Knowledge Organisers
Year 7
Summer 2024

Knowledge Organisers

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*Some subjects have Knowledge Organisers which last two terms or a year, therefore it will be the same as in past booklets.

An Introduction to Knowledge Organisers

What is a Knowledge Organiser?

A knowledge organiser is a document, usually one side of A4, occasionally two, that contains key facts and information that children need to have a basic knowledge and understanding of a topic, or in some cases a series of topics.

Students are expected to bring their Knowledge Organiser Booklet to school every day. Students will be issued with a new booklet to bring each term. However, it is import they keep the old booklets to help with revision for end of year exams.

What are the benefits of knowledge organisers?

The main benefit of knowledge organisers is that they give students and parents the 'bigger picture' of a topic or subject area. Some topics can be complicated, so having the essential knowledge, clear diagrams, explanations and key terms on one document can be really helpful.

Research shows that our brains remember things more efficiently when we know the 'bigger picture' and can see the way that nuggets of knowledge within that subject area link together. Making links, essentially, helps information move into our long-term memory.

How can the students use them?

As mentioned earlier, students are expected to bring their Knowledge Organiser Booklet to school everyday. In lessons they can be used in a number of ways, for example, to look up the meaning of key words, spell words correctly and do some additional work if they have finished classwork.

At home knowledge organisers can be used to support homework, independent work and revise for tests and exams. Two quick and easy ways to do this are:

1. <u>Look, cover write, check</u> – look at <u>part</u> of the knowledge organiser, cover it, write as much as you can remember and then check it
2. <u>Word up</u> – Pick out any words you don't understand. Use a dictionary or thesaurus to find the meaning. If they don't help as your teacher.

The more often you do this the better. YouTube has some clips on them; search 'Mr Garner look, cover, write, and check 'and 'Mr Garner word up'

How can parents use them?

- Read through the organiser with your son/daughter – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

How the booklet is organised

The knowledge organisers are in alphabetical order by subject.

Portraits

Skills

- Planning/proportion
- Tone for 3D and surface qualities
- Artist understanding/application
- Painting echniques
- Measurements/grid planning
- Developing intentions and ideas
- Colour mixing
- Presentation skills

Keywords

Proportion   Highlight   Expression
Guide lines   skin tone
Tone   Mark making   Technique
Shape   Style
Portrait   Composition
Texture   Symmetry

Lina Vicktor

Lina Viktor is an Liberian- British artist
Her works across paper and canvas draw on a variety of
artistic traditions and visual influences, from European
portraiture, classical mythology and astronomy, to ancient
Egyptian and African symbolism.
The lustrous blacks are punctuated with luminous gold and
opulent ultramarine blue – the limited colour palette making
the work high contrast.
Viktor's shows cultural narratives and potent mediations on
blackness and being. It is layered with reflections on history
and culture. Her portraits present the viewer with a proud and
powerful black woman, patterns cross the line between
graphic, geometric and symbolic of her heritage

Other well known Portrait Artists:

Pablo Picasso
Van Gogh
Andy Warhol
David Hockney
Lucian Freud
Frida Kahlo
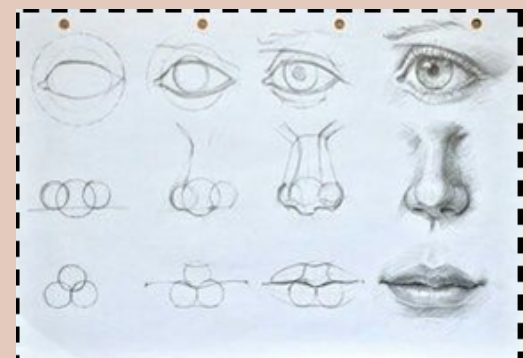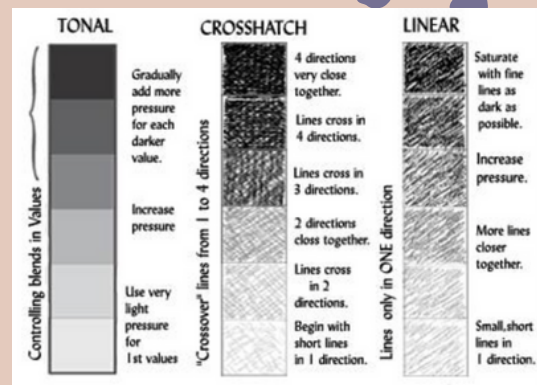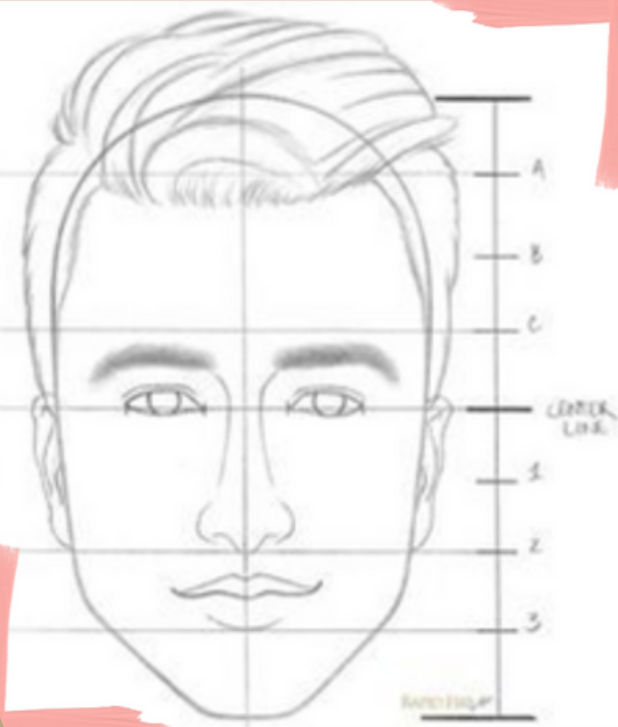
Spreadsheet Reference

Formula view

	A	B	C	D	E
1	**Product**	**Price**	**Tax rate**	**Tax amount**	**Selling price**
2	Sprocket	£10.00	20%	=B2*C2	=B2+D2

Normal view

	A	B	C	D	E
1	**Product**	**Price**	**Tax rate**	**Tax amount**	**Selling price**
2	Sprocket	£10.00	20%	£2.00	£12.00

A spreadsheet is a document that has a tabular layout.

It is split into boxes **cells**.

Cells have an address or **cell reference.** A1 and E2 are cell references.

Spreadsheets are used for performing calculations.

A computer user has created a spreadsheet to calculate the price of products after tax has been added.

- Cell A2 is a **text label** as it contains data that ill not be used in any calculation.

- B2 is a **numeric variable** as the user could change the price. It has **currency formatting**. This means the user doesn't need to type the £ symbol and pence — they will be displayed automatically.

- C2 is another numeric variable, but the is time uses **percentage formatting**.

- Cells D2 and E2 contain **formulas**. These are calculations that always begin with the = symbol. They use cell references in their calculations, so if the data in the cells changes, the answer automatically updates too.

Formula operator	Description
+	Addition
-	Subtraction
*	Multiplication
/	Division

Spreadsheet information

1. Use a formula for every calculation. Never do them in your head or use a calculator!

2. Spreadsheets are the most useful tool on a computer. Almost everyone can benefit from using them. Learn how to use one!

3. There are 17,179,869,184 cells on Excel. That's over 17 billion!

Cyber Security: *"All the things we do to protect our digital devices and ourselves."*

Cyber Security Measures

Anti-malware software checks for malware on your device.

Firewalls protect against unwanted data entering or leaving a computer on a network.

Passwords should be at least 8 characters in length. Don't use real words or your username.

They should include:
- Upper and lower case letters
- Numbers
- Other characters

Report spam messages. Don't open messages from untrusted sources.

Update apps and operating systems when prompted.

CAPTCHA, **2FA** and **biometrics** are ways to authenticate users.
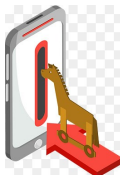
Social engineering

"The manipulation of people into giving up personal data, which can be used for malicious purposes."

Phishing takes the form of electronic messages that look like they come from a genuine company, asking users to confirm security details. Links to the user to hoax websites where the details are gathered.

Blagging is a con where a criminal uses an invented scenario to extort money. Messages may come from a hacked account.

Shouldering is hackers observing users entering their login details, perhaps over the user's shoulder. Distraction techniques are used to mask this activity.

Malware	*A term to describe **mal**icious soft**ware**. This is computer programs that have a negative impact on computer users or their devices. There are three main types:*
Virus	• Usually comes embedded in other files. When people open these files, the virus is activated. • Capable of copying itself and sending itself to other devices. • Can destroy data on your computer.
Worm	• Needs no human interaction to be activated. • They travel around networks, looking for unprotected computers. • Stand alone program, not embedded with a host file.
Trojan horse	• Malware that gives hackers access to a computer. • Often disguised as useful software. • Has to be installed by a human

DRAMA KNOWLEDGE ORGANISER: YEAR 7

CHARLIE AND THE CHOCOLATE FACTORY	ROALD DAHL	HARRY POTTER
• Students to perform in 'stereotype' linking to the main characters in the book – Charlie Bucket, Mike TV, Augustus Gloop, Violet Beauregarde and Veruca Salt. • Using strong physicalisation to represent characters. • Using and understanding scripts to perform in an effective way to fully embody the characters. • Using role on the wall to fully create and develop a character. • Developing the skill of Tableaux.	• Students will different Roald Dahl stories, The BFG, The Twits, Georges Marvellous Medicines, Matilda and James and the Giant Peach. • Using the skills of Physical Theatre, Hot Seating, Conscience Alley, Choral Speaking, Tableaux and Script. • Understanding the themes and messages within the different stories.	• Students to use physical theatre (performing using your body with gesture and movement). • Looking at key characters from the book – Harry Potter, Ron Weasley, Hermione Granger, The Dursleys, Snape. • Understanding different types of genre within theatre. • Looking at stereotypical characters. • Marking the moment – showing a significant moment within performance. • Using exaggerated movement and gestures to show characters personalities and feelings.

PANTOMIME	SPY SCHOOL	KEY WORDS	
• Inspired by Commedia Del Arte and clowning. • Originated in Italy. • Commedia means "the comedy" • Very popular in Shakespearian time. • Actors using no script – Improvisation – making up performance on the spot. • Started by being performed on the street. • Comedic in style – characters are very physical and over the top. • Main Characters – Prince, Princess, Dame, Evil • Choral elements are vital to this performance style – talking in unison. • Singing, dancing and acting are involved.	• Introduction to practitioner Konstantin Stanislavski and his 'System.' • Stanislavski – Father of Modern Theatre born in 1863 from Russia – created Method Acting. • Teacher in Role – teacher performing in character to create sense of realism. • Naturalism – performance that is like real life. • Physical Apparatus – actors voice and body. • Hot Seating – questioning actors in role. • Magic If – how the actor would feel IF they were in the characters situation. • Emotion Memory – Using a past memory to influence your acting.	• Tableaux • Characterisation • Body Language • Slap stick • Marking the moment • Stereotypes • Physical Theatre • Comedy • Chorus/Ensemble • Naturalism • Magic If • Emotion Memory • Teacher in role • Cross-cutting • Over exaggeration • Setting • Script/Plot	**IMPORTANT PRACTITIONERS:** ➢ Stanislavski ➢ Commedia Del Arte

EMPLOYABILITY:

Team work, Collaboration, Listening skills, Creative thinking, Leadership, Focus, Concentration, Positivity, Confidence, Self-belief, Self-discipline

Year 7 Cooking & Nutrition Knowledge Organiser

Practical Skills

Skill Group	Techniques
Knife skills	Fruit and Vegetables—bridge hold, claw grip, peel, slice, dice and cut into even pieces.
Weigh and measure	Be able to demonstrate accurate measurement of liquids and solids.
Use of equipment	Use a grater, vegetable peeler, paring knife, saucepans and wok.
Using the hob	• boiling and simmering • stir frying
Using the oven	• baking
Make sauces	Make a reduction sauce (pasta sauce)
Test for readiness	Use a knife/skewer, finger or poke test, bite or visual colour check to establish whether a recipe or ingredient is ready.
Judge and manipulate sensory properties	Demonstrate: • how to taste and season during cooking • presentation and food styling—use garnishes & decorative techniques.

Hygiene & Safety Rules

Hygiene & Safety Rules
Tie up long hair
Wear an apron
Tuck tie in
Wash hands
No running
Use oven gloves when necessary
Clean practical equipment thoroughly

Key abbreviations: Weights and Measurements

L	Litres	
g	Grams	
ml	millilitres	1000ml =1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml

Nutrition – The Eatwell Guide

Eatwell Guide

Equipment

Wok | Kitchen Scales | Measuring Jug | Fish Slice | Vegetable knife
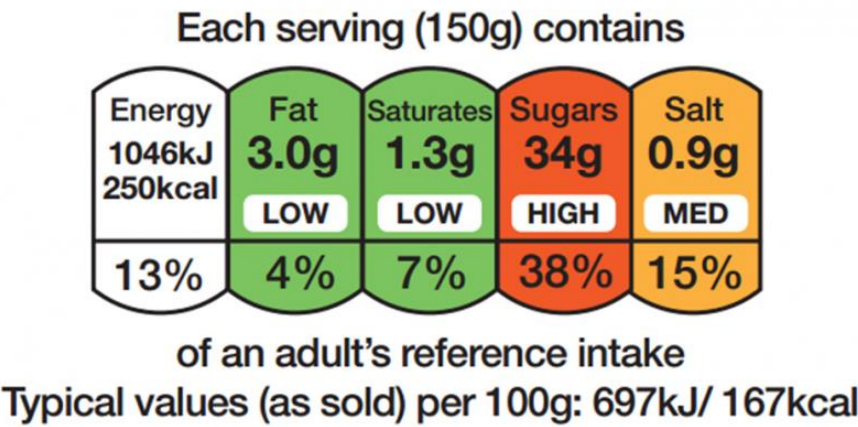
Key Messages:

- Eat at least 5 portions of fruit and vegetables per day.
- Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates.
- Have some dairy or dairy alternatives.
- Eat some beans, eggs, fish, meat and other proteins.
- Choose unsaturated oils and spreads and eat in small amounts.
- Drink 6–8 cups/glasses of fluid per day.

Food Labelling

Each serving (150g) contains

	Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
	13%	4%	7%	38%	15%

of an adult's reference intake

Typical values (as sold) per 100g: 697kJ/ 167kcal

Year 7 Graphic Products Knowledge Organiser

Automata Project

Key Skills

- Responding to a Design Brief
- Analysing & researching information
- Creating a suitable idea for a target audience
- Isometric drawing techniques
- Developing CAD drawing skills using:

    Serif Draw / Techsoft Design

- Rendering techniques
- presentation skills
- Developing & testing
- Manufacturing with modelling materials (card & paper)
- Evaluating the design & making process

FOLLOWER
SLIDE
ROLLER
PEAK
SNAIL/DROP CAM
VERTICAL CENTRE LINE

By V.Ryan

SHAFT
FOLLOWER
CRANK
CAM
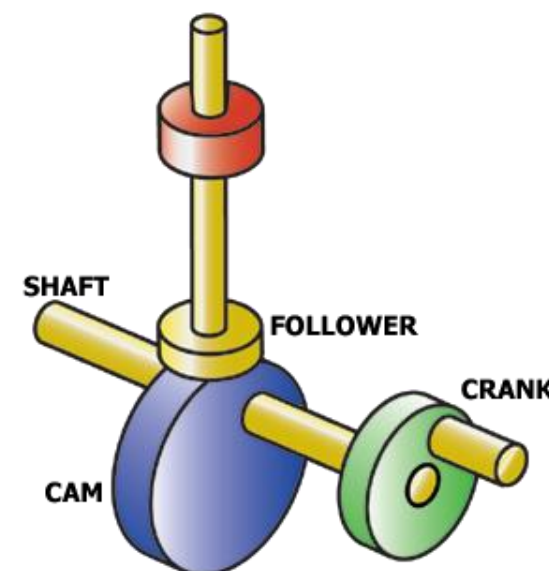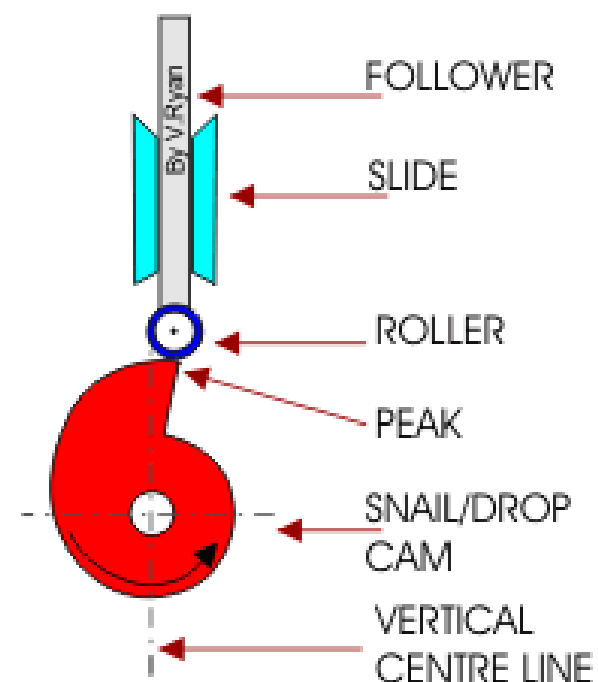
Cams

ROUND	EGG-SHAPED
ELLIPSE	ECCENTRIC
HEXAGON	SNAIL

Key vocabulary

Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Target Audience	The person or people most likely to be interested in your design or product.
Function	What a product does, how it works and what it will be used for?
Mechanism	A system of parts working together in a machine.
Motion	Something moving or being moved.
Cam	A rotating or sliding piece used to transfer rotary motion into linear motion or vice versa.
Modelling	To present ideas to the user (target audience) or client.
Evaluating	To judge or calculate the quality, importance, amount, or value of something
Linea Motion	Motion moving along a straight line.
Rotary Motion	Motion moving clockwise or anti-clockwise.

dt design technology

Year 7 Product Design Knowledge Organiser

dt design technology

Catamaran Boat Design

Key Skills

- Responding to a Design Brief
- Identifying a target audience and product function
- Applying Health & Safety procedures and PPE in the workshop environment
- Developing practical skills to create housing & dowel joints to join materials
- Identifying specific workshop tools and equipment
- Manufacturing a prototype model
- Finishing materials
- Presentation skills
- Evaluating the manufacturing process

Tools for working with Timber

Try square	Bench vice
Steel rule	Marking gauge
Tenon saw	File

Belt & Disc Sander	Coping Saw	Bench hook	Pillar drill

Timber is a natural material with imperfections, knots and grain. Remember always sand with the grain

Softwood
From coniferous trees that are evergreen, which are faster to grow and are less expensive than hardwoods. Softwoods are a sustainable material as the resource can be regrown and not depleted. Softwoods are strong and easy to work with.

Health & safety in the workshop

Tie long hair back
Wear an apron
Wear safety goggles must be worn when using machinery
Move slowly around the workshop
Be aware of where the emergency stop buttons
Ensure the ventilation is switch on prior to using a machine
Only one person operating a machine at one time
Report any injuries or breakages to the teacher immediately

Key vocabulary

Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Function	What a product does, how it works and what it will be used for?
Target Audience	The person or people most likely to be interested in your design or product.
Materials	What something is made from.
Finishing	The process of applying a finish to preserve or protect a material & improve aesthetics.
Wood grain	Wood grain is the pattern made by the wood fibres in trees when it grows.
Modelling	To present ideas in 2D & 3D to the user (target audience) or client.
Prototype	A prototype is a model that is built to test to see if it is successful or whether it needs further modification or improvements.
PPE	Personal protective equipment are items such as goggles and aprons.

Year 7 Textiles Knowledge Organiser
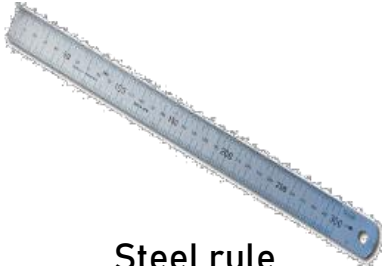
Animal Cushion Design

Key Skills

- Responding to a Design Brief
- Analysing existing products
- Identifying a target audience
- Designing & annotating to include a range of decorative and construction techniques
- Demonstrating ability to complete a range of decorative by techniques by hand:
  - Embroidery stitches (running stitch, back stitch & blanket stitch)
  - Appliqué
  - Adding components e.g. buttons or googly eyes
- Using a sewing machine to complete construction techniques to make seams

Product features		
Creative design that is personalised	A theme that is identifiable and original	
Hand embroidery	Consideration of a specified target market	
Hand appliqué	Components used as decoration	
Components used as decoration	Machine sewing	

Health & safety
Follow teacher instructions
Move slowly around the room do not run
Tie long hair back
Hold scissors or shears correctly when walking around the room.
Report any injuries or breakages to the teacher immediately

HAND SEWING

RUNNING STITCH — Used as a decorative stitch or for seams. Stitch is easy but also not very strong. Stitches should be small & even.

BACK STITCH — Strong hand stitch for holding seams together and inserting zippers by hand. Stitches overlap on the back.

BLANKET STITCH — Good stitch for finishing edges. Stab from bottom up, and wrap thread around half exposed needle in the direction you are sewing.

Key vocabulary	
Decorative	Being aesthetically pleasing to the eye.
Materials	What something is made from?
Components	The parts/materials/threads needed to make a product.
Function	What a product does, how it works and what it will be used for?
Aesthetics	How a product or design looks .
Target Audience	The person or people most likely to be interested in your design or product.
Embroidery	Even stitch widths and lengths completed by hand sewn stitches.
Appliqué	A decorative technique whereby one material is sewn on top of another by hand.
Design Brief	An written outline which explains the aims and objectives and milestones of a design project.

CONTEXT

- William Shakespeare (26 April 1564 – 23 April 1616) was an English playwright, poet, and actor. He wrote 38 plays (with about half of them considered comedies) and poems. He lived in Stratford-upon-Avon, in Warwickshire, England.
- The **Jacobean era** was the time when James I was King of England, between 1603 and 1625. During the Jacobean era, England and Scotland officially got together and became the United Kingdom.
- The **Renaissance era** was a period in history that spanned from the 14th to the 17th century and is characterised by a renewed interest in classical learning and advancements in science, art and literature.
- The Renaissance also rekindled a love of classical works such as **Ovid's Metamorphoses and Virgil's Aeneid** which influenced many writers including Shakespeare
- In the 1600s, **colonialism** was common practice for many European countries such as Britain who established colonies in other parts of the world for economic gain, religious conversion and national prestige. Countries like Britain, France, Spain and Portugal colonised many areas of the world such as North and South America, Africa and Asia, forcefully taking over the land and imposing their own laws, cultures and languages on the indigenous people. The colonies were used as a source of raw materials and led to the exploitation and oppression of many. During this time, the first British colonists also started coming to the United States. Jamestown, Virginia, was founded in 1607.
- There was a rising fascination with **magic, alchemy and the occult** and there were also many accounts of **voyages and shipwrecks**.

Genre conventions

Comedy	Tragedy
Marriage / love	Death
Farce/ Humour	Pain/Suffering
Mistaken identity	Betrayal and Revenge
Surprises and Twists	Pride
Wit	Anger
Foolishness	Chaos
Magic	Power

MAIN CHARACTERS

Prospero – Former Duke of Milan who has landed on a mystical island after being usurped by his brother. He has magical powers

Miranda – Prospero's daughter. She lives on the island with her father

Ariel – a spirit of the island and Prospero's servant

Caliban – son of the witch Sycorax and Prospero's slave

Ferdinand – the prince of Naples, son of Alonso

Trinculo – Alonso's jester and Stephano's friend

Stephano – Alonso's butler and friend of Trinculo

Alonso – king of Naples, Ferdinand's father

Antonio – Prospero's brother who became Duke of Milan after overthrowing him

Gonzalo – Alonso's counsellor and trusted advisor

DRAMATIC TECHNIQUES AND TERMINOLOGY

Soliloquy: an act of speaking one's thoughts aloud alone or regardless of any hearers, especially by a character in a play.

Dramatic irony: when the audience knows something that a character does not, creating tension and suspense

Aside: A character speaks to the audience or another character but others are not meant to hear what is being said.

Epilogue: a section or speech at the end of a book or play that serves as a comment or conclusion.

Monologue: A long speech delivered by one character to another character or to the audience

Stagecraft – in literature, this is the playwright's choices in writing and structure to present their play to the audience.

Protagonist - In Greek drama the principal character and actor. It is now often used to describe the 'hero' referring to the leading character

Dialogue: a conversation between two or more people as a feature of a book, play, or film.

Anti-hero: The central character in a story, film, or drama who lacks conventional heroic attributes.

Stage directions: directions to describe body language, movement, voice tone and gesture also play a part in stagecraft as they help to pass on the message of the playwright in delivery as well as clarifying the plot, characters and relationships.

LANGUAGE AND TERMINOLOGY

Shakespeare writes in a combination of **prose** and **verse**. Prose is a conversational way of speaking which doesn't have a set rhythm or structure. Verse always has a set rhythm and structure.

Rhyming couplets are two lines written in iambic pentameter that end in the same sound, or a rhyme. They are often used to sum up the end of a character's speech.

Juxtaposition happens when two opposites are put together in a text. For example, hot and cold or light and dark.

Iambic pentameter is the name given to the rhythm that Shakespeare uses in his plays. The rhythm of iambic pentameter is like a heartbeat, with one soft beat and one strong beat repeated five times

Metaphor: A figure of speech in which a word or phrase is applied to an object to action which is not literal

Simile: A comparison of two unlike things using 'like' or 'as;

Irony is the use of language to convey the opposite to what the words express

SUMMARY OF THE PLOT

BACK STORY: Before the action of *The Tempest* begins, Antonio usurps his brother Prospero as Duke of Milan, with the help of Alonso, King of Naples and Alonso's brother Sebastian. Cast off to sea, Prospero and his daughter Miranda land on a remote island, inhabited by Caliban and the spirit Ariel, whom Prospero uses his magic to enslave.

ACT 1 SCENE 1: On board a ship caught in a violent storm are group of noblemen who are returning to Italy after the wedding of Alonso's daughter in Tunisia. As the storm rages, the sailors try to control the ship, whilst the noblemen get in their way.

ACT 1 SCENE 2: Miranda is upset, having watched the storm engulf the ship just offshore. Prospero reassures her and then tells her the story of how they ended up on the island. He then uses his magic to put Miranda to sleep and calls for his spirit Ariel. Ariel describes how he created the storm and that the ship is now safe and everyone on board is safe. Ariel objects to Prospero's plans but he is promised freedom if he obeys. Prospero then wakes Miranda and takes her to see his slave Caliban. She is reluctant as he attacked her but she goes with her father. Later, Ariel then magically leads Ferdinand to Miranda and they fall in love at first sight. Prospero is angry, and uses his magic to imprison Ferdinand.

ACT 2 SCENE 1: Alonso, Antonio, Sebastian, Gonzalo, Adrian and Francisco find themselves washed up on the island together after the shipwreck. Alonso is worried about what has happened to his son Ferdinand. The others try to cheer him up. Ariel enters, invisible to the nobleman, and sends them all to sleep except for Antonio and Sebastian. Antonio tells Sebastian of his plans and persuades Sebastian to betray his brother Alonso, just as he betrayed his brother Prospero. When Sebastian and Antonio raise their swords to kill Alonso and Antonio in their sleep, Ariel sings, and wakes them up. Sebastian and Antonio pretend their swords are drawn to defend the others. They then go in search of Ferdinand.

ACT 2 SCENE 2: Caliban enters complaining that Prospero always sends his spirits to attack him. He sees Trinculo and hides under his cloak. Trinculo is looking for shelter and crawls under the cloak too. Stephano then enters and he was washed up on shore with a barrel of wine so is now drunk. Seeing Caliban and Trinculo under the cloak he thinks it is a monster 'with four legs'. He pours wine into Caliban's mouth and, as Caliban has never tasted wine before, he quickly becomes drunk. Trinculo recognises Stephano's voice and they are joyfully reunited. Caliban thinks Stephano is 'a brave god' and offers to serve him as his new master. Trinculo thinks Caliban is ridiculous but Stephano is flattered and tells accepts Caliban's offer.

ACT 3 SCENE 1: Ferdinand is thinking about Miranda, and says he is happy to do the menial tasks for Prospero because of his love for her. Miranda enters and Prospero is actually secretly watching them. Miranda and Ferdinand express their love for each other and agree to get married.

ACT 3 SCENE 2: Stephano enters with Caliban and Trinculo. He is still drunk and enjoying the status Caliban is giving him. Trinculo is not as impressed. Caliban tells Stephano the island is ruled by a sorcerer that by his cunning hath cheated me of the island'. Ariel watches secretly and tricks Caliban by speaking as if he were Trinculo. Caliban then persuades Stephano to kill Prospero, take Miranda as his wife and rule the island himself.

ACT 3 SCENE 3: Alonso and the nobles rest after searching for Ferdinand unsuccessfully as Sebastian and Antonio agree they will try again to kill Alonso. There is then music and strange creatures lay out a banquet. The creatures vanish but leave the feast behind them. Ariel appears and says he knows what they did to Prospero he adds that as a consequence they were caught in the storm and lost Ferdinand. Prospero praises Ariel and tells the audience his magical ticks are as Alonso, Sebastian and Antonio are left in a 'strange stare'.

ACT 4 SCENE 1: Prospero has set Ferdinand free, and tells him and Miranda that he agrees to their marriage. He creates a magical show with the spirits to bless Miranda and Ferdinand's 'contract of true love'. Suddenly, Prospero interrupts the show, and sends them away as he calls for Ariel. Ariel reports that Caliban, Stephano and Trinculo are drunk and he led them around the island Prospero sends Ariel to distract the conspirators. They then watch as Stephano and Trinculo are distracted from their plot to kill Prospero. Other spirits then appear and chase Stephano, Trinculo and Caliban away. Prospero sends Ariel after them to make sure they are punished.

ACT 5 SCENE 1: Prospero announces his plans are coming together and Ariel tells him the nobles are 'all prisoners'. Prospero says if they are sorry he will forgive them. He sends Ariel to release them and, in a soliloquy, announces his plans to give up his magic. Ariel leads in the nobles and as Prospero forgives them, they begin to return to normal. Prospero then sends Ariel to fetch the Master and Boatswain. Prospero embraces Alonso, and Alonso gives back Prospero's title of Duke. Alonso also mourns the loss of Ferdinand and Prospero says he also lost his daughter in the storm but then reveals Miranda and Ferdinand playing chess together. Prospero sends Ariel to 'set Caliban and his companions free'. Alonso is surprised to see Stephano and Trinculo in such a drunken state and Caliban is sorry he took 'this drunkard for a god' and promises to learn from his mistakes. Prospero invites the noblemen to his rooms to spend the night and promises to tell 'the story of my life' before they all return to Naples together the next day. Prospero tells Ariel to ensure they get safely back to Naples and then sets him free.

Year 7 Geography
Unit 3: Ecosystems

Consumers — Predators, Prey | Producers

Plants get their energy from the Sun. They are called **producers** because they make their own food.

Animals are called **consumers** because they eat plants and other animals. They do not make their own food.

Animals that eat other animals are called **predators**. The animals they eat are called **prey**.
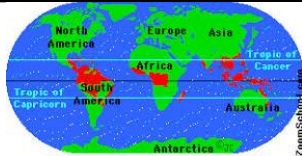
Tropical Rainforests

This biome is located on three continents:
- South America
- Africa
- South east Asia

The temperature ranges from 21 to 30 degrees Celsius. Rainfall remains high all year round.

The tropical rainforests are being cut down for the following reasons:
1. To sell the wood
2. To build on the land
3. To find minerals in the ground
4. To use the land for agriculture (cattle farming)

This means that:
1. Indigenous people lose their homes
2. Animals lose their habitat
3. Unique plants are lost forever
4. Less carbon dioxide is removed from the atmosphere. This will make the world a warmer place to live.

Deserts

Deserts are found along the Tropic of Capricorn and the Tropic of Cancer. The **largest** desert is the **Sahara**.

There is very little biodiversity in hot deserts because of the harsh climate.

In the day, temperatures can exceed 40 degrees Celsius but drop below 0 degrees Celsius at night.

Plant adaptations - Plants have developed special adaptations to survive the harsh climate.

Spines -lose less water than leaves so are very efficient in a hot climate. They also stop animals from eating the plant.

Waxy skin - some leaves have a thick, waxy skin on their surface. This reduces water loss by transpiration.
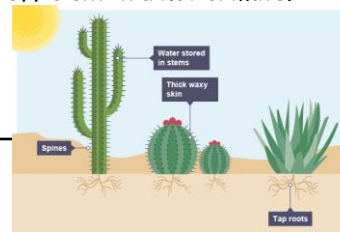
Polar

Polar biomes, such as Antarctica, are cold and dry all year round. 99 per cent of it is covered by ice.

Antarctica is the 5th largest **continent**, 25 per cent larger than Europe.

During the winter, much of the water surrounding Antarctica freezes.

Countries have claimed ownership of parts of Antarctica.

The **Antarctic Treaty** was agreed in 1961 to help control human activity in the location and also to resolve disagreements over territory.

The biodiversity is low. **Emperor penguins** live in Antarctica. **Polar bears do not!**
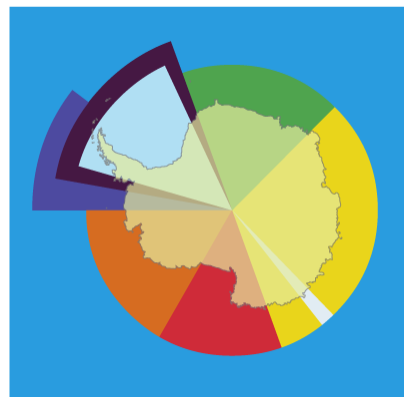
	Definition
Food Chain	A series of organisms each dependent on the next as a source of food.
Biome	A large naturally occurring ecosystem such as tropical rainforest.
Deforestation	The removal of trees.
Adaptation	The process of change by which an organism becomes better suited to its environment.
Sustainable	The process of maintaining a balanced environment. It is where we act in a way to provide for the needs of today without compromising the needs of the future generations.

Year 7 Geography
Unit 4: Weather

Recording and observing the weather.

Wind direction – a wind vane is used. These show the direction from which the wind blows.
Anemometer – this is used to measure the wind speed. It is measured in metres per second.
Cloud cover – This is the amount of sky covered by cloud. It is measured in eighths.
Visibility – This is the distance that can be seen. It is measured in metres.
General weather – this describes the weather in words, e.g. rain, snow, showers, fog, mist, thunder, cloudy, fair or sunny.
Rain gauge – this is used to measure the amount of precipitation over a set period of time. It is measured in millimetres.

What is Britain's weather like?

1. North is colder than the south
2. West is wetter than the east

This is because:
- The North Atlantic Drift raises the temperatures in the west.
- Mountains lower temperatures by 1 degrees Celsius every 100m
- In the summer the sun warms the south more than the north.

What is rain?
Clouds are made up of tiny drops of moisture called cloud droplets. They are only visible because there are billions of them crowded together. A cloud gives rain after these tiny cloud droplets grow into larger raindrops which fall to the ground.
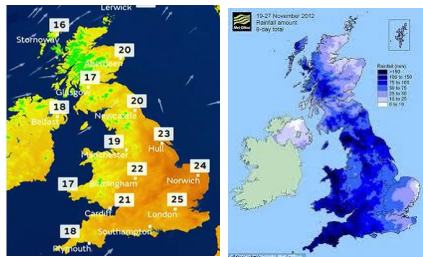
1. Air rises
2. Air cools
3. Condensation occurs (vapour – liquid)
4. Precipitation occurs

Low pressure system – depressions
Low pressure is where air rises, cools, condenses and forms cloud. When low pressure moves over the UK, we experience cloud and rain.

High pressure system – anticyclone
High pressure is where the weight of the air pressing down on us increases. This means air has cooled and is sinking. When high pressure moves over the UK, we experience cloudless skies.

Wind is the movement of air from areas of high to low pressure.

Microclimate
This is when the climate in a small area is different to the general surroundings.
- The wind can be reduced by buildings/walls which create shelter.
- The temperature can be increased by buildings releasing heat.
- Dark surfaces retain heat for longer warming the surrounding air.

L - Low Pressure
H - High Pressure

Frontal Rainfall

Condensation forms clouds
Front
Warm air forced to rise over cold air
It rains heavily along the front

Relief Rainfall

Warm, moist air is forced to rise over high areas
Air cools and condenses, forming clouds
Rain shadow
Sea
It rains
Air descends, warms and becomes drier

Convectional Rainfall

Sun heats the land and the air above
Warm air rises, cools and condenses, forming clouds
Rain can then occur
Sea
Land
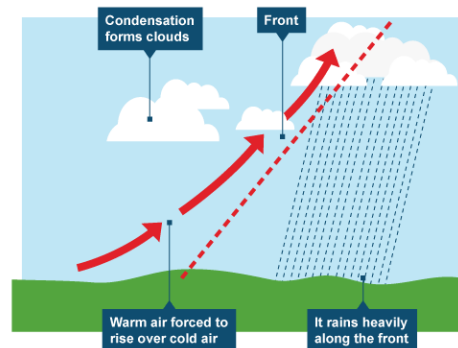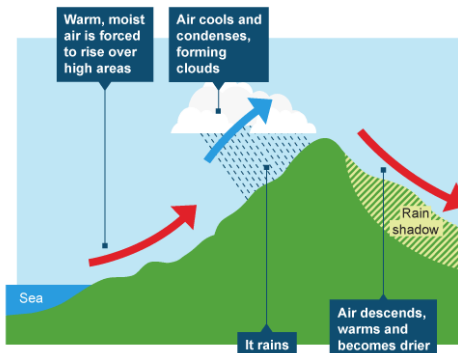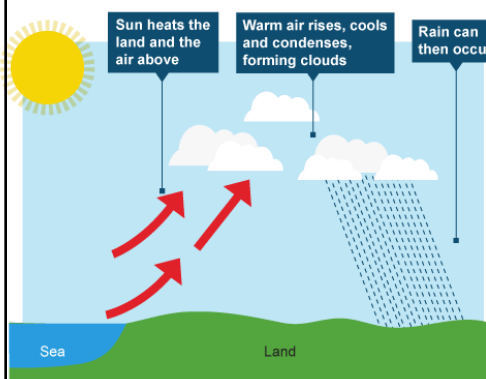
	Definition
Weather	Weather is the condition of the atmosphere over a short period of time. It relates to wind speed and direction, cloud cover, temperature, visibility and humidity.
Climate	Climate is the average weather for a place. It is calculated by collecting data over a 30 year period.
Meteorology	The study of weather.
Precipitation	This is the form of moisture in the sky. It can fall as rain, snow, hail or sleet.
Air pressure	The weight of the air pressing down on the earth's surface. It is measured in millibars.

Wellington History
Year 7 HT 5 Knowledge Organiser
How significant was Mansa Musa?
How far did fear allow the Aztecs to control their Empire?

What and why?
✓ You will learn about the richest man that ever lived! You will also learn a lot about how Mansa Musa life changed the Medieval world.
✓ You will learn about the Aztecs and compare their Empire building to both the Romans and the Mongols.

❖ **Want to explore further?**
Podcast: BBC Homeschool History Mansa Musa
https://www.bbc.co.uk/sounds/play/m000jvqr
Website:
https://www.nationalgeographic.org/encyclopedia/mansa-musa-musa-i-mali/
Book: Mansa Musa: The Richest Man In History by Mike McCraw

Key Questions

• Why should we learn about Medieval Mali?

• What was life like in Medieval Mali?

• How was Medieval Africa similar to Medieval Europe?

• Why was Mansa Musa significant?

Keywords

Mansa
King or ruler
Emperor
Ruler of an Empire
Empire
When a country rules land outside of its borders
Trade
The exchange of goods and services
Pilgrimage
A religious journey
Architect
A person who designs buildings
Wealth
An abundance of valuable possessions or money
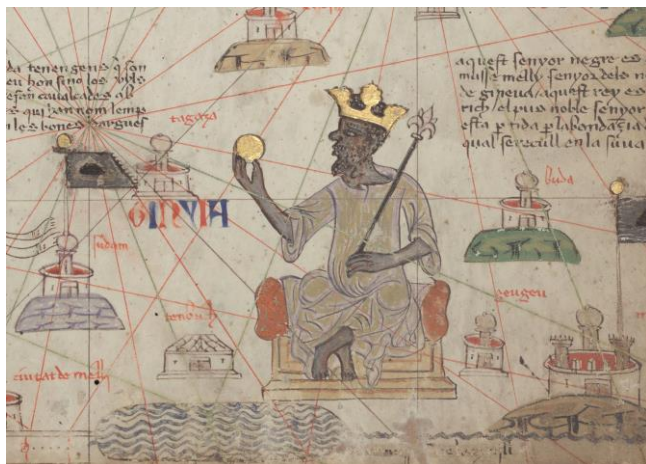
Key events and Key People
Mansa Musa – 14th Century Emperor of Mali
Sundiata – Musa's great uncle and the founder of the Malian Empire
Mansa Abu Bakr – Mansa Musa's uncle, the Emperor before Mansa Musa
1312 A.D. – Mansa Musa became Emperor
1324 A.D. – Mansa Musa's pilgrimage to Mecca
1337 A.D. – Mansa Musa dies

✓ **What and why?** To understand the religious, political and social change that occurred during the reign of the first four Tudor Monarchs.

✓ **Stop, think and link:** How had the Romans and the Normans changed England? How important was Medieval religion?

❖ **Want to explore further?**
Podcast:
https://www.historyextra.com/period/tudor/podcasts-tudors-history-henry-viii-george-thomas-boleyn-thomas-cromwell-elizabeth-i-jane-seymour-lady-jane-grey/
Website: https://www.dkfindout.com/uk/history/tudors/
Book: Terrible Tudors by Terry Deary

Key Questions

• How did the Wars of the Roses change England?

• How and why did Henry VIII change the country's religion?

• What impact did Edward and Mary have?

• How tolerant was Tudor England?

• How should we remember the impact of the Tudors?

Keywords

Monarchy
A system of government that has a king or queen at its head
Dynasty
A family of rulers who rule over a country for a long time
Successor
A person who inherits the throne after the death of the previous king or queen
Catholic
The oldest and largest branch of Christianity ruled over by the Pope in Rome
Protestant
The second largest branch Christianity that became separate from the Catholic church in the 16th, don't follow authority of the Pope
Reformation
An attempt in the 16th century to change the Catholic church that resulted in the creation of Protestant churches
Heir
Next in line to the throne
Monastery
A building were people lived, worshiped and devoted their time to God. People who lived in a monastery were called monks
Dissolution
A formal, legal ending of something. armada A large group of warships
Heretic
Follower of an old religion

Key events and Key People

1485 Henry Tudor becomes Henry VII after defeating Richard III at the Battle of Bosworth.
1509 Henry VIII becomes King.
1517 Martin Luther writes a list of criticisms against the Catholic Church and the Protestant Church begins.
1527 Henry asks the Pope for a divorce from Catherine of Aragon. The Pope refuses.
1534 Henry passes the Act of Supremacy. This created the Church of England and made the Monarch the Head of the English Church, instead of the Pope.
1549 Edward VI introduces the Book of Common Prayer.
1553 Lady jane Grey Queen for 9 days. Removed by Mary I and executed.
1558 Mary I dies and is replaced by Elizabeth I.

Topic/Skill	Definition/Tips	Example	Non-example
1. Integers	Division can be thought of as a) sharing b) grouping c) the inverse of multiplication.	$24 \div 6$ a) 24 sweets shared with 6 people b) 24 people put into groups of 6 c) What do we multiply by 6 to get 24?	
	Dividend $\div$ divisor = quotient	$8 = 56 \div 7$ 56 is the dividend 7 is the divisor 8 is the quotient	
	Division is not commutative or associative.		$8 \div 2 \neq 2 \div 8$ $(36 \div 3) \div 4 \neq 36 \div (3 \div 4)$
	The distributive law can be used with division and addition/subtraction.	$(16 + 8) \div 4 = 16 \div 4 + 8 \div 4$	$12 \div (4 + 2) \neq 12 \div 4 + 12 \div 2$
2. Equivalent calculations	To find an equivalent calculation, multiply/divide the dividend and then do the <u>same</u> to the divisor.	$24 \div 6 = 4$ $48 \div 12 = 4$	$36 \div 3 = 12$ $18 \div 6 \neq 12$
	To find an adjusted calculation, multiply/divide the dividend and then do the <u>same</u> to the quotient.	$56 \div 7 = 8$ $28 \div 7 = 4$	$48 \div 6 = 8$ $24 \div 6 \neq 16$
	To find an adjusted calculation, multiply/divide the divisor and then do the <u>inverse</u> to the quotient.	$56 \div 7 = 8$ $56 \div 14 = 4$	$45 \div 15 = 3$ $45 \div 5 \neq 1$

3. Negatives	A positive divided by a negative produces a negative quotient.	$27 \div -3 = -9$	$27 \div -3 \neq 24$
	A negative divided by a positive produces a negative quotient.	$-10 \div 2 = -5$	$-10 \div 2 \neq -8$
	A negative divided by a negative produces a positive quotient.	$-48 \div -16 = 3$	$-9 \div -3 \neq -12$
4. Algebra	We can simplify terms by writing as single powers using index laws.	$a^3 \div a = a^2$ $b^7 \div b^4 = b^3$	$a^{10} \div a^2 \neq a^5$
	When dividing, we divide the numbers and then use index laws.	$36x^5y^4 \div 9x^2y = 4x^3y^3$	$28x^6y^8 \div 7x^2y$ $\neq 21x^3y^8$
	We can factorise an expression by taking a common factor from each term.	$16x - 8 = 2(8x - 4)$ $16x - 8 = 4(4x - 2)$ $16x - 8 = 8(2x - 1)$ The final answer is factorised fully. $15x^3 - 27x^2y = 3x^2(5x - 9y)$	
5. Decimals	To divide decimals, we do the integer division and then adjust the calculation.	$63 \div 9 = 7$ $6.3 \div 9 = 0.7$ $0.63 \div 9 = 0.07$ $0.63 \div 0.9 = 0.7$	

6. Fractions	Two numbers are reciprocals if they multiply to make 1.	2 and $\frac{1}{2}$ $\frac{1}{7}$ and 7 $\frac{4}{7}$ and $\frac{7}{4}$ 0.3 and $\frac{10}{3}$	3 and -2
	To divide fractions, we can find a common denominator and then divide numerators.	$\dfrac{24}{25} \div \dfrac{8}{25} = 24 \div 8 = 3$ $\dfrac{7}{4} \div \dfrac{9}{2} = \dfrac{7}{4} \div \dfrac{18}{4} = 7 \div 18 = \dfrac{7}{18}$	$\dfrac{3}{7} \div \dfrac{6}{7} \neq 2$
	To divide fractions, we can also multiply by the reciprocal of the divisor.	$\dfrac{5}{12} \div \dfrac{3}{4} = \dfrac{5}{12} \times \dfrac{4}{3} = \dfrac{5}{9}$ $2\dfrac{3}{5} \div \dfrac{1}{2} = \dfrac{13}{5} \div \dfrac{1}{2} = \dfrac{13}{5} \times \dfrac{1}{3} = \dfrac{13}{15}$	$\dfrac{7}{12} \div \dfrac{2}{5} \neq \dfrac{12}{7} \times \dfrac{2}{5}$

Year 7 German Knowledge Organiser: HT 5

Was machst du in deiner Freizeit? *What do you do in your free time?*

basteln	to do crafts
einkaufen gehen	to go shopping
faulenzen	to lounge/laze about
fernsehen	to watch television
ins Kino gehen	to go to the cinema
lesen	to read
malen	to paint
mit Freunden chatten	to chat/text with friends
Musik hören	to listen to music
Musik machen	to play/make music
Rad fahren	to ride a bike, to cycle
Skateboard fahren	to go skateboarding
Ski fahren	to ski
Snowboard fahren	to snowboard
tanzen	to dance
Videospiele spielen	to play video games

Was für Musik hörst du gern?

die Musikart	type of music
die elektronische Musik	electronic dance music
die klassische Musik	classical music
der Schlager	German pop
der/die Komponist/Komponistin	composer
das Lieblingsstück	favourite piece (of music)
das Lied	song
Liedtexte (pl)	song lyrics
die Melodie	melody
der/die Sänger/Sängerin	singer
singen	to sing
die Stimme	voice
aggressiv	aggressive
hart	harsh
inspirierend	inspiring
schön	beautiful
Spielst du ein Instrument?	Do you play an instrument?
Ich bin nicht musikalisch.	I am not musical.

Key verb
SEIN = to be

Ich bin	I am
Du bist	you are
Er ist	he is
Sie ist	she is
Wir sind	We are

Key verb
HABEN = to have

Ich habe	I have
Du hast	you have
Er hat	he has
Sie hat	she has
Wir haben	We have

Was machst du oft/nie? *What do you often/never do?*

ausruhen/chillen	to relax
die Familienzeit	family time
die Schularbeit	school work
zocken	to game/play video games
zuhause bleiben	to stay at home

Ich spiele *I play…*

die Geige	violin
die Gitarre	guitar
das Klavier	piano
das Musikinstrument	musical instrument
das Schlagzeug	drums
die Trompete	trumpet

Pronunciation Tips

Letters	Sound
ei	eye
ie	ee
v	f
w	v

Key verb form

HABEN = to have

Ich habe	I have
Du hast	you have
Er hat	he has
Sie hat	she has
Wir haben	We have

Key verb form

SEIN = to be

Ich bin	I am
Du bist	you are
Er ist	he is
Sie ist	she is
Wir sind	We are

Adverbs

ab und zu	now and then
am Wochenende	at the weekend
einmal/zweimal pro Woche	once/twice a week
jeden Abend	every evening
jeden Tag	every day
manchmal	sometimes
nie	never
nur	only
oft	often
selten	rarely
denn	because

Opinions

Ich mag	I like
Ich mag (gar) nicht	I don't like (at all)
Ich liebe	I love
Ich hasse	I hate
aber	but
und	and
oder	or
denn	because
Es ist…	It is…
anstrengend	tiring
entspannend	relaxing
schwierig	difficult
Es macht Spaß.	It is fun.
Es gefällt mir nicht.	I don't like it.
Ich finde es…	I find it…
Ich (+verb) gern	I like (+ verb)
Ich (+verb) lieber	I prefer (+ verb)
Ich (+verb) am liebsten	I like (+ verb) the most

KEY VERBS

Ich heiße	I'm called/My name is
Ich wohne	I live
Ich habe	I have
Ich bin	I am
Ich mag	I like
Ich mag …nicht	I dislike/don't like
Ich spiele	I play
Ich mache	I do/make
Ich gehe	I go

Connectives and qualifiers

oder	or
und	and
aber	but
ein bisschen	a bit
nicht so	not very, not so
vielleicht	perhaps
sehr	very
ziemlich	quite

How do I learn my German words ?

- 'Look Cover Write Check'
- Recording myself on my phone
- Have someone test me
- Making flashcards
- Practising 'little and often'

Là où j'habite

Qu'est-ce qu'il y a… ?	What is there… ?
Il y a …	There is…
un café	a café
un centre commercial	a shopping centre
un centre de loisirs	a leisure centre
un château	a castle
un cinéma	a cinema
une église	a church
un hôtel	a hotel
un marché	a market
un parc	a park
un restaurant	a restaurant
un stade	a stadium
une patinoire	an ice rink
une piscine	a swimming pool
des magasins	shops
des musées	museums
Il n'y a pas de…	there isn't

Les directions

Pardon…	Excuse me…
Où est…?	Where is… ?
Où sont…?	Where are… ?
C'est	It's… ?
à gauche	left
à droite	right
tout droit	straight on
au carrefour	at the crossroads
entre	between
derrière	behind
devant	in front of

Expressions of frequency

d'habitude	usually
normalement	normally
quelquefois	sometimes
de temps en temps	from time to time
tous les weekends	every weekend

High-frequency words

assez	quite
mais	but
ou	or
puis	then
très	very

Intensifiers

Un peu	a (little) bit
assez	quite
très	very
trop	too

Sequencing

D'abord, puis, ensuite, finalement…

Tu veux aller+place ? Tu veux aller **au** cinéma ?   Tu veux aller **à la** patinoire ?

Tu veux aller **à l'**église ?   Tu veux aller **aux** magasins ?

Key questions

- Parle-moi de ta ville / ton village

- Qu'est-ce qu'il y a/ il n'y a pas / dans la ville/ le village ?

- Tu aimes ta ville/ ton village ?

- Pourquoi ?

- Tu vas où le weekend ?

- Tu veux aller … ?

- Qu'est-ce qu'on peut faire à ?

- Quelle ville préfères-tu ?

Coucou! Hi there!

Je veux	I want
Tu veux	You want
Il/elle veut	He/She wants
On veut	We want
Nous voulons	We want
Vous voulez	You (pl/formal) want
Ils/Elles veulent	They want

Bonne idée !	Good idea
Super !	Fabulous !
Génial !	Great !
D'accord	Ok
Oui, c'est super top.	Yes, that's really great
Oui, je veux bien.	Yes, I want to.
Non, je n'ai pas envie.	No, I don't want to
Si tu veux.	If you want to.
Non merci.	No, thanks

Qu'est-ce que on peut faire à… ?
What can you do at/in… ?

Je peux	I can
Tu peux	You can
Il/Elle/On peut	He/She/We can
Nous pouvons	We can
Vous pouvez	You (plural/formal) can
Ils/Elles peuvent	They can

aller au concert	go to a concert
faire du bowling	do bowling
faire du roller	do roller-skating
faire du skate	go skateboarding
faire du vélo	go cycling
jouer au babyfoot	play table tennis
manger au restaurant	eat at a restaurant
visiter les jardins/les monuments/les musées	visit gardens/monuments/museums

Opinions

Tu aimes ta ville/ton village ?	Do you like your town/village?
Je pense que…	I think that…
À mon avis…	In my view/opinion…
C'est	It is…
bien	good
super	super
joli	pretty
intéressant	interesting
ennuyeux	boring
vraiment nul	really rubbish
trop petit	too small
J'aime ça	I like it
J'adore ça	I love it
Je déteste ça	I hate it
Tu es d'accord ?	Do you agree?
Oui, je suis d'accord	Yes, I agree
Non, je ne suis pas d'accord	No, I don't agree/I disagree

Key verb
Avoir = to have

J'ai	I have
Tu as	you have
Il a	he has
Elle a	she has
Nous avons	we have
Vous avez	you have
Ils/ elles ont	they have

Key verb
Être = to be

Je suis	I am
Tu es	you are
Il est	he is
Elle est	she is
Nous sommes	we are
Vous êtes	you are
Ils/ elles sont	they are

Key verbs (in the 1st person 'I')

Je m'appelle	I am called
J'ai	I have
Je suis	I am
Je fais	I do
Je joue	I play
Je vais	I go
Je nage	I swim
J'écoute	I listen
Je regarde	I watch
Je lis	I read
Je danse	I danse
J'étudie	I study
Je télécharge	I download
J'envoie	I send
Je parle	I talk
Je tchatte	I chat
Je surfe	I surf
Je retrouve	I meet

Intensifiers

Un peu	a (little) bit
assez	quite
très	very
trop	too

Connectives

et	and
aussi	also
mais	but
cependant	however
car	because

What do you like doing?

J'aime…	I like…
…retrouver mes amis	…meeting my friends
…regarder la télé	…watching TV
…jouer sur ma PS4	…playing on my PS4
…écouter de la musique	…listening to music
…faire les magasins	…going shopping
…faire du sport	…doing sport
…jouer au football	…playing football
…traîner avec mes amis	…hanging out with my mates
…téléphoner à mes copines	…phoning my mates.

Opinions

Je préfère	I prefer
J'adore	I love
J'aime	I like
Je n'aime pas	I don't like
Je déteste	I hate
Tu aimes…?	Do you like…?
Il aime	He likes
Elle aime	She likes
Oui, j'aime ça	Yes, I like that
Non, je n'aime pas ça	No, I don't like that
Je suis d'accord	I agree
Je ne suis pas d'accord	I don't agree
Ce n'est pas bien	It is not good
Je pense que…	I think that…
À mon avis…	In my opinion
C'est	It is
génial	great
cool	cool
bien	good
essentiel	essential
nul	rubbish
ennuyeux	boring
important	important
Ça m'amuse	It amuses me
Ça m'ennuie	It bores me
Ça m'énerve	It annoys me

School subjects

le français	French
le théâtre	drama
la géographie/la géo	geography
la musique	music
la technologie	technology
l'anglais (m)	English
l'EPS (f)	PE
l'histoire (f)	history
l'informatique (f)	ICT
les arts plastiques (m)	art
le dessin	art
les sciences (f)	science
les mathématiques/maths (f)	maths
éducation religieuse/la religion	RE

Sequencing

D'abord	Firstly
puis,	then
ensuite,	then
finalement	finally

le matin	morning
l'après-midi	afternoon
le soir	evening

Question words

Qu'est-ce que…?		What…?
Qui… ?		Who…?
Quel/Quelle/Quels/Quelles.. ?		Which ?
Où… ?		Where…?
Quand… ?		When… ?
Pourquoi… ?		Why… ?
Comment… ?		How… ?

lundi, mardi, mercredi, jeudi, vendredi, <mark>samedi,</mark> dimanche.
janvier, février, mars, avril, mai, juin, juillet, août, septembre, octobre, novembre, décembre

Places in town

Qu'est-ce qu'il y a… ?	What is there… ?
Il y a …	There is…
Il n'y a pas de…	there isn't
un centre commercial	a shopping centre
un centre de loisirs	a leisure centre
un château	a castle
une église	a church
un hôtel	a hotel
un marché	a market
une patinoire	an ice rink
une piscine	a swimming pool
des magasins	shops
des musées	museums

Frequency words
toujours

always	
de temps en temps	
from time to time	
quelquefois	
sometimes	
d'habitude	
usually	
normalement	
normally	
tous les weekends	
every weekend	

Computers and mobile phones

Que fais tu… ?	What do you do/are you doing?
…avec ton ordinateur ?	…on your computer ?
…avec ton portable ?	…on your mobie phone ?
Je joue….	I play…/ I am playing…
Je surfe sur internet.	I surf/I'm surfing the net.
Je tchatte sur MSN.	I chat/I'm chatting on MSN.
Je regarde des clips vidéo.	I watch/I am watching video clips.
Je télécharge de la musique.	I download/I'm downloading music.
J'envoie des SMS.	I text/I'm texting.
Je parle avec mes ami(e)s.	I talk/I'm talking to my friends.

Wellington School Music Department

Piano keyboard: C D E F G A B C D E F G A

TREBLE CLEF NOTATION

Every **G**ood **B**oy **D**eserves **F**ootball

F A C E

Triad: A type of chord that has only 3 notes. You can work out the notes in a triad by playing the chord note, miss a note, play a note, miss a note and play a note.

C triad
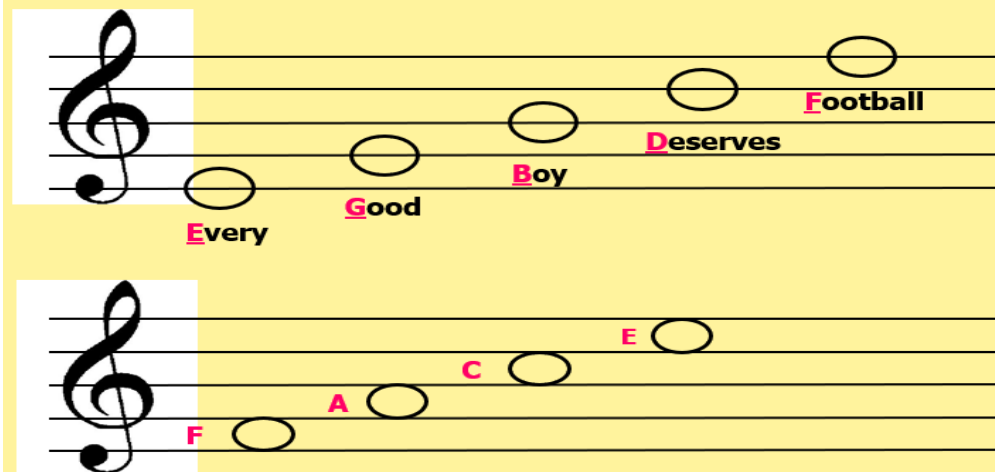
C · E · G

F triad

F · A · C

G triad

G · B · D

C Major Chord
F Major Chord
G Major Chord

| LOOKS LIKE	SOUNDS LIKE	DURATION	NAME
○	LI-I-I-ME	4	SEMIBREVE
♩♩	GRA-PE	2	MINIM
♩♩	PEAR	1	CROTCHET
♪♪	APP-LE	1/2 EACH	QUAVER (USUALLY GROUPED IN 2S)

Year 7 Unit 3: Living in the Wider World

KNOWLEDGE

L1. study, organisational, research and presentation skills

L2. to review their strengths, interests, skills, qualities and values and how to develop them

L3. to set realistic yet ambitious targets and goals

L4. the skills and attributes that employers' value

L5. the skills and qualities required to engage in enterprise

L6. the importance and benefits of being a lifelong learner

L20. that features of the internet can amplify risks and opportunities, e.g. speed and scale of information sharing, blurred public and private boundaries and a perception of anonymity

L21. to establish personal values and clear boundaries around aspects of life that they want to remain private; strategies to safely manage personal information and images online, including on social media

L22. the benefits and positive use of social media, including how it can offer opportunities to engage with a wide variety of views on different issues

L23. to recognise the importance of seeking a variety of perspectives on issues and ways of assessing the evidence which supports those views

L24. to understand how the way people present themselves online can have positive and negative impacts on them

L25. to make informed decisions about whether different media and digital content are appropriate to view and develop the skills to act on them

L26. that on any issue there will be a range of viewpoints; to recognise the potential influence of extreme views on people's attitudes and behaviours

L27. to respond appropriately when things go wrong online, including confidently accessing support, reporting to authorities and platforms

SKILLS

1. Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
2. Can express and explain opinions through discussion and written work.
3. Develop empathy with others and an understanding of how to safely and respectfully interact.
4. Is reflective about the knowledge and skills needed for setting realistic targets and personal goals.
5. Work individually and with others to negotiate, plan and take action.
6. Can recognise and reduce risk, minimising harm and getting help.
7. Develop skills of enquiry and advocacy via research and group work
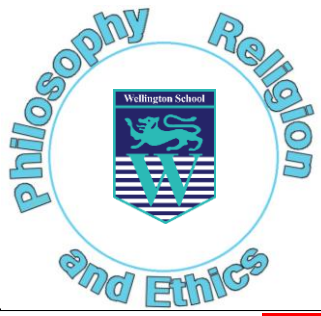
Y7: REP Term 3

68% of the worlds population have stated that they have some belief in God or would claim to have some element of religious faith. Religion remains an important feature of our world and has been part of our lives for thousands of years. However, are we now at a crossroads where religions are often misunderstood, are misused and some would argue in decline. You are going to consider a variety of different religious, ethical and philosophical ideas to consider why religion is still important and the role it continues to play in the world today in shaping our views.

Knowledge Organiser

Basics of REP	The World
Big Questions	Morality

Lesson 23-24

Stereotyping and Prejudice: Are there enough good Samaritans?

Can you define the terms prejudice & discrimination and identify examples of this and what we can do to prevent them from happening? Can you link this to and describe the story of the Good Samaritan?

Lesson 25-26

The Trolley Problem: Can we make correct moral decisions?

What does it mean to be moral and make ethical decision? Can you make good ethical decisions?

Lesson 27-28

How to revise for your end of year exam

We will help you to prepare for your end of year exam in REP. Going over key concepts, key terminology and skills for you to practice to help you to reach your full potential.

Lesson 29-32

Project: a deep dive into a religious, ethical or philosophical issue of your choosing.

You will produce a piece of work to present to your teacher and class mates that relates to a religious, ethical or philosophical issue that you have studied in Year 7. This can be in any format and we would encourage you to be as creative as possible!
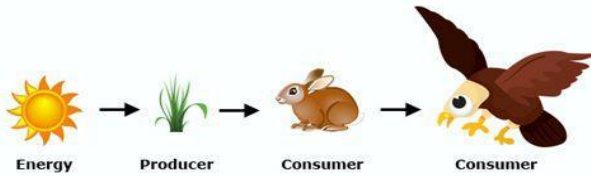
Lesson 33-34

Pupils will be assessed in lessons and complete an extended project on a religion of their choice. They will complete a formal examination at the end of the year.
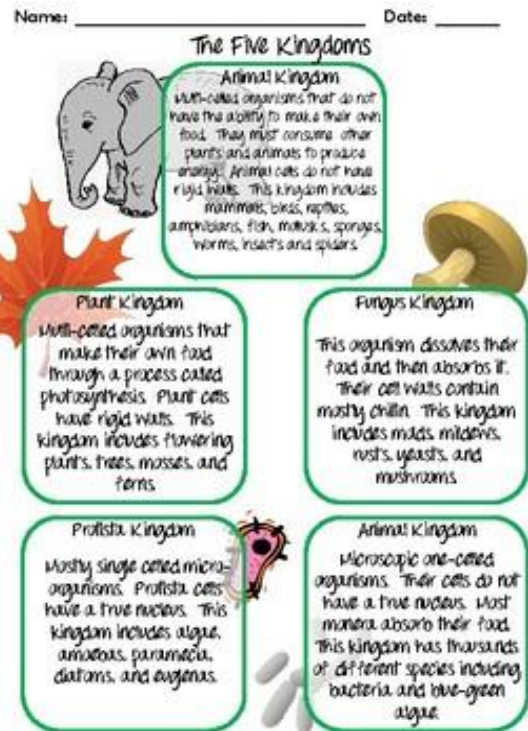
Year 7 Knowledge Organiser : B3 - Ecology

Virtual **Ecosystem** Food Chain

Energy → Producer → Consumer → Consumer

Food chains show the flow of energy within an ecosystem & how organisms are dependent on each other.
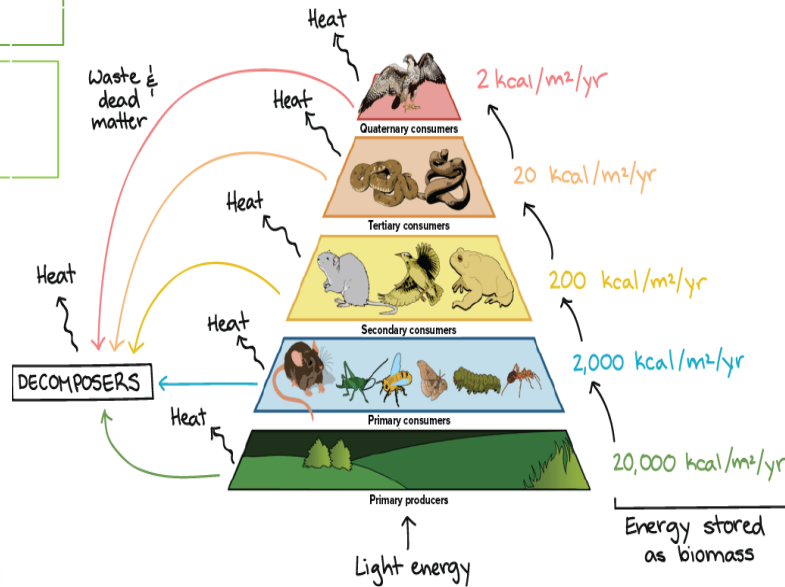
Classification is the sorting of organisms into different groups.
The five kingdoms are shown below

Abiotic Factors are non-living factors which affect the survival and distribution of organisms within an ecosystem, e.g. light intensity, volume of rainfall, pH of the soil.

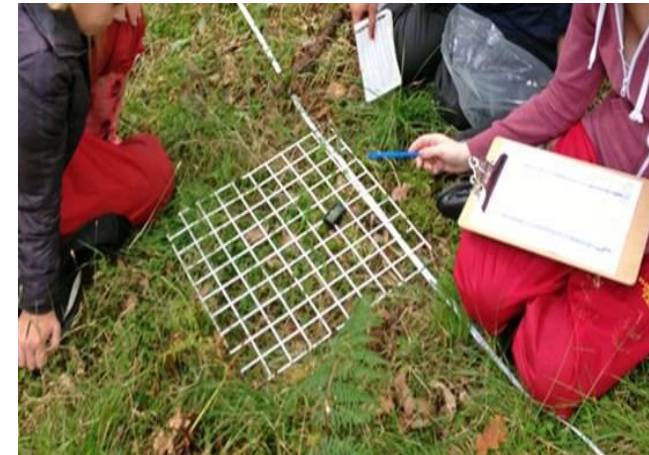**Biotic Factors are living factors which affect it – e.g predators and competition for resources with other organisms.**

Sampling: This is a process in Biology where a 'sample' of a population is taken to achieve an overview of the whole population.

Type of Variable	Job
Independent	The one you change
Dependent	The one that you measure
Control	The ones that you keep the same so that you can compare results

Quadrat – normally a 1m² grid which is used to sample the number of plants in an area. It is placed randomly and the number of each plant in the quadrat is taken. A MEAN average is then taken of the number of plant.

The area of the quadrat is scaled up to the whole area of the field and the number of plants in the whole field is estimated.

The Five Kingdoms

Animal Kingdom
Multi-celled organisms that do not have the ability to make their own food. They must consume other plants and animals to produce energy. Animal cells do not have rigid cell walls. This kingdom includes mammals, birds, reptiles, amphibians, fish, molluscs, sponges, worms, insects and spiders.

Plant Kingdom
Multi-celled organisms that make their own food through a process called photosynthesis. Plant cells have rigid walls. This kingdom includes flowering plants, trees, mosses, and ferns.

Fungus Kingdom
This organism dissolves their food and then absorbs it. Their cell walls contain mostly chitin. This kingdom includes molds, mildews, rusts, yeasts, and mushrooms.

Protista Kingdom
Mostly single celled micro-organisms. Protista cells have a true nucleus. This kingdom includes algae, amoebas, paramecia, diatoms, and euglena.

Animal Kingdom
Microscopic one-celled organisms. Their cells do not have a true nucleus. Most monera absorb their food. This kingdom has thousands of different species including bacteria and blue-green algae.

Heat
Waste & dead matter
Heat
Heat
Heat
Heat
DECOMPOSERS
Light energy

2 kcal/m²/yr — Quaternary consumers
20 kcal/m²/yr — Tertiary consumers
200 kcal/m²/yr — Secondary consumers
2,000 kcal/m²/yr — Primary consumers
20,000 kcal/m²/yr — Primary producers

Energy stored as biomass

This pyramid of biomass shows how much 'living material' makes up each trophic level. It also shows how much energy Is passes onto the next level as it is lost with each organism.
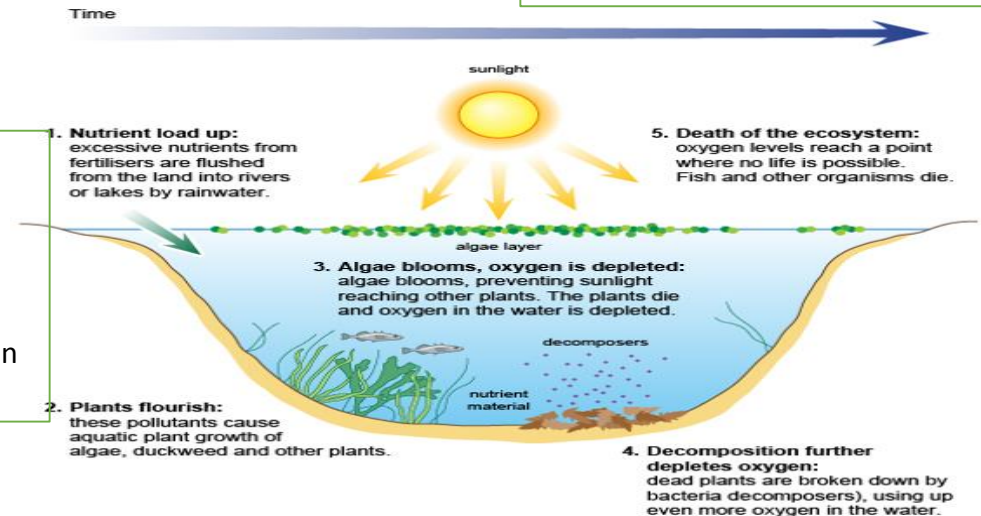
Eutrophication is a process where humans use fertilisers which leach into lakes and they cause death within the ecosystem.

This is due to the development of an algal bloom.

Time

sunlight

1. Nutrient load up: excessive nutrients from fertilisers are flushed from the land into rivers or lakes by rainwater.

2. Plants flourish: these pollutants cause aquatic plant growth of algae, duckweed and other plants.

3. Algae blooms, oxygen is depleted: algae blooms, preventing sunlight reaching other plants. The plants die and oxygen in the water is depleted.

4. Decomposition further depletes oxygen: dead plants are broken down by bacteria decomposers), using up even more oxygen in the water.

5. Death of the ecosystem: oxygen levels reach a point where no life is possible. Fish and other organisms die.

algae layer
decomposers
nutrient material

Electricity is the transfer of energy, normally down a wire. This energy is carried by particles we call electrons (as in electr-icity).

Electrical circuits take energy stored in cells or in a power supply and transfer it into something useful such as heat or light

We use special symbols to represent different parts of an electrical circuit. These are shown below.

Circuit symbols

- Cell
- Battery
- Switch
- Bulb/lamp
- Ammeter
- Voltmeter
- Resistor
- Fuse

Measurement	Unit	Unit suffix	In equations
Potential Difference	volts	V	V
Current	amps	A	I
Resistance	ohms	Ω	R

- For current to flow in a circuit, the circuit must have a power supply (a cell or a power pack) and a complete loop with no breaks.
- Different parts of a circuit – such as a bulb or a switch – are called components.
- Charge – groups of electrons, measured in coulombs – move round the circuit. Current is how much charge/how many coulombs flow per second through the circuit.
- Potential difference is how much energy each packet gains or loses as it goes through a component.
- If a circuit only has one loop it is called a series circuit. If it has more than one loop it is called a parallel circuit.
- We use an ammeter to measure current. It goes *in series* with the component so everything that goes through the component also goes through the ammeter.
- We use a volt meter to measure potential difference across a component. This goes *in* parallel with the component so it can measure the difference in energy being carried by the charge on each side of the component
- Resistance is how much a component prevents electricity flowing through it.
- Ohm's law: the potential difference across a component equals the product of the current through the component and the component's resistance – or V = IxR
- Electricity is dangerous so various safety systems are in place to put a "break" in the circuit, stopping dangerous current flowing. Each safety device protects against a sudden high current which could damage expensive electrical items like TVs etc – or anyone touching them. The most common safety device is the fuse, found in all UK plugs.
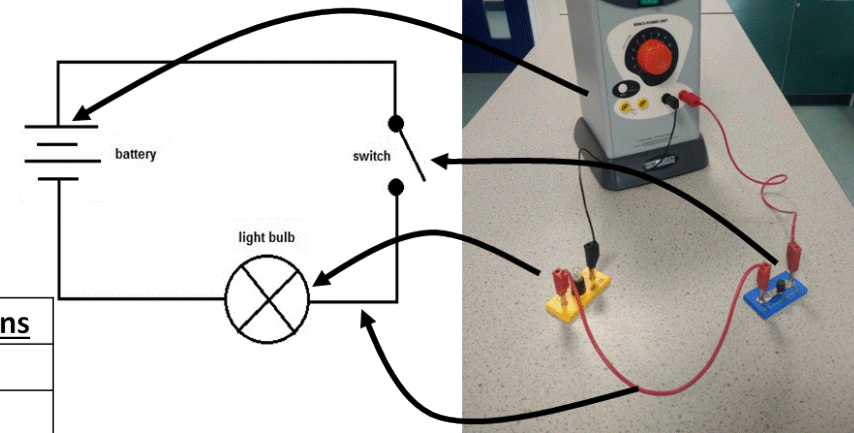
Common barriers to learning:
- Circuits are **already** full of electrons, they don't come from a switch or from a plug or from the power station.
- Electrons can't just be created or disappear.
- Electrons are each so small and have so little energy that we think of them in groups, called coulombs.
- Electrons leave a power source (e.g. a cell) with full energy and return to the power source with no energy.
- Resistance is not created by friction.

The layout of the periodic table

The structure of the atom

Groups	Vertical columns are called groups. Each group has a number. Elements in a group have similar properties.
Periods	These are horizontal rows on the periodic table
Patterns and trends	These are relationships between elements in a group and how they can change e.g. melting point

Physical reactions are reversible and involve a change of state. Chemical reactions are usually irreversible and produce new substances.
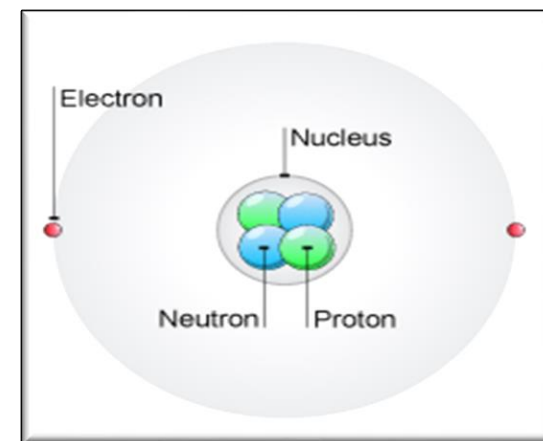
Evidence for Chemical Reactions:
- Colour change
- Bubbles of gas
- Temperature change
- Change in mass (caused by loss of gas)
- Precipitation (solid formed)

Physical Properties depend on the type of element:
Metals have high melting points and boiling points, conduct heat and electricity, are malleable, ductile and strong. They are all solid at room temperature except Mercury.
Non-metals have low melting points and boiling points. Most are gases at room temperature. They are insulators and are brittle.

Chemical properties depend on the types of chemical reactions a substance does.
e.g. Reactions with oxygen, water, acid or displacement.
Elements in the same group will show similar chemical properties.