HOME-LEARNING

YEAR 8

HALF TERM 2

"EDUCATION IS THE PASSPORT TO THE FUTURE, FOR TOMORROW BELONGS TO THOSE WHO PREPARE FOR IT TODAY."

MALCOLM X

Core Values

Our school community is built on three important values which underpin all we do.

We believe that great learning comes from:

Politeness

- We treat every person and thing as we want to be treated
- We are respectful, polite and courteous at all times
- We help others at all times

Hard-work

- We never give up
- We remain positive so that we have the strength to persevere with even the hardest work
- We do what it takes, for as long as it takes

Honesty

- We are true to ourselves and others and we do not make excuses
- We look to ourselves to see what needs to be done.

What is learning?

A big part of learning is about getting knowledge to go into your long-term memory and then using this knowledge. Our brains will only remember knowledge in the long term if we think really hard about it. Just reading, or highlighting does not make our brains work hard enough. We must **practise** remembering things – this will feel difficult at the time but worth it in the end.

What is a knowledge organiser?

A knowledge organiser is a document that contains key facts and information. A knowledge organiser will not include every possible fact on a topic; it will include facts needed to understand the main points. Knowledge organisers make knowledge clear. So, even if a learner misses a lesson, they have a constant point of reference.

Why are knowledge organisers good for learning?

Research shows that our brains remember things more efficiently when we know the 'bigger picture' and can see the way that 'nuggets' of knowledge link. Making links helps information move into our long-term memory. A knowledge organiser shows linked facts on a single topic.

Knowledge organisers can be used for retrieval practice (practising remembering things). Regular retrieval of knowledge helps us remember more effectively with our long-term memory. Developing our long-term memory is a vital first step. Without knowledge we have nothing to work with, nothing to think about! Retaining knowledge over time is essential.

To help us understand learning better, Gateacre students and staff have created a series of videos that explain how memory works and what we can do to make it stronger. Follow the QR code or the Learning to Learn link to view them.

How can you best use your knowledge organiser?

There are many ways you can use a knowledge organiser. The most important thing to say, however, is 'use it'. Owning one does not make you remember facts… **you must practise** if you are to improve at anything! There will be mistakes – this is how you learn. Ultimately, the best way to remember things is to try and remember facts that you can't quite remember instantly… practice, practice and practice.

Here are some ways you could try to improve your **long-term memory** – they are all based on making you **think**, getting you to **test your memory**. That way your memory will get stronger:

Hide and seek

Read through a small section of your knowledge organiser (three or four key words), cover the facts and try to write out as much as you can remember. Check your answers and correct them if needed. Then choose your next words or check ones you have already done again.

Quiz

Test your memory by asking someone to quiz you on facts from your knowledge organiser. Write down your answers and see how many you get right. Correct any facts you get wrong.

Teach it!

Teach and explain to someone your key facts – you could even test them!

Back to front

Write down a fact from memory and then compose a question that would lead to that answer.

Sketch it

Draw pictures /diagrams to represent each of the facts or dates (time lines, flow diagrams, or labelled pictures are great ways of remembering parts of a system or orders of events).

Repackage it (from memory)

Create a mind map that brings different facts together under one title. Check that your key words are spelt correctly… or, take a key word and create a sentence that uses it.

Take pride in how you present your work. Each page should be clearly labelled with an underlined date. There should be at least one page of work.

Always check your answers and correct anything you got wrong…. You are allowed to get things wrong… That is how you learn! Getting yourself to think is the key!

Do not just copy a knowledge organiser out – that would not help learning and would only waste your time! Make sure you are having to think!

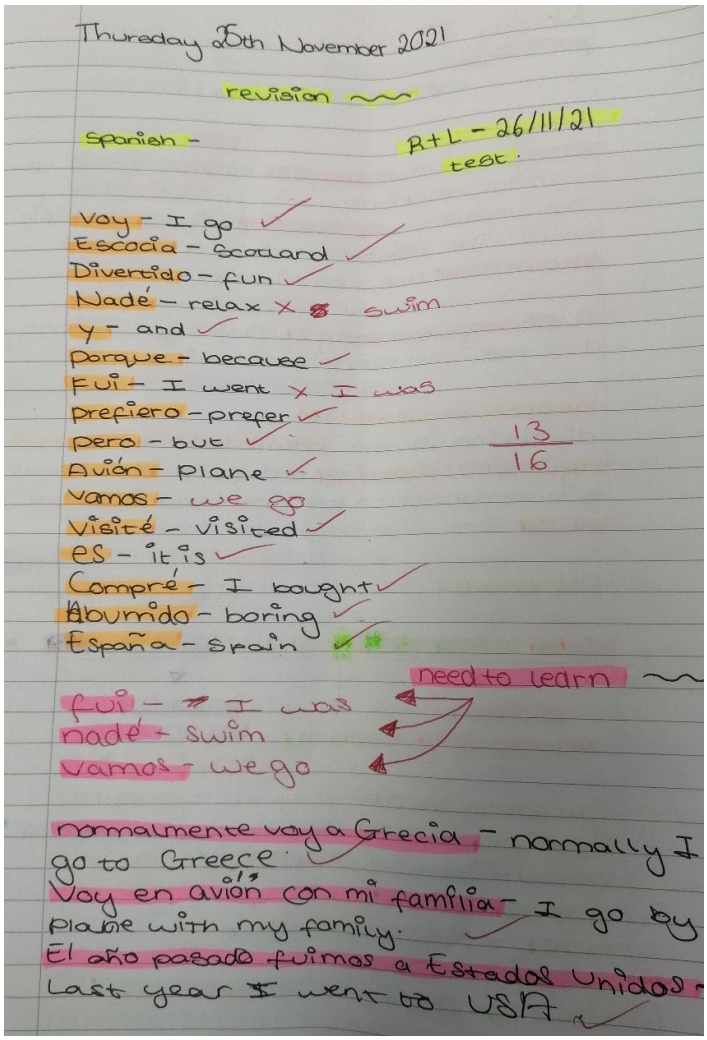
What does effective home-learning look like?

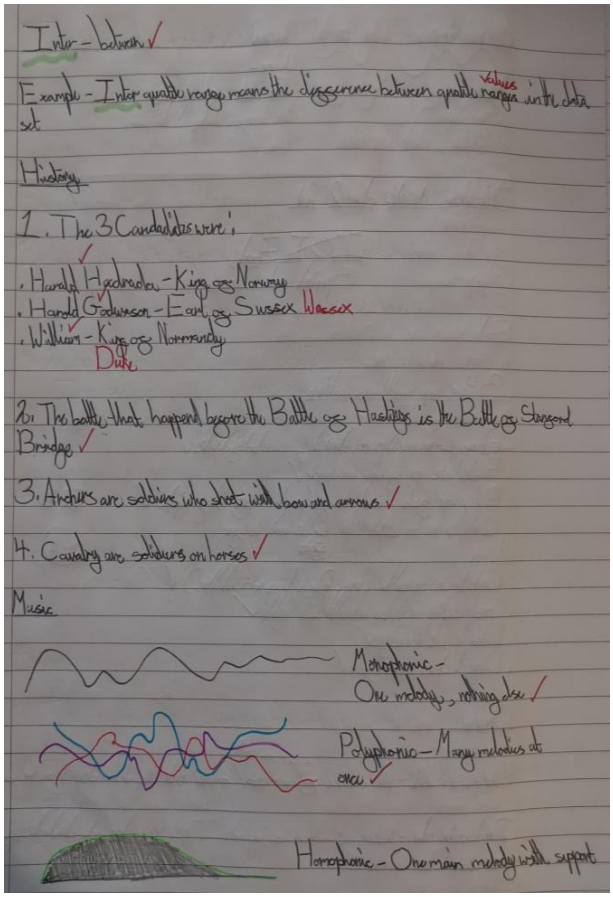
Here are some essential points to remember and some examples to see.

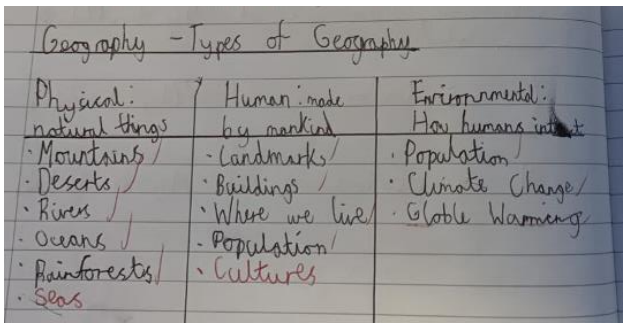
- Long term memories are created when you have to **think**. Simply copying does not help you remember. Testing yourself will make you **think** and remember

- The process of reflection and self-assessment is important if you are to fix mistakes. Do not worry about getting things wrong as long as you check, fix it and try again

All these learners have **read**, **thought**, **tested themselves** and then **checked** their work. They will start to develop long term memory which they can then use in the future.







MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Maths	**Food**	**English**	**Art**	
History	**Drama**	**Geography/Computing**	**Science**	
Music	**Spanish**	**DT**	**Active Lifestyles/RS**	

Where subjects share a slot, it is for **you** to decide which one **you** know less about - which one should **you** revise? **You** decide which one to focus on.

Literacy: Do take time to engage with the **Listen Project**. Developing our vocabulary is immensely important if we are to develop as learners. The **listen Project** is an opportunity to listen to interesting ideas, facts and make our vocabulary better. You can do this short activity at any point within the week.

Remember, you can always do more. Challenge yourself to be the best you can be!

SCAN ME

The 'Listen' Project #1

How to use the 'Listen' Project

Start Here

Being read to is a vital part of learning - hearing words that we are unfamiliar with, ideas that we don't understand yet and thoughts we haven't had a chance to think.

Even simple stories create links from one idea to the next. The fairy tales we heard when we were babies give us the first step to understanding the adventure stories we read in school.

Take time out and listen…

Step 1 – Click the link and listen.

You can follow the text as you are read to or just listen.

Step 2 – Check the text.

Have a look at the texts. There are three pieces of writing.

The first piece may appear to be very simple, maybe even too young for you. These stories are some of the first we hear and often start our journey to understanding more complicated ideas.

The second text may be something you recognise or have read yourself. Is there a link to the first story?

The third is the most complex and may even leave you with a lot of questions.

Step 3 – What's the connection?

The final step is to think about what links these texts and stories together?

Where have you thought about these ideas before?

Do you think about any of these ideas in school?

You can go back and listen to the texts being read as many times as you like.

SCAN ME

The 'Listen' Project #1

Gingerbread

There is a great famine in the country and the woodcutter's family is starving. His wife suggests to take their children, Hansel and Gretal, into the woods, so they would have two hungry mouths less to feed.

After some hesitation he agrees and they leave the children in the wood. Hansel and Gretel have heard about the plan and return home thanks to the stones Hansel was using to mark the path. But at the next attempt, Hansel can't load his pocket with stones because the doors were locked. Instead of stones he used bread crumbs, but they are eaten by the birds, so the woodcutter and his wife succeeded and children were lost in the woods.

They find a mysterious hut made of gingerbread. There is a witch living inside. She is a wicked witch and intends to eat Hansel!

But they are too lean, so she decides to feed Hansel first, using Gretel as a slave and for some time children manage to postpone their tragic end.

The Witch, being sold, has very poor sight, so she is checking Hansel's fat by pinching his finger. Instead of the finger he gives her a chicken bone, what postpones his death for a few days.

Finally, the witch prepares an oven and plans to bake both kids. Fortunately, Gretel outsmarts her and throws the witch in her oven where she is killed. The children search the hut, find gold, jewelry and other valuables and with a help of some birds safely return home.

Their stepmother and father are sorry for what they've done and they lived happily ever after.

That's Unfortunate

Violet Baudelaire, the eldest, liked to skip rocks. Like most fourteen-year-olds, she was right-handed, so the rocks skipped farther across the murky water when Violet used her right hand than when she used her left. As she skipped rocks, she was looking out at the horizon and thinking about an invention she wanted to build. Anyone who knew Violet well could tell she was thinking hard, because her long hair was tied up in a ribbon to keep it out of her eyes. Violet had a real knack for inventing and building strange devices, so her brain was often filled with images of pulleys, levers, and gears, and she never wanted to be distracted by something as trivial as her hair. This morning she was thinking about how to construct a device that could retrieve a rock after you had skipped it into the ocean.

Klaus Baudelaire, the middle child, and the only boy, liked to examine creatures in tide-pools. Klaus was a little older than twelve and wore glasses, which made him look intelligent. He was intelligent. The Baudelaire parents had an enormous library in their mansion, a room filled with thousands of books on nearly every subject. Being only twelve, Klaus of course had not read all of the books in the Baudelaire library, but he had read a great many of them and had retained a lot of the information from his readings. He knew how to tell an alligator from a crocodile. He knew who killed Julius Caesar. And he knew much about the tiny, slimy animals found at Briny Beach, which he was examining now.

Sunny Baudelaire, the youngest, liked to bite things. She was an infant, and very small for her age, scarcely larger than a boot. What she lacked in size, however, she made up for with the size and sharpness of her four teeth. Sunny was at an age where one mostly speaks in a series of unintelligible shrieks. Except when she used the few actual words in her vocabulary, like "bottle," "mommy," and "bite," most people had trouble understanding what it was that Sunny was saying. For instance, this morning she was saying "Gack!" over and over, which probably meant, "Look at that mysterious figure emerging from the fog!"

Philip Pirrip

"Hold your noise!" cried a terrible voice, as a man started up from among the graves at the side of the church porch. "Keep still, you little devil, or I'll cut your throat!"

A fearful man, all in coarse grey, with a great iron on his leg. A man with no hat, and with broken shoes, and with an old rag tied round his head. A man who had been soaked in water, and smothered in mud, and lamed by stones, and cut by flints, and stung by nettles, and torn by briars; who limped, and shivered, and glared and growled; and whose teeth chattered in his head as he seized me by the chin.

"O! Don't cut my throat, sir," I pleaded in terror. "Pray don't do it, sir."

"Tell us your name!" said the man. "Quick!"

"Pip, sir."

"Once more," said the man, staring at me. "Give it mouth!"

"Pip. Pip, sir."

"Show us where you live," said the man. "Pint out the place!"

I pointed to where our village lay, on the flat in-shore among the alder-trees and pollards, a mile or more from the church.

The man, after looking at me for a moment, turned me upside down, and emptied my pockets. There was nothing in them but a piece of bread. When the church came to itself - for he was so sudden and strong that he made it go head over heels before me, and I saw the steeple under my feet - when the church came to itself, I say, I was seated on a high tombstone, trembling, while he ate the bread ravenously..

Gingerbread

Perhaps one of the most famous **fairy tales** collected by the **Grimm** brothers is **Hansel and Gretal**. The dark tone of the story is similar to a lot of early fairy stories and is nothing like the retellings by Disney! We might find it difficult today to understand how a family might give up their children like this but times were very hard.

Fairy tales often serve as warnings or lessons; for instance – don't go into those woods alone!

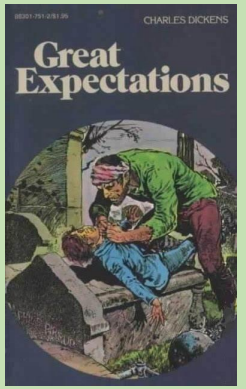
That's Unfortunate

Stories about children looking after themselves and using their own skills and wits to survive in tough circumstances are very popular. Some of the older stories you might be familiar with are the **Famous Five** and **Secret Seven** books by **Enid Blyton**. Even **Harry Potter** might be a story of surviving against the odds. **A Series of Unfortunate Events** may break the mould by promising us an unhappy ending!

Philip Pirrip

Philip Pirrip, or Pip, is the name of the main character in **Charles Dicken's** novel, **Great Expectations**. The young boy is alone in the world until he is taken under the wing of an escaped criminal, **Magwitch**, and his adventures begin.

The **Victorian era** that Dicken's lived in relied heavily on class and family to provide you with opportunities. Pip has very few **expectations** but things change as his life unfolds.



Your Maths Home Learning has two parts:

Mathematics

Part 1 is: Copy the definition of the key word and diagrams into your Home Learning Book, then use these to complete the task

Part 2 is: Scan the Corbett Code (or look up the video number) for extra practice.

Week	Key Word	Definition	Task	Corbett Code
1	Multiplier	The **number** you **multiply** a quantity by to **increase or decrease** it by a **percentage**.	The multiplier for increasing by 12% is 1.12 The multiplier for decreasing by 12% is 0.88	239 Scan here
2	Factorise	Put into brackets	Factorise 10x + 20	117 Scan here
3	Substitution	**Replace letters with numbers.**	$a = 3, b = 2$ *and* $c = 5$ $3\boldsymbol{a} - 2\boldsymbol{b} + \boldsymbol{c} = 3 \times \mathbf{3} - 2 \times \mathbf{2} + \mathbf{5} = 10$	20 Scan here
4	Numerator	The **top** number on a fraction. To find a **fraction of an amount** divide by the **denominator** and multiply by the **numerator**	Find 2/7 of 28	137 Scan here
5	Index number / Power	A small number to the top right of the **base** number that tells you how many of the base to multiply together. 5^4 means 5x5x5x5	Find 2^4 and 3^3	172 Scan here

History KNOWLEDGE ORGANISER

Topic: **The Stuarts, 1603 - 1745**

YEAR 8
HT2

Overview

When **Queen Elizabeth** died childless in 1603, **James VI** of Scotland became the first Stuart King of England. He was a **Protestant**, but not well liked in England because he was Scottish. His poularity increased after the discovery of the **Gunpowder Plot**, and his **persecution** of Catholics that followed.
He was succeeded by his son **Charles** in 1625. Charles soon fell out with **Parliament** over such issues as religion, money and power. This resulted in the **English Civil War**, and Charles' eventual **execution**.
England was ruled by **Oliver Cromwell** from 1649 until his death in 1658. During this time England was a **Republic**. By 1660, Parliament asked Charles II to become King, and the monarchy was **restored** (brought back).
Charles died in 1685, having fathered atleast 14 children. Unfortunately, none of them were with his wife! So his brother **James** became King. He was a Catholic, and this created conflict with a strictly Protestant Parliament.
Parliament wrote to James' daughter **Mary**, asking her and her Dutch Protestant husband **William** to become joint rulers of England. In return, they agreed to accept the **Bill of Rights**, which set limits on the power of the monarchy.
By 1707, the **Act of Union** had united England and Scotland, and **Great Britain** was born. For many years, the Scots felt they were disadvantaged in an unequal partnership.
By **1745**, Britain's population was approaching 8 million, with 80% of people living in the countryside. Only the richest 5% of the population could vote in an election.

Key People

King Charles I

He was deeply religious, and a firm believer in the Divine Right of Kings – the power of the monarchy came directly from God. This may explain why he argued constantly with Parliament throughout his reign, a Parliament that was constantly trying to tip the balance of power in their favour. This led to the Civil War, Charles' defeat and his eventual execution.

King Charles II

Known as the 'merry monarch' Charles II became king after the **Restoration**, following Cromwell's death. He immediately restored many things banned under Cromwell – theatres and inns were reopened, and strict religious rules were relaxed.
Charles fathered at least 14 illegitimate children (outside of marriage) during his reign. On his death bed he confessed to being a secret Catholic, but worse was to follow – the throne passed to his brother James...and he made no secret of his Catholicism! This caused further religious tension in England. This led to the **Glorious Revolution** a few years later.

Oliver Cromwell

A farmer, who became an MP and was a leader during the English Civil War, he reorganised Parliament's army into a professional fighting force. He lost faith in Charles I after he restarted the Civil War.

A strict Puritan, Cromwell ruled England as Lord Protector during the Interregnum, but his reputaion was ruined by his own closing down of Parliament, and killings by his army in Ireland.

William & Mary

Mary was the Protestant daughter of James II, who, along with her Dutch husband William, was invited by Parliament to return to England in 1688 to rule as joint King and Queen. James fled to France, and the event became known as the Glorious Revolution.

Main events

Gunpowder Plot 1604

The traditional story goes that Guy Fawkes and a number of Catholic Plotters tried to blow up Parliament on the day that protestant King James was due to visit. The plot was discovered at the last minute, following a tip-off from someone involved in the plot. All the plotters were caught, tortured and executed.
However, some historians believe that the plot was an elaborate Protestant plan to frame the Catholics, which then persuaded King James to pass more anti-Catholic laws.

The English Civil War, 1642 - 1649

King Charles and Parliament argued over 3 important issue:

1) Money. Parliament accused Charles of raising unfair and illegal taxes. They were determined to control spending.
2) Power! Charles said his power came directly from God, and therefore could not be challenged. Parliament was determined to have more say in matters.
3) Religion. Charles angered Protestant Parliament by marrying a French Catholic. He later made changes to churches, services and the prayer book. The resulting civil war was a failure by both sides to find areas of compromise (come to an agreement).

Interregnum, 1649 – 1660

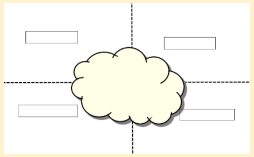
After the execution of Charles, England became a republic for the first time in its history. Cromwell ruled England, taking the title of Lord Protector. He raised taxes and used the army to enforce what he thought was right, which made him unpopular. In Ireland he persecuted Catholics – particularly in Drogheda – where the people of the town were massacred.

The Plague & the Great Fire of London, 1665 – 1666

Following the Restoration of the monarchy, the reign of Charles II was well known for 2 famous events that happened just a few years into his rule.
The first was an outbreak of plague, which killed thousands in London and spread to other parts of the country. The following year, much of London was destroyed by a devastating fire. The tightly packed wooden buildings in the old city burned for days.

The Glorious Revolution & the Bill of Rights, 1688

After Charles II died, Catholic James II proved to be an unpopular king, and Protestant Parliament suspected that he was trying to change the country back to Catholicism. They feared another civil war. His replacement by his Protestant daughter Mary and her husband William became known as the Glorious Revolution, as it had been achieved with very little bloodshed. The new monarchs agreed to accept the Bill of Rights, which gave more power to Parliament and less to the monarch.

Key Terms	Tasks
Bill of Rights – this Act limited the power of the monarch and confirmed the right of Parliament to control taxation and law-making. **Civil War** – a war within one country between two different sides. **Democracy** – a system of government in which all citizens have the right to vote for their leaders in free and fair elections. **Divine Right** – the belief that a monarch's power comes directly from God. **Glorious Revolution** – the time when an unpopular Catholic King (James) was replaced by a Protestant King & Queen (William and Mary) with little fighting. **Interregnum** – literally, a pause between two periods of time. It refers to the years 1649 – 1660 when England had no King and was a republic. **Monarch** – a King or Queen. **Persecution** – to punish people for who they are or what they believe, usually used during this period to describe actions against Catholics. **Puritan** – a group of Protestants, often seen as extreme, who wanted to simplify religious worship and introduce strict religious rules. **Republic** – a country without a King or Queen. **Restoration** – to bring something back, in this case, the monarchy in 1660. **Treason** – a crime against your country, punishable by death.	**Task 1** Using the overview section, create a timeline of the monarchy of England from 1603 to 1685. Write one way the monarchs connect to each other (for example why did James I become King after Elizabeth I). **Task 2** Read the section on 'Key People' and create a biography for one of the rulers. Think about: • The years of their reign. • An event that was central (important) to their reign. • A judgement on whether they were a successful ruler. **Task 3** From the 'Main Events' section above, create a 10-question multiple choice quiz to test yourself or someone else. Make sure to make a note of the answers. **Task 4** Create 3 flashcards, one for each of the three sections above: Overview, Key People, and Key Events. It is up to you to decide what the flashcard specifically focuses on. The image to the right shows the layout of a flashcard.  **Task 5** Write a letter to a family member as one of the conspirators (planners) of the Gunpowder Plot. Explain why you are against the King. **Task 6** Read through the BBC Bitesize page and challenge yourself against the multiple choice quiz at the bottom! https://www.bbc.co.uk/bitesize/topics/zk4cwmn/articles/zxxgg7h SCAN ME

THE GUITAR

Guitar Key Technical Words:

Chord: playing many notes at once (often all six strings)

Strumming: Playing all required strings in one go

Picking: Plucking the individual strings

Fret: The spaces on the neck where you press your fingers down

Acoustic: a guitar that does not need an amplifier to be heard

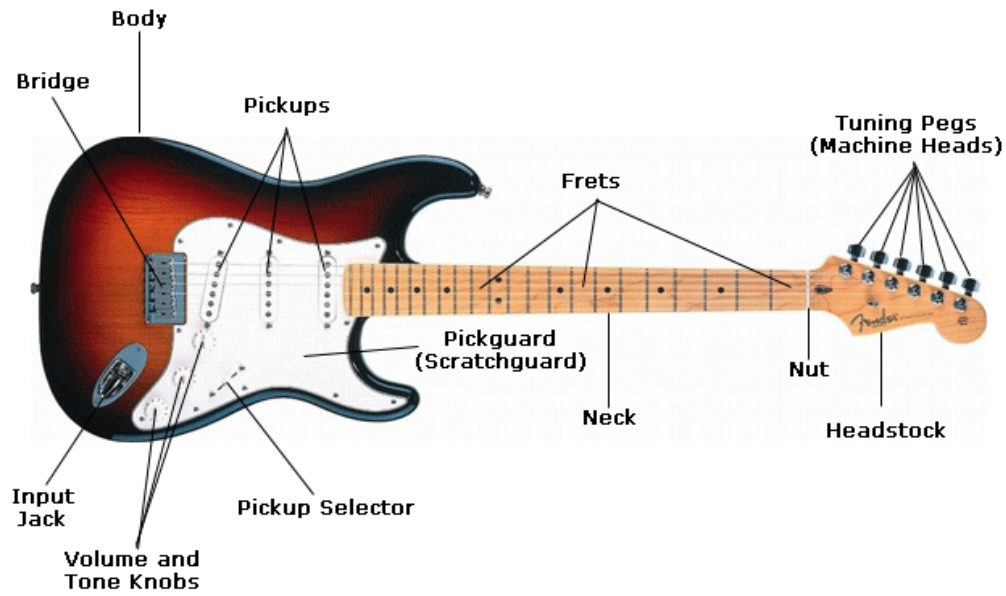
Jack Lead: The cable that connects a guitar to the amplifier

Blue Note: bending the string to make a different note

Hammer On: playing a string with your 'fret' hand by striking down with a finger

Pull Off: playing a string with your 'fret' hand by plucking the string with a finger

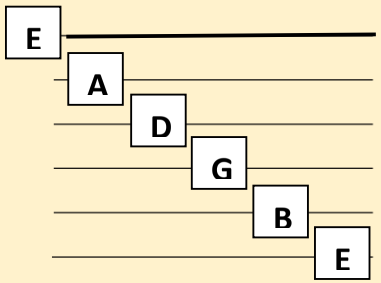
Palm Mute: stopping the strings vibrating with the palm of your strumming hand



Other Guitar-like String Instruments:

Ukulele	Hawaii (USA)
Lute	'Old' European
Banjo	Africa/America
Sitar	India
Balalaika	Russia
Koto	Japan

Tuning the open strings:



https://www.youtube.com/watch?v=KoVvstkRMME

Task 1: Learn the names of the open strings on guitar and watch the clip on the QR code or Youtube link below.

Task 2: Learn the key technical words.

Task 3: Learn the Instrument names of other guitar-like instruments, and which country they come from.

Task 4: Draw a diagram of the guitar **without the labels**. After revising these labels, complete the diagram **from memory – no peeking!** Add any gaps **in red pen.**

Task 5: Create a 10 mark quiz based on the guitar. Get someone to test you!

Task 6: Listen to some famous guitarists on Youtube. For example, Jimi Hendrix, Eric Clapton, B.B. King, John Williams.

Food Technology

Food Provenance: Understanding food provenance goes beyond knowing where a food item comes from. For instance, you might learn that your favorite chocolate bar contains cocoa beans harvested in West Africa, processed in Europe, and distributed globally, highlighting the complex journey and global impact of a single product.

Butter Making: Making butter can involve various methods. For example, traditional churns use physical agitation to separate the fat from the cream, while modern butter production often includes pasteurization and mechanical separators to enhance food safety and quality.

Raising Agents: Raising agents are critical in baking. Baking soda requires an acid to activate, while baking powder contains both an acid and a base, providing leavening power in recipes like buttermilk pancakes or fluffy muffins.

Local vs. Global Foods: Think about the choice between a local, organically grown tomato and an imported one. Beyond freshness, you'll consider the environmental impact of shipping, supporting local farmers, and the overall taste and quality.

The Food Journey: Consider a simple loaf of bread. It begins with wheat farming, milling the grains into flour, yeast fermentation, kneading, baking, and finally, slicing and packaging before reaching your table. Each stage contributes to its production.

Personal Food Preferences: Personal preferences can vary widely. You might prefer spicy foods due to your exposure to different spices in your family's cooking, while your friend's preference for milder flavors could be influenced by their cultural background.

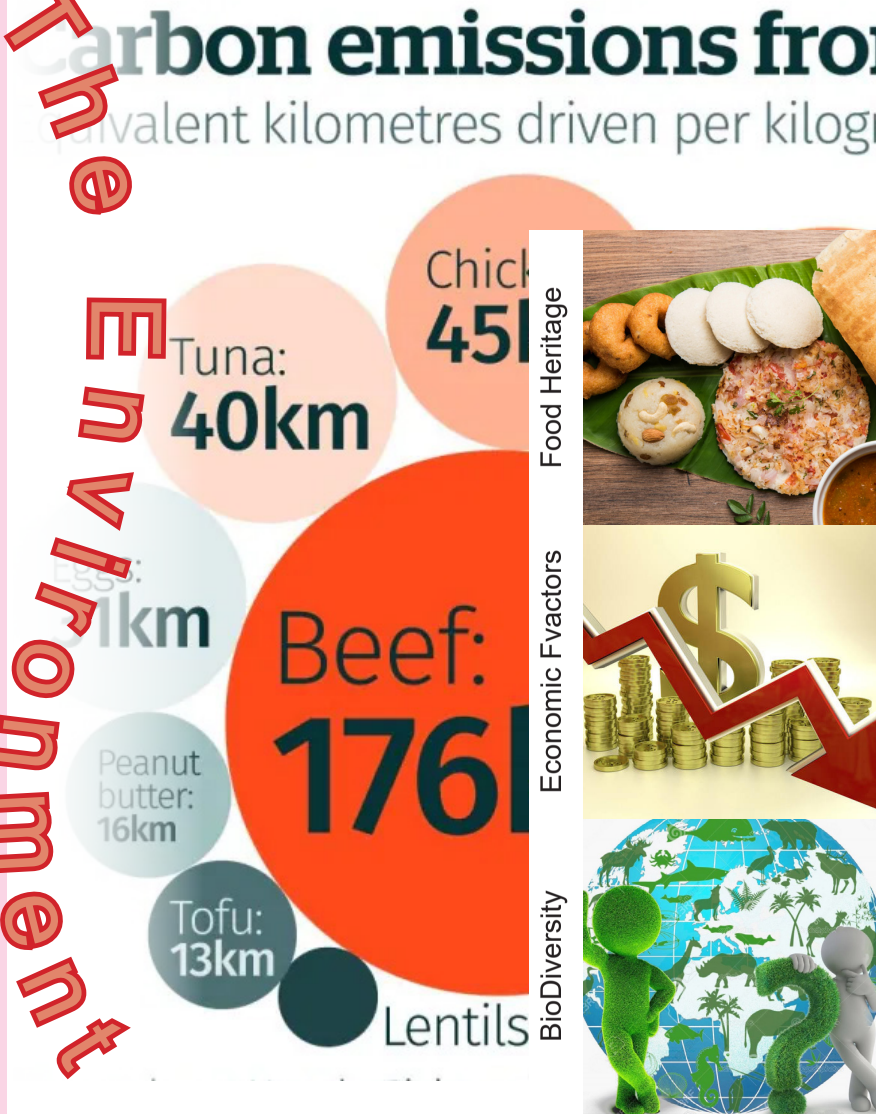
Cultural Background: Expanding on this, if you're from India, you have a diverse culinary heritage. Indian cuisine includes dishes like biryani, dosa, and samosas, each reflecting regional traditions and ingredients.

Environmental Impact: To delve deeper, consider the environmental consequences of transporting food. Local sourcing reduces carbon emissions, supports biodiversity, and can help sustain local ecosystems.

Economic Factors: Economic factors extend to trade balances and government policies. For instance, when you choose locally sourced honey, you support beekeepers in your region and may also contribute to trade regulations and tariffs affecting honey imports.

Health and Nutrition: In-depth knowledge of nutrition

The Environment



Knowledge...

includes understanding macronutrients (carbohydrates, proteins, fats) and micronutrients (vitamins and minerals). For example, vitamin C, found in fruits like oranges and strawberries, is essential for collagen production, wound healing, and overall immune system function.

Glossary

Food Provenance: The term refers to the origin and journey of a food item, including where it is produced, how it is processed, and how it reaches consumers.

Butterfat: The natural fat content found in milk, particularly important in making butter and contributing to its flavor and texture. Raising Agent: A substance added to baked goods, like baking soda or baking powder, that creates carbon dioxide gas when combined with an acid, causing the dough or batter to rise.

Local Food: Food produced or sourced within a specific geographic region or community, often with an emphasis on supporting local farmers and reducing food miles.

Global Food: Food that is sourced from different regions around the world and transported for consumption, contributing to a globalized food supply chain.

Culinary Heritage: The culinary traditions, recipes, and cooking practices that are passed down through generations within a specific culture or community.

Biodiversity: The variety of plant and animal species within an ecosystem, which can be impacted by food production and sourcing choices.

Trade Regulations: Rules and policies established by governments to manage the import and export of goods, including food products, affecting international trade.

Tariffs: Taxes or fees imposed on imports or exports, influencing the cost and availability of foreign food products in local markets.

Macronutrients: Essential nutrients needed in large quantities for energy and growth, including carbohydrates, proteins, and fats.

Micronutrients: Essential nutrients required in smaller amounts for various physiological functions, such as vitamins and minerals.

Food Safety: Practices and measures taken to ensure that food is free from contamination and safe for consumption, including handling, storage, and preparation.

Sustainability: The use of resources in a way that preserves them for future generations, often applied to food production to minimize environmental impact.

Local Sourcing: The practice of purchasing food items that are produced or grown nearby to support local farmers, reduce transportation emissions, and enhance community resilience.

Carbon Emissions: The release of carbon dioxide and other greenhouse gases into the atmosphere, often linked to the transportation and distribution of food products.

Tasks:

1) "Local vs. Global Food Detective":
Research and create a visual collage of at least five food products in your home. Identify whether each product is locally sourced or globally sourced. Write a short paragraph explaining your findings and share your thoughts on the benefits of consuming local food.

2) "Design Your Own Food Label":
Imagine you are a food manufacturer creating a new product. Design a creative and informative food label for your product, including details like ingredients, nutritional information, and a unique name. Consider what information would be essential for consumers to make informed choices.

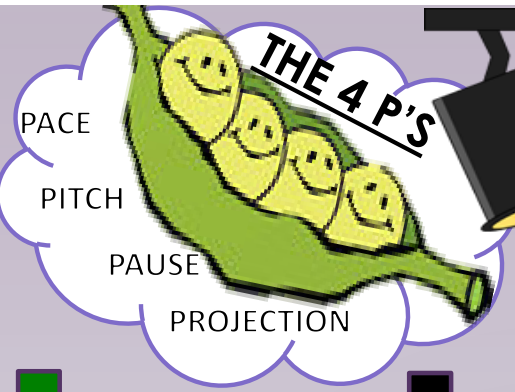
3) "Balanced Meal Planner":
Plan a balanced meal for your family for a day. Include breakfast, lunch, and dinner, and ensure it contains foods from different food groups. Write a brief explanation of why you chose each food item and its significance in a balanced diet.

4) "Create Your Own Butter":
Following the lesson on butter, try making your own homemade butter. Document the process with photos or drawings and describe how it turned out. Include any flavors or additives you used to customize your butter.

5) "Food Provenance Storyteller":
Choose a food item from your pantry, refrigerator, or any meal. Research its food provenance – where it comes from, its journey, and its impact on the environment and local communities. Write a short story or create a comic strip that tells the journey of your chosen food item.

6) "Local Food Spotlight":
Explore your local community or farmer's market, if available. Interview a local farmer or vendor about their produce and find out why they think locally sourced food is important. Share a summary of your conversation and your thoughts on supporting local food producers.

7) "Food Choices Survey":
Create a short survey (about 5-10 questions) to ask your family, friends, or neighbors about their food preferences. Include questions about whether they prefer local or global foods, what factors influence their choices, and any memorable food experiences. Summarize the responses and share the key findings in a report or presentation format.



The next two schemes are:

Physical Theatre

New Skill/Technique **Retrieval**

Knowledge/ skill	Definition
Stimuli	The starting point, idea or inspiration for your devised **drama**. It is what you base your **drama** around.
Gesture	In **acting gesture** is **defined** as a sign that communicates a character's action, state of mind and relationship with other characters to an audience.
Still Image or Freeze frame	This is where the action freezes as if someone has taken a picture midway through a performance. Conveys meaning and highlights the current scene.
Body as Prop	A genre (type) of drama that tells a story using over exaggerated movement. and physicality. Body as Prop Using your body to create props and objects on stage.
Improvisation	A very spontaneous performance without specific or scripted preparation.
Transition	This is the process in which something changes from one state to another
Movement	Where we move to on and around the stage avoiding the blocking another actor.
Physical Theatre	**Physical theatre** is a well-known genre of theatrical performance that encompasses storytelling primarily through **physical** movement.
Role Play	Role play is the act of imitating the character and behaviour of someone who is different from yourself.
Promenade theatre	In promenade theatre there is no formal stage, both the audience and the actors are placed in the same space.
Narration	A commentary delivered to accompany a performance.
Slow Motion	Performing in manner whereby the action appears much slower than in real life.

Gecko YouTube Channel

What is promenade theatre?

What are the constraints of 'Theatre in The Round?'

What performance skills can we use to show emotion?

BUT DO ENJOY YOURSELVES!

WATCH LIST FOR THIS TERM (IF YOU CAN):

Frantic Assembly: What is Physical Theatre?

Gecko 'The Time of your life' 2016

Youtube Channel: DV8 Physical Theatre

Key performance terminology for this term:

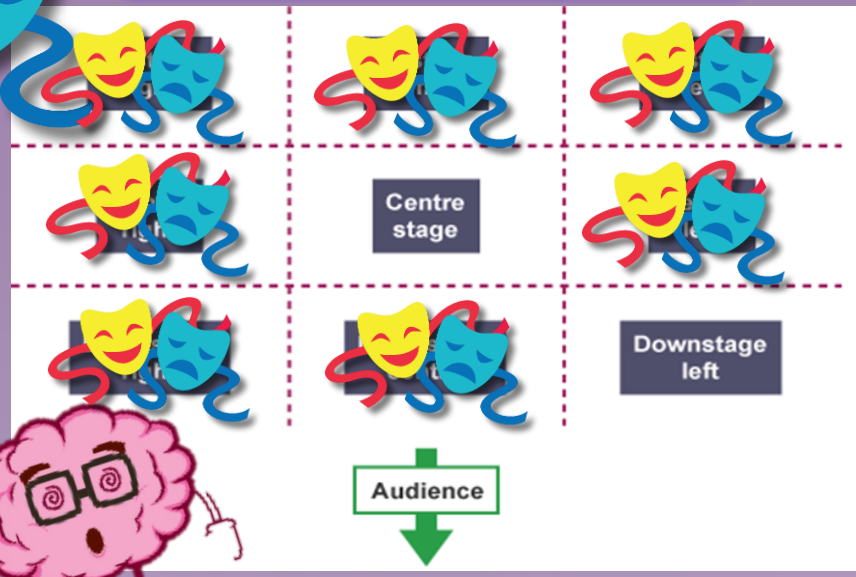
Physical Skills...(Skills that involve using your BODY)

1. Body Language	How an actor uses their body to communicate meaning. For example, crossing your arms could mean you are fed up.
2. Posture	The position an actor holds their body when sitting or standing. For example, an upright posture.
3. Gait	The way an actor walks.
4. Facial Expressions	A form of non-verbal communication that expresses the way you are feeling, using the face.
5. Gestures	A movement of part of the body, especially a hand or the head, to express an idea or meaning.
6. Stance	The way you position yourself when standing to communicate your role. An elderly person would have a different stance to a child!

Vocal Skills...(Skills that involve using your VOICE)

1. Projection	Ensuring your voice is loud and clear for the audience to hear.
2. Volume	How loudly or quietly you say something. (Shouting, whispering)
3. Tone	The way you say something in order to communicate your emotions. (E.g. Angry, worried, shocked tone of voice)
4. Pace	The speed of what you say.
5. Pause	Moments of pause can create tension, or show that you are thinking.
6. Accent	Use of an accent tells the audience where your character is from.
7. Pitch	How high or low your voice is.
8. Emphasis	Changing the way a word or part of a sentence is said, in order to emphasise it. (Make it stand out.) Try emphasising the words in capital letters and see how it changes the meaning: "How could YOU do that?" "How could you do THAT?"

Stage positioning



Week 1	Week 2	Week 3
Draw out the stage positioning grid and uncover our Drama faces!	Create an information poster on the Physical Theatre Company 'Frantic Assembly'	List the important skills/techniques needed for effective physical theatre

Week 4	Week 5	Week 6
Access the GCSE Bitesize Quiz	Watch a Gecko Performance on youtube	Write a list of the skills you have explored/used this term – be proud!

Spanish - Key verbs and vocab

Key phrases for this half term – Holidays

1. **Siempre voy a Alemania** – I always go to Germany
2. **Voy con mi clase en autocar** – I go with my class by coach
3. **El verano pasado fui a Gales** – Last summer I went to Wales.
4. **Fui con mis amigos y fuimos en tren** – I went with my friends and we went by train
5. **¡Fue un desastre!** – It was a disaster
6. **¡Lo pasé bien!** – I had a good time!
7. **El hotel era muy lujoso** – the hotel was very luxurious
8. **El primer día compré una camiseta** – On the first day I bought a T-shirt
9. **El último día nadé en el mar** – On the last day I swam in the sea
10. **¡Ojalá pudiera ir a Estados Unidos!** – If only I could go to the USA!

Siempre voy a Egipto con mi familia y vamos en avión porque es rápido sin embargo el verano pasado fui a Escocia con mi clase. El hotel era lujoso ¡pero fue un desastre! El primer día fui a un restaurante pero fue asqueroso y después perdí mi pasaporte. El último día nadé en el mar sin embargo hizo frío.

asqueroso = disgusting
perdí = I lost
frío - cold

Para ir más lejos: (To go further…)

Scan this QR code with your phone or tablet. It will take your to BBC Bitesize where you can practice how to form the preterite (past) tense in Spanish – Very useful!

Your teacher should have given you your username and password for **Languagenut**. Log in and complete some of the revision games on there. It's great for practising speaking and listening skills!

Week 1: Practice key phrases 1-5 – look, cover, write, check, correct x 3.
Week 2: Practice key phrases 6 -10 - look, cover, write, check, correct x3.
Week 3: Translate the paragraph into English.
Week 4: Create a 10 question quiz of key vocabulary or phrases.
Week 5: Create a mind map of any key phrases you can remember and then fill it in with red pen using this knowledge organiser.
Week 6: Teach it! Create a resource that will help teach others these key phrases. It could be a poster, a PowerPoint presentation, a leaflet or anything else. If you can, stick it in your home learning book.
Week 7: Write a paragraph about your holidays FROM MEMORY! Then check it over with your red pen. Read it out loud to a member of your family to practice your pronunciation.

Y8 Nature Poetry Knowledge Organiser

Things we will explore

Animals and what they represent e.g. innocence, anger, calm.
The weather and how it can be a symbol in poetry.
Times of the day and what they represent.
Flowers and what they represent.

P Point	Sum up the main idea in your paragraph.	• In my opinion... • Arguably... • The writer uses... • Similarly • Firstly... • Secondly... • Both... • In contrast... • One of the language features used is...
E Evidence	Provide Evidence for the point you are making.	•For example... •An example of this is... •This is shown... •This can be seen... •This is demonstrated when... •We know this because... •The evidence for this is...
E Explanation	Why is the quotation significant? What effect does the quotation have on the reader? Why has the writer used this technique?	• This shows • This suggests... • This implies... • This is effective because... • The writer has chosen this technique because... • This would make the reader feel... • This has been used because...

Poetic Devices

Alliteration - When words placed together start with the same sound.
Metaphor - When you compare something to something else.
Simile – When you compare two things using the words like or as.
Oxymoron - When two words are placed together with opposite meanings.
Onomatopoeia - Words that sound like what they are. "Meow" or "crash".
Assonance - The repetition of a vowel sound "Go slow over the road".
Personification – when an object or animal is given human qualities.
Sensory imagery- when poets write abut the five senses to create an image in the reader's mind and develop description.
Structure - The way that the poem is arranged/organised
Sibilance - A repeated 's', 'sh' or 'z' sound.
Enjambment - When one line runs into another without a pause.

Poets we will study:

William Wordsworth
Ted Hughes
William Blake
Percy Bysshe-Shelly
Imitaz Dharker
James Reeves
Anoop Lokkur

T itle
O verview

S tructure
M ood
I magery
L anguage
E ffect

Structuring a poetry essay:

- Read the question carefully and make sure you understand what the question is asking you about the poem.
- Introduction- write a paragraph which summarises the poem to show your understanding. Include a sentence which links to the question.
- Main body- answer the question using PEE paragraphs.
- Conclusion- summarise your main argument in response to the question. E.g. Overall growing up is presented as turbulent, quick and a happy experience in the poem.

Y8 Nature Poetry Home Learning Tasks

Week 1
Similes and Metaphors

Simile: comparing two things using **as or like.**
Metaphor: Saying one thing ***is*** something else.
Example: **Her eyes shone like diamonds. (Simile)**
He was a tornado blasting his way through the opposing team. (Metaphor)
Write a simile or metaphor to compare each of the following:
The Sun, The Moon, The Stars, A Wild Sea, Flowers, A Butterfly, A Calm Lake, An Eagle

Week 2
Write your own Poem

Choose a subject linked to '**Nature**' e.g. Flowers, Seasons, Insects etc.
1. **Write your own poem** on the subject.
Try to use a poetic device such as simile, metaphor, personification, alliteration etc. and a careful choice of adjectives.
2. **Highlight and annotate your poem** to show which devices/language features have been used.

Week 3
William Wordsworth Research

Carry out some research on the poet **William Wordsworth**. Write 10 interesting facts about his life and his style of poetry.

Week 4
Poetry Analysis

My Heart Leaps Up William Wordsworth

My heart leaps up when I behold
A rainbow in the sky:
So was it when my life began;
So is it now I am a man;
So be it when I shall grow old,
Or let me die!
The Child is father of the Man;
And I could wish my days to be
Bound each to each by natural piety.

Read the poem above – What do you think is the meaning of 'My Heart Leaps Up' by William Wordsworth? – Write a paragraph to show your thoughts. "In my opinion ....."

What is the rhyme scheme?

Can you find any techniques used in the poem?

*piety – devotion/religious

Week 5
Imtiaz Dharker Research

Carry out some research on the poet Imtiaz Dharker. Write 10 interesting facts about her life and her style of poetry.

Week 6
Poetry Analysis

Find a nature poem of your choice (see websites like PoetryFoundation.org and PoemHunter.com or just choose a topic and search the internet)

Make notes on the language techniques the writer uses. Try to use the **TO SMILE** acronym to set out your notes.

Week 7
Revision Guide

Create a revision guide for students that covers all the new knowledge and understanding you have picked up from this term about poetry.

Language, structure, vocabulary, imagery, onomatopoeia etc.....

Evidence for plate movement

- Study of fossils – similar fossils are found on different continents. This is evidence that these regions were once very close or joined together.
- Pattern of rocks- similar pattern of rock layers on different continents is evidence that the rocks were once close together or joined.
- Shape of continents fit together like a jigsaw.

Continental drift

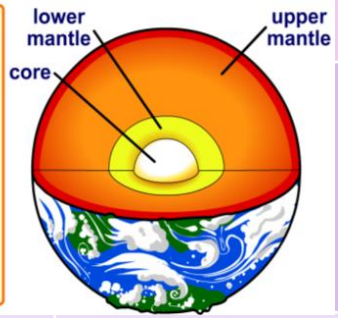
In 1912, Alfred **Wegener** proposed that South America and Africa were once joined together and had subsequently moved apart.
He believed that all the continents were once joined together as one big land mass called **Pangaea** and this was intact until about 200 million years ago. The idea that continents are slowly shifting is called **continental drift**.

Convection currents

A convection current is a circulatory pattern driven by the rising of hot material and/or sinking of cold material.

1. The Earth's radioactive core releases large amounts of heat energy, which heats the rock in the lower mantle.

This heated rock then becomes less dense than the cooler rock above it in the upper mantle.

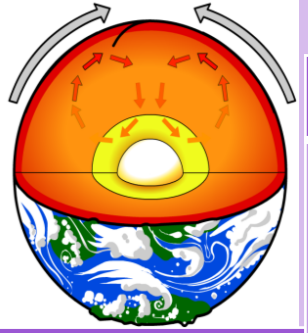


2. The warmer rock in the lower mantle begins to rise, while the cooler rock in the upper mantle begins to sink.

This movement of rock means that circulating convection currents are formed within the mantle.

3. As the mantle heats up, energy transfer from the convection currents causes the Earth's crust to heat up.

This heating drives the movement of the tectonic plates and causes the continents to move a few centimetres each year.



Earthquakes

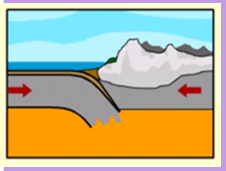
An earthquake is a shaking movement of the earth's crust.
They can occur anywhere but 90% occur along plate margins..
The point where energy released is called the **focus** (where plates meet).
The point where the energy reaches the surface is called the **epicentre**.

Plate tectonics

Year 8 Geography

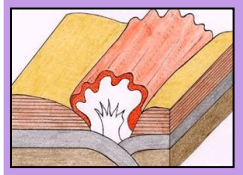
- The Earth's crust is broken into different plates, which sit on the Earth's mantle.
- These plates move because of **convection currents**.
- The plates move in different directions and meet at **plate boundaries**.

Plate boundaries

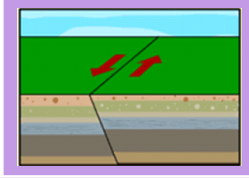


Destructive-
The plates either **collide** or the oceanic plate **subducts under** the continental plate. An example is the Nazca plate being forced under the South American plate.

Constructive-
The plates **move apart.** An example of this is the North American plate moving away from the Eurasian plate.



Collison-
The plates **move towards** each other**.** An example of this is the Indo-Australian plate moving towards the Eurasian plate to form the Himalayas.



Conservative-
The plates **slide past** each other**.** Friction causes the plates to grind past each other**.** An example of this is the San Andreas Fault which lies between the North American and the Pacific plate.

Tasks- if you complete all 5, revisit some or all from memory

Task 1: Read over the evidence for plate movement. Create a mind map/spider diagram with a strand for each piece of evidence.
Task 2: Read over the theory of continental drift. Research using Google about Wegener.
Task 3: Using Google find out about a earthquake in the last 20 years. Create a fact file on the earthquake- include dates/location/cost of damage/injuries/death toll.
Task 4: Look over the 3 diagrams and information on convection currents. Create a flow diagram explaining the process in your own words on how convection currents form.
Task 5: Look over the 4 diagrams and information on plate boundaries. Cover and try to sketch your own 2D diagrams. Re-check and then cover the information and write your own explanation next to each one.

Computing Department Knowledge `Organiser: Year 8 Computing Systems

What is the Antikythera Mechanism?

https://youtu.be/EZy4a5uTYH0

Introduction to Computer Devices and Logic Gates

www.bbc.co.uk/bitesize/guides/zxb72hv/revision/1

Computing Systems

The invention of the computer has had a huge impact on our day-to-day lives, and they are now present everywhere – at home, at work and in education.

It is easy to recognise that personal computers, laptops and mobile devices are computers, but computers are also hidden in many more devices. Computers are found in many of the devices we use on a daily basis. Because they are relied on so heavily, knowing what they are and how to use them is valuable.

Input devices

An **input** device is any piece of computer hardware **used to provide data to a computer system**.

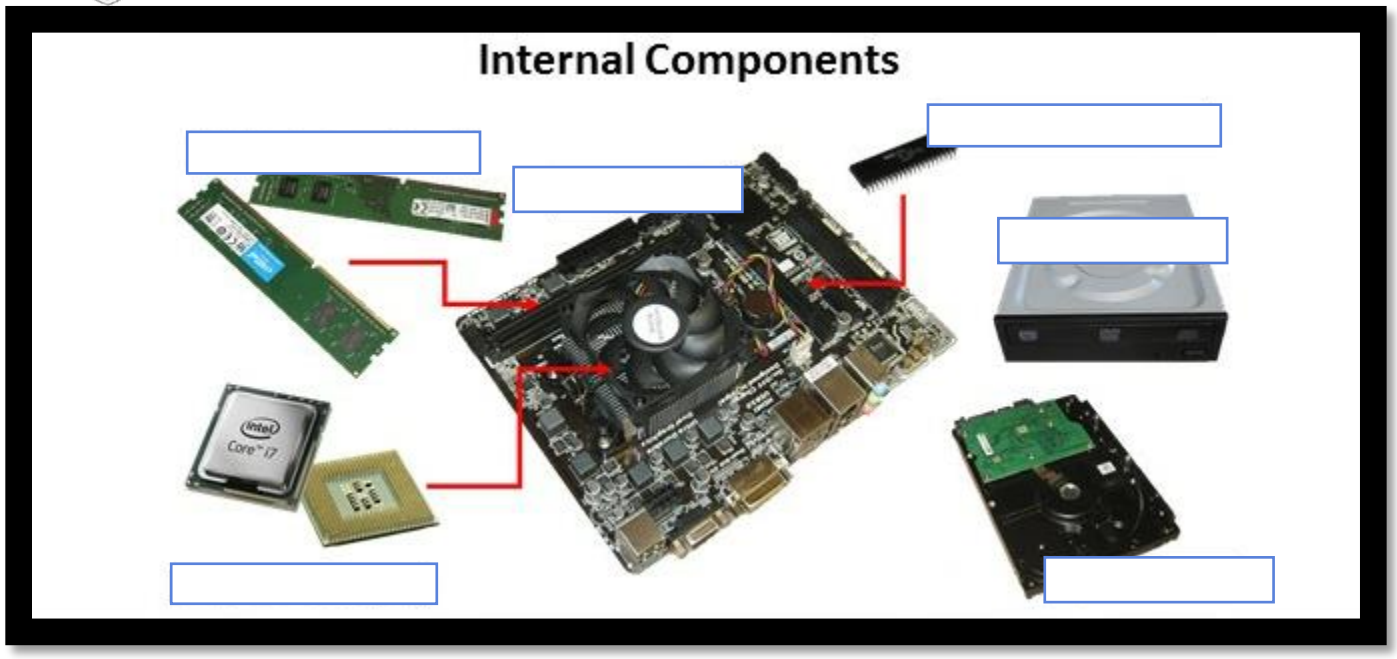
Output devices

An **output** device is any piece of computer hardware **used to communicate the results of data that has been processed.**

Identify whether each device is an input or output device: The first one has been done for you:

Device	Input Device	Output Device
Keyboard	✓	
Monitor		
Speakers		
Mouse		
Printer		
Headphones		
Webcam		

Computing Department Knowledge `Organiser: Year 8 Computing Systems



Label the Components

RAM (Random Access Memory)

ROM (Read Only Memory)

CD/DVD Drive

Hard Disk Drive

CPU (Central Processing Unit)

Motherboard

Operating Systems (OS)

Software that supports a computer's basic functions, such as: managing memory, managing the CPU and controlling devices.

- Windows
- Mac OS X
- Linux
- iOS
- Android

Application Software

Programs that allow the user to complete a specific task

- Word processing software e.g. Word
- Graphic design software
- Games

System Utility Software

Used to manage the computer and keep it running

- Antivirus
- Encryption
- System security

Computing Department Knowledge `Organiser: Year 8 Computing Systems

Computing System Key Words:
Binary: A number system that contains two symbols, 0 and 1. Also known as base 2.
Boolean: A data type in computing which only has two possible values, true or false.
Component: Working parts of a computer system.
Hardware: The physical parts of a computer system, eg a graphics card, hard disk drive or CD drive.
Input: Data which is inserted into a system for processing and/or storage.
Logic Gate: Circuit components which take several inputs, compare the inputs with each other, and provide a single output based on logical functions such as AND, OR and NOT.
Output: Data which is sent out of a system.
Software: Programs that run on a computer and complete a specific task.
Truth Table: Used to assess possible results of a Boolean algebra statement.

DESIGN TECHNOLOGY KNOWLEDGE ORGANISER

Topic: Wooden Wheeled Children's Toy Project



YEAR 8 DT

My Tool Box

Tenon Saw – Used to cut straight lines in wood.

Coping Saw – Used to cut curves and internal shapes in

Twist drill – fitted in the chuck of a drill to drill holes.

Wood Vice – Used to secure material while working on it (cutting, filing sanding etc.)

Pyro pen – Used to burn designs into wood

Pillar/Bench Drill – Used to drill holes into different materials.

Hand file – Used to smooth out different materials

Belt Sander – Used to sand/smooth down different materials

Focused topics

6 R's of Sustainability

Information about natural timbers

SPECFICATION	HARDWOOD	SOFTWOOD
Origin	Deciduous Trees	Evergreen Trees
Trees Be Like	Oak, Teak & Mahogony	Pine, Spruce & Fir
Price	More Costly	Less Costly
Density	Harder (Not Always)	Softer(Not Always)
Colour	Generally Dark	Almost Light
Structure	Lower Sap Part	Higher Sap Part
Grain	Close	Loose
Fire Resistance	Good	Poor
Weight	Heavy	Light

Key Terms

Hardwood - the wood from a deciduous, broadleaved tree (such as oak, ash, or beech)
Manufactured Board – timber sheets which are produced by gluing wood layers or fibres together (such as MDF, Plywood and Chipboard)
Pyrography - decorating wood by burning a design on the surface with a heated metallic point
Renewable - Inexhaustible and replaceable
Softwood - the wood from a conifer (such as pine, fir, or spruce)
Sustainable - A sustainable resource can be replaced once used. As a tree is chopped down, many more can be planted to ensure the use of trees can be sustained.

Tasks

Task 1: Cover the knowledge organiser then write down all the tools you have learnt. Check and red pen mistakes.
Task 2: Do the same as task 1 for Key terms & definition.
Task 3: Learn the focused topic: the 6 R's of sustainability- Check your knowledge of the definitions and words (cover and check).
Task 4: Draw two tools and write what they are for.
Task 5: Create a quiz based on the focused topic column- get someone to test you.
Task 6: Create a mind map for the information you remember and red pen anything you've forgotten.
Task 7: Teach it. Create a task that can be used to teach some of the information from here.

To go further:

Introduction to oblique sketches:

More information about natural and manufactured timber:

ART KNOWLEDGE ORGANISER

Topic: African Art and Culture

YEAR 8
Term 1 (1b)
African Crafts

African Art and Culture:

As we have learnt in lessons, African arts and crafts come in many different forms, all of which envelop the rich culture and proud heritage within Africa such as masks, textiles, pottery and paintings. Many forms of art that come from Africa have a more abstract style using pattern, shape and colour to create the visual artwork.

Ceramics

People, in most cases, women, craft these clay pots, dishes, and sculptures by hand, using techniques passed down through families. After making and shaping the pots, the clay would be left in the sun to dry before being covered in wood bark and cooked on an open fire, after baking the clay would then be decorated. The vibrant colours and intricate designs reflect the rich cultural diversity of Africa, with each region having its own unique style. These ceramics serve practical purposes, like storing water or cooking food, but they also tell stories and celebrate African heritage.

Kente Cloth/Textiles

Kente cloth is a stunning and special fabric from Africa. It's handwoven by people, often in Ghana and mostly by men, using brightly coloured threads. What makes it extraordinary is that each pattern and colour have a unique meaning. Kente is worn on important occasions, like weddings and festivals, and it tells a story about the wearer's heritage and values. It's like a colourful language that celebrates African culture and history. So, when you see someone wearing kente cloth, you're not just looking at beautiful clothing; you're reading a vibrant tale of their identity and traditions.

TASKS TO COMPLETE:

Week 1: Practice key literacy vocab 1-12 – look, cover, write, check, correct x 3. Read the sentences again and check for understanding.

Week 2: Watch the video about the traditional way of making ceramic pots in Africa and make a step by step guide within your books.

Week 3: Watch the video and create a drawing of your own African inspired clay pot in your books using the outlines provided

Week 4: Watch the video of the origin of Kente cloth and write down in your book how it came to be

Week 5: Using the images below to help you, try and come up with your own Kente design

Week 6: Draw out the outline of the people dressed in Kente cloth and dress them using your design from last week

Week 7: Practice key phrases 1 -12 - look, cover, write, check, correct x3. Read the sentences again and check for understanding.

Key Literacy Vocabulary:

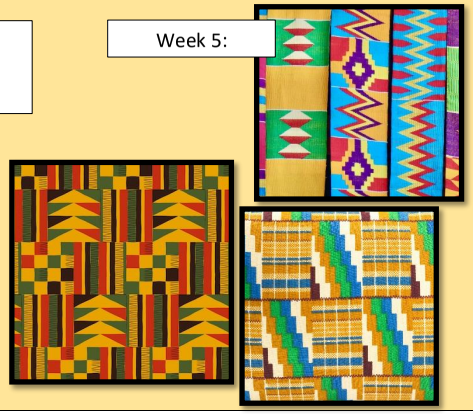
1. **Pattern** – a repeated decorative design.
2. **Ceramics** – pots and other items made from clay hardened by heat
3. **Kente cloth** – a Ghanaian textile, made of handwoven cloth, strips of silk and cotton.
4. **Craft** – an activity involving skill in making things by hand.
5. **Abstract** – something that doesn't pictorially represent reality, Picasso's portraits from his African period for example
6. **Geometric Patterns** – patterns containing shapes, objects or pictures that repeat themselves.
7. **Tribal** - a characteristic of a tribe or tribes.
8. **Earth colours** – colours of the earth, for example, brown, brownish-reds, reds. Headdress – an ornamental covering or band for the head, especially one worn on ceremonial occasions.
9. **Relief** – is where three-dimensional elements are raised from a flat base.
10. **Bold** – the use of strong colour and outlines mean that the arts and crafts stand out.
11. **Textiles** – a type of cloth or woven fabric
12. **Heritage** – a person's unique, inherited sense of family identity; the values, traditions, culture and artifacts handed down by previous generations

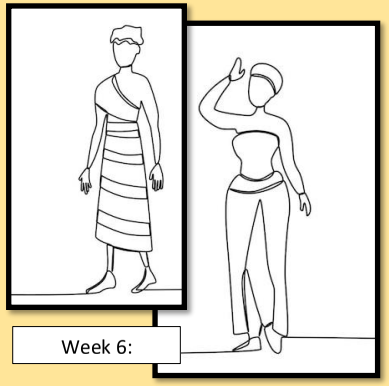
Week 2:

Week 3:

Week 4:

Week 5:





Week 6:

Week One

Read your knowledge organiser focusing on **Health & Lifestyle** for 5 minutes. Turn to the page labelled **Health & Lifestyle Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 1 - 10 in full sentences.

Mark your own work using the answers.

Week Two

Read your knowledge organiser focusing on **Health & Lifestyle** for 5 minutes. Turn to the page labelled **Health & Lifestyle Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 11-22 in full sentences.

Mark your own work using the answers.

Week Three

Read your knowledge organiser focusing on **Health & Lifestyle** for 5 minutes. Turn to the page labelled **Health & Lifestyle Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 23 - 33 in full sentences.

Mark your own work using the answers.

Week Four

Read your knowledge organiser focusing on **The Periodic Table** for 5 minutes. Turn to the page labelled **The Periodic Table Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 1 - 6 in full sentences.

Mark your own work using the answers.

Week Five

Read your knowledge organiser focusing on **The Periodic Table** for 5 minutes. Turn to the page labelled **The Periodic Table Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 7 - 12 in full sentences.

Mark your own work using the answers.

Week Six

Read your knowledge organiser focusing on **The Periodic Table** for 5 minutes. Turn to the page labelled **The Periodic Table Key Questions.**

Cover the answers or cut the page out and fold down the middle line.

Answers questions 13 - 18 in full sentences.

Mark your own work using the answers.

Have you completed your 4 daily goals?

Complete your 4 daily goals this week to ensure you improve! 😉

Home learning tips:

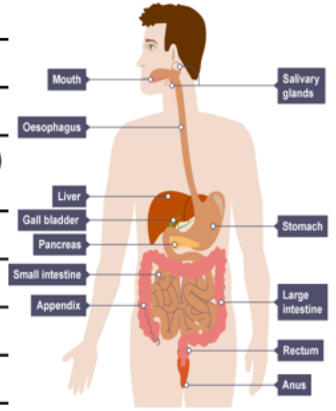
1. Answer any questions in full sentences.
2. Take your time reading through your knowledge organiser.
3. Read the task twice.
4. Ask your teacher in your next lesson if you are unsure about anything.
5. Not sure which week to do? Ask your teacher!

Health and Lifestyle

Digestion is the breakdown of carbohydrates, proteins and fats into small soluble substances to be absorbed into the blood.

The Digestive System

Mouth	Mechanical breakdown/chew food
Salivary glands	Produce saliva with amylase enzymes to breakdown starch
Oesophagus	Push chewed food to stomach
Stomach	Partial digestion of food/mechanically churns food with HCl and protease enzymes
Pancreas	Produces digestive enzymes
Liver	Produces bile
Gall bladder	Stores bile which breaks down fats (lipids) and neutralises the HCl(stomach acid)
Small intestine	Absorption of small soluble particles
Large intestine – colon	Where water is reabsorbed
Large intestine – rectum	Muscular section of the large intestines
Large intestine – anus	Where faeces leave the body



Absorb	Movement of a substance across a cell membrane
Active site	The area of the enzyme with the specific shape to make the reaction happen with the substrate(s)
Carbohydrate	Food group used as a source of energy
Catalyst	Chemical that speeds up a reaction
Denature	When an enzyme has its shape changed so it no longer works
Digestive enzyme	Enzymes which speed up the process of digest
Enzyme	A biological catalyst. One type of enzyme does one specific reaction
Lipid	Other name for fats, needed as a source of energy
Product	Chemical made during a reaction
Protein	Needed for growth and repair
Substrate	The chemical(s) which are involved in the enzyme catalysed reaction

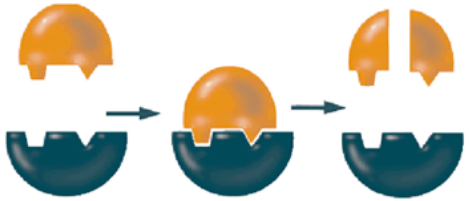
Types of Enzymes

Enzymes are proteins that function as biological catalysts. They can break down larger molecules into smaller, soluble molecules that can be absorbed in the small intestine.

Enzyme	Substrate	End product	Where produced
Protease	Protein	Amino acids	Stomach, pancreas
Lipase	Lipids	Fatty acids and glycerol	Pancreas
Amylase	Carbohydrates (starch)	Simple sugars	Mouth, small intestine

Enzymes

Organisms use enzymes to control chemical reactions.
Enzymes are **catalysts**, so they speed up chemical reactions.
They have an **active site** with a specific shape. A specific molecule slots into the active site (like a key into a lock) and the reaction takes place.



Food Tests

Test for	Chemical	Result
Sugar	Add Benedict's solution	Turns brick red (or orange with less sugar)
Protein	Add Biuret solution	Turns purple
Starch	Add iodine	Turns blue black

Malnutrition

If a person has an unbalanced diet they are said to be malnourished. This can lead to people becoming overweight or underweight or having deficiency diseases.

Obesity

If a person eats too much food and does not do enough exercise they will gain weight. If someone becomes very overweight they are said to be obese. Obese people have a higher risk of certain conditions such as:

- Diabetes
- Heart disease
- Arthritis

Starvation

If a person does not eat enough food they will they will lose weight. In the extreme this can lead to starvation. Very underweight people are more at risk of having:

- A weakened immune system
- Fragile bones
- Fertility problems

Deficiency Diseases

Deficiency diseases are when the body does not get enough of a certain nutrient.

- A lack of vitamin C can lead to scurvy which affects the gums.
- A lack of vitamin D can lead to rickets which affects the bones.

Recreational drugs and gas exchange

Smoking can affect the gas exchange system in the following ways:

1. Destroys **cilia** in the airways so they are less able to sweep **mucus** containing pathogens out of the lungs, leading to a persistent **smoker's cough**
2. Irritates the **bronchi**, causing **bronchitis**
3. Destroys alveoli, reducing the surface area for gas exchange and causing **emphysema**
4. Cigarette smoke contains **carbon monoxide** (CO) which binds to red blood cells, so they can carry less oxygen to cells and the **heart has to work harder**
5. Increases the risk of lung, throat, mouth and oesophagus cancers

Recreational drugs and gestation

The mother's behaviour during gestation can affect the development of the unborn baby because of the transfer of substances across the placenta.

Smoking or being exposed to cigarette smoke (passive smoking) during gestation can:

- Reduce the **volume of oxygen** which reaches the baby's cells, affecting their ability to release energy. This is because of nicotine and carbon monoxide in the cigarette smoke. **Nicotine narrows blood vessels** and **carbon monoxide inhibits red blood cells from carrying oxygen**
- Smoking increases the risk of **premature** (early) birth, **stillbirth** (death of the foetus), **cot death** (death of the new-born) and **low birth weight** caused by growth impairment
- Children whose mothers smoked during gestation are more likely to experience:
    - learning disorders
    - behavioural problems
    - low IQ
    - asthma

Drinking alcohol during gestation can lead to foetal alcohol syndrome (FAS). Symptoms of FAS:

- **Physical** defects e.g. small head size, low birth weight
- **Cerebral palsy** (movement and coordination problems)
- **Behavioural** differences including **autistic** traits and attention-deficit hyperactivity disorder (**ADHD**)
- Problems with **organs** including the liver, kidneys, and heart
- **Learning difficulties**

Neonatal abstinence syndrome occurs when a mother has taken a drug which causes **dependency**, during gestation. An example is the illegal, opioid drug **heroin**. The baby is born with a dependency on the drug and goes through **withdrawal** much like an adult would. These include cramps, muscle spasms, chills and increased heart rate and blood pressure.

Health and Lifestyle – Key Questions

Questions

1. What is a balanced diet?
2. Name the seven components of a balanced diet.
3. What is a carbohydrate used for? Give an example.
4. What is a protein used for? Give an example.
5. What is a lipid used for? Give an example.
6. What is scurvy?
7. What is used to test for starch? What does a positive test look like?
8. What is used to test for glucose? What does a positive test look like?
9. What is used to test for protein? What does a positive test look like?
10. What is used to test for lipids? What does a positive test look like?
11. What affects our daily energy needs?
12. What can lead to health problems, such as obesity?
13. What is energy intake measured in?
14. How many joules are there in a kilojoule?
15. What type of energy store is food?
16. What are the four different types of teeth?
17. What causes a dental cavity?
18. What is an enzyme?
19. What is a substrate?
20. Where on an enzyme does a substrate attach?
21. Define "denatured"
22. How can an enzyme be denatured?
23. What is difference between mechanical and chemical digestion?
24. Where in the body is lipase produced?
25. Where in the body is protease produced?
26. Where in the body is carbohydrase produced?
27. How are recreational drugs different from medicinal drugs?
28. Is alcohol a drug?
29. How does alcohol affect the body?
30. What long term effects can alcohol cause in the body?
31. What is carbon monoxide?
32. What is tar?
33. What effect does nicotine have on the body?

Answers

1. A balanced diet contains the correct amount of each component.
2. A balanced diet consists of carbohydrates, protein, lipids, vitamins, minerals, fibre and water.
3. Carbohydrates are used as energy sources. They are found in bread, rice, pasta and potatoes.
4. Protein is used for growth and repair. They are found in red meat, fish, pulses and tofu.
5. Lipids are a source of energy and needed for growth. They are found in dairy, avocados, butter, oil and nuts.
6. Scurvy is a Vitamin C deficiency which used to be common amongst seamen.
7. Iodine solution is used to test for starch. A blue/black colour is a positive result.
8. Add benedict's reagent and heat to test for glucose. A brick red colour is a strong positive with orange or green also identifying glucose.
9. Add Biuret A and Biuret B to test for protein. A purple colour is a positive result.
10. Add Sudan III to test for lipids. A red layer either above or below the substance is a positive result.
11. Our daily energy needs are affected by exercise, age and lifestyle.
12. Poor lifestyle, an unbalanced diet and a lack of exercise can lead to health problems.
13. Energy intake is measured in calories or kCal.
14. There are 1000 joules in a kilojoule.
15. Food is a chemical potential store of energy.
16. The four types of teeth are molars, pre-molars, canines and incisors.
17. A high sugar diet and poor dental hygiene causes dental cavities.
18. An enzyme is a biological catalyst that speeds up reactions without being used up.
19. A substrate is the substance in which an enzyme acts.
20. The active site is where a substrate attaches to an enzyme.
21. Denatured is when an enzymes active site changes shape and no longer functions.
22. An enzyme becomes denatured due to high temperatures or extreme pH.
23. Mechanical digestion is the physical breakdown of food (e.g. by teeth), chemical digestion is the breakdown of food by enzymes.
24. Lipase is produced in the pancreas and small intestine.
25. Protease is produced in the pancreas, small intestine and the stomach.
26. Carbohydrase is produced in the pancreas, small intestine and salivary glands.
27. Recreational drugs are used by people for pleasure and can be both legal and illegal. Medicinal drugs are designed to treat or cure illness and can be either prescription or bought over the counter.
28. Alcohol is a legal recreational drug.
29. Alcohol affects parts of the brain that control judgement, concentration, coordination, behavior and emotions.
30. Excessive and prolonged alcohol abuse can cause cirrhosis of the liver.
31. Carbon monoxide is a poisonous gas that reduces the amount of oxygen that red blood cells can carry around the body.
32. Tar is a brown sticky substance that consists of tiny particles and is formed when tobacco smoke condenses.
33. Nicotine is an addictive drug that affects the central nervous system.

8.3 – The Periodic Table

What do I need to be able to do?

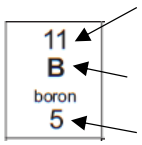
- Describe the varying physical and chemical properties of different elements
- Understand the principles underpinning the Mendeleev Periodic Table
- Understand the arrangement of the Periodic Table: periods and groups; metals and non-metals
- Understand how patterns in reactions can be predicted with reference to the Periodic Table
- Describe the properties of metals and non-metals
- Use and interpret the Periodic Table
- Make predictions based on trends in chemical and physical properties
- Classify and compare properties of metal and non-metals
- Link properties of metal and non-metals to uses
- Record observations and cognise trends and patterns

1. The Periodic Table

The Periodic Table displays all the **elements** that exists so far, on the Earth.

Elements are arranged in order of increasing number of **protons**, from left to right.
See Box 6 for a recap on proton number.

Each element is represented in a box like the following. We can gain the following information from it:



Mass number – number of protons + number of neutrons

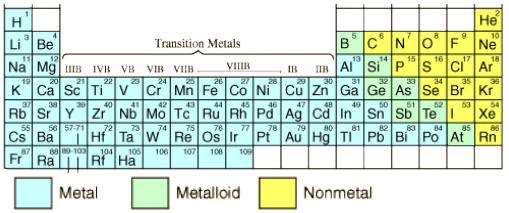
Element symbol

Proton number – number of protons

The columns of the Periodic Table are called **groups** – all elements in the same group share similar chemical properties.

The rows of the periodic table are called **periods.**

2. Metals and Non-metals



Metal elements are found to the left of the Periodic Table and non-metal elements are found to the right.

Metals and non-metals have different properties:

Metals	Non-metals
Good conductors of heat and electricity	Insulators of heat and electricity
High melting and boiling point	Low melting and boiling points
Lustrous	Dull
Shiny when cut	
Malleable	Brittle
Ductile	

There are some exceptions to these properties.

3. Group 1: The Alkali Metals

Trends down the group
- melting and boiling points decrease
- hardness decreases
- reactivity increases

When group 1 metals react with water:

Lithium + water → lithium hydroxide + hydrogen

$2Li + 2H_2O \rightarrow 2LiOH + H_2$

Dissolves in the water to produce an alkaline solution – hence the name alkali metals.

A flammable gas

Observation; universal indicator will turn purple

Observation; fizzing/bubbling/ fumes, flames

All other group 1 metals react with water in this way.

SCAN ME

Scan here to watch the reactions of group 1 metals and water

4. Group 7 – The Halogens

Trends down the group
- melting and boiling points increase
- colour gets darker
- reactivity decreases

Reacting with group 1 metals:
A salt is made.
Hint – see 7.10 Acids & Bases for a recap on salts

The suffix of the halogen changes from **-ine** to **-ide.**

e.g. sodium + chlor**ine** → sodium chlor**ide**
lithium + brom**ine** → lithium brom**ide**

SCAN ME

Scan here for more information about the uses and properties of group 7 elements

Displacement reactions occur when a **less** reactive element in a compound is removed and replaced (**displaced**) by a **more** reactive element

e.g.
sodium chloride + fluorine → sodium fluoride + chlorine

Fluorine is more reactive than chlorine and so replaces it in the compound. Chlorine is removed as an element…

…But with lithium bromide and iodine, there is no reaction. Iodine is below bromine in the Periodic Table and therefore less reactive. It cannot displace bromine from its compound.

When writing balanced symbol equations, remember halogens are diatomic molecules when in their elemental form;

e.g.
sodium chloride + fluorine → sodium fluoride + chlorine

$2NaCl + F_2 \rightarrow 2NaF + Cl_2$

5. Group 0 – The Noble Gases

Trends down the group
- Melting and boiling points increase
- Density increases

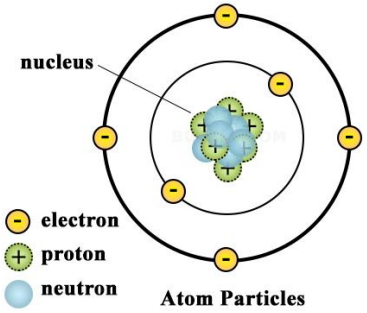
The Noble Gases are **colourless, inert** (unreactive) gases. It is these properties that make them useful in the following situations:

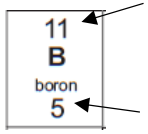
- *Helium is used to fill balloons as it is less dense than air and therefore will float*
- *Argon is used to fill filament lamp bulbs. This is because it is unreactive and non-flammable. It will not react with the metal filament as it glows.*

SCAN ME

← Scan here for more information about the uses and properties of group 0 elements

6. Atomic Structure Recap





Mass number – number of protons + number of neutrons

Proton number – number of protons

Mass number (11) is the number of protons plus the number of neutrons. We know there are 5 protons. *So how many neutrons are there?*

Mass number (11) – proton number (5) = 6 neutrons

The Periodic Table – Key Questions

Questions

1. List 8 properties of Metals.
2. What does ductile mean?
3. What does malleable mean?
4. What does sonorous mean?
5. What does lustrous mean?
6. Where on the periodic table would you find the metals?
7. Where on the periodic table would you find the non-metals?
8. If an element is located in period 3 how many electrons are present on the elements outer shell?
9. Define "reactivity".
10. What name is given to group 1 elements?
11. How does reactivity change within group 1 elements?
12. What is produced in reactions of alkali metals and water?
13. What name is given to group 7 elements?
14. How does reactivity change within group 7 elements?
15. Starting with the most reactive, list group 7 elements in order of reactivity.
16. What name is given to group 0 elements?
17. Name 2 properties of group 0 elements.
18. Define "monatomic".

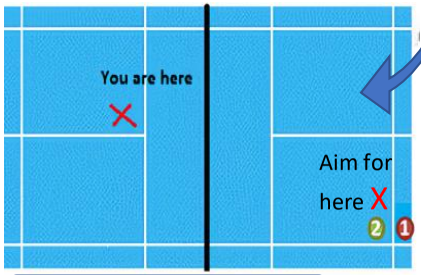
Answers

1. Metals are: Lustrous, Sonorous, Thermal Conductor, Electrical Conductor, Density, Ductile, Malleable, and have a high MP and BP.
2. Ductile means the metal can be easily pulled into long wires without breaking.
3. Malleable means the metal can be easily shaped.
4. Sonorous means the metal is capable of transmitting and making a sound.
5. Lustrous means the metals is shiny when polished.
6. Metals are found to the left and centre of the periodic table. (Left for the zig-zag.)
7. Metals are found to the left and centre of the periodic table. (Left for the zig-zag.)
8. If an element is located in period 3 of the periodic table it has3 electrons present on its outer shell.
9. Reactivity is the relative capacity of an atom, molecule, or radical to undergo a chemical reaction with another atom, molecule, or compound.
10. Group 1 elements are called alkali metals.
11. As you move down group 1 the reactivity increases.
12. Alkali metals reacted with water to produce hydroxides.
13. Group 7 elements are called halogens.
14. As you move down group 7 the reactivity decreases.
15. The order of reactivity in group 7, with the most reactive first is: fluorine, chlorine, bromine, iodine, astatine and tennessine.
16. Group 0 elements are called noble gases.
17. Group 0 elements are unreactive and colourless.
18. Monatomic means consisting of one atom.

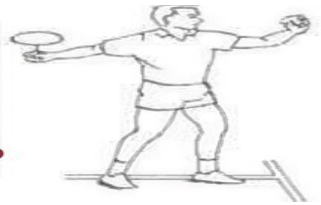
Badminton Singles

Forehand serve

- Stand side on to the net behind the service line.
- Hold the shuttle by the feathers with your finger and thumb.
- Point your non racket shoulder towards your target
- Hold the racket just above waist height behind you.
- As you drop the shuttle swing your racket towards the shuttle and hit it with the open racket face based on your power and follow through it will be a short or long serve.



Forehand service stance

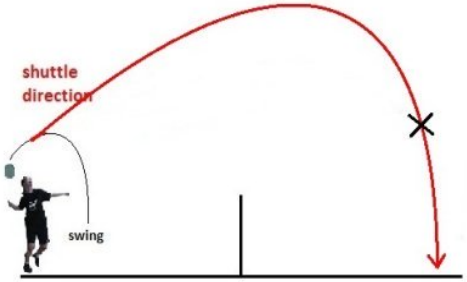


Overhead clear

1. Move into position and get behind the shuttle. Adopt the Forehand Grip.
2. Raise your Racket Arm and Non-Racket Arm.
3. Your body should face sideways with your feet pointing slightly sideways.
4. Stretch your Racket Arm to as far back as possible. Stretch out your Non-Racket Arm. Inhale. Then Exhale as you swing your racket forward.
5. Take the shuttle at the Highest Point possible.

Contact Point: In step 1, you should place yourself right below the shuttle. So when you hit the shuttle, your swing will naturally direct the shuttle upwards.

6. Complete a Full Arm Swing. Follow through with your swing even after you hit the shuttle.

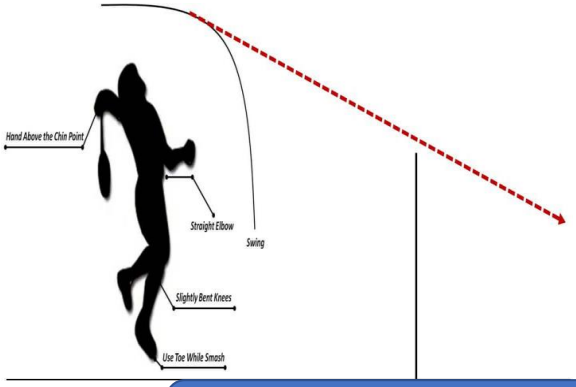


Smash shot

•Raise your non-racket hand and point it above your chin. This is highly crucial, for a angled shot. It has part to play in the direction and pace of your shot.

•You should shift your weight on to your back foot, for balance.

•Straighten your elbows and swing the racket forward. Keep in mind to shuffle your racket foot forward and knees should be slightly bent.



Task 1
Without looking practice remembering the name of the 4 shots above.

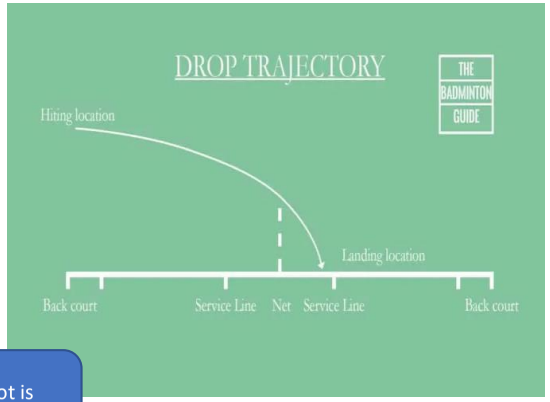
Task 2
Watch the video and describe how the shot is performed and when would be as good time to use this shot

Badminton Drop Shot

Drop Shot

Both of your hands should be upwards in the air, with the non-racket arm in front of your body, and the racket arm needs to be behind your head. The body weight should be on your racket leg.

When the shuttle comes closer, you need to extend your non-racket arm and rotate the hip and shoulders towards facing the net. Hit the shuttle gently with the shuttle just in front of your body, but still high in the air. Unlike a smash, decelerate the racket head speed.



Task 4:

Scan the quiz QR code

Take this test more than once and compare your scores after each attempt in a table

Table tennis

Smash shot

•Face sideways with your shoulder pointing towards the target.
•Body weight should be on the back foot.
•Raise the racket to a high position to generate downwards and forwards power.
•As the ball bounces off the table, rotate your body quickly to face forwards.
•Aim to hit the ball at its highest point.
•Transfer body weight from back to front foot.

Task 1
Without looking can you recall the name of each of the 3 shots.
Task 2
Get someone to show you the 3 pictures and you have to match up watch shot is being performed

Top spin shot

- Your legs should be more apart than your shoulders and knees slightly bent.
- As the ball approaches you, rotate body towards the direction you are playing the shot and at the same time forward your bat from knee height to head height.
- The movement of your bat should be upward as well as forward.
- Hit on the top of the ball at the top of the bounce. This gives the forward spin making the ball speed up when it bounces.

Bat over the top of the ball (finishing position)

Task 3
Watch the video and describe how the shot is performed and when would be as good time to use this shot

Table tennis Smash Shot

Task 2
There are 3 components of fitness in the word search labelled for table tennis which are crucial to play the sport.
Without looking list what the 3 main component of fitness are.

Drop Shot

- A drop shot is a type of shot in table tennis in which the ball is hit softly and lands near the net. Table tennis is a sport that has a type of shot called “drop shots.”
- These shots are hit softly and with a lot of touches, so the ball just clears the net and stays low.

Table Tennis

O	S	E	R	V	E	I	I	E	L	O	R	H	F
V	C	H	H	P	K	V	O	K	N	E	N	E	I
N	O	T	G	G	O	T	I	N	R	O	T	A	O
O	O	C	N	N	R	O	P	F	N	P	I	A	S
I	R	B	I	A	I	H	A	H	I	I	T	G	A
T	D	A	N	G	T	S	N	P	P	E	O	I	O
C	I	C	O	N	S	P	I	I	S	I	N	L	O
A	N	K	I	E	E	O	P	T	K	O	I	I	R
E	A	H	T	T	N	R	S	S	C	B	H	T	P
R	T	A	I	O	T	D	P	E	A	G	A	Y	S
T	I	N	S	C	G	V	O	P	B	H	S	P	O
O	O	D	O	S	H	S	T	I	M	B	V	S	E
K	N	D	P	N	E	N	C	G	S	C	H	S	A
C	F	O	R	E	H	A	N	D	S	M	A	S	H

DROPSHOT
LET
FOREHAND
BACKSPIN
POSITIONING
TOPSPIN
AGILITY
SERVE
COORDINATION
REACTION
BACKHAND
SMASH

3 components of fitness
Agility
Coordination
Reaction

HINDUISM

BACKGROUND

- Hinduism began in India and is one of the world's oldest religions
- It is also called Sanatan Dharma which means 'eternal truth'
- There are around 900 million Hindus in the world today
- Hindus use 'namaste' as a greeting. It offers peace and respect to the other person's soul

As we study think about…

How do these beliefs help Hindus?

How do the beliefs and actions make them feel?

What symbols/images do they use?

What links can you make with your life?

How do they express their beliefs in everyday life?

HINDU TEACHINGS:

"The lord lives in the heart of all creatures"

"The whole universe comes from the Supreme Spirit."

"Just as a man casts off worn out clothes…, so the soul casts off worn out bodies and enters others that are new."

KEY WORDS:

REINCARNATION	The belief that we are born, we live, we die and then are born again into a new body	PILGRIMAGE	A holy journey to a special place
DEITY	A Hindu god or goddess	BRAHMAN	The universal spirit that is in all things
KRISHNA	The popular Hindu god of compassion and love	GHAT	A platform used by pilgrims to the river Ganges
KARMA	A sense of universal justice, that we are rewarded and punished for the life that we have lived	GANGES	A holy river that is a place of pilgrimage
PRASHAD	Food that has been blessed by the gods	MANDIR	The Hindu place of worship, prayer and meditation
MURTI	A statue of a god	SAMSARA	The cycle of life
AUM	The holy symbol of Hinduism	NAMASTE	A Hindu greeting

SOME TASKS FOR YOU TO COMPLETE

Draw a symbol for each key word

Create a mind map of Hindu worship. Use different colours for mandir and pilgrimage

Create a key word quiz or flash cards

Write your answers to 3 reflection questions

Investigate an issue in the media that involves Hinduism

Create a poster of Hindu beliefs

Make flash cards for the Hindu deities

HINDU DEITIES

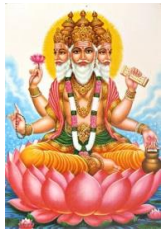
Hindus worship a Supreme Spirit:

BRAHMAN.

It is

- Universal (one, all-encompassing spirit)
- Neither male nor female
- Invisible
- Present in all living things
- Fulfilling roles in creation as different deities

BRAHMA – the god of creation. He creates new life and is matched with SARASWATI, the goddess of wisdom and music.



VISHNU – the god of protection. He sustains the world and keeps it safe. He is matched with LAKSHMI, the goddess of wealth and beauty.

SHIVA – the god of destruction. He destroys so that new life can come and is matched with PARVATI, the mother goddess.

Where do they worship?
IN THE MANDIR:

- At the front of the worship hall is a **shrine**. It has beautifully decorated statues of the gods which are called **murtis.**
- Food and flowers offered. When food is blessed by the god it becomes **prashad.**
- A bell is rung to announce that worship is beginning
- **Incense** is burnt to purify the air and carry prayers to god
- Flowers are offered, a reminder of beauty
- Men and women sit on the floor in front of the shrine
- A pilgrim may walk to a mandir for many miles barefoot to show their **commitment** to the gods

What do they believe in?

REINCARNATION:

- Hindus believe in **samsara**, the idea that life goes in cycles
- They believe that your soul will go to a new life when you die
- Your new life depends on whether you have good or bad **karma**
- With enough good karma a Hindu's soul will one day be reunited with Brahman and become one with the universe

DHARMA:

- Hindus believe we have duties to fulfil in life
- The duties depend on whether we are a student, an adult or retired
- Performing these duties well brings good karma
- Dharma is linked to our caste (the level of society we are born into) to move up to a better caste we must have good karma

Where do they worship?
ON PILGRIMAGE:

- They visit **mandirs** to pray as they believe that these prayers are more likely to be answered
- They **make offerings** to the gods as a sign of love and devotion.
- They visit the places like **Varanasi** where the gods were born or lived to show **respect**
- They stand on **ghats** (special platforms beside the river)
- They **bathe** in the river to **wash away their sins.** This is so that they can get good **karma**
- They **scatter ashes** of loved ones to speed up their journey to the **next life**

SCAN ME

Learning to Learn

SCAN ME

The 'Listen' Project #1