HOME-LEARNING

KNOWLEDGE ORGANISERS

YEAR 8

HALF TERM 3

"AN INVESTMENT IN KNOWLEDGE PAYS THE BEST INTEREST."

BENJAMIN FRANKLIN

Core Values

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

We believe that great learning comes from:

Politeness

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

Hard-work

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

Honesty

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

What is learning?

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

What is a knowledge organiser?

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

Why are knowledge organisers good for learning?

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

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

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

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!

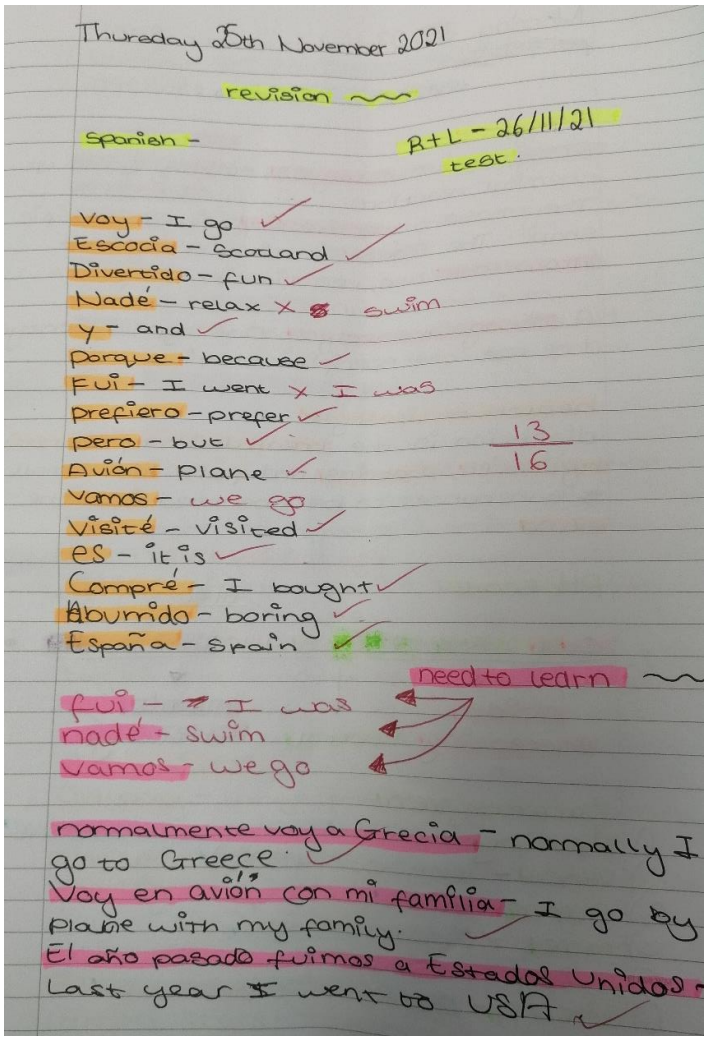
What does effective home-learning look like?

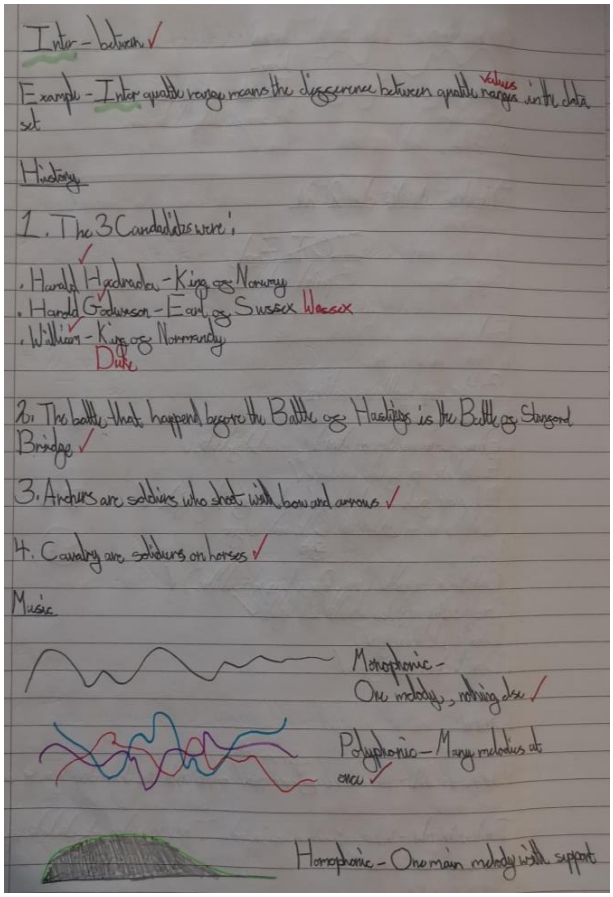
Here are some essential points to remember and some examples to see.

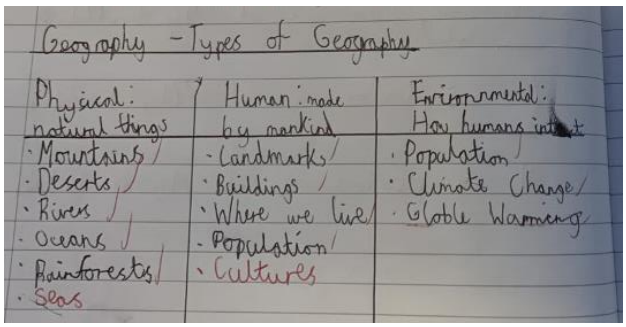
- Long term memories are created when you have to **think**. Simply copying does not help you remember. Testing yourself will make you **think** and remember

- 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 [Hegarty Maths On-Line and Prefixes & Suffixes]	**ICT/ Food**	**English** [Supported by Educake Tasks]	**Art/Dt**	
History	**Drama**	**Geography**	**Science** [Knowledge Organisers]	
Music	**Spanish**	**RS**	**Active Lifestyles**	
← **Science: Tassomai On-Line (complete one daily goal each day)** →				

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

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

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

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

How to use the 'Listen' Project

Start Here

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

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

Take time out and listen…

Step 1 – Click the link and listen.

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

Step 2 – Check the text.

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

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

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

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

Step 3 – What's the connection?

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

Where have you thought about these ideas before?

Do you think about any of these ideas in school?

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

SCAN ME

The 'Listen' Project #1

Dogs

Hairy Maclary from Donaldson's Dairy

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

And Hercules Morse
As big as a horse

With Hairy Maclary
From Donaldson's Dairy.

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

And Hairy Maclary
From Donaldson's Dairy.

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

and Hairy Maclary
From Donaldson's Dairy.....

Humph.....

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

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

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

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

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

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

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

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

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

Man's Best Friend

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

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

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

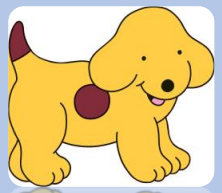
The three men were lining a boat down a stretch of rapids. Hans and Pete moved along the bank, snubbing with a rope from tree to tree, while Thornton remained in the boat, helping its descent by means of a pole.

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

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

Dogs

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



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

Humph…

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

Man's Best Friend

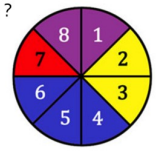
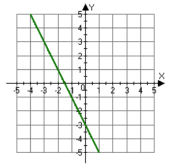
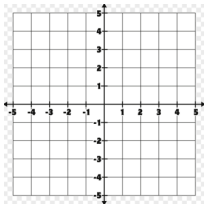
The story of Buck is told in **Jack London's *Call of the Wild***. The story is told from the perspective of Buck the dog and details his adventures in the Alaskan wilderness during the gold rush. Although the story is told from the animal's perspective, **London** works hard to retain ***realism***.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

Mathematics

Your Maths Home Learning has two parts:

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

Part 2 is: Access **www.hegartymaths.com** → Watch the video , making notes in your book → Complete the assigned quiz

Week	Key Word	Definition	Task	Hegarty Task
9th January	Prism	A 3D shape which has the same cross section throughout Eg. So you can slice it anywhere and it would have the same face	In your home learning book, research a draw these prisms: Cuboid Cylinder Triangular Prism	829
16th January	Probability	The chance that something will happen What is the probability of spinning blue ?  Eg. There are 8 outcomes on the spinner. 3 of them are blue so the probability of spinning blue is 3/8 This can also be given as 0.375 or 37.5%	In your home learning book, give the probability of rolling a dice and getting • 5 on the dice • An odd number • A number greater than 4	351
23rd January	Equation of a line	The equation of a straight line is given as: y = mx + c x and y are any points on the line m is the gradient Example:  Other examples: $x = y$ $y = 4$ $x = -2$ $y = 2x - 7$ $y + x = 10$ $2y - 4x = 12$	In your home learning book, sketch an axis and plot the points: (-1,-1) (0,1) (1,3) (2,5) 	206
30th January	Gradient	How steep a line is (going up or down) The larger the gradient the steeper the line A negative gradient means the line goes down Eg. y = 5x + 3 gradient is 5	In your home learning book, identify the gradient of Y = 3x + 1 y= 3 + 2x y = 4x + 2 Y = -2x + 3 y = 3 - 0.5x y = -3x + 4	207
6th February	Y-Intercept	The point where the line crosses the y axis (x=0) X is 0 so the line is on the y axis (see graph) Eg. y = 3x—4 y intercept is –4	In your home learning book, identify the y intercept of Y = 3x + 1 y= 3 + 2x y = 4x + 2 Y = -2x + 3 y = 3 - 0.5x y = -3x + 4	208

History KNOWLEDGE ORGANISER

Topic: The Industrial Revolution, 1745-1900

YEAR 8
HT3

Overview



The years 1745-1900 saw great change in Britain. The population grew faster due to breakthroughs in medicine leading to people living longer, healtheir lives and by 1900 more people lived in towns and cities than the countryside in a process called **urbanisation**. This effected the daily lives of all people in Britain as their family and work lives became dominated by various new inventions, ways of working and leisure activities that sprung up throughout the **Industrial Revolution**. During this period the **British Empire** grew to become the largest the world had ever seen and led to Britain becoming the first Industrial nation on Earth. Cities grew massively, including Liverpool which saw its port become an integral part of the Empire. Many modern sports were born in this period such as football and rugby and the country shifted from being ruled primarily by a **monarch** to rule by **parliament**. All of this shaped Britain into the modern society it is today.

Great Change

1745

Power – After the **Bill of Rights** was passed in 1688, the monarch's power was limited. However, in 1745 parliament still needed to have the Kings approval to pass laws. During this time the Hanover Kings ruled (George I, II & III), who usually left parliament to rule on their own.

Work - In 1745, Britain was still a farming society. 80% of people worked in the countryside and the vast majority of people were poor. They worked to feed themselves and sell food and products at a market. Products were made in small workshops that employed no more than 50 people and there was limited trade between countries.

Entertainment - In 1745 most people in Britain were illiterate so only the rich read books. They would also spend their time hunting and attending concerts and ballet. The poorer people would spend time at a local pub, playing skittles, bowls and cards.

Travel - Travel had not improved in centuries as roads were of very poor quality. Most people rarely left their village as travel was so slow. For example, it could take 2 weeks to travel from London to Edinburgh!

1900

Power – By 1900 parliament was largely independent of the monarch and was left to rule on its own, much like the system we see today. During the 19th century two reform acts passed in 1832 and 1867 led to more men gaining the right to vote, making Britain a more democratic country. However, women did not gain the right to vote until 1928.

Work - Due to the Industrial Revolution many people moved to the cities in search of a better life. Large factories employed hundreds of workers, creating many new products and there was lots of trade with other countries.

Entertainment - As education improved more and more people could read and so authors could sell their books to thousands of people. By 1900 the beginnings of cinema had come to Britain and people were amazed at the moving images.

Travel - The invention of the steam engine and railways opened up more of the country to ever quicker travel throughout the 19th century. For example, in 1830 the first inter-city railway in the world was built between Liverpool and Manchester.

Impact of change

Domestic to Factory Systems

The domestic system involved the whole household. Families created products such as woollen cloth, shoes and clay pots in their home in order to sell to buy food. This was especially important in times when food crops failed. Products often took a long time to make and therefore both output and money made was low. However, during the 18th and 19th centuries a series of inventions such as the spinning jenny allowed for the speeding up of production in areas such as cloth making. As machines got bigger and needed more people to run them, factories were set up as **centres of production**. This movement away from the home (domestic system) and into the factories was a major part of the Industrial Revolution.

Life of Factory Workers

As machines could be worked 24 hours a day, factory owners started to make people work 'shifts'. As people were not used to this, strict **codes of discipline** were put in place and people could be fired for being late. **Working conditions** could best be described as disgusting and dangerous as factory owners only cared about profit. There was no safety equipment, noise would make people go deaf and the dust would make them sick. Many factories employed children too, using their small bodies to do often dangerous jobs that adults were too big for. Many people worked for extremely low pay and had to work 6 days a week with only Sundays off to attend church!

Conditions in Industrial Towns


Work in the factories led to a **mass migration** (movement) of people moving from the countryside to towns. These growing cities needed cheap homes and lots of them. Terraced housing became the solution, often built with cheap materials to maximise profits. Entire families lived on one floor of the home and this led to cramped, disease ridden conditions. Houses did not have their own bathrooms or water supply and people had to use an outside toilet and a local well, leading to **cholera epidemics**. There would be a courtyard between each row of terraces were waste of all sorts would be thrown leading to extremely unhygienic places to live. All of this paints a picture of dirty towns and cities all over the country where the poor often led unhealthy lives.

Liverpool to Manchester Railway

The Liverpool to Manchester Railway, completed in 1830, was the first successful railway line to open in Britain. The Liverpool to Manchester Railway was a much needed link between the two major cities in the northwest for factory owners in Manchester and Lancashire. The Liverpool & Manchester Railway was the main cause for '**Railway Mania**' which saw railway building take place all around the world. It changed perceptions of time and space and revolutionised people's work and personal lives in a huge way.

Domestic System – The focus on the household as a centre of production.

Economies of scale – The efficient mass production of products which led to them becoming very cheap and therefore available to everyone.

Factory System – The focus on factories as new centres of production.

Industrial Revolution – A period of time in Britain from 1745-1900 when people moved the countryside to cities in search of work due to the many factories being set up there.

Mass migration – A movement of a mass amount of people from one place to another. During the 19th century in Britain this was people moving from the countryside to cities.

Reform Acts – Changes to the voting laws in 1832 and 1867 that gave more voting rights to men within Britain.

Rural Society – A country where most people live in the countryside focusing their time on farming.

Spinning Jenny – A new invention which led to a faster production of cloth, which Britain was sending all around the world at this time.

Urbanisation – The building up of cities and movement of people into these cities.

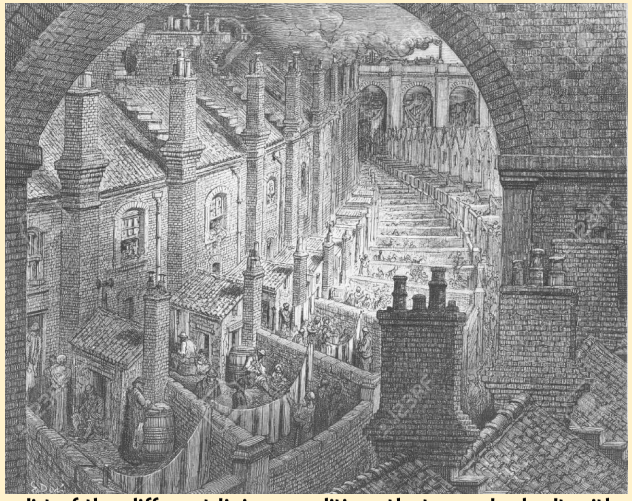
Task 1

In no more than two sentences, for each category (power, work, entertainment and travel), explain how there was change between the years 1745-1900.

Task 2

Describe the main differences between the domestic and factory systems of work. Think about how they came about and what this meant for families and Britains economy.

Task 3



Label or make a list of the different living conditions that people dealt with on a daily basis.

Task 4

Write a diary entry from the perspective of a factory worker talking about their daily life.
Think about: Work, Family life, Food, Entertainment, Travel

Task 5

Research one invention that helped revolutionise Britain during the 18th and 19th centuries. Draw an image of the invention and label or write a description about how the invention improved working systems.

Task 6

Follow the link to BBC Bitesize. Read through the information all about the Industrial Revolution and then complete the quiz at the end to check your knowledge.

https://www.bbc.co.uk/bitesize/topics/zm7qtfr/articles/z6kg3j6#zsqk4xs0

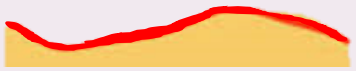
SCAN ME

ELEMENTS OF MUSIC 1

Texture:

Monophonic:  One melody – nothing else

Polyphonic:  Many melodies at once

Homophonic:  One main melody with support

Unison:  Two instruments playing the same melody at the same time

Rhythm:

Time Signature: The regular count of the music. How many beats are in each bar?

$\frac{3}{4}$ $\frac{4}{4}$ $\frac{6}{8}$ $\frac{4}{4}$ Is the most common **time signature.**

Syncopated: Playing off the beat. This will create a more complicated rhythm. Syncopation is common in jazz and popular music as well as much folk music (i.e. African drumming, Samba)

Ostinato: This is a repeated pattern. A repeated rhythm can be very effective in creating a strong sense of rhythm (**Samba** and **African drumming** use layers of **rhythmic ostinato patterns)**.

Polyrhythms: layers of different rhythms played at the same time (again, Samba and African drumming use polyrhythms).

Harmony:

Chromatic:	Complex harmony (notes added to chord)
Major:	Positive harmony (happy, relaxed)
Minor:	Negative harmony (sad, dark, gloomy)
Chord:	A group of notes played together (often 3 notes)

Instruments:

Strings:	Violin; Viola; Cello; Double Bass; Guitar; Sitar
Woodwind:	Flute; Oboe; Clarinet; Bassoon; Saxophone
Brass:	Trumpet; Trombone; French Horn; Tuba
Percussion:	Drums (lots of types); Tambourine; Cow Bell; Timpani
Keyboards:	Piano; Harpischord (used in Baroque Music); Organ

Timbre: The sound itself e.g. an instrument might sound metallic, breathy, mellow.

Task 1: Learn the names of the different textures and what they mean.

Task 2: Learn the harmony words and what they mean.

Task 3: Learn the rhythm words: **Time Signature; Syncopated; Ostinato** and what they mean.

Task 4: Learn which instruments are in the four instrument families (Strings; Woodwind; Brass Percussion) and what the word **timbre** means.

Task 5: Create a 10-question quiz based on **Texture** and **Harmony**.

Task 6: Create a 10-question quiz based on **Rhythm** and **Instruments**.

Year 8 – Cereal Grains, Potatoes and Dairy Foods

Key Vocabulary

Cereals – cultivated grasses. The grains are used as a food source.
Gluten – the protein found in wheat.
Fibre – the nutrient found in the cell walls of cereal grains – helps the digestive system.

Cereal Grains

Cereal grains grow on cultivated grasses. The grains can be eaten as a food source. Common cereal grains include wheat, oats and rice.

Wheat

Wheat is used in the production of flour and bread products. Flour needs to be processed in order to make flour. This process is called milling. This removes the outer layer of the grain and grinds the grain into flour.

The type of flour depends on the extraction rate – this is the percentage of the wheat grain found in the flour:

- 100 percent extraction rate is the wholegrain, which provides wholegrain flour.
- 85 percent extraction rate provides brown flour.
- 70 percent extraction rate is the wholegrain, which provides white or plain flour.

These flours can used to make lots of different products including breads, cakes, pasta, and biscuits.

Potatoes

Although potatoes are vegetables, a potato is actually a tuber. Tubers grow from roots. In the Eatwell guide, potatoes are included in the starchy foods section.

Different potato varieties have different qualities and uses:

- **Floury Potatoes** fall apart when cooked, such as Maris Pipers and King Edward. They are very good for baking and mashing. Recipes using floury potatoes include cottage pie, jackets potatoes, roast potatoes and hash browns.
- **Waxy Potatoes** such as Charlotte or Jersey Royals hold together when steamed or boiled. Recipes using waxy potatoes include potato salad, dauphinoise potatoes and cubed in soups.

Weekly Tasks

Task 1: Make a list of food products that are made with flour – next to the food, say whether it is made with white or wholegrain flour.

Task 2: Research and explain why we need fibre in our diet, and make a list of foods that provide it.

Task 3: List the different type of milk you can buy in a shop. Research and explain what the process of skimming is.

Task 4: Create your own 3 course menu – the starter should contain grains, the main should contain potato, and the dessert should have dairy.

Task 5: List the nutrients that are provided by cereal grains, potatoes and dairy foods. Are you getting enough of these in your diet?

Dairy Foods

Dairy products are foods made using the milk of a cow, goat or sheep. Cow's milk is most commonly used to make cheese and yoghurt. Bacteria, called starter cultures, are needed to make cheese and yoghurt. This causes the lactose (sugar in milk) to turn into lactic acid, which adds flavour and makes the product last longer.

Computing Department Knowledge Organiser: Year 8 HTML

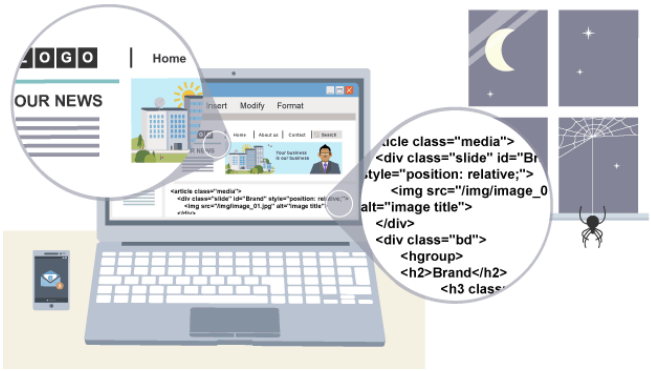
HTML - Using HTML to create websites

All web pages on the internet are created using a language called **Hypertext Markup Language** (HTML). HTML describes:

- what information appears on a webpage
- how it appears on the page (formatting)
- any links to other pages or sites

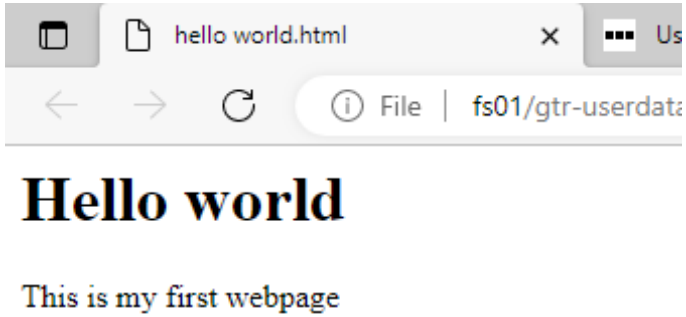
HTML can be written in specialist software, or in a simple text editor like Notepad.

As long as the document is saved with the file extension '.html' it can be opened and viewed as a webpage from a browser.



Use the QR code to read about the internet and HTML and complete the quiz.
What was your score: ...../10

Example webpage created in HTML



This example HTML code used to display the message on the webpage on your left:

```
<html>

<body>

<h1>Hello world</h1>

<p>This is my first webpage</p>

</body>

</html>
```

The code uses **tags** to describe the appearance of the information:

- `<html>` states that the document is a HTML document
- `<body>` states that the information appears in the body of the page
- `<h1>` states that the following text appears as a prominent heading
- `<p>` states that this is the beginning of a new paragraph

Computing Department Knowledge Organiser: Year 8 HTML

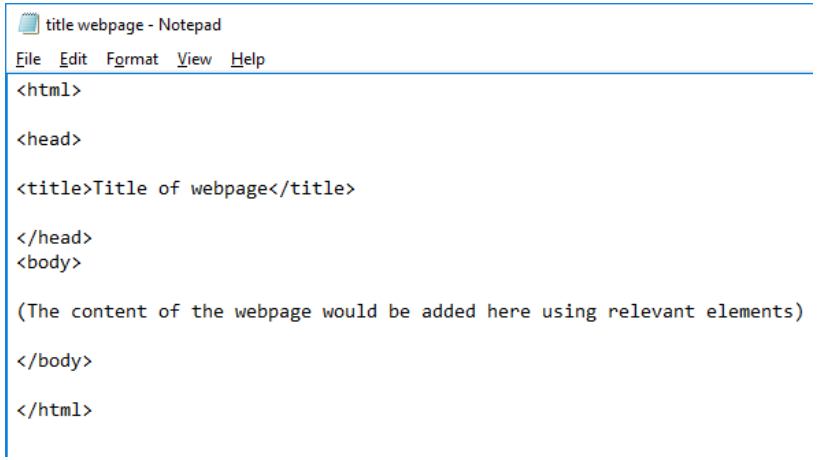
HTML – What are HTML tags?

What are HTML Tags?

- HTML tags help the browser to know how to display a web page to the user.
- You need to be familiar with how Hypertext Markup Language (HTML) is used to create web pages.

Tags start like `<tagname>` and usually end like this `</tagname>` although some can self-close.

Example webpage using the tags opposite in notepad:



There are **four critical tags** that are used to create webpages

`<html>...</html>`

The opening and closing tags of an HTML file. Tells the browser the rest of the document contains HTML tags.

`<head>...</head>`

These tags include all information about the page itself as well as links to JavaScript and CSS files. Metadata is entered here that can be indexed by search engines.

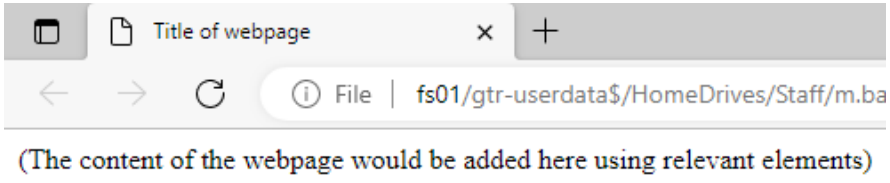
`<title>...</title>`

The text included between the opening and closing <title> and </title> tags is the title of the webpage. The title appears on browser tabs, as a page title. It is also what appears as the title of the webpage on search result pages.

`<body>...</body>`

Content within the <body>…</body> tags is the content that users will see on the page.

Example webpage using the HTML code on the left



Computing Department Knowledge Organiser: Year 8 HTML

HTML – What are other HTML tags can we use in a webpage?

Headings

Heading tags tell the browser to format the text within them in bold and a larger font size. This means that the text can then be used as a paragraph heading.

`<h1></h1>` tags produce the heading with the largest font size.

`<h6></h6>` tags produce the heading with the **smallest** font size.

h2, h3, h4 and h5 tags produce headings with font sizes in between h1 and h6.

Tags - Other tags you can use which tell the web browser how you want the page to be formatted:

Paragraphs - The `<p></p>` This tag makes the text one **paragraph**

Break `<br> </br>` This tag gives you a break between the text

Bold text `<b> </b>` This tag gives you bold text

Emphasise (italic text) `<em> </em>` This tag gives you italic text

Underline text `<u> </u>` This tag underlines your text

How to create a list on your webpage:
`<ul> </ul>` creates an unordered (bulleted) list
`<ol> </ol>` creates an ordered (numbered) list
`<li> </li>` adds an item to the list created
Here is an example of how you can create a **numbered list**:

```
<ol>
<li>insert text</li>
<li>insert text</li>
<li>insert text</li>
<li>insert text</li>
<li>insert text</li>
</ol>
```

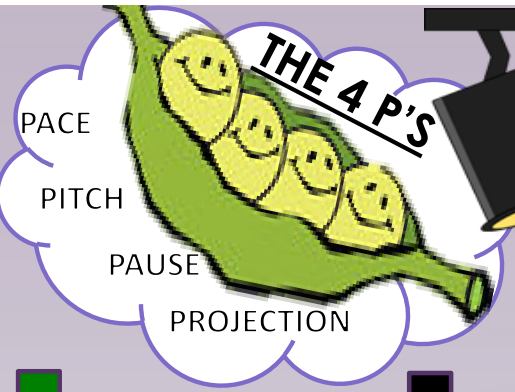
Tasks:

1. **What does HTML stand for? Explain what HTML does.**

HTML Tag	What it does
<u></u>	
Can you research any other HTML tags and explain what they do?	

2. Complete this table in your home learning book:

3. **Write the HTML for a website about you or something you like. Try to include: a heading; some bold text; some underlined text; some text in italics; a background colour and an image. *Don't forget to close the HTML tags! </>***
4. **Draw what your web page will look like in a web browser.**



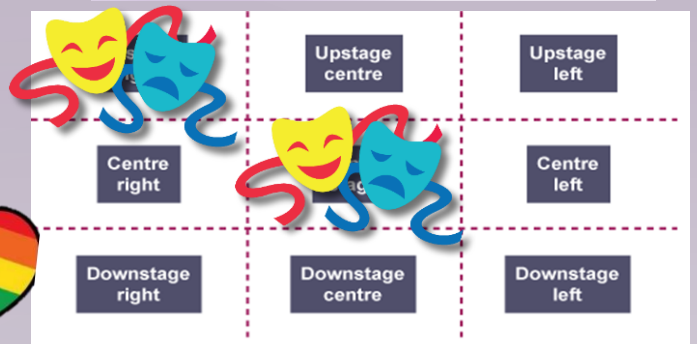
The next scheme of learning is:

Overcoming obstacles &

AP1

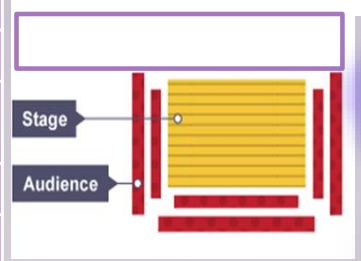
New Skill/Technique **Retrieval**

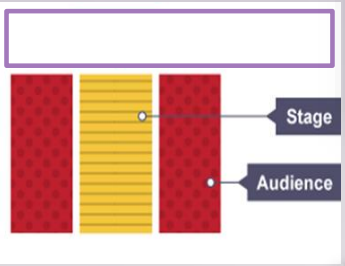
Stage Positioning

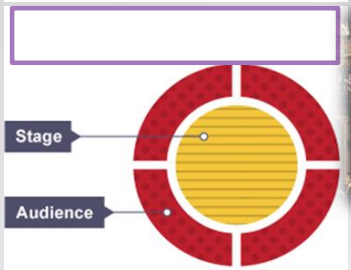


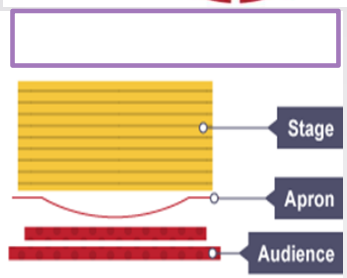
Knowledge/ skill	Definition
Stimuli	The starting point, idea or inspiration for your devised **drama**. It is what you base your **drama** around.
Sound design	The art and practice of creating sound tracks for a variety of needs in a performance.
Still Image or Freeze frame	This is where the action freezes as if someone has taken a picture midway through a performance. Conveys meaning and highlights the current scene.
Cross cutting	This term is used to describe two or more scenes which are performed on stage at the same time
Improvisation	A very spontaneous performance without specific or scripted preparation.
Placards	A printed or handwritten notice or sign used in a performance often to communicate a message to the audience.
Movement	Where we move to on and around the stage avoiding the blocking another actor.
Physical Theatre	**Physical theatre** is a well-known genre of theatrical performance that encompasses storytelling primarily through **physical** movement.
Role Play	Role play is the act of imitating the character and behaviour of someone who is different from yourself.
Motif	A spoken piece of dialogue that is repeated throughout a performance to create a dramatic affect/mark a moment/educate the audience.
Narration	A commentary delivered to accompany a performance.
Flashback	A flashback is an interjected scene that takes the narrative back in time from the current point in the story.
Hot seating	A character is questioned by the group about his or her background, behaviour and motivation.
Characterisation	Developing and portraying a personality through voice and movement.
Multirole	Multi-roling is when an actor plays more than one character onstage
Thought tunnel	Thought tunnel or '**Conscience alley**' is a drama activity that can be used to support students to develop characters during narrative writing. The technique can also be used to support students to explore a book character in more depth
Transition	This is the process in which something changes from one state to another

Stage Types









Audience

1650 - 1700

1700 - 1800

1800 - 1900

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

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

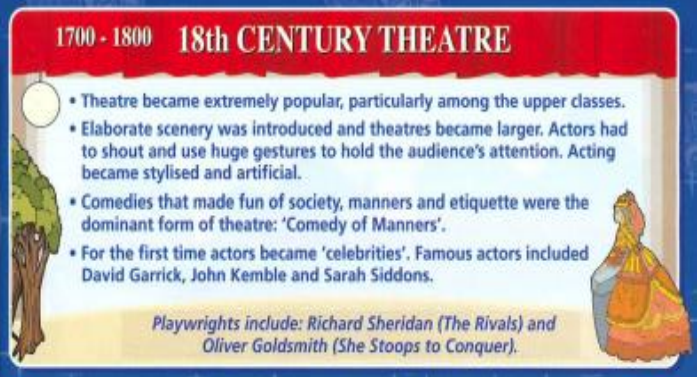
Vocal Skills...(Skills that involve using your VOICE)

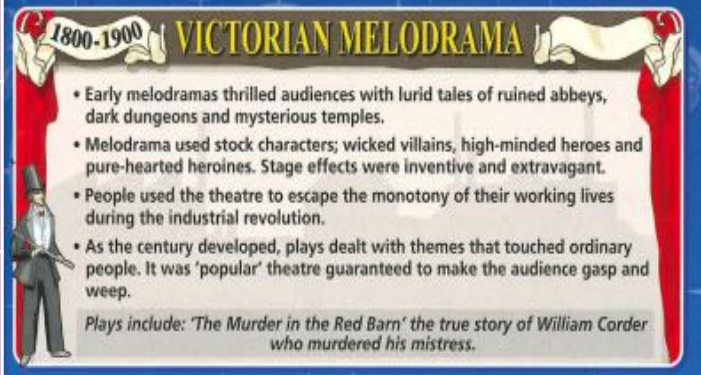
1. Projection	Ensuring your voice is loud and clear for the audience to hear.
2. Volume	How loudly or quietly you say something. (Shouting, whispering)
3. Tone	The way you say something in order to communicate your emotions. (E.g. Angry, worried, shocked tone of voice)
4. Pace	The speed of what you say.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

Key information and terminology for this term:

Theatre Roles And Responsibilities

Playwright	This is the name given to the person who writes the play.
Performer	A performer is an actor or entertainer who realises a role or performance in front of an audience.
Understudy	An actor who studies another's role so that they can take over when needed.
Lighting designer	The lighting designer is responsible for designing the lighting states and, if required, special lighting effects for a performance. The final design will result in a lighting plot which is a list of the lighting states and their cues.
Set designer	The set designer is responsible for the design of the set for a performance. They will work closely with the director and other designers so that there is unity between all the designs and the needs of the performance.
Costume designer	The person who designs the costumes for a performance. The costume department of a theatre is often called the wardrobe.





Week 1 & 2	Week 3	Week 4	Week 5
Let's do some preparation for our AP1! Here are some tasks: • On the first page of the Knowledge Organiser you will see a 'History of Theatre' timeline - there are blank boxes, using the theatre type titles provided – fill the blanks and complete the History of Theatre timeline in chronological order! • What stage position are our Drama faces cheekily covering? • Create a Roles and Responsibilities quiz and quiz whoever you can get involved! • Fill in the blank stage types titles – the titles you need to fill in is: **-Theatre in the Round** **-Thrust stage** **-Proscenium Theatre** **-Traverse Theatre**	Research some facts about Homelessness and create a monologue or poem about the Obstacle of Homelessness	Listen to 'Where is the Love – Black eyed peas *clean version*' and write down all the phrases that come to mind.	Watch the History of Theatre videos and create your own History of Theatre Poster

Spanish - Key verbs and vocab

Key phrases

1. **Uso mi móvil para chatear con mis amigos** – I use my phone to chat with my Friends
2. **Siempre comparto mis vídeos favoritas** – I always share my favourite videos.
3. **Nunca hablo por Zoom ya que es aburrido** – I never talk on Zoom because it's boring.
4. **A veces escucho la música de Adele** – Sometimes I listen to Adele's music
5. **La melodía y las letras son muy impresionantes** – the melody and the lyrics are very impressive.
6. **Ayer saqué fotos con mi móvil** – Yesterday I took photos with my phone
7. **La semana pasada fui al cine** – Last week I went to the cinema
8. **Me encantan los documentales porque son educativos** – I love documentaries because they are educational.
9. **Las películas de terror son estúpidos** – horror films are stupid
10. **Voy a ver más concursos porque son entretenidos** – I'm going to watch more gameshows because they're entertaining.

Normalmente **chateo con mis amigos** o **saco fotos** porque es **entretenido** pero ayer ful al cine con mi familia. Vi una película de **acción** y fue muy **emocionante** pero a veces me gusta ver las películas de **terror** pero son un poco **estúpidos**. Veo los **documentales** cada día porque son **educativos** y también me gusta escuchar la música. Prefiero la música de **Adele** porque **me encanta la letra** pero voy a escuchar más la música **pop** porque **me gusta la melodía**.

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 1-5 – look, cover, write, check, correct x 3. Read the sentences out loud to practice your pronunciation.

Task 2: Practice key phrases 6 -10 - 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: Teach it! Create a resource that will help teach others these key phrases. It could be a poster, a PowerPoint presentation, a leaflet or anything else. If you can, stick it in your home learning book.

Task 8: 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

El presente – Present tense

Chateo con mis amigos – I chat with my friends
Comparto mis vídeos favoritos – I share my favourite videos
Descargo melodías o aplicaciones – I download ringtones or apps
Hablo por Skype – I talk on Skype
Juego – I play
Leo mis SMS – I read my messages
Mando SMS – I send messages
Saco fotos – I take photos
Veo – I watch
Salgo con mis amigos – I go out with my friends
Voy al cine – I go to the cinema
Hago mis deberes – I do my homework

El pasado – Past tense

Chateé con mis amigos – I chatted with my friends
Compartí mis vídeos favoritos – I shared my favourite videos
Descargué melodías o aplicaciones – I downloaded ringtones or apps
Hablé por Skype – I talked on Skype
Jugué – I played
Leí mis SMS – I read my messages
Mandé SMS – I sent messages
Saqué fotos – I took photos
Vi – I watched
Salí con mis amigos – I went out with my friends
Fui al cine – I went to the cinema
Hice mis deberes – I did my homework

La televisión – TV

Un programa de deportes – a sports programme
Una comedia – a comedy
Un concurso – a gameshow
Un documental – a documentary
Un reality – a reality show
Una serie policíaca – a police series
Un dibujo animado – a cartoon
Una telenovela – a soap
El telediario – the news
Una película de terror – a horror film
Una película de amor – a love/romantic film
Una película de guerra – a war film
Una película de acción – an action film
Una película de ciencia-ficción – a sci-fi film

La música – music

Escucho de todo – I listen to everything
El rap - rap
El R 'n' B - RnB
El rock - rock
La música clásica - classical music
La música electrónica – electro music
La música pop – pop music
La música Latina – Latin music
La música de los años sesenta – 60s music

La letra – the lyrics
La melodía – the tune
El ritmo – the rhythm
…canta bien - …sings well

Las opiniones – opiniones

educativo – educational
gracioso - funny
informativo - informative
importante - important
inútil - pointless
interesante - interesting
estúpido/tonto – stupid/silly
útil - useful
entretenido - entertaining
pueril/infantil - childish
aburrido - boring
impresionante - impressive
bueno / malo – good/bad
emocionante – exciting

Year 8
William Shakespeare
Much Ado about Nothing

Structure and Form

Term	Definition
Prologue	An introductory section to a piece of literature or drama.
Rhyming couplet	Two lines of the same length that rhyme.
Soliloquy	A character speaking alone, voicing their thoughts out loud.
Aside	A comment made by a character, only to be heard by the audience.

Themes

Theme	Description
Deception	Both Don Pedro and Don John come up with schemes to **deceive** other characters; Don Pedro wants to make Beatrice and Benedick confess their love but Don John wants to destroy Hero's reputation and marriage to Claudio.
Gender	Beatrice is a non-typical Shakespearian woman as she is unmarried, whilst Hero conforms to typical **gender** roles as she is helpless and naïve.
Love	**Love** is seen in many forms throughout the play: Beatrice and Benedick eventually admit they **love** each other. Hero and Claudio fall in **love** at first sight and Leonato shows his fatherly **love** for his daughter and niece.

Character	Description
Beatrice	Leonato's strong and independent niece. Claims she dislikes men and is unmarried.
Benedick	Older companion of Don Pedro. A proud bachelor.
Hero	Leonato's sweet and innocent daughter. Falls in love with Claudio.
Claudio	Younger companion of Don Pedro who is often naïve and gullible. Falls in love with Hero.
Don Pedro	Prince of Arragon. Well liked and respected by everyone.
Don John	Don Pedro's illegitimate brother (know as "the bastard"). Causes most of the disruption in the play with his evil scheme.
Leonato	Governor of Messina. Hero's father and Beatrice's uncle. Has traditional values and can lose his temper.

Term	Definition
Simile	A comparison using the words 'like' or 'as' **Example:** *"He will hang upon him **like** a disease"*
Metaphor	A description saying something is something else **Example:** *"God help the noble Claudio, if he hath caught **the Benedick"***
Personification	Giving human qualities to something that us not human. **Example:** *"Four of his five **wits** went **halting** off"*
Dramatic irony	When the audience knows something that the characters do not. **Example: *The audience know that Claudio will shame Hero at the altar but she does not.***
Oxymoron	Two opposites used together to create an effect. **Example:** *"There is a kind of **merry war** betwixt Signior Benedick and her"*
Alliteration	A series of words that begin with the same letter for effect. **Example**: *"For a **h**awk, a **h**orse or a **h**usband."*
Hyperbole	Exaggerating something for emphasis or effect. **Example:** *"I would rather hear my dog bark at a crow than a man swear he loves me."*

Shakespeare - Much Ado about Nothing Home Learning Tasks

Week 1
Match the character to the description. The first one has been done for you.

Leonato		Don Pedro's brother
Hero		Leonato's niece, cousin of Hero
Claudio		Governor of Messina, father of Hero
Beatrice		Daughter of Leonato
Benedick		Prince of Aragon, returned from war
Don John		A friend of Don Pedro and Benedick
Don Pedro		Friend of Claudio, returned from war

Week 2
Plot summary

Summarise the plot in 10 bullet points.

Week 7
Language Techniques

Using the knowledge Organiser over the page, revise the examples of language techniques used in the play e.g. Simile, Metaphor, personification etc.

Week 3
Who am I?

Description	Character
'I am quite funny and clever. I have a love-hate relationship with one of the women in the play.'	
'I am very sweet and beautiful. I fall in love with a young soldier.'	
'I am a strong female character and I have a bit of a love-hate relationship with one of the male characters'	
'I am the governor of Messina and host of the party. I have a beautiful daughter.'	
'I am very brave soldier, but often led astray because I am young and naïve'.	

Week 7
Report it!

Write a police report for Borachio's involvement in the plot to stop the wedding of Claudio and Hero

OFFICIAL POLICE REPORT

Notes for the Reporting Officer: After exploring the scene of the crime and before speaking with Goldilocks, give complete details of what happened to aide in the investigation.

Who was involved? _____

What happened? _____

Where did the incident occur? _____

When did the incident happen? _____

Why do you think the accused did this? _____

How should he/she be punished? _____

Week 4
In their Shoes

Imagine you are one of the characters you met in Act 1. Pick one of the challenges below:

- Write a love letter from Claudio to Hero
- Write Don John's diary explaining how he feels about Don Pedro
- Write a soliloquy(see over page) for either Beatrice or Benedick to deliver to an audience, explaining how they feel about each other

Week 5
Shakesbook

Create a profile page for Shakesbook, a new social media platform. You could include:

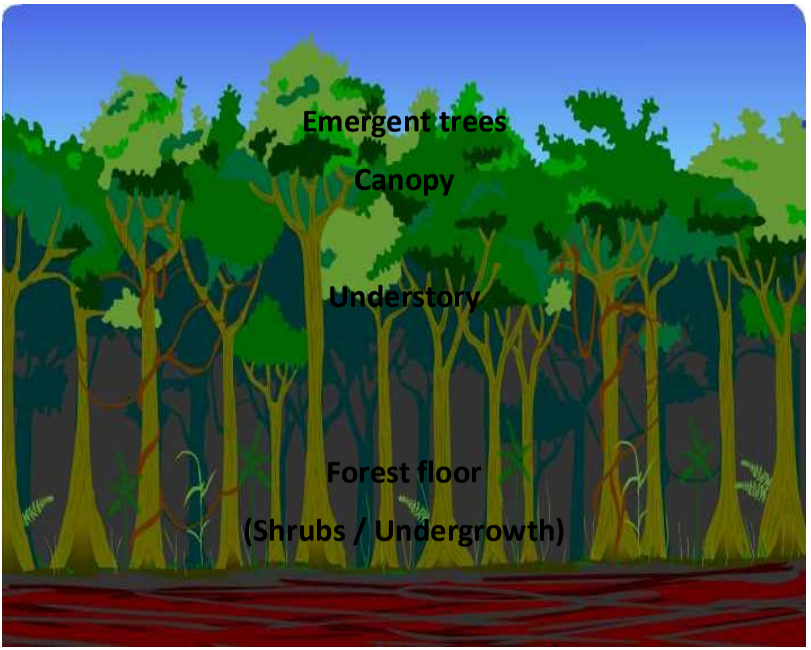
- List of friends/family
- Comment wall for friends/family to post
- A profile pic
- Your age
- Your relationship status
- Likes/dislikes
- Memes which reflect your personality

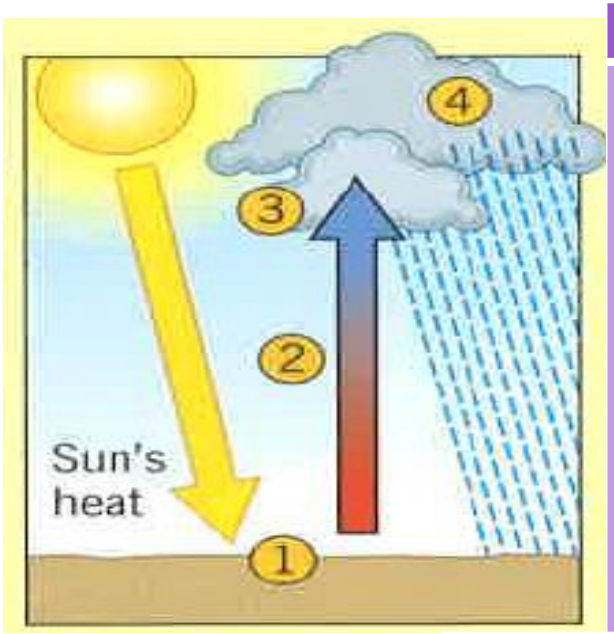
Week 6 Translator
Match the word to the meaning

Disdain	Politeness, manners
Courtesy	Traitor, defector
Turncoat	A worn out horse
Pernicious	Already decided or arranged
Predestinate	Someone who repeats others
Jade	Harmful, Poisonous
Parrot teacher	Contempt, Scorn

Rainforest structure- definitions

- **Emergent- 50m or taller. Usually supported by buttress roots.**
- **Canopy- A dense layer. Trees are 20-30m high. Many hardwood trees such as Mahogany.**
- **Understory-Dark and humid area containing saplings and shrubs.**
- **Forest floor- Covered with ferns and a deep layer of litter – fallen leaves and branches.**





Convectional rainfall

This precipitation is caused by very HOT WEATHER heating the ground:

1.Sun beats down.

2.The ground becomes very hot and heats the air above it.

3.The hot air rises = evaporates.

4.When it reaches the cool air up in the atmosphere it condenses to form clouds.

5.It rains – usually hard as this is a quick and intense process.

Services- a service or action that the biosphere provides for us e.g. the green lungs.

Year 8 Geography

Goods- things which the biosphere gives us (products) e.g. meat and fruit.

How the rainforest provides us with resources

- **Food-** Bananas, nuts, tea, coffee, palm oil. all originated in the rainforest.
- **Medicine-** Many types of medicine (more than 700) come from plants e.g. malaria (quinine). Heart conditions, diabetes, cancer (rosie periwinkle) etc.
- **Minerals-** Minerals such as gold and silver are found in rocks.
- **Materials-** Building materials such as wood- teak, mahogany.
- **Fuels-** Wood-can be burnt as a source of heat & energy.
- **Recreation-** Increasingly TRFs are exploited by travel companies bringing large groups of tourists. E.g. zip wires.

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

Task 1: Revise the diagram of rainforest structure, then cover it and sketch the diagram from memory, (using a pencil) then self assess and add any of the layer names you have missed.
Task 2: Learn the definitions of the names of layers of the rainforest.
Task 3: Revise how the rainforest provides us with resources. Cover and then create a mind map of all the resources you can remember. Check back and add any you have missed in red pen.
Task 4: Learn the key terms for 'services' and 'goods' and then go back to your mind map from task 3 and then use 2 colours to highlight those things that are goods and those that are services. Don't forget to create a key.
Task 5: Create a flow diagram showing the 4 stages in convectional rainfall.

MORAL ISSUES

What are they?

A moral issue is one where there are many **different opinions** as to whether an action is right or wrong. In order to decide whether we should do it, people consider who they might help and who they might harm and then **weigh up the merits** of that action. Religious people will also look for **guidance in their holy books** and follow the **example of religious leaders**

SKILLS

- ✓ Consider two sides of an issue
- ✓ Understand religious teachings
- ✓ Share opinions respectfully

What do religious teachings say about this?

As we study think about…

How could I argue the other side?

What do I think about this?

What harm does this do?

How does this help people?

RELIGIOUS TEACHINGS

"Rule over the birds of the air and the fish of the sea"

GOD TO ADAM

"The Earth is green and beautiful and Allah has appointed you his stewards over it"

MUHAMMAD

"Do not kill"

THE 6TH COMMANDMENT

"Consider the work of God. Who can straighten what he has made crooked?"

THE BIBLE

KEY WORDS:

MORAL ISSUE	An issue that has no right or wrong answer, instead there is debate about the harm or help it brings	GENES	These contain our DNA which controls how we are genetically put together
POLLUTION	The damage that is being done to our environment	GENETIC ENGINEERING	Changing genes for a specific outcome
STEWARD	Someone who cares for the world and the things in it	'PLAYING GOD'	Doing something that is really God's job
KHALIFAH	The Muslim word for steward, given responsibility to care for the world from Allah	POVERTY	The state of being poor, without basics such as money, food, shelter etc.
DOMINION	Being in charge of something. Many religious people believe we have dominion over the environment	RIGHTS	The guaranteed expectations of every person. These are protected by law.

SOME TASKS FOR YOU TO COMPLETE	*Draw a symbol for each key word*	*Create a mind map of one of the world issues. Add the two sides in a different colour*	*Create a key word quiz or flash cards*	*Write your answers to 3 reflection questions*	*Investigate a world issue. Remember to consider different views*	*Write a persuasive argument for a world issue*	*Rewrite the religious teachings in your own words*

ISSUES IN OUR WORLD

GENETIC ENGINEERING

- We can grow better crops to feed people, which means less hunger and poverty
- But we cannot be sure of the impact of these changes, e.g. whether they will cause disease in the future
- Genetic engineering means we can cure diseases and stop people suffering, just like Jesus did.
- But maybe we don't have the right to be 'playing God' and interfering with nature
- We are being good stewards, using our brains and resources to make the world better
- But embryos (potential life) are wasted in order to achieve these improvements. Many believe this is killing.
- We can make our next generation healthier, cleverer and better looking
- But we are using our skills for trivial purposes and may be creating prejudice and discrimination

ANIMAL RIGHTS

- Animals have always been used by people to provide food, clothing, help with tasks and entertainment.
- But sometimes the use becomes abuse and animals are cruelly mistreated
- Animals are valuable in research. We can test products and drugs that keep people safe and cure diseases
- But why should animals suffer for the sake of human health and safety
- Animals are part of God's creation. He made them and gave us power over them.
- But we should care for them responsibly, not just treat them like tools. Hindus believe Brahman is in all living things
- Animal meat is a good source of protein and keeps us strong
- But we have other food available that doesn't need killing

THE ENVIRONMENT

- The world is a precious gift from God and we should look after it as stewards
- But God has given us dominion and we can use the resources when we need them
- The planet gives us food, medicine and everything we need to survive. We should share and protect our resources
- But business will be better and people will be richer if we use what we have
- Many, especially Jews, believe we need to pass on a good world to future generations
- But we need to make sure that people now have what they need before we worry about the future

POVERTY & HUMAN RIGHTS

The UN and the law guarantees human rights such as shelter, healthcare, education, family life etc.

- But sometimes people don't receive these because of bad governments, natural disasters, debt etc.
- As humans we want to treat people with dignity and equality and give them freedom
- But sometimes these are compromised for the sake of other needs (e.g. saving money, other priorities etc.)
- Charities like Christian Aid try to ensure basic needs are met for people around the world with:
  - emergency help (shelter, food, medicine, clean water)
  - long term help (schools, hospitals, orphanages, farming equipment etc.)
- But some people would like to see money spent on other things like support for the homeless or the NHS in the UK

ART KNOWLEDGE ORGANISER

Topic: Native American Art and Culture

YEAR 8
Term 2 (2a)
Native American Crafts

Context:

Native American culture goes back thousands of years; to a time when the indigenous people lived in what is now known as North America. Native American culture revolved heavily around nature, and every aspect of their lives was based around the Earth. The Native Americans lived within many different tribes. These tribes were hunter/ gatherers. Some of the most famous well-known tribes of native America were the 'Cherokee, Apache, and the Navajo'. Some of the most famous Native Americans were: Pocahontas and Sitting Bull, to name a few. Films have been created about these Native American people.

The Native American culture loved to explore Art, music, spirit animals and religion. This had a big impact on how they lived. The tribal communities would create many different types of art, most of which would be used make support their lifestyle. Here are some examples: textiles (tee-pee homes, and décor), wood carvings (totem poles, canoe's), ceramics (jugs bowls etc) and paintings. These people were a very creative culture.

Native Americans used various forms of art to decorate their rugs, blankets and other textiles. The art they applied to the textiles often used specific geometric patterns. The Navajo tribe is most famous for the patterns it used in woven textiles. The Navajo people borrowed this style of geometric patterns from the Pueblo people who lived in the southwest area of America. Patterns were geometric in style, often repeated and would be decorated using Earth Colours such as brown, yellow, green, black, orange and yellow. It is these geometric patterns which we will focus on in our art lessons.

Tasks to complete:

Week 1: AP1 revision: Watch the video on Native American symmetrical designs and patterns. In your Home Learning book create a symmetrical design using the turtle image below which has been inspired by Native American motifs, patterns and symbols.

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

Week 3: Practice key literacy vocab 5-10 - look, cover, write, check, correct x3. Read the sentences again and check for understanding.

Week 4: Watch the video which shows you how to draw a bold dreamcatcher freehand. In your home Learning book follow the instructions and draw the dreamcatcher freehand. Outline using black biro pen, felt pen or black pencil, then use Earth Colours to apply colour.

Week 5: Watch the video which shows an exhibition of different Native American arts and crafts. In your home learning book list as many different arts and crafts as you can. Which one is your favourite? Explain why.

Key Literacy Vocabulary:

1. **Construct:** To make or build something by combining materials, techniques and processes. It also means to create or think of an idea or concept.
2. **Composition:** This is the way that different elements in a piece of artwork are combined and arranged.
3. **Repeat Pattern**: The repetition of lines, shapes, tones, colours, textures to create a design.
4. **Geometric Patterns** – patterns containing shapes, objects or pictures that repeat themselves.
5. **Motif:** A recurring pattern or design that appears in a work of art.
6. **Focal point**: The feature in a piece of artwork which is the most interesting.
7. **Symmetry**: An object or image has symmetry if it can be divided into two identical halves.
8. **Earth colours** – colours of the earth, for example, brown, brownish-reds, reds.
9. **Border**: An ornamental/decorative design on the outer part or edge of something.
10. **Mixed Media**: Artworks which are composed from combining different materials, techniques and processes.

Week 1– scan this QR code to watch the video then create your own Native American turtle symmetrical design which has a border.

Week 4 – Scan this QR code and use the images and templates to create a drawing of a dream catcher. Use colour pens or pencils to apply some colour! Remember to use Earth Colours.

Week 5 – scan this QR code to watch a video about native American crafts. List as many crafts as you can and describe the key features of Native American Arts and Crafts.

Half Term extra-curricular extension just for fun. Watch the video on how to make and create a paper tepee. Use the designs provided to try and create your own!

DESIGN TECHNOLOGY KNOWLEDGE ORGANISER

Topic: Cam Toy Project

YEAR 8 DT

My Tool Box

Bench hook – Used to hold work in place when cutting

Coping Saw – Used to cut curves and internal shapes in wood.

Cordless drill – Used to drill and drive screws.

Tenon Saw – Used to cut straight lines in wood.

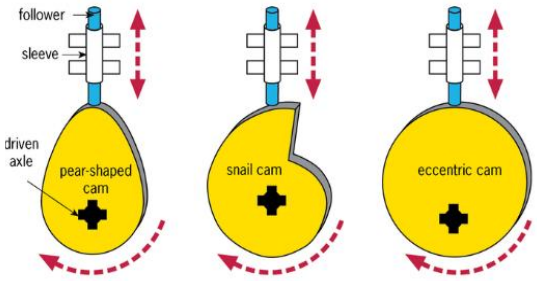
Marking Gauge – Used to mark out a parallel line on wood.

Quick Clamp – Used to clamp material

Cams and followers

A cam mechanism has two main parts:
- a cam- attached to a crankshaft, which rotates
- a follower – touches the cam and follows the shape, moving up and down

A CAM changes the input motion, which is usually rotary motion (a rotating motion), to a reciprocating motion of the follower. They are found in many machines and toys



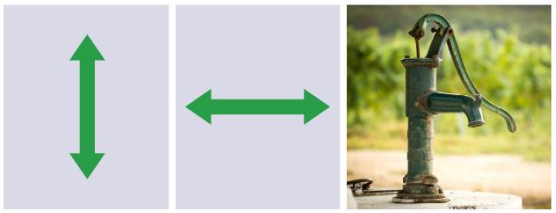
Types of Motion

Mechanical devices require motion. The four types of motion are:

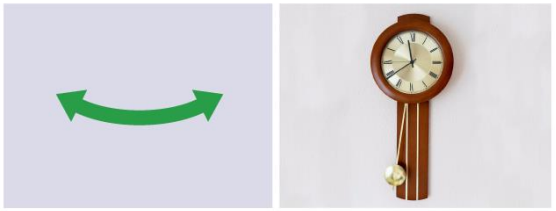
Linear motion moves something in a straight line, eg a train moving down a track:

Rotary motion is where something moves around an axis or pivot point, eg a wheel:

Reciprocating motion has a repeated up and down motion or back-and-forth motion, eg a piston or pump:



Oscillating motion has a curved backwards and forwards movement that swings on an axis or pivot point, eg a swing or a clock pendulum:



Key Terms

Linear Motion - this is movement in a straight line and in one direction. One of the best examples of this is a train / locomotive. When a train runs along a track, it is in a straight line and heading in one direction.

Rotary Motion – this is movement following a circular path, around a fixed point. A very good example of this is a bicycle wheel. The wheel rotates around a centre point.

Reciprocating motion - this is a repetitive movement left to right OR up and down. A good example of this type or motion is a piston, such as found in an engine.

Oscillating Motion – Oscillating motion occurs when an object swings left and then right (or vise-versa), from a fixed point. A very good example of this is a classic pendulum clock

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 in the focused topic column.
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:

Introduction technical drawing:

More information about mechanical devices:

Week One

Pick 4 key words from the knowledge organiser page title **light**. Using those 4 key words make as many links between the words as you can.

Remember to include:

1. The 4 key words you have chosen.
2. The links you have made between the words, these should be written along the arrow that connects them.

Week Two

Read your knowledge organiser focusing on **light** for 5 minutes. Then turn the organiser over and write a short summary of the topic.

The summary should include:

1. No more than 40 words.
2. And should be written in full sentences.

Week Three

Answer the following questions in full sentences in your home learning workbooks.

1. Why do polar bears have small ears?
2. Why do cacti have spines instead of leaves?
3. Why are owls nocturnal?
4. Why do birds fly south for the winter?
5. Why do hedgehogs have spikes?
6. Why do leaves lose their leaves in the winter?
7. Why do cheetahs have muscular legs?

Week Four

Read your knowledge organiser focusing on **adaptation and inheritance** for 5 minutes. Then turn the organiser over and write a short summary of the topic.

The summary should include:

1. No more than 40 words.
2. And should be written in full sentences.

Week Five

Using your Home Learning book, make a quiz containing at least 10 questions from the topics **light** and **adaptations and inheritance.**

Remember to include:

1. Answers to each question written in full sentences,
2. A variation in the type of question, Draw/state/explain etc.

Have you completed your 4 daily goals?

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

Home learning tips:

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

8.5 – Light Waves

What do I need to be able to do?

- Compare the similarities and differences between light waves and waves in matter
- Describe; light waves travelling through a vacuum; speed of light
- Describe the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface
- Use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing in the human eye
- Light transferring energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras
- Describe; colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption and diffuse reflection.
- Construct ray diagrams to show; how we see luminous and non-luminous objects, the laws of reflection/ refraction
- Link frequency and wavelength to colour of visible light
- use s=d/t equation to calculate speed of a wave

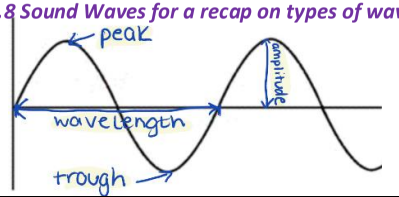
1. The Nature of Light Waves

Light travels as **waves**. All waves are **oscillations** (vibrations) that transfer **energy.**
Light waves are oscillations in the **electric and magnetic fields** around the Earth.

More on this in 8.8 – Electromagnetism

Light waves are **transverse** – the oscillations are **perpendicular** to the direction of energy transfer. They do not need a substance to travel through.

See 7.8 Sound Waves for a recap on types of waves



Peak	Highest point of a wave
Trough	Lowest point of a wave
Amplitude	Distance from the still position to the maximum disturbed position
Wavelength	Distance between the same point on two consecutive waves
Frequency	Number of waves passing a point per second. Measured in hertz (Hz)

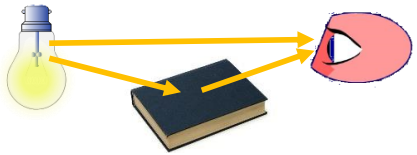
2. How do we see objects?

Light waves travel in **straight lines**, so when we are drawing ray diagrams, we must use a ruler.

Luminous objects – emit light e.g. The Sun, a lightbulb

Light travels directly from the light source to your eye

Non-luminous objects – do not emit light, but reflect the light of other objects e.g. The Moon, a book



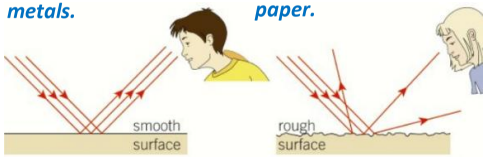
Light **reflects** off of the object and is absorbed by the eye

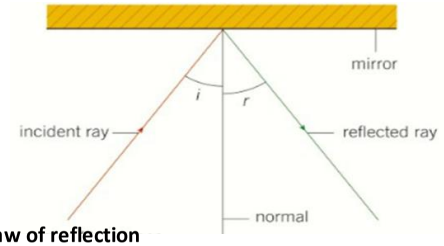
Transverse waves, such as light, do not need a substance to travel through, therefore can travel through a **vacuum**. This is how light from the Sun travels across space.

3. Reflection

Specular reflection – occurs when light reflects off smooth surfaces. A clear image is formed because all light reaches your eye ***e.g still water, mirrors, metals.***

Diffuse scattering – occurs when light reflects off of rough surfaces. No image is formed because most of the reflected light does not reach your eye ***e.g painted walls, paper.***

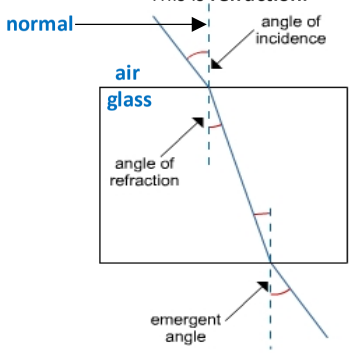




Law of reflection
Angle of incidence (i) = angle of reflection (r)

4. Refraction

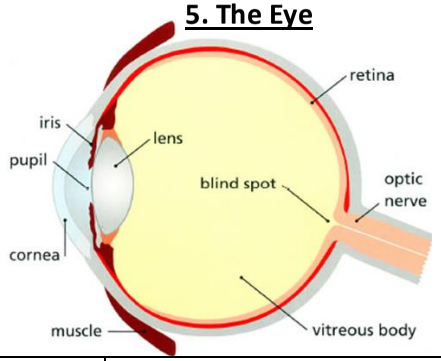
When light leaves a **less dense** material, such as air, and enters a **denser** material such as water or plastic, it slows down. The change in speed also causes it to change direction.
This is **refraction.**



As the light enters a more dense material it bends **towards** the normal.
As the light enters a less dense material, it bends **away from** the normal

The two rays outside of the glass block are parallel.
Angle of incidence = emergent angle

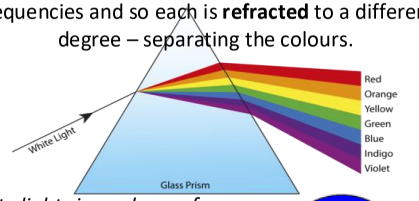
5. The Eye



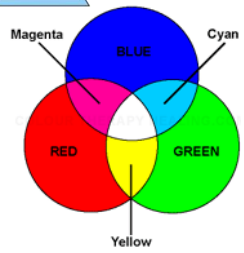
Iris	A ring of muscle that contracts/relaxes to change the size of the pupil to control how much light enters the eye.
Pupil	A hole that allows light to hit receptor cells on the retina
Cornea	Refracts light as it enters the eye
Lens	Refracts and focusses light onto the retina to create an image. It can change shape to bend light more or less.
Retina	Contains the light receptor cells
Optic nerve	Carries electrical impulses from the eye to the brain

6. Colour

White light is a mixture of all colours. A **prism** can be used to separate white light into its colour **spectrum.** The different colours have different wavelengths and frequencies and so each is **refracted** to a different degree – separating the colours.



White lights is made up of 3 primary colours; red, green and blue.
Two primary colours mixed together gives a secondary colour.
Red, green and blue light mixes together to make white light



Objects appear a certain colour due to the wavelengths of light they **reflect** e.g. a red book appears red because it reflects red wavelengths and **absorbs** all others

7. Speed of Light

Light travels extremely quickly. Its maximum speed is approximately 300,000,000 m/s, (or 300,000 km/s) when it travels through a vacuum such as space. This is approximately a million times faster than the speed of sound.

It takes 8 minutes and 20 seconds for light from the Sun to reach the Earth.

We can use the following equation to calculate the distance from the Sun to the Earth:

Speed (km/s) = distance (km) ÷ time (s)

E - s = d ÷ t
V - s = 300,000 km t = 8 mins 20 s = 500 s
E - 300,000 = d ÷ 500
d = 300,000 x 500
R - d = 150,000,000
Y - d = 150,000,000 km

8.6 – Adaptations & Inheritance

What do I need to be able to do?

- Understand inheritance as the process by which genetic information is transmitted from one generation to the next
- Describe a simple model of chromosomes, genes and DNA in inheritance, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model
- Describe differences between species
- Describe the variation between individuals of the same species being continuous or discontinuous
- Understand the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection
- Understand that changes in environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which may lead to extinction
- Understand the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.
- Produce measurements and graphical representation of continuous or discontinuous variation

1. Competition

In a habitat there is a limited supply of resources. To survive, animals **compete** to get enough of these resources.

Animals compete for:

- Food
- Water
- Space/territory
- Mates – to reproduce

Plants compete for:

- Light
- Water
- Mineral ions
- Space

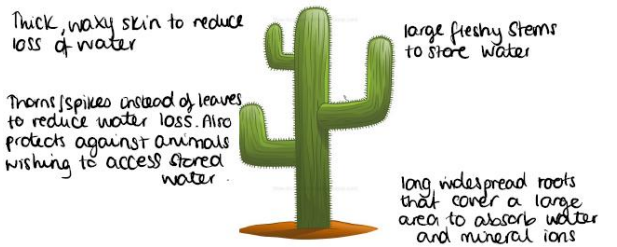
Remember – plants do not compete for food because they make their own glucose via photosynthesis.

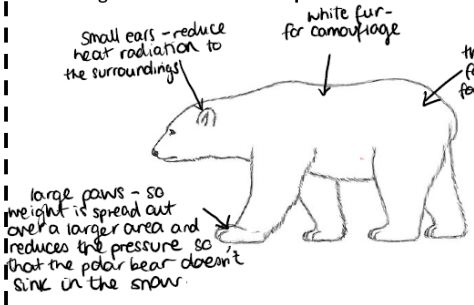
2. Adaptations

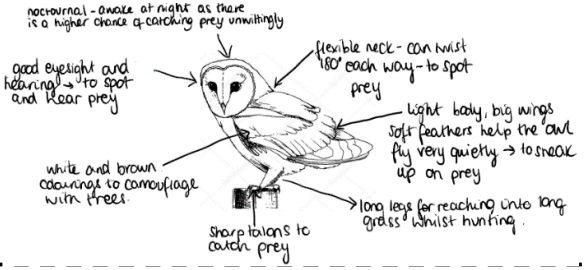
Animals need to be the best competitors for resources to make sure they survive.

Some animals have good eyesight or hearing which make it easier to spot their prey.

The features that enable an organism to compete better for resources than other organisms are called **adaptations**







3. Variation: Inherited & Environmental

Variation is the difference in characteristics. There is lots of variation between organisms of the same species. *e.g. humans have different heights, eye colour, hair colour, blood group etc*

Variation can either be:

Inherited – a result of genes inherited from parents *e.g. natural hair colour, eye colour, blood group, presence of dimples*

Environmental – as a result of differences in surroundings, or choices that the individual makes. *e.g. scars, tattoos, language spoken, accent*

This accounts for the differences observed in identical (genetically) twins.

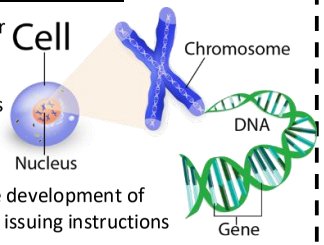
Or…as a result of **both inherited and environmental** factors

e.g. height – you inherit genes for your height from your parents, but it is also largely influences by your diet.

Similarly, with weight, intelligence etc

4. Inheritance

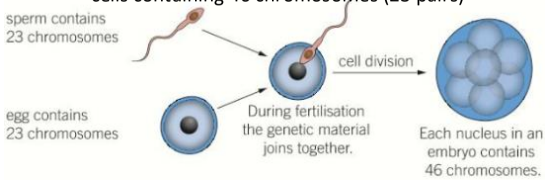
The genetic information for each organism is stored as a chemical, DNA, in the nucleus of cells. The DNA is tightly wound into chromosomes.



Different genes control the development of different characteristics by issuing instructions to the cell.

One gene contains the instructions for making one protein. Several genes work together to form a single characteristic, *e.g. eye colour.*

Egg and sperm cells are the only cells to contain **23 chromosomes**. They only have one copy of each chromosome. During **fertilisation, the nuclei of the egg and sperm cells fuse together.** The chromosomes pair up producing an embryo with cells containing 46 chromosomes (23 pairs)



5. Natural Selection

Scientists have shown that the species we see on Earth today have gradually changed over millions of years. This is called **evolution.** The fossil records provides evidence of species that are extinct e.g. dinosaurs

Organisms evolve through a process called natural selection

- Organisms within a species show variation – this is due to differences in their genes.
- Some organisms with characteristics that make them better adapted to their environment survive more and the less adapted organisms die. This is survival of the fittest
- The organisms that are better adapted reproduce and pass on their genes for the adaptations to their offspring.
- The offspring now also show these characteristics that make them better adapted
- This process is repeated many times. The species changes so much that a new species if formed. This is evolution

6. Extinction

Species become extinct when there are no longer any living individuals of that species.

Factors that lead to extinction:

- Change to their environment e.g. lack of resources
- Destruction of habitat
- Outbreak of a new disease
- Increased predation
- Increased competition

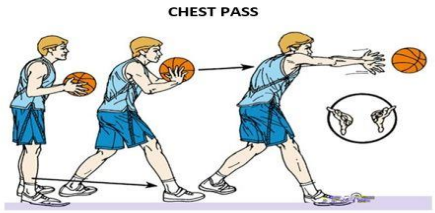
Scientists are trying to prevent endangered species from becoming extinct and also maintain **biodiversity**

One way is by using **gene banks**. Samples of the endangered species (e.g. plant cuttings and sex cells of animals) are stored so that their DNA can be used in the future to create new individuals

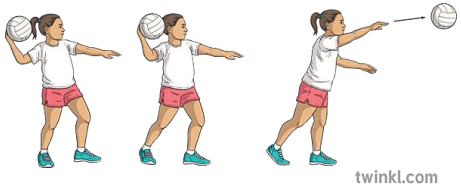
Passing

Coaching points

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

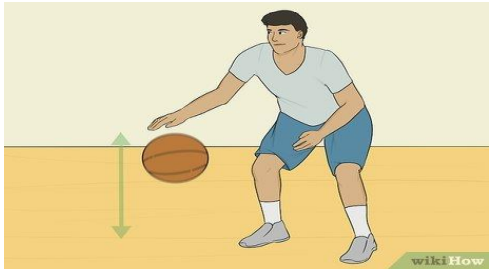


A netball shoulder pass is a one-handed netball pass for longer distances. It follows a straight line between your shoulder and the receiver's hands.

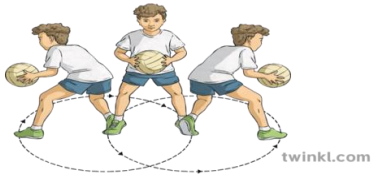


Dribbling

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

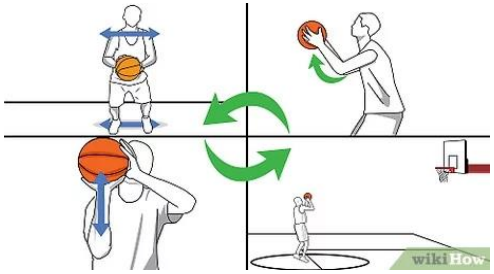


There is no dribbling in netball, but you can pivot (also allowed in basketball) Pivot by rotating yourself on the ball of your landing foot. Keep your upper body straight and head up.



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

Shooting



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

Laces shot

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

1)Why do we dribble below the waist in basketball?
2)What other types of passing could be performed in basketball?
3)Memory test, try and remember BEEF and their descriptions.

1) Are you allowed to dribble in netball?
2)Should a netball shoulder pass be low and short or high and long?

1) When would you use outside of the foot dribbling in football?
2)Name as many pass types in football
3)What other types of shot are performed in football?

SCAN ME

Learning to Learn

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The 'Listen' Project #1