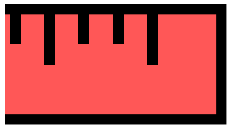




HOME-LEARNING

YEAR 9



HALF TERM 4



"STRIVE FOR PROGRESS, NOT PERFECTION."

UNKNOWN



## **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!

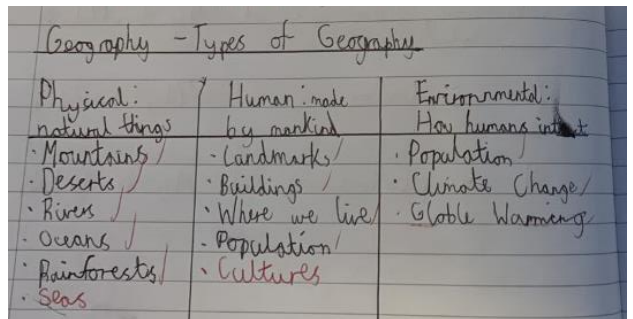
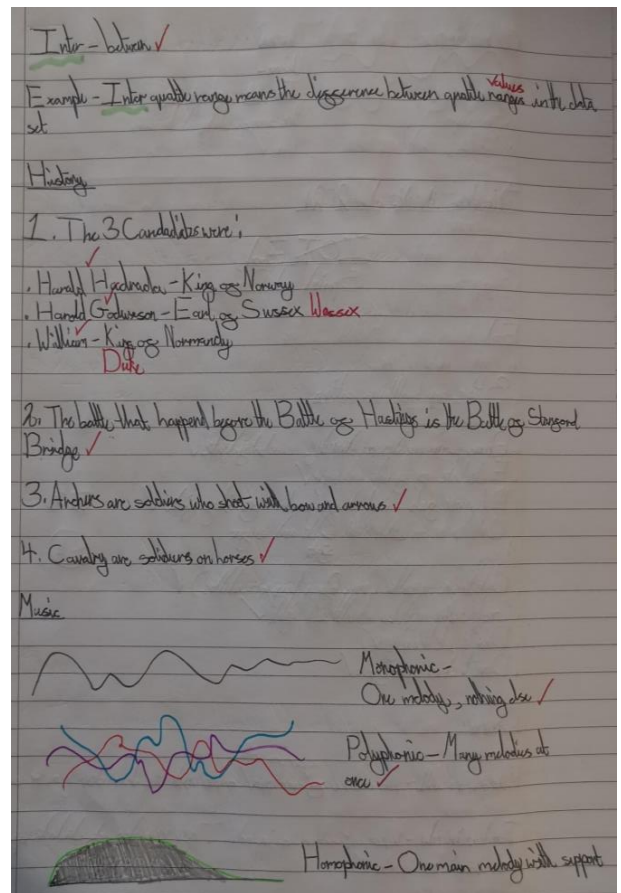
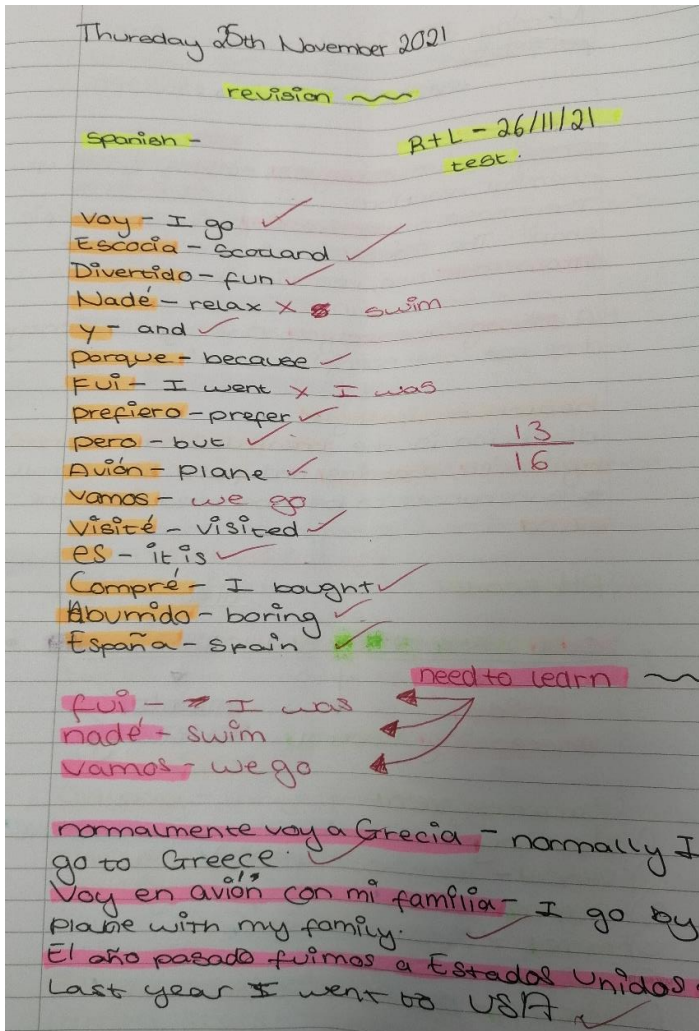


# What does effective home-learning look like?

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	Computing/Food	English	Design Technology (DT)	
History	Drama	Geography	Science [Knowledge Organisers]	
Music	Spanish	Art	Active Lifestyles/RS	
<p style="text-align: center;">← Science: Tassomai On-Line (complete one daily goal each day) →</p>				

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.






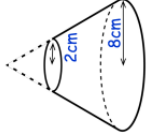




*SCAN ME*

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

Week	Key Word	Definition	Task	Corbett Code
1	Inequality	<p><b>Inequalities</b> are the relationships between two expressions which are not equal to one another.</p> <p><math>X &lt; 7</math> <math>x</math> is less than 7      <math>X &gt; 7</math> <math>x</math> is greater than 7</p> <p><math>X \leq 5</math> <math>x</math> is less than or equal to 5      <math>X \geq 8</math> is greater than or equal to 8</p> <p>An open circle means less than/greater than</p> <p>A closed circle means less than/greater than or equal to</p>	<p>For example, this is the number line for the inequality <math>x \geq 0</math>:</p>  <p><b>Create 5 values for x using inequalities</b></p> <p><b>Draw a -5 to 5 number line and draw in your inequalities</b></p>	 Scan here 176
2	Direct Proportion	<p>When two variables are directly proportional, as one <b>increases</b> the other <b>also increases</b> at the same rate (proportionally).</p> <p>So if one doubles, the other also doubles.</p>	<p><b>8 Scores</b></p> <p>200g flour      How much of each ingredient would be needed to make:</p> <p>30g caster sugar      (a) 16 scones?      (b) 4 scones?      (c) 24 scones?</p> <p>50g butter      (d) 40 scones?      (e) 80 scones?      (f) 2 scones?</p> <p>140ml milk</p> <p>1 egg</p>	 Scan here 256
3	Indirect (Inverse) Proportion	<p>If two quantities are inversely proportional, one <b>increases</b> as the other <b>decreases</b> at the same rate.</p> <p>If one quantity doubles, the other one halves.</p> <p>For example, more workers on a job would reduce the time to complete the task.</p>	<p>if it takes 1 person 20 hours to build a wall</p> <p>How long would it take:</p> <p>A) 2 people B) 4 people C) 10 people?</p>	 255c
4	Density	<p>The density of an object or substance is its mass divided by its volume.</p> <p>The more dense a substance is, the heavier it feels.</p> <p><b>Density = Mass ÷ Volume</b></p>	<p>Calculate the density of:</p> <p>A) A piece of wood mass 200g and volume 10cm<sup>3</sup></p> <p>B) A rod of iron of mass 2000g and volume 200cm<sup>3</sup></p> <p>C) A coin of mass 40g and volume of 4cm<sup>3</sup></p>	 Scan here 384
5	Frustum	<p>A frustum is a part of a cone with the top cut off</p> <p>To find the volume of a frustum find the volume of the whole cone and subtract the part cut off</p>	<p>Use the formula for the volume of a cone to calculate the volume of:</p>  <p>3cm</p> <p>9cm</p> $V = \frac{1}{3} \pi r^2 h$	 Scan here 360a
6	Geometric Sequence	<p>A Geometric Sequence is a sequence which multiplies for divides each time</p> <p>Eg. 3,6,12,24 is a geometric sequence as it follows the rule <math>\times 2</math></p>	<p>Find the next two terms in the sequence:</p> <p>A) 2, 4, 8, 16, 24,....</p> <p>B) 128, 64, 32, 16</p>	 286,287





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 increasingly ambitious in his aims for German expansion.

Hitler decided to invade Poland on the 1<sup>st</sup> 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 3<sup>rd</sup> September Britain and France declared war on Germany. Hitler's gamble had also failed; Germany was now at war.

Main Participating Countries			
ALLIED POWERS		AXIS POWERS	
Country	Date Joined	Country	Date Joined
FRANCE 	3 <sup>rd</sup> Sep, 1939	GERMANY 	1 <sup>st</sup> Sep, 1939
UK 	3 <sup>rd</sup> Sep, 1939	ITALY 	11 <sup>th</sup> Jun, 1940
SOVIET UNION 	22 <sup>nd</sup> Jun, 1941	HUNGARY 	27 <sup>th</sup> Jun, 1941
USA 	8 <sup>th</sup> Dec, 1941	JAPAN 	7 <sup>th</sup> Dec, 1941

**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 1933-1945. 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 30<sup>th</sup> Apr 1945, when the war was clearly lost.



**Major Events**

Event	Description	Date/s	Fact
<b>WWII Begins</b> 	On 1 <sup>st</sup> 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 3 <sup>rd</sup> September. Britain initially responded with bombing raids over Germany. Nearly six years of war in Europe was to follow.	1 <sup>st</sup> -3 <sup>rd</sup> September 1939	Hitler claimed to give the German people 'Lebensraum' – living space.
<b>Evacuation of Children</b> 	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.
<b>Evacuation of Dunkirk</b> 	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.'	26 <sup>th</sup> May – 4 <sup>th</sup> June 1940	These events have been the basis for the recent film entitled <i>Dunkirk</i> .
<b>Battle of Britain</b> 	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.	10 <sup>th</sup> July – 31 <sup>st</sup> October 1940	This was seen by many as Germany's first major defeat in the war.
<b>D-Day Landings</b> 	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.	10 <sup>th</sup> July – 31 <sup>st</sup> October 1940 6 <sup>th</sup> June 1944	Between 14,000 and 19,000 men died in the D-Day landings.

## Key Terms

**Allies:** Two countries/groups who have joined together. In war allied countries fight together 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 "Lightning 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 ammunition 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>



### **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#zws5pp4j9>



# THE HISTORY OF MUSIC

<p style="text-align: center;"><b>ROMANTIC</b> [1800...ish - 1900...ish]</p>	<p style="text-align: center;"><b>The music sounds...</b> Dramatic Emotional</p>	<p style="text-align: center;"><u><b>Composers</b></u> Chopin Liszt Schumann Brahms Wagner Grieg</p>	<p style="text-align: center;"><u><b>Instruments</b></u> Large Orchestra More Brass Percussion Saxophone invented</p>	<p style="text-align: center;"><u><b>Form</b></u> Opera Symphony Lieder (songs) Concerto Sonata</p>	<p style="text-align: center;"><u><b>Texture</b></u> Various: Homophonic Polyphonic Monophonic</p>
<p style="text-align: center;"><b>CLASSICAL</b> [1750 - 1800...ish]</p>	<p style="text-align: center;"><b>The music sounds...</b> Polite Elegant</p>	<p style="text-align: center;"><u><b>Composers</b></u> Haydn Mozart Beethoven</p>	<p style="text-align: center;"><u><b>Instruments</b></u> 'Medium'-sized orchestra  Piano Clarinet Timpani</p>	<p style="text-align: center;"><u><b>Form</b></u> Opera Symphony Concerto Sonata String Quartet</p>	<p style="text-align: center;"><u><b>Texture</b></u> Mainly Homophonic</p>
<p style="text-align: center;"><b>BAROQUE</b> [1600...ish - 1750...ish]</p>	<p style="text-align: center;"><b>The music sounds...</b> Decorative Busy</p>	<p style="text-align: center;"><u><b>Composers</b></u> J. S. Bach Handel Vivaldi Purcell</p>	<p style="text-align: center;"><u><b>Instruments</b></u> Small orchestra Harpsichord Strings  Often no conductor</p>	<p style="text-align: center;"><u><b>Forms</b></u> Opera Sonata Concerto Dances Variations</p>	<p style="text-align: center;"><u><b>Texture</b></u> Mainly Polyphonic</p>

**Task 1:** Learn the information in the *Baroque* period box. Test yourself to check your memory!

**Task 2:** Learn the information in the *Classical* period box. Test yourself to check your memory!

**Task 3:** Learn the information in the *Romantic* period box. Test yourself to check your memory!

**Task 4:** Create a mind map for each of the 3 musical periods **from memory – no peeking!** Include the following information: **dates – sounds like – composers**. **Self-assess** - fill any gaps **in red pen**.

**Task 5:** Create a mind map for each of the 3 musical periods **from memory – no peeking!** Include the following information: **instruments – forms – texture**. **Self-assess** - fill any gaps **in red pen**.

**Task 6:** Design a 'Musicals Periods' timeline as a poster that shows what the main fashions of Baroque, Classical and Romantic music were.

**\*\*PLEASE LISTEN TO MUSIC BY COMPOSERS FROM THE BAROQUE, CLASSICAL AND ROMANTIC PERIOD ON YOUTUBE. CAN YOU HEAR THE DIFFERENCE BETWEEN THESE MUSICAL FASHIONS?**

## 1.7 Energy balance

### Why do we need energy?

We need energy for:

- breathing
- keeping our organs working
- digesting food
- activities such as walking, running and even sitting down.

The amount of energy we need depends upon our age, gender, activity level, our health and our body size.



- ▲ Your age, your gender and how active you are affects how much energy you need each day

### What is BMR?

**Basal metabolic rate (BMR)** is the rate at which a person uses energy when they are resting. The energy is needed for basic functions such as breathing, keeping the heart beating and blood circulating, and keeping all the other organs working.

In other words, BMR is the energy your body needs just to stay alive!

### What is energy balance?

- If we eat more food than we need and do not use it up by exercising, any energy that is left is changed to fat, and we put on weight.
- If we eat less food than we need and use it up, the fat stores in our body are used and we lose weight.
- If we eat the right amount of food for our energy needs, then our body weight is maintained.

## 1.8 Nutritional needs for different groups of people

### How much of each nutrient do different people need?

Everyone has their own nutritional needs, which will vary depending on their:

- gender
- age
- level of activity
- **health conditions**
- body size
- **the environment.**

To make it easier when planning meals, people are classified into **target groups**:

- babies
- children
- teenagers
- adults
- pregnant and **lactating women**
- older adults.

Target group	What are their special dietary and energy needs?	Which nutrients should they have more of?
 <p>Babies</p>	<p>Ideally breast milk for the first six months</p> <p>After six months, introduce a variety of foods</p> <p>High energy needs due to growth</p> <p>No added salt (sodium)</p> <p>No added free sugar</p>	<p>All the nutrients are vital</p> <p>Foods rich in iron and vitamin C are especially needed from 6 months</p>
 <p>Children (age 1-12)</p>	<p>Need to eat regular, smaller meals, snacks and drinks</p> <p>High energy needs due to growth and activity</p> <p>Reduced sodium (salt) and sugar</p> <p>Gradually introduce the Eatwell Guide between 2 and 5 years</p>	<p>Protein</p> <p>Calcium and vitamin D</p> <p>Iron and vitamin C</p> <p>B group vitamins</p>
 <p>Teenagers</p>	<p>Follow the Eatwell Guide</p> <p>Teenagers have growth spurts and are very active, so high energy needs</p> <p>Increased appetites mean larger portion sizes are needed</p>	<p>Protein</p> <p>Calcium and vitamin D</p> <p>Iron and vitamin C</p>

## Tasks:

- 1) Produce a range of flash cards for every keyword. Keywords are either in bold or underlined. Make sure you have the words on one side and a good description on the other.
- 2) Look at all the different target groups. Are there any similarities that link all of them together. If there are, can you come up with general dietary advice?
- 3) Write down your favourite all time meal and dessert listing all the different ingredients. Underline all the carbohydrates in red, proteins in green, fatty foods in blue. Then think of the following questions...
  - How many carbohydrate foods are there?
  - How many protein foods are there?
  - How many fatty foods are there?
  - Discuss with someone at home and whether or not the food has any impact on your health.
- 4) Research and find out how much energy your body uses when it is asleep. Why do you think you burn this energy, what does it do and how important is sleep?

<p><b>Adults</b></p> 	<p>Lower energy needs Need to avoid foods high in sugar and fat to prevent weight gain</p>	<p>Calcium and vitamin D Iron and vitamin C</p>
<p><b>Pregnancy</b></p> 	<p>Healthy balanced diet, prepared safely Include plenty of watery drinks Higher energy needs for last 3 months of pregnancy</p>	<p><b>Folic acid</b> (especially at the start of pregnancy) Protein Calcium and vitamin D Iron and vitamin C</p>
<p><b>Lactation (breast feeding)</b></p> 	<p>Healthy balanced diet, prepared safely Include plenty of watery drinks Energy needs of breast-feeding mothers increase as the baby gets older</p>	<p>Protein Calcium and vitamin D Iron and vitamin C</p>
<p><b>Older adults (age over 65)</b></p> 	<p>Bodies usually slow down, so less energy is needed. Older adults don't absorb nutrients so easily as adults Need plenty of watery drinks</p>	<p>Fibre Calcium and vitamin D Iron and vitamin C</p>

**Introduction to Tinkercad**

Tinkercad is an online application (software) used for Computer Aided Design. Just take a look around you. Almost everything you see started off as a 3D model in CAD software. Using specialist tools and techniques, you can design just about anything in CAD software, then using specialist machinery, you can make it. 3D models designed in CAD software can be printed using a 3D printer.



**What is CAD?**

CAD stands for Computer Aided Design. Computer software is used to design 3D models and these 3D models can be made into physical objects. Furniture, cars and buildings are just some examples of what can be designed using CAD?

**Tinkercad Keywords**

<b>Align</b>	to place or arrange (things) in a straight line. To use the Align tool, select at least two objects by Shift left-clicking on them or by dragging a box around them. Once selected, click on the Align icon at the top. Simply move your mouse over a node (the black dots) to preview the move.
<b>Dimensions</b>	a measurable extent of some kind, such as length, width, or height. In its simplest form: a line describes one dimension, a plane describes two dimensions, and a cube describes three dimensions.
<b>Duplicate</b>	to make or be an exact copy of. To duplicate an object, use Ctrl + D and then drag it out or use the arrow keys.

<b>Group</b>	to combine two or more shapes into a part. Do this by selecting them and then choosing the Group icon at the top.
<b>Handle</b>	the little squares that appear on the shape when you select it that allow you to resize it by pulling and pushing them.
<b>Scale</b>	to change the size of an object so that its dimensions are proportional to the original size. You can do this by holding down the Shift key while pushing and pulling the handles to resize.
<b>Workplane</b>	the large, blue grid where you create your designs. You can drag out new workplanes onto the surfaces of your shapes for easier stacking and more precise measuring.



# Computing Department Knowledge Organiser: Year 9 Tinkercad

## Tinkercad work plane

This is what the Tinkercad work plane looks like. You can access Tinkercad at home for free by visiting this website: <https://www.tinkercad.com/>



# COMPUTING: CREATING MEDIA

## KNOWLEDGE ORGANISER

### Overview

**3D Modelling**  
-3D means three-dimensional, or having 3 dimensions. For example, a box is a 3D shape, whereas a square is a 2D shape.

-3D modelling involves using computer software to create 3D shapes, in order to produce models of real-world objects.

-3D modelling allows us to view designs from different angles and experiment with various designs.

-3D modelling is used in many industries, e.g. in interior design, architecture and making video games.

### More Advanced Techniques

**Duplicating:** Click and drag around an object to ensure that it is selected. Then, click on the duplicate icon (see left) to create a copy.

**Resizing:** Objects can be manually resized by clicking and dragging on the handles around them. The dimensions are labelled.

**Rotating:** Selecting these handles allows us to rotate shapes. Drag the object to rotate it in different ways.

**Text:** You can add block text by selecting 'text' in the shapes. This can help you to enhance other shapes.

### The Basics of 3D Modelling

'Tinkercad' is one example of software that we can use to create 3D Models. Other examples include 'CAD for Kids' and 'Sketchup 3D'.

- The ViewCube Allows us to switch the view of the model e.g. from the front angle, top angle, or spin around to show the sides.
- Zoom in and zoom out.
- The workspaces where you can work on your model. The square panes help us to distances and dimensions and accurately.
- Objects can be resized by dragging handles (white squares).
- When you place multiple objects into the same space, they merge.
- Alter the dimensions of your model, for example the length, height, width and shape.
- 3D objects that can be dragged into the workspace and remodelled.
- Change the colour/shading of your model, and make them solid or holes.

### Making Holes

Holes: Sometimes we need to create objects that are not solid – they have space inside/ within them.

- To achieve this, begin by adding a 3D shape onto the workspace. Then drag one of the 'holes' shapes onto the workspace. Adjust dimensions accordingly.
- Drag the 'holes' shape over the 3D shape as desired.
- Click and drag a box around the shapes to select them.
- Click the 'group' button to combine the shapes and create the hole.

### Important Vocabulary

Modelling    Three-dimensional    Workspace    Faces    Vertices    Edges    Handles    Duplicate    Holes

[www.tinkercad.com](https://www.tinkercad.com)



## Computing Department Knowledge Organiser: Year 9 Tinkercad

### Task 1: Tinkercad Tools

Draw these Tinkercad tool symbols into your home learning book and describe what they do:



### Task 2 Key Word Definitions

Read the Tinkercad keywords, cover them and try to write an accurate definition into your home learning book, check your definition against the definition in the knowledge organiser.

### Task 3 Design Task

In your home learning book, design a keyring that contains your name that could be made in Tinkercad. Think about the 3D shapes that you could use to create the keyring and any decorations that you would like to add. Colour in or label your keyring.





# Preparing for GCSE DRAMA!

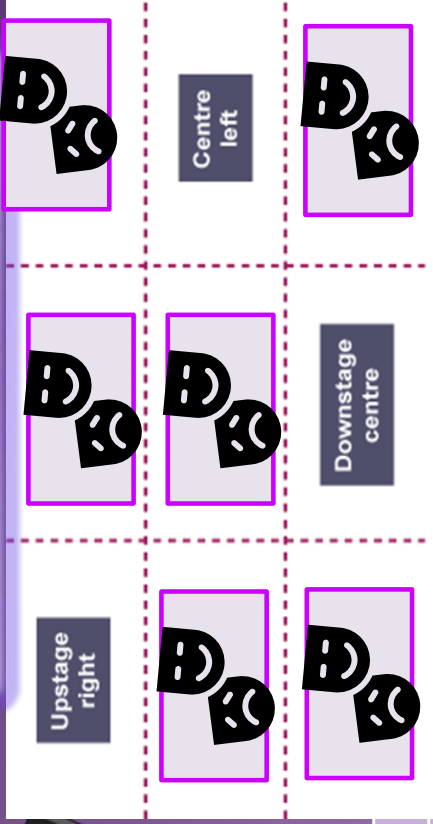
The scheme in focus during this half term is:

## Script Exploration

### New Skill/Technique **Retrieval**

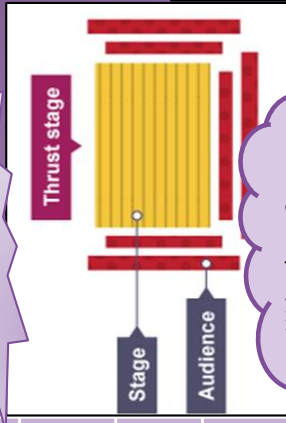
Knowledge/ skill	Definition
<b>Mime</b>	The theatrical technique of expressing an idea or mood or portraying a character entirely by gesture and bodily movement without the use of words.
<b>Characterisation</b>	Developing and portraying a personality through voice and movement.
<b>Verbatim</b>	A form of documented theatre in which plays are constructed from the precise words spoken by people interviewed about a particular event or topic.
<b>Subtext</b>	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.
<b>Monologue</b>	A speech by one actor, performed to the audience — tells the audience what the character is thinking, feeling and the situation they may be in.
<b>Thought tunnel/ conscience alley</b>	Provides the opportunity to explore a decision, problem or dilemma. A useful strategy for exploring any kind of dilemma faced by a character. The class forms two lines facing each other.
<b>Theatre in education</b>	Theatre in Education (TIE) is a process that uses interactive theatre/drama practices to help aid the educational process
<b>Vocal Skills</b>	When an actor changes the tone/pitch of their voice to suit the character they are playing
<b>Direct address</b>	Speaking directly to the audience to break the fourth wall and destroy any illusion of reality.
<b>Movement</b>	Where we move to on and around the stage avoiding the blocking another actor.
<b>Alienation effect</b>	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.
<b>Transition</b>	This is the process in which something changes from one state to another
<b>Gesture</b>	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.

### Stage positioning

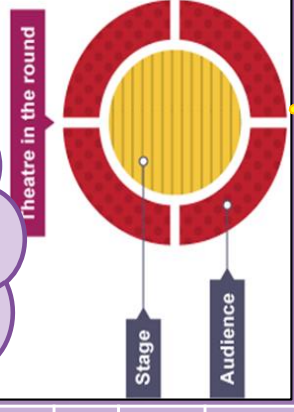


Audience

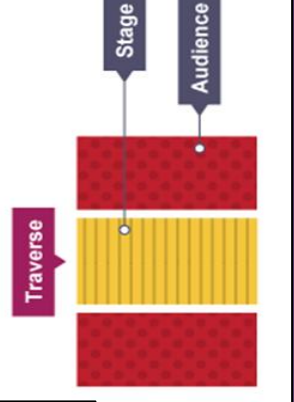
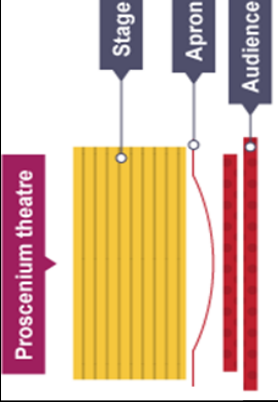
### Stage Types



Write down 3 interesting facts about it and share with your family!



Task 1: Research Shakespeare's 'The Globe Theatre'.



# Setting you up for GCSE Drama Success – the knowledge in this table is KEY for Section A of Component 1 of the GCSE course! Join our **Cloud 9 Crew!**

## Role and responsibilities

<b>Playwright</b>	This is the name given to the person who writes the play.
<b>Performer</b>	A performer is an actor or entertainer who realises a role or performance in front of an audience.
<b>Understudy</b>	An actor who studies another's role so that they can take over when needed.
<b>Lighting designer</b>	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.
<b>Sound designer</b>	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.
<b>Set designer</b>	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.
<b>Costume designer</b>	The person who designs the costumes for a performance. The costume department of a theatre is often called the wardrobe.
<b>Puppet designer</b>	The person who designs the puppets for a performance.
<b>Technician</b>	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.
<b>Director</b>	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.
<b>Stage manager</b>	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.
<b>Theatre manager</b>	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	Week 2	Week 3	Week 4	Week 5	Week 6
Scan the QR Code and watch the video: 	Scan the QR code and read the latest The Drama Maga-Scene issues! 	Sketch out the different stage types and match them with the right title. 	Read the following Article: What is Theatre in Education and five reasons how it supports organisations to inspire positive change. 	Scan the QR Code and explore the Bitesize AQA Drama GCSE space 	What stage position are our pesky drama faces covering? Create your own 'Stage Position Puzzle' and test your family! 



# Spanish - Key verbs and vocab

## Key phrases

1. Trabajo como ingeniero - I work as an engineer
2. Mi madre es dentista - My mum is a dentist
3. Mi padastro trabaja en un garaje - My step-dad works in a garage
4. Mi hermana trabajaba como cocinera - My sister used to work as a chef
5. Es un trabajo muy creativo y práctico - It's a very creative and practical job
6. Va a ser bastante fácil - It's going to be quite easy
7. Creo que soy una persona extrovertida y trabajadora - I think I'm a very outgoing and hard-working person
8. Me gustaría trabajar con niños- I would like to work with children
9. Sería repetitivo y monótono - It would be repetitive and monotonous
10. Espero tener una casa grande - I hope to have a big house
11. Quiero ser famoso - I want to be famous
12. Voy a vivir al extranjero - I'm going to live abroad

Mi madre es comerciante y trabaja en una oficina en mi ciudad. Dice que es un trabajo difícil pero variado. Mi padre trabaja en un taller como carpintero pero no le gusta su trabajo porque es muy exigente. En el futuro yo voy a ser periodista porque soy muy ambiciosa y sería variado e interesante. Cuando era más joven mi madre era dependienta pero ahora no. También en el futuro espero casarme y vivir al extranjero. Además me gustaría tener un coche deportivo y ser feliz.

Para ir más lejos: (To go further...)



Link to BBC Bitesize



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!

**Task 1:** Practice key phrases 1-6 - look, cover, write, check, correct x 3. Read the sentences out loud to practice your pronunciation.

**Task 2:** Practice key phrases 7 -12 - look, cover, write, check, correct x3. Read the sentences out loud to practice your pronunciation.

**Task 3:** Pick on of the boxes of vocab from page 2 and draw a picture to represent each phrase in that box.

**Task 4:** Read through the model paragraph and translate what you can into English.

**Task 5:** Re-write the model paragraph, changing the underlined words and phrases. Try to do this without looking at the vocab!

**Task 6:** Create mind maps under the following headings: Activities, present tense and opinions. Do this from memory and then add to it with your red pen from the vocab page.

**Task 7:** Write a paragraph about yourself **FROM MEMORY!** Then check it over with your red pen. Read it out loud to a member of your family to practice your pronunciation.



# Spanish - Key verbs and vocab

<b>Los trabajos - Jobs</b> 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
--

<b>Mis sueños - my hopes and dreams</b> 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
---

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

<b>Lugares de trabajo - Places of work</b> 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
--

<b>La personalidad - personality</b> organizado/a - organised trabajador/a - hard-working fuerte - strong ambicioso/a - ambitious 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
--

<b>Descripciones - descriptions</b> 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
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## Blood Brothers Knowledge Organiser

### Very Brief Plot Summary

**Act 1:** Mrs Johnstone finds out she is pregnant with twins. The wealthy Mrs Lyons, who employs Mrs Johnstone as a cleaning lady, suggests she gives her one of the babies, as Mrs Johnstone is worried about not being able to support them. Mrs Johnstone reluctantly agrees. After she hands over the baby, she is sacked by Mrs Lyons.

Seven years later, the boys, Mickey and Edward, meet and become 'blood brothers'. Mickey introduces Edward to his friend, Linda, and to his mum. Mrs Johnstone warns Edward to stay away from them. However, the two boys cannot be kept apart. Mrs Lyons becomes increasingly paranoid about the Johnstones. Mr Lyons tells Edward they are moving to the countryside for Mrs Lyons' health. Upset, Edward says goodbye to Mrs Johnstone. Shortly afterwards, Mrs Johnstone receives a letter saying her family can move to the countryside.

**Act 2:** Time has moved on. Edward and Mickey meet up again and recognise each other. They instantly resume their friendship. Mrs Lyons goes to see Mrs Johnstone and accuses her of following them to the area. She tries to bribe her to move away, then tries to stab her.

Linda and Mickey get together, get married and have a baby. Edward goes to university and falls out with Mickey. Mickey is made redundant, commits a robbery and is imprisoned. When he is released, he is addicted to anti-depressants. Linda asks for Edward's help and he gets Mickey a job. Brought together once again, Linda and Edward are attracted to each other and start an affair. Mickey finds out from Mrs Lyons and shoots Edward dead. He is immediately shot dead himself by the police.

### Characters

**Mrs Johnstone:** A single mum, Mrs Johnstone has lots of children and looks older than she is. She works as a cleaning lady and is desperate to provide for her family, but often struggles. She is warm and caring, and spends her life regretting her decision to give away Edward.

**Mrs Lyons:** A wealthy, middle-class woman, Mrs Lyons is desperate for children. She is lonely because her husband is often away on business. She is cunning, as she hatches a plan to pass one of the twins as her own. She pays for her decision by becoming paranoid that the truth will come out, and increasingly jealous of Mrs Johnstone. She lacks maternal warmth.

**Mickey:** One of Mrs Johnstone's twins, his life is often chaotic. He is suspended from school, gets his girlfriend, Linda, pregnant, loses his job, goes to prison, becomes addicted to anti-depressants and eventually kills his own brother. Mickey shows us how the chances we get in life can define who we become.

**Edward:** The twin that Mrs Johnstone gives away, Edward is raised in a privileged lifestyle, with private school and a university education. He gets a good job and eventually wins over Linda. However, he never experiences the maternal kindness that Mickey experiences.

**Linda:** Boisterous and fun-loving, Linda falls in love with Mickey and is fiercely loyal to him. She stands up for him against teachers and against Sammy, but his eventual decline sends her into Edward's arms. She feels trapped by the life that has been created for her with Mickey.

**The Narrator:** The Narrator stays on stage throughout the play, commenting on and narrating events. He asks the audience to speculate about who is to blame for the events in the play, and often appears as a minor character to remind Mrs Johnstone of her guilt at giving away her son.

**Sammy:** Mickey's older brother is a violent bully who exhibits aggressive behaviour throughout the play. At first, Mickey looks up to him, but eventually he becomes a threat. It is Sammy who involves him in the robbery and who unwittingly provides the gun which Mickey uses to kill Edward.

**Mr Lyons:** A wealthy, middle-class businessman, Mr Lyons has no understanding of his wife's desperation for a baby, or her deep paranoia about Edward. He is dismissive about her worries. He also shows no care for his employees, whom he makes redundant in Act II.

### Key Quotations

"As like each other as two new pins." Narrator, Act I.

"a mother, so cruel, / There's a stone in place of her heart." Narrator, Act I

"I believe that an adopted child can become one's own." Mrs Lyons, Act I

"I love the bones of every one of em." Act I, Mrs Johnstone

"if either twin learns that he was once a pair, they shall both

immediately die." Act I, Mrs Lyons

"you know the devil's got your number" Act I, Narrator

"we always have to stand by each other." Mickey, Act I

"you're not the same as him. You're not, do you understand?" Mrs Lyons, Act I

"Make sure he keeps with his own kind, Mr Lyons." Policeman, Act I

"You've got to have an ending, if a start's been made. / No-one gets off without the price being paid." Narrator, Act II

"Everybody has secrets. Don't you have secrets?" Eddie, Act II

"You have ruined me." Mrs Lyons, Act II

"you've not had much of a life with me, have y'?" Mrs Johnstone, Act II

"it's just another sign / Of the times." Mr Lyons, Act II

"while no one was looking, I grew up." Mickey, Act II

"so I can be invisible." Mickey, Act II

"how come you got everything... An' I got nothin'?" Mickey, Act II

"I could have been him!" Mickey, Act II

"And do we blame superstition for what came to pass / Or could it be what we, the English, have come to know as class?" Narrator, Act II

**Themes**

**Nature vs Nurture**

- Splitting up Edward and Mickey at birth shows us how environment can have a huge impact on life chances.
- The boys continue to be drawn to each other, despite very different upbringings.
- Mrs Johnstone is shown as having a natural maternal instinct, while Mrs Lyons seems unable to show easy motherly love. This has an impact on the boys and ironically drives Edward towards Mrs Johnstone.

**Violence**

- Mickey is exposed to violence from a young age, in the games played by his friends and by Sammy.
- Sammy is frequently violent to others and it is his violent tendencies which lead to Mickey going to prison.
- Mrs Lyons resorts to violence when she threatens Mrs Johnstone.
- Mickey resorts to violence at the end of the play when he finds out the truth.

**Growing Up**

- Mickey and Edward's childhoods are juxtaposed throughout the play to show how childhood experiences can be very different and yet very similar.
- Mrs Johnstone and Mrs Lyons react to their children growing up in different ways.
- The montage in Act II shows the transition from childhood to adulthood.
- Mickey realises that some people have to grow up quicker than others, due to their circumstances.
- The play shows how two children with similar backgrounds (Sammy and Linda) can make different choices and take different paths in life.

**Fate and Superstition**

- We are told how the story will end at the beginning of the play – so there is no escaping the fate of the blood brothers.
- The play considers how one decision can decide a person's fate – Mickey realises at the end of the play that he could have had Edward's life if Mrs Johnstone had chosen differently.
- Mrs Johnstone is highly superstitious at the beginning of the play, and Mrs Lyons uses this to create the superstition about twins who are parted.
- Mrs Lyons becomes superstitious as her paranoia takes over.
- The Narrator asks us if superstition is to blame for boys' fate.

**Class**

- Willy Russell shows us the injustices of the class divide by juxtaposing the upbringing of Edward and Mickey.
- Accents, vocabulary and costume are used to show the class divide between the two boys and their mothers.
- Education is shown as a key factor in the class divide: Edward's education guarantees him university and a good job; Mickey's education is largely pointless and reduces his chances in life.
- The Narrator asks us if class is to blame for the boys' fate.

**Friendship and Loyalty**

- Edward and Mickey forge a friendship which bridges the class divide.
- That friendship is destroyed by Edward's inability to understand the pressures of money problems – ultimately the class divide comes between them.
- Linda shows loyalty to Mickey throughout her life, standing up for him against bullies. But when Mickey becomes unreachable, she betrays him.

**Symbols and Motifs**

**Guns** are a recurring symbol throughout the play. Firstly, they are shown as harmless toys, part of games that the children play. Then they become more mischievous, as Mickey, Edward and Linda play with an air gun and are reprimanded by the police. Finally, Sammy's gun in the robbery puts Mickey in prison and becomes the weapon that kills Edward. They represent violence, and the transition from childhood to adulthood.

**Edward's locket** is a symbol which represents secrets. Mrs Lyons wants to see the locket but the irony is that she is guarding a far bigger secret. The locket also represents the power of motherhood – Edward is drawn to Mrs Johnstone even though he does not know her relationship to him.

**Marilyn Monroe** is a recurring symbol within the play – Mrs Johnstone's husband was attracted to her because she looked like the film star, but when she starts to age he finds a replacement. A tragic figure, Marilyn Monroe is significant because she combined sexuality, vulnerability and secrets.

**Language and Techniques**

- audience address
- chorus
- Colloquial
- contrast
- dramatic Irony
- emotive language
- foreshadowing
- irony
- juxtaposition
- metaphor
- refrain
- repetition
- rhythmic Couplet
- song
- tragedy



**Key Vocabulary**

- act
- deprivation
- education
- inequality
- maternal
- nature
- nurture
- playwright
- recession
- social divide
- superstition
- stage directions



## WEEK 1

### SOCIAL/HISTORICAL CONTEXT

Use the internet to find answers to the following questions:

#### Willy Russell

1. Where and when was Willy Russell born?
2. What jobs has Willy Russell had during his lifetime?
3. What are the plays that Willy Russell has written?
4. What awards has 'Blood Brothers' won?
5. Who are some of the famous actors who have had parts in 'Blood Brothers'?

#### Liverpool: The City

1. What happened to Liverpool during the Second World War?
2. What happened to housing in the city during the Second World War?
3. What did the city do to change this?
4. Up until the 1970s, what was Liverpool's main industry?
5. What can you find out about unemployment in Liverpool in the 1970s and 80s?

#### Liverpool: The Culture

1. What do you call someone from Liverpool? Why?
2. Why is Liverpool such a culturally diverse city?
3. What ethnic communities can you find in Liverpool?
4. What is the predominant religion in Liverpool?
5. How was Liverpool influential to 1960s music?

#### Marilyn Monroe

1. What was Marilyn Monroe's birth name and when was she born?
2. What was she famous for?
3. Who did she marry and what were they famous for?
4. What problems did she experience in her life?
5. How did she die?

## Home Learning Tasks BLOOD BROTHERS

### WEEK 2

#### ACCENT/DIALECT

Research your own Liverpool accent and dialect. Where did it come from and how did it develop? Find some of the scouse slang phrases we use and write the standard English definition.

e.g. Slang – 'cob on'

Standard English meaning – 'Bad mood'

#### Useful websites

[Learn 'Scouse' or Liverpool slang: All you need to know \(greatbritishmag.co.uk\)](#)

[35+ Boss Scouse Slang Phrases & Scouse](#)

[Words You Should Know](#)

[\(signaturesliverpool.co.uk\)](#)

### WEEK 3

#### KEY QUOTATION POSTER

Create a key quotation poster. You should choose a key quotation from the scenes you have read so far, include an image to accompany it and an explanation of its meaning and effect.

### WEEK 4

#### CHARACTER

Choose 1 character from the play and focus on the following questions:

1. Briefly explain what happens to your character in the play.
2. What themes are important to your character?
3. What type of relationship does your character have with other characters? What do other characters think of your character?
4. What advice would you give to an actor playing this role? Costume? How to speak? Mannerisms?
5. How is social/historical context relevant to your character?
6. What 5 key quotations would you choose to show your character?

### WEEK 5

#### CAST THE PLAY

Which real life actors would you like to see in the main roles? Explain what makes them good choices. Mickey, Edward, Mrs Johnstone, Mrs Lyons, Linda, Sammy, Mr Lyons

### WEEK 6

#### WRITE A SCENE

Write a scene from the funerals of Mickey and Edward. Consider how their deaths will have had an affect on other characters and their relationships. Include some stage directions in your scene.

Key definitions	Erosion- sub types
<ul style="list-style-type: none"> <li>• <b>Erosion</b>- The wearing away of rocks and other deposits on the earth's surface by the action / movement of water, ice, wind, etc.</li> <li>• <b>Transportation</b>- the movement of material from one place to another-material can be moved in different ways depending on its weight/size.</li> <li>• <b>Deposition</b>- when material is dropped because there is no longer enough energy to transport it.</li> <li>• <b>Weathering</b>- is the breaking down of rocks in situ (in place).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Hydraulic action</b>- The explosion of compressed air trapped in cracks of the cliffs by the waves.</li> <li>• <b>Attrition</b>- When the waves cause rocks and pebbles to bump into each other and break into smaller pieces.</li> <li>• <b>Abrasion</b>- When large waves hurl beach material against the cliff.</li> <li>• <b>Solution/corrosion</b>- When salts and other acids in sea water dissolve the rocks of the cliff.</li> </ul>

Weathering- sub types	Year 9 Coasts- Geography		
<p>There are 3 main types of weathering:</p> <table border="1"> <tr> <td data-bbox="203 1018 646 1371"> <p>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.</p> </td> <td data-bbox="203 669 646 1018"> <p>2. Chemical: The decomposition of the rocks is caused by a chemical reaction within the rock e.g. acidic rainwater / alkaline seawater and limestone.</p> </td> </tr> </table> <p>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.</p>	<p>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.</p>	<p>2. Chemical: The decomposition of the rocks is caused by a chemical reaction within the rock e.g. acidic rainwater / alkaline seawater and limestone.</p>	<p><b>Tasks- if you complete all 6, revisit some or all from memory</b></p> <p>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.</p>
<p>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.</p>	<p>2. Chemical: The decomposition of the rocks is caused by a chemical reaction within the rock e.g. acidic rainwater / alkaline seawater and limestone.</p>		

How are waves formed?	Year 9 Coasts- Geography
<ul style="list-style-type: none"> <li>• Waves form when the <u>wind blows over the sea</u>. <u>Friction</u> with the surface of the water causes small ripples in the water, which develop in to waves.</li> <li>• The energy of the wind causes the water particles to rotate as it passes over it, this causes the wave to move forward.</li> <li>• The distance the wind blows across the water is called the <u>fetch</u>. The longer the fetch, the more powerful the wave.</li> <li>• Waves can also be formed when earthquakes and volcanic eruptions shake the seabed. These waves are known as <u>tsunami</u> waves.</li> </ul>	<p>The size and strength of a wave depend on:</p> <ol style="list-style-type: none"> <li>1) The speed of the wind</li> <li>2) Length of time the wind blows</li> <li>3) The distance the wave has travelled: (Fetch)</li> </ol>

Transportation- sub types
<ul style="list-style-type: none"> <li>• <b>Traction</b> - Where large rocks and boulders are rolled along the river bed.</li> <li>• <b>Saltation</b> - Where smaller stones are bounced along the river bed in a leap frogging motion.</li> <li>• <b>Suspension</b>- Where very small grains of sand or silt are carried along with the water.</li> <li>• <b>Solution</b> - Where some material is dissolved (like sugar in a cup of tea) and is carried downstream.</li> </ul>



# RESPONDING TO SUFFERING

## 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

Which is worse; natural or moral evil?

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

What makes it hard to forgive?

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

Why do you think genocides happen again and again?

How do we show we are sorry?

As we study think about...

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

## KEY WORDS:

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

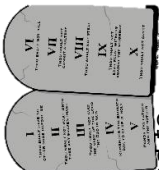
Create a key word quiz or flash cards

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

Forgive your brother 70 x 7 times (Jesus)

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

Allah is merciful so Muslims should show mercy too

# THE PROBLEM OF EVIL

- 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



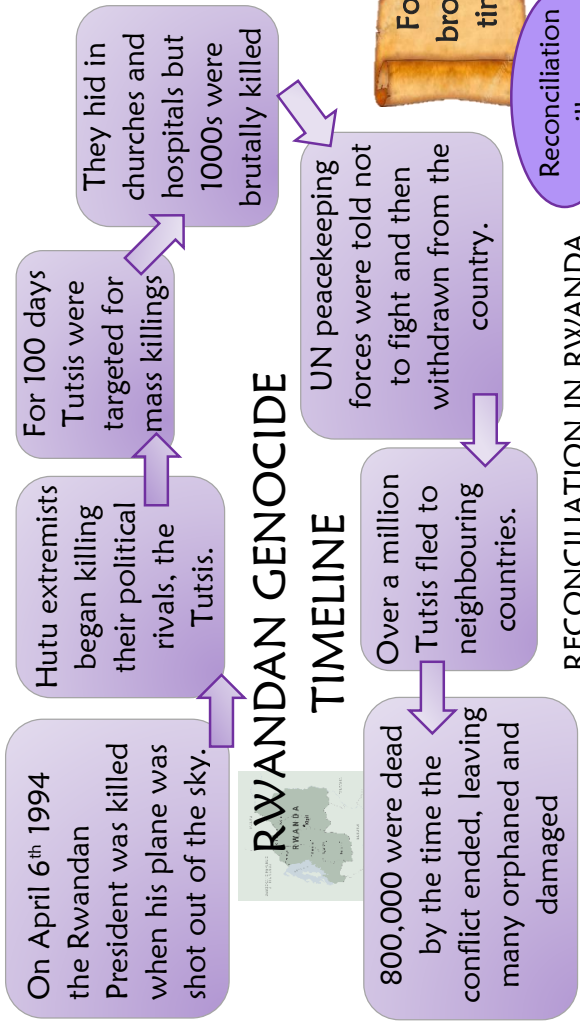
Charities

Campaigning

Forgiving

# RWANDAN GENOCIDE

## TIMELINE



## RECONCILIATION IN RWANDA

To bring communities together again they created:

### 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.

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



# ART KNOWLEDGE ORGANISER

YEAR 9  
TERM 2 (January-March)  
Contemporary Mixed Media Art

## Topic: People and Places

### Context:

Artists have been inspired by the theme People and Places for centuries. As time has evolved, the approach to this theme has changed with the times and the technologies available. Painters and artists have explored this theme throughout many different art movements ranging from Impressionism (1860's), Cubism (early 1900's), Pop Art (1950's) and more contemporary styles of art today, for example Mixed media and Digital art. Street and graffiti artists create art in public places such as on a building or wall, usually to convey a political/social message or commemorate an event. One of Britain's most famous street artists is Banksy. 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. Another artist who is inspired by people: mainly celebrities is a French Artist called Argadol. He is known for his bright, bold portraits of icons and superheroes. Argadol creates his artwork using media and will fill up the entire composition and background with messages, symbols and other pop culture references. Argadol has a unique style and uses spray and acrylic paint, stencils, collage and paint pens in his work. Argadol loves music, in particular classic rock. His dream was to be a musician. Music still plays a crucial role in his art. He will always paint while listening to music. Argadol tries to show deep messages in his artwork. All his artworks have black borders and black drips, to signify the dark side of society, showing that everything isn't as it can appear.

### Task List

**Week 1:** Ap 1 revision; Find an image of a celebrity you admire. Using pencil produce a tonal drawing of your celebrity, remembering to apply the correct proportions to the face and apply the drawing techniques you learned about last term while completing your work on portraits.  
**Week 2:** Practice key literacy vocab 1-6 - look, cover, write, check, correct x 3. Read the sentences again and check for understanding. **Week 3:** Practice key phrases 7 -12 - look, cover, write, check, correct x3. Read the sentences again and check for understanding.  
**Weeks 4/5:** Watch the video about Graffiti: Is it Art? Or Vandalism? After watching the video, create a mind map exploring both sides of the argument. See if you can draw your name in a graffiti style.  
**Week 6:** Research Banksy's work and pick a favourite image that you like. Write about what it is you like about this work and why you find it interesting.  
**Weeks 7/8:** Select an image of Banksy's work and complete a drawing of this work (or a section if it is a big piece). Try to think carefully about composition, in particular text the message portrayed in his work.  
**Weeks 9/10** Watch the video clips showing the French artist Argadol at work. Write about what it is you like about his work and why you find it interesting.  
**Week 11:** Produce a collage about a celebrity you like and admire. Aim to capture the celebrities identity in the collage you create.

### Key Literacy Vocabulary:

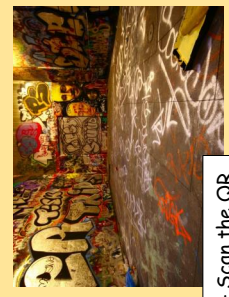
1. Landmarks - an object or feature of a landscape or town that is easily seen and recognized from a distance.
2. Publicity - notice or attention given to someone or something by the media.
3. Iconic - someone who is a celebrity, politician or famous for doing a particular thing.
4. Public places - an indoor or outdoor area, which the public have right of access to, for example a park or a street.
5. Graffiti - writing or drawings sprayed on a wall or other surface in a public place
6. Celebrity - someone who is well known and famous.
7. Pop Art - the art movement in which artist explored everyday objects, celebrities and comic books. Artists include: Roy Lichtenstein and Peter Blake.
8. Street Art - artwork that is created in a public place.
9. Headlines - the title of the story in a newspaper or magazine.
10. Mixed Media - a variety of media used in a work of art.
11. Contemporary - living or occurring at the same time, modern, present day.
12. Inspiration - the process of being mentally stimulated to do or feel something, especially creative.



**Week 1**  
Watch the video clip to refresh your memory on how to draw a portrait from a photograph, before you do your own pencil drawing.



**Weeks 4/ 5 -** Scan the QR code to watch the video, then explore both sides of the argument about Graffiti.



**Week 6**  
Watch the Banksy clips to find out a little bit of information about this mysterious British Political/Street Artist.



**Weeks 9/10**  
Watch the video clips showing the French artist Argadol at work.





# DESIGN TECHNOLOGY KNOWLEDGE ORGANISER

YEAR 9

## Topic: Jewellery project

### My Tool Box



**Piercing Saw** – Used to cut thin sheet metal.



**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.



**Scribe**- Used to mark out on metal.



**Buffer/polishing machine**- Used to buff/polish metal and plastics



**Tin snips** – Used to cut thin sheet metal.

### Focused topics

**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**

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

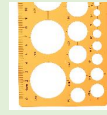


Name	Description	Uses	Name	Description	Uses
Cast Iron	• Very strong in compression • but brittle • Remained hot iron without other metals	• Man hole covers • Metal work vices • Iron frying pans	Aluminium	• Can be polished for a good finish • lightweight and can be anodised for colour	• Cooking foil • Sausage pans • Toy cars • Ladders
Mild Steel	• Ductile and Malleable • Rusts quickly if exposed to moisture	• Nuts • Bolts • Car bodies • Furniture Frames • Gases	Copper	• Reddish brown • Ductile and malleable	• Plumbing • Electrical • Drilled heels
Stainless Steel	• An alloy of iron with 18% chromium and 8% Nickel. • Does not rust and resists surface wear	• Kitchen sinks • Cutlery • Discs • Surgical Instruments	Tin	• Bright silver • Ductile and malleable • Resistant to corrosion	• Most commonly used as a coating on food cans and animal 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.

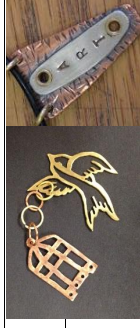
**Task 7:** Teach it. Create a task that can be used to teach some of the information from here.

### To go further:

How it's Made: Aluminium



Onshape: 3D modelling tutorial



### Week One

Using the **Cells** Knowledge organiser draw and label an *animal and plant cell* in your home learning book.

Under each label give details for the function of each organelle.

### Week Two

Read your knowledge organiser focusing on **Cells** for 5 minutes. Turn to the page labelled **Cells 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 Three

British Science Week!!

Turn to the information page about this years BSW which is themed 'Time' to find your activity for the week.

### Week Four

Read your knowledge organiser focusing on **Cells** for 5 minutes. Turn to the page labelled **Cells Questions**.

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

Answers questions 11-20 in full sentences.

Mark your own work using the answers.

### Week Five

Read your knowledge organiser focusing on **Cells** for 5 minutes. Turn to the page labelled **Cells Questions**.

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

Answers questions 21-30 in full sentences.

Mark your own work using the answers.

### Week Six

Draw the process of mitosis in your home learning booklet.

Explain how a parent cell completes the process of mitosis in order to produce 2 daughter cells.

WE ARE USING



TASSOMAI

Have you completed your 4 daily goals?

Completion of your 4 daily goals this

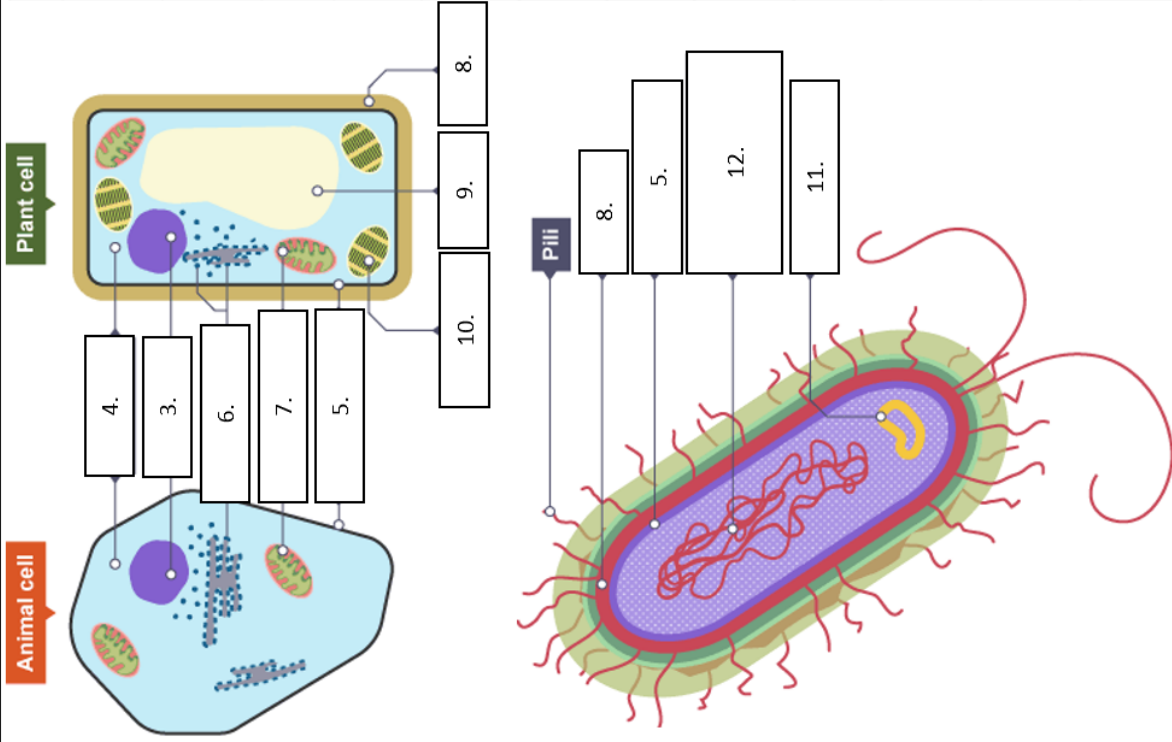
week will help progress! 😊

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!

# Biology Topic 1: Cell Biology

## 1. Cell structure



### Keywords

<b>1. Eukaryotic</b>	A complex cell with a nucleus (e.g. animal or plant cells).
<b>2. Prokaryotic</b>	A smaller cell without a nucleus (e.g. bacterial cell).
<b>3. Nucleus</b>	Contains genetic material.
<b>4. Cytoplasm</b>	Where a cells chemical reactions happen.
<b>5. Cell membrane</b>	Controls what goes into and out of a cell.
<b>6. Ribosome</b>	Part of a cell where proteins are made.
<b>7. Mitochondria</b>	Where aerobic respiration takes place.
<b>8. Cell wall</b>	Only found in plant cells. Made of cellulose and supports the cell.
<b>9. Vacuole</b>	Only found in plant cells. Contains cell sap.
<b>10. Chloroplasts</b>	Only found in plant cells. Where photosynthesis takes place.
<b>11. Plasmid</b>	Only found in bacterial cells. A small loop of DNA.
<b>12. Genetic material</b>	Long strands of genes not tightly pack in a nucleus.

## 2. Specialised cells

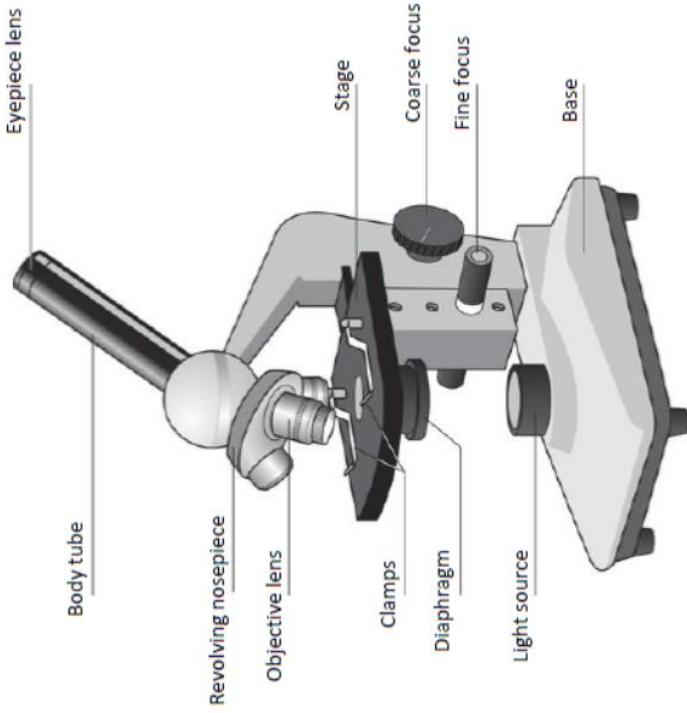
### Keywords

<b>Differentiation</b>	A stem cell turning into a specialised cell
<b>Stem cell</b>	A special type of cell which can turn into other specialised cells
<b>Adult stem cells</b>	Can only produce certain types of cell - found in bone marrow
<b>Embryonic stem cells</b>	Can produce all types of cells - controversial
<b>Meristems</b>	Where plant stem cells are found
<b>Sperm cells</b>	Take male DNA to the egg <ul style="list-style-type: none"> <li>• Tail to help it swim</li> <li>• Lots of mitochondria for energy</li> </ul>
<b>Nerve cells</b>	Carry electrical signals around the body <ul style="list-style-type: none"> <li>• Long to cover long distances</li> <li>• Branches to connect to other cells</li> </ul>
<b>Muscle Cells</b>	Muscle cells contract <ul style="list-style-type: none"> <li>• Long so have space to contract</li> <li>• Lots of mitochondria for energy</li> </ul>
<b>Root hair cells</b>	Root hair cells absorb water and minerals <ul style="list-style-type: none"> <li>• Long hairs</li> <li>• Big surface area for absorption</li> </ul>
<b>Phloem Cells</b>	Phloem cells transport sugars <ul style="list-style-type: none"> <li>• Long tubes joined end to end</li> </ul>
<b>Xylem cells</b>	Xylem cells transport water (plants) <ul style="list-style-type: none"> <li>• Long tubes joined end to end</li> <li>• Hollow so water can flow through</li> </ul>

### 3. Comparing types of microscope

Type of microscope	Advantages	Disadvantages
Light microscope	<ol style="list-style-type: none"> <li>Cheaper</li> <li>Can see colours</li> <li>Can see live specimen</li> </ol>	<ol style="list-style-type: none"> <li>Lower magnification</li> </ol>
Electron microscope	<ol style="list-style-type: none"> <li>Expensive</li> <li>Higher magnification (x1000 more)</li> </ol>	<ol style="list-style-type: none"> <li>Can only see dead specimen</li> <li>No colour</li> </ol>


#### Parts of a microscope



### 4. Calculating magnification

$$\text{magnification} = \frac{\text{image size}}{\text{real size}}$$

$$\text{Real size} = \frac{\text{image size}}{\text{magnification}}$$

	2mm	0.13	130000	20000000
	130µm	0.00725	7250	32000000
	0.032m	32000	32000000	32000000
	7.25µm	7.25	7250	7250

$\times 1000$  (mm)  $\rightarrow$  (µm)  $\rightarrow$  (nm)  $\times 1000$   
 $\div 1000$  (nm)  $\rightarrow$  (µm)  $\rightarrow$  (mm)  $\div 1000$

Key Terms	Function
Stage	Area where specimen is placed
Clamps	Hold the specimen still whilst it is being viewed
Light source	Illuminates the specimen
Objective lens	Magnifies the image of the specimen
Eyepiece lens	Magnifies the image of the specimen
Course/fine focus	Used to focus the specimen so it can be seen clearly
Revolving nosepiece	Holds 2 or more objective lenses

6. Cell division	
Keywords	
Chromosomes	Long strands of DNA containing genes. Found in 23 pairs in a human.
Cell cycle	The process the cell goes through to divide.
Mitosis	A type of cell division that creates 2 identical daughter cells.
Therapeutic cloning	Using an embryo to create cells that have the same genes as the patient. Controversial.

8. Transport in cells		Examples
Keywords	Definition	
Diffusion	The passive movement of a substance from an area of high concentration to an area of low concentration	<ul style="list-style-type: none"> <li>Oxygen and carbon dioxide in the lungs</li> <li>Perfume in a room</li> </ul>
Osmosis	The movement of <b>water</b> molecules across a partially permeable membrane from a less concentrated solution to a more concentrated solution.	<ul style="list-style-type: none"> <li>Water uptake in plants</li> <li>Water absorption in the intestine</li> </ul>
Active transport	Movement of a substance from a lower concentration to a higher concentration, against the concentration gradient. <b>Uses energy.</b>	<ul style="list-style-type: none"> <li>Mineral absorption by roots</li> <li>Glucose absorption by the intestine</li> </ul>
Surface area to volume ratio	The surface area divided by the volume expressed as a ratio	All high <ul style="list-style-type: none"> <li>Unicellular organisms</li> <li>Alveoli in the lungs</li> <li>Villi in the intestines</li> </ul>

7. Stages of mitosis	
1.	The cell grows and copies all its DNA, mitochondria and ribosomes.
2.	The nuclear membrane dissolves and the copied chromosomes pair up.
3.	The chromosomes are pulled to opposite sides of the cell.
4.	The cytoplasm and cell membrane divides making two identical cells.

9. Factors that effect the rate of diffusion/osmosis	
Speed up	Slow down
High concentration gradient	Low concentration gradient
High temperature	Low temperature
High surface area of membrane	Low surface area of membrane



## Cells – Key Questions

### Questions

1. State the 5 sub-cellular organelles in an animal cell
2. State the 8 sub-cellular organelles in a plant cell
3. State the function of the mitochondria of a cell
4. Define "diffusion"
5. What do we mean by dynamic equilibrium?
6. Which substances diffuse into and out of cells?
7. State three adaptations of red blood cells
8. State two adaptations of muscle cells
9. State the function of ciliated epithelial cells
10. State an adaptation of a palisade cell
11. State the function of the cell wall of a cell
12. State the function of the cell membrane of a cell
13. State the function of the cytoplasm of a cell
14. State the function of the nucleus of a cell
15. State two functions of the vacuole of a cell
16. Define "eukaryotic cell"
17. What are the main parts of a light microscope?
18. Why is Robert Hooke associated with microscopes.
19. How do we calculate the total magnification of a light microscope?
20. What do we call living things made of only one cell.
21. Name the pigment in chloroplasts that absorbs light.
22. What is the word equation for Photosynthesis?
23. What is the symbol equation for Photosynthesis?
24. What are the adaptations of a root hair cell?
25. What is the function of a root hair cell?
26. What are the roles of the food vacuole and pseudopoda in amoeba?
27. What are the roles of the eye spot and flagellum in euglena?
28. What is the word equation for aerobic respiration?
29. What is the word equation for anaerobic respiration in animals?
30. What is the word equation for anaerobic respiration in yeast?

### Answers

1. Nucleus, cell membrane, ribosomes, cytoplasm, mitochondria.
2. Nucleus, cell membrane, ribosomes, cytoplasm, mitochondria, cell wall, chloroplast and vacuole
3. Where aerobic respiration occurs in a cell
4. The movement of particles from a high concentration to a low concentration
5. dynamic equilibrium means that molecules still move across a cell membrane but the concentrations remain equal on each side.
6. Oxygen, glucose, carbon dioxide and water diffuse into and out of cells.
7. Red Blood Cells have a large surface area, no nucleus and lots of haemoglobin.
8. Muscle cells have protein fibers to contract and relax and lots of mitochondria to provide energy from aerobic respiration.
9. Ciliated epithelial cells move mucus out of airways.
10. Palisade cells have lots of chloroplasts for photosynthesis
11. Provides support for the cell
12. Controls what enters and leaves the cell
13. Where chemical reactions occur in a cell
14. Contains DNA and controls the function of the cell
15. Stores minerals and sugars and gives structure
16. DNA contained in a nucleus
17. The base, diaphragm, objective lens, eyepiece lens, coarse focus, fine focus, stage.
18. Robert Hooke produced the first sketches of microscope images in his book "Micrographia". He also came up with the term "cells".
19. You calculate total magnification by multiplying eyepiece magnification by objective magnification.
20. Unicellular organisms consist of only one cell.
21. Chlorophyll is the pigment in chloroplasts that absorbs light.
22. Carbon Dioxide + Water --> Glucose + Oxygen
23. CO<sub>2</sub> + H<sub>2</sub>O --> C<sub>6</sub>H<sub>12</sub>O<sub>6</sub> + O<sub>2</sub>
24. Root hair cells have a large surface area and no chloroplasts.
25. The function of a root hair cell is to absorb water and minerals from the soil.
26. The function of the food vacuole is absorption and digestion of food, the pseudopoda all movement to take place.
27. The eye spot detects light and the flagellum allows movement.
28. Glucose + Oxygen --> Carbon Dioxide + Water
29. Glucose --> lactic acid
30. Glucose --> ethanol + carbon dioxide



The theme this year for British Science Week is 'Time!' It's the 30th anniversary of British Science Week – we want you to celebrate this huge milestone with us, thinking about time since the Week began, and looking to the future!



The theme this year is 'Time', – there are loads of STEM topics to be explored! Students could create a poster showing how a certain type of technology has changed over time, or even the advancement of time-telling technology itself. Budding poster makers could also go futuristic show us how they think the world might look in years to come, or perhaps look at nature – lifecycles, lifespans, evolution and hibernation – nature is full of timely topics.

**Your task this week is to create an A4 poster about TIME. Posters should be bright and colourful!!**

**You are welcome to join Miss. Robinson in C505 after school on Wednesday to use pencils and coloured paper to create your masterpiece.**

**The Science department will be sending the 5 best posters to a national competition where you could win a prize!!!**

## Skill terms

## Definitions

<b>Down</b>	An attempt to at play period of time that begins when the ball is snapped by the centre until the ball becomes dead.
<b>Touchdown</b>	When a team runs with, or catches the ball in the opponent's endzone.
<b>Conversion</b>	Points awarded after a touchdown when a team attempts to run or pass the ball into the endzone.
<b>Handoff</b>	When the QB hands the ball to another player after the snap.
<b>Snap</b>	A pass round the side or backwards through the legs of the Centre, which begins the game.
<b>Line of Scrimmage (LoS)</b>	An imaginary line across the width of the field of play beyond which a team cannot pass until the next play has begun. Play begins with a snap on this imaginary line with the ball in the middle of the field.
<b>Safety</b>	When an offensive player is tackled in their own endzone. (Please note, the word 'safety' is also used to refer to a particular defensive position.)
<b>Offside</b>	Movement of an offensive player on the LoS before the ball has been snapped or a defensive player crossing the LoS.

## How to play

The aim of the game is to score more touchdowns than the opposition. A touchdown is scored when a player runs with the ball or catches it in the opponent's endzone (it does not need to be touched to the ground). The opposing team try to 'tackle' offensive players (pull their flags) which results in the game being stopped. The opposition gain possession if they pull a flag, or if the attacking team do not score a touchdown from four downs (plays or attempts).

# Flag

## Offence

# NFL



- The offence has **4 downs** (attempts) to move the ball into the defenders' half of the field or to score a touchdown.
- The offensive team is awarded another set of 4 downs if the ball crosses the halfway line.
  - The ball-carrier is 'tackled' if one flag is pulled.
  - Play starts when the centre 'snaps' the ball to the QB. This means that, in one fluid motion from the ground, the centre snaps the ball through their legs to the QB standing 2 yards behind them. This must be done within 30 seconds of placing, or spotting, the ball in position for play to begin.
  - Offensive players are not permitted to start their run down the field until the ball has been snapped. If they do, a false start is declared.



- The ball can only be thrown forward once on any down by a player who must be behind the **Line of Scrimmage (LoS)**. This is an imaginary line across the width of the field beyond which the teams cannot pass until the next play has begun.
- If a player catches a forward pass they cannot pass it on to another team member. They must run with it.
- A player cannot pick up and run with a ball that has hit the ground. The play is whistled 'dead' and the next play will begin from the last point of possession before the ball was dropped.
- The ball-carrier cannot push the defender's hand away from the flag or hold onto the opponent's flag to stop it being pulled. This is called 'flag guarding' and results in a penalty

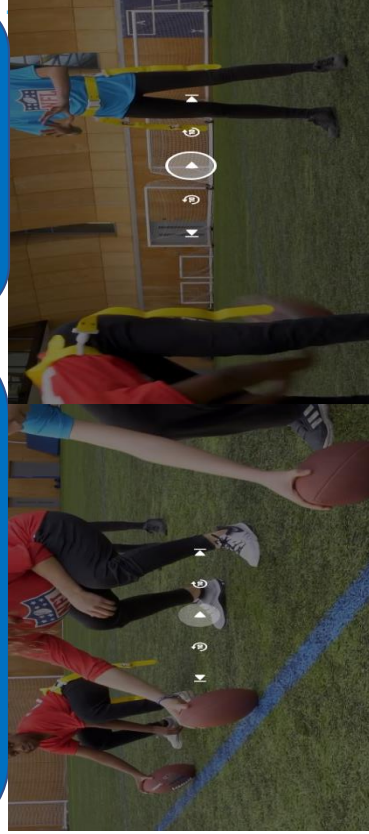
## Snap

This is how to start the game. The snap is performed by the centre.

The centre starts with the ball and holds it in 1 hand with the ball on an angle

The teammate behind you is known as the quarter back and they will give the commands “ready, down, set, HUT!”

On “HUT” the centre throws the ball backwards between their legs to the quarter back who should receive the ball around their chest height (image 2)



## Components of fitness in Flag NFL

- Speed
- Power
- Agility
- Reaction time
- Flexibility
- Co-ordination
- Cardiovascular endurance

## Definition

- Defenders try to stop the offensive team advancing the ball or scoring by:
- Intercepting (catching) the ball when it is in flight and catching it. If a defender intercepts the ball they can try to run it back to the opposing team's endzone for a touchdown.
  - Hitting the ball away from the intended receiver while it is in flight.
  - Pulling a flag from the receiver after the ball has been caught (Defenders can only pull flags from offensive players if they have possession of the ball).
  - Pulling a flag from the RB as soon as a handoff is made. (Once the ball has been handed off, all defensive players can cross the LoS. This includes in the event of a fake hand-off or a 'play-action').
  - If the ball doesn't cross the halfway line in 4 downs or there is no score the ball is handed to the opposing team. The offensive team takes possession from their own 5-yard line.
  - Flag Football is a non-contact sport. No one can physically stop anyone running down the field of play or catching/ intercepting passes.

# Flag NFL



### Task 1:

- 1) What is the name for the player who snaps the ball?
- 2) What are the 4 command words before snapping the ball?
- 3) What is the name of the player who receives the ball?
- 4) Where should the ball be received on the body

### Task 2

On page 1  
Cover up all the definitions but copy out all the skill terms and definitions and see how many definitions you can remember  
Repeat this task more than once to try improve your score

### Task 3

- 1) How is a touchdown scored?
- 2) What do defenders need to pull to tackle?
- 3) After 4 downs, what part of the field do the attacking team need to be at?

### Task 4

Look at the Flag NFL playing field for no longer than 2 minutes.  
Now based off memory, draw the Flag NFL playing field including all the details. The details should include all the distances in yards for each area and the names of that area.  
Bonus stretch and challenge  
Can you list the point systems for the areas on the playing field.

### Answers

- Task 1.
- 1) The centre
  - 2) ready, set, down, HUT
  - 3) quarterback
  - 4) Around chest height

### Answers

- Task 2
- 1) Uncover the definitions to see how many you got correct

### Answers

- Task 3
- 1) when a player runs with the ball or catches it in the opponent's endzone
  - 2) Pull the flag
  - 3) Either half way line or endzone

### Answers

Task 4

Look back over the playing field on page 1.

Bonus stretch and challenge  
6 point for the end zone  
1 point for no run zone to endzone (after the touchdown)  
2 points for 20 yards to endzone (after the touchdown)

PERFECT  
PRACTICE  
MAKES  
PERFECT



*SCAN ME*

Learning to Learn



*SCAN ME*

The 'Listen' Project #1