North and Poor South.	
Development	Increasing income and improving quality of life in a country.	
Quality of life	A measure of health and happiness in a country.	

Classifying levels of development		GNI per capita
LIC	Low-income country e.g. Somalia, Nepal	<$1,045
NEE	Newly emerging economy. A country that has rapid economic growth e.g. Brazil, China	$1,045 - $12,746
HIC	High income country e.g. UK, Canada	> $12,746

2. Factors influencing development

	Reason	Description
Historical	**Colonisation**	When one country is controlled by another. *E.g.* British Empire.
	Civil war	Conflict within a country (war).
Economic	**Trade**	The buying and selling of goods between countries.
	Raw materials	Natural products taken from the land or sea e.g. crops.
	Primary jobs	A job that involves taking raw materials from the environment e.g. farmer.
Physical	**Earthquakes**	When the ground shakes and damages buildings, expensive to repair.
	Drought	A long period of time with low rainfall.
	Landlocked	A country that has no coast.

3. How is development measured?

Key Term	Definition
Development indicator	A numerical measure of quality of life and standard of living in a country e.g. birth rate.
Life expectancy	Average age you are expected to live to in a country.
Infant mortality rate	Number of babies that die before their 1st birthday, per 1000/year.
Literacy rate	The percentage of people that can read and write.
Birth rate	Number of births per 1000 per year.
Death rate	Number of deaths per 1000 per year.

4. Development Indicators

Key Term	Description	Evaluation
HDI (Human Development Index)	• Made up of: average life expectancy, years in education, average income. • Scored between 0 and 1. • HICs have scores closer to 1.	✔ Both social and economic indicators. ✔ Removes anomalies.
GNI per capita	• Gross national income (money). • The value of a country's income divided by the population.	✔ Can compare between countries ✘ It is only an average. ✘ Does not show inequality.

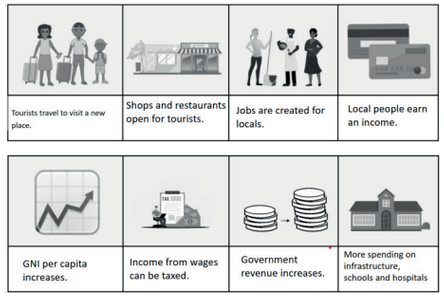
5. Development case study: Nepal

Nepal Capital: Kathmandu GNI per capita: $1,370 (2022)

Causes of Nepal's uneven development	
Human	Conflict, corruption, debt, education, healthcare.
Physical	Relief, climate, tropical diseases, tectonic hazards, lack of natural resources.

Geography - Development

6. How tourism has led to economic growth in Nepal



Tourism impacting Nepal:

- Job Creation
- Higher GNI per capita
- Infrastructure development
- Higher government revenue
- Cultural preservation
- Environmental conservation

7. Aid

Key term	Definition	Evaluation
Aid	Help given.	
Short term aid	Given after a natural hazard to help the country through a crisis.	✔ Send food, clean drinking water. ✘ Countries depend on aid.
Long term	Given over a long period of time to help countries develop.	Teaching locals vital skills such as: • Farming • Building • First aid
Top down	• Large scale expensive projects. • Normally funded by governments.	✔ Standards of living increase. ✔ Life expectancy up from 68 to 74. ✘ Tied aid. There is a hidden catch.
Bottom up	Small scale projects run by individuals or small businesses.	✔ See 'Short term aid example' section. ✘ Small scale only, can be just temporary.

8. How developed is the DRC?

Democratic Republic of Congo | Kinshasa | GNI per capita: $660

Human features	Physical features
Population of 16 million people. Kinshasa has vibrant culture and music. Port of Kinshasa is essential for trading.	DRC is rich in natural resources (diamond and gold). Eastern border suffers from frequent earthquakes and volcanic eruptions. DRC has the second largest tropical rainforest in the world.

9. Top-down development project: The Grand Inga Dam in the DRC

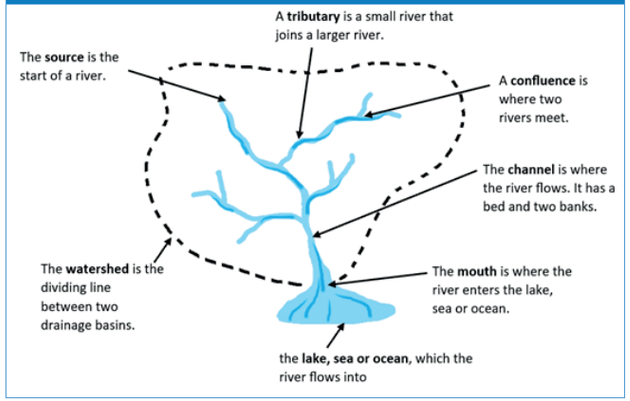
Advantages	Disadvantages
• Provides reliable source of renewable energy for the DRC. • Provides electricity for Kinshasa. • DRC can sell electricity to other nearby countries. • Produces electricity for power used in coltan mines.	• It would flood 22,000 hectares of land behind the dam. • Natural habitats destroyed. • 35,000 people would be displaced from their homes. • Electricity that would be sold would leave rural areas in the DRC without power.

10. Bottom-up development project: WECAN in the DRC

Advantages	Disadvantages
• Protects habitats of 100,000 species of plants and animals. • Empowers local, indigenous women. • Women earn money from selling fruit from planted trees. • Afforestation reduces the impact of climate change.	• Small scale project so it has limited reach. • It does not stop illegal logging. • The project currently supports only 700 women. • It takes a long time for benefits to be felt (trees take years to grow). •

Geography - Rivers

1. Drainage basin features



2. The Water Cycle

Key Term	Definition
Precipitation	water falling to the ground in all forms (rain, sleet, snow and hail).
Interception	when the leaves of trees stop precipitation from reaching the ground.
Surface runoff	the movement of water over the surface of the land and back into a river.
Surface storage	water stored on the surface in lakes or puddles.
Infiltration	the movement of water from the surface into the soil.
Throughflow	the movement of water through the soil back into the river.
Groundwater	water moving through the rock layer beneath the ground.
Evaporation	when liquid water is heated and turns into water vapour (gas).
Condensation	when water vapour turns back into liquid water, such as in clouds.

3. The river profile

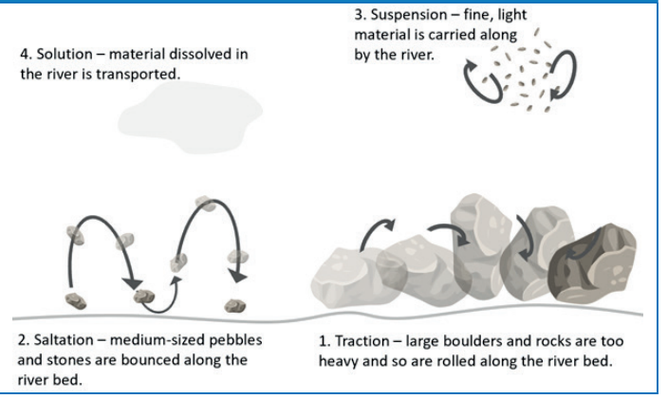
Upper course – the **narrow**, steep, upper part of a river. This course contains waterfalls.
Middle course – the **wider**, deeper channel in the central part of a river. This course contains meanders and oxbow lakes.
Lower course – the **widest**, flattest part of a river, near the mouth. This course contains the floodplain.

4. River processes

Erosion – the breaking down, or wearing away, of material in a river. There are 2 types of erosion:
Vertical – erosion which takes place downwards into the land.
Lateral – erosion which takes place from side to side, causing bends to widen.

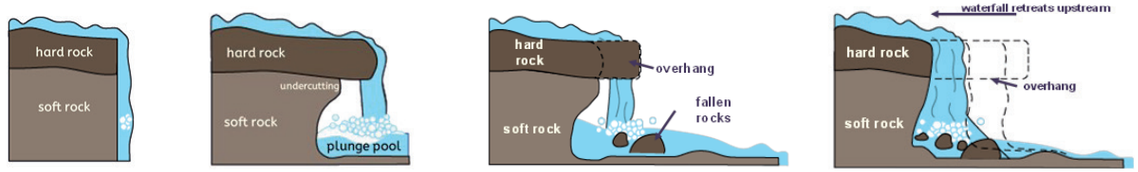
Deposition – when a river drops its load.

Transportation – when rivers carry rocks and sediment (their load) along their journey. There are 4 types of transportation:



5. River features—waterfall

Waterfalls form in the upper course of a river, due to erosion.



The river flows over hard and then soft rock. Soft rock erodes quicker.

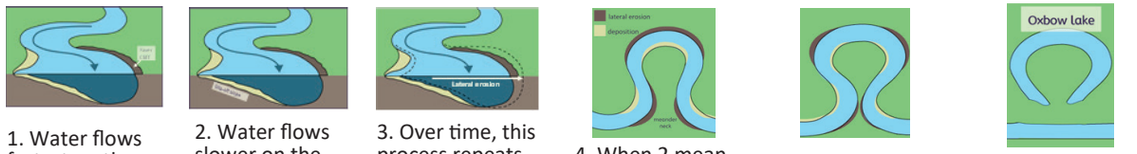
A plunge pool forms at the bottom of the soft rock, which undercuts the hard rock above. This causes an overhang.

As the hard rock overhang has no support, it eventually collapses.

Over time, the process repeats and the waterfall retreats upstream. This leaves behind a steep-sided gorge.

6. River features—meanders and oxbow lakes

A meander is a bend in a river. An Oxbow Lake is a meander that has been cut off by deposition.



1. Water flows fastest on the outside bend, causing lateral erosion. This undercuts the riverbank, forming a river cliff.

2. Water flows slower on the inside bend, causing deposition. This forms a gently sloping bank called a slip off slope.

3. Over time, this process repeats, causing lateral erosion. The meander moves across the valley floor (migrates) in the direction of the lateral erosion.

4. When 2 meanders are near to each other, the meander neck will narrow over time, as each meander migrates due to lateral erosion.

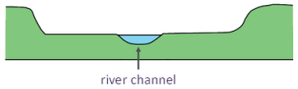
5. When the neck is very narrow, the river will cut through during a flooding event.

6. Deposition builds up in the entrance to the old meander. This cuts it off from the main river.

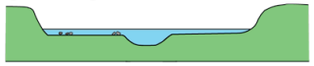
Geography - Rivers

7. River features—floodplains and levees

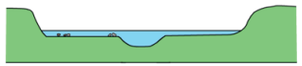
Floodplains and levees form in the lower course of a river due to deposition. Floodplains are flat and fertile. Levees are raised banks along the edge of the river.



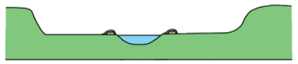
1. As a river flows through the lower course, it transports its load.



2. During a flood, the river bursts its banks. The transported load is lifted in the flood water, and when the flood water recedes, it is deposited across the floodplain.



3. The heaviest material is deposited closest to the banks of the river. Finer material transported by processes such as suspension is deposited far from the river.



4. The heavier material that is deposited on the banks of the river builds up over time due to repeated flood events. Eventually, creates natural raised banks, or levees.

8. Causes of flooding

Cause	Human or physical	How it increases flooding
Impermeable surfaces	Both	Reduces infiltration and increases surface run off
Deforestation	Human	Reduces interception, leads to saturated soil
Storm drains	Human	Speeds up water reaching river, increases likelihood of overtopping
Steep relief	Physical	Gravity speeds water flow to river
Saturated soil	Physical	Reduces interception
Ice melt	Physical	Increases liquid water in drainage basin. Reduces storage.
Heavy, prolonged rainfall	Physical	Leads to saturated soil and increases surface run off.

9. Impacts of flooding

Impact	What happened next
Homes destroyed	Homelessness increases (social), house insurance increases (economic)
Farmland flooded	Less food produced, price goes up (economic), ecosystems destroyed (environmental)
Roads blocked	Deliveries delayed (economic), emergency services can't get through (social)

10. Managing flood risk

Hard engineering - Human made structures that help to reduce flood risk.
Soft engineering – Adaptations that work in nature to reduce flood risk.

Hard engineering	Soft engineering
Dams and Reservoirs + Holds back water / Reduces insurance costs - Expensive / Flooding needed to create reservoir	Afforestation + Reduced surface run off / reduced flood risk - Less farmland / Only reduces flood by 20%
Dredging + River holds more water / Reduced insurance cost - Must be repeated regularly = expensive	Monitoring and predicting + Accurate warnings can be sent to locals - Does not stop flood / People might not see warnings

11. Dorset flooding 2021

Where: Bournemouth, Christchurch and Poole in Dorset (UK)
When: 12th July 2021

Causes	Effects	Responses
58mm of rain fell in 8 Hours	31 houses flooded in Poole	Extra workers brought in to keep drains clear of debris
Low-lying land with 2 major rivers running through – Stour & Avon	4 schools closed – water was 1ft deep at Stanley Green Infants Academy	Fleetsbridge Pumping Station upgraded to hold 3,500 litres extra
Debris left near drainage channels, causing blockages	8 businesses flooded on Winton High Street	2 new water gauges installed in Christchurch and Broadstone
Flood occurred in early hours of Monday, so few people at work	Sewage spilled into Poole Harbour, impacting fishermen for 2 weeks	Turlin Moor Sewage System upgraded so less sewage leaks into harbour

12. Bangladesh flooding 2022

Where: Sylhet region in Bangladesh, Asia
When: June 2022

Causes	Effects	Responses
Monsoon rain from March - ground was saturated	32 people died	500 flood shelters built
Low-lying land: 80% is less than 6 metres above sea level	640 schools destroyed	6,000 km of levees built
Low-lying land: 80% is less than 6 metres above sea level	4.5 million made homeless	Early warning systems introduced - flood alarms in urban areas
Snow melt in the Himalayan Mountains	113,000 hectares of farmland destroyed	Red Cross gave $7.8 million for housing, food and water
Deforestation in the drainage basin	Fresh water shortage - 100,000 cases of water borne disease.	[redacted]

Geography - World of Work

1. Employment sectors	
Employment	When people are in work, receiving a wage and paying tax.
Unemployment	When people are not in work, therefore do not receive a wage and do not pay tax.
Primary Industry	Industries which collect or extract natural resources from the environment, such as farming or fishing.
Secondary Industry	Industries which manufacture goods into products, such as builders, car manufacturers or food processing.
Tertiary Industry	Industries that provide a service, such as teachers, doctors, sales assistants, hair dressers or bus drivers.
Quaternary Industry	Industries that involve using technology, design and research, including computer scientists, have designers, computer engineers and research scientists.

2. Influences on employment structures	
Industrialisation	A move from primary employment to secondary employment, with a rise in manufacturing.
Mechanisation	When machinery begins to do the jobs which once required humans.
Disposable Income	The money a person has left to spend after they have paid all their bills.
Public Services	A service that is given or funded for the benefit.

3. The Location of Industries	
Site	The actual place where a settlement first began. This refers mainly to its physical location.
Situation	The location of a place relative to other features nearby.
Footloose	Industries which are not tied to a specific location and can operate anywhere (BT call centres in India and other parts of Asia).
Raw Materials	Natural resources (iron ore used in steel) that are used to make other things.
Labour	Workers, employed people.
Market	A place where tings are brought and sold.

4. Trade	
Trade	The exchange of goods and materials between countries.
Import	Good brought into a country.
Export	Sending goods to another country for sale.
Trade Bloc	An arrangement in which participant counties lower trade barriers with one another.
Tariff	A tax imposed on goods when they are imported or exported between countries

5. Employment structures and development	
Countries	**Industries**
Developing countries	A large primary sector, growing secondary sector and a moderate tertiary sector.
Emerging Countries	A large secondary sector, rapidly decreasing primary sector and growing tertiary sector.
Developing Countries	A large tertiary sector, a growing quaternary sector, both secondary and primary employment is low
Change	**Cause**
Falling primary and secondary sector	1. Cheaper to import. 2. Mechanisation has taken jobs 3. Raw materials have been exhausted in certain areas.
Growing tertiary sector	1. Disposable income has increased, so greater demand for services. 2. A large public sector e.g. health and education, due to a high tax revenue.

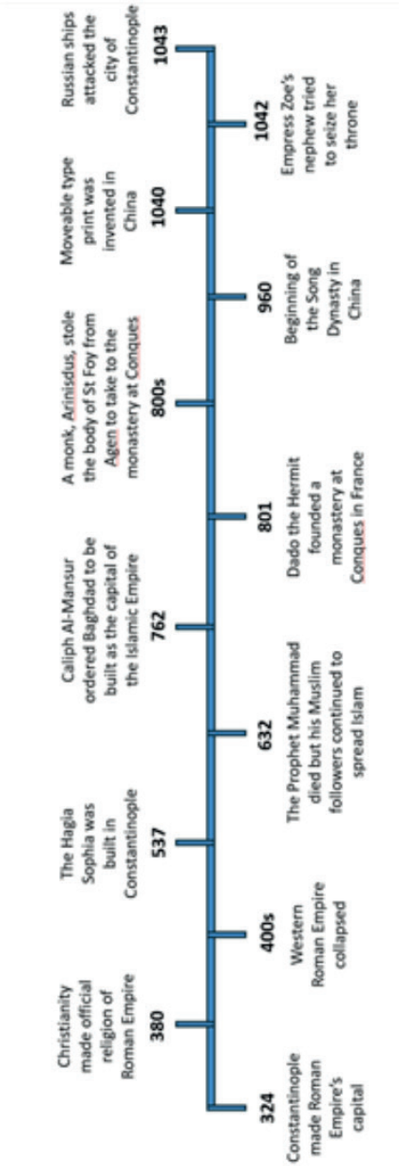
6. Case Study: World of Work in Russia.	
Factors affecting trade in Russia.	
Opportunities	**Challenges**
With a working population of over 75 million people, Russia has one of the largest workforces in the world.	Russia is at war with Ukraine which affects international relationships.
The Steppe and temperate woodlands of western Russia are fertile and flat.	Russia has the largest land mass of any country.
Russia has an extensive network of roads, railways, ports and pipelines.	Russia does not have a warm water port.
Russia has vast reserves of natural resources including oil and natural gas.	Many countries aim to buy and use less oil and natural gas in the future to mitigate the effects of climate change.
Russia's education system puts a strong focus on science, technology, engineering and maths (STEM).	

History Topic 1: Empires East and West

Knowledge Organiser Questions		
1	What are traces of the past which historians use to study the past?	Sources
2	What is the name given to informed historical opinions made by historians?	Interpretations
3	How many years are in a millennium?	1000
4	How many years are in a decade?	10
5	What do we call a period of 100 years?	A century
6	What term refers to the arrangement of dates and events in the order that they occurred?	Chronology
7	What is the term that means a group of countries ruled by a single leader?	Empire
8	What term means that power is passed from one person to another within the same family?	Dynasty
9	What term refers to the movement of people from one place to another?	Migration
10	What was the name of the trading route that connected China with the Middle East and Europe?	Silk Road
11	Which dynasty ruled China in the year c.1000?	The Song Dynasty
12	Who was the first Emperor of this dynasty?	Taizu Zhao
13	What four new innovations came out of this dynasty?	Paper money, moveable type printing, gunpowder, compasses
14	Which religion arrived in China along the Silk Road?	Buddhism
15	What work did most Chinese people do?	Farming
16	What three things were women expected to do in China?	Marry, have children and manage household
17	What did Chinese people believe would happen if yin and yang were unbalanced?	Cause disease
18	What key term is used to describe the leader of the Islamic Empire?	Caliph
19	Why did al-Mansur choose Baghdad as the capital of the Islamic Empire?	In the heart of the Silk Road trade route
20	Where in Baghdad did scholars translate text from Ancient Greece and discuss new knowledge?	House of Wisdom

Knowledge Organiser Questions		
21	What did the caliph and other rich citizens build to share knowledge?	Madrasas
22	Who ran many madrasas and mosques?	Women
23	In what subjects did scholars translate text and discuss new knowledge?	Maths, science, geography, astronomy, technology
24	From which country did knowledge of paper come to Baghdad?	China
25	Which famous Greek doctor's work was translated in Baghdad?	Galen
26	Why did Caliphs in Baghdad build hospitals?	Islam taught that sick people should be cared for.
27	What empire was Constantinople the capital of?	Byzantine Empire
28	What are two things that connected Constantinople to the rest of the world?	Silk Road, Mediterranean Sea
29	What was the name of the cathedral built in the middle of Constantinople?	Hagia Sophia
30	What did marriage help rulers do in the medieval period?	Strengthen power, make alliances, gain land
31	What was the name of the female ruler of the Byzantine Empire in the 11th century?	Empress Zoe
32	What methods of warfare were used in the Byzantine Empire?	Fortification, cavalry, archers, infantry
33	In what year did Christianity become the official religion of the Roman Empire?	380 AD
34	Who was the head of the Church in Europe?	The Pope
35	Where did the Pope rule and live?	Vatican City
36	What term refers to a system where people are ranked according to their power and status?	Hierarchy
37	Who was directly below the Pope in the church hierarchy?	Cardinals
38	Which group of people had religious authority over a parish, village or town church?	Priests
39	Why were many churches built across Europe?	So ordinary people could visit them weekly.
40	What was the name of the European empire made up of areas with different leaders but all under the rule of one Emperor?	Holy Roman Empire

History Topic 1: Empires East and West



How was the world connected c. 1000?

The Song Dynasty – The Silk Road was thriving during the Song Dynasty having been established during the Han Dynasty in 119 BC, it was the most significant trading route in the world which connected China with the Middle East. People moved along the Silk Road as well as goods, beliefs, diseases, inventions and knowledge. China was ruled by dynasties which is when power passes to someone who is related to the previous ruler. Buddhism arrived in China from people who had visited countries along the Silk Road where Buddhism was the main religion. Most people in China worked as farmers. Women were expected to marry, have children and manage the household. New printing methods, such as moveable type printing, meant that texts could be produced more quickly and knowledge could spread across China and beyond.

The Islamic Empire - The Islamic Empire stretched from India to Spain. Travelling from one end of the Islamic world to the other would have taken at least a year, whether by boat, horse, camel or on foot. Caliph al-Mansur belonged to the Abbasid dynasty, and in AD 762, he started to build a new city, Baghdad, as the ideal location for the capital of the Islamic Empire, as it was right in the heart of the Silk Road trade route. Baghdad swiftly became one of the most powerful and wealthiest cities in the world during that era. The pursuit of knowledge and learning is a central part of Islamic teaching. The House of Wisdom was a great palace that housed a lot of ancient books. This knowledge was translated by scholars. In the House of Wisdom, as well as translating books, scholars created new knowledge about astronomy, science and technology.

The Byzantine Empire - The Byzantine Empire was the eastern half of the Roman Empire, with Constantinople as its capital. Constantinople was strategically located for trade and defensive purposes at the crossroads of the East and West. Boats would have weaved into the harbour carrying goods from across the Mediterranean, while from the East, merchants travelled from China along the Silk Road to the markets of Constantinople. In the medieval period, marriage was less about love and more about strategy. It helped rulers strengthen their power, make alliances and gain land. There was a strong female ruler called Empress Zoe, who married to increase her political power and secure alliances.

The Holy Roman Empire - In 395, the Roman Empire was split in two: the Western Roman Catholic Church, which was ruled from Rome, and the Eastern Orthodox Church, which was ruled from Constantinople. Although the Western Empire collapsed in the late fifth century, Christianity remained and grew. During this period, Christianity was the dominant religion in Europe and was led by the pope. Christianity had a well-established hierarchy. The pope, based in Rome, was the head of the Church. Many churches were built across Europe so that ordinary people could visit them weekly. The Holy Roman Empire was a complex system of different states and territories, each with its own rules and leaders, but all under the rule of the Holy Roman Emperor.

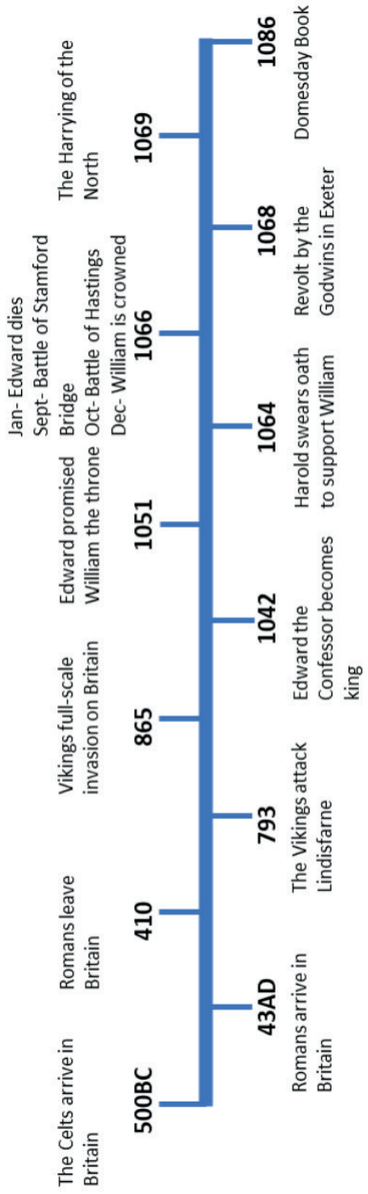
History Topic 2: Norman Conquest and Control

Knowledge Organiser Questions		
1	What are traces of the past which historians use to study the past?	Sources
2	What are traces of the past which historians use to study the past?	Interpretations
3	Which group started to migrate to Britain in 500BC?	The Celts
4	In which year did the Romans invade Britain?	43AD
5	What did the Romans build 16,000km of in Britain?	Roads
6	Why did the Romans leave Britain in 410AD?	Their empire was being attacked
7	Which three groups migrated to Britain in the 5th Century AD?	The Angles, Jutes and Saxons
8	In which year did the Vikings launch a full-scale invasion of Britain?	865AD
9	Which Anglo-Saxon king died in January 1066 with no clear heir?	Edward the Confessor
10	Which Anglo-Saxon earl was crowned following the death of the king?	Harold Godwinson
11	What did William Duke of Normandy claim happened in 1051?	Edward promised him the throne
12	Which Viking warrior also claimed the throne in 1066?	Harald Hardrada
13	In which battle did the Anglo-Saxons defeat the Vikings in September 1066?	Stamford Bridge
14	What changed at the end of September that allowed the Norman army to invade?	Wind direction
15	What was Harold's force of 3,000 professional soldiers called?	Huscarls
16	What were William's heavily armoured soldiers on horseback called?	Knights
17	In which month and year did the Battle of Hastings take place?	October 1066
18	Which tactic did the Normans use to get the Anglo-Saxons off the top of Senlac Hill?	Fake retreat
19	What is the 70m long embroidered cloth depicting William's victory?	Bayeux Tapestry
20	What did William and his troops do on their way to London from Hastings?	Burnt crops and villages

History Topic 2: Norman Conquest and Control

Knowledge Organiser Questions		
21	When was William crowned king of England?	25th December 1066
22	What type of castle did William and his nobles build across England?	Motte and bailey castles
23	What did William force all surviving Anglo-Saxon nobles to do when he was crowned?	Swear an oath of loyalty
24	What did William do with the land belonging to deceased Anglo-Saxon nobles?	Gave it to Norman knights
25	What did the Godwins do in Exeter in 1068 after William was crowned?	Launched a revolt
26	What did the English enlist the help of the Vikings to do in 1069?	Take the city of York
27	What happened in 1069, following a revolt in Durham and York?	The Harrying of the North
28	Who led the final major Anglo-Saxon rebellion against the Normans?	Hereward the Wake
29	What did William build in Dorset at the site of an old Saxon Hall?	Corfe Castle
30	Which important book did William commission in 1086?	Domesday Book
31	Why did William want to find out what the English people owned?	To tax them as much as possible
32	Which social hierarchy did William introduce?	The feudal system
33	Who was higher on the social hierarchy: barons or knights?	Barons
34	Who was at the bottom of the social hierarchy?	Peasants
35	Give two examples of how William the Conqueror used terror to assert control.	Castles and Force
36	Give two examples of how William the Conqueror peacefully asserted control.	Feudal system and Domesday Book
37	Which new law meant that the whole region had to pay a fine if one Norman was attacked?	Murdrum fine
38	What is the process where the eldest son inherits everything?	Primogeniture
39	What did the forest laws prevent the English people from doing?	Hunting in the forests
40	What became the language of the aristocracy?	French

History Topic 2: Norman Conquest and Control



William's leadership – Faked retreat tactic to break Harold's shield wall, gained the Papal Banner so his soldiers believed they had God's blessing to fight, William's troops highly organised, strength of knights, William's inspiring speech on arrival at Pevensey

Harold's weaknesses – Harold rushed down to Hastings rather than letting his men rest, wasn't able to respond once shield wall formation was broken, Harold had called in his navy so Pevensey was undefended, Harold's army had a high number of peasant soldiers (fyrd)

Why was William Duke of Normandy victorious at Hastings?

Luck – The wind changed allowing William's troops to cross the channel, Harold's army was tired and injured from Battle of Stamford Bridge, both the Vikings and the Normans invaded at similar times, Pevensey was undefended

How did William control England?

- **Feudal system** – Ensured loyalty to superiors as land depended on it, clear hierarchy so everyone knows their place, William able to reward his knights and ensure his loyal followers were in positions of power, replaced any Anglo-Saxon earl who wouldn't swear an oath of loyalty

- **Building castles** – a stronghold to put down any uprisings, symbolised a strong occupying force scaring locals into submission

- **Force** – Harrying of the North- every village burnt to the ground between York and Durham (farm animals slaughtered, crops were destroyed, fields were laced with salt, estimated 100,000 people starved to death). Hereward the Wake- Saxon rebels were killed, imprisoned, blinded or had their arms chopped off. Noble's sons were demanded as hostage to ensure Anglo-Saxon nobles stayed loyal

- **Domesday Book**– Domesday book ensured that William could tax people the maximum they could afford raising money to pay for his armies and castles.

How far did the Norman Conquest change England?

Change - Murdrum Fines were introduced if a Norman was attacked, forest laws stopped the English hunting in the forests, the church reformed to be more Norman, Primogeniture (eldest son inherits everything) ensured large areas of land were not broken up, church courts introduced, trial by combat introduced, Norman French became the language of the clergy and nobility, Norman names like William and Matilda became fashionable.

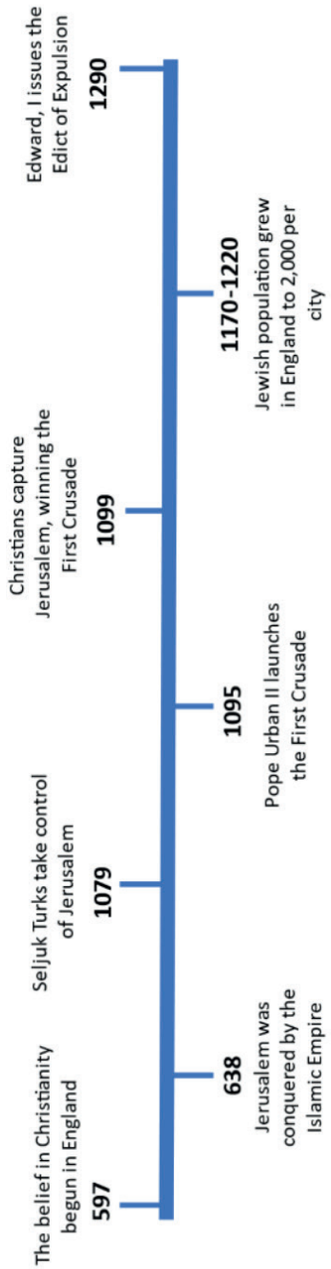
Continuity – William kept the Saxon legal system, the Saxon coinage system remained, although standardised by the Normans.

History Topic 3: Medieval Religion

Knowledge Organiser Questions		
1	What is the Church?	A Christian place of worship
2	Who is the head of the Catholic Church?	The Pope
3	What was the Divine right of Kings?	King only answered to God.
4	Who was the most senior clergyman in England?	Archbishop of Canterbury
5	How could the Pope end a king's rule?	Excommunication
6	Why could clergy only have to answer to the Pope?	Benefit of the clergy
7	How much land did the Church own?	1/3
8	What small buildings did Monks and Nuns live in?	Monasteries
9	What large buildings did Bishops live in?	Cathedrals
10	What were small local churches called?	Parish
11	What was the 10% tax on income paid to the Church called?	A tithe
12	What was a journey to a place of religious significance called?	A pilgrimage
13	How could you get your sins forgiven?	Working on a cathedral
14	Why were medieval paintings dramatic and colourful?	Majority could not read or write
15	How did the church influence people to live a sin free life?	Fear of hell
16	Where would you get your soul cleansed after death?	Purgatory
17	Where could people see the grim details of hell?	Doom Paintings
18	What did medieval people do to prevent spending a long time in purgatory?	Church every Sunday, pilgrimages and indulgences.
19	What was the purpose of doom paintings?	Too control society into conforming a living a sin free life.
20	What was the most common believed cause of diseases?	God

Knowledge Organiser Questions		
21	What was the purpose of hospitals run by churches?	Care not cure
22	Who would work in these hospitals?	Monks and Nuns
23	What moral crimes did the Church deal with?	Adultery, gambling, getting drunk, hitting your wife and swearing.
24	What was taught in church run universities?	Hippocrates and theory of four humours.
25	Who seized control of Jerusalem and stopped Christians going on pilgrimage to Jerusalem?	Seljuk Turks
26	How did Pope Urban II show his power?	Calling Western Christians to Crusade
27	What was seen as a Holy act?	Going on Crusade as it was seen as going on a pilgrimage
28	What was not successful in reclaiming the Holy lands?	Crusades
29	When did Jewish communities settle in England?	1070
30	What did Jewish communities quickly become apart?	English Economy
31	What caused the Church to become hostile?	Blood Libel
32	What did the Crusades cause Jewish people to be seen as?	'Christ-Killers'
33	What were Jews forced to pay for?	1189 Crusade
34	Who did Jewish loaners sell on their debts for?	Christians
35	When did Jewish moneylenders store official documents of the money borrowed?	Late 12th Century
36	When was the Edict of Expulsion?	1290
37	Why did Edward I banish all Jewish communities from England?	To compensate for the debts, he was in
38	What is a source?	Anything from the past Historians can study
39	What is an interpretation?	Historians informed opinion on the past based using sources.
40	What is the past?	History begins with events the facts cannot be altered by Historians.

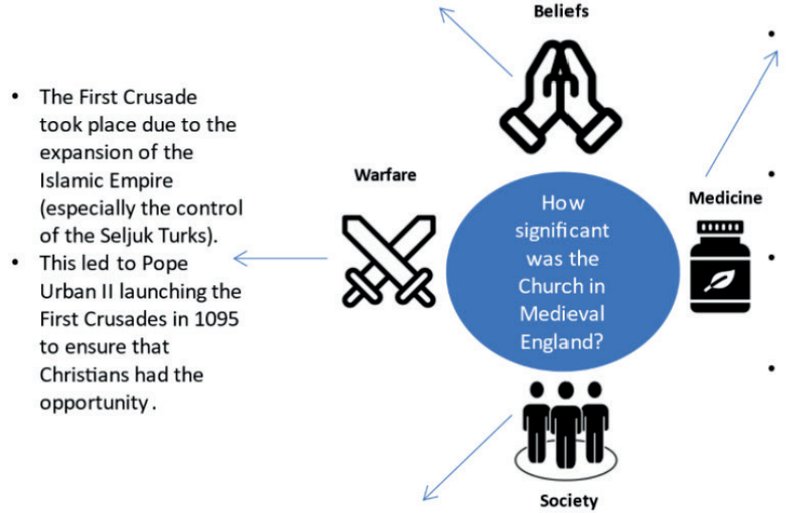
History Topic 3: Medieval Religion



What is the hierarchy system of a church?

- The **Pope** is the worldwide head of the Christian Church and is believed to be God's representative on earth.
- The **Archbishop of Canterbury** is the most senior churchman in all of England. He was appointed by the king; however, he needed the Pope's approval to take on the role.
- The **Bishop** is the head of a district (diocese) who is an advisor or guidance for priests within the district they control.
- A **priest** is the local leader within a parish who leads or performs religious ceremonies for the people in the area.
- The **People** are those who attend the churches to worship God and obey instructions from those above them.

- Majority of medieval England believed in Christianity, and they visited Churches such as parishes and cathedrals to worship God or ask forgiveness for their sins.
- The Pope is head of the church and has to the power to excommunicate anyone (including the King). The Archbishop of Canterbury is the most senior churchman in all of England. The King is the head of the state and supported by the barons to rule the nation. It was believed that the King was only answerable to God and is chosen by God to be the ruler therefore everyone believed in the 'Divine Right of Kings'.
- The Church used to control people in society through theories relating to the afterlife such as heaven, hell and purgatory. This was conveyed through 'doom paintings' which created fear in many leading to the church establishing power over others.



- The First Crusade took place due to the expansion of the Islamic Empire (especially the control of the Seljuk Turks).
- This led to Pope Urban II launching the First Crusades in 1095 to ensure that Christians had the opportunity.

- Monks and nuns had a duty to provide care for the sick and terminally ill. This was not like a modern hospital but was a place to recover or die in peace.
- Some monasteries grew all sorts of herbs and plants to make medicine.
- The Church supported and taught the medical teachings of a Roman doctor called Galen, who said the body was designed by God.
- In the medieval period churches gave people care and not necessarily a cure for their illness due to the lack of understanding regarding the causes of illness.

- Majority of the society believed in Christianity and therefore had to pay a 10% 'tithe' to the Church .
- People took pilgrimages to worship God or saints however during the First Crusade, Pope Urban II wanted to protect Christians; Christians felt they could no longer complete pilgrimages to the site of Jesus' resurrection following the rule of the Seljuk Turks.
- Jewish communities started settling in 1070, however they were persecuted by the people of society leading to them being expelled in 1290 due to the Edict of Expulsion.

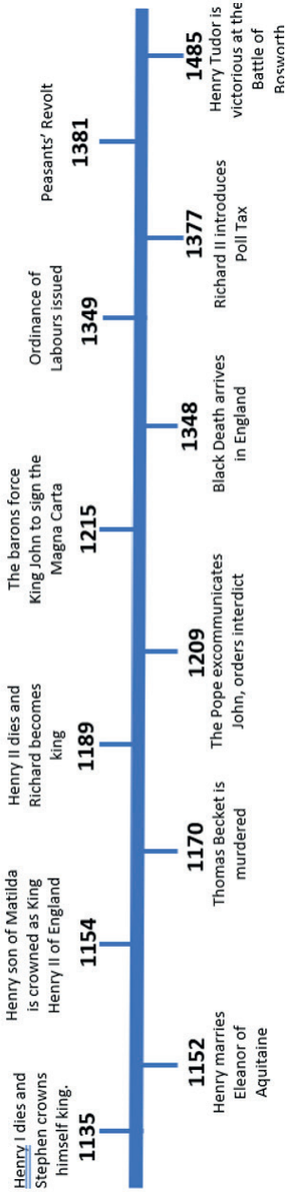
History Topic 4: Challenges to Medieval Monarchs

Knowledge Organiser Questions		
1	When did Henry I grant Matilda as the next heir to the English throne?	1126
2	Why did Stephen break the oath of support for Matilda?	Did not believe women were capable of ruling.
3	What was the stalemate between Stephen and Matilda?	'The Anarchy'
4	Who did Stephen claim was the next heir to the throne in 1153?	Matilda's son, Henry II
5	What position did Henry II give to his friend Thomas Beckett in 1162?	Archbishop of Canterbury
6	Who murdered Becket in 1170?	Four Knights
7	What did Henry II order the monks and bishops of Canterbury do to him in 1174?	Whip him as penance
8	What was the combined land of Eleanor and Henry II known as?	The Angevin Empire
9	Who plotted against Henry II in 1173?	Eleanor and their 3 sons.
10	What did Richard I use England for?	Raising funds for the third crusade
11	Who is suspected to have been removed as a threat to King John's throne?	Arthur, his nephew.
12	Why did the Barons dislike King John?	He taxed them to fund the crusades and ruled on his own.
13	What happened to church services after King John was excommunicated?	Banned for 5 years.
14	Why did English people fear the interdict banning church services?	They would go straight to hell
15	What is a ruler who refuses to share their power, and governs cruelly and oppressively?	Tyrant
16	What did the Barons give King John at Runneymede in 1215?	Magna Carta
17	Why did the Magna Carta not support the 1.5 million peasants in England?	Due to not being free men.
18	Why did the Pope condemn the Magna Carta?	Illegal and told John not to abide by it.
19	How old was Henry III when he succeeded the English throne?	9
20	Why could Henry III not be crowned at Westminster abbey?	Prince Louis controlled London.

History Topic 4: Challenges to Medieval Monarchs

Knowledge Organiser Questions		
21	Why did parliament begin to challenge Henry's authority?	Increasing taxation.
22	How did the Barons limit the king's power in 1258?	Provisions of Oxford.
23	What did Simon De Monfort create in 1265?	Representative parliament
24	In which year did the Black Death arrive in England?	1348
25	How many people died during the Black Death?	1/3 of the population
26	How did the Black Death weaken the feudal system?	People could move up in society.
27	How did the nobility respond to labour shortages caused by the Black Death?	Paying higher wages to peasants
28	Which law in 1349 stopped peasants from gaining more power?	Ordinance of labourers
29	Who exclaimed to the peasants that they are equal to noble men?	John Ball
30	Why was the 1381 poll tax unpopular with the peasants?	It had to be paid by everyone
31	What did the peasants do to the royal officials who tried to collect the tax?	Attacked and killed the collectors.
32	How many peasants marched to London beginning the revolt in 1381?	60,000
33	What did Richard II agree to change in England?	Divide church land and equality
34	What is the definition of a 'civil war'?	A war between sides in the same country
35	What two families emerged in the War of the Roses from 1455-1487?	House of Lancaster and York
36	Who ruled as Lord Protector during Henry VI poor mental health?	Richard, Duke of York.
37	How did Richard secure his succession after defeating the king in May 1455?	Act of Accord in 1460
38	Who supported Henry Tudor at the Battle of Bosworth, August 1485?	The Stanley family
39	How did Henry Tudor unite the House of York and Lancaster?	Marrying Elizabeth of York
40	What was the symbol that represented the new Tudor dynasty?	The Tudor Rose

History Topic 4: Challenges to Medieval Monarchs



Who posed the greatest challenge to Medieval Monarchs?

Dynastic

- After the unexpected death of Henry I, Matilda was named as his successor. However, Stephen believed he deserved the throne because many including the Pope believed a female could not rule the country effectively. This led to 'The Anarchy' (a civil war) between Stephen and Matilda which was resolved through the promise that Stephen's heir to the throne would be Henry (Matilda's son).
- Eleanor of Aquitaine joined the Great Revolt against Henry II in 1173-1174 with the support of her three sons Richard, Geoffrey and Henry the Younger. Eleanor and her sons were unsuccessful, and this led to her being imprisoned for 16 years until 1189 when Richard became king and released her.
- King John died in 1216 and under male primogeniture was succeed by his eldest son Henry III who was nine at the time.
- The Wars of the Roses started as between the Henry VI from the House of Lancaster and Richard from the House of York over who should be the rightful king of England. Battles between Henry VI and Richard include St Albans and Wakefield. After the death of Richard his son Edward continued the Yorkists fight. Battles between Henry VI and Edward include Towton and Tewkesbury. Edward and the Yorkists were victorious, and he was crowned King of England.
- Richard III was killed at the Battle of Bosworth in 1485, and Henry VII was crowned king of England. Henry VII married Elizabeth of York which united both sides of the Plantagenet family who had been in conflict during the Wars of the Roses.

Religious

- Monarchs were seen as God's representative on earth so monarchy as an institution remained secure. The Church was seen as independent of the monarch which led to disagreements over archbishops between the Pope and monarchs such as Henry II and John.
- Archbishop Thomas Becket challenged Henry II's wishes resulting in Becket's exile and damaging relationship with the Church. Becket's strong religious beliefs frustrated the King so much that it resulted in his death in 1170. The king had to pay penance for his actions allowing himself to be whipped by the Church showing their power and control.
- King John argued with the Pope over who should be the Archbishop of Canterbury; the Pope excommunicated him in 1209 and ordered an interdict against England leading to pressure on John.

Political

- The Barons had wealth, power and armies which they could raise against the monarch. Some barons supported Henry II's sons when they rose against him in the Great Revolt 1173-1174.
- As a result of the lack of communication with his barons and increasing tax against them, King John found himself being forced to sign the Magna Carta in 1215. When he refused to honour the charter, they declared civil war against him.
- Barons tried to limit the power of King Henry III in 1258 by forcing him to sign the Provisions of Oxford. Henry had appleaed to the Pope for support however was denied and this led to another civil war known as the Second Baron's War 1264-1267 led by Simon de Montfort. De Montfort created the first form of parliament which was made up of the House of Lords and House of Commons.

Social

- The Black Death spread wide across England from 1348 seeing peasants becoming more needed to farm land. This means they could demand for higher wages and freedom from serfdom. Their ability to gain land and money began to alter the feudal system worrying the king who passed laws to limit their increasing power.
- The ordinary people exercised their own power as a unit following the Poll Tax and started the Peasants Revolt in 1381 led by Wat Tyler against Richard II. Tyler led 60,000 peasants to London to force the King to give into their demands for a fairer society.

History Topic 5: Medieval Mali

Knowledge Organiser Questions		
1	What is the definition of an empire?	A group of countries ruled by a single ruler.
2	Where is the Mali Empire located?	West Africa
3	When was Mali Empire founded by Sundiata Keita?	Around 1230
4	What natural resources made the Mali Empire wealthy?	Gold, copper and salt
5	What year did Mansa Musa begin ruling in approximately?	1312
6	Which religion was Mansa Musa?	Muslim
7	Mansa Musa believed governance was in part a dialogue between him and who?	The people
8	Where did Mansa Musa go on a pilgrimage to?	Makkah
9	How many kg of gold did Mansa Musa take on his pilgrimage?	21,000kg
10	How much would Mansa Musa be estimated to be worth today in $?	$400 billion dollars
11	What happened when Mansa Musa gave away so much gold in Cairo?	Decreased in value
12	What three things did Mansa Musa promote in the Empire?	Trade, education, and building
13	What kingdom was conquered by Mansa Musa that made him wealthy?	The Songhai Kingdom
14	In which city did Mansa Musa develop a library in to share ideas and learn more?	Timbuktu
15	How many manuscripts were held in the library in Timbuktu?	400,000
16	What new subjects were taught in the Empire?	Maths, astronomy, history and medicine
17	Where did scholars go to increase their knowledge further?	Madrasas
18	What did Mansa Musa build across his empire to spread Islam?	Mosques
19	What was the oldest mosque built that also became a centre of learning?	Sankore Mosque
20	At the height of its power what was the Mali Empire known as?	One of the richest and most powerful

What does the life of Mansa Musa reveal about the Mali Empire?

Empire: The Mali Kingdom was founded by Sundiata Keita the great-grandfather of Mansa Musa in 1230. The Mali Empire was located in West Africa and was richer than any European empire. One of Mansa Musa's generals conquered the Songhai Kingdom extending his power further. The Kingdom was annexed to the Mali Empire, which resulted in many territories coming under the control of Mansa Musa, including its capital Gao and the city of Timbuktu. The people of the country also had a good dialogue with Mansa leading to him being seen as fair and just leader. At the height of its power the Mali Empire was known as ' one of richest and most powerful in the world.'

Beliefs: The Hajj is a pilgrimage to Makkah in Saudi Arabia. It is one of the five pillars of Islam, and all Muslims are expected to make the journey at least once in their lifetime, if they can. Mansa Musa was a devout Muslim and wanted to ensure his entire kingdom believed in Islam and therefore built multiple mosques. Islam was boosted by Mansa Musa in Timbuktu, with the building of mosques under his instruction. The Sankore Mosque built in Timbuktu still stands today. He commissioned the tasks of building mosques in Gao and Timbuktu to an architect named Al-Sahili, who had accompanied him from Mecca.

Wealth: The empire was extremely wealthy, as its land was rich in resources. It contained three large gold mines containing almost half the world's gold – and all the gold belonged to the Mansa. Mali also had large copper mines which were worked by enslaved people. These natural resources all helped turn the Mali Empire into a trading centre. Mali also had large supplies of salt, which was very valuable in hot desert countries. It is estimated that he was worth $400 billion. Mansa Musa was wise and generous and believed it was his duty to make his empire more wealthy and powerful through trade. During his stay in Cairo, Mansa Musa and his following boosted the local economy by spending huge amounts of gold decreasing its value.

Knowledge: Mansa Musa's journey to Makkah was revolutionary due to introducing scholars who he brought back to Mali to increase knowledge. This led new subjects being taught such as maths, astronomy, history and medicine. Timbuktu was flourishing as a newly conquered city with a library, and it led to it being used by scholars to share ideas leading to Madrasas being built to extend education for many. Timbuktu became a popular and significant city, beating the best learning and art centres in the world. Mansa Musa turned Sankore Mosque into a university and filled it with astronomers, mathematicians and scholars. It could educate 25,000 students and contained thousands of manuscripts. Mansa Musa wanted his empire to become a centre of learning that all could be inspired by.

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.

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

Key Term	Definition
Improper Fraction	A fraction where the numerator is larger than the denominator.
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 <, > , ≤, ≥ or ≠.
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** (ie. are significant) to the size of the number. The **first significant figure** of a number **cannot be zero**.

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.

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.

Mathematics - Geometry and Measure

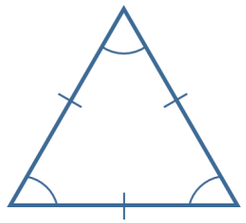
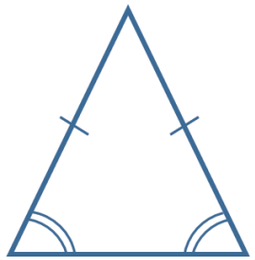
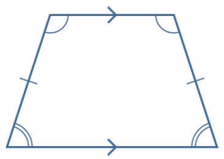
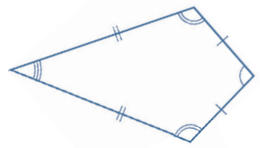
Key Term	Definition
Acute Angle	An angle less than 90°.
Adjacent	Next to, or near.
Area	A measure of the space inside a closed two-dimensional shape.
Axes	The straight lines on a graph used to define the position of a point. The x-axis goes across (horizontal). The y-axis goes up (vertical).
Centimetre (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. 1km = 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°.

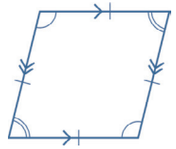
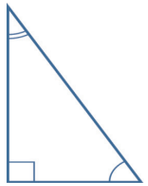
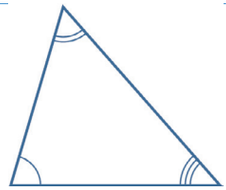
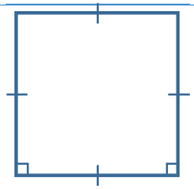
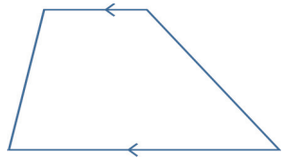
Key term	Definition
Perpendicular	Two lines that meet at an angle of 90°.
Perimeter	The total distance around the outside of a closed two-dimensional shape.
Polygon	A closed two-dimensional shape made up of all straight edges.
Protractor	An instrument used to measure angles.
Quadrilateral	A two-dimensional 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	Definitions
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	Definitions
Area of a rectangle or square	Length x width
Area of a parallelogram	Length x perpendicular height
Area of a triangle	$\frac{\text{Base x perpendicular height}}{2}$
Area of a trapezium	$\frac{a + b}{2}$ x h, where a and b are parallel sides.

Mathematics - Geometry and Measure

Key Term	Definition	Diagram
Equilateral Triangle	A triangle with all sides the same length and angles of 60^0.	
Isosceles Triangle	A triangle with two sides and two base angles of equal size.	
Isosceles Trapezium	A trapezium with two sides of equal length and 2 pairs of equal angles.	
Kite	A quadrilateral with two pairs of equal sides and adjacent sides equal.	
Parallelogram	A quadrilateral with two pairs of parallel sides and opposite sides equal.	

Key Term	Definition	Diagram
Rectangle	A quadrilateral with two pairs of parallel sides and opposite sides of equal length.	
Rhombus	A quadrilateral with four equal sides and two pairs of parallel sides.	
Right-angled Triangle	A triangle, one of whose angles is 90°.	
Scalene Triangle	A triangle, having all sides unequal.	
Square	A regular quadrilateral, having four equal sides and angles.	
Trapezium	A quadrilateral with one pair of parallel sides.	

French - Je Me Présente

1 Bonjour, Ça va?	Hello, how are you?
Quel âge as tu?	How old are you?
Comment t'appelles tu?	What is your name ?
Ça va bien / super	I'm great
Ça va mal	I'm bad
Comme ci comme ça	I'm so so
J'ai onze ans	I am 11 years old
Je m'appelle.....	My name is..

2 Quelle est ta nationalité?	What nationality are you?
Je suis	**I am**
italien /ne	Italian
anglais /e	English
français/e	French
espagnol/e	Spanish
portugais/e	Portuguese
allemand/e	German

3 Où habites tu?	Where do you live?
J'habite à Bournemouth/ Paris	**I live in Bournemouth / Paris**
En Angleterre	In England
En France	In France
En Espagne	In Spain
En Allemagne	In Germany
Au Portugal	In Portugal
Aux Etats-Unis	In the United States

4 Quelle est la date de ton anniversaire ?		When is your birthday ?	
Mon anniversaire c'est le...		My birthday is...	
Premier		First	
Un	**1**	Dix-sept	**17**
Deux	**2**	Dix-huit	**18**
Trois	**3**	Dix-neuf	**19**
Quatre	**4**	Vingt	**20**
Cinq	**5**	Vingt-et-un	**21**
Six	**6**	Vingt-deux	**22**
Sept	**7**	Vingt-trois	**23**
Huit	**8**	Trente	**30**
Neuf	**9**	Trente-et-un	**31**
Dix	**10**	Trente-deux	**32**
Onze	**11**	Trente-trois	**33**
Douze	**12**	Quarante	**40**
Treize	**13**	Quarante-et-un	**41**
Quatorze	**14**	Cinquante	**50**
Quinze	**15**	Cinquante-et-un	**51**
Seize	**16**	Soixante	**60**

Grammar note! An infinitive means 'to something' and ends in an er / ir / re in French

	6 Qu'est-ce que tu aimes faire ?	What do you like to do?
	J'aime	I like
	J'adore	I love
	Je préfère	I prefer
	Je n'aime pas	I don't like
	Je déteste	I hate

4 Les mois	The months
janvier	January
février	February
mars	March
avril	April
mai	May
juin	June
juillet	July
août	August
septembre	September
octobre	October
novembre	November
décembre	December

	5 Quel temps fait-il ?	What is the weather like?
	En été	In summer
	En printemps	In spring
	En hiver	In winter
	En automne	In autumn
	Il fait chaud	It is hot
	Il fait beau	It is nice
	Il pleut	It rains
	Il fait froid	It is cold
	Il neige	It snows

	6 Qu'est-ce que tu aimes faire ?	What do you like do?
	Jouer au foot	To play football
	Jouer à des jeux vidéo	To play video games
	Jouer du piano	To play the piano
	Écouter de la musique	To listen to music
	Regarder la télé	To watch TV
	Faire les devoirs	To do homework
	Faire de la natation	To do swimming
	Faire de la danse	To do dance

French - Je Me Présente

7 Tu joues à quoi ?	What do you play ?
Je joue	I play
Je joue au foot	I play football
Je joue au tennis	I play tennis
Je joue au volley	I play volleyball
Je joue au basket	I play basketball
Je joue aux jeux vidéos	I play video games
Je joue aux cartes	I play cards
Je joue aux échecs	I play chess
Je joue du piano	I play the piano
Je joue de la guitare	I play the guitar

What to include in your writing (colour key)	
C	Connectives
O	Opinions
R	Reasons
N	Negatives
E	Extra detail
T	Time expressions
T	Tenses
I	Intensifiers
	Masculine
	Feminine
	Plural

Connectives		
	Cependant	However
	Mais	But
	Aussi	Also
	Et	And
	Parce que	Because

8 Qu'est-ce que tu fais ?	What do you do ?
Je fais	I do
Je fais du sport	I do sport
Je fais du surf	I do surfing
Je fais du ski	I do skiing
Je fais du judo	I do judo
Je fais du vélo	I do cycling
Je fais de la natation	I do swimming
Je fais de la danse	I do dancing
Je fais de l'escalade	I do climbing
Je fais de l'athlétisme	I do athletics
Je fais des arts martiaux	I do martial arts
Je fais mes devoirs	I do my homework

Time expressions		
	9 Tu fais ça quand?	**When do you do that?**
	Le lundi	On Monday
	Le mardi	On Tuesday
	Le mercredi	On Wednesday
	Le jeudi	On Thursday
	Le vendredi	On Friday
	Le samedi	On Saturday
	Le dimanche	On Sunday
	Normalement	Normally
	Après le collège	After school
	Avant le collège	Before school
	Le matin	In the morning
	L'après-midi	In the afternoon
	Le soir	In the evening
	Le weekend	At the weekend

10 Quelles autres activités fais-tu ?	What other activities you do?
Je dessine	I draw
Je chante	I sing
Je danse	I dance
Je surfe sur Internet	I go online
Je parle avec mes amis	I talk to my friends
Je regarde la télé	I watch TV
J'écoute de la musique	I listen to music
Je fais du jogging	I jog
Je vais au gymnase	I go to the gym
Je vais au cinéma	I go to the cinema
Je sors	I go out

Opinions		
	11 Tu aimes cette activité?	**Do you like this activity?**
	Je pense que	I think that
	Je crois que	I believe that
	Je trouve que	I find that
	C'est	It is

Intéressant	Interesting
Amusant	Fun
Génial	Great
Différent	Different
Divertissant	Entertaining
Stimulant	Motivating

Dangereux	Dangerous
Nul	Rubbish
Difficile	Difficult
Ennuyeux	Boring

Spanish - Me Presento

1 Hola, ¿ cómo estás?	Hello, how are you?
Estoy	I am
Estoy bien	I am fine
Estoy fenomenal	I am great
Estoy mal	I'm bad
Estoy cansado/a	I'm tired
Estoy regular	I'm fine
¿Cómo te llamas?	What is your name ?
Me llamo	My name is
¿Cuántos años tienes ?	How old are you ?
Tengo	I have
Tengo 12 años	I am 12 (I have 12 years)

2 ¿De dónde eres?	Where are you from?
Soy ...	I am
inglés / inglesa	English
italiano / a	Italian
francés /a	French
español/a	Spanish
portugués / a	Portuguese
alemán / a	German

3 ¿Dónde vives?	Where do you live?
Vivo en	I live in
Inglaterra	England
Francia	France
España	Spain
Alemania	Germany
Suiza	Switzerland
Italia	Italy

Grammar note! An infinitive means 'to something' and ends in an ar, er or ir in Spanish

4 ¿Cuándo es tu cumpleaños ?	
Mi cumpleaños es el ..de... = My birthday is the...of...	
Primero = first	
Uno	1
Dos	2
Tres	3
Cuatro	4
Cinco	5
Seis	6
Siete	7
Ocho	8
Nueve	9
Diez	10
Once	11
Doce	12
Trece	13
Catorce	14
Quince	15
Dieciséis	16
Diecisiete	17
Dieciocho	18
Diecinueve	19
Veinte	20
Veintiuno	21
Veintidos	22
Veintitres	23
Treinta	30

	5 ¿Que te gusta hacer ?	What do you like to do ?
	Me gusta	I like
	Me encanta	I love
	Prefiero	I prefer
	No me gusta	I don't like
	Odio	I hate

6 ¿Cuándo es tu cumpleaños ?	When is your birthday ?
enero	January
febrero	February
marzo	March
abril	April
mayo	May
junio	June
julio	July
agosto	August
septiembre	September
octubre	October
noviembre	November
diciembre	December

	7 ¿Qué tiempo hace?	How's the weather?
	En verano	In summer
	En primavera	In spring
	En invierno	In winter
	En otoño	In autumn
	Hace calor	It is hot
	Hace buen tiempo	It is nice
	Llueve	It rains
	Hace frío	It is cold
	Nieva	It snows

	8 ¿Que te gusta hacer ?	What do you like to do ?
	Jugar al fútbol	To play football
	Jugar a los video juegos	To play video games
	Bailar	To dance
	Escuchar música	To listen to music
	Ver la tele	To watch TV
	Hacer los deberes	To do homework
	Hacer natación	To do swimming
	Tocar al piano	To play the piano

Spanish - Me Presento

9 ¿Qué juegas?	What do you play?
Juego	I play
Juego al tenis	I play tennis
Juego al fútbol	I play football
Juego al rugby	I play rugby
Juego al baloncesto	I play basketball
Juego a los video juegos	I play videogames
Juego a las cartas	I play cards
Juego al ajedrez	I play chess
Juego al voleibol	I play volleyball
Juego al tenis de mesa	I play table tennis

What to include in your writing	
C	Connectives
O	Opinions
R	Reasons
N	Negatives
E	Extra detail
T	Time expressions
T	Tenses
I	Intensifiers
	Masculine
	Feminine
	Plural

	Conectores	Connectives
	Sin embargo	However
	Pero	But
	También	Also
	Y	And
	Porque	Because

10 ¿Qué haces?	What do you do
Hago	I do
Hago natación	I do swimming
Hago atletismo	I do athletics
Hago judo	I do judo
Hago artes marciales	I do martial arts
Hago deporte	I do sport
Hago surf	I do surfing
Hago esquí	I do skiing
Hago ciclismo	I do cycling
Hago piragüismo	I do canoeing
Hago senderismo	I do hiking

	Espressiones de tiempo	Time expressions
	11 ¿Cuándo?	**When ?**
	El lunes	On Monday
	El martes	On Tuesday
	El miércoles	On Wednesday
	El jueves	On Thursday
	El viernes	On Friday
	El sábado	On Saturday
	El domingo	On Sunday
	Por la mañana	In the morning
	Por la tarde	In the afternoon
	Por la noche	In the evening
	El fin de semana	At the weekend
	Todos los días	Everyday
	Después del insti	After school
	Antes del insti	Before school

12 Qué otras actividades haces?	What other activities do you do?
Veo la televisión	I watch TV
Dibujo	I draw
Toco la guitarra	I play the guitar
Canto	I sing
Bailo	I dance
Escucho música	I listen to music
Veo películas	I watch films
Cocino	I cook
Nado	I swim
Hablo con mis amigos	I talk to my friends
Salgo con mis amigos	I go out with my friends
Quedo con mis amigos	I meet up with friends
Voy al cine	I go to the cinema

Opinions	
Pienso que	I think that
En mi opinión	In my opinion
Es	It is

Es divertido	It is fun
Es emocionante	It is exciting
Es genial	It is great
Es guay	It is cool

Es aburrido	It is boring
Es agotador	It is exhausting
Es caro	It is expensive
Es tonto	It is stupid

French - Ma Famille

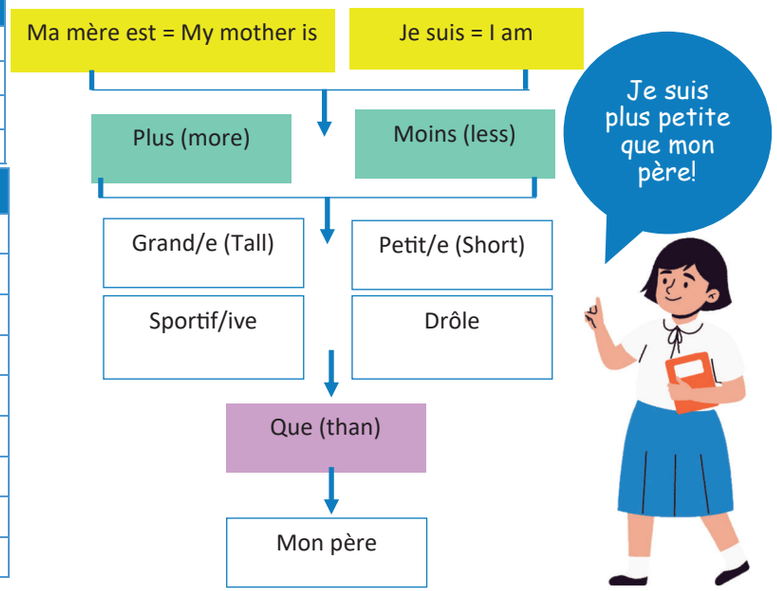
1 Parle-moi de ta famille	Tell me about your family
Dans ma famille il y a	In my family there is
Mes parents et moi	My parents and me
Mon frère	My brother
Ma sœur	My sister
Mon père	My father
Ma mère	My mother
Ma tante	My aunt
Mon oncle	My uncle
Mon grand-père	My grandad
Ma grand-mère	My grandma
Mon cousin	My cousin (male)
Ma cousine	My cousin (female)
Ma demi-sœur	My half sister
Mon demi-frère	My half brother

	Extra detail	Intensifer
	Très	Very
	Assez	Quite
	Trop	Too
	Un peu	A bit

4 Comment est ton caractère?	How is your personality?
Je suis / Je ne suis pas	I am / I am not
Il / elle est / n'est pas	He / she is / is not
Timide	Shy
Sérieux / sérieuse	Serious
Bavard /e	Talkative
Heureux / euse	Happy
Sportif / ive	Sporty
Drôle	Funny
Énervant /e	Annoying

2 Tu es comment ?	What are you like?
J'ai	I've got/ I have
Il / elle a	He/she has
Les cheveux longs	Long hair
Les cheveux courts	Short hair
Les cheveux bouclés	Curly hair
Les cheveux raides	Straight hair
Les cheveux bruns	Brown hair
Les cheveux blonds	Blonde hair
Les yeux verts	Green eyes
Les yeux gris	Grey eyes
Les yeux bleus	Blue eyes
Les yeux marron	Brown eyes

5 Comparisons



3 Tu es comment ?	What are you like?
Je suis	I am (personality)
Il / elle est	He/she is
Grand / e	Tall
Petit /e	Short
Mince	Slim
Gros /se	Fat
Je porte des lunettes	I wear glasses
Il / elle porte des lunettes	He / she wears glasses
Il a une barbe	He has a beard
Il a une moustache	He has a moustache
Il n'a pas de barbe	He does not have a beard

6 Time expressions		
	Quand ?	**When?**
	Après le collège	After school
	Normalement	Normally
	Ne …jamais	Never
	Toujours	Always
	Parfois / quel-quefois	Sometimes
	Le lundi	On Monday
	Le mardi	On Tuesday
	Le mercredi	On Wednesday
	Le jeudi	On Thursday
	Le vendredi	On Friday
	Le samedi	On Saturday
	Le dimanche	On Sunday

French - Ma Vie Scolaire

7 Qu'est-ce que tu étudies ?	What do you study?
J'étudie	I study
J'apprends	I learn
J'aime	I like
Je n'aime pas	I don't like
Le français	French
L'anglais	English
L'EPS	PE
L'informatique	ICT
Le théâtre	Drama
La musique	Music
La religion	Religion
La géographie	Geography
La technologie	Technology
L'histoire	History
Les maths	Maths
Les sciences	Sciences

10 Quand étudies-tu?	When do you study..?
À neuf heures	At 9.00
À dix heures et quart	At 10.15
À onze heures et demie	At 11.30
À une heure dix	At 1.10
À trois heures	At 3.00
Pendant la récré	At break time
Pendant la pause déjeuner	At lunch time

***Grammar note**

If you say 'il n'y a pas de' there is no 'un / une'

8 Tu aimes?	What do you like?
Ma matière préférée c'est	My favourite subject is
La matière que j'aime le moins c'est	The subject I like the least is
La matière que j'aime le plus c'est	The subject I like the most is

Reasons	
Parce que	Because
Car	Because
C'est	It is

Reasons	
Intéressant	Interesting
Amusant	Fun
Utile	Useful
Gratifiant	Rewarding
Ennuyeux	Boring
Pertinent	Relevant
Inutile	Useless

11 Qu'est-ce qu'il y a dans ton collège?	What is there in your school?
Dans mon collège il y a	In my school there is
***Dans mon collège il n'y a pas de (no article)**	In my school there isn't
Une piscine	A swimming pool
Des laboratoires	Some labs
Une cantine	A canteen
Une cour de récréation	A playground
Des salles de classe	Some classrooms
Un gymnase	A sports hall
Une bibliothèque	A library

9 Tes profs sont comment?	How are your teachers?
Mon professeur de… est	My … teacher is
Mes professeurs sont	My teachers are
Sympa /s	Nice
Intéressant / e / s	Interesting
Heureux / euse / s	Happy
Drôle /s	Funny
Décontracté / e / s	Easy-going
Méchant / e / s	Nasty
Sérieux / euse / s	Serious
Strict / e / s	Strict
Ennuyeux / euse / s	Boring

If a noun is feminine add an **e** to the adjective.
If it is plural add an **s** to the adjective.

12 Que fais-tu pendant la récré ?	What do you do at breaktime?
J'étudie	I study
Je parle avec mes amis	I talk to my friends
Je mange quelque chose	I eat something
Je joue au foot	I play football
J'utilise mon portable	I use my mobile
J'écoute de la musique	I listen to music
Je vais à la bibliothèque	I go to the library
Je fais mes devoirs	I do my homework
Je bois quelque chose	I drink something
Le vendredi	On Friday
Le samedi	On Saturday
Le dimanche	On Sunday

Spanish - Mi Familia

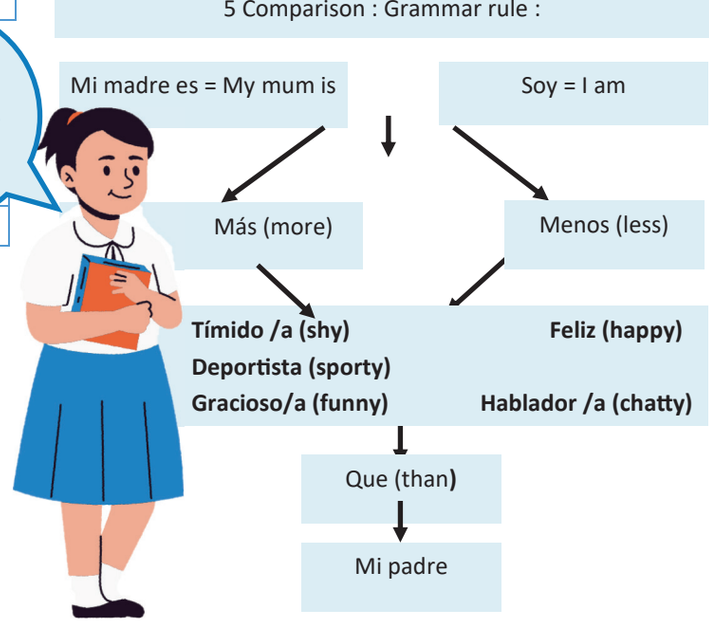
1 Háblame de tu familia	Tell me about your family
En mi familia hay	In my family there is
Mis padres y yo	My parents and me
Mi hermano	M brother
Mi hermana	My sister
Mi padre	My father
Mi madre	My mother
Mi tío	My uncle
Mi tía	My aunt
Mi abuelo	My grandad
Mi abuela	My grandma
Mi primo	My cousin (male)
Mi prima	My cousin (female)
Mi hermanastro	My step-brother
Mi hermanastra	My step-sister

Extra detail	Intensifer
Muy	Very
Bastante	Quite
Desmasiado	Too
Un poco	A bit

2 ¿Cómo es tu personalidad?	How is your personality?
Soy / Es	I am / He or she is
Tímido /a	Shy
Deportista	Sporty
Hablador /a	Talkative
Feliz	Happy
Divertido /a	Fun
Gracioso /a	Funny
Aburrido /a	Boring

3 ¿Cómo eres?	What do you look like?
Tengo	I've got/ I have
Tiene	He/she has
El pelo largo	Long hair
El pelo corto	Short hair
El pelo rizado	Curly hair
El pelo castaño	Brown hair
El pelo rubio	Blonde hair
Los ojos verdes	Green eyes
Los ojos negros	Black eyes
Los ojos azules	Blue eyes
Los ojos grises	Grey eyes
Los ojos marrones	Brown eyes

4 ¿Cómo eres?	What do you look like?
Soy	I am (personality)
Es	He/she is
Tiene	He / she has
Alto /a	Tall
Bajo /a	Short
Delgado /a	Slim
Gordo /a	Fat
Llevo gafas	I wear glasses
Lleva gafas	He / she wears glasses
Tiene barba	He has a beard
Tiene bigote	He has a moustache
No tiene barba	He does not have a beard
Es calvo	He is bald
Es guapo /a	He / she is good looking



Time Expressions	
¿Cuándo?	**When?**
Después del insti	After school
Normalmente	Normally
Nunca	Never
Siempre	Always
A veces	Sometimes
Los lunes	On Mondays
Los martes	On Tuesdays
Los miércoles	On Wednesdays
Los jueves	On Thursdays
Los viernes	On Fridays
Los sábados	On Saturdays
Los domingos	On Sundays

Spanish - Mi Vida Escolar

5 ¿Qué estudias?	What do you study?
Estudio (no article after)	I study
Aprendo (no article)	I learn
Las matemáticas	Maths
Las ciencias	Science
El español	Spanish
El inglés	English
El teatro	Drama
La música	Music
La religión	RE
La geografía	Geography
La tecnología	Technology
La educación física	PE
La informática	ICT
La historia	History

Time Expressions (Espressiones de tiempo)	
¿Cuándo estudias…?	**When do you study..?**
A primera hora	Period 1
A segunda hora	Period 2
A tercera hora	Period 3
A última hora	Last period
En el recreo	At break time
En la comida	At lunch time
En tutoría	At tutor time
Después del insti	After school
Antes del insti	Before school

Grammar note

If you say 'no hay' then there is no article un / una

If it is plural add an s.

6 ¿Qué te gusta?	What do you like?
Mi asignatura favorita es	My favourite subject is
Me gusta(n)	I like
No me gusta(n)	I don't like

Reasons	
Porque	Because
Ya que	Because
Es	It is
Son	They are

Interesante /s	**Interesting**
Divertido /a / s	Fun
Útil / es	Useful

Aburrido / a /s	**Boring**
Difícil / es	Difficult
Inútil / es	Useless

7 ¿Qué hay en tu insti?	What is there in your school?
En mi instituto hay	In my school there is
En mi instituto no hay	In my school there isn't
Una piscina	A swimming pool
Una oficina	A office
Un comedor	A canteen
Un patio	A play ground
Un gimnasio	A gym
Un polideportivo	A sports hall
Un salón de actos	A hall
Unas clases	Some classrooms
Unos laboratorios	Some labs

8 ¿Cómo son tus profes?	How are your teachers?
Mi profesor de … es	My … teacher is
Mis profesores son	My teachers are
Simpático / a / s	Nice
Interesante /s	Interesting
Estricto / a / s	Strict
Gracioso / a /s	Funny
Aburrido / a / s	Boring
Antipático / a / s	Unfriendly
Relajado / a / s	Easy-going
Serio / a / s	Serious
Feliz /ces	Happy

Grammar note

If a noun is feminine add an **a** to the adjective. If it is plural add an **s** to the adjective. If it is feminine and plural add **as** to the adjective.

9 ¿Qué haces durante el recreo?	What do you do at breaktime?
Estudio	I study
Hablo con mis amigos	I talk to my friends
Como algo	I eat something
Bebo algo	I drink something
Juego al fútbol	I play football
Hago mis deberes	I do my homework
Compro algo que comer	I buy something to eat
Uso mi móvil	I use my mobile
No escucho música	I don't listen to music
No voy a la biblioteca	I don't go to the library

French - Où j'habite

1 Tu habites où ?	Where do you live ?
J'habite	I live
À la montagne	In the mountains
À la campagne	In the countryside
Au bord de la mer	By the sea side
Sur la côte	On the coast
En ville	In town
Au centre-ville	In town centre
Dans un village	In a village
Dans une grande ville	In a big town / city
Dans un petit village	In a small village
Ma ville se trouve	My town/city is situated
Mon village se trouve	My village is situated
Dans le centre	In the centre
Dans le nord	In the north
Dans le sud	In the south
Dans l'est	In the the east
Dans l'ouest	In the west
Près de	Near to

4 Tu aimes ta ville ?	Do you like your town?
J'aime ma ville	I like my town / city
Je n'aime pas ma ville	I don't like my town
C'est / Ce n'est pas	It is / It is not
Bruyante	Noisy
Polluée	Polluted
Propre	Clean
Belle	Beautiful
Calme	Calm
Historique	Historical
Touristique	Touristic
Moderne	Modern

2 Tu habites où ?	Where do you live ?
J'habite	I live
Dans	In
Une grande maison	A big house
Une petite maison	A small house
Une vieille maison	An old house
Une maison moderne	A modern house
Une ferme	A farm
Un petit / vieil appartement	A little/old flat
Un beau / vieux bungalow	A beautiful/old bungalow
Tu habites avec qui ?	Who do you live with?
Avec	With
Mes parents	My parents

5 Que peut-on faire?	What can you do?
On peut	**You (we) can**
On ne peut pas	**You (we) cannot**
Aller au cinéma	To go to the cinema
Aller au parc	To go to the park
Aller à la patinoire	To go to the ice rink
Aller au parc d'attractions	To go to the theme park
Visiter des musées	To visit the museums
Faire des promenades	To go for walks
Manger au restaurant	To eat at a restaurant
Jouer au bowling	To play bowling
Retrouver des amis	To meet up with friends
Aller à la plage	To go to the beach
Faire des randonnées	To do hikes

3 Qu'est-ce qu'il y a dans ta ville ?	What is there in your town
Dans ma ville il y a ..	In my town there is
Une patinoire	An ice rink
Une église	A church
Une piscine	A swimming pool
Une gare	A train station
Une poste	A post office
Une plage	A beach
Une école	A school
Un château	A castle
Un marché	A market
Un supermarché	A supermarket
Un centre de loisirs	A leisure centre
Un centre sportif	A sports centre
Un centre commercial	A commercial centre
Un stade	A stadium
***Mais il n'y a pas de…**	But there is not any
Il n'y a pas de stade	There isn't a stadium

6 Future tense

To say what you are going to do in the future you need 2 things

1) Je vais

2) Infinitive verb (ends er / re / ir

Example : Je vais aller en ville

To give your opinion use **ce sera = it will be**

If you say 'il n'y a pas de' there is no article un / une

If it is plural add an s.

French - Où j'habite

7 Comment est ta maison ?	What is your house like?
Dans ma maison	In my house
Dans mon appartement	In my flat
Chez moi	At my house
Au premier étage	On the first floor
Au rez de chaussée	On the ground floor
Il y a	There is
Une cuisine	A kitchen
Une salle de bains	A bathroom
Une salle à manger	A dining room
Ma chambre	My bedroom
La chambre de mes parents	My parents' bedroom
La chambre de mon frère	My brother's bedroom
Une cave	A cellar
Un grenier	An attic
Un bureau	An office
Un salon	A lounge
Un jardin	A garden
Un couloir	A hallway
Un garage	A garage
Un balcon	A balcony

La salle de bains	The bathroom
Le balcon	The balcony
Ma chambre	My bedroom
La piscine	The swimming pool

Est	Is
Plus / Moins	More / Less
Moderne	Modern
Spacieux/euse	Spacious
Grand/e	Big
Petit/e	small
Cool	Cool
Que	Than
La chambre de mon frère	My brother's room

8 Décris ta chambre	Describe your room
Dans ma chambre il y a	In my bedroom there is
Un lit	A bed
Un ordinateur	A computer
Un bureau	A desk
Un canapé	A sofa
Un tapis	A rug
Une armoire	A wardrobe
Une table	A table
Une chaise	A chair
Une lampe	A lamp
Une commode	A chest of drawers
Une table de chevet	A bed side table
Une poubelle	A bin
Une fenêtre	A window
Une télévision	A TV
Des posters	Some posters
Des tableaux	Some frames

Opinions	
9 Tu aimes ta chambre ?	Do you like your
J'aime ma chambre	I like my bedroom
Ma chambre me plaît	I like my bedroom
Je déteste ma chambre	I hate my bedroom
Je n'aime pas ma chambre	I don't like my bedroom

Reasons	
Car je peux me relaxer	Because I can relax
Car je peux dormir	Because I can sleep
Car j'ai une télévision	Because I have a TV
Car elle est spacieuse	Because it's spacious
Car elle est bien rangée	Because it's tidy
Car elle est trop petite	Because it's too small
Car je n'ai pas de..	Because I have no...

10 Qu'est-ce que tu vas faire dans ta ville?	What are you going to do in your city?
Je vais aller au centre commercial	I am going to go the shopping centre
Je vais aller au cinéma	I am going to go to the cinema
Je vais aller au marché	I am going to go to the market
Je vais aller à la patinoire	I am going to go to the ice rink
Je vais aller à la piscine	I am going to go to the swimming pool
Je vais faire les magasins	I am going to go shopping
Ce sera divertissant	It will be fun

Spanish - Donde Vivo

1 ¿Dónde vives?	Where do you live?
Vivo en	I live in
Una ciudad	A city
Un pueblo	A town/village
Una región	A region
Un barrio	A neighbourhood
Que se llama	Which is called
Está en	It is located in
Está en la costa	It's on the coast
Está en el campo	It is in the countryside
Está en las montañas	It is in the mountains
Está en el norte	It is in the north
Está en el sur	It is in the south
Está en este	It is in the east
Está en oeste	It is in the west
Vivo en Inglaterra	I live in England
Vivo en España	I live in Spain
Vivo en los Estados Unidos	I live in the USA

Opinions	
2 ¿Te gusta tu ciudad?	**Do you like your city?**
Me gusta mi ciudad porque	I like my city because
Es turística	Touristy
Es tranquila	It is quiet
Es segura	It is safe
Es peligrosa	It is dangerous
Hay poca naturaleza	There isn't much nature
Hay mucho que hacer	There is a lot to do
No hay nada que hacer	There is nothing to do
Hay mucho tráfico**	There is a lot of traffic
Hay mucha contaminación	There is a lot of pollution

**** Common spelling mistake—be careful!**

3 ¿Donde vives?	Where do you live?
Vivo	I live
Con mi familia	With my family
En un piso	In a flat
En un edificio	In a block of flats
En una casa	In a house
En una granja	In a farm
En una casa adosada	In a semi-detached house

***Grammar note**

If you say 'no hay' then there is no article un / una

4 ¿Que se puede hacer?	What can you do?
Se puede	You can
No se puede	You cannot
Se puede ir de compras	You can go shopping
Se puede dar un paseo	You can go for a walk
Se puede hacer deporte	You can do sport
Se puede cenar fuera	You can eat out
Se puede nadar	You can swim
Se puede quedar con amigos	You can meet up with friends
Se puede salir	You can go out
No se puede visitar monumentos	You cannot visit monuments
No se puede ver	You cannot see
Lo que es una lástima***	Which is a shame

***** This is a higher level phrase**

5 ¿Que hay en tu ciudad?	What is there in your city?
Hay	There is / there are
No hay*	There isn't / there aren't
En mi ciudad hay	In my city there is
En mi ciudad no hay*	In my city there isn't
Un colegio	A school
Un supermercado	A supermarket
Un castillo	A castle
Un parque	A park
Un polideportivo	A sports centre
Un aeropuerto	An aiport
Un cine	A cinema
Una piscina	A swimming pool
Una iglesia	A church
Muchas tiendas	Many shops

Future tense

To say what you are going to do in the future you need 3 things :

1) Voy
2) a
3) Infinitive verb (ends ar / er / ir)

Example : = I am going to play football

Spanish - Donde Vivo

6 Qué vas a hacer en tu ciudad?	What are you going to do in your city?
Voy a ir al centro comercial	I am going to go the shopping
Voy a ir al cine	I am going to go to the cinema
Voy a ir al mercado	I am going to go to the market
Voy a ir a la pista de hielo	I am going to go to the ice rink
Voy a ir a la piscina	I am going to go to the swimming pool
Voy a ir de compras	I am going to go shopping

Comparisons	
El cuarto de baño	The bathroom
El balcón	The balcony
Mi habitación	My bedroom
La piscina	The swimming pool

Es	Is
Más / Menos	More / Less
Moderno /a	Modern
Ordenado/a	Tidy
Espacioso /a	Spacious
Grande	Big
Pequeño/a	Small

Que	Than
La habitación de mi hermano	My brother's room

7 ¿Cómo es tu casa?	What is your house like?
En mi casa hay	In my house there is
En mi casa no hay*	In my house there **isn't**
Un salón	A living room
Un jardín	A garden
Un cuarto de baño	A bathroom
Un balcón	A balcony
Un dormitorio	A bedroom
Una habitación	A bedroom
Una piscina	A swimming pool
Una cocina	A kitchen
Una terraza	A terrace
En la planta baja	On the ground floor
En la primera plana	On the first floor

Opiniones	Opinions
Porque	Because
Ya que	Because
Pero	But
Será	It will be
Va a ser	It's going to be

Interesante /s	Interesting
Divertido /a / s	Fun
Emocionante	Exciting
Aburrido / a /s	Boring
Caro	Expensive

***Grammar note**

If you say 'no hay' then there is no article un / una

Un / una means a / an

El / la means the

8 ¿Y en tu habitación ?	And in your bedroom ?
En mi habitación hay	In my room there is
Un armario	A wardrobe
Un ordenador	A computer
Una cama	A bed
Una mesa	A table
Una lámpara	A lamp
Una mesita de noche	A bedside table
Una cómoda	A chest of drawers
Una ventana	A window
Una televisión	A television
Al lado de	Next to
Delante de	In front of
Detrás de	Behind
Encima de	On top of
Debajo de	Under

9 ¿Donde te gustaría vivir ?	Where would you like to live?
Me gustaría vivir	I would like to live
En Londres	In London
En la costa	By the sea
Porque hace sol	Because it's sunny
Porque me encanta la cultura	Because I love the culture
Sería	It would be
Sería fenomenal	It would be great

Dance - Year 7

PHYSICAL SKILLS	
POSTURE	The way the body is held
ALIGNMENT	Correct placement of body parts in relation to each other.
BALANCE	A steady or held position achieved by an even distribution of weight.
COORDINATION	The efficient combination of body parts
CONTROL	The ability to start and stop movement, change direction and hold a shape efficiently.
FLEXIBILITY	The range of movement in the joints (involving muscles, tendons and ligaments).
MOBILITY	The range of movement in a joint; the ability to move fluently from action to action.
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.

EXPRESSIVE SKILLS	
PROJECTION	The energy the dancer uses to connect with and draw in the audience.
EYE FOCUS	Use of the eyes to enhance performance or interpretative qualities.
SPATIAL AWARNESS	Consciousness of the surrounding space and its effective use.
FACIAL EXPRESSION	Use of the face to show mood, feeling or character.
PHRASING	The way in which the energy is distributed in the execution of a movement phrase.
MUSICALITY	The ability to make the unique qualities of the accompaniment evident in performance
SENSITIVITY TO OTHER DANCERS	Awareness of and connection to other dancers.

TECHNICAL SKILLS	
ACTION CONTENT	Performing the movements in the choreography such as travelling, turning, gesture and floor-work accurately.
DYNAMIC CONTENT	Accurately performing the quality of the movements such as soft, strong, sharp, gently.
SPATIAL CONTENT	Accurately performing the actions in the correct place e.g.. levels, directions, pathways, shapes, designs and patterns.
RELATIONSHIP CONTENT	Accurately portraying the ways in which dancers interact; the connections between dancers.
TIMING CONTENT	Accurate use of time or counts when matching movements to sound and/or other dancers.
RHYTHMIC CONTENT	Repeated patterns of sound or movement performed accurately.
STYLISTIC ACCURACY	Performing the choreography in a way which highlights the key features of the chosen style/s

Vocal skills	
Term	**Definition**
Accent	The way a character pronounces words according to their regional 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 to build tension, add emphasis or communicate other meaning.
Pitch	How high or deep the voice is.
Volume	How loud or quiet the voice is.
Tone	The way the character speaks to show emotion.

Physical Skills	
Term	**Definition**
Eye contact	Use of the eyes to communicate meaning.
Body Language	Use of the body to communicate meaning.
Gestures	Use of hands, head and shoulders to communicate meaning.
Facial expressions	Use of the face to communicate meaning.
Posture	How the body is held or the shape of the back.

Key Terms	
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.
Dialogue	Spoken conversation used by two or more characters to express thoughts, feelings and actions.
Fourth Wall	The imaginary wall at the front of the stage separating the audience from the performers.

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.

Creating Theatre	
Term	**Definition**
Stimulus	The item that inspires the idea
Devise	Create a performance, usually based on a stimulus.
Artistic vision	What the actor/director wants the audience to experience
Rehearsal	The process of repeatedly practicing and refining a performance to improve the quality.

Movement	
Term	**Definition**
Unison	A group of people moving as one
Canon	Performing the same phrase of movement one after the other.
Dynamics	The quality of the movement relating to energy, effort, force, or weight.

Use of space	
Term	**Definition**
Blocking	The process of staging the movement of a scene
Levels	How high or low an actor is stood or sat to communicate meaning or status
Proxemics	The use of space to communicate meaning

Performance quality	
Communicate Meaning	How the performers share messages or information with the audience verbally, non-verbally and physically.
Clarity	Speaking clearly so that an audience can hear you
Audience Awareness	Being aware of what the audience can see and hear when blocking, rehearsing and performing a scene
Corpsing	Coming out of role or losing focus during a performance- should be avoided

Performance Styles	
Term	**Definition**
Naturalistic	Closely imitating real life.
Physical Theatre	Storytelling primarily through physical movement
Devised Theatre	A performance created from scratch, usually based on a stimulus.
Slapstick	*A ridiculous, exaggerated type of comedy performance.*
Mime	*The act of using movements of your hands and body, and expressions on your face, without speech, to tell a story.*

Types of Sound	
Term	**Definition**
Sound effect	A sound other than speech or music made artificially for use in a play.
Voice Off	Speaking dialogue or narration from off stage.
Live Sound	Sounds or music created live during the performance.
Pre-recorded Sound	Sounds or music that have been recorded or sourced prior to the performance.
Music	Vocal or instrumental sounds (or both) combined in such a way as to produce beauty of form, harmony, and expression of emotion.

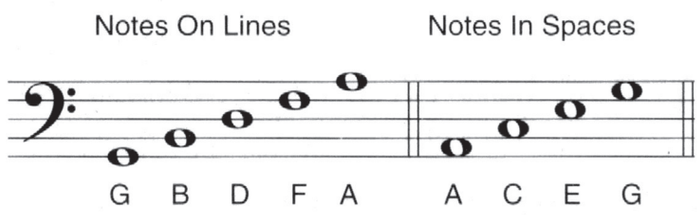
Characterisation	
Term	**Definition**
Character Motivation	The reason behind a character's behaviour and actions in a given scene.
Character Interaction	The ways in which characters communicate or interact with each other. The action or relationship among two or more characters.
Hot-Seating	Being questioned and answering in character.
Thought-tracking	Saying aloud the inner thoughts and feelings of your character.

Music Year 7

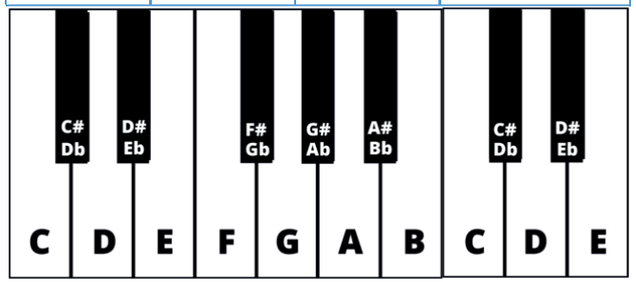
The musical elements	
Dynamics	The volume of music e.g. loud or quiet.
Rhythm	The pattern of beats in music.
Pitch	The movement of the notes between high and low within a piece of music.
Structure	The different sections within a piece of music e.g. verse/ chorus.
Melody	The main tune within a piece of music.
Instrumentation	The different instruments used within a piece of music.
Texture	The different layers of sound happening at once.
Tonality	The character of apiece 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.

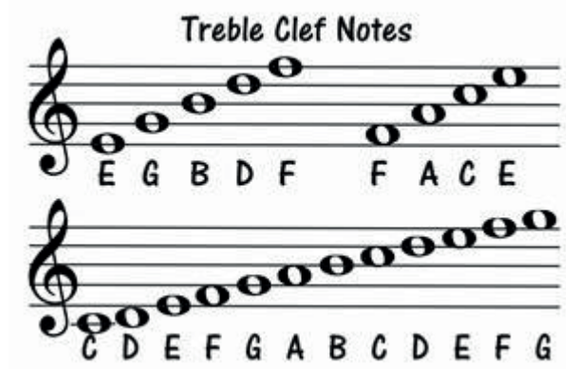
Music Notation	
Time signature	At the start of the music, it tells us how many beats are in a bar and the type of beats.
Bar line	A vertical line that separates each bar.
Bar	A segment of music that holds a certain number of beats
Double bar line	Signifies the end of the piece

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 hat tells you how to perform the piece expressively.
Balanced Performance	When you can hear all parts of the performance at the right dynamic.
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.

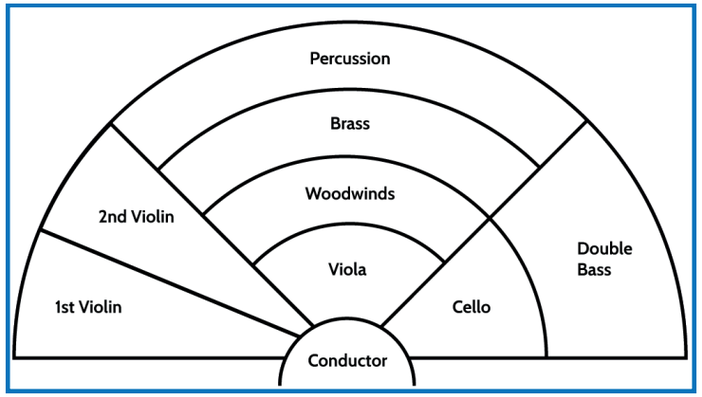




Music Year 7

Melodic hooks and riffs	
Hook	The ‘catchy bit’ of the song that you will remember. It is often short and used and repeated in different places throughout the piece.
Melodic Hook	A hook based on the instruments and the singers.
Verbal/lyrical hook	A hook based on the rhyming and/or repeated words of the chorus.
Rhythmic hook	A hook based on the patterns in the drums and bass parts.
Riff	A repeated musical pattern often used in the introduction and instrumental breaks in a song or piece of music. Riffs can be rhythmic, melodic or lyrical, short and repeated.
Ostinato	A repeating musical pattern. The same meaning as the word riff but used when describing repeated musical patterns in ‘classical’ and some ‘world’ music.
Bass Line	The lowest pitched part of the music often played on bass instruments such as the bass guitar or double bass. Riffs are often used in bass lines.
Melody	The main ‘tune’ of a song or piece of music, played higher in pitch than the bass line and it may also contain riffs or hooks. In ‘Classical music’, the melody line is often performed ‘with’ an ostinato pattern below.
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

The Orchestra	
String family	They are usually played with a bow (arco) - not the Harp but can also be plucked (pizzicato). The smaller the instrument the higher pitched it is.
Brass family	They are made of metal and the sound is made by blowing into the mouthpiece by buzzing the lips in a similar way to blowing a raspberry!
Woodwind family	Wind instruments divided into two subsections: flute and piccolo (create a sound by air passing over a small hole) and reed instruments (use a piece of bamboo reed to create a vibration). Instruments include clarinet, oboe and bassoon.
Percussion family	Instruments which produce sound when hit, struck, scraped or shaken. These fall into two subsections: tuned percussion (able to play different pitches) and untuned percussion.
Orchestra	A large ensemble (group of musicians) divided into four families of musical instruments—strings, woodwind, brass and percussion—led by a conductor.
Conductor	Leader of the orchestra who stands at the front of the orchestra and directs it. They will indicate the main beats in the music using a baton. All musicians look at the conductor whilst playing as they are ultimately in control of the whole piece.
Arco	The articulation where you bow a sting instrument.
Pizzicato	The articulation where you pluck a string instrument.
Mouthpiece	The part of a brass or woodwind instrument that you blow in/over.
Valves	The device on brass instruments that when pressed changes the length of tubing and allows the player to pitch different notes.
Slide	A device found on a trombone that enables it to change pitch.
Timpani	A tuned kettle drum. It plays the first and fifth note of the key it is in It can also roll notes.
Oboe	A double reed woodwind instrument made from wood. Used to play very pastoral melodies.



Physical Education - Year 7

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	
Teamwork	Means working well with others to achieve a shared goal in sport.
Leadership	Is when someone helps guide or organise a team during activities.
Fitness	Is the ability to carry out daily tasks with energy and without tiring quickly.
Verbal communication	Is used to give instructions and work effectively as a team. Includes calling for the ball or giving instructions to teammates.
Non-verbal communication	Includes hand signals, eye contact, and body gestures used to show where to pass or move.
Healthy lifestyle	Means exercising regularly and making good food choices.

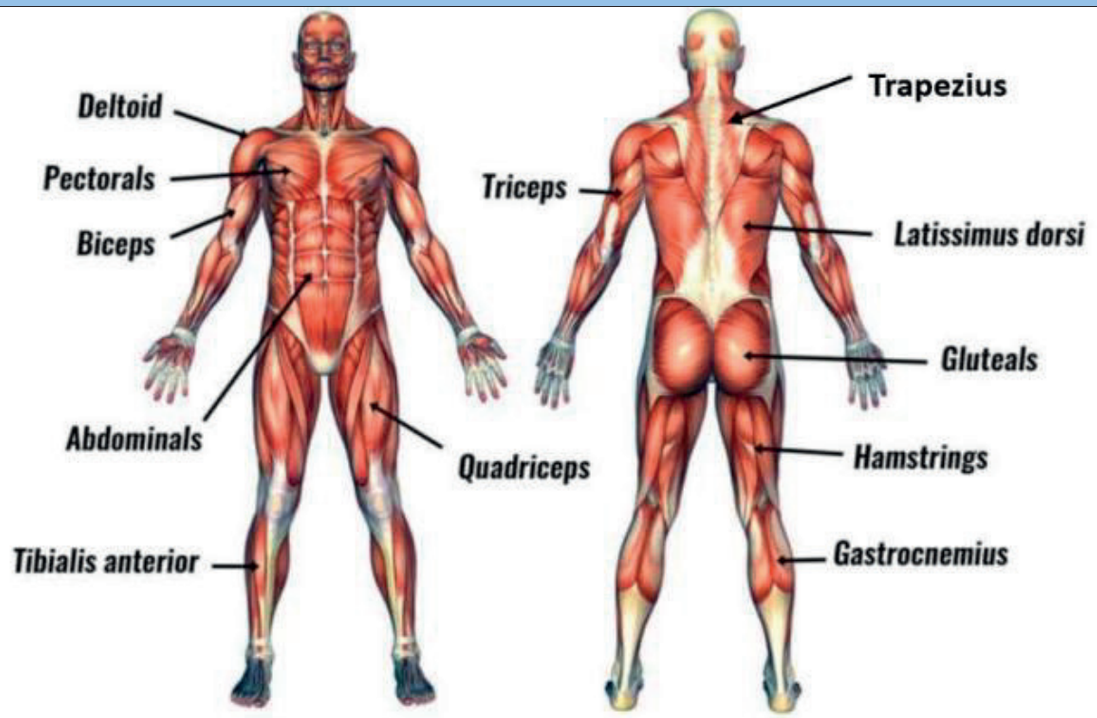
Warm-up	
Warm- Up	Simple exercise routine that is performed before a workout session. Exercises to prepare the body for exercise so that the chances of injury are reduced
Pulse Raiser	The starting activity of a warm-up. It consists of exercises that slowly increase the heart rate and body temperature. 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).
Dynamic Stretching	Involves stretching whilst moving or taking the joint though the full range of movement. This is performed at medium intensity
Dynamic Stretching activities	High knees, heel flicks, arm rotations, skipping, lunges, walking hamstring stretches (feed the chickens), side steps
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

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

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

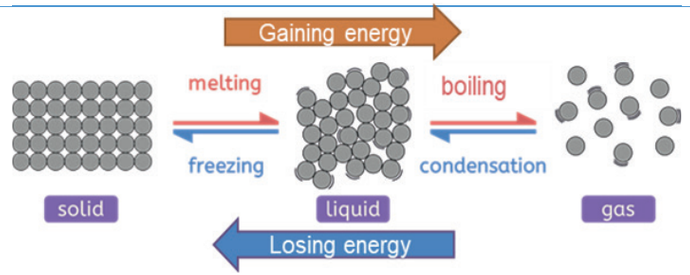
Nutrition	Functions
Nutrition	Substances in food that the body needs to grow, stay healthy, and function properly.
Balanced Diet	A diet that includes the right amounts of all the necessary nutrients from different food groups.
Vitamins & Minerals	Essential nutrients that help keep the body healthy and support different body functions.
Fats	Foods that give you energy and help keep your body warm.
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.
Carbohydrates	Foods that give you energy, like bread and fruit.
Vegetables	They give you vitamins, help you stay strong, and keep your body working well.
Dairy	help keep your bones strong.

Muscles	

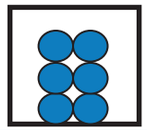
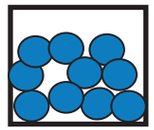
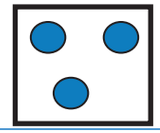

Deltoid
Pectorals
Biceps
Abdominals
Quadriceps
Tibialis anterior
Trapezius
Triceps
Latissimus dorsi
Gluteals
Hamstrings
Gastrocnemius

Science - Particles, substances and mixtures

Change of state

Keyword	Definition
Change of State	A physical change where a substance changes from one state (solid, liquid, gas) to another without forming a new substance.
Physical Change	A change that does not produce a new substance and is usually reversible.
Reversible	A process that can be undone, returning the substance to its original state.
Energy of Particles	The amount of kinetic energy particles have, which affects how they are arranged and how they move.
Particle Arrangement	The way particles are organized in a substance, which changes during a change of state.
Particle Movement	The motion of particles, which increases or decreases depending on the energy they have.
Temperature	Remains constant during a change of state, even though energy is being transferred.
melting point:	The temperature at which a substance changes from a solid to a liquid
boiling point:	The temperature at which a substance changes from a liquid to a gas,
	

Particle mode of matter

	Solid	Liquid	Gas
Arrangement			
Movement	ordered and all touching	random and all touching	random and not touching
Attraction between particles	strong	weak	very weak

Diffusion

Keyword	Definition
Diffusion	The passive movement of particles from a high concentration to a low concentration.
Random Movement	Particles move in all directions without a set pattern.
High Concentration	An area with many particles close together.
Low Concentration	An area with fewer particles spread out.

Gas Pressure

Keyword	Definition
Gas Pressure	The force gas particles create when they hit the walls of a container.
Particle Collisions	When gas particles bump into the container walls, causing pressure.
Faster Movement	Makes particles hit the walls more often and harder, increasing pressure.
More Particles	Increases the number of collisions, raising the pressure.
Higher Temperature	Makes particles move faster, leading to more collisions and higher pressure.

Science - Particles, substances and mixtures continued

Conservation of Mass in a solution

Keyword	Definition
Solution	A mixture made when a solute dissolves in a solvent.
Solute	The substance that dissolves (e.g., salt or sugar).
Solvent	The liquid that dissolves the solute (e.g., water).
Mass of Solution	Equals the mass of the solute plus the mass of the solvent.
Mass Conservation	Mass stays the same because the number of particles doesn't change when dissolving.

Explaining the Properties of Solids

Property	Explanation
Fixed shape and can-not flow	Strong forces of attraction between the particles keep them in fixed positions.
Cannot be compressed (squashed)	Particles are all touching and have no space to move into.

Explaining the Properties of Liquids

Property	Explanation
Takes shape of con-	Weak forces of attraction between the particles, so they can
Cannot be compressed (squashed)	Particles are all touching and have no space to move into.

Explaining the Properties of Gases

Property	Explanation
Takes shape of con-	Very weak forces of attraction between the particles, allowing
Can be compressed (squashed)	Particles are not touching and have space to move into.

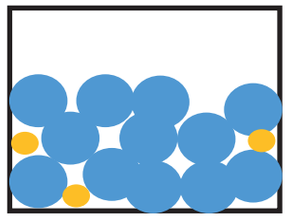
Pure substances and mixtures

Keyword	Definition
Pure Substance	Made of only one type of particle (e.g. only iron).
Mixture	Made of two or more substances that are not chemically joined and can be separated.
Physically Separated	Can be split without a chemical reaction (e.g. by filtering or evaporating).

Pure Substance	Pure Substance	Mixture
		

Solubility

Keyword	Definition
Saturated Solution	A solution where no more solute can dissolve.
Soluble	A substance that can dissolve in a solvent.
Insoluble	A substance that cannot dissolve in a solvent.
Solubility	How much solute can dissolve in a solvent.
Temperature Effect	Higher temperatures let more solute dissolve.
Different Solubility	Solubility changes with different solutes and solvents.
Dissolving Process	Solute particles spread out and fit between solvent particles.



The **solute** is dissolved in the **solvent** to create a **solution**

Science - Separating mixtures

Separating mixtures using chromatography

Keyword	Definition
Chromatography	A method to separate mixtures of coloured substances.
Solute	The coloured substance in the mixture (e.g. ink or dye).
Solvent	The liquid that moves up the paper (e.g. water or ethanol).
Solubility	How well a substance dissolves in a solvent.
Separation	Happens because some substances dissolve and move further than others.
Pencil Line	A line drawn to place the ink or dye spots before starting the experiment.
Paper	The surface the solvent travels up, carrying the solutes with it.

Separating mixtures using distillation

Keyword	Definition
Distillation	A way to separate liquids using their different boiling points.
Boiling Point	The temperature where a liquid turns into a gas.
Evaporation	When a liquid changes into a gas by heating.
Condensation	When a gas cools down and turns back into a liquid.
Ink and Water	Water boils and is collected; ink stays behind because it doesn't boil.
Separation	Happens because one liquid turns into gas and is collected, while the other stays behind.

Separating mixtures using evaporation and crystallisation

Keyword	Definition
Evaporation	A method to remove liquid by turning it into gas, leaving the solid behind.
Crystallisation	A method to form solid crystals from a solution.
Soluble Solid	A solid that can dissolve in a liquid (e.g. copper sulphate).
Solution	A mixture of a solute (solid) dissolved in a solvent (liquid).
Copper Sulphate	A blue solid that dissolves in water to form a solution.
Crystals	Solid shapes formed when a solute comes out of a solution slowly.

Separating mixtures using distillation

Keyword	Definition
Filtration	A method to separate a liquid from an insoluble solid.
Insoluble Solid	A solid that does not dissolve in a liquid (e.g. sand).
Filter Paper	Special paper with tiny holes that let liquid through but block solids.
Selectively Permeable	Allows only some substances to pass through, because the holes in it are a certain size.
Sand and Water	When filtered, water passes through the paper and sand stays behind, because the sand is too big.

Science - Fundamentals in physics (Forces)

Types of forces	
Thrust force	(noun phrase) a contact force arising from an interaction between two objects which are free to move apart
Upthrust	(noun) a contact force arising from an interaction between an object and a fluid in which it is or could be immersed
Water resistance	(noun phrase) a contact force arising from an interaction between a fluid and an object moving through it
Weight	(noun) the gravity force acting on an object exerted by a large body
Air resistance	(noun phrase) a contact force arising from an interaction between air and a moving object
Friction	Force that opposes motion.
Magnetic force	(noun phrase) a non-contact force arising from an interaction between magnets or a magnet and a magnetic material
Normal contact force	(noun phrase) force arising from an interaction between two objects in contact and acting perpendicular to the surface
Lift force	(noun phrase) a contact force arising from an interaction between air moving and a curved object
Tension	(noun) the process of forces pulling away from each other on an object

Motion & balance	
Speed	Speed = distance / time
Velocity	Speed in a particular direction.
Terminal velocity	The maximum speed of an object.
Pressure	The force exerted over an area. Pressure = force / area
Centre of mass	The point at which the mass of an object appears to be concentrated.
Moment	A turning effect of a force.
Pivot	The point around which something can turn or rotate.
Momentum	All moving objects have momentum. Momentum = mass x velocity

Forces	
Force	Force is a push or a pull.
Newton (N)	Unit of force.
Newton meter	Apparatus used to measure force. Also called a spring balance.
Forces can…	Change an objects speed, direction of motion or shape.
Balanced forces	If forces acting on an object are balanced, there is no resultant force acting.
Unbalanced forces	If forces acting on an object are unbalanced, there is a resultant force acting.
Resultant force	The sum of forces acting on the object.
Contact force	Forces that act between two objects that are physically touching each other. Examples of contact forces include pulling, pushing, friction, up thrust, air resistance, reaction force and tension.
Non-contact force	Forces that act between two objects that are not physically touching each other. Examples of non-contact forces include magnetic force, electrostatic force and weight.
Force diagram	Used to show the size and direction of a force acting on an object. The length of the arrow is used to show the size of the force.
Hooke's law	When an elastic object, such as a spring, is stretched, the increased length is called its extension (e). The extension of an elastic object is directly proportional to the force applied to it.

Science - Fundamentals in physics (Energy)

Stores of energy	
Kinetic energy	Energy stored in a moving object
Elastic potential energy	The potential energy stored in a spring or something stretchy that will spring back after being released
Gravitational potential energy	Energy stored in an object that is in a gravitational field
Electrostatic energy	The energy stored when charges are moved relative to one another
Chemical energy	Energy stored in the bonds of substances; typically fuels or food, i.e. energy is released when burned
Magnetic energy	The energy stored when magnetic materials are moved relative to each other.
Nuclear energy	Energy stored in the nuclei of atoms; released when nuclei are fissioned or fused
Thermal energy	Associated with changes in temperature and/or changes of state of objects.

Pathways	
Mechanical	Energy transferred by a force acting on an object
Electrical	Energy transferred when an electric current flows through a device
Heating	Energy transferred by conduction, convection or radiation
Radiation	Energy transferred by electromagnetic radiation (light, microwaves, etc.) or sound

Renewable Energy Resources	
Solar	Energy converted to electricity using photovoltaic cells
Wind	Wind causes turbines to turn, turning generators, which generate electricity
Tidal	Waves power turbines, turning generators which generate electricity
Hydroelectric	Running water turns turbines, turning generators to generate electricity
Biofuel	Plant matter burned to power electricity generators
Geothermal	Energy transferred from inside the Earth

Key terms	
Repeatability	(noun) a measure of the closeness of experimental results by the same person using the same method
Reproducibility	(noun) a measure of the closeness of experimental results by different people or using different methods

Equations to learn	
Efficiency	efficiency = useful energy transferred ÷ total energy input
Power (W)	Power (W) = Energy transferred (J) ÷ time (s)
Hooke's law	Force on spring (N) = extension (m) x spring constant (N/m)
Energy transfer	Work done (J) = Force applied (N) x distance travelled (m)
Cost	cost = energy used in kWh x cost of 1 kWh

Non-renewable energy	
Coal	Burning coal heats water, producing steam which turns turbines to generate electricity
Oil	Burned to heat water, producing steam which turns turbines to generate electricity
Nuclear	Nuclei are split in the process of nuclear fission; heat released heats water, producing steam which turns turbines to generate electricity
Natural gas	Piped to consumer and burned on site to heat water for direct use, or producing steam which turns turbines to generate electricity

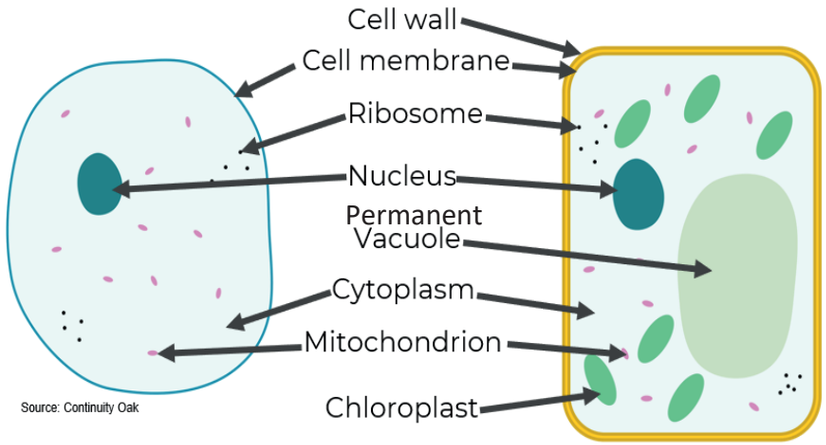
Key words	
Conservation of energy	Energy cannot be created or destroyed, only transferred from one store to another
Insulator	Materials that do not allow charge or heat to pass through them easily
Conductor	Materials that do allow charge or heat to pass through them easily
Renewable	Source of energy that can be replenished as it is being used, e.g. solar, wind
Non-renewable	Source will run out, as it is being used at a greater rate than it can be replenished e.g. oil and coal
Dissipation	Energy becoming spread out to the stores of surrounding objects (usually wasted thermal energy.)
Lubrication	A method of reducing unwanted energy transfer by reducing friction.
Useful energy	Energy transferred to where it is wanted in the way it is needed.
Wasted energy	Energy that is not usefully transferred.

Science —Cells and Organisation

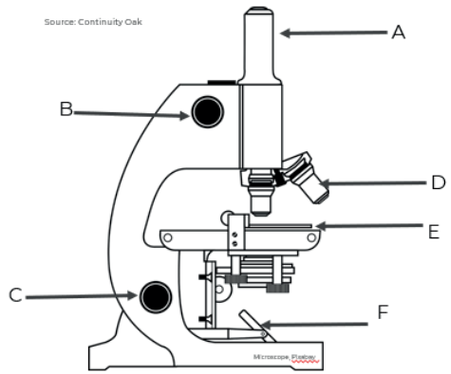
Sub-cellular structures	Function
Nucleus	Controls the cell's activities and contains genetic material
Cell membrane	Controls the movement of substances into and out of the cell
Cytoplasm	A jelly-like substance where most of the chemical reactions happen
Mitochondria	The site of respiration
Ribosome	Site of protein synthesis
Cell wall	Strengthens the cell and supports the plant, made of cellulose
Chloroplast	Site of photosynthesis (contains chlorophyll, a green pigment which absorbs light)
Permanent Vacuole	Filled with cell sap to help keep the cell turgid (stiff) to provide support

Levels of organisation: Cell → Tissue → Organ → Organ System → Organism	
Cell	The smallest unit for building all organisms e.g. muscle cell
Tissue	A group of cells with a similar structure and function, which work together to do a particular job e.g. muscle tissue
Organ	A group of different tissues, which all work together to do a particular job e.g. heart
Organ system	A group of different organs, which all work together to do a particular job e.g. circulatory system
Organism	A living thing (capable of the 7 life processes)

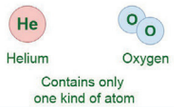
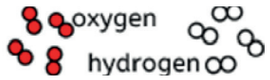
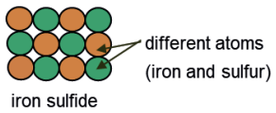
Key words and definitions	
Magnification	Magnification = size of image ÷ size of real object
Diffusion	The movement of particles from an area of high concentration to an area of low concentration
Specialised cell	Cell that is adapted to do a specific job e.g. sperm
Unicellular	Organism made of only one cell e.g. bacteria
Multicellular	Organism made of many cells e.g. human



Microscopes		
A	**Eyepiece lens**	Where the viewer looks through to see the specimen
	Clips	Keep the specimen secure on the stage
B	**Coarse focus**	Moves the stage up and down
C	**Fine focus**	Used to make the image clearer
D	**Objective lens**	Changes the magnification of the image
E	**Stage**	Where the specimen is placed
F	**Light**	Produces light to see the specimen

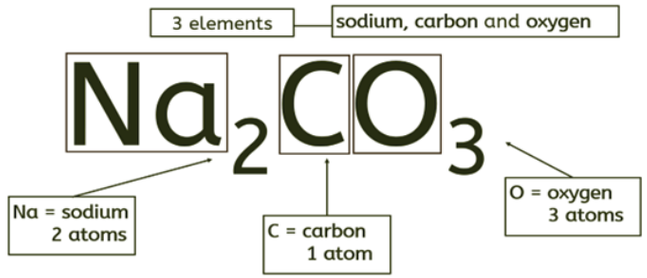


Science —Chemical Changes

Term	Definition	Example
Atom	The smallest particle of matter, which all things are made of.	
Element	Substance that contains only one type of atom. Listed on the periodic table.	
Molecule	Two or more atoms chemically bonded together. The atoms can be the same or from different elements.	
Compound	Contains two or more different elements chemically combined e.g. the elements iron and sulfur chemically combine to form iron sulfide compound.	

Metals	Non-metals
most are shiny	most are dull
most are hard	solid non-metals are soft and easy to cut, **except carbon as diamond**
most are strong	most are not strong
most are sonorous (makes a ringing sound when hit)	most are not sonorous
malleable (easy to reshape without breaking)	not malleable
most are ductile (can be drawn out into a long wire without breaking)	not ductile
most have very high melting and boiling points	most have very low melting and boiling points
some but not all are magnetic	not magnetic
conduct electricity	non-metals do not conduct electricity, **except carbon as graphite**
good at conducting heat	poor at conducting heat

Naming elements and compounds	
Element symbols	First letter is written as a capital letter. If there is a second letter it is written in lowercase e.g. sodium is written Na.
Naming compounds	When a metal reacts with a non-metal the metal name always comes first in the name of the compound. The ending for the non-metal is shortened and changed to '–ide'. E.g. iron + sulfur → iron sulfide.
Naming three element compounds containing oxygen	If there are three elements in the compound, and one of them is oxygen, the ending of the non-metal is shortened and changed to '–ate'. E.g. lithium + nitrogen + oxygen → lithium nitrate
Chemical formulae	Uses chemical symbols and numbers to show how many of each atom is present in a compound.

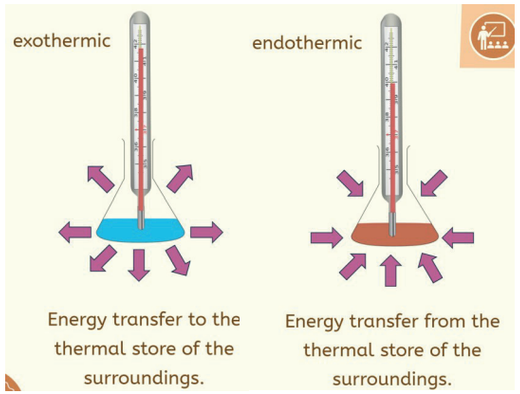


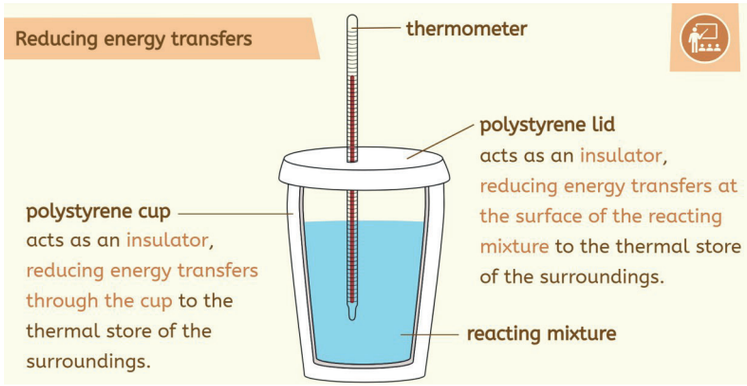
Chemical reactions (reactant A + reactant B —> product A + product B)	
Reactants	Chemicals at the start of the reaction.
Products	Chemicals made at the end of the reaction.
Chemical reaction	When chemicals react the atoms rearrange. The compound made has different properties to both of the elements that make it.
Conservation of mass	Atoms are not destroyed nor created during chemical reactions, so in any reaction: Total mass of reactants = total mass of products.

Term	Definition	Examples
State symbol	A symbol to show the physical state of the reactants and products.	(s) solid (l) liquid (g) gas (aq) aqueous—dissolved

Types of Reaction	
Term	**Definition**
Oxidation	In an oxidation reaction, a substance gains oxygen. E.g. magnesium + oxygen → magnesium oxide E.g. carbon + oxygen → carbon dioxide
Combustion	The process of burning fuels in oxygen. E.g. **Fuel + oxygen → carbon dioxide + water** **methane + oxygen → carbon dioxide + water**
Thermal decomposition	Type of reaction in which a compound breaks down to form two or more substances when it is heated. E.g. many copper carbonates take part in thermal decomposition **copper carbonate → copper oxide + carbon dioxide** $CuCO3(s) \rightarrow CuO(s) + CO_2(g)$

Exothermic and Endothermic Reactions		
Term	**Definition**	**Example**
Exothermic reaction	A reaction that transfers energy to the thermal store of the surroundings. This causes a rise in temperature (positive temperature change).	Combustion Respiration Hand warmer
Endothermic reaction	A reaction that transfers energy in from the thermal store of the surroundings. This causes a drop in temperature (negative temperature change).	Thermal decomposition Photosynthesis Cold pack

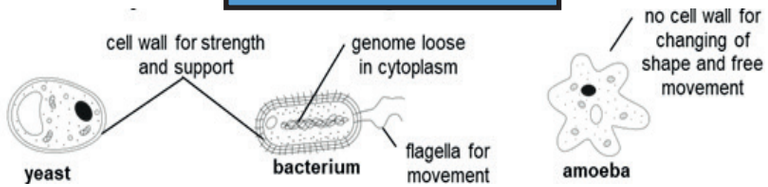




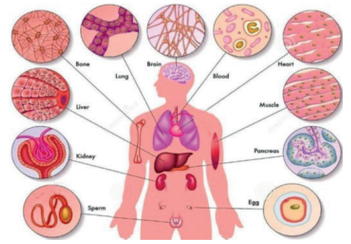
Science - Organ systems

Comparing unicellular organisms and multicellular organisms		
Feature	**Unicellular organism**	**Multicellular organism**
Number of cells	Made of one single cell	Made of many cells working together
Size	Usually microscopic	Usually larger and visible to the naked eye
Examples	Bacteria, Amoeba, yeast	Humans, Oak tree, Elephant
Specialization	One cell performs all life functions	Cells are specialized for different functions
Survival	Independent, can live alone	Cells depend on each other to survive
Uses	Yeast used in baking and brewing; bacteria used in digestion and medicine	Humans build societies; plants used for food, medicine, and oxygen

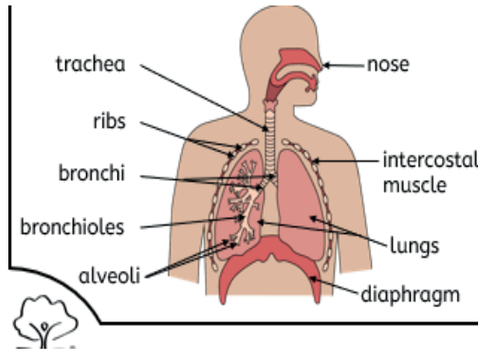
Unicellular organisms



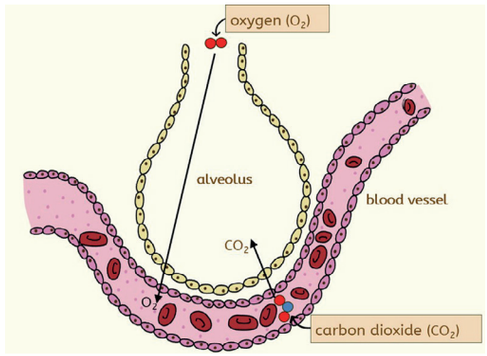
Multicellular organism



Gas exchange system	
Trachea	A tube that links the mouth to the lungs, also known as the windpipe.
Bronchi	the part of the gas exchange system that is a pipe leading from the trachea into the lung
Bronchioles	small air passages in the gas exchange system that branch from the bronchi into the alveoli
Alveoli	Thin-walled air sacs in the gas exchange system, where gas exchange takes place
Diaphragm	a sheet of muscle which contracts and relaxes to change the volume of the chest



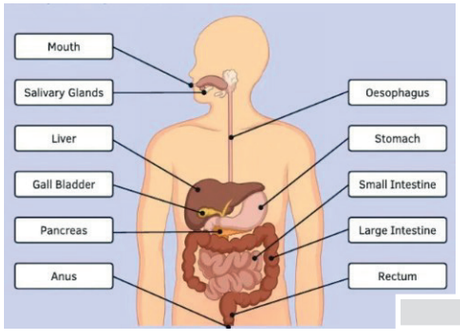
Features of the alveoli	
Thin walls	To provide a short diffusion pathway
Good blood supply	To maintain the concentration gradient for oxygen and carbon dioxide
Highly folded	To provide a large surface area of diffusion



The process of breathing		
	Inhalation	**Exhalation**
Intercostal muscles	contract	relax
Ribcage	pulled up and out	released down and in
Diaphragm	contracts and moves down-wards	relaxes and moves upwards
Volume in the chest	increases	decreases
Pressure in the chest	decreases	increases
Movement of air	into the lungs	out of the lungs

Science - Organ systems

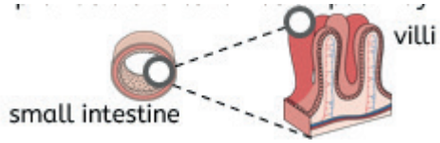
Digestive system



The human digestive system breaks down large, insoluble food molecules into small, soluble molecules so that they can be ab-

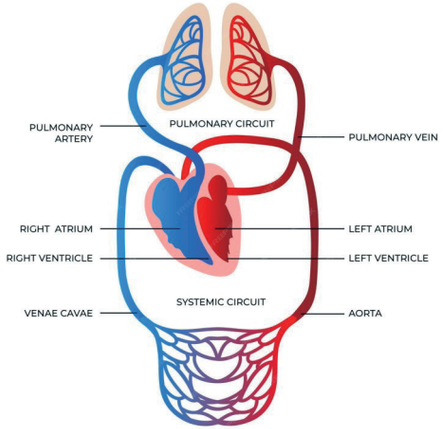
Mouth	Starts mechanical digestion (chewing) and chemical digestion (saliva)
Oesophagus	Transports food from the mouth to the stomach via peristalsis.
Stomach	Mixes food with gastric juices; begins breakdown of proteins.
Small Intestine	Continues digestion and diffuses nutrients into the bloodstream.
Large Intestine	Absorbs water and electrolytes; forms and stores faeces.
Rectum & Anus	Stores and eliminates waste from the body
Mechanical digestion	The physical breakdown of food
Chemical digestion	Using chemical substances to break down food

Adaptation	How it aids absorption
Large surface area	Villi increase the surface for absorption of nutrients
Thin walls (one-cell thick)	Short diffusion path allows nutrients to enter the blood quickly.
Rich blood supply (capillary network)	Maintains concentration gradients and rapidly transports absorbed nutrients.



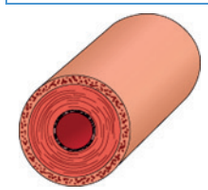
Circulatory system

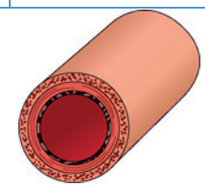
Part	Function
Heart	Pumps blood around the body
Arteries	Carry oxygen-rich blood away from the heart
Veins	Carry blood back to the heart
Capillaries	Tiny vessels where gas exchange happens
Blood	Transports oxygen, nutrients, and removes waste



CIRCULATORY SYSTEM

Arteries	Veins	Capillaries
Carry oxygenated blood away from the	Carry deoxygenated blood towards the	Carries blood between arteries and veins
Thick, muscular, elastic walls	Thinner walls	One cell thick
Narrow lumen	Wide lumen	Very narrow lumen
No valves	Has valves	No valves
High blood pressure	Low blood pressure	Very low blood pressure





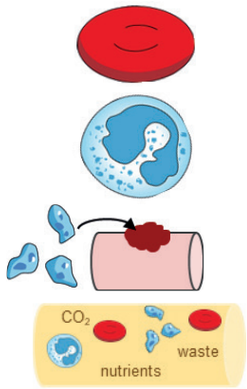
Science - Organ systems

Circulatory system

Blood is a fluid that transports substances, useful molecules and waste around the body.

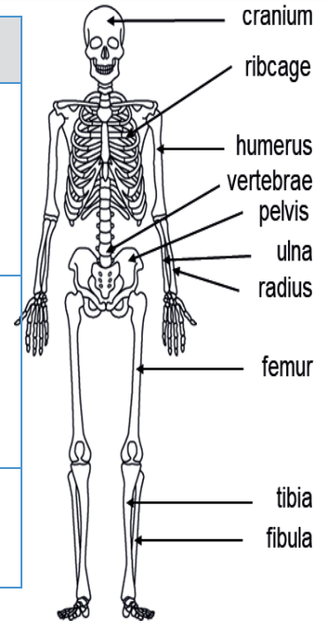
Blood helps the body to defend against diseases and to form scabs to heal cuts.

Blood components	Where it is made	Adaptations
Red blood cells	Bone marrow	Biconcave shape for large surface area; no nucleus for more haemoglobin; flexible.
White blood cells	Bone marrow	Different types adapted to attack pathogens; can change shape to engulf invaders.
Platelets	Bone marrow	Irregular shape to help in clotting; release chemicals to initiate clotting cascade.
Plasma	Liver (proteins) & small intestine (nutrients)	Straw-colored liquid that transports substances; dissolves gases, nutrients, hormones, waste.



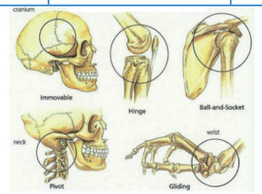
Skeletal system

Function	Description
Support	Provides a rigid framework that supports the body and maintains shape.
protection	Shields vital organs (e.g. skull protects the brain, ribs protect the heart).
movement	Works with muscles to enable body movement via joints and levers.

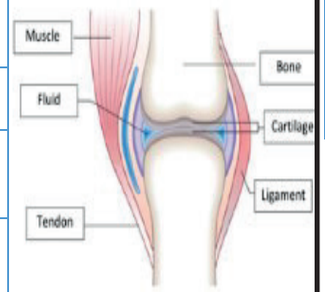


Joints, muscles and movement

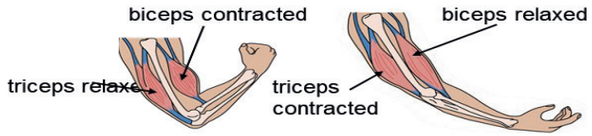
Type of joint	Example	Movement
Fixed	Skull	No movement
Hinge	Elbow/knee	Movement in one direction
Ball and socket	Shoulder/hip	Movement in all directions
Pivot	Neck	Rotates around a single axis



structure	function
ligaments	Connect bones to other bones
Tendons	Attach muscles to bones
Muscles	Contract to produce movement
Synovial fluid	Lubricates joints to reduce friction
Cartilage	Cushions joints; reduces friction between bones



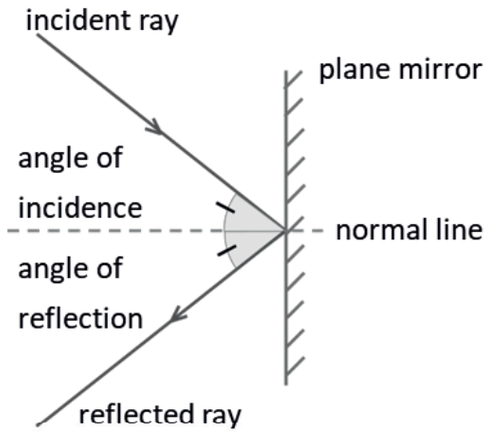
Antagonistic muscle pair	How they work together
Biceps and triceps	Biceps contract to bend the arm (flexion); triceps contract to straighten it (extension
Quadriceps and ham-	Hamstrings contract to bend the knee;

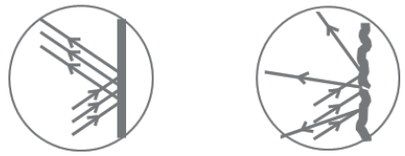


- **Muscle strength** varies based on muscle size, age, sex, training, nutrition and injury.

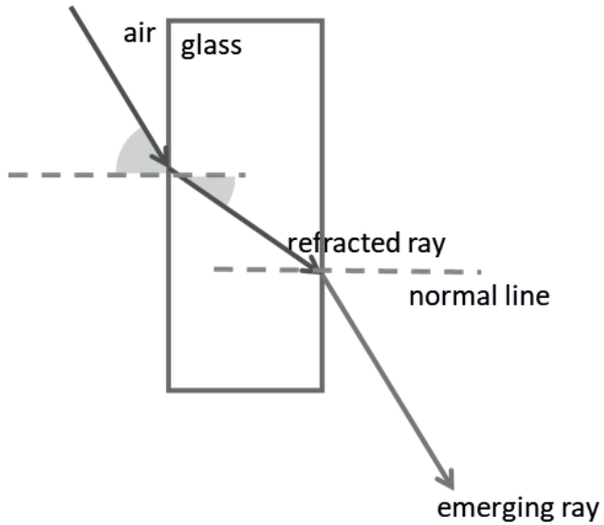
Science - Light

Light	
Key word	**Definition**
Shadow	Dark area produced by an object blocking light
Opaque	Light cannot pass through
Translucent	Allows some light to pass through, objects are unclear
Transparent	Allows light to pass through so objects can be clearly seen
Filter	Allows certain colours of light to pass through
Absorb	Take in
Reflect	Light bounces off a surface
Refract	Where a ray of light changes speed when entering a different density medium and so changes direction
Density	How tightly packed particles are, density = mass / volume
Medium	Substance the wave is travelling through
Spectrum of visible light	Band of colours seen in a rainbow (red, orange, yellow, green, blue, indigo, violet)
Speed of light	300 million m/s (metres per second)
Law of reflection	Angle of incidence = angle of reflection
Electromagnetic spectrum	A continuous spectrum of waves with different frequencies and wavelengths
Luminous	An object emits their own light
Illuminated	An object needs light shining on them

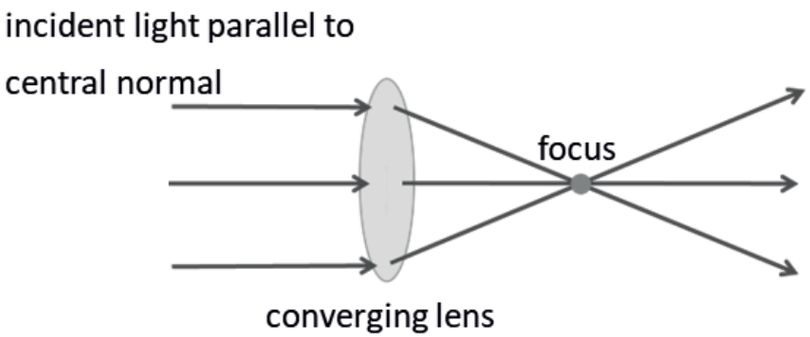


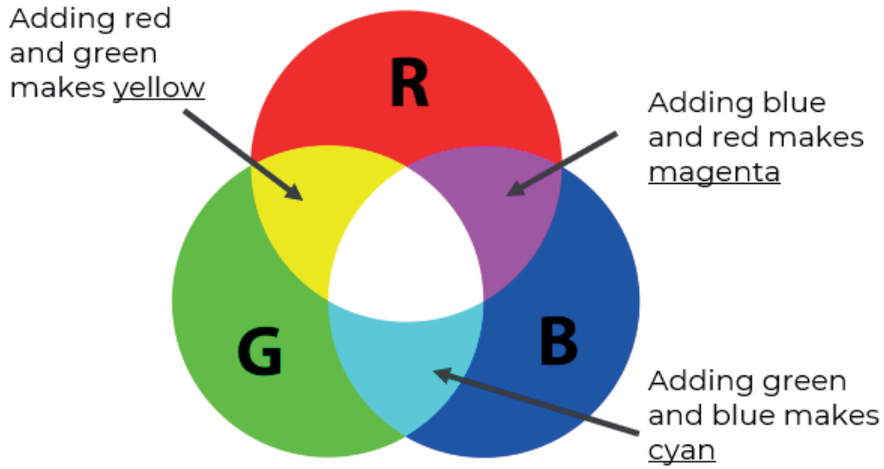


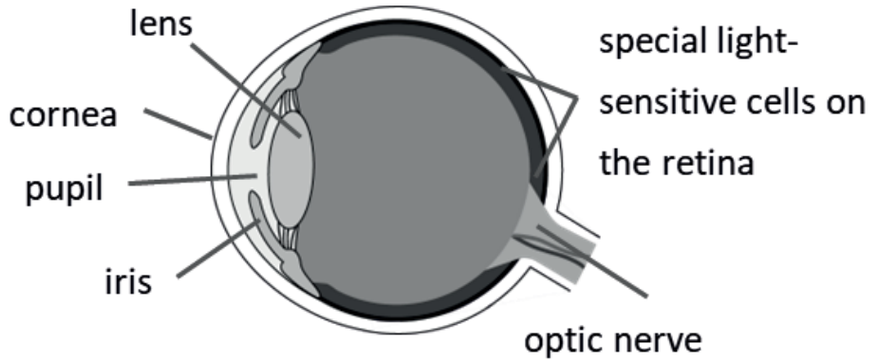
specular reflection **diffuse** reflection



Light	
Key word	**Definition**
Converging Lens	Form a focus and can form a clear image
Concave Lens	Refract light rays away from the normal
Primary colours	Red, Blue, Green
Secondary Colours	Magenta, Cyan, Yellow
Cornea	refracts light before it enters the eye
Iris	controls the size of the pupil
Pupil	lets light enter the eye
Lens	refracts light to form an image
Retina	made up of cells that detect light
Optic Nerve	carries electrical signals to the brain

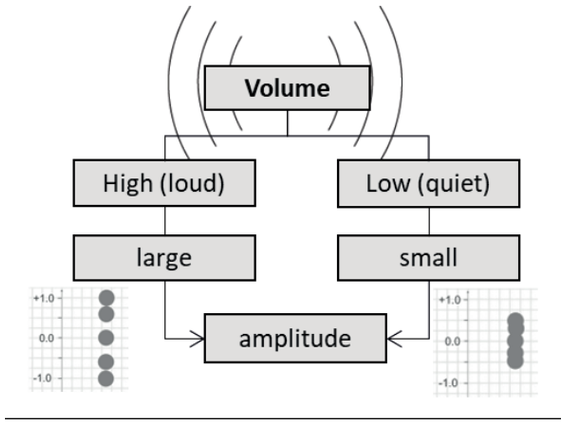


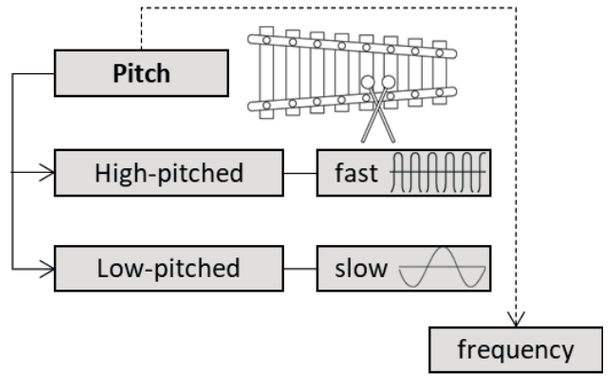


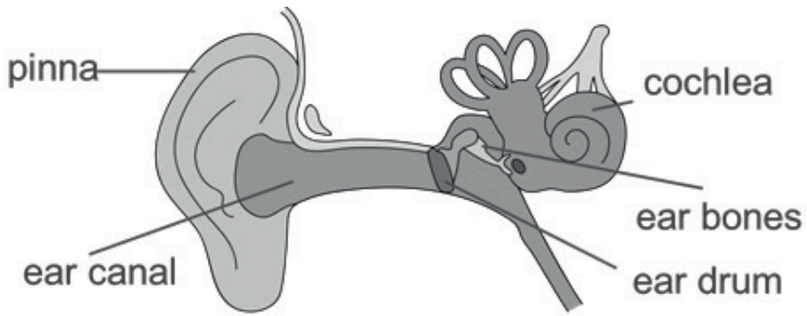


Science - Sound

Light	
Key word	**Definition**
Amplitude	Height from centre line to the peak, or from centre line to the trough of a wave
Wavelength	The length of 1 wave (in metres) from one point on one wave to the same point on the next wave
Frequency	The number of waves passing a point each second, measured in Hertz (Hz)
Period	The time taken for 1 wave to pass a certain point
Oscillation	Movement back and forth
Wave	The transfer of energy without transferring particles
Transverse	A wave produced when the oscillations are perpendicular to the
Longitudinal	A wave produced when the oscillations are parallel to the
Pitch	Increased frequency, higher sound. Decreased frequency, lower sound
Volume	Increased amplitude, louder sound. Decreased amplitude, softer sounder
Echo	Reflecting sound wave
Audible range for humans	20Hz—20,000Hz
Infrasound	Below 20Hz
Ultrasound	Above 20,000Hz
Decibels	Unit for volume of sound





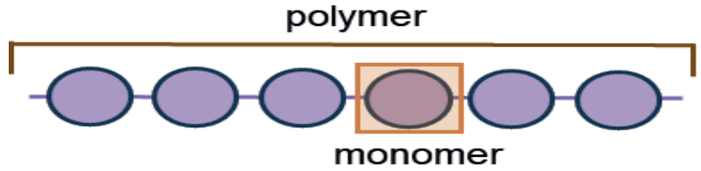


Science - Materials

Materials	
Key idea	**Explanation**
What is a material?	What something is made of (e.g. glass, plastic, paper)
Types of material	*Natural (from nature) or Synthetic* (made by humans).
Why materials matter	The chosen material depends on what the object is used for.
Why it's important to understand materials	Helps us pick the right material based on its properties (e.g. strong, flexible, waterproof).

Ceramics	
Key point	**Explanation**
What is a ceramic?	A hard, non-metallic material made by heating and cooling a soft substance.
How is it made?	Shape the soft material, heat it to a high temperature, then let it cool.
Example—clay ceramics	Made by shaping wet clay and heating it to make it hard and durable.

Polymers	
Key point	**Explanation**
What is a polymer?	A long chain molecule made of repeating units called *monomers*.
How are they made?	*Polymerisation—joining monomers together to form polymers.*
Natural polymers	Found in plants and animals (e.g. cellulose, starch, wool, chitin).
Synthetic polymers	Made using chemicals from crude oil (e.g. polyester, nylon, PVC, polyethene).



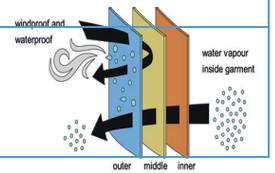
Factor	Effect on polymer properties
Different monomers	Different starting units lead to different properties in the final polymer.
Different chain length	Longer chains make polymers stronger and increase their melting point.

Property	Examples of uses
Good electrical insulators	Casing around electrical wires
Chemically unreactive	Food containers
Durable	Shopping bags
Mouldable	Plastic bottles

Polymers (continued)	
Key idea	**Explanation**
Population growth	More people means more demand for resources and raw materials.
Raw materials	Natural resources (e.g. crude oil) used to make products like fuels and plastics.
Resource shortage	Many raw materials are running out or becoming harder to find.
Consequence of competition	Can lead to **ethical** (fairness), **social** (impact on people), **economic** (costs), and **political** (global tensions) issues.

Issue/action	Explanation
Environmental impact	Plastics take hundreds of years to degrade; build up in landfills and oceans.
Health impact	Chemicals from polymers may disrupt reproduction in animals and humans.
Global effort	Policies like the plastic bag charge aim to reduce plastic waste.
Reuse	Using items again reduces waste but may not be possible for all plastics.
Recycle	Turns plastics into new products; helps conserve resources but needs sorting.
Incinerate	urns waste to generate energy; reduces volume but may release pollutants.
Landfill	Easy option but leads to long-term pollution and land use

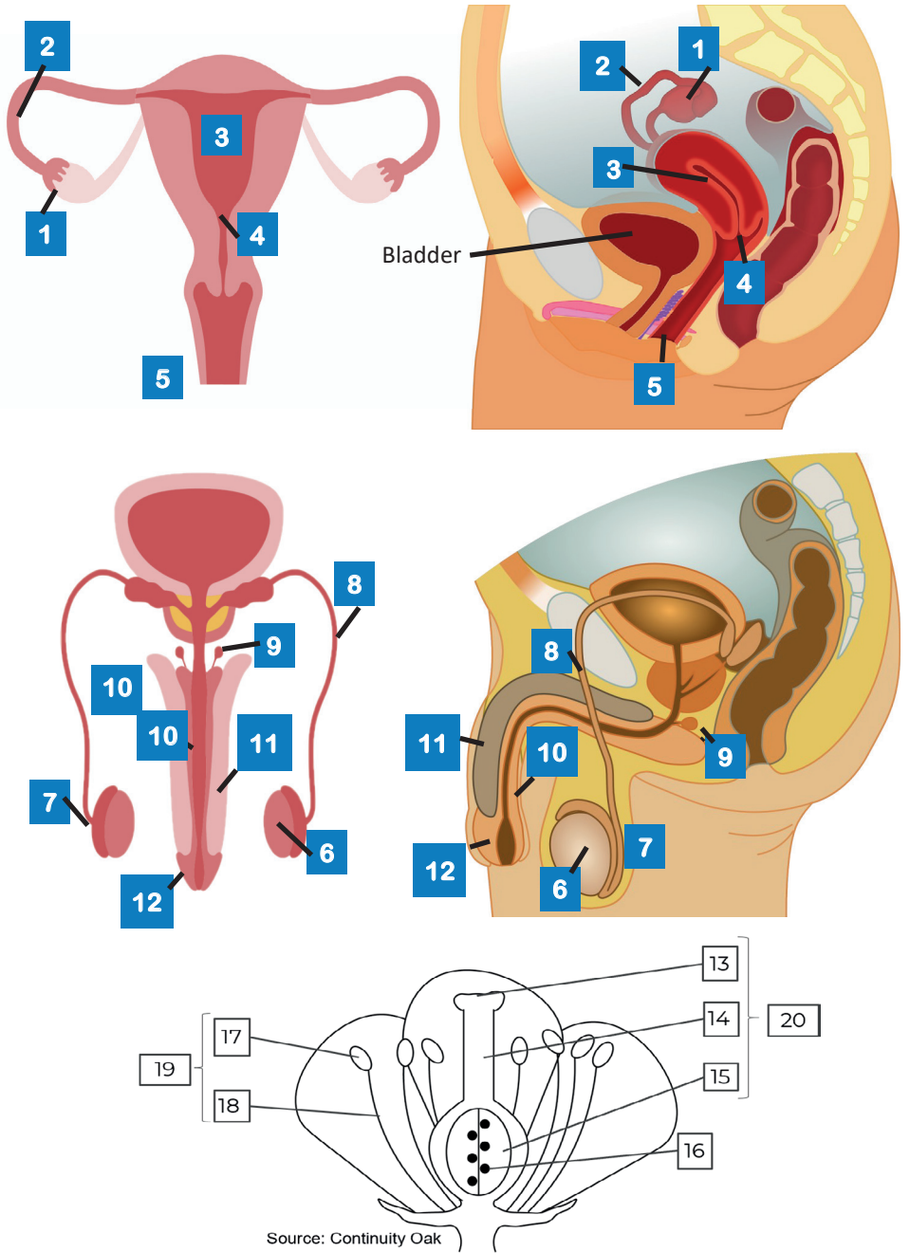
Composites	
Key idea	**Explanation**
What is a composite?	A material made from two or more different materials.
Why use composites?	Combines useful properties from each material to make something better.
Material properties	Each material keeps its own properties, and they work together.
Example	Breathable fabric used for outdoor clothing.
What affects the properties?	The materials used - How much of each is used - How they are structured



Composite material	Components	Uses
Fibre glass	Glass fibres +	Boat hulls, car parts, helmets
Carbon fibre	Carbon fibres + polymer resin	Aircraft, bicycles, high-performance sports gear
Concrete	Cement + sand/	Buildings, roads, bridges
Kevlar	Kevlar fibres +	Bulletproof vests, protective gear
Wood-plastic composite	Wood fibres +	Outdoor decking, fencing, furniture

Science - Life cycles

Reproductive Part		Function
Ovary	1	The organ where egg cells (ova) are both produced and mature, ready to be released each cycle
Oviduct	2	Tube connecting the ovary to the uterus and where fertilisation occurs
Uterus (womb)	3	The organ where an embryo grows into a foetus until birth
Uterus lining		The wall of the uterus; the destination for a fertilised egg
Cervix	4	A ring of muscle tissue between the uterus and vagina; this helps keep a foetus in the uterus during pregnancy
Vagina	5	The organ that is entered by the penis during sexual intercourse; sperm must pass through for fertilisation to be possible
Testes	6	The organ where sperm cells are made
Scrotum	7	The skin that holds the testes and helps maintain constant temperature
Sperm ducts	8	The tubes that carry sperm from the testes to the urethra
Prostate Glands	9	These add liquid, including nutrients for the sperm; the mixture of sperm cells and this fluid is called semen
Urethra	10	The tube that carries either urine or semen out of the body through the penis
Penis	11	The organ which carries sperm out of the male body and enters the vagina
Foreskin	12	The skin that protects the end of the penis
Pollen		Male gamete (sex cell) for flowering plants
Stigma	13	Structure that the pollen sticks to and where pollen enters the style
Style	14	Connects the stigma to the ovary, by a pollen tube
Ovary	15	Produces and stores the female gamete (ovule)
Ovule	16	The female gamete (sex cell), found in the ovary
Anther	17	Produces the male gamete (pollen)
Filament	18	Holds the anther to the edge of the flower
Stamen	19	Male reproductive organs; consists of anther and filament
Carpel	20	Female reproductive organs. consists of stigma, style and ovary



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Science - Life cycles

Human Reproduction	
Term	**Information**
Gametes	Sex cells: sperm (male) and egg (female)
Gestation	Process where foetus develops during pregnancy (fertilisation to birth), lasts approximately 40 weeks
Embryo	Collection of dividing cells up to 8 weeks
Foetus	The developing baby in the uterus during pregnancy from 8 weeks to birth
Placenta	Organ that provides the foetus with oxygen and nutrients and re-moves waste substances (carbon dioxide and urea)
Umbilical cord	Connects the foetus to the placenta
Amniotic fluid	Liquid that surrounds and protects the foetus
Birth	Uterus muscles contract and the baby passes through the cervix and out of the vagina
Puberty	Is the process of changes by which a child's body becomes an adult body capable of reproduction usually during teens

Menstrual Cycle	
Menstrual cycle	Body's preparation for pregnancy, controlled by hormones, cycle stops if egg is fertilised by sperm
Duration	Approximately 28 days
Day 1 - 5	Menstruation (period): uterus lining breaks down and is shed through the vagina.
Day 6 - 28	Uterus lining thickens to prepare for pregnancy
Day 14	Ovulation: release of an egg cell from the ovary
Menstrual cycle pauses	If the egg is fertilised an embryo develops and implants into the uterus wall = pregnancy

Plant Reproduction	
Term	**Information**
Pollination	Pollen transferred from the anther to the stigma, by wind or insects
Fertilisation	Fusing of the nuclei from a male and female sex cell
Fertilisation stages	**Stage 1:** The pollen grain on the stigma grows a pollen tube down the style to the ovary
	Stage 2: The nucleus of the pollen grain then travels down to meet the ovule
	Stage 3: The nucleui fuses and this is fertilisation. Fertilised ovule becomes the seed and the ovary becomes a fruit
Seed	Structure that contains the embryo of a new plant
Fruit	Structure containing seeds
Seed dispersal	Seeds spread to reduce competition for light, nutrients and water
Methods of seed dispersal	Water, wind, animals, explosion

Variation and Inheritance	
Term	**Information**
Variation	The differences in characteristics between living things of the same species, e.g. different coloured fur
Inherited variation	Different characteristics due to differences in genes, inherited from parents
Environmental	Different characteristics due to impact of surroundings, e.g. diet, lifestyle, injury
Continuous data	Where differences can have any numerical value between a maximum and minimum, for example, height and weight
Discrete data	Where differences can only be grouped into categories, e.g. eye colour and blood group
Inheritance	When living things reproduce, they pass on characteristics to their offspring via genes e.g. eye colour
DNA	Is a chemical made up of two long strands, arranged in a double-helix structure; which carries genetic information

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