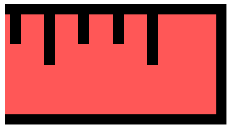# HOME-LEARNING

KNOWLEDGE ORGANISERS

YEAR 9

HALF TERM 3

"AN INVESTMENT IN KNOWLEDGE PAYS THE BEST
INTEREST."
BENJAMIN FRANKLIN

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.

SCAN ME

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 <u>small</u> 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!

PERFECT PRACTICE PERFECT MAKES

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.
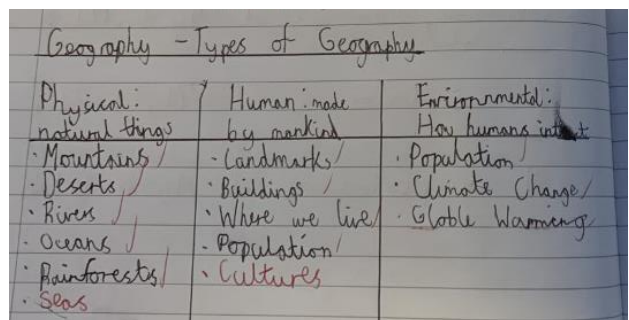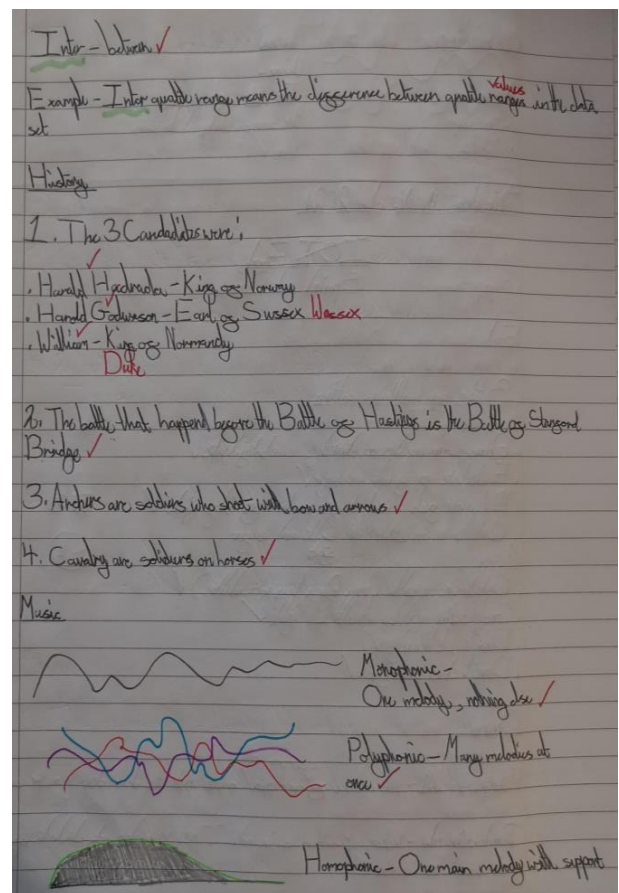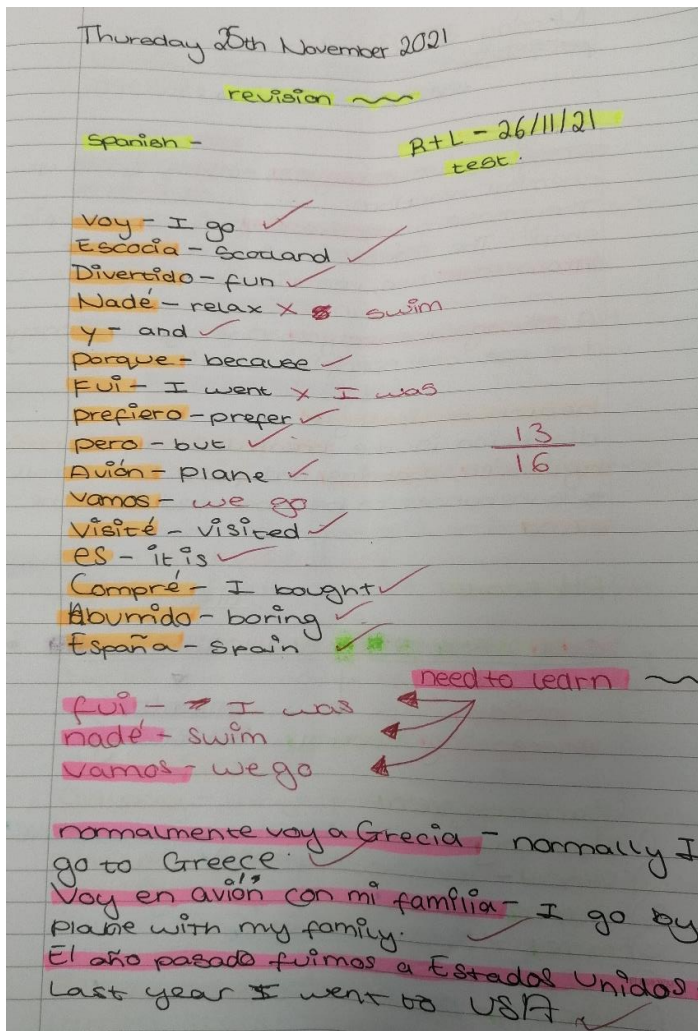
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Maths [Hegarty Maths On-Line and Prefixes & Suffixes]	**ICT/ Food**	**English** [Supported by Educake Tasks]	**Art/Dt**	
History	**Drama**	**Geography**	**Science** [Knowledge Organisers]	
Music	**Spanish**	**RS**	**Active Lifestyles**	

←———— **Science: Tassomai On-Line (complete one daily goal each day)** ————→

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 do.

Science: Remember, you should do a **Tassomai daily goal each day** to help your science learning.

Literacy: Do take time to engage with the **Listening Project**. Developing our vocabulary is immensely important if we are to develop as learners. The **listening 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!

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.
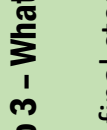
Step 3 – What's the connection?

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

Dogs

Hairy Maclary from Donaldson's Dairy

Out of the gate
And off for a walk
Went Hairy Maclary
From Donaldson's Dairy

And Hercules Morse
As big as a horse

With Hairy Maclary
From Donaldson's Dairy.

Bottomley Potts
Covered in spots,
Hercules Morse
As big as a horse

And Hairy Maclary
From Donaldson's Dairy.

Muffin McLay
Like a bundle of hay,
Bottomley Potts
Covered in spots,
Hercules Morse
As big as a horse

and Hairy Maclary
From Donaldson's Dairy…..

Humph….

In the beginning of years, when the world was so new and all, and the Animals were just beginning to work for Man, there was a Camel, and he lived in the middle of a Howling Desert because he did not want to work; and besides, he was a Howler himself. So he ate sticks and thorns and tamarisks and milkweed and prickles, most 'scruciating idle; and when anybody spoke to him he said 'Humph!' Just 'Humph!' and no more.

Presently the Horse came to him on Monday morning, with a saddle on his back and a bit in his mouth, and said, 'Camel, O Camel, come out and trot like the rest of us.'

'Humph!' said the Camel; and the Horse went away and told the Man.

Presently the Dog came to him, with a stick in his mouth, and said, 'Camel, O Camel, come and fetch and carry like the rest of us.'

'Humph!' said the Camel; and the Dog went away and told the Man.

Presently the Ox came to him, with the yoke on his neck and said, 'Camel, O Camel, come and plough like the rest of us.'

'Humph!' said the Camel; and the Ox went away and told the Man.

At the end of the day the Man called the Horse and the Dog and the Ox together, and said, 'Three, O Three, I'm very sorry for you (with the world so new-and-all); but that Humph-thing in the Desert can't work, or he would have been here by now, so I am going to leave him alone, and you must work double-time to make up for it.'

That made the Three very angry (with the world so new-and-all), and they held a palaver, and an indaba, and a punchayet, and a pow-wow on the edge of the Desert; and the Camel came chewing on milkweed most 'scruciating idle, and laughed at them. Then he said 'Humph!' and went away again.

Man's Best Friend

This man (Thornton) had saved his life, which was something; but further, he was the ideal master. Other men saw to their dogs' welfare from a sense of duty; he saw to the welfare of his as if they were his own children. He had a way of taking Buck's head between his hands and resting his own head upon Buck's, and of shaking him back and forth. Buck knew no greater joy than that rough embrace. It seemed that his heart would be shaken out of his body.

When Thornton's two partners, Hans and Pete, arrived, Buck refused to notice them until he learned they were close to Thornton; after that he tolerated them in a passive sort of way.

For Thornton, however, Buck's love seemed to grow and grow. In the fall of the year, he saved John Thornton's life.

The three men were lining a boat down a stretch of rapids. Hans and Pete moved along the bank, snubbing with a rope from tree to tree, while Thornton remained in the boat, helping its descent by means of a pole.

At a spot, where a ledge of barely submerged rocks jutted out into the river, Hans cast off the rope, and Thornton poled the boat out into the stream. The boat snubbed into the bank bottom up, while Thornton, flung sheer out of it, was carried downstream toward the worst part of the rapids, a stretch of wild water in which no swimmer could live.

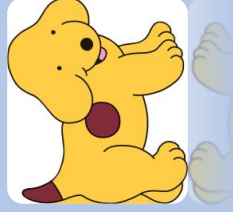Buck sprung in; and at the end of 300 yards, amid a mad swirl of water, he overtook Thornton. When he felt him grasp his tail, Buck headed for the bank. But from below came the fatal roaring where the wild current went wilder. Thornton scraped furiously over a rock, bruised across a second, and struck a third with crushing force. He clutched its slippery top with both hands, releasing Buck, and shouted: "Go, Buck! Go!"

Man's Best Friend

The story of Buck is told in **Jack London's *Call of the Wild*.** The story is told from the perspective of Buck the dog and details his adventures in the Alaskan wilderness during the gold rush. Although the story is told from the animal's perspective, **London** works hard to retain *realism*. The short novel details just how tough the world can be for humans and animals alike and bond that can be created between them.

Humph...

Authors use animals to tell bigger, more valuable stories. We often call simple stories that try to tell bigger truths **allegories.** Rudyard Kipling wrote a series of short stories that explain how various animals came to be the way they are, both in terms of their character like the grumpy camel and the way they look. **Aesop's fables** also use animals to explain why things are they way they are or to teach valuable lessons.

Dogs

Animals play an enormous role in many of the texts that we read. From our youngest years, we read about **Spot the Dog** and **Meg and Mog.** Humans and animals have existed together for thousands of years and the relationship between pets and their owners can be very powerful.

Animal stories are not always simple or heart-warming. We can learn valuable lessons about the natural world from the stories we tell.
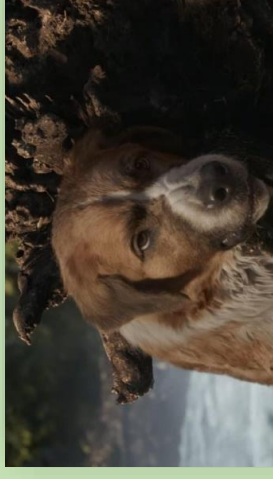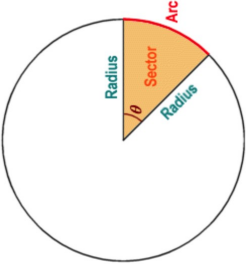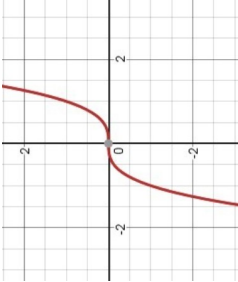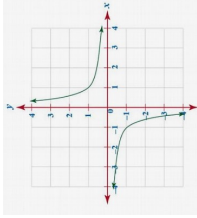
Mathematics

Your Maths Home Learning has two parts:

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: Access **www.hegartymaths.com** → Watch the video , making notes in your book → Complete the assigned quiz

Week	Key Word	Definition	Task	Hegarty Task
9th January	Sector	A part of a circle from the centre to the edge. Made up of 2 radii and an arc. Eg. Think of a slice of cake	Draw three circles and sketch a sector in each using a different colour pen.	546
16th January	Arc	A piece of the curve of a circle	Draw three circles and sketch an arc in each using a different colour pen.	544
23rd January	Surface Area	The area of all the faces of a 3D shape.	Sketch this net of a cubc find the area of all the si then the total surface ar	584
30th January	Cubic Graph	A graph which contains a x^3 Can be recognised through the graph 'turning' twice	Sketch 3 different cubic graphs	299
6th February	Reciprocal	A graph made by dividing by an x term eg. Y = 1/x It will never touch the axis on a graph because you cannot divide by x	Sketch out a reciprocal graph in your Home Learning book	300

History KNOWLEDGE ORGANISER

Topic: Why did the Second World War break out and what was the impact in Britain?

Overview

The road to World War Two: Appeasement

When Hitler came to power he had promised the German people that he would make Germany great again and abolish the hated Treaty of Versailles. To achieve this Hitler knew that he would have to expand Germany's borders into neighbouring countries. He had seen both Japan in 1932 and Italy in 1935 invade other countries without serious opposition. With the failure of the League of Nations to prevent countries from invading one another world leaders tried to find other ways to prevent war.

After Hitler came to power in 1933 Britain and France adopted a policy of appeasement towards Hitler, (this meant that Britain and France would give Hitler what he wanted as long as the demands were reasonable). Appeasement was widely supported by the British people who wanted to avoid another war and now thought that the terms of the Treaty of Versailles were unfair. By appeasing Hitler, Britain and France gave Hitler the confidence to expand Germany without the fear of France and Britain stepping in to stop him. Between 1936 and 1939 Britain and France seemed to be putting up little resistance to Hitler who became increasing ambitious in his aims for German expansion.

Hitler decided to invade Poland on the 1st September 1939. He believed that France and Britain had weak leaders who would not stop the German invasion. However, Britain had promised to intervene if Germany invaded Poland. The policy of appeasement had failed. On the 3rd September Britain and France declared war on Germany. Hitler's gamble had also failed; Germany was now at war.

Main Participating Countries

ALLIED POWERS

Country	Date Joined	Death Toll
FRANCE	3rd Sep, 1939	600,000 1.44% of population in 1939
UK	3rd Sep, 1939	450,900 0.94% of population in 1939
SOVIET UNION	22nd Jun, 1941	approx. 24,000,000 13.7% of population in 1939
USA	8th Dec, 1941	419,400 0.32% of population in 1939

AXIS POWERS

Country	Date Joined	Death Toll
GERMANY	1st Sep, 1939	approx. 7,200,000 8.5% of population in 1939
ITALY	11th Jun, 1940	approx. 500,000 1.14% of population in 1939
HUNGARY	27th Jun, 1941	464,000 5.08% of population in 1939
JAPAN	7th Dec, 1941	approx. 3,000,000 4.1% of population in 1939

Key People

Sir Winston Churchill – was a British politician who served as the Prime Minister between 1940 and 1945 and again from 1951 to 1955. He took over after a disastrous start to the war in which Nazi Germany conquered much of Europe. He did his best to rally the nation in defiance of Adolf Hitler.

Adolf Hitler – was a German politician who was the Führer of Germany from 1934-1945. He gained a loyal following through his ideas, powerful speeches and charisma. Hitler's Germany invaded Poland in Sep 1939 to start the war, and he initiated the Holocaust. He is therefore significantly responsible for millions of deaths. He committed suicide on 30th Apr 1945, when the war was clearly lost.

Major Events

Event	Description	Date/s	Fact
WWII Begins	On 1st September 1939, Germany invaded Poland, using the 'Blitzkrieg' strategy. Britain and France (Poland's allies) gave a notice period for the Germans to withdraw their troops from Poland. When they did not, Britain and France declared war on 3rd September. Britain initially responded with bombing raids over Germany. Nearly six years of war in Europe was to follow.	1st-3rd September 1939	Hitler claimed to attack Poland to give the German people 'Lebensraum' – living space.
Evacuation of Children	People expected cities to be bombed, as enemy planes tried to hit targets, for example warehouses and factories. This would have put city children (in schools and houses close by) in grave danger, and so thousands were evacuated to the countryside. Many were extremely homesick, but some enjoyed their new lives.	September 1939 onwards	About 800,000 children left their homes throughout the war.
Evacuation of Dunkirk	Large numbers of British, French, and Belgian troops were surrounded by German soldiers at the French coastal town of Dunkirk, and seemed set to be killed or captured. Remarkably, 338,226 were saved by a fleet of 800 small boats. The event is also known as the 'Miracle of Dunkirk.'	26th May – 4th June 1940	These events have been the basis for the recent film entitled Dunkirk.
Battle of Britain	In the Battle of Britain, the Royal Air Force (RAF) successfully defended the UK against attacks by Nazi Germany's air force, the Luftwaffe. It has been described as the first military campaign fought entirely by air forces.	10th July – 31st October 1940	This was seen by many as Germany's first major defeat in the war.
D-Day Landings	The Normandy Landings, also known as D-Day, were a series of landing operations by the Allies to claim back Europe. It was the largest seaborne invasion in history. The operation began the liberation of north-western Europe from being under German control.	10th July – 31st October 1940 6th June 1944	Between 14,000 and 19,000 men died in the D-Day landings.

Key Terms	Tasks

Key Terms

Allies: Two countries/groups who have joined together. In war allied countries fight togeter against a common enemy.

Anderson Shelter: A small air-raid shelter meant to protect one family during an air raid. Made of corrugated steel and covered in soil.

Appeasement: *Giving in to demands to avoid a future war.*

Atlantic Wall: Coastal fortifications built by the German Army during WW2 along the French and Scandinavian coast. It was built to push back an allied attack.

Blitzkrieg: *German for "Lighting War". Hitler's attack strategy involves an intense military campaign which overwhelms the opposing army and brings about a quick victory.*

Blitz Spirit: A determination and belief that everyone is in this together.

Bomber Command: The division in the RAF responsible for all of the RAF bomber squadrons and the military operations they took part in.

British Expeditionary Force: The professional British Army sent to France 1939-40.

Evacuation: To move someone from one area to another because of danger.

Fighter Command: Part of the RAF in charge of the organisation and deployment of the RAF fighter planes like Spitfires and Hurricanes.

Luftwaffe: *German Air force.*

Morale: *Confidence or faith in someone or something.*

Munitions: Military weapons and/or ammuntion like bombs, bullets and grenades.

Operation Dynamo: *Codename for the mass evacuation of British and Allied troops at Dunkirk.*

Rations: *A fixed amount of goods a person is allowed. During World War One and Two goods were rationed. During WW2 one adult was allowed 4 thin slices of ham or bacon, 1 egg, 3 pints of milk, 57g of butter and 227g of sugar.*

Rearmament: To equip the armed forces with new supplies.

Squadrons: A group of military air planes that work and fly together.

U-boats: German submarines.

Tasks

Task 1

Look at the "Overview" section on the page above. Explain why many historians think the policy of appeasement was a mistake.

Task 2

Look at the 'Major Events' section on the page above. Choose the event you find the most shocking and, using the descriptions and facts linked to that event, explain why you are most shocked by this event.

Task 3

Create a 10-question quiz based on your knowledge organiser. Use this quiz to test someone you know. If they don't know the answer, teach them!

Task 4

Go to the Liverpool Blitz page on the Imperial War Museum website. Explain which of the 6 sources you find the most interesting and why. You could ask the people you live with if they knew about the impact of the war on our city too!

https://www.iwm.org.uk/history/the-liverpool-blitz

SCAN ME

Task 5

Read through **BBC Bitesize** – *World War Two: An Overview* and complete the 10-question quiz at the end to test your knowledge.

https://www.bbc.co.uk/bitesize/topics/zk94jxs/articles/z6vff82#zwspp4i9

SCAN ME

MUSIC FROM AROUND THE WORLD

Djembe

Africa

African Music is:

- often part of everyday activities - everyone joins in!
- often part of ceremonies where it is performed by specialists
- not normally written down but passed on through the **oral tradition**
- **call and response** is a common musical feature
- **syncopated (see Samba)**
- made up of **layers of ostinato** rhythms

African Drums include:

- **Djembe** (three different 'notes' can be produced - Bass, Tone Slap)
- **The Talking Drum**
- **Congas**

The influence of **black African music** is widespread. It went to America with the African slaves, combined with other music of the European settlers to produce new styles of music such as blues, gospel and jazz.

Key Terms: Samba and African Drumming

Ostinato: a repeated musical pattern

Syncopated: a rhythm that is 'off the beat' normally a complicated rhythm

Polyrhythm: two different rhythms played at the same time

Improvise: make it up 'on the spot'

Call and response: a musical phrase (the call) answered by other musicians with a different phrase (the response)

Unison: all play the same music at the same time

Oral tradition: when music is shared by listening and copying – not by writing it down

TASKS:

1. Revise what samba is about and the names of the instruments.
2. Use the QR code to watch a Youtube clip of samba. Which of the key elements of samba and instruments can you identify?
3. Revise what African drumming is about and the names of the instruments.
4. Use the QR code to watch a Youtube clip of African drumming. Which of the key elements of African drumming and instruments can you identify?
5. Create a 10 mark quiz that contains questions about both Samba and African drumming.
6. Create a Venn diagram showing what features Samba and African drumming have in common and also their differences.

Brazilian Samba is:

- performed in outdoor **carnivals** by large groups of musicians
- performed on **percussion** instruments
- not normally written down but passed on through the **oral tradition**
- includes **call and response** sections
- made up of **layers of ostinato** rhythms
- is often very **syncopated** (off beat rhythms)
- The stops and starts are controlled by a leader using a whistle

Samba instruments include:

- The Surdo
- The timbale
- Claves
- Agogo Bells

Surdo

Agogo bells

Brazil

Year 9 – Functional Properties of Fats

Functional Properties of Fats

Fats are an essential part of our diet - eating too much can lead to obesity – but not enough can lead to malnutrition. Fats also have a role is how food products and made, how they taste, and even their structure.

Plasticity

Fats do not melt at fixed temperatures, but over a range. This property is called plasticity. It gives all fats unique characteristics.

This plasticity is due to the mixture of triglycerides, each with their own melting point.

Some products are formulated using fats containing triglycerides with lower melting points so they can spread from the fridge (e.g. soft spread) or melt on the tongue (e.g. chocolate). **Other fats have higher melting points and are used for cooking.**

Aeration

Aeration is the process of adding very tiny pockets of air to something. In the case of fats and oils, this is normally done using mechanical/physical means, such as creaming a mixture together using a wooden spoon or using an electric whisk.

The process of allowing air to be combined into ingredients to make them lighter and/or create more volume, which may also be referred to as aeration. For example, sifting flour removes lumps and adds air making the resulting flour and typically the food dish using the flour, lighter in texture and consistency. Beating egg whites adds air, which increases the volume or whipping butter accomplishes the same purpose.

Shortening

Oils and fats are used in a baked product to reduce the development of gluten giving the foods a crumbly texture. The fats and oils break down the gluten into "shorter strands" hence the term shorteners. Coating the flour in fat prevents the flour from absorbing water hindering the formation of gluten. If too much gluten developed, the food would be stretchy and elastic.

Shortening is used in most doughs and batters, to give the baked product a crisp and crumbly texture. Rubbing the fat in causes the baked product to have a flaky texture, as the dough is separated into layers. When fat is whisked with sugar, a process called creaming, the texture will be more like a cake, and be soft and springy.

The type of fat used will also affect the colour of the product. For example, using margarine will give the baked product a golden colour, whereas lard produces a product with a pale yellow colour.

What is an App?

'App' is an abbreviation for application.

An App is a computer program or piece of software designed with a purpose so that you can download on to your smartphone. E.g. WhatsApp, Tassomai

Task 1: Can you name 5 educational apps?
Task 2: Describe an app in your own words
Task 3: Describe an idea for an app that could be made that is linked to a hobby or interest that you have.
Task 4: What does debugging an app mean?
Task 5: What events can be used for user input?

Advantages of mobile phone apps

- Simplicity. Mobile apps generally need very little instruction on how to use them

- They help to engage pupils in education as well as providing them with greater access to educational materials

- They create more interactive ways for us to communicate with family and friends across the world

- They allow more opportunities for flexible working, such as working from home or outside normal office hours

Disadvantages of mobile phone apps

- Apps may have to be coded for two or more environments (e.g., iOS and Android).

- Mobile apps may require access to personal information on your phone. This may feel invasive and could be a potential security weakness

- An app may not contain all the information or functionality of the full website version e.g. the Facebook app has less features than the website version of Facebook

- In some cases, mobile apps may be more of a distraction from learning in educational settings. Some studies say using apps for too long can accelerate information overload so remember to take a break.

Computing Department Knowledge Organiser: Year 9 Mobile App Development

You are developing a **mobile app** in your Computing lessons using the https://code.org/educate/applab website.

Top Tip: You can use the **hour of code** website to learn how to code or create an app from home. https://hourofcode.com/uk/learn

COMPUTATIONAL THINKING

DECOMPOSITION
Breaking down a problem into smaller chunks. This makes it more manageable and easier to understand.

1

PATTERN RECOGNITION
Looking carefully in lines of code for patterns, similarities and trends.

2

ABSTRACTION
Filtering out and focusing on what is important. Ignoring what is not important.

3

ALGORITHM DESIGN
A plan and step by step instructions on how to solve the problems.

4

DEBUGGING
Looking through your program to find errors and then fixing them.

5

EVENT DRIVEN PROGRAMMING

User action such as:
- Mouse clicks
- Touchscreen
- Key presses
- Hovering over a picture
- Voice input ("OK Google", Siri, Alexa)

Events can also be triggered by:
- Sensors (e.g. if movement is sensed turn the light on)
- Messages from other programs

Event

PAIR PROGRAMMING

The driver: To control the keyboard and mouse and place the code blocks into the correct places.

The navigator: To help support the driver by watching for any mistakes, reading instructions to the driver, and seeking support if needed.

Computing Department Knowledge Organiser: Year 9 Mobile App Development

VARIABLE (VAR)

Sometimes we need computers to remember the information we give it and that it calculates during programs. A variable can be thought of as a box that the computer can use to store a value. The value held in that box can change or 'vary'. A program can use as many variables as it needs it to.

A variable can store letters, integers (numbers) or text

For example:

```
>>> money_in_bank = 20
>>> total_money = money_in_bank + 10
>>> print(total_money) 30
```

GETTEXT

getText ("id") is a built-in subroutine that collects the text entered into a textbox; "id" is to be replaced with the name given to the text box.

```
var 🔢 = getText ( ▼ "id" ) ;
```

EVENT HANDLER

You can use an event handler to determine when to collect the data and what to do with it once it has been collected and linked with a variable.

```
onEvent ( ▼ "login" , ▼ "click" ,  function 🔵 {
    var username = getText ( ▼ "username" ) ;
} ) ;
```

GRAPHICAL USER INTERFACE (GUI)

Tappy Tap App
Saved a few seconds ago

Code Design Data

screen1

▶ Run

Rename Share Remix

Design Toolbox

Drag the elements into your app!

Button Text Input
Button

abc Dropdown
Label

Radio Button Checkbox

Image Canvas

Screen Text Area

Chart Slider

Workspace

Click on an element or choose it from the dropdown below to edit its properties.

PROPERTIES EVENTS

id
screen1

theme
Default

background color
#ffffff

image
Choose...

USER INPUT

Text boxes – allowing the user to input a string.

Checkboxes - allowing for the user to indicate a yes or no response.

Button – linked to an event that will capture and process the data when it is clicked

SELECTION – BOOLEAN LOGIC (IF/ELSE/ELIF)

Selection is the process of making a decision based on a condition. Selection allows you to add more avenues and routes to your coding.

```
if ( score > 10 ) {
    setText ( ▼ "feedback_label" , "Great Work" ) ;
} else if ( score > 6 ) {
    setText ( ▼ "feedback_label" , "Not Bad" ) ;
} else {
    setText ( ▼ "feedback_label" , "Hard Luck" ) ;
}
```

EVALUATION

Verb

"To judge or calculate the quality, importance, amount, or value of something"

The Last Resort

Girls Like That

THE STONES

NOUGHTS & CROSSES

The History OF Theatre

Timeline

1860 – Present

1945 – 1960

1920 – Present

1956 – 1970

Stage Types

Stage | Audience

Stage | Audience

Stage | Audience

Stage | Apron | Audience
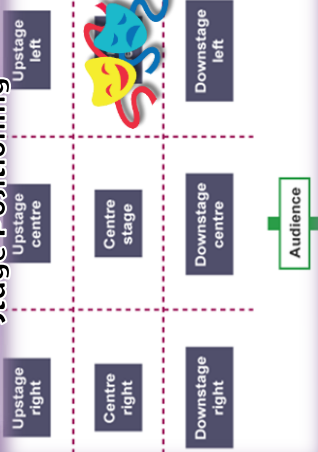
The scheme in focus during this half term is:

Theatre Practitioners/ Script exploration

AP1

Stage Positioning

Upstage right	Upstage centre	Upstage left
Centre right	Centre stage	Centre left
Downstage right	Downstage centre	Downstage left

Audience

New Skill/Technique   Retrieval
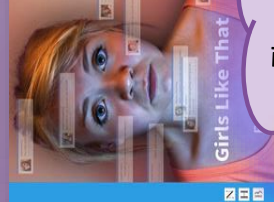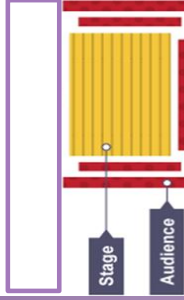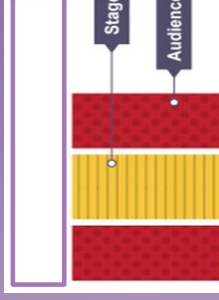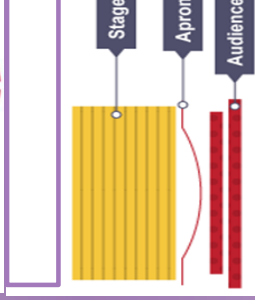
Knowledge/ skill	Definition
Alienation effect	It involves the use of techniques designed to distance the audience from emotional involvement in the play through jolting reminders of the artificiality of the theatrical performance.
Split role	This is where more than one actor plays the same character. For instance, the actor playing the main character might rotate from scene to scene.
Physical theatre	A well-known genre of theatrical performance that encompasses storytelling primarily through physical movement.
Verbatim	A form of documented theatre in which plays are constructed from the precise words spoken by people interviewed about a particular event or topic.
Choral Work	The chorus in Classical Greek drama was a group of actors who described and commented upon the main action of a play with song, dance, and recitation.
Subtext	This is content underneath the dialogue. Under dialogue, there can be conflict, anger, competition, pride, showing off, or other implicit ideas and emotions. Subtext is the unspoken thoughts and motives of characters — what they really think and believe.
Improvisation	A very spontaneous performance without specific or scripted preparation.
Synchronisation	When two or more performers perform the same moves at the same time
Hot seating	A character is questioned by the group about his or her background, behaviour and motivation.
Theatre in education	Theatre in Education (TiE) is a process that uses interactive theatre/drama practices to help aid the educational process
Movement	Where we move to on and around the stage avoiding the blocking another actor.
Chair Duets	This is a technique by the incredible Frantic Assembly. This is a physical theatre performance that primarily takes place on chairs and performers create dynamic movements directing eachother.
Direct address	Speaking directly to the audience to break the fourth wall and destroy any illusion of reality.
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.
Soundscape	A collection/layering of sounds created either by the actors themselves or by using recorded methods.

THEATRE OF THE ABSURD
1945 - 1960

- World War II made people further question the meaning of life. Playwrights once again used theatre to make people question the point of their existence.
- One of the most famous plays from this period is 'Waiting for Godot' by Samuel Beckett. Although the play is comic, it also makes many serious points about the futility of life.
- The influential British playwright Harold Pinter was influenced by Theatre of the Absurd', particularly in his early works such as 'The Birthday Party'.

Playwrights include: Eugène Ionesco (The Chairs) and N.F. Simpson (One Way Pendulum).
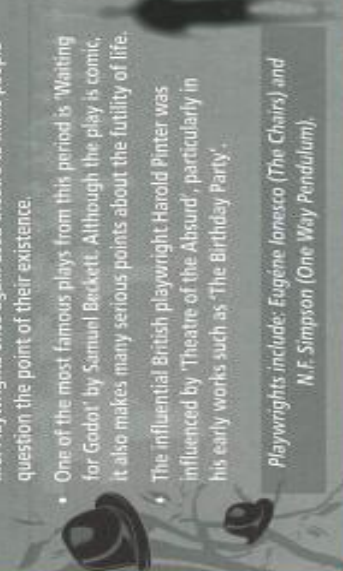
KITCHEN SINK DRAMA
1956 - 1970

- In 1956, director George Devine commissioned a number of playwrights to write plays for the Royal Court Theatre.
- One play: 'Look Back in Anger' by John Osborne featured a young male character who criticised middle class values. This type of character was labelled an 'Angry Young Man' and refers to anyone who challenged the establishment.
- When censorship was abolished, playwrights were given complete freedom to use theatre to challenge ideas and beliefs.
- This 'revolution in theatre' also had a massive impact on television and film.

Playwrights include: Shelagh Delaney (A Taste of Honey) and Arnold Wesker (Chips with Everything).

Key Theatre maker terminology for this term

Role and responsibilities

Playwright	This is the name given to the person who writes the play.
Performer	A performer is an actor or entertainer who realises a role or performance in front of an audience.
Understudy	An actor who studies another's role so that they can take over when needed.
Lighting designer	The lighting designer is responsible for designing the lighting states and, if required, special lighting effects for a performance. The final design will result in a lighting plot which is a list of the lighting states and their cues.
Sound designer	The sound designer is responsible for designing the sound required for a performance. This may include underscoring, intro and outro music as well as specific effects. The final design will result in a sound plot which is a list of the sounds required and their cues.
Set designer	The set designer is responsible for the design of the set for a performance. They will work closely with the director and other designers so that there is unity between all the designs and the needs of the performance.
Costume designer	The person who designs the costumes for a performance. The costume department of a theatre is often called the wardrobe.
Puppet designer	The person who designs the puppets for a performance.
Technician	A person who works backstage either setting up technical equipment such as microphones or rigging lights before a production or operating technical equipment during a performance.
Director	A director is in charge of the artistic elements of a production. A director will often have the initial creative idea ('concept') for a production, will work with the actors in rehearsal, and will collaborate with designers and the technical team to realise this idea in performance.
Stage manager	The Stage Manager is in charge of all aspects of backstage, including the backstage crew. They will oversee everything that happens backstage before, during and after a performance. During the rehearsal period, the Stage Manager and their team will make sure that all props are found or made, scene changes are rehearsed and smooth, and all other aspects of backstage are prepared. They are also in charge of the rehearsal schedule.
Theatre manager	This is the person who is responsible for and manages the front-of-house team who deal with the audience during the production (for example, the box office manager, ushers and similar staff).

Week 1

Let's do some preparation for our AP1! Here are some tasks:
- On the first page of the Knowledge Organiser you will see a 'History of Theatre' timeline – fill the blanks and complete the History of Theatre timeline in chronological order!
- What stage position are our Drama faces cheekily covering?
- Create a Roles and Responsibilities quiz and quiz whoever you can get involved!
- Fill in the blank stage types titles. You should 100% know these by now!

NATURALISM
1860 - Present

- 'Naturalism' refers to dramas that attempt to recreate 'real life'.
- English playwright, Tom Robertson experimented with Naturalism in the 1860's. His plays were labelled 'Cup and Saucer Dramas' as he used real food and drink on stage.
- Konstantin Stanislavski developed 'The Method'; a system that helped actors relate to their characters' emotions.
- Naturalism is now an accepted form in theatre, film and television. Eastenders and Coronation Street are both naturalistic dramas.

Playwrights include: Henrik Ibsen (A Doll's House) and August Strindberg (Miss Julie).

POLITICAL THEATRE
1920 - Present

- The horrors of World War I had a huge impact on people across the world.
- German director Erwin Piscator believed theatre could be used to make people think about political issues.
- Bertolt Brecht wanted audiences to be challenged and think about injustice. He became one of the most influential playwrights and theorists of the twentieth century.
- British playwrights such as Joan Littlewood and Tony Marchant have continued to use theatre as a forum to make audiences think about political issues.

Playwrights include: Bertolt Brecht (The Caucasian Chalk Circle) and Joan Littlewood (Oh! What a Lovely War).

Spanish – Key verbs and vocab

Key phrases

1. Trabajo como abogado – I work as a lawyer
2. Mi madre es enfermera – My mum is a nurse
3. Mi padrastro trabaja en una oficina – My step-dad works in an office
4. Mi hermana trabajaba como periodista – My sister used to work as a journalist
5. Es un trabajo muy estresante y exigente – It's a very stressful and demanding job
6. Va a ser bastante fatigante – It's going to be quite tiring
7. Creo que soy una persona ambiciosa y trabajadora – I think I'm a very ambitious and hard-working person
8. Me gustaría trabajar en contacto con la gente – I would like to work with people
9. Sería variado y creativo – It would be varied and creative
10. Espero tener un buen trabajo – I hope to have a good job
11. Quiero ser feliz – I want to be happy
12. Voy a ser rico – I'm going to be rich

Mi madre es **profesora** y trabaja en **un instituto** en mi ciudad. Dice que es un trabajo **estresante** pero **variado**. Mi padre trabaja en **un garaje** como **mecánico** pero no le gusta su trabajo porque es muy **exigente**. En el futuro yo voy a ser **diseñadora** porque soy muy **creativa** y sería **variado** y **práctico.** Cuando era más joven mi madre era **recepcionista** pero ahora no. También en el futuro espero casarme y **tener tres hijos.** Además me gustaría **viajar por el mundo y ser rico.**

Para ir más lejos: (To go further…)

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!

Link to BBC Bitesize

Tasks

Spanish – Key verbs and vocab

Los trabajos – Jobs

ingeniero – engineer
abogado – lawyer
profesor – teacher
dependiente/a – shop assistant
enfermero – nurse
cocinero – chef
camarero – waiter
periodista – journalist
médico – doctor
conductor – driver
soldado – soldier
dentista – dentist
carpintero – carpenter
jardinero - gardener
mecánico – mechanic
peluquero – hairdresser
escritor – writer
diseñador – designer
futbolista – footballer
cantante – singer
comerciante – businessman/woman
recepcionista – receptionist
electricista – electrician

Mis sueños – my hopes and dreams

Espero – I hope
Quiero – I want
Me gustaría – I would like
casarme – to get married
tener un buen trabajo – to have a good job
comprar una casa grande – to buy a big house
tener hijos – to have children
ser rico/a – to be rich
tener un auto deportivo – to have a sports car
viajar por el mundo – to travel the world
ser feliz – to be happy
vivir al extranjero – to live abroad
ser famoso/a – to be famous

Lugares de trabajo – Places of work

un hospital – a hospital
un instituto – a school
una oficina – an office
un teatro – a theatre
un hotel – a hotel
un garaje - a garage
un taller – a workshop
una tienda de ropa – a clothes shop
un supermercado – a supermarket
un restaurante – a restaurant
una clínica del dentista – a dentist's surgery

La personalidad – personality

organizado/a – organised
trabajador/a – hard-working
fuerte - strong
ambicioso/a – ambicious
activo/a – active
paciente – patient
dinámico/a – dynamic
honesto/a – honest
inteligente – clever
práctico/a – practical
creativo/a – creative
responsable – responsible
extrovertido/a – outgoing
comunicativo/a – communicative
serio/a – serious

Descripciones – descriptions

creativo – creative
práctico – practical
manual – practical/manual
fatigante – tiring
variado – varied
fácil – easy
repetitivo – repetitive
monótono – monotonous/repetitive
difícil – hard
estresante – stressful
exigente – demanding
interesante – interesting

Challenge: Using this vocab, how many sentences can you make in Spanish about jobs and future plans?

Narrative Writing Knowledge Organiser
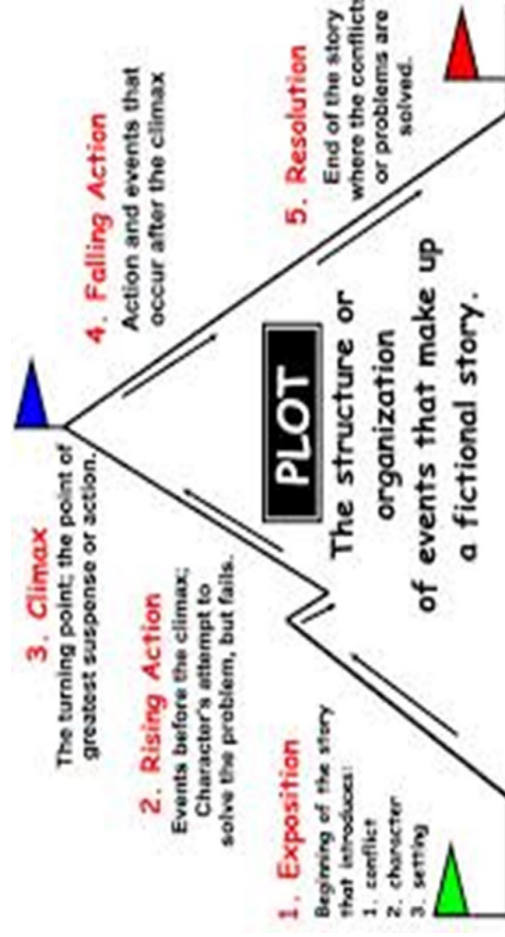
Genre:

- Autobiography
- Mystery
- Adventure
- Tragedy
- Romance
- Ghost/horror
- Detective

Narrative Voice:

- First person autobiographical
- First person persona
- Third person omniscient
- Third person character

Powerful Endings:

- Unexpected twist
- Cliff hanger
- Happy resolution
- Sad resolution

The Seven Story Types:

1. Overcoming the "Monster"
2. Rags to Riches
3. The Quest
4. Voyage and Return
5. Comedy
6. Tragedy
7. Rebirth

Descriptive Techniques:

- Connotations of noun choices
- Adjectives
- Careful verb choices
- Adverbs
- Comparative imagery – simile, metaphor, personification
- Show not tell
- Sensory imagery (all 5 senses)

Great Beginnings:

1. Begin in the middle of the action (e.g. in a story about a fire start with the fire, not the lead up to it).
2. Begin using a word ending in "-ing" such as, 'gasping for breath, she ran towards the open door' to create a sense of action from the outset.
3. Begin with a line of dialogue – this can quickly help to establish character and situation.
4. Begin with the unexpected – take your reader by surprise with an unusual setting or event.
5. Make the reader wonder about something. For example, let's say you mention that your character is terrified of going to school that day, but you don't say why (yet).
6. Start with a problem or conflict.

PLOT

The structure or organization of events that make up a fictional story.

3. Climax
The turning point; the point of greatest suspense or action.

4. Falling Action
Action and events that occur after the climax

5. Resolution
End of the story where the conflicts or problems are solved.

2. Rising Action
Events before the climax; Character's attempt to solve the problem, but fails.

1. Exposition
Beginning of the story that introduces:
1. conflict
2. character
3. setting

Short Stories – Narrative Writing
Home Learning Tasks

Week 1
Don't Tell. Show!
Make the following "telling statements" *show*.

I was really mad.

Alec wasn't paying attention to the teacher.

His room was a mess.

The pizza was delicious.

The two boys were about to fight one another.

Rick was excited when the newscaster announced that the school would be closed today.

He was bored while she was telling her story.

Week 2
Planning practice

Plan a short story with an unexpected twist using the plot diagram over the page
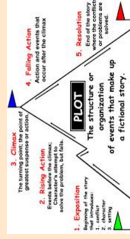
Week 3
Story Types

Choose any 3 of the seven story types listed over the page. Think of stories from any books you have read or films you have watched and describe how each story fits the type. Aim to write 3 paragraphs. You must choose 3 different types of story.

Week 4
Flashbacks

We often come to associate a specific sensory experience, for example a smell, with a particular person or moment. This can have the effect of taking us back to a specific moment from the past.

How do your senses trigger memories from the past? Write an example for each sense as to show how your senses link you to memories or moments from the past.

e.g. The sound of an ambulance siren takes me back to when ……………..

Week 5
Verb Choices
Make a list of 8 alternative verbs for each

Running	Standing	Sitting	Touching

Week 6
Open the story

Choose one of the 'Great beginnings' from over the page and write the opening paragraph for a story of your choice using the technique you have chosen.

Week 7
Genre

Study the different types of story genres over the page. For each genre, think of 2 books/films that would fit into each genre.

Week 8
Atmosphere

This is an ordinary forest scene. Write three sentences which add details that would make it seem sinister.

Year 9 Geography

Key definitions

- Erosion- The wearing away of rocks and other deposits on the earth's surface by the action / movement of water, ice, wind, etc.
- Transportation- the movement of material from one place to another-material can be moved in different ways depending on its weight/size.
- Deposition- when material is dropped because there is no longer enough energy to transport it.
- Weathering- is the breaking down of rocks in situ (in place).

Weathering- sub types

There are 3 main types of weathering:

1. Physical / Mechanical:
Disintegration of rock without a chemical change e.g. freeze-thaw- sometimes called frost shattering. Another type is exfoliation- which involves changes in temperature.

2. Chemical:
The decomposition of the rocks is caused by a chemical reaction within the rock e.g. acidic rainwater / alkaline seawater and limestone.

3. Biological:
Living things such as burrowing animals e.g. badgers and foxes can burrow into banks of soil causing them to collapse. Plant roots weather rocks and weakening their structures by searching for water and nutrients that have often collected in cracks in the rocks.

How are waves formed?

- Waves form when the wind blows over the sea. Friction with the surface of the water causes small ripples in the water, which develop in to waves.
- The energy of the wind causes the water particles to rotate as it passes over it, this causes the wave to move forward.
- The distance the wind blows across the water is called the fetch. The longer the fetch, the more powerful the wave.
- Waves can also be formed when earthquakes and volcanic eruptions shake the seabed. These waves are known as tsunami waves.

The size and strength of a wave depend on:
1) The speed of the wind
2) Length of time the wind blows
3) The distance the wave has travelled: (Fetch)

Erosion- sub types

- Hydraulic action- The explosion of compressed air trapped in cracks of the cliffs by the waves.
- Attrition- When the waves cause rocks and pebbles to bump into each other and break into smaller pieces.
- Abrasion- When large waves hurl beach material against the cliff.
- Solution/corrosion- When salts and other acids in sea water dissolve the rocks of the cliff.

Transportation- sub types

- **Traction** - Where large rocks and boulders are rolled along the river bed.
- **Saltation** - Where smaller stones are bounced along the river bed in a leap frogging motion.
- **Suspension**- Where very small grains of sand or silt are carried along with the water.
- **Solution** - Where some material is dissolved (like sugar in a cup of tea) and is carried downstream.

Tasks- if you complete all 7, revisit some or all from memory

Task 1: Learn the 4 key definitions.
Task 2: Learn the definitions of 4 sub types of erosion.
Task 3: Learn the definitions of the 4 sub types of transportation.
Task 4: Go to your 4 sub type definitions of transportation and create 4 labelled diagrams to illustrate each type.
Task 5: Revise the types of weathering and create 5 quiz questions with answers to test someone.
Task 6: Read about how waves are formed. Cover and hide the information and then rewrite the bullet points in your own words.
Task 7: Using Google find out about 1 landform on the coast that is created by erosion. Create a labelled diagram showing the stages of how the landform is created.

RESPONDING TO SUFFERING

As we study think about…

(thought bubbles)

What makes it hard to forgive?

Why do you think genocides happen again and again?

How do we respond when we see suffering or bad things?

How do we show we are sorry?

Which is worse; natural or moral evil?

How can God be loving and still allow people to suffer?

(scroll)

If you want to achieve enlightenment then you must not hold onto anger.
A Buddhist teaching

BACKGROUND

- Despite promises of 'Never Again' there have been a number of genocides and atrocities committed since the Holocaust
- After these atrocities, countries and communities have had to find ways of working together to unite and reconcile people.
- Suffering can make people question God's existence but also inspire people to respond with courage and compassion

KEY WORDS:

GENOCIDE	The systematic killing of a whole race, ethnic group, nationality or religious group
RECONCILIATION	When two people or groups of people become friendly again after they have argued or fought
RWANDA	A country in Africa where genocide occurred between the Hutus and Tutsis
MYANMAR	A country currently experiencing persecution of the Rohingya people
FORGIVENESS	The release of resentment or anger after a person admits their wrong-doing
NATURAL EVIL	Suffering caused by the natural environment
YOM KIPPUR	A Jewish holy day of repentance and forgiveness
BENEVOLENT	The belief that God is loving
OMNIPOTENT	The belief that God is all-powerful
OMNISCIENT	The belief that God is all-knowing
FREE WILL	Our free right to choose to do good or evil
THE FALL	The Biblical account of when Adam and Eve ate the forbidden fruit and brought evil into the world
MORAL EVIL	Suffering caused by humans
SCAPEGOAT	A symbolic animals who carries the sins of the Jews away into the desert

SOME TASKS FOR YOU TO COMPLETE

| *Draw a symbol for each key word* | *Create a mind map of one of the genocides we have studied* | *Create a key word quiz or flash cards* | *Write your answers to 3 reflection questions* | *Rewrite the religious teachings in your own words* | *Investigate an issue in the media that shows people responding to suffering* | *Write a conversation between 2 people discussing the problem and responses to evil* |
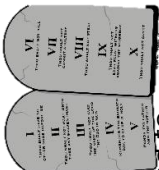
FORGIVENESS IN JUDAISM

- Yom Kippur is for 10 days after the Jewish new year
- Jews confess and repent of their sins done to God and to others
- They fast for 25 hours (sundown to sundown) as a sign of atonement
- Judaism teaches that those who are genuine in their confession will have their name written in the Book of Life

FORGIVENESS IN OTHER RELIGIONS

Allah is merciful so Muslims should show mercy too

For every person you forgive you heal a wound of your own (Buddhism)

Forgive your brother 70 x 7 times (Jesus)

RESPONSES TO THE PROBLEM

God doesn't cause suffering, the Devil does. God is loving but the Devil is not BUT can God not stop the Devil?

God is testing us through suffering to see if we remain faithful to him BUT it is a harsh test

God gave us free will to choose our actions. Some people make wrong choices and cause suffering

Suffering helps us develop as human beings. It teaches us an important lesson and we often become better for it

Suffering gives us an opportunity to do good and help each other

Forgiving

PROTEST!

Campaigning

Charities

THE PROBLEM OF EVIL

God is omniscient

so he must know about the suffering that goes on

God is omnipotent

but he doesn't seem to do anything to stop suffering

God is benevolent

but he lets people suffer, this doesn't seem very loving

RWANDAN GENOCIDE TIMELINE

On April 6th 1994 the Rwandan President was killed when his plane was shot out of the sky.

Hutu extremists began killing their political rivals, the Tutsis.

For 100 days Tutsis were targeted for mass killings

They hid in churches and hospitals but 1000s were brutally killed

UN peacekeeping forces were told not to fight and then withdrawn from the country.

Over a million Tutsis fled to neighbouring countries.

800,000 were dead by the time the conflict ended, leaving many orphaned and damaged

RECONCILIATION IN RWANDA

To bring communities together again they created:

- Local law courts
- Reconciliation villages
- Community service

GENOCIDE IN MYANMAR

The Buddhist Rohingya have lived in Muslim Myanmar for centuries but recently they have become victims of persecution. The Myanmar government doesn't recognise them as citizens and has blamed them for many of the country's failings.

More than 1.3 million Rohingya have been targeted with many reports of killings, rape and villages being burned.

Many of the Rohingya people fled to Bangladesh and live in overcrowded refugee camps, causing one of the greatest refugee crises in modern times.

The camps spread disease, lack clean water and are unsafe environments for girls and women. Children are not supported and 1 in 4 are malnourished.

ART KNOWLEDGE ORGANISER

Topic: People and Places (producing outcomes)

Context:

You have been exploring the work of different artists in your art lessons (Banksy and Mark Andrew Allen) and learning about the techniques that they use to create pieces of artwork or outcomes. It is these techniques and processes that you will be using this term to create a piece of your own art work.

Mark Andrew Allen is heavily influenced by Pop Art, Society and Popular Culture. He loves to create artwork which is mainly inspired by American cities and capture the culture of that city. Mark Andrew Allen loves to use bold colours in his work and combine different techniques together for example paint, collage and digital techniques. Mark Andrew Allen likes to reflect on society and popular culture. He blends urban street art with his background of typography, mixed media collage, and abstract expressionism into each of his urban pop expressionist works. Mark Andrew Allen was inspired by so many different artists including Robert Rauschenberg, Jasper Johns, Andy Warhol, Jackson Pollock and Roy Lichtenstein. He has met many of the artists who inspire him.

Banksy began his unconventional artistic career as a graffiti artist in Bristol in the 1990s, and came to prominence painting political murals on buildings. His signature style became black and white portraits painted using stencils, often showing human or animal figures performing an action or interacting with the world around them.

Some of his most well-known works oppose conflict, including a portrait of a man hurling a bouquet of flowers - painted on the West Bank Wall which separates Jerusalem from Israel. A lot of Banksy's work has been removed recently for preservation purposes. Some of his work has been sold and some have been restored and displayed in various Street Art galleries.

Home Learning tasks:

Week 1: AP1 revision
Look closely at the characteristics of the work of 'Mark Andrew Allen.' Create a page of drawings and patterns from this.'

Week 2: Practice key literacy vocab 1-5 – look, cover, write, check, correct x 3. Read the sentences again and check for understanding.

Week 3: Practice key phrases 6 -11 - look, cover, write, check, correct x3. Read the sentences again and check for understanding.

Week 4: Watch the Video of who is Banksy'. See QR code below. Produce a mind map of key elements from this.

Week 5: Create a piece of artwork using a famous Liverpool landmark. Now apply some artist techniques from Banksy and Mark Andrew Allen. Consider the key elements you have been looking at:

- Stencil/silhouette or digital style Liverpool building
- Collaged square images, consider layers.
- A spectrum of bright colours
- fonts/ text/ numbers.

Extension:
Watch the interview with Mark Andrew Allen 'Beyond the Palette', Record information on his life and career in a Graphic Design.

Key Literacy Vocabulary:

1. **Composition:** the arrangement or placement of visual elements in an individual piece of artwork. 'Putting a piece of art together', where you place things.
2. **Construct:** To build, create or make something.
3. **Layers:** The process of adding a further surface on top of the previous one.
4. **Silhouette:** a picture of the outline of an object, filled with solid black colour. The dark shape is usually against a bright or white background.
5. **Stencil:** paper/plastic or metal with a design cut out, to allow, paint ink or pen through the space.
6. **Collage:** a craft, which consists of gluing images onto a piece of artwork.
7. **Mixed Media:** the use of two or more art materials in one piece of artwork, for example: paint, colour pencil, paint and collage.
8. **Typography:** The use of letters, symbols and numbers, that can be used in a piece of art work.
9. **Landmarks:** an object or feature of a landscape or town that has importance and is easily recognizable.
10. **Contemporary:** Modern and current.
11. **Abstract expressionism:** New forms of Abstract Art developed by American Artists such as Jackson Pollack, Mark Rothko and Willliem de Kooning. They were mostly based in New York.
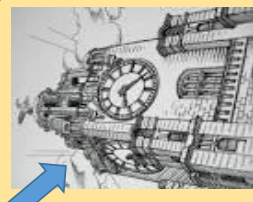
Week 1: Create a page of mixed media patterns, looking closely at layers and Mark Andrew Allen.

Week 4: scan this QR code to watch the video 'Who is Banksy'

Week 5: Create a piece of Artwork that uses a famous Liverpool landmark. See examples to support.

Extension task: Listen to the Mark Andrew Allen interview on how his art career developed.

YEAR 9

Topic: Jewellery project

My Tool Box

Piercing Saw – Used to cut thin sheet metal.

Buffer/polishing machine – Used to buff/polish metal and plastics

Engineer Square – Used to mark out right angles.

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

Centre punch – Used to mark out centre of hole before drilling.

Tin snips – Used to cut thin sheet metal.

Scribe – Used to mark out on metal.

Focused topics

Ferrous Metals			Non- Ferrous Metals		

Ferrous metals consist of iron, carbon and other elements. Most ferrous metals are prone to rusting and can be picked up with a magnet. The exception to this is Stainless Steel.

Non-ferrous metals do not contain iron, so they are not attracted to a magnet and do not rust when exposed to moisture.

Name	Description	Uses	Name	Description	Uses
Cast Iron	• Very strong in compression but brittle • Re-melted pig iron with other metals	- Man hole covers - Metal work vices - Iron frying pans	Aluminium	• Can be polished for a good finish • lightweight and can be anodised for colour	- Cooking foil - Saucepans - Toy cars - Ladders
Mild Steel	• Ductile and Malleable • Rusts quickly if exposed moisture	- Nuts - Bolts - Car bodies - Furniture Frames - Gates	Copper	• Reddish brown • Ductile and malleable • A conductor of heat and electricity	- Plumbing - Electrical - Domed roofs
Stainless Steel	• An alloy of iron with 18% chromium and 8% Nickel. • Does not rust and resistant to wear.	- Kitchen sinks - Cutlery - Dishes - Surgical instruments	Tin	• Bright silver • Ductile and malleable • Resistant to corrosion	- Most commonly used as a coating on food cans and similar packaging

Production aids

Template

A template is a tool used to mark out shapes repeatedly. A template could be made to draw around for speed and consistency.
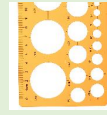
Jigs

A jig is device used to hold a piece of material and guide tools. They are used to ensure the process can be repeated accurately and to a high quality.

Key Terms

Brittle - Will snap easily and will not bend.

Malleable - The ability of a material to permanently deform in all directions without cracking.

Ductile - The ability of a material to deform by stretching along its length.

Corrosion – Corrosion is the deterioration and loss of a material and its properties due to chemical and other reactions of the exposed material surface with the surrounding environment.

Casting– The process of pouring molten metal into a mould to create a shape.

Ferrous metals – Are metals that contain iron.

Non-Ferrous metals – Are metals that do not contain iron.

Alloys – A metal that contains more than one different type of metal.

Tasks

Task 1: Learn the tool names and their use.

Task 2: Learn the key words and the definition.

Task 3: Create 6 questions that can be answered from the information on here.

Task 4: Draw two tools and write what they are for.

Task 5: Create a quiz based on task 1, 2 or 3. 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:
How It's Made: Aluminium

**Onshape: 3D modelling tutorial**

WE ARE USING

TASSOMAI

Have you completed your 4 daily goals?

Complete 4 daily goals each week to ensure success in Science! 😊

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!

Week Four

Using your Home Learning book as guidance write your own definitions for the following keywords:

- Element
- Mixture
- Compound
- Molecule
- Isotope
- Nucleus

Week Five

In your book create a timeline of the discovery of the atom. Start the timeline with John Dalton and finish it with Niels Bohr.

Use your home learning book as guidance or head to BBC Bitesize for further information.

Week One

Write a summary of 4 separation techniques.

Remember to include:

1. What each technique is used for.
2. A brief description of how the technique is completed.

[Take a look on BBC Bitesize for additional information about the separation techniques].

Week Two

Test yourself using the 10 questions you created during autumn term on the topic **atomic structure**.

Week Three

Group 1: Alkali Metals

1. Describe the trend in melting and boiling point down the group.
2. Describe the trend in reactivity down the group
3. What gas is produced during the reaction of group 1 metals and water?

Group 7: The Halogens

1. Describe the trend in melting and boiling point down the group.
2. Describe the trend in reactivity down the group
3. Name the product formed from the reaction of lithium and iodine
4. Name the product formed from the reaction of potassium and chlorine

Group 0: The Noble Gases

1. Describe the trend in the melting and boiling point down the group
2. Describe the trend in density down the group3.

Chemistry topic 1: Atomic structure

1. Keywords

1. Atom	The smallest possible piece of an element. Has a radius of 0.1nm (or 1x10⁻¹⁰m)
2. Element	A substance in which all the atoms have the same atomic number
3. Isotope	Atoms with the same number of protons but different numbers of neutrons
4. Molecule	Two or more atoms bonded together
5. Compound	Two or more different atoms bonded together
6. Mixture	At least two different elements or compounds together. Can be separated easily
7. Nucleus	The centre of an atom. Contains protons and neutrons
8. Proton	A positively charged particle found in the nucleus
9. Neutron	A neutral particle found in the nucleus. Has no charge
10. Electron	A negatively charged particle found in energy levels (shells) around the nucleus
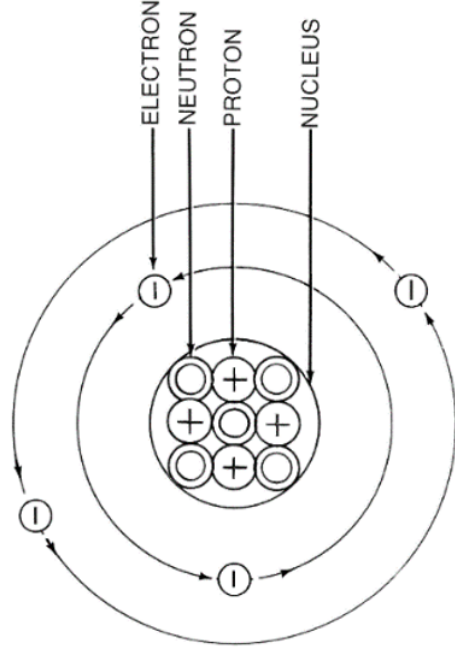
2. Properties of sub-atomic particles

Particle	Relative mass	Relative charge	Location
Proton	1	+1	Nucleus
Neutron	1	0	Nucleus
Electron	0	-1	Shells

Key

relative atomic mass	1
atomic symbol	**H**
name	hydrogen
atomic (proton) number	1
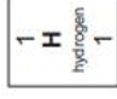
3. Using the periodic table

Number of..	Is the...	Found by...
Protons	Atomic (proton) number	Smaller number on periodic table
Electrons	Atomic (proton) number	Smaller number on periodic table
Neutrons	Difference between the atomic mass and atomic number	Big number – small number

4. History of the atom

Discovery	By	Model	Diagram
Solid particle called atom	John Dalton	Particle: solid spheres	1
The electron	JJ Thompson	Plum pudding: positive 'cake' with negative 'plums'	2
Nucleus	Rutherford	Nuclear: Positive nucleus surrounded by electrons	3
Neutron	James Chadwick	Nuclear: Now with protons and neutrons in nucleus	3
Energy levels (shells)	Niels Bohr	Planetary: Electrons now 'orbit' in different shells	4

1.   2.   3.   4.

ELECTRON
NEUTRON
PROTON
NUCLEUS
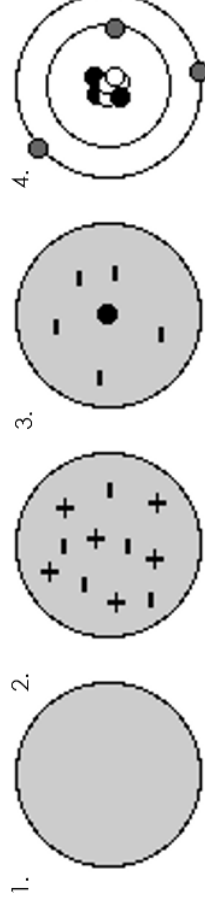
5. Electron arrangement rules

1.	Always fill from the inside to the outside
2.	The first shell can only hold 2 electrons
3.	The second and third can hold 8 electrons

6. History of the Periodic Table

Developed by	Dmitri **Mendeleev**, a Russian scientist.
Arranged	In order of **atomic mass**, and by their **chemical properties**
What was special about it?	**Predicted** the existence of **other elements** not discovered, and **left gaps** for them in his table
Why was it used?	**New elements** were **discovered** that **matched these gaps**

7. Properties – metals and non-metals

Property	Metals	Non-metals
Density	High (they feel heavy for their size)	Low (they feel light for their size)
Strength	Strong	Weak
Malleable or non-malleable	Malleable (they bend without breaking)	Brittle (they break or shatter when hammered)
Conduction of heat	Good	Poor (they are insulators)
Conduction of electricity	Good	Poor (they are insulators apart from graphite

8. Layout of the periodic table

Groups

							3	4	5	6	7	0

Periodic table layout showing:

Groups 1 and 2 (left), groups 3–0 (right), transition metals in the middle.

Group	1	2	3	4	5	6	7	0
Electrons in outer shell	1	2	3	4	5	6	7	8*
Charge of ion	+1	+2	+3	N/A	-3	-2	-1	N/A
Number of covalent bonds	N/A	N/A	N/A	4	3	2	1	N/A

N/A = not applicable (does not do it)

(* Except Helium)

Alkali metals | **Halogens**
Transition metals | **Noble gases**

TL/DR:

Group number
Tells you're the number of outer electrons

Period number
Tells you how many shells

Period	No. of shells
1	1
2	2
3	3
4	4
5	5
6	6
7	7

9. Properties – Groups 1, 7 and 0

Group 1 (I)	Melting point	Density	Reactivity	Group 7 (VII)	Melting point	Density	Reactivity	Group 0 (VIII)	Melting point	Density	Reactivity
Lithium (Li)	**Decreases** down the group	**Increases** down the group	**Increases** down the group	Fluorine (F)	**Increases** down the group	**Increases** down the group	**Decreases** down the group	Helium (He)	**Increases** down the group	**Increases** down the group	**INERT** (DO NOT REACT)
Sodium (Na)				Chlorine (Cl)				Neon (Ne)			
Potassium (K)				Bromine (Br)				Argon (Ar)			
Rubidium (Rb)				Iodine (I)				Xenon (Xe)			

11. Common separation techniques

1. Chromatography
Used to separate a mixture of dyes in ink.

2. Filtration
Used to separate insoluble solids from liquids (e.g. sand from water).

3. Evaporation
Used to separate a soluble salt from solution. The solution is heated strongly in an evaporating basin until dry crystals are left.

4. Crystallisation
Used to separate a soluble salt from solution. The solution is heated gently in an evaporating basin until crystals form; the remaining liquid is filtered out.

5. Simple distillation
Is used to separate a liquid from a solution – e.g. water from ink. A condenser is used to cool hot gas until it forms a liquid.

6. Fractional distillation
Used to separate a mixture of liquids with different boiling points.

Shooting

Remember !BEEF! For basketball & netball
Balance by keeping your feet hip/shoulder width apart
Elbow Position your elbow so it's in line with your shoulder
Eyes should be focused on the target
Flick your wrist as you release the ball

Laces shot
- Line up your body for the shot.
- Point your standing foot toward your target.
- Lock your ankle in position.
- Kick the ball with the top of your shoe.
- Follow through with your kicking leg.

Dribbling

Use your fingertips not your palms. Keep your knees bent for a lower centre of gravity. Finally keep the ball under hip height.

There is no dribbling in netball, but you can pivot (also allowed in basketball) Pivot by rotating yourself on the ball of your landing foot. Keep your upper body straight and head up.

Football: Touching the ball with foot between little toe, and the outside of the laces on your boot. Touches should be light, close enough so away from defender, but far enough away from body to run freely

Passing

Coaching points

- Hold ball in both hands, chest high.
- Step forward, extend your arms and snap your wrists to throw the ball in a straight line to your teammate's chest.
- Finish with your arms in front, chest high.

CHEST PASS
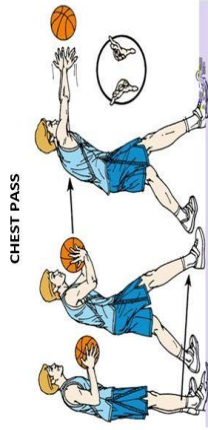
A netball shoulder pass is a one-handed netball pass for longer distances. It follows a straight line between your shoulder and the receiver's hands.

Look to where the pass is going
Kicking leg bent at the knee
Kick with the inside of the foot
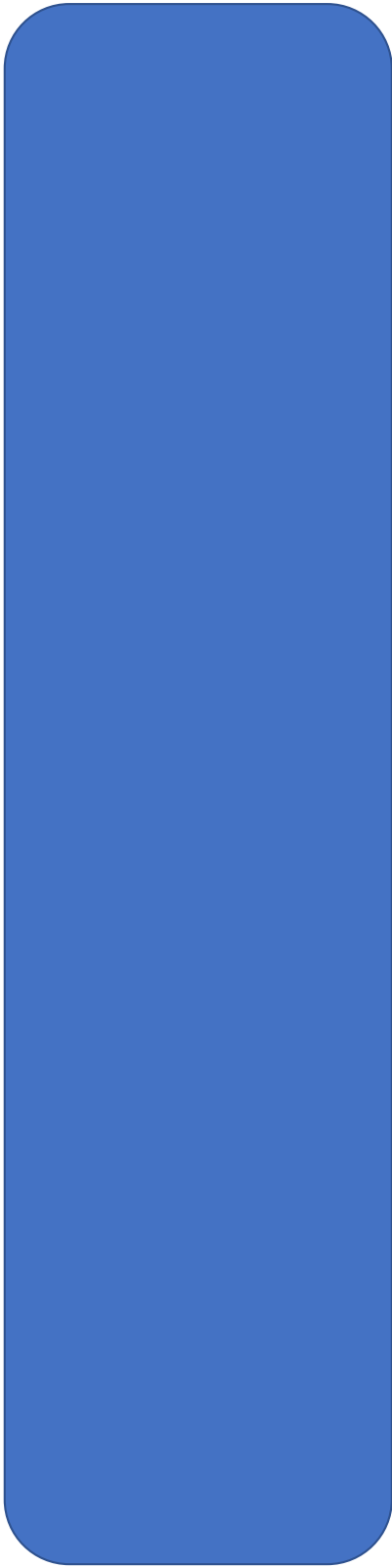Follow through with the kicking leg so the ball is propelled to a team mate
Standing leg next to the ball

ANSWERS

Design your session plan for one activity for one of the 3 sports provided. Must contain coaching points. A warmup, a drill, a main activity and a cool down

PERFECT
PRACTICE
MAKES
PERFECT

SCAN ME

Learning to Learn

SCAN ME

The 'Listen' Project #1