



Haggerston
School



Year 7 Knowledge Organiser Term 1

2024

Aspiration Creativity Character

Knowledge Organiser - Contents

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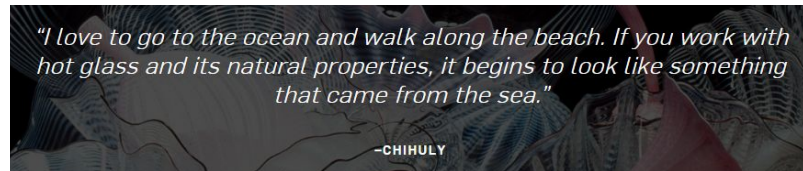


Term 1

Dale Chihuly

1941

Since the late 1960s, Dale Chihuly has been using the art and craft of glassblowing to create dynamic, flamboyant and colour-saturated forms. His artworks can be found across the U.S. and worldwide, and they range from undulating, nested vessels to whimsical sea creatures, also encompassing architectural installations. In the UK Chihuly has large scale installations at Kew Gardens and the Victoria and Albert Museum. Chihuly has up to 18 people working on his sculptures at a time, and draws inspiration from architecture and design, painters and sculptors, Native American baskets, and nature. People often have emotional reactions to



Dale Chihuly's sculptures



Sea creatures



Word bank: line, colour, shape, form, 3D, glass, sculpture, translucent, organic, installation, outline, composition.



Practical application of art history:

1. Create a drawing of a value (tonal) scale. Can you use tone to create a drawing of one of the sea creatures?
2. Recreate one of Chihuly's sculptures using a pen – can you show different tones and complex detail by using mark making techniques?
3. Recreate Chihuly's work using only outlines of the shapes.
4. Design a Chihuly-inspired sculpture of your own using the sea creatures as your starting point. Write a sentence explaining where you would like your public sculpture to be displayed and why.
5. Write in full sentences WWW and EBI.

Self Quiz:

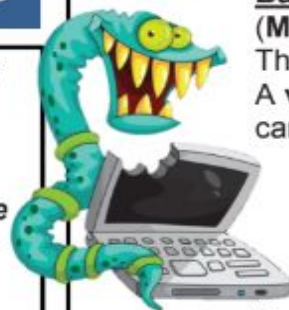
1. Can you write a brief paragraph describing how the work of Dale Chihuly makes you feel using key art terms?
2. What do you think inspired these works of art?
3. Can you write a summary of Dale Chihuly's biography?
4. What material does Chihuly use to create his sculptures?

ART

YR7 Computing: E-Safety and Flowcharts



Advanced: Digital footprint is a trail of data you create while using the Internet like websites you visit, emails you send, messages / pictures you post. Once you do something online it is **there forever**. In the future this could be seen by your friends, employers, or by the colleges and universities you apply to
THINK BEFORE YOU POST



Basic: Viruses are a type of malware (**MAL**icious + soft**WARE**)

They are programs that can **attack** computers and phones. A **virus** is a program that causes harm to your computer and can steal information. A virus does 3 things

1. Attaches itself to another file / program
2. Copies itself
3. Spreads to other computers

Spyware is also a type of **MALWARE**.

Basic: Symbol	Name	Meaning
	Start / End	Represents the start or end of a flowchart
	Connector	Connects the shapes and shows how data moves
	Decision	Shows where a decision or choice takes place
	Process	A command or calculation
	Input / Output	Collects data from the user or outputs on the screen
	Subroutine	Links to another Flowchart that carries out a specific task



Basic: Hacker: A Hacker is someone who gets access to your computer, phone or online account without permission. Despite what you see on films this is most often done via **Social Engineering**. This means being sneaky like looking over your shoulder when you put in your password, tricking you into sending your login details by email or just guessing your password if its weak.

Advanced: Flowcharts

Algorithm: A set of steps / instructions, logically set out that if followed tell you how to complete a task, calculation or write a computer program
Analytical thinking: A kind of problem solving where by a person works out how to solve a problem or task using a computer program or algorithm

Decomposition: This is part of **Analytical thinking**. This is when a larger problem or task is broken into a series of smaller steps

Abstraction: This is part of **Analytical thinking**. This is when during the process of creating an algorithm or computer program, unimportant details are taken out and ignored. This helps to create a more efficient program / algorithm

Actuator: A motorised device that makes something move – like a door opening or closing

Sensor: A device that detects something outside of a computer system and creates a signal in the computer system – like a motion detector

Knowledge Organiser: Computational Thinking

What is Computational Thinking

Computational thinking allows us to take a complex problem, understand what the problem is and develop possible solutions. We can then present these solutions in a way that a computer, a human, or both, can understand.

The Four Cornerstones of Computational Thinking are: Decomposition, Pattern Recognition, Abstraction and Algorithms

Decomposition

Decomposition is one of the four cornerstones of Computer Science. It involves breaking down a complex problem or system into smaller parts that are more manageable and easier to understand. The smaller parts can then be examined and solved, or designed individually, as they are simpler to work with.



Pattern Recognition

When we decompose a complex problem we often find patterns among the smaller problems we create. The patterns are similarities or characteristics that some of the problems share.

Pattern recognition is one of the four cornerstones of Computer Science. It involves finding the similarities or patterns among small, decomposed problems that can help us solve more complex problems more efficiently.

Abstraction

Once we have recognised patterns in our problems, we use abstraction to gather the general characteristics and to filter out of the details we do not need in order to solve our problem.

Abstraction is the process of filtering out – ignoring - the characteristics of patterns that we don't need in order to concentrate on those that we do. It is also the filtering out of specific details. From this we create a representation (idea) of what we are trying to solve.

Key Vocabulary

Abstraction	The process of separating and filtering out ideas and specific details that are not needed in order to concentrate on those that are needed.
Algorithm	A sequence of logical instructions for carrying out a task. In computing, algorithms are needed to design computer programs.
Decomposition	The breaking down of a system into smaller parts that are easier to understand, program and maintain.
Pattern Recognition	Finding similarities and patterns in order to solve complex problems more efficiently.
Program	Sequences of instructions for a computer.
Programming	The process of writing computer software.

Knowledge Organiser: Designing an Algorithm

Designed an Algorithm

Before designing an algorithm it is important to first understand what the problem is. Algorithms can be designed using pseudocode or a flowchart, and the standard notations of each should be known.

An algorithm is a plan, a logical step-by-step process for solving a problem. Algorithms are normally written as a flowchart or in pseudocode.

The key to any problem-solving task is to guide your thought process. The most useful thing to do is keep asking 'What if we did it this way?' Exploring different ways of solving a problem can help to find the best way to solve it.

Understanding the problem

Before an algorithm can be designed, it is important to check that the problem is completely understood. There are a number of basic things to know in order to really understand the problem:

What are the **inputs** into the problem?

What will be the **outputs** of the problem?

In what order do **instructions** need to be carried out?

What decisions need to be made in the problem?







Are any areas of the problem repeated?

Pseudocode

Most programs are developed using programming languages. These languages have specific syntax that must be used so that the program will run properly. Pseudocode is not a programming language, it is a simple way of describing a set of instructions that does not have to use specific syntax.

Flowcharts

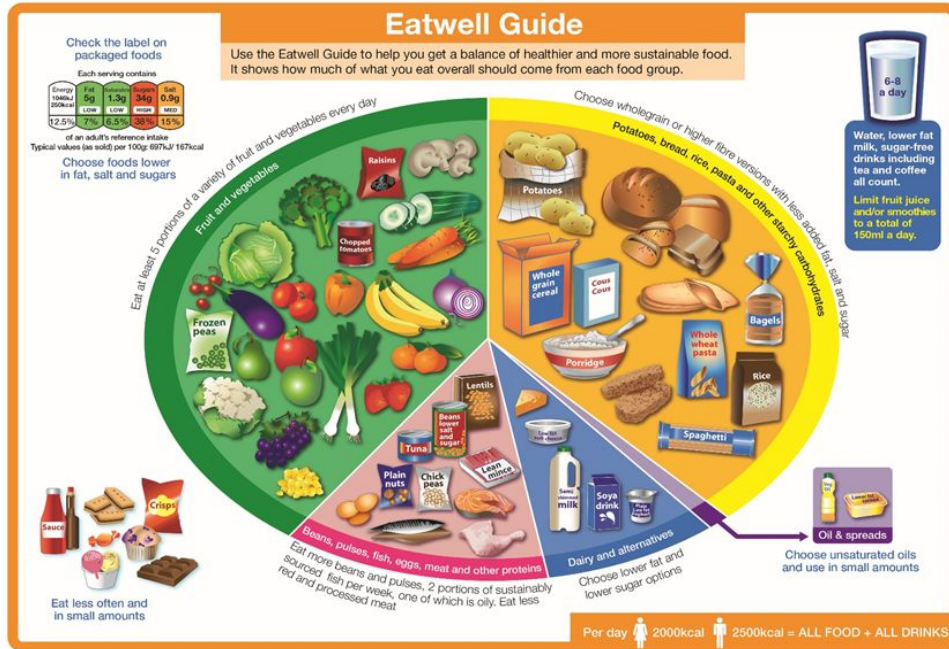
A flowchart is a diagram that represents a set of instructions. Flowcharts normally use standard symbols to represent the different types of instructions. These symbols are used to construct the flowchart and show the step-by-step solution to the problem.

Name	Symbol	Usage
Start or Stop		The beginning and end points in the sequence.
Process		An instruction or a command.
Decision		A decision, either yes or no.
Input or Output		An input is data received by a computer. An output is a signal or data sent from a computer.
Connector		A jump from one point in the sequence to another.
Direction of flow		Connects the symbols. The arrow shows the direction of flow of instructions.

Key Vocabulary

Algorithm	A sequence of logical instructions for carrying out a task. In computing, algorithms are needed to design computer programs.
Condition	In computing, this is a statement or sum that is either true or false. A computation depends on whether a condition equates to true or false.
Flowchart	A diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs.
Input	Data which is inserted into a system for processing and/or storage.
Instruction	A single action that can be performed by a computer processor.
Iteration	In computer programming, this is a single pass through a set of instructions.
Loop	A method used in programming to repeat a set of instructions.
Notation	A system of written symbols or graphics used to represent something in order to aid communication and understanding.
Output	Data which is sent out of a system.
Program	Sequences of instructions for a computer.
Programming language	A language used by a programmer to write a piece of software.
Pseudocode	Also written as pseudo-code. A method of writing up a set of instructions for a computer program using plain English. This is a good way of planning a program before coding.
Selection	A decision within a computer program when the program decides to move on based on the results of an event.
Syntax	Rules governing how to write statements in a programming language.

Cooking & Nutrition



Preparing Food

The way you prepare or cook food affects the sensory experience of eating it.



Cutting Techniques

Bridge

Cuts round foods

Claw

Cuts long & flat foods

Cross Chop

Finely cuts food

Dietary Requirements: Lifestyle choice

Vegetarian: Does not eat any meat

Vegan: Does not eat any product from an animal

Pescatarian: Does not eat meat but does eat Fish

Muslim: Does not eat pork, drink alcohol and meat must be Halal

Jewish: Does not eat pork, dairy and meat cannot be mixed, meat must be Kosher.

Hindu: Does not eat beef as Cows are sacred

Sensory Analysis

Eating is a sensory experience, affecting all of our senses. Sensory analysis is carried to improve the experience.

Sight:
Stringy, firm, dry, heavy, flaky, crumbly, flat, crisp, lumpy, fizzy, fluffy, smooth, hard, mushy, dull, cuboid, sticky, fragile...

Sound:
Crunch, plop, slurp, sizzle, crack, rustle, snap, crackle, pop

Smell: Fresh
Aromatic, spicy, floral, bland, tainted, bitter, perfumed, citrus, savoury, rotten, sweet,, strong, mild, fragrant, musty, weak, scented

Taste: Sweet, cool, bitter, zesty, warm, hot, sour, sharp, rich, bland, rotten, tart, strong, citrus, mild, umami, tangy, salty, savoury, spicy

Texture:
Brittle, rubbery, stodgy, bubbly, gritty, sandy, mushy, tender, soft, firm, flaky, crisp, fluffy, crumbly, lumpy, smooth, hard, sticky, grainy

Nutrients	Use in the body	Sources
Carbohydrates	To provide energy	Cereal, bread, pasta, rice & potatoes
Protein	For growth and repair of muscles	Fish, meat, eggs, beans, pulses and dairy products
Fat	To store energy in the body, insulate heat, protects bones & organs from knocks	Butter, oil, nuts, cheese and other dairy foods
Vitamins & Minerals	Needed in small amounts to maintain a healthy body	M= Dairy foods, Meat, Fruit & Veg. V = Fruit & Veg
Fibre	To help digestion	Vegetables, bran
Water	Needed for cells and body fluids	Fruit juice, milk, water

Kitchen Equipment



Food Science: Function of Ingredients - YEAST



Bread is made using flour, warm water, yeast, sugar and a pinch of salt. The different ingredients have different functions:
Flour = Structure
Salt = provides flavour and helps to set the structure
Warm water = activates yeast and combines ingredients
Sugar = Feeds the yeast
Yeast = raising agent that creates CO₂

Once the ingredients have been mixed a dough is formed. This needs to be **kneaded** so it becomes stretchy and elastic. This makes the bread light and airy in texture and a little chewy on the outside. It also helps to mix all the ingredients together.



Leaving the dough to **proof** is also important as this is the time the yeast needs to ferment, in which it releases CO₂

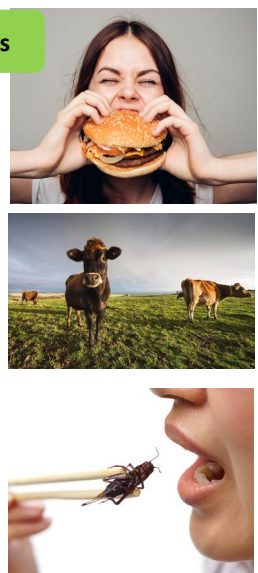
Food & The Wider World: Alternative Proteins

We need food to survive, however the type of food we eat, how it is packaged, where it has travelled from has a huge **impact on the environment**.

Eating **meat** has a particularly high impact on the environment as the animal requires food, water to live, space to roam and time to grow.

Farmers will need to drive tractors to deliver food this also releases **pollution** into the atmosphere.

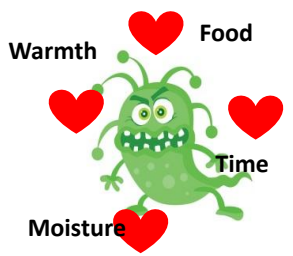
Once the animal has been slaughtered the meat will need to be kept in the **fridge** so not spoil. This means that energy is needed to power the fridges.



Meat is one of the best sources of protein, which our body needs to grow and repair muscles and cells. However many people are choosing to eat bugs such as crickets, mealworms as they are very high in protein however require far less food, water, space and time to grow.

Other non animal proteins include chickpeas, nuts, lentils, kidney beans. These are good source of protein but not as high as protein found in animals.

Bacteria is harmful **micro-organism** that can ruin the taste but also make food **dangerous** to eat. To multiply (and become dangerous) bacteria needs enough food and moisture, the right temperature and enough time. To stop the multiplying of bacteria, you must limit these conditions.



You can use the **4 CS** to do this:

- Cross Contamination:** preventing raw foods (meat) from contacting ready to eat food.
- Cooking:** Kills the bacteria
- Chilling:** Keeps it dormant (not active)
- Cleaning:** Kills bacteria, but also prevents food and moisture from being available.

Food Spoilage (Food Safety)



Introduction to Drama

The 6Cs of Drama

- | | |
|-----------------|------------------------|
| • Co-operation | Working together |
| • Creativity | Using my imagination |
| • Communication | Speaking and listening |
| • Confidence | Being brave |
| • Concentration | Focus |
| • Consideration | Respect |

The Features of a Frozen Picture

Frozen pictures are like photographs; they capture a moment and tell the audience a story. You must use the features of a frozen picture to ensure the story is clear for the audience.

- Awareness of the audience
- No blocking
- Exaggerated facial expressions
- Exaggerated gestures
- Different levels
- Creative use of space

Challenge:

Points of contact

Physical theatre (when you use your body to make an object)

Self Quiz – LOOK, COVER, WRITE, CHECK & CORRECT

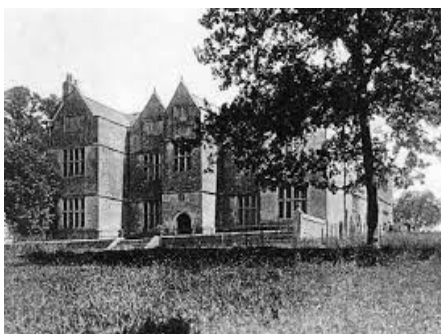
1. The key words and their meaning.
2. In the boxes provided, sketch 3 frozen pictures entitled ‘The Door’. Annotate the boxes by labelling them with the correct features of a frozen picture.
How could you make the door using your body? What is behind it?

Darkwood Manor

Improvisation means creating drama. We can do this spontaneously which means 'on the spot' or we can rehearse this which means we talk, plan and practise.

Use the whole group role play you did in your lesson to identify the success criteria below:

To make our spontaneous improvisation successful, we need to:



Key words:

Teacher in role – The teacher takes on a role/ character by changing their voice face and body.

Character – changing your voice, face and body to become someone different in performance.

Narration – telling the story.

Tension – A feeling of nervousness, discomfort, fear and excitement.

Climax – The peak of tension in a performance.

Cliff hanger – Ending a performance at a crucial moment leaving the audience with uncertainty and suspense.

Suspense - a state of feeling excited or anxious uncertainty about what may happen.

Atmosphere – a feeling or mood that surrounds us.

Soundscape – layering sounds and words to communicate meaning to an audience.

Setting – where the performance takes place

Self Quiz – LOOK, COVER, WRITE, CHECK & CORRECT

Make sure you understand the meaning of the key words in bold.

Task

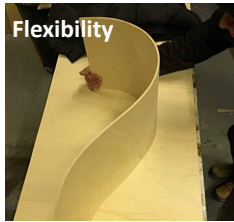
Use the pictures to write a script narrating your journey into the manor. Write in the first person, think about the senses and add interesting language.

Material Properties describes what the product can do.



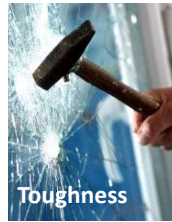
Hardness

Ability to resist cutting and indentations to its surface



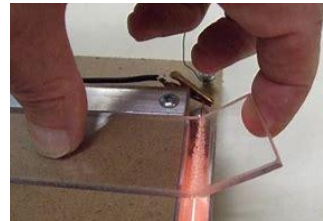
Flexibility

Ability to bend without breaking and then spring back to its original shape.

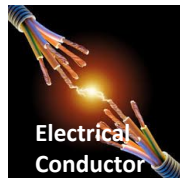


Toughness

Ability to withstand shock

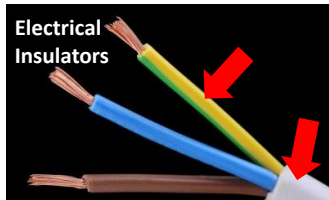


Ability to be hammered, rolled or pressed into shape without breaking. Heat is used to help the material become more malleable



Electrical Conductor

Ability to pass/transfer electrical currents



Electrical Insulators

Ability to hold passing electrical currents, without conducting them.



Heat Insulating

Ability to hold heat in



Heat Conducting

Ability to transfer heat



Water Resistant

Ability to withstand water or moisture – also known as Water Repellent.



Absorbent

Ability to absorb/soak up water or moisture (opposite to water resistant)



Ductile

Ability to be stretched into a length without breaking

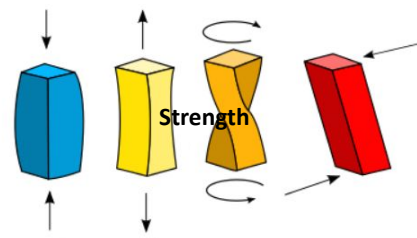
Durable

Ability to last a long time



Elasticity

Ability to be stretched and return to its original size



Strength

Ability to withstand being squashed (compression), pulled (tension), twisted (torsional) and Sheared (two pushing or pulling forces acting close together but no directly opposite).

Choose a product and explain the use of materials based on its properties and characteristics



Brittle

Ability to break easily

Material Characteristics describes the aesthetics of a material – the textures, appearance, shape and size.



Texture describes how something feels.

Appearance describes how something looks.

'The fabric is soft and fluffy in texture and a deep red in colour'

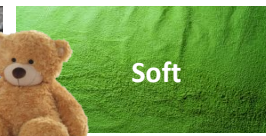
Important: Sometimes a texture descriptor can also describe the appearance. The pictures below have been labelled T= Texture and A=Appearance.



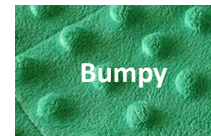
Fluffy



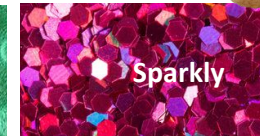
Rough



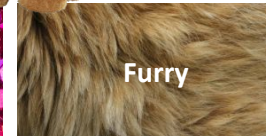
Soft



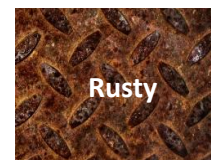
Bumpy



Sparkly



Furry



Rusty



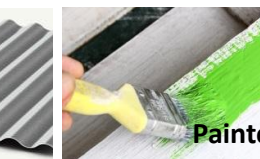
Shiny



Stained



Wavy



Painted



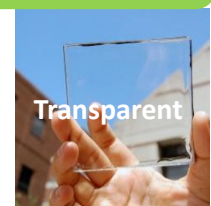
Rubbery



ENGRAVED WOOD



Smooth



Transparent





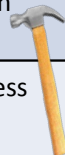


Frosted (Translucent)










Opaque object (Wood)

Opaque



Ferrous Metals			
	Composition	Properties/ Characteristics	Uses
 <p>Cast Iron</p>	Re-melted pig iron* with additions	Hard skin but brittle soft core. Heavy. Rigid under compression. Cannot be bent or forged . Corrode easily unless protected (enamelled)	Parts with complex shapes made via casting. Frying pans, machine parts, vices.
 <p>Mild Steel</p>	Iron and 0.15-0.30% Carbon	High tensile strength, ductile, tough, fairly malleable, poor resistance to corrosion.	Nails, screws, nuts, bolts, plate, sheets, car bodies
<p>Medium Carbon Steel</p>	Iron and 0.30-0.70% Carbon	Stronger and harder than mild steel but less ductile, tough and malleable	Garden tools such as trowels, forks, and springs
 <p>High Carbon Steel</p>	Iron and 0.70-1.40% Carbon	Hardest of the carbon steels; less ductile, tough or malleable.	Hammers, chisels, screwdrivers, drills, files
 <p>Stainless Steel</p>	74% Steel (Iron & Carbon) 18% Chrome 8% Nickel	Resistant to corrosion (non toxic), hard, tough but difficult to work with. Shiny in appearance.	Sinks, Dishes, Cutlery
<p>High Speed Steel</p>	Medium Carbon Steel + Tungsten, Chromium and Vanadium	Retains hardness at high temperatures; resistant to high level of frictional heat.	Drills, lathes, cutting tools.
 <p>High Tensile Steel</p>	Low Carbon Steel + Nickel and Chrome	Extremely hard and tough	Gears, shafts, engine parts, turbine blades.




*Pig Iron is the iron that comes from the furnace first. It has not been refined.
Alloys = mixture of two or more pure metals to improve performance






Non Ferrous Metals			
 <p>Aluminium</p>	Pure Metal	Light, soft, ductile, malleable, good conductor of heat and electricity, corrosion resistant, polishes well. Easily welded .	Aircraft bodies, saucepans, cooking utensils, packaging, foil, cans, window frames
<p>Copper</p>	Pure Metal	Malleable, ductile, tough, good conductor of heat/electricity, easily joined, corrosion resistant, easily soldered .	Electrical wire, hot water tanks, heating pipes, PCBs
<p>Brass</p>	65% Copper 35% Zinc	Corrosion resistant, can conduct electricity/heat, easily joined, casts well, attractive golden colour	Castings, Ornamental decorations, boat fittings, musical instruments
 <p>Bronze</p>	90% Copper 10% Tin	Tough, hardwearing, corrosion resistant, aesthetically pleasing	Bearings, castings for statues, coins, valves (air, water, and steam)
 <p>Lead</p>	Pure Metal	Very soft, heavy, malleable, corrosion resistant, low melting point, easy to work with	Sold solders, roof coverings, protection against x-ray radiation
<p>Tin</p>	Pure Metal	Soft, ductile and malleable, low melting point, corrosion resistant. Mostly used within alloys rather than on its own.	Soft solders 
<p>Tin Plate</p>	Steel sheet coated with Tin	Mild steel gives it strength, tin coating bends with the steel, it is non toxic	Tin cans 
<p>Pewter</p>	91% Tin 7.5% Antimony 1.5% Copper	Malleable, casts well, low melting point, corrosion resistant	Decorative features (jewellery), plates, cups 
 <p>Zinc</p>	Pure Metal	Low melting point, extremely corrosion resistant, easily worked	Coating of steel bins, buckets, watering cans (galvanising)

DT



POLYMERS (PLASTICS)

Thermoplastics (Thermoforming Plastics)		
	Properties/Characteristics	Uses
LDPE Low Density Polythene	Available in a range of colours, tough, flexible, good electrical insulator and chemical resistance	Squeezy bottles (washing up liquids, detergents), bin liners, and carrier bags
HDPE High Density Polythene	Available in a range of colours, hard, stiff, good chemical resistance, can withstand high impact, food safe	Milk crates, bottles, pipes, buckets and bowls 
PVC Polyvinyl Chloride	Stiff, hard, tough, good chemical and weather resistant	Pipes, guttering, roofing sheets, window frames
Polystyrene	Available in a range of colours, stiff, hard, lightweight, safe with food, good water resistance	Disposable plates, cups, food containers 
Expanded Polystyrene	Lightweight, absorbs shock, good sound and heat insulator	Sound and heat insulation, protective packaging, crash hats 
PP Polypropylene	Hard and lightweight, good chemical resistance, can be sterilised, good impact resistance, easily shaped incl complex forms, durable, available in variety of colours. Food safe.	Medical equipment, syringes, creates, string, rope, outdoor furniture and toys, food containers with built in dividers or hinges.
Acrylic	Stiff, hard (however does easily scratch), available in a variety of finishes (clear, frosted, opaque, mirrored, live edge), durable, weather resistant, tough in large/brittle in small surface area	Signs, Stands, Point of Sale Units., car rear light covers, baths Can also be referred to as Perspex
ABS Acrylonitrile butadiene styrene	Tough, high-impact strength, lightweight, scratch resistant, chemical resistant, very aesthetically pleasing	Kitchenware, safety helmets, car parts, telephones, food mixers, toys (LEGO)
HIPS High Impact Polystyrene	Tough, rigid, high impact strength, readily available in a wide variety of colours. Food safe.	Yoghurt pots, disposable cutlery & cups, bathroom cabinets, toilet seats

Thermoset Plastics		
	Properties/ Characteristics	Uses
Urea Formaldehyde	Stiff, hard, brittle, heat resistant, good electrical insulator, available in a range of colours	White electrical fittings (plug sockets) domestic appliance parts (kettles), wood glue (PVA) 
Melamine Formaldehyde	Stiff, hard, strong, range of colours and finishes, scratch and stain resistant, odourless, food safe	Tableware, decorative laminates for work surfaces, electrical insulator 
Phenol-Formaldehyde (Bakelite)	Stiff, hard, strong, brittle, heat resistant	Dark electrical fittings, saucepan and kettle handles 
Epoxy Resin	Good chemical and heat resistance, electrical insulator, durable.	Used largely as an adhesive (glue) to bond different materials together – wood, plastic and metal 
Polyester Resin	When laminated with glass fibre it becomes tough, hard and strong. It is brittle without reinforcement.	GRP (Glass Reinforced Plastic) boats, chair shells and car bodies. 

Using your existing knowledge of Thermoplastics and Thermosets (see the first page 'Product Design') and the above tables to explain why particular polymers have been use for particular product uses. Eg:

- Why is expanded polystyrene suitable for protective packaging?
- Why would Urea Formaldehyde be used in the casing of a computer?
- Why is Polypropylene used to make outdoor children toys?

DT

Wanderlust

What Is Travel Writing?

Travel writing is writing about visiting different places.

It can appear as a factual piece of writing, such as a newspaper article, informing readers about a specific destination.







It can also be in the form of literary nonfiction, such as a longer book which tells someone's story.

Genre Conventions (what to expect)

Travel writing is usually written in the first person – using 'I'.

As literary non-fiction, it aims to entertain as well as inform. It often includes descriptions of places and people the writer has met there.

It is often descriptive – telling you about the place using powerful vocabulary and language techniques.

Texts	Context	Key Vocabulary
<p>Captain Robert Falcon Scott - <i>Captain Scott's Diary (Extract)</i></p> 	<p>Captain Scott was a Royal Navy officer and explorer who led two expeditions to the Antarctic regions. His diary tells the tale of his final expedition. (Written 1912)</p>	<p>Expedition = A journey with a purpose Inhospitable = An environment that is harsh and difficult to survive in. Sublime: awe- inspiring, majestic, overwhelming</p>
<p>William Blaker - <i>Along the Enchanted Way</i></p> 	<p>William Blaker lived in Romania from 1996 to 2004. He now divides his time between England, Italy and Romania. (Published 2009)</p>	<p>Alienated = Feeling strange or isolated Assimilate = To fit in with a group of people Diverse = Varied</p>
<p>Dervla Murphy - <i>Full Tilt: Ireland to India with a Bicycle</i></p> 	<p>Dervla Murphy is an Irish touring cyclist who has written about her adventures for over 40 years. (Published 1965)</p>	<p>Governed = Controlled by Emaciated = Abnormally thin or weak Gruelling = Extremely tiring or demanding</p>
<p>Jini Reddy - <i>On the Road in Rural Iran</i></p> 	<p>Jini Reddy was born in London to South African-born parents of Indian descent. She has lived in many different countries and is a travel journalist. (Published 2009)</p>	<p>Alluring = Powerful and mysteriously attractive or fascinating Serenity = The state of being calm and peaceful Juxtapose = Place close together with contrasting effect</p>
<p>Kate Marsden - <i>On Sledge and Horseback to Outcast Siberian Lepers</i></p> 	<p>Kate Marsden was a British missionary, explorer, writer and nurse. She set out on a round trip from Moscow to Siberia to find a cure for leprosy. (Published 1891)</p>	<p>Missionary = A person sent on a religious mission Disrepute = Being not trusted or disrespected Tension: Mental or emotional strain</p>
<p>Tété-Michel Kpomassie - <i>An African in Greenland</i></p> 	<p>Tété-Michel Kpomassie journeyed from West Africa to Greenland, inspired by a book he read as a teenager. (Published 1981)</p>	<p>Awe-inspiring- something magnificent illuminated- lit up</p>

ENGLISH

Descriptive Techniques		Sentence Parts	Examples	Vocabulary and Meanings	
Technique:	Example:	Subject- noun the sentence is about.	<i>The <u>waves</u> danced.</i>	Nouns:	Adjectives to Describe Senses:
Personification - a metaphor attributing human feelings to an object.	<i>The waves danced on the horizon as the boat skipped towards the island.</i>	Verb- word expressing action/doing.	<i>The waves <u>danced</u>.</i>	scenery - natural landscape vegetation - plants and trees) atmosphere - mood of a place memory experience culture - way of life impression adventure	acrid - bitter or unpleasant smelling repulsive - horrible mouth-watering - delicious deafening - extremely loud whistled- a high pitched sound grotesque - ugly or unnatural
Onomatopoeia - words that sound a little like they mean.	<i>The autumn leaves and twigs cracked and crunched underfoot.</i>	Main clause - Part of a sentence containing one subject and one main verb (makes sense by itself).	<i><u>The car stopped</u> because the lights were at red.</i>	horizon - line where sky and earth / sea meet obstacle - blocks the way sunset sunrise sun's rays moon's glow	Adjectives to Describe Places: luscious - delicious or appealing verdant - bright green (grass) densely-populated - many people living close together in one place remote - far from other people or places diverse ethereal - seems not to be of this world eerie - creepy or unsettling nostalgic - reminds you of a past time meandering - a winding course austere - harsh and inhospitable picturesque - attractive in a quaint way vibrant - full of energy and life breaktaking - astonishing or awe=
Pathetic fallacy - using the weather to create or reflect a certain mood.	<i>The sun's rays beamed down, warming everything they touched.</i>	Subordinate clause - Part of a sentence which does not make sense by itself.	<i>The car stopped because <u>the lights were at red</u>.</i>	Verbs: squint - looking with eyes part closed meander - follow a winding course emerge - move out from immerse - get involved in venture - go bravely hurry - go quickly dawdle - walk slowly dance - move rhythmically	Adjectives to Describe Buildings: abandoned - empty(building) derelict - old and falling apart (building) dilapidated - old and ruined (building) - sparkling and bright resplendent - attractive and impressive imposing - grand and impressive historic - famous or important in history beloved - loved by many people Synonyms for bright / beautiful: dazzling, glimmering, illuminating, mesmerising, enchanting, beguiling, eye-catching
Metaphor - a descriptive technique that names a person, thing or action as something else.	<i>The circus was a magnet for the children</i>	Coordinating Conjunctions - join two main clauses to create a compound sentence	FANBOYS For/And/Nor/But/Or/Yet/So <i>The majestic bird soared through the clear blue sky <u>and</u> the wind whistled melodically.</i>		
Simile - a descriptive technique that compares one thing with another, usually using 'as' or 'like'.	<i>The heavy raindrops felt like bullets on my skin.</i>	Subordinating Conjunctions - start subordinate clauses which help create complex sentences	ISAWAWABUB If/ since/ as/ when/ although/ while/ after/ before/ until/ because <i>Although it had been raining, the ground was dry.</i>		
Structuring Fiction (Story Writing)		DROP Sentence Starters: <i>In that moment...</i> <i>All around, I could feel...</i> <i>A sudden gust of hot air blew, pushing...</i>		ZOOM Sentence Starters: <i>Immediately, the colours of the ___ caught my eye...</i> <i>The subtle shades of...</i> <i>My eyes are drawn to...</i>	
DROP	Start in the middle of exciting action	FLASH Sentence Starters: <i>Earlier that morning..</i> <i>The streets had been deserted when...</i> <i>Back at home..</i> <i>Seeing... instantly took me to...</i>		END Sentence Starters: <i>The ___ grew louder than ever before...</i> <i>Reflecting on my day, ...</i> <i>Repeat a word / phrase from the opening of the piece</i>	
ZOOM	Choose something that you will 'zoom in' on and describe in detail				
FLASH	Change the time or place of your story				
END	Bring it back to where you were at the start. What has changed?				



Asia and Africa

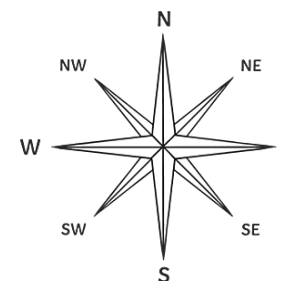
1. Where are India and Nigeria?

There are 7 continents: Europe, Asia, Africa, North America, South America, Antarctica and Oceania.

5 major oceans: Atlantic Ocean, Pacific Ocean, Arctic Ocean, Indian Ocean and Southern Ocean.

We use 8 compass points to describe position and direction.
The 4 main points are North, South, East and West (going clockwise they are NESW).

Nigeria is located in West Africa. India is located in SouthEast Asia. Nigeria is South West of India and India is North East of Nigeria.



Key words

Country: An area of land that is controlled by its own government.

Continent: A large area of land that is separated from others by water or other natural features.

Physical geography: The study of the Earth's natural features.

Human geography: The study of where and how people live.

2. Why are Nigeria and India important?

Both countries are predicted to continue developing quickly in the next few decades, with India ahead of Nigeria.

We can measure development with many different indicators:

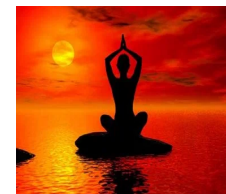
- Gross Domestic Product (GDP): This measures a country's wealth.
- Life expectancy: This helps us understand the standard of living in a country.

Nigeria is important to study because:

- It has the fastest growing economy in Africa with the highest GDP on the continent and 26th in the world
- It also has the largest population in Africa with 201 million people with a life expectancy of 53
- Nigeria has a diverse culture. Nigerian music is enjoyed throughout Africa. It is also a hub for literature with a range of popular writers.
- Nigeria has the second-largest film industry in the world, ahead of the United States and behind India. Nigerian cinema is known as "Nollywood".

India is important because:

- In 2020 India had the 5th highest GNP in the world and 3rd in Asia.
- It has the second biggest population in the world, with an estimated 1.38 billion people in 2020.
- India also has a rich culture, with many different languages and food. India has a strong religious and spiritual culture with yoga originating in the country. Bollywood is the largest film industry in the world.



Development: The standard of living of the people who live in a country.

Gross Domestic Product (GDP): the total value of goods and services produced by a country in a year.

Life expectancy: The average age a person can expect to live to at birth.

Standard of living: The amount of wealth or personal comfort that a person or group of people have.

3. How to use 4 figure grid references to locate the main physical features of each country

A grid of squares helps people to locate places and features on a map. The vertical lines are called eastings. They are numbered - the numbers increase to the east. The horizontal lines are called northings as the numbers increase in an northerly direction.

When finding a four figure grid reference you must always find the bottom number first (Easting), and then the number up the side (Northing)

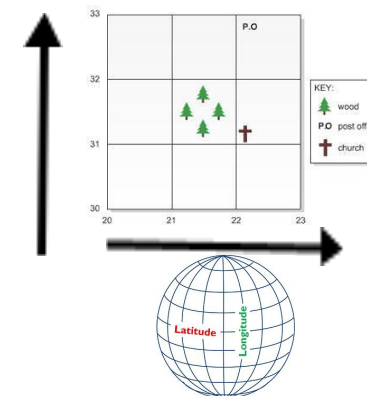
1. Start at the left-hand side of the map and go east until you get to the bottom-left-hand corner of the square you want. Write this number down.
2. Move north until you get to the bottom-left corner of the square you want. Look at the number of this grid line and add it to the two-digit number you already have. This is your four-figure grid reference.
3. E.g. the church is in (22, 31)

An easy way to remember this is: **Along the corridor and up the stairs**

Longitude and Latitude

On a world map, we use a system of imaginary lines to find the location of anywhere on the surface of the Earth.

- The horizontal lines are called the lines of **latitude** and tell you how far North and South you are.
- The vertical lines are called lines of **longitude** and tell you how far East and West you are



The Norman Conquest

Summary:

When King Edward the Confessor died in 1066, England was plunged into crisis. As he had no children, three men sought to seize the throne for themselves. Edward had, at different points, promised two of them the throne – William, Duke of Normandy, and Harold Godwinson, Earl of Wessex. A third, Harald Hardrada, claimed the throne due to his ancestors being former kings of England.

Although Godwinson was immediately crowned king, The three men took each other on in a series of battles at Fulford, Stamford Bridge and Hastings. The final battle settled the issue, as William killed his rival, Harold, and was crowned on Christmas Day 1066.

William faced a number of challenges upon becoming king. He took land away from his defeated enemies, and gave it as a reward to his loyal supporters. He also built a series of castles across the country – they were called Motte and Bailey castles and they were built quickly out of wood and earth. These measures helped him to defeat a series of rebellions. William also carried out the Domesday Survey, a national survey of every town and village in England. This helped him to resolve land disputes, and gave him a clear idea about how much tax was owed, helping him to raise money. All of these actions meant that William increased his control over the country.

Britain before 1066

England was made up of two main tribal groups:

Anglo-Saxons: People who lived in Britain from the 5th century. They included people from tribes who migrated to the island from Germany and Denmark.

Vikings: Many Vikings lived in the North of England in the area known as Danelaw, under Kings like Canute.

Until 1066, the king was **Edward the Confessor (1042-1066)**.

- Edward became king of England in 1042 after his half-brother died. Before this he had been living in Normandy.
- Edward married but had no children. It was not clear who Edward wanted to be king after him. **For a king to die without an heir was a disaster!**
- He was made a saint and 'the Confessor' means someone that is saint-like.

Key developments

4 th January	Edward the Confessor dies without leaving an heir
6 th January	Harold Godwinson is crowned as the new king
July	Harold prepares his army for an invasion from the south
September	Harald Hardrada launches an invasion of England
20 th September	The Battle of Fulford – a Viking victory over the Saxons
21 st September	King Harold Godwinson begins to march north
25 th September	The Battle of Stamford Bridge – Saxons defeat Vikings

Key terms

Normans	A group of people from Normandy, in northern France
Heir	Someone chosen to take over from the king or queen after they die
Invasion	An attempt to take over a country by force
Exile	To force someone to leave the country
Earl	A powerful lord who ruled over a large region on behalf of the king
Shield Wall	A defensive tactic commonly used by the English Saxons
Hostage	A prisoner taken from your enemy to make sure they cooperate
Archer	Soldiers who use a bow and arrow
Cavalry	Soldiers who fight on horseback
Pope	Head of the Christian Church – seen as God’s representative on earth
Feigned Retreat	A Norman tactic that involved faking a retreat to draw out the enemy
Motte	The raised mound of earth at the centre of the castle
Bailey	The enclosed area containing buildings like storehouses and barracks
Keep	A strong fortification on top of the hill from which the Normans kept watch
Feudal System	The way Norman society was organised, with the king at the top
Peasants	The common people, who had little power in Norman England
Rebellion	An attempt to get rid of the king or queen by a group using violence







The Norman Conquest



Summary:

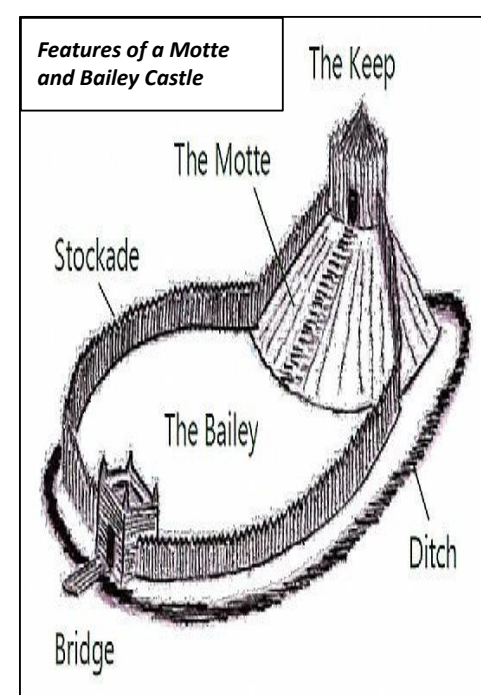
When King Edward the Confessor died in 1066, England was plunged into crisis. As he had no children, three men sought to seize the throne for themselves. Edward had, at different points, promised two of them the throne – William, Duke of Normandy, and Harold Godwinson, Earl of Wessex. A third, Harald Hardrada, claimed the throne due to his ancestors being former kings of England.

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 <p>A sword used for slashing, not stabbing. Used by important soldiers. Passed down through the family.</p>	 <p>The Dane Axe was a five foot long, razor-sharp axe which had to be held in both hands. This was used by both Saxons and Vikings.</p>	 <p>The Fyrd were regular peasants, untrained in battle, who were recruited just before the battle. They had basic equipment and little fighting experience.</p>	 <p>Housecarls were highly trained and well equipped knights that formed the king's personal bodyguard. Harold Godwinson had a few hundred.</p>	 <p>Archers were soldiers who used a bow and arrow. They normally stayed at the back of the army. The Normans made good use of archers.</p>	 <p>Cavalry were horse-mounted soldiers. They could move around quickly. The Normans used cavalry, but Saxons and Vikings didn't.</p>
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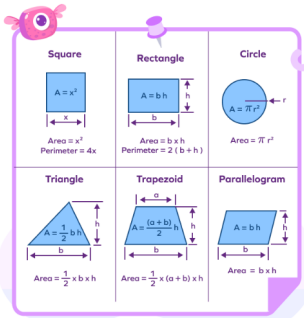



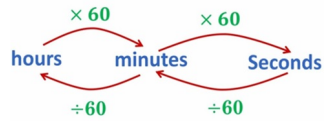
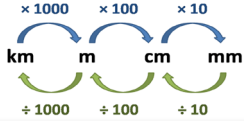
Britain before 1066		
<p>Harold Godwinson</p>  <ul style="list-style-type: none"> English Popular One of Edward's advisors Powerful and experienced Important English family Edward's brother-in-law Good soldier Claimed Edward had promised him the throne just before he died 	<p>Harald Hardrada</p>  <ul style="list-style-type: none"> Related to a previous king of England King of the Vikings – a powerful group within England Popular with Vikings in the north Outstanding soldier and leader Powerful and experienced Already a king 	<p>William, Duke of Normandy</p>  <ul style="list-style-type: none"> King Edward had promised him the throne England had close links with Normandy and Edward had lived there for a while Powerful and experienced Good soldier Harold Godwinson had sworn to support his claim



Memory Maths Booklet

Pathway X and A	Pathway B, C and D
KO1 I know the times tables up to 12 x 12	
KO2 I know the properties of a prime number, the first 15 square numbers and the first 5 cube numbers and their roots	KO2 I know odd and even numbers, the first 10 prime numbers, the first 12 square numbers and the first 5 cube numbers and their roots
KO3 I know the rules of collecting and simplifying like terms in equations and expressions	
KO4 I know the formulas to find the interior and exterior angles of a polygon. I know the formula to find the sum of the total angle in a polygon	KO4 I know what an acute, obtuse, reflex and a right angle is
KO5 I know Pythagoras' theorem	KO5 I know how to read coordinates of any quadrants and I know the formula to find the midpoint
KO6 I know the multipliers to find 1%, 5%, 10%, 20%, 25%, 50% and 75%	
KO7 I know what fractions and percentage are as ratios and vice versa	KO7 I know what fractions are as ratios and vice versa
KO8 I know the formulas to find the surface area and volume of prisms and cylinders	KO8 I know the formulas to find the area of rectangles, squares, parallelograms and triangles, circle and trapeziums
KO9 I know the method to expand and factorise double brackets	KO9 I know the method to expand and factorise expressions
KO10 I know how to convert time into seconds, minutes and hours and vice versa	KO10 I know how to convert millimetres to centimetres, metres and kilometres and vice versa

Pathway X and A						Pathway B, C and D					
KO1											
1 × 1 = 1	2 × 1 = 2	3 × 1 = 3	4 × 1 = 4	5 × 1 = 5	6 × 1 = 6	7 × 1 = 7	8 × 1 = 8	9 × 1 = 9	10 × 1 = 10	11 × 1 = 11	12 × 1 = 12
1 × 2 = 2	2 × 2 = 4	3 × 2 = 6	4 × 2 = 8	5 × 2 = 10	6 × 2 = 12	7 × 2 = 14	8 × 2 = 16	9 × 2 = 18	10 × 2 = 20	11 × 2 = 22	12 × 2 = 24
1 × 3 = 3	2 × 3 = 6	3 × 3 = 9	4 × 3 = 12	5 × 3 = 15	6 × 3 = 18	7 × 3 = 21	8 × 3 = 24	9 × 3 = 27	10 × 3 = 30	11 × 3 = 33	12 × 3 = 36
1 × 4 = 4	2 × 4 = 8	3 × 4 = 12	4 × 4 = 16	5 × 4 = 20	6 × 4 = 24	7 × 4 = 28	8 × 4 = 32	9 × 4 = 36	10 × 4 = 40	11 × 4 = 44	12 × 4 = 48
1 × 5 = 5	2 × 5 = 10	3 × 5 = 15	4 × 5 = 20	5 × 5 = 25	6 × 5 = 30	7 × 5 = 35	8 × 5 = 40	9 × 5 = 45	10 × 5 = 50	11 × 5 = 55	12 × 5 = 60
1 × 6 = 6	2 × 6 = 12	3 × 6 = 18	4 × 6 = 24	5 × 6 = 30	6 × 6 = 36	7 × 6 = 42	8 × 6 = 48	9 × 6 = 54	10 × 6 = 60	11 × 6 = 66	12 × 6 = 72
1 × 7 = 7	2 × 7 = 14	3 × 7 = 21	4 × 7 = 28	5 × 7 = 35	6 × 7 = 42	7 × 7 = 49	8 × 7 = 56	9 × 7 = 63	10 × 7 = 70	11 × 7 = 77	12 × 7 = 84
1 × 8 = 8	2 × 8 = 16	3 × 8 = 24	4 × 8 = 32	5 × 8 = 40	6 × 8 = 48	7 × 8 = 56	8 × 8 = 64	9 × 8 = 72	10 × 8 = 80	11 × 8 = 88	12 × 8 = 96
1 × 9 = 9	2 × 9 = 18	3 × 9 = 27	4 × 9 = 36	5 × 9 = 45	6 × 9 = 54	7 × 9 = 63	8 × 9 = 72	9 × 9 = 81	10 × 9 = 90	11 × 9 = 99	12 × 9 = 108
1 × 10 = 10	2 × 10 = 20	3 × 10 = 30	4 × 10 = 40	5 × 10 = 50	6 × 10 = 60	7 × 10 = 70	8 × 10 = 80	9 × 10 = 90	10 × 10 = 100	11 × 10 = 110	12 × 10 = 120
1 × 11 = 11	2 × 11 = 22	3 × 11 = 33	4 × 11 = 44	5 × 11 = 55	6 × 11 = 66	7 × 11 = 77	8 × 11 = 88	9 × 11 = 99	10 × 11 = 110	11 × 11 = 121	12 × 11 = 132
1 × 12 = 12	2 × 12 = 24	3 × 12 = 36	4 × 12 = 48	5 × 12 = 60	6 × 12 = 72	7 × 12 = 84	8 × 12 = 96	9 × 12 = 108	10 × 12 = 120	11 × 12 = 132	12 × 12 = 144
KO2						KO4					
<p>Odd numbers end in 1, 3, 5, 7, 9. Even numbers end in 0, 2, 4, 6, 8</p> <p>The first 10 prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29. Prime numbers have two factors. 1 and itself. 1 is NOT a prime number</p> <p>The first 12 square numbers are 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144</p> <p>The first 5 cube numbers are 1, 8, 27, 64, 125. 1 and 64 are a square and a cube number</p>						<p>A right angle is 90°</p> <p>An acute angle is one that measures LESS than 90°</p> <p>An obtuse angle is one that measures between 90° and 180°</p> <p>A reflex angle is an angle that measures between 180° and 360°</p>					
KO3						KO5					
<p>Identify the like terms in an algebraic expression and combine them by adding or subtracting.</p>						<p>The first number represents the position on the x-axis, and the second number represents its position on the y-axis. The coordinates are usually written as (x,y). X and y coordinates (axis) are horizontal and vertical addresses in a graph or map</p>					
<p>KO4</p> <p>Sum of total angle inside a polygon = $(n - 2) \times 180$</p> <p>Interior angle of a polygon = $\text{sum of interior angles} \div \text{number of sides}$</p> <p>Exterior angle of a polygon = $360 \div \text{number of sides}$</p>						<p>In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides</p> $a^2 + b^2 = c^2$					

Pathway X and A	Pathway B, C and D																	
<p>KO6</p> <p>1% multiply by 0.01, 5% multiply by 0.05, 10% multiply by 0.1, 20% multiply by 0.2, 25% multiply by 0.25, 50% multiply by 0.5 and 75%, multiply by 0.75</p>																		
<p>KO7</p> <p>Ratios are given as 5:8</p> <p>To convert to fraction it'll be 5/5+8 (5/13) and 8/8+5 (8/13)</p> <p>Convert to percentage by multiplying the fraction by 100</p>	<p>KO7</p> <p>Ratios are given as 5:8</p> <p>To convert to fraction it'll be 5/5+8 (5/13) and 8/8+5 (8/13)</p>																	
<p>KO8</p> <table border="1" data-bbox="293 550 996 826"> <thead> <tr> <th>Figure</th> <th>Picture</th> <th>Surface Area</th> <th>Volume</th> </tr> </thead> <tbody> <tr> <td>Rectangular Prism</td> <td></td> <td>$2lw + 2wh + 2lh$</td> <td>Area of Base \times h $V = lwh$</td> </tr> <tr> <td>Triangular Prism</td> <td></td> <td>$6h + (P_{base})h$ Area of 2 triangles \times 2 perimeter</td> <td>Area of Base \times prism height $1/2 bh \times h$</td> </tr> <tr> <td>Cylinder</td> <td></td> <td>$2\pi r^2 + 2\pi rh$ Area of each circle \times circumference \times height</td> <td>$V = \pi r^2 h$ Area of Base \times height</td> </tr> </tbody> </table>	Figure	Picture	Surface Area	Volume	Rectangular Prism		$2lw + 2wh + 2lh$	Area of Base \times h $V = lwh$	Triangular Prism		$6h + (P_{base})h$ Area of 2 triangles \times 2 perimeter	Area of Base \times prism height $1/2 bh \times h$	Cylinder		$2\pi r^2 + 2\pi rh$ Area of each circle \times circumference \times height	$V = \pi r^2 h$ Area of Base \times height	<p>KO8</p> 	
Figure	Picture	Surface Area	Volume															
Rectangular Prism		$2lw + 2wh + 2lh$	Area of Base \times h $V = lwh$															
Triangular Prism		$6h + (P_{base})h$ Area of 2 triangles \times 2 perimeter	Area of Base \times prism height $1/2 bh \times h$															
Cylinder		$2\pi r^2 + 2\pi rh$ Area of each circle \times circumference \times height	$V = \pi r^2 h$ Area of Base \times height															
<p>KO9</p> <p>How to expand double brackets:</p> <table border="1" data-bbox="582 917 929 1125"> <tr> <td></td> <td>$2x$</td> <td>$+3$</td> <td></td> </tr> <tr> <td>\times</td> <td>$2x^2$</td> <td>$+3x$</td> <td rowspan="2">$= 2x^2 + 7x + 6$</td> </tr> <tr> <td>$+2$</td> <td>$+4x$</td> <td>$+6$</td> </tr> </table> <p style="text-align: center;">Expanding Two Brackets</p> <p>How to factorise quadratics:</p> <p>Quadratics will be in the form</p> <p>When $a = 1$, find all the factor pairs of C. $ax^2 + bx + c = 0$</p> <p>Find a pair that multiplies to give C and + or - to give B.</p> <p>Substitute the values into double brackets</p>		$2x$	$+3$		\times	$2x^2$	$+3x$	$= 2x^2 + 7x + 6$	$+2$	$+4x$	$+6$	<p>KO9</p> <p>How to expand brackets:</p> <table border="1" data-bbox="1422 925 1601 1061"> <tr> <td></td> <td>$5(4 + a)$</td> </tr> <tr> <td>\times</td> <td>$4 + a$</td> </tr> <tr> <td>5</td> <td>$20 + 5a$</td> </tr> </table> <p>$5(4 + a) = 20 + 5a$ $= 5a + 20$</p> <p>How to factorise:</p> <p>Find the highest common factor of each of the terms in the expression, write the highest common factor (HCF) at the front of a single bracket then fill in each term in the bracket by multiplying out</p>		$5(4 + a)$	\times	$4 + a$	5	$20 + 5a$
	$2x$	$+3$																
\times	$2x^2$	$+3x$	$= 2x^2 + 7x + 6$															
$+2$	$+4x$	$+6$																
	$5(4 + a)$																	
\times	$4 + a$																	
5	$20 + 5a$																	
<p>KO10</p> 	<p>KO10</p> 																	

MUSICAL ELEMENTS

- M**elody - formal word for 'tune'
- A**rticulation - how you play / sing a note
- D**ynamics - how loud or soft a note is played
- T**exture - how the layers of a musical piece fit together
- S**tructure - the different sections of a piece and how they are ordered
- H**armony - how notes work together to make an effect
- I**nstrumentation - which instruments or voices are used
- R**hythm - pattern of notes over time
- T**empo - the overall speed of the music
- T**ime Signature - how the beats are arranged in music (metre)

KNOWLEDGE ORGANIZER

Year 7 - DPR 1

MUSICAL ELEMENTS CONT.

The key words form an acronym:
MADTSHIRT(T)

HARMONY TERMS:
MAJOR / MINOR

ARTICULATION TERMS:
STACCATO / LEGATO

TEXTURE TERMS:
THICK / THIN

DYNAMICS TERMS:
FORTE (LOUD) / PIANO (SOFT)

RECOMMENDED LISTENING

Classical

Stravinsky - Rite of Spring
Prokofiev - Peter & the Wolf
Rhythms of the World
Le Trio Joubran
Mustapha Tettey Addy

Pop

Little Richard - Little Richard is Back
Elvis Presley

Film

Star Wars - Episode 1 Soundtrack (1999)

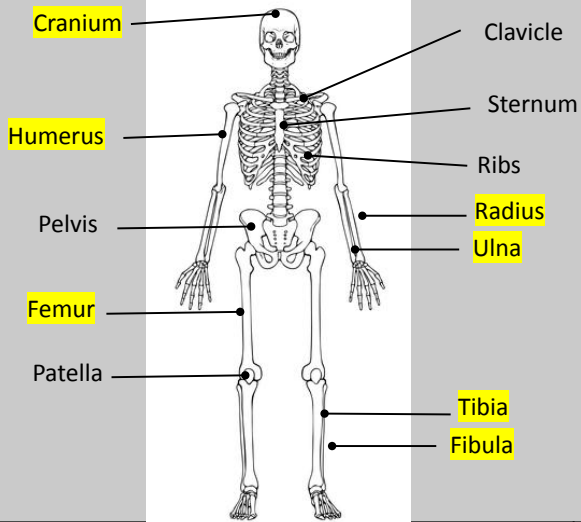
REVISION QUESTIONS

- 1) What are the two words associated with harmony?
- 2) What are the two words associated with texture?
- 3) Describe the difference between staccato and legato.
- 4) What is the other word that can mean 'time signature'?
- 5) What are the musical names of the notes (not tea/coffee)?
- 6) Listen to one of the Recommended Listeners and identify concepts you hear from each of the Elements of Music.

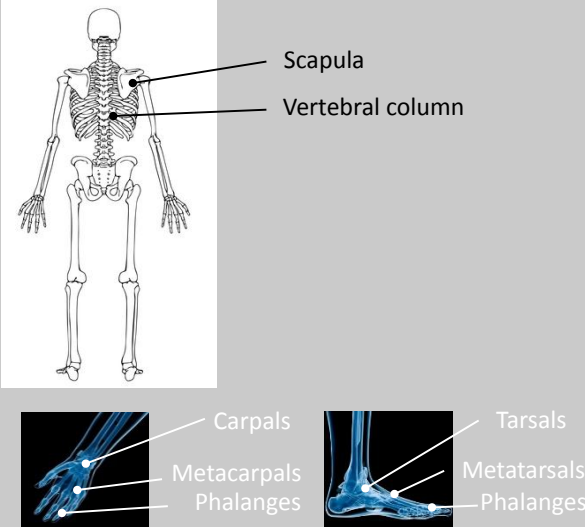


The structure and functions of the skeletal system Cycle 1

Structure of the skeletal system - Key bones highlighted



Structure of the skeletal system

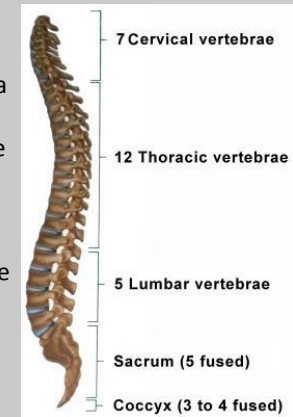


Vertebral Column

The vertebral column is divided into 5 sections. It is made up of irregularly shaped bones called vertebrae.

Each vertebra is protected with cartilage to prevent friction.

The vertebrae protects the spinal cord.



Function of the skeleton

- **Protection** of vital organs
- Muscle attachment
- Joints for **movement**

Classification of bones

Long (leverage)	Short (weight bearing)	Flat (protection + muscle attachment)	Irregular (protection and muscle attachment)
Clear shaft region to the bone. <i>i.e. femur, humerus & phalanges</i>	Light, small and very strong. <i>i.e. carpals, tarsals</i>	Broad surface area for muscle attachment. <i>i.e. cranium</i>	Assist the functioning of certain joints. <i>i.e. Patella/vertebrae</i>

Classification of joint

- **Pivot** (neck – atlas and axis)
- **Hinge** (elbow and knee)
- **Ball and socket** (hip and shoulder)

Joint movements

Flexion	Adduction	Rotation	Dorsi-Flexion (ankle joint)
Decreasing the angle at a joint (bending)	Limbs moving towards the midline of the body.	A twisting/turning action around a joint.	When the toes are turned up to the body.

Connective tissue

Ligaments – attaches bone to bone to add joint stability.
Tendons – attaches muscles to bone and contributes to joint movement as a result of muscle contraction.

Looking for God

Key Terms		Key Concepts
Fact	Something that can be shown through evidence to be true, or to exist or to have happened.	<p><u>Ultimate Questions</u>: These are questions often of a philosophical and Religious nature that have no right or wrong answer. For example: Why am I here? What is the meaning of life?</p>
Opinion	A view somebody takes on an issue based on personal thoughts and judgements	<p><u>Design argument</u>: Also known as the Teleological argument is a theory that states that the world is too complex to have come into existence of its own accord and therefore must have had an intelligent designer behind its creation and the only person powerful enough to do it would be God. This theory was postulated by William Paley</p>
Truth	A statement generally believed to be true that usually links directly to fact or reality	<p><u>Creationism</u>: A Christian belief that the world was created exactly as the Bible describes it.</p>
Belief	Acceptance by the mind that something is true, often because of an emotional or religious sense of being certain.	<p><u>Cosmological Argument</u>: Sometimes called "Causation" or the first cause it is an argument proposed by Thomas Aquinas that says that all things have been caused by a prior cause. The Earth itself must have been caused by something else and the only thing powerful enough to cause the Earth's existence is God.</p>

Creation Stories

Creation	The act of bring something into existence	<p>Christianity: God created the world in 6 days and rested on the seventh. Each day of creation involved a new creation starting on the 1st day with light and ending on the sixth day with humans. The first Human was Adam and then Eve was created from Adam's rib</p>
Theist	A person who believes in God	<p>Islam: God created the world in 7 periods and each period of creation involved the creation of different elements of the universe. Adam was the first man and he was created from the soil. Eve would be created from Adam and they would live in paradise until Iblis, a Djinn, tempted them into sin</p>
Atheist	A person who does not believe in God	<p>Hinduism: in the beginning there was darkness and a divine force. The divine force made an egg and from that egg hatched Brahma the creator. The Egg split into two halves and these became the Heavens and the Earth, Brahma then continued to create all life from this point.</p>
Agnostic	A person who is unsure of God's existence	<p>Aboriginal story: there was always been land but no life until the dreamtime ancestors visited the land at the behest of Baiame the creator. As the shape changing ancestors went across the land they left their mark creating all different forms of life. For example dreamtime eagle ancestor is the source of all eagles. Eventually the ancestors went back into the land and allowed life to thrive without them</p>

Looking for God

Key Terms		Key Concepts
Numinous	The feeling of the presence of something greater than yourself i.e. the church	<u>Religious Experience</u> : Some people say that a religious experience is one that changes your life forever. They believe a real religious experience will give you a deeper knowledge and awareness of God .
Miracle	Something that seems to break a law of science and makes you think only God could have done this.	<u>Tawhid</u> : The oneness of uniqueness of God. A key belief within Islam that is included in both the six articles of Sunni Islam and the 5 roots of Usul-ad-din in Shi'a Islam
		<u>The 99 Names of Allah</u> : God in Islam has 99 names to represent all the different attributes that God represents. These include names like the life-giver, the forgiver, the king, the first and the wise.
Prayer	An attempt to contact God, usually through words	<u>Jesus Miracles</u> : Jesus performed a host of miracles in his lifetime including turning water into wine, walking on water, feeding 5000 people with a few loaves of bread and a few fish, healing the sick and bringing Lazarus back from the dead
Conversion	When your life is changed by giving yourself to a religion/God	<u>All paths lead to God</u> : Hindu's believe that any form of belief be it Hindu or otherwise are all paths to the same thing God, All religions promote positive moral behaviour and should therefore be treated equally
Trimurti	The word used to describe the 3 Gods that preside over all life in Hinduism Brahma (creator), Vishnu (preserver) and Shiva (destroyer)	<h3>Important Quotes</h3>
AUM	The Symbol of Hinduism that represents all life A= Brahma U=Vishnu M=Shiva	"He is Allah, The one and only; Allah the eternal, absolute, he begot none, nor was he begotten, and there is none like him." (Surah 112)
		"He is Allah the Creator the Evolver, the Bestower of Forms (or Colours). To Him belong the Most Beautiful Names: whatever is in the heavens and on earth, doth declare His Praises and Glory: and He is the exalted in Might, the Wise. [Surah 59:24]
Puja	A ritual in Hinduism where offerings are made to a shrine, each aspect of the puja ritual appeals to a different sense	"And when he thus had spoken, he cried with a loud voice, Lazarus, come forth. And he that was dead came forth, bound hand and foot with grave clothes: and his face was bound about with a napkin. Jesus saith unto them, Loose him, and let him go" John 11:43-44
		"He is the one you praise; he is your God, who performed for you those great and awesome wonders you saw with your own eyes." Deuteronomy 10:21
Meditation	A state in which the body is consciously relaxed and the mind is allowed to become calm and focused	




RE

KS3 States of Matter Knowledge Organiser

Three States of Matter

There are three main states of matter: **solid**, **liquid** and **gas**.

All matter is made up of tiny parts called particles. How they are arranged determines the state of matter and the properties of the material.

	Solid	Liquid	Gas
particle model diagram			
particle arrangement	regular structure no space between particles	irregular structure very little space between particles	irregular structure large space between particles
volume and shape	fixed volume fixed shape	fixed volume shape changes to fill bottom of container	volume increases to fill capacity shape changes to fill capacity
able to flow	no (forces between particles are very strong and hold them in fixed positions)	yes (forces between particles are weak and particles slide over one another)	yes (forces between particles are very weak and particles move randomly and rapidly)
density	high cannot be compressed (particles are already tightly packed)	high cannot be compressed (particles are already tightly packed)	low can be compressed (particles are forced closer together)
particle energy levels	low (particles vibrate around a fixed point only)	moderate (particles can move and flow but slowly)	high (particles moving rapidly and freely)
examples	wood, metal, stone, plastic	water, milk, bleach, acid	air, oxygen, carbon dioxide

matter - any substance that has mass and takes up space (volume)

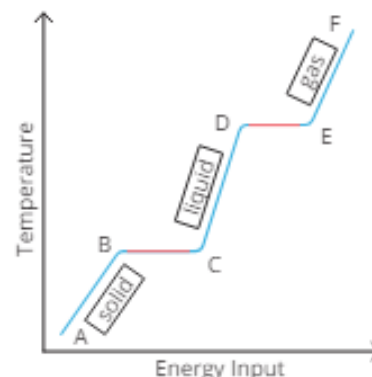
properties - characteristics or features

density - the mass of a substance per volume (**density = mass ÷ volume**)

Melting and Boiling Points

B - C When a solid substance is heated, the particles gain energy and begin to move around more.

When a solid reaches its melting point, the particles begin to break off from the uniform structure and are free to flow. The solid melts into a liquid.



D - E When a liquid substance is heated, the particles gain energy and begin to move around more. When a liquid reaches its boiling point, evaporation occurs and the liquid boils. Liquid particles break free and evaporate into a gas.

Every pure substance has a specific melting and boiling point. The purity of a substance can be checked for using knowledge of these specific melting and boiling points.

For example, pure water boils at 100°C whereas pure ethanol boils at 78°C.

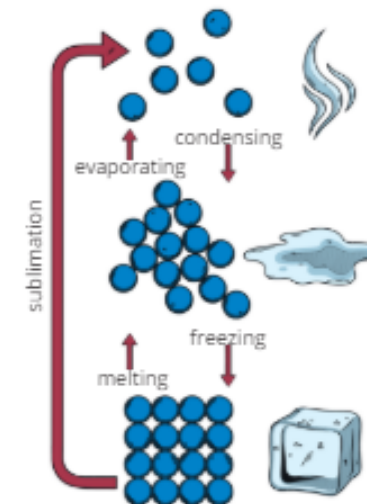
Ice melts at 0°C, and iron has a melting point of 1538 °C.

If a substance contains any impurities (dissolved solids), then its melting and boiling point will extend over a range of temperatures.

Changes of State

The arrangement of particles changes when the substance changes state.

Sublimation is when a solid changes to a gas, without going through the liquid phase.



Gas Pressure

Gas pressure is the force exerted by the gas particles on the wall of the container it is in. The more frequently air particles hit the walls, the higher the pressure rises.

Gas pressure is affected by:



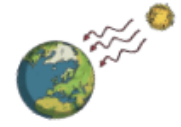








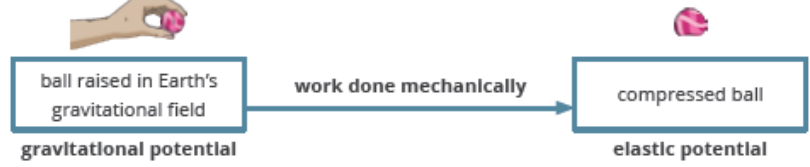

- amount of gas;
- volume of container;
- temperature.



High gas pressure can be created by a high volume of particles in a small space, or with a high temperature.

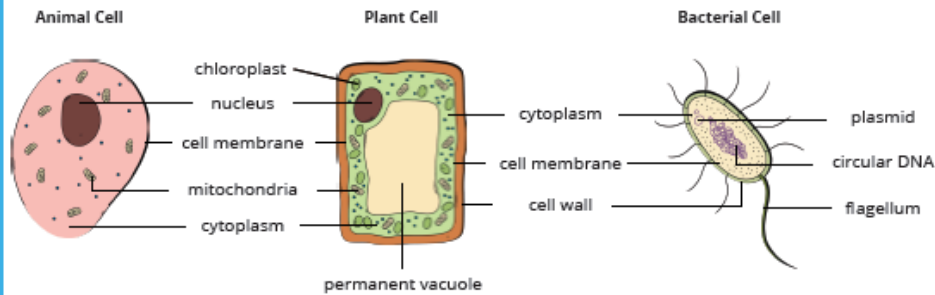
An inflated balloon will shrink if placed in ice water and expand when placed in hot water.

Energy Knowledge Organiser

Key Words		Energy Stores	Energy Pathways	
conduction	The transfer of energy through a material by particles colliding with each other when they vibrate.	 Chemical Store The energy stored in the bonds of a substance or group of substances. Examples include the chemicals inside a battery, food or muscles.	Heating via Particle Movement 	Heating via Radiation 
convection	The transfer of energy through a fluid by particles colliding with each other.	 Kinetic Store The energy stored in a moving object.	Energy is transferred by conduction or convection because of a temperature difference between two objects.	Energy is transferred by waves.
dissipation	The transfer of energy from a system to the surroundings. Often described as wasted energy.	 Elastic Potential Store The energy stored when an object has been stretched or compressed.	Work Done Electrically 	Work Done Mechanically 
energy pathway	A way in which energy is transferred from one store to another.	 Thermal Store The total energy of the particles in an object. The more energy there is in this store, the higher the temperature of the object.	Energy is transferred by a current when charges move due to a potential difference.	Energy is transferred by a force making something move through a distance.
energy resource	A system that can store large amounts of energy. They can often be used to generate electricity.	 Gravitational Potential Store The energy stored when an object is lifted in a gravitational field.	Energy Transfers	
energy store	A way that energy is stored in or by objects due to their motion, position, shape or processes.	 Nuclear Store The energy stored in the nucleus of an atom.	Energy Transfers Energy transfers can be displayed in an energy transfer diagram. The boxes identify the parts of the system where energy is stored. The type of energy store is labelled underneath each box. The arrows represent the pathways that transfer energy from one store to the next.	
energy transfer	The movement of energy from one store to another.	 Magnetic Store The energy stored when repelling poles have been pushed closer together or when attracting poles have been pulled further apart.		
insulator	A material that does not allow energy to transfer through it easily.	 Electrostatic Store The energy stored when repelling charges have been pushed closer together or when attracting charges have been pulled further apart.	When energy is transferred, the total amount of energy is conserved because energy can only be stored or transferred. It cannot be created or destroyed.	
radiation	The transfer of energy as waves.			
system	A group of objects.			
temperature	A measurement of the average kinetic energy of the particles in a substance. Measured in degrees Celsius (°C).			

Energy Resources		
<p>Renewable energy resources can be replenished and will not run out.</p> <p>Non-renewable energy resources cannot be replenished in a lifetime and will eventually run out.</p>		
Energy Resource	Advantages	Disadvantages
biofuels (renewable)	<ul style="list-style-type: none"> In theory, carbon dioxide released by burning the biofuel is balanced by carbon dioxide taken in during growth. Crops can be grown to meet demands. 	<ul style="list-style-type: none"> Deforestation may be used to clear land for farming. Supply may be affected by a poor growing season.
fossil fuels (non-renewable)	<ul style="list-style-type: none"> The output is not affected by the time of day or weather conditions. 	<ul style="list-style-type: none"> The process releases carbon dioxide into the atmosphere, contributing to global warming. The process releases sulfur dioxide which causes acid rain. Habitats are destroyed when fossil fuels are mined.
geothermal (renewable)	<ul style="list-style-type: none"> Power stations have a predictable output. The output is not affected by the time of day or weather conditions. 	<ul style="list-style-type: none"> Local habitats are destroyed when the power stations are built. Drilling releases some carbon dioxide.
hydroelectric (renewable)	<ul style="list-style-type: none"> The output is not affected by the time of day or weather conditions. No greenhouse gases are released once it has been built. 	<ul style="list-style-type: none"> The local area is flooded to create the dam which affects the habitats of organisms close to the dam. The output could be affected by drought if the reservoirs dry up.
nuclear (non-renewable)	<ul style="list-style-type: none"> The output is not affected by the time of day or weather conditions. No greenhouse gases are released once it has been built. 	<ul style="list-style-type: none"> The process produces hazardous waste. An explosion would affect local habitats for many years. Mining uranium causes habitats to be destroyed.
solar (renewable)	<ul style="list-style-type: none"> No greenhouse gases are released once it has been built. They can be used in remote locations. 	<ul style="list-style-type: none"> Unreliable in cloudy areas and does not work at night. A lot of solar panels are needed. So, habitats could be damaged to install them.
tides (renewable)	<ul style="list-style-type: none"> Tides are very predictable. The process produces a steady output of electricity. No greenhouse gases are released once it has been built. 	<ul style="list-style-type: none"> The placement of barrages damages the habitats or organisms that live in river estuaries. The noise of the turbines can affect animals that use echolocation.
waves (renewable)	<ul style="list-style-type: none"> No greenhouse gases are released once the wave generators have been installed. 	<ul style="list-style-type: none"> Less electricity is generated when there is little or no wind as there are fewer waves. The cables and buildings needed spoil the shoreline. The wave generators might affect the habits of marine life and birds nearby.
wind (renewable)	<ul style="list-style-type: none"> No greenhouse gases are released once the turbines have been built. 	<ul style="list-style-type: none"> No electricity is generated when there is little or no wind. Local people often dislike the sight and noise of the turbines. Large wind farms disturb the local habitats.

KS3 Cells and Organisation Knowledge Organiser



Different cell types contain different sub-cellular structures.

Sub-Cellular Structure	Animal Cell	Plant Cell	Bacterial Cell
nucleus	✓	✓	x
circular DNA	x	x	✓
mitochondria	✓	✓	x
chloroplasts	x	✓	x
cell wall	x	✓	✓
cell membrane	✓	✓	✓
cytoplasm	✓	✓	✓
flagellum	x	x	✓
permanent vacuole	x	✓	x
plasmids	x	x	✓

The components of a cell each have different functions.

Sub-Cellular Structure	Function
nucleus	Controls the activities of the cell. It contains genetic material (DNA), which is packaged into structures called chromosomes.
circular DNA	The DNA of bacteria found free in the cytoplasm.
mitochondria	Contain the enzymes needed for aerobic respiration, which releases energy for the cell.
chloroplasts	Contain a pigment called chlorophyll, which absorbs light to provide energy for photosynthesis.
cell wall	Helps to strengthen the cell and provides support for the plant.
cell membrane	Controls the movement of substances into and out of the cell.
cytoplasm	A jelly-like substance that fills the cell, where most chemical reactions occur.
flagellum	A tail-like structure that allows bacteria to move around.
permanent vacuole	Filled with cell sap to keep the cell rigid to support the plant.
plasmids	Plasmids are small rings of DNA that code for specific features, such as antibiotic resistance.

Levels of Organisation

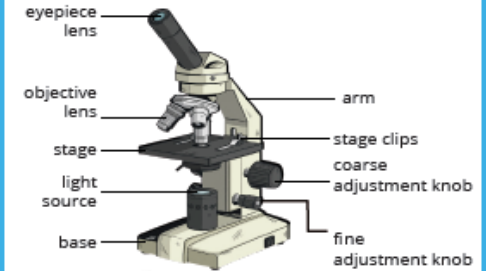
A cell is the smallest unit of a living organism. It contains structures needed to carry out life processes.

A tissue is a group of cells of the same type.

An organ is a group of different tissues working together to carry out a job.

An organ system is a group of different organs working together to perform a particular function.

Parts of a Light Microscope



Using a Light Microscope

- Plug in the microscope and turn on the light.
- Place the slide on the stage and hold it in place with the stage clips.
- Turn to the objective lens with the lowest magnification.
- Look down the eyepiece lens and use the adjustment knobs to focus the specimen.
- Increase the magnification by turning to a higher power objective lens, then use the fine adjustment knob to bring the cells back into focus.










Organ System Functions

Organ System	Function
musculoskeletal system	Muscles and bones working together support and move the body.
reproductive system	Produces sperm (males) and eggs (females). In females, this is where the foetus develops.
respiratory system	Takes in oxygen from the air and removes carbon dioxide from blood.
immune system	Protects the body against infections.
digestive system	Breaks down and absorbs food molecules.
circulatory system	Transports substances around the body.

SCIENCE

Specialised Cells

Each function carried out by the organism is performed by different cells. Each type of cell has slightly different features.

Name	Diagram	Functions	Adaptions
root hair cell		To absorb water and minerals from the soil.	Long protrusion fits between grains of soil and provides a large surface area for the absorption of water and minerals into the cell.
palisade cell		To carry out photosynthesis and make food for the plant.	Lots of chloroplasts to absorb light energy for photosynthesis. Its tall, long shape gives the cell a large surface area to maximise the absorption of light.
sperm cell		To travel to and fuse with an egg cell for fertilisation.	Long tail for movement to the egg and lots of mitochondria to release energy to allow the sperm to move.
muscle cell		To help the body to move.	Contains bands of protein that change shape to contract and relax the muscle. Lots of mitochondria to provide energy for muscle contraction.
nerve cell		To carry nerve impulses around the body.	Long fibres carry electrical impulses up and down the body and branching dendrites at each end connect to other nerves or muscles.
ciliated epithelial cell		To move mucus away from the lungs.	Tiny hairs called cilia to help waft mucus along the airways. Lots of mitochondria release energy for the cilia to move.
red blood cell		To transport oxygen around the body.	Biconcave shape increases the surface area for the diffusion of oxygen. No nucleus so that there is more room for haemoglobin, which binds oxygen molecules.
white blood cell		To fight pathogens which cause disease.	Some can change shape to squeeze out of blood vessels and engulf pathogens. Some can produce antibodies or antitoxins.
egg cell		To be fertilised by the sperm cell.	The cytoplasm contains nutrients for the developing embryo. The membrane changes after fertilisation to stop any more sperm getting in.

1.1. ¿Cuántas personas hay en tu familia? (How many people are there in your family?) Quizlet link		1.2. ¿Cómo eres? (How are you like?) Quizlet link		2. ¿Cómo te llevas con tu familia? (How do you get on with your family?) Quizlet link		
<p>En mi familia tengo- <i>In my family I have</i></p> <p>Somos ... en mi familia - <i>In my family we are...</i></p> <p>Hay ... personas en mi familia- <i>there are.... people in my family</i></p>	<p>Mi abuela- my grandmother Mi abuelo- my grandfather Mi madre- my mother / Mi padre- my father Mi hermano menor- my younger brother Mi hermana mayor- my older sister Mi tío- my uncle / Mi tía- my aunt Mi primo- my cousin (male) Mi prima- my cousin (female) Mi madrastra- my step mother Mi padrastro- my step father Mi hermanastro- my step brother Mi hermanastra - my step sister Mis padres- my parents</p>	<p>Yo tengo - I have Tú tienes - you have Él / ella tiene - he/she has Mi hermano tiene - my brother has Mi padre y yo tenemos- my father and I have Mis padres tienen - my parents have</p>	<p>El pelo... <i>(the hair)</i></p> <p>Castaño - brown Negro - black Rubio - blonde Pelirrojo- ginger Liso- straight Ondulado- wavy Rizado- curly Corto - short Largo- long A media melena - mid-length</p>	<p>Me llevo bien con mi hermano porque es... - I get on well with my brother because he is</p> <p>Me llevo mal / fatal con mi abuelo dado que es - I get on badly/ awful with my grandfather because he is...</p> <p>Me gusta mi primo/ mi madre/ mi hermana ya que es... - I like my cousin/ mother/ sister because he/she is</p> <p>Mi madre es bastante / muy/ un poco... - my mother is quite/ very/ a bit...</p>	<p>Character (positive): activo/a(s)- active / alegre(s)- cheerful divertido/a(s) - fun/funny entusiasta(s) - enthusiastic generoso/a(s)- generous rápido/a(s) - fast sincero/a(s) - sincere simpático/a(s)- nice tímido/a(s)- shy Character (negative): Antipático/a(s)- not friendly agresivo/a(s)- aggressive aburrido/a(s)- boring tonto/a(s)- silly arrogante(s)- arrogant nervioso/a(s)- nervous perezoso/a(s)- lazy/ torpe(s)- clumsy</p>	
<p>Soy / es <i>I am / He/she is</i></p>	<p>Hijo único - only child (male) Hija única - only child (female)</p>	<p>En el pasado tenía - <i>In the past I used to have</i> Hace cinco años tenía - five years ago he/she used to have</p>	<p>Los ojos... <i>(the eyes)</i></p> <p>Azules - blue Marrones - brown Verdes - green Negros - black Grandes- big Pequeños - small</p>	<p>Quando era joven yo era- When I was young I used to be Hace diez años mi padre era- ten years ago my father used to be Antes mis padres eran- before my parents used to be</p> <p>Mi amigo ideal sería- my ideal friend would be</p>	<p>Physical appearance:</p>	
<p>Somos - we are</p>	<p>Gemelos - twins</p>	<p>3. ¿Cuántas mascotas tienes? (How many pets do you have?) Quizlet link</p>				
<p>Están - they are</p>	<p>Divorciados- divorced</p>	<p>4. ¿Qué hay en el estuche? (What is in my pencil case?) Quizlet link</p>				
<p>En casa tengo - <i>at home I have</i></p> <p>En casa no tengo - <i>at home I don't have</i></p> <p>Mi amigo/a tiene - <i>my friend has</i></p> <p>Me gustaría tener - <i>I would like to have</i></p> <p>En el pasado tenía - <i>in the past I used to have</i></p>	<p>un caballo – a horse un conejo – a bunny un hámster – a hamster un pájaro – a bird un perro – a dog un pez – a fish un gato - a cat un pingüino – a penguin un ratón – a mouse una cobaya – a guinea pig una serpiente – a snake una tortuga – a tortoise</p> <p>unos caballos – some horses cinco conejos – five rabbits tres hamsters – three hamsters diez perros – ten dogs doce peces – twelve fish muchos gatos – lots of cats</p>	<p>que se llama Maravilla <i>(that is called Wonder)</i></p> <p>que se llaman <i>(that are called)</i></p> <p>llamado(a)(s) Melón <i>(called Melon)</i></p>	<p>es <i>(she / he / it is)</i></p> <p>pequeño/a- small grande - big gordo/a – fat delgado/a- slim, skinny bonito/a – pretty feo/a- ugly tímido/a – shy rápido/a- fast</p> <p>son <i>(they are)</i></p> <p>agresivos/as – aggressive activos/as – active alegres – cheerful</p>	<p>En mi estuche hay <i>(In my pencil case there is/are...)</i></p> <p>En el estuche no tengo <i>(In my pencil case I don't have)</i></p> <p>Necesito <i>(I need)</i></p> <p>Mi amigo tiene <i>(My friend has)</i></p> <p>Me gustaría tener <i>(I would like to have)</i></p> <p>En la escuela primaria tenía <i>(At primary school I used to have)</i></p>	<p>Un bolígrafo <i>(A pen)</i> Un lápiz <i>(A pencil)</i> Un sacapuntas <i>(A pencil sharpener)</i> Un subrayador <i>(A highlighter)</i></p> <p>Una goma <i>(A rubber)</i> Una regla <i>(A ruler)</i> Un pegamento <i>(A glue stick)</i></p> <p>Unos lapices <i>(Some pencils)</i></p> <p>Unos subrayadores <i>(some highlighters)</i></p> <p>Unas tijeras <i>(Scissors)</i></p>	<p>de color – <i>the colour</i></p> <p>blanco/a- white amarillo/a- yellow morado/a- purple negro/a- black rojo/a- red verde - green azul– blue gris– grey marrón – brown rosa – pink naranja– orange</p> <p>de colores – <i>the colours</i></p> <p>claros/as– light oscuros/as – dark llamativos/as– bright,flashy</p>

PRESENT TENSE		PRESENT TENSE	PRESENT TENSE	FREQUENCY EXPRESSIONS
REGULAR VERBS		TENER (TO HAVE)	SER (TO BE)	Hoy en día – Nowadays
Yo→ -AR: -o	Yo→ -ER/IR: -o	Yo tengo – I have	Yo soy – I am	De momento – At the moment
tú→ -AR: -as	tú→ -ER/IR: -es	Tú tienes – You(sg.) have	Tú eres – You(sg.) are	Normalmente – Normally
Él /ella→ -AR: -a	él/ella→ -ER/IR: -e	Él / Ella tiene – He / She has	Él / Ella es – He/She is	Generalmente – Generally
nosotros/as→ -AR: -amos	nosotros/as→ -ER: -emos IR: -imos	Nosotros(as) tenemos – We have	Nosotros(as) somos – We are	Todos los días – Every day
vosotros/as→ -AR: -ais	vosotros/as→ -ER: -eis IR: -ís	Vosotros(as) tenéis – You(pl.) have	Vosotros(as) sois – You(pl.) are	Hoy – Today
ellos/as→ -AR: -an	ellos/as→ -ER/IR: -en	Ellos / Ellas tienen – They have	Ellos / Ellas son – They are	
PRETERITE TENSE		PRETERITE TENSE	PRETERITE TENSE	FREQUENCY EXPRESSIONS
REGULAR VERBS		TENER (TO HAVE)	SER (TO BE)	Ayer – Yesterday
Yo→ -AR: -é	Yo→ -ER/IR: -í	Yo tuve – I had	Yo fui – I was	Anoche – Last night
tú→ -AR: -aste	tú→ -ER/IR: -iste	Tú tuviste – You(sg.) had	Tú fuiste – You(sg.) were	La semana pasada – Last week
Él /ella→ -AR: -ó	él/ella→ -ER/IR: -ió	Él / Ella tuvo – He/ She had	Él / Ella fue – He/ She was	El fin de semana pasado – Last weekend
nosotros/as→ -AR: -amos	nosotros/as→ -ER/IR: -imos	Nosotros(as) tuvimos – We had	Nosotros(as) fuimos – We were	El mes pasado – Last month
vosotros/as→ -AR: -asteis	vosotros/as→ -ER/IR: -isteis	Vosotros(as) tuvisteis – You(pl.) had	Vosotros(as) fuisteis – You(pl.) were	Hace tres semanas – Three weeks ago
ellos/as→ -AR: -aron	ellos/as→ -ER/IR: -ieron	Ellos / Ellas tuvieron – They had	Ellos / Ellas fueron – They were	El año pasado – Last year
NEAR FUTURE TENSE		NEAR FUTURE TENSE	NEAR FUTURE TENSE	FREQUENCY EXPRESSIONS
REGULAR VERBS		TENER (TO HAVE)	SER (TO BE)	La próxima semana – Next week
Yo→ voy a + infinitive verb (-ar/-er/-ir)		Yo voy a tener– I am going to have	Yo voy a ser– I am going to be	El fin de semana que viene – Next weekend
tú→ vas a + infinitive verb (-ar/-er/-ir)		Tú vas a tener – You(sg.) are going to have	Tú vas a ser – You(sg.) are going to be	En cuatro días – In four days
Él /ella→ va a + infinitive verb (-ar/-er/-ir)		Él / Ella va a tener – He/She is going to have	Él / Ella va a ser – He/She is going to be	El próximo año – Next year
nosotros/as→ vamos a + infinitive verb (-ar/-er/-ir)		Nosotros(as) vamos a tener– We are going to have	Nosotros(as) vamos a ser – We are going to be	El próximo mes – Next month
vosotros/as→ vais a + infinitive verb (-ar/-er/-ir)		Vosotros(as) vais a tener– You(pl.)are going to have	Vosotros(as) vais a ser – You(pl.)are going to be	
ellos/as→ van a + infinitive verb (-ar/-er/-ir)		Ellos / Ellas van a tener – They are going to have	Ellos / Ellas van a ser – They are going to be	

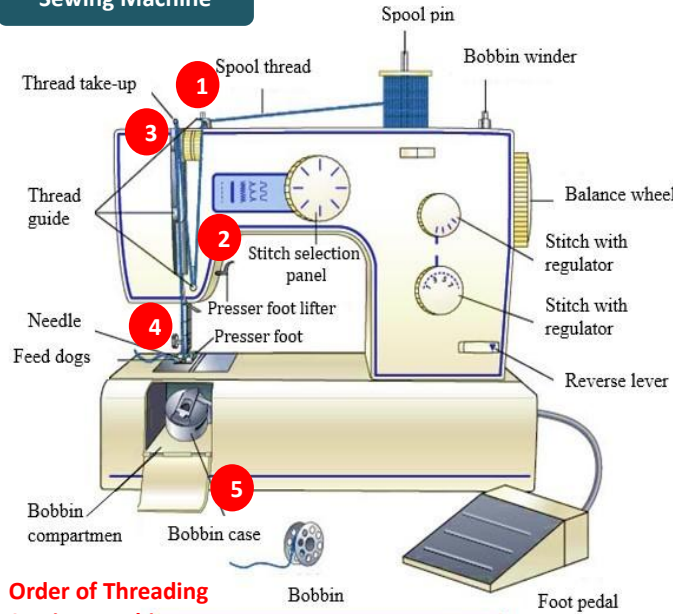
Year 7

Textiles

Equipment

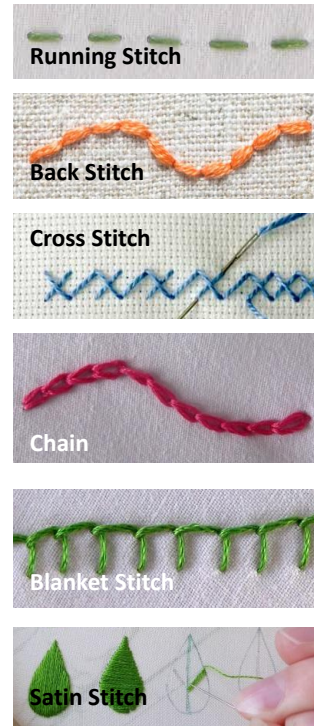


Sewing Machine



Order of Threading Sewing Machine Up

Embroidery Stitches



Embroidery is the craft of decorating fabric using a needle to apply **thread**. Embroidery stitches can also be used to hold applique in place.

Paper Patterns



A paper **pattern** acts as a template, showing you where to mark and then cut the fabric. Patterns can be designed to specific size and design.

Applique



1. Cut your pattern piece using paper & scissors
2. Use a pin to attach your pattern to the fabric.
3. Cut around your pattern and once complete, remove your pin
4. Use a pin to attach to your larger piece of fabric
5. Stitch around the edge to secure in place

Electronics in Textiles

	Symbol!

Electronic textiles or e-textiles are fabrics that enable electronic components such as batteries, lights, sensors, and microcontrollers to be embedded in them.

Remember these symbols ←



Classification of Fibres

A **fibre** is fine like hair in structure. Fibres that are **twisted** together are called **thread/yarn**. **Fabric** is **cloth** that is **made from fibres or yarn**. Depending on where they come from and how they are made, gives the fabric different characteristics and therefore suits different functions. Fibres are split into two categories:

Natural Fibres

Spinnable substances existing in **nature**

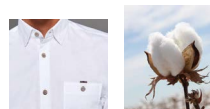
Animal

Silk
Wool



Plant

Cotton
Calico
Linen
Hessian



Manufactured Fibres

Spinnable substances manufactured by **man** using **chemical processes**.

They are classed as Synthetic Fibres

Nylon, Polyester, Acrylic, Lycra, Felt*



*Felt can be made using Synthetic fibres such as acrylic or Natural fibres such as animal fur
** Leather is not a fabric as it is not made up of fibres or yarns - it is a skin of an animal

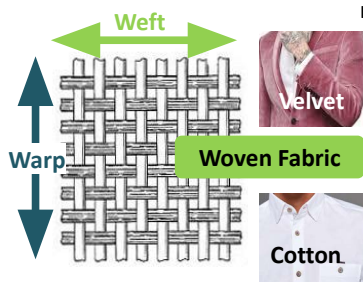
Properties and characteristics of fibres and fabrics.

Fabrics and fibres have different characteristics (soft, smooth, fluffy, shiny) and properties - **what the fabric can do/how it can behave**. For instance **wool** is heat insulating and has some elasticity (property) but it is soft to feel (characteristics).

	Properties/Characteristics	Uses
Calico	Cheap, Easy to cut, dye, print on, paint, lightweight, breathable, durable, relatively hard wearing	Design prototypes, bags, curtain linings, bags, craft projects
Hessian	Rough, frays easily, breathable so resist condensation, durable, hard wearing, relatively cheap	Sacks - coffee and teas, garden bags
Lycra	Elasticity (stretchy), durable, breathable, smooth, lightweight, moisture wicking (absorbs moisture from body, keeping wearer cool/dry)	Sports wear, socks, surfing suits/swimming suits
Felt	Sound insulation, very easy to cut, available in wide range of colours, sizes and thickness, durable, heat insulating	Crafting projects, sound insulation

Construction of Fabric

Fabrics are made from yarns, which are held together by **weaving** or **knitting**. Fabrics can also be made from **bonded fibres**.



Woven fabrics are made interlacing two sets of yarn, the warp and weft

Different coloured yarns can be woven together to create a pattern. Woven fabric is more structured and will hold its shape, that is why it is often used for shirts, blazers/suits and trousers.

Knitted Fabric



Knitted fabrics are made by interlocking one or more yarns together using loops

As a result of the interlocking loops, knitted fabrics are more flexible and elastic, that is why they are often used for socks, jumpers and sports clothing that allows movement

Bonded Fabric



Bonded fabrics are webs of fibres which are held together by glue, stitches or heat

There are **two** types of Bonded Fabric - Felted and Non Woven Fabrics. Both are formed by through compressions but in felted fabrics no glue is used

Health & Safety

<p>Iron:</p> <ul style="list-style-type: none"> -No talking whilst using iron -No distracting others when using iron -No touching base of iron either when on or off -Do not use iron around water -Unplug iron when not in use -Stand iron on platform when not in use -Do not walk around with the iron 	<p>Sewing Machine:</p> <ul style="list-style-type: none"> -No talking whilst using sewing machine -No distracting others when using sewing machine -Sew at a safe speed -Turn off machine if a problem occurs -Never try to mend machine -Only use a sewing machine once you have passed the 'Driving Test'
<p>Equipment:</p> <ul style="list-style-type: none"> -Do not stick pins or needles in skin -Do not point or wave around scissors -Do not point or wave around un-picker 	<p>General:</p> <ul style="list-style-type: none"> -Do not run in classroom -Do not act dangerously -Follow instructions given by teacher -No shouting -SLANT

TEXTILES

SPaG

Grammar: Write in sentences

A sentence is a group of words that make sense. Sentences start with a capital letter and end with a full stop, question mark or exclamation mark. All sentences contain **clauses**. You should try to use a range of sentences when writing. There are three main types of sentences.

Simple sentence: A sentence containing one main clause with a **subject** and a **verb**.
 He **reads**.
 Literacy **is** important.

Compound sentence: Two simple sentences joined with a **conjunction**. Both of these simple sentences would make sense on their own. Varying conjunctions makes your writing more interesting.
 He **read** his book **because** it **was written** by his favourite author.
 Literacy **is** important **so** students **had** an assembly about reading.

Complex sentence: A longer sentence containing a main clause and one or more **subordinate clause (s)** used to add more detail.
 The main clause makes sense on its own. However, a subordinate clause would not make sense on its own, it needs the main clause to make sense. The subordinate clause is separated by a comma (s) and/or conjunction. The clause can go at the beginning, middle or end of the sentence.
 He **read** his book **even though it was late**.
Even though it was late, he **read** his book.
 He **read** his book, **even though it was late**, because it was written by his favourite author.

How can you develop your sentences?

1. Start sentences in different ways. For example, you can start sentences with adjectives, adverbs or verbs.
Adjective: **Funny** books are my favourite!
Adverb: **Regularly** reading helps me develop a reading habit.
Verb: **Looking** at the front cover is a good way to choose a reading book.
2. Use a range of **punctuation**.
3. **Nominalisation**
 Nominalisation is the noun form of verbs; verbs become concepts rather than actions. Nominalisation is often used in academic writing. For example:
 It is important to **read** because it helps you in lots of ways.
 Becomes: **Reading** is beneficial in many ways.

Germany **invaded** Poland in 1939. This was the immediate cause of the Second World War breaking out.
 Becomes: Germany's **invasion** of Poland in 1939 was the immediate cause of the outbreak of the Second World War.

Connectives and Conjunctions	
Cause And Effect	Because So Consequently Therefore Thus
Addition	And Also In addition Further (more)
Comparing	Whereas However Similarly Yet As with/ equally/ Likewise
Sequencing	Firstly Initially Then Subsequently Finally After
Emphasis	Importantly Significantly In particular Indeed
Subordinate	Who, despite, until, if, while, as, although, even though, that, which



Year 7 Knowledge Organiser



Aspiration Creativity Character