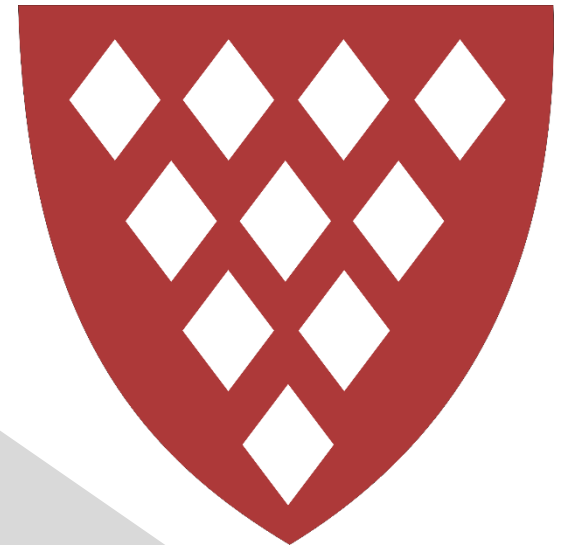


KNOWLEDGE ORGANISER BOOKLET

YEAR 8 – CYCLE 2

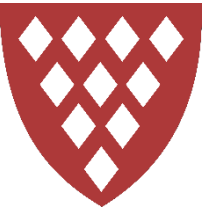
2025-2026



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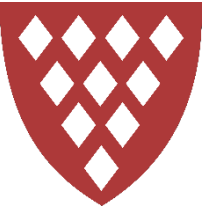
Tutor Group:

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Instructions for Use



For all of your subjects, there are certain **facts** that you **need** to know in order for you to best understand the content you study in lessons.

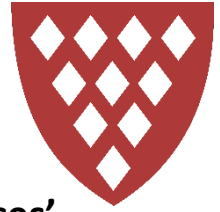
In this booklet are **Knowledge Organisers** for each subject which contain the core concepts that you have to know to be successful in your lessons.

The **first 15 minutes** of Home Learning is the same in all subjects (apart from Maths) and should be completed in your single **Home Learning exercise book**:

-  **Look:** read a specific section of the *Knowledge Organiser*.
-  **Cover:** cover it over or put it to one side;
-  **Write:** from memory, write out as much of the information as you can remember for that section;
-  **Check:** check back with the *Knowledge Organiser*. Anything missing or incorrect, add in purple pen.
-  **Review:** information you didn't recall the first time you may wish to check in a different format, such as repeating the process or creating revision cards.

The next lesson, your teacher will check that you have completed this process and you will be quizzed in your subject lesson to see what you can recall.

Instructions for Use : Example



Show My Homework for Geography says: 'Knowledge Organiser: How to Read Grid References'.



1. **LOOK:** carefully read the section of the *Knowledge Organiser* which you are learning.



2. **COVER:** cover it over or put it to one side.



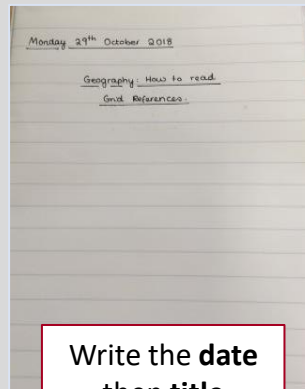
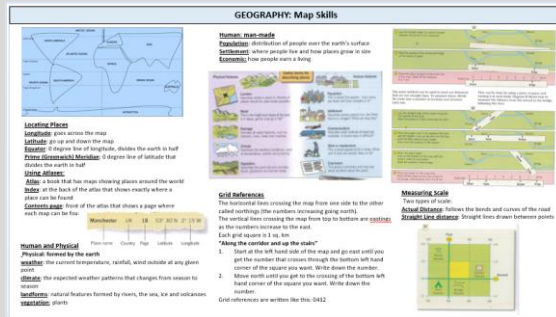
3. **WRITE:** write out as many details as you can from memory.



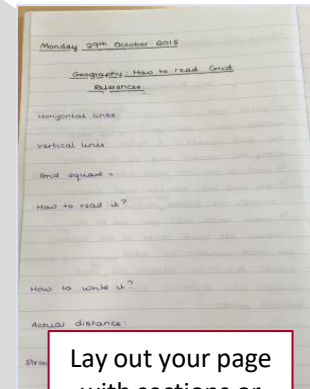
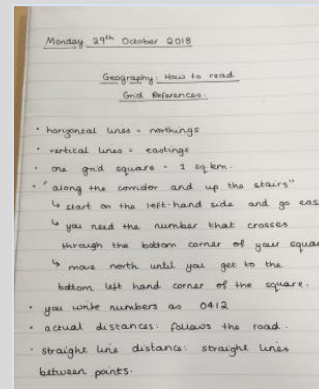
4. **CHECK:** check back over your answer with the *KO*. Anything which is missing or incorrect, add in in **purple pen**.



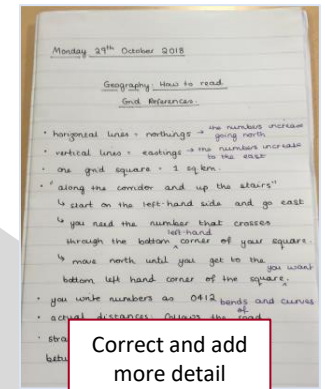
5. **REVIEW:** if you had significant gaps or parts you didn't understand, repeat the process from Step 1.



Write the **date**
then **title**
(subject: focus)



Lay out your page
with sections or
questions to help



Correct and add
more detail
using your
purple pen.

sparx is your Maths homelearning

You do not have a knowledge organiser for maths. This is because the best way to remember and understand mathematics is to do it. Write your Sparx password in the space below so you don't forget it.

Sparx username:

Sparx password:

How do I log on?

Go to www.sparxmaths.uk. Select **Kingsbridge Academy** and enter your username and password.

What do I have to do each week?

Complete all of your Compulsory Section Sparx homework and get it 100% correct. If within your hour of home learning time you should complete the target and optional sections which are designed to help you make better progress in Maths.

How long should it take?

Sparx will adjust your homework so it should take about 1 hour. If you find yourself taking longer than this you should make sure you are coming for help on the difficult bits.

When should I do it?

You should complete your Sparx homelearning in the 4 allocated 15 minute slots in your homelearning timetable

What if I get stuck or can't do it?

You can watch the videos, ask a friend or parent or ask a maths teacher (in person or by email).

Why do I get different questions to my friend?

Sparx creates a custom homework just for you – because you are an individual. We are really pleased that we are able to offer you personalised homework.

Why do I have to do 100%?

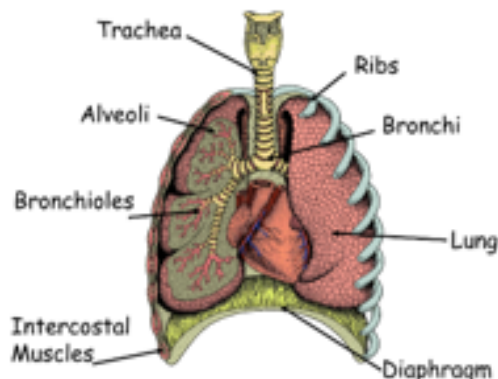
We care about you and believe that you deserve to do well in maths. Students who do all questions learn more and get better results.

Science – Cycle 2 – Gas Exchange and Breathing

Lesson 1

Human Breathing System

Humans breathe to ensure that oxygen enters the body and carbon dioxide leaves the body.



Structure	Function
Trachea	Also called your windpipe carries air into and out of lungs.
Alveoli	Found at the end of the bronchioles, they are tiny air sacs. This is where gas exchange happens.
Bronchioles	The bronchi branch in to smaller and narrower airways. These are too small to be seen with the naked eye.
Intercostal muscles	Muscles found between the ribs which are involved in moving the rib cage up and out during breathing
Ribs	Bones which form a cage which protect the breathing system.
Bronchi	There are two, the windpipe/trachea divides in to two smaller branches.
Lungs	There are two, protected by the ribs, air moves in and out of them.
Diaphragm	A sheet of muscle, involved in moving air in to and out of the lungs.

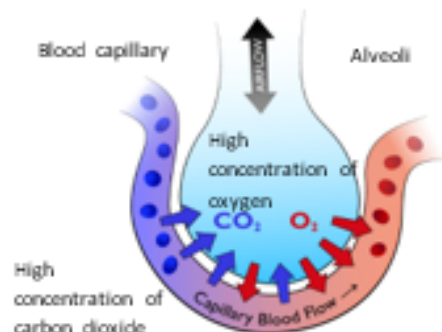
Lesson 2

Alveoli

When blood arrives at the lungs it is deoxygenated, When the blood leaves the lungs, it is oxygenated.

Oxygenated – Blood which is high in oxygen.
Deoxygenated – Blood which is low in oxygen.

Gas exchange at the alveoli:



- Oxygen diffuses from the alveoli into the red blood cells in the blood.
- Oxygen moves from where it is high concentration (alveoli) to where it is in low concentration (capillary).
- Carbon dioxide moves from where it is in high concentration (capillary) to where it is in low concentration (alveoli).

Oxygen travels in the red blood cells in the blood around the body where it diffuses into cells to be used.

Lessons 3 & 4

Ventilation

Inhalation:

- The intercostal muscles between the ribs contract pulling the ribs up and outward.
- At the same time, the diaphragm contracts and flattens.
- The volume inside the thorax increases and the pressure decreases. Atmospheric pressure is now greater than inside.
- As a result, air moves through the nose, mouth, bronchus and bronchioles gushes inside the lungs filling the alveoli with fresh air.

Exhalation:

- The intercostal muscles relax, meaning the ribs return back to their normal position, down and in.
- The diaphragm relaxes and returns to its normal structure, dome shaped.
- The thoracic volume is decreased, the pressure increases, atmospheric pressure is now less than pressure inside.
- The air in alveoli is pushed out through the bronchioles, bronchus and finally out by nasal cavity.



Lesson 5 Lung Diseases

Smoking:

- Cigarettes contain nicotine, tar and carbon monoxide.
- Nicotine – Highly addictive drug that acts directly on the brain.
- Tar – black sticky substance that clogs the lungs and makes lung infections more likely.
- Carbon monoxide – Reduces the amount of oxygen that is carried in your red blood cells.

Lung cancer – Tar in cigarettes contains carcinogens. They change the DNA in cells in the lungs causing tumours.

Bronchitis – Tar in cigarettes leads to a build-up of extra mucus in the bronchioles which stops the cilia from functioning. The airways become inflamed and air flow is reduced.

Emphysema – When lungs are inflamed, the alveoli can become damaged or burst. Blood becomes less oxygenated so sufferers have trouble breathing.

Asthma – A condition which affects the bronchioles. During an asthma attack:

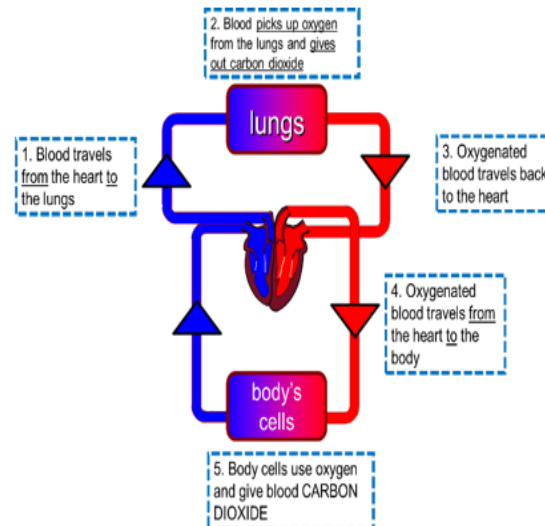
- The lining of the airways becomes inflamed.
- Fluid builds up in the airways
- The muscles around the bronchioles contract, which narrows the airways

Lesson 6 Heart and Circulation

Circulation: The movement of blood around the body.

Circulatory system:

- = Oxygenated blood
- = Deoxygenated blood



The Heart

The heart is an organ which pumps blood around the body by contracting.

Lesson 7 Aerobic Respiration

The body needs a constant supply of energy which comes from digested food. Glucose from digested carbohydrate is a source of stored chemical energy.

Respiration - the process that the body uses to release energy from digested food (glucose)

Aerobic means with oxygen

Aerobic respiration takes place in the mitochondria.

Aerobic respiration equation

Glucose + Oxygen → Carbon dioxide + Water (+ energy)

Combustion – the scientific name for burning

Combustion equation:

Fuel + Oxygen → Carbon dioxide + water (+ energy)

Lesson 8 Anaerobic Respiration in Animals	Lesson 9 Anaerobic Respiration in Plants and Micro-organisms	Lesson 10 Comparing Aerobic and Anaerobic Respiration
When the body cannot supply the cells with the oxygen needed to break down glucose (e.g. during exercise), then it has to carry out anaerobic respiration. Anaerobic means without oxygen Anaerobic respiration takes place in the cytoplasm Anaerobic respiration equation Glucose → Lactic Acid (+ energy) The lactic acid produced by anaerobic respiration causes muscle fatigue and cramps. The lactic acid must be removed after anaerobic respiration. Oxygen Debt – The amount of oxygen needed to remove the lactic acid built up in the muscles following anaerobic respiration.	Anaerobic respiration in plant and yeast cells is different to animals. Anaerobic respiration in plants & yeast: Glucose → ethanol + carbon dioxide Fermentation - Using Yeast micro-organisms to breakdown glucose without oxygen, releasing ethanol and carbon dioxide. Yeast fermentation is used to make beer and wine, it is also used in baking, the carbon dioxide bubbles produced by anaerobic respiration makes bread rise. Rate of fermentation can be increased by: - Increasing the amount of glucose - Increasing the amount of yeast - Increasing the temperature	Comparing aerobic and anaerobic respiration in animals Aerobic Respiration - Produces carbon dioxide - Water is a product - Requires oxygen as a reactant - Takes place in the mitochondria Anaerobic Respiration - Produces lactic acid - Is the main cause of oxygen debt - Causes muscles to become tired quickly - Can be switched on suddenly - Takes place in the cytoplasm Both - Use glucose - Produce energy

Lesson 11 Effects of Exercise

What happens during exercise?

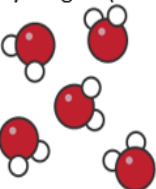
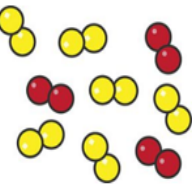
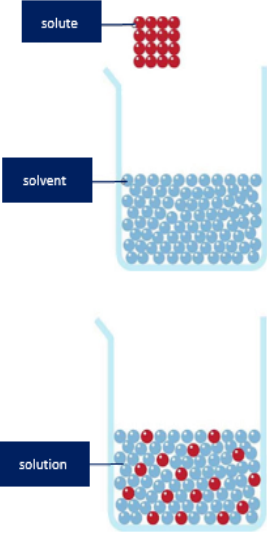
Heart rate increases to supply the cells of the body with **more oxygen and glucose** for respiration.

Breathing rate increases to supply the blood with **more oxygen** to take to the cells of the body for respiration.

Exercise causes the **frequency and depth of breathing** to increase. This can be measured by looking at the following:

- **Breathing rate** (the number of breaths you take per minute)
- **Tidal volume** (the volume of air breathed in and out in one breath)

Increasing the intensity of exercise will mean that the cells in your body are respiring more aerobically so will require more oxygen to be delivered to them, hence the increase in your breathing.

Lesson 1 Pure and impure substances	Lesson 2 Solutions	Lesson 3 Solubility
Pure An element is made from just one type of atom.  A compound is a pure substance that is made from more than one element. In a compound, elements are chemically bonded together Water molecules are made up of two elements - hydrogen (white atoms) and oxygen (red atoms).  Compounds have a specific ratio of atoms. Water has a ratio of two hydrogen atoms to one oxygen atom. Impure A mixture is formed when two or more elements or compounds are present without being chemically bonded together. Mixtures are impure.  This particle diagram shows air. Air is a mixture which is made mainly of nitrogen molecules (yellow) and oxygen molecules (red).	Dissolve: The process when a solute is mixed with a solvent and the solute breaks into much smaller particles and spreads out. Solute: The solid (or occasionally a gas) which dissolves into a solvent (liquid) in order to make a solution. Solvent: The liquid in a solution which dissolves the solute. Solution: Made when a solute dissolves into a solvent. 	Soluble If a solid does dissolve in a specific solvent. Insoluble If a solid does not dissolve in a specific solvent. Solubility measures how much solute can dissolve in a volume of solvent at a specific temperature. Sugar has a higher solubility in water than salt. Therefore, more sugar than salt can dissolve in a volume of water at a specific temperature. The solubility of a solid solute usually increases when the temperature increases. Saturation There is a limit to the mass of solute that will dissolve in a particular volume of the solvent. When no more solute dissolves, the solution is saturated. 

Lesson 4 Filtration

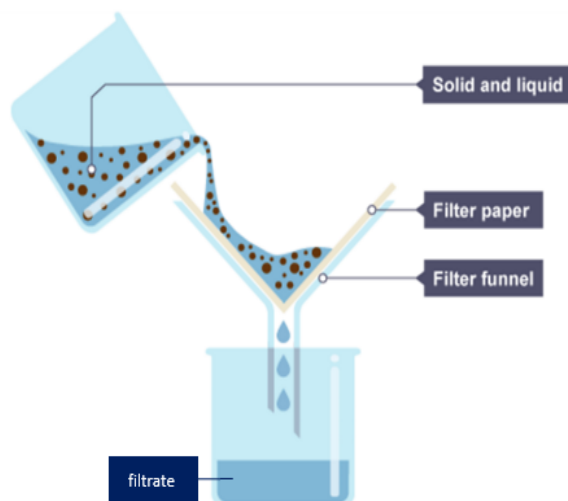
Filtration is used to separate an insoluble solid from a pure liquid or a solution.

The filtrate is the liquid which passes through the filter paper and the residue is the solid left on the filter paper.

Filtration usually involves a circle of filter paper folded to make a cone and placed into a filter funnel.

When a mixture of sand and water is filtered:

- the sand stays behind in the filter paper, it becomes the residue.
- the water passes through the filter paper, it becomes the filtrate.



Lesson 5 Evaporation/Crystallisation

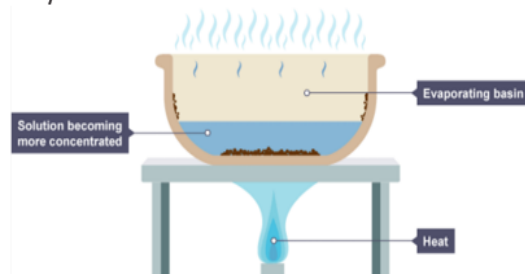
Evaporation occurs when a liquid slowly turns into a gas below its **boiling point**.

Evaporation occurs at all temperatures, boiling happens at a fixed temperature depending on the liquid.

Puddles dry up because of evaporation. Puddles do not boil because the temperature on earth is always below 100°C - the boiling point of water.

Crystallisation is a separation technique used to obtain crystals of a solid solute from a solution.

When a solution is heated, the solvent evaporates and crystals of the solute are left behind.



Crystallisation is similar to the evaporation technique used to separate a solid solute from a solution but is done over a longer period of time.

Rather than heating the evaporating basin directly, warm it gently and slowly over a beaker of boiling water, until half the solution evaporates, and leave it too cool.

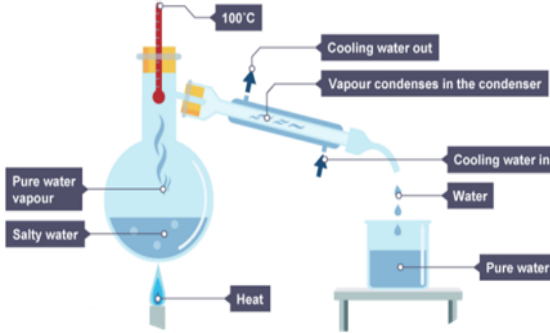
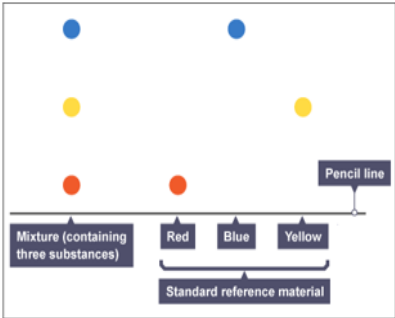
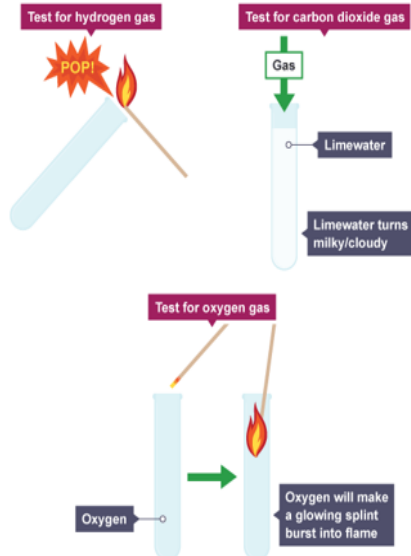
Lesson 6 &7 Separating Rock Salt-Plan & Investigation

A method describes how an experiment is carried out. It should contain a set of written instructions with numbers or letters to show the order in which the steps are carried out.

A diagram can be included to show how the experiment should look when it's set up.

Diagrams make it clear how pieces of apparatus are linked together.

Name of apparatus	Drawing	2D cross section diagram
Bunsen burner		
Evaporating basin		
Filter funnel		
Tripod		
Gauze		
Beaker		

Lesson 8 Distillation	Lesson 9 Chromatography	Lesson 10 Testing for Gases
Distillation is a separation technique used to separate a solvent from a mixture. For example, water can be separated from salt solution by distillation. Distillation involves boiling the mixture and then condensing the gas to produce a liquid.  1. The salt solution is placed into a flask and heated until it boils. 2. The water turns into a gas but the salt stays behind in the flask. 3. The steam passes into the condenser. The condenser is a tube which is surrounded by a layer of cold water. This cools the steam, which turns it back into a liquid. 4. The distillate is pure water.	Chromatography is a separation technique used to separate mixtures of soluble substances. Chromatograms can be used to match known pigments with those in a mixture. On a chromatogram, one spot means that the substance is pure. An impure substance produces two or more spots.  From the chromatogram above, three conclusions can be drawn: 1. The mixture contained three substances because it separated into three spots in a vertical column. 2. The mixture contained the same red, blue and yellow pigments as the standard reference pigments because the coloured spots were the same height for each colour. 3. All of the pigments on the chromatogram were soluble in water, because they all moved up from the start line.	Hydrogen, oxygen and carbon dioxide can be identified using different tests. Hydrogen Putting the flame of a lighted wooden splint in a test tube of hydrogen makes a 'squeaky pop' sound. Oxygen Putting a glowing wooden splint in a test tube of oxygen, causing the splint to relight. Carbon dioxide Bubbling carbon dioxide through limewater changes it from colourless to 'milky'. 

Lesson 1 Types of Wave

Waves transfer energy from one place to another.

Some waves move through a substance because the particles vibrate at right angles to the direction that the wave is moving in, these types of waves are called **transverse waves**.

Other waves travel because the particles move backwards and forwards a short distance in the same direction as the wave is moving in. These types of waves are called **longitudinal waves**.

Longitudinal Waves

Transverse Waves



The following types of waves are **transverse** waves:

- ocean waves
- light waves
- microwaves
- radio waves

The following types of waves are **longitudinal** waves:

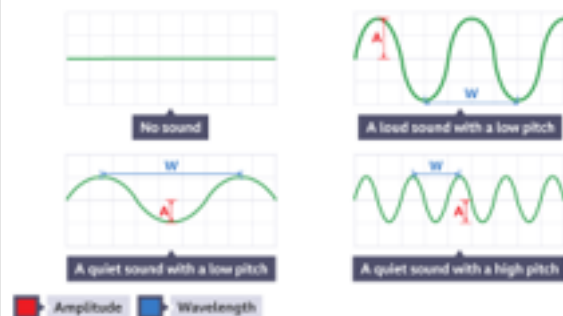
- sound waves
- pressure waves

Lesson 2 Sound

A sound wave is a **vibration** that travels through a solid, liquid or gas such as the air or water.

A loud sound has a large amplitude, a high-pitched sound has a high frequency.

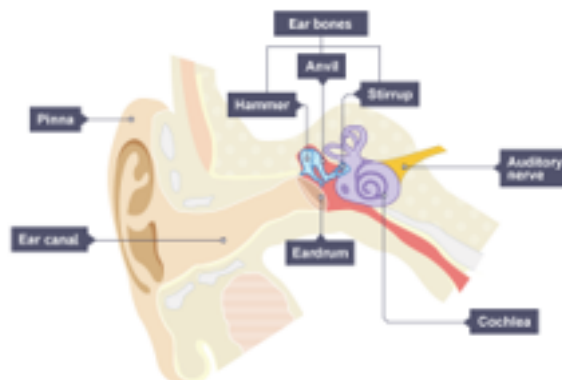
Musicians and scientists record and analyse sounds using wave traces.



Lesson 3 Human Hearing

We can't hear all levels of sounds. Sound waves with very high frequencies are called **ultrasound** and our ears can't detect them.

The range of frequencies for human hearing is 20Hz – 20000Hz



- The **Pinna** funnels the sound waves that the ear receives and sends them down the **ear canal**
- These sound waves vibrate the **eardrum**
- The three small bones (**hammer, anvil, stirrup**) pass the vibrations onto the **cochlea**
- The cochlea converts vibrations into electrical signals
- The electrical signals are transported to the brain up the **auditory nerve**.

Science – Cycle 2 – Waves

Lesson 4 Speed of Sound

Sounds travel at different speeds through gases, solids and liquids.

The speed of sound in air is around 340m/s

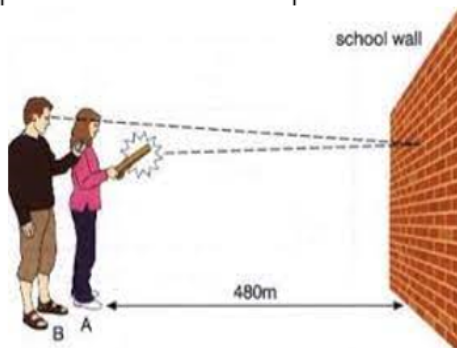
Sound waves are vibrations that are passed on between particles. The speed of sound is the distance a sound travels divided by the time it takes.

Speed = distance ÷ time

How quickly sound travels depends on how close together the particles are.

The particles in gases are further apart than liquids, and so sound travels slower in a gas than a liquid. The particles in a solid are closer still and so sound travels fastest in solids

An experiment to calculate the speed of sound in air:



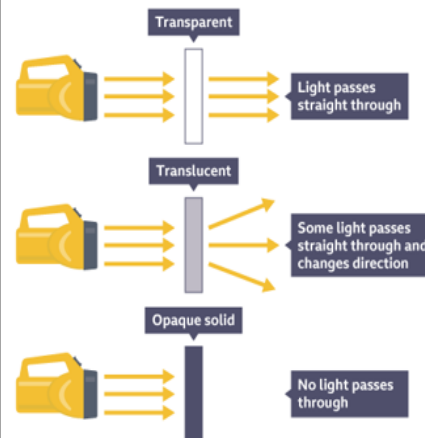
Lesson 5 Properties of Light

Light is an electromagnetic wave and travels at an extremely high speed: the **speed of light**. The speed of light in a vacuum is around 300,000,000 metres per second

Light travels as a transverse wave and moves in straight lines.

Unlike sound waves, light waves can travel through a **vacuum** – they do not need a substance to travel through.

Light can pass through **transparent** and **translucent** materials, but not **opaque** materials

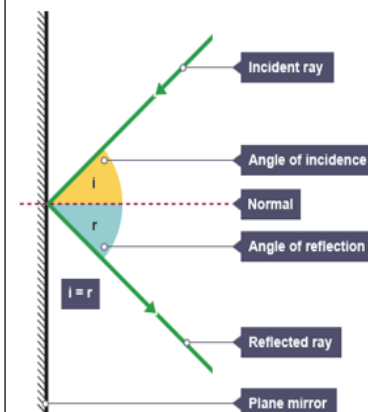


Lesson 6 Reflection

Light travels as a transverse wave and can be **reflected** by surfaces and objects.

Smooth, shiny surfaces produce **specular** reflections, and rough surfaces produce **diffuse** reflections.

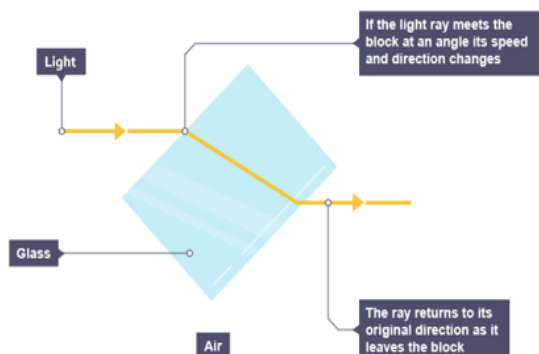
Ray diagrams are used to show the path of light rays which are reflected and how images are formed in a mirror



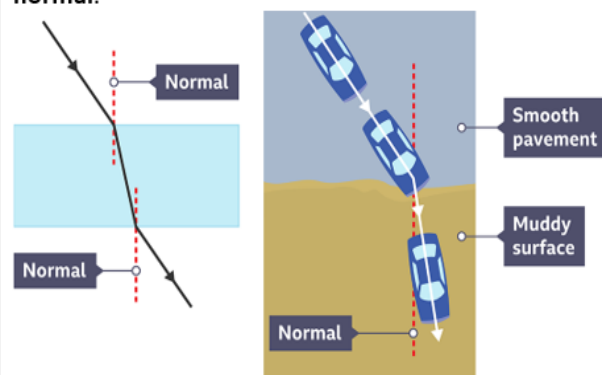
Science – Cycle 2 – Waves

Lesson 7 Refraction

Light is **refracted** when it enters a material like water or glass. Depending on the density of the material, light will reduce in speed as it travels through, causing it to change direction.



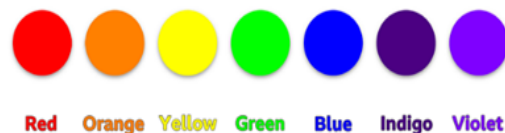
The car on the right hits the mud at an angle, so the front right wheel hit the mud first and slows down, causing the car to turn clockwise – towards the **normal**.



Lesson 8 Colour & Dispersion

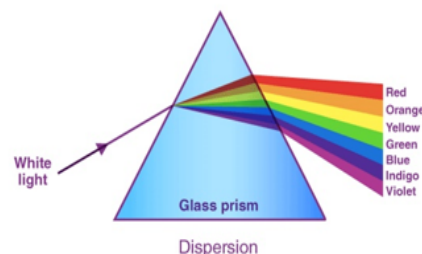
White light is made of a **spectrum** of different colours.

Richard Of York Gave Battle In Vain



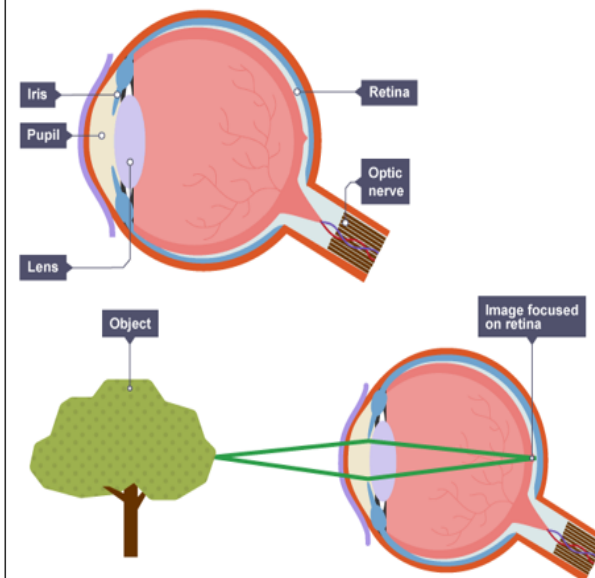
White light can be split up into a spectrum of these colours using a triangular block of glass or acrylic, known as a prism.

Light is refracted when it enters the prism, and each colour is refracted by a different amount. This means that the light leaving the prism is spread out into its different colours, a process called **dispersion**.



Lesson 9 The Human Eye

Cameras and eyes both detect light. Both cameras and the human eye use lenses to focus light.



Iris – The coloured part of the eye, which contains muscles that control the size of the pupil. The purpose of the iris is to regulate the amount of light that enters the eye.

Pupil – The pupil is the hole located at the centre of the iris. Its function is to let in light and focus it on the retina.

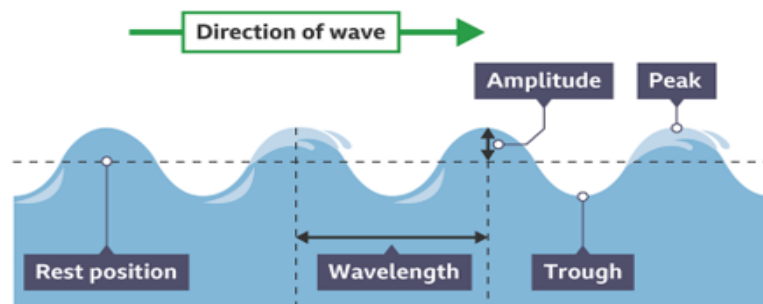
Lens – The purpose of the lens is to focus light on the retina.

Science – Cycle 2 – Waves

Lesson 10
Water Waves

Water waves are ripples that travel through water.

Water waves are **transverse** waves and can be **reflected** from surfaces



Water waves can reflect or 'bounce off' a surface.

For example, ocean waves are reflected when they hit a harbour wall, just like light waves reflect when they hit a mirror and waves in washing-up water are reflected off the sides of the sink.

Year 8 Art & Craft – Cycle 2

Threshold Concept: Artists use traditional craft techniques to create work with different forms and functions.



Aztec Pottery
1470



Islamic Art
Star-shaped tile from
Iran, 1444



Iranian Mosque, 1602
– 1619



William Morris,
Strawberry Thief
Textile Design 1883



Clarice Cliff.
Coffee Cup & Saucer
1929



Courtney Mattison
'Confluence'
Ceramic Installation 2018



Key terms:

- Traditional craft = methods that have existed for a long time without changing, using a skill to make things by hand.
- Ceramics = is the art of making objects by shaping pieces of clay.
- Printmaking = is the design and production of prints made using ink.

Art History- Key Facts:

1. **Aztec Pottery:** The Aztecs flourished in central Mexico from 1300 to 1521. They took pride in creating a variety of beautiful pottery, from small simple bowls to tall jars that were heavily decorated and painted. Their art and pottery was functional and also used to honour and praise their gods.
2. **Islamic Art:** Islamic art includes the visual arts produced since the 7th century by people who lived within Muslim territories. In Islamic Art plant motifs and patterns were used to decorate architecture and objects from the earliest Islamic period. Patterns were created using a range of techniques, including repetition of a motif using a grid, symmetrical and freehand design.
3. **William Morris:** William Morris is known as the 19th century's most celebrated designer, and a key figure in the Arts & Crafts Movement. He championed a principle of handmade production that didn't match with the Victorian era's focus on industrial 'progress'. He made designs used for wallpapers and textiles, tiles and book covers. The popular 'Strawberry Thief' pattern design was based on the thrushes which frequently stole the strawberries in the garden at his home in Oxfordshire.
4. **Clarice Cliff:** Clarice Cliff was one of the UK's most important Art Deco artists. Her distinctive ceramics with appealing, bright colours, brought modernity to the kitchen in the 1930's. She experimented with different ways to create tableware, from her triangular teacup handles to the distinctive conical form of her sugar casters. In the 1970s and 80s her popularity was revived, leading to worldwide collectability.
5. **Courtney Mattison :** Courtney Mattison creates delicate and large-scale ceramic sculptures using slab & hand building techniques. She is inspired by the fragile beauty of coral reefs and raising awareness for the protection of our blue planet, 'I believe art impacts our emotions and can move us to value the blue planet we live on in ways that scientific data often cannot.'

Yr8 Art & Craft - Cycle 2 Knowledge Organiser

Artists use traditional craft techniques to create work with different forms and functions.

Art History: There are 3 key phases in Art History:

1. **Traditional Art** = Art that is made using skills and knowledge which are passed down through generations from master craftsmen to apprentices. →
2. **Modern Art** = Art in which the traditional styles and values of the past have been thrown aside in a spirit of experimentation, in particular art created between the late 19th and the late 20th centuries. →
3. **Contemporary Art** = The art of today, produced in the second half of the 20th century or in the 21st century. →



Aztec Pottery
1470



Clarice Cliff.
1930



Courtney Mattison, 2018

Craft: Craft is an activity involving skill in making things by hand. Craft is a form of making which usually produces an object that has a function. In the past, craft was considered to be a lesser form of art than painting and sculpture because the objects made had a domestic function. In the mid-1800s William Morris began to question the differences between art and craft by bringing an artist aesthetic to a craft object, like wallpaper design. During the twentieth century, the boundaries between art and craft became blurred, as artists started to experiment with craft practices in their art.

Pattern: A pattern is a design in which lines, shapes or colours are repeated.

Motif: A recurring image or pattern that appears in a work of art.

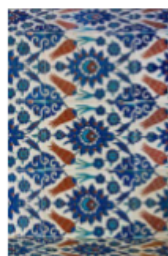
Lino Print: Linocut or lino printing is a form of block printing that involves carving a pattern or design into a linoleum surface that can then be printed from.

Rotate: To turn an image in a clockwise or counter clockwise direction. A motif may be rotated and repeated to create a pattern design.

Tessellate: Designs that tessellate combine shapes that fit together perfectly to form a pattern without any gaps, much like a jigsaw puzzle. Brick walls, tiled floors, wallpaper and the honeycomb pattern in bee hives are all tessellations.

Trace & transfer : Trace & transfer is a quick process where you copy an image from one surface onto another.

Textiles: Textile arts use materials & fibres to construct practical or decorative objects.



Ceramics: Art known as *ceramics* is all about making pottery. It is the art of making objects by shaping pieces of clay and then firing them in an oven called a kiln at temperatures around 1200 C. The word 'ceramic' refers to the material from which ceramics are made and comes from the Greek word *κεραμικός* (keramikos), "of pottery"

Decorative: Decorative pattern can be used to add variety to the surface of a ceramic sculpture.

Functional: Designed to be practical and useful, rather than just attractive.

Modelling: in sculpture is working by hand to construct a 3D form. In ceramics the artist's hands are the main tools, metal and wood implements are also used.

Slab : clay rolled into flat sheets using a rolling pin & roller guides

Score & Slip : the method used to join 2 pieces of clay together

Teracotta, Crank, Buff : types of clay

Computer Science

Year 8 - HTML Knowledge Organiser

What is the World Wide Web?

The internet is a global network of computers. The World Wide Web is the part of the internet that can be accessed through websites. Websites consist of webpages which allow you to see information.

A Browser

Websites are accessed using a web browser. A browser is a program designed to display the information held on a website. Every website has an address at which it can be found, a bit like a house address.

Internet Explorer

Internet Explorer was once the most widely used web browser, but it is not used any more.

Safari

Safari is the default browser on Apple devices.

Firefox

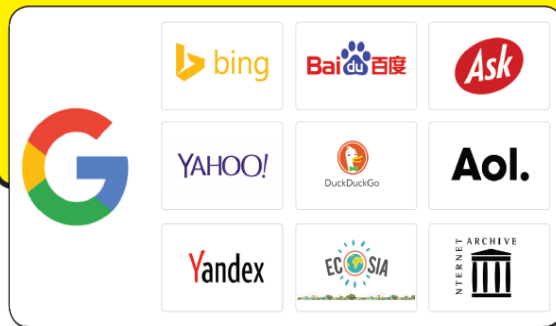
Mozilla Firefox, or simply Firefox, is a free and open-source web browser

Chrome

Google Chrome browser is an open source program for accessing the World Wide Web and running Web-based applications.

A Search Engine

These are commonly mixed up with a browser by students. A search engine is actually a webpage that is used to search using keywords the Internet. These powerful webpages makes finding and accessing information on the internet quick and easy.



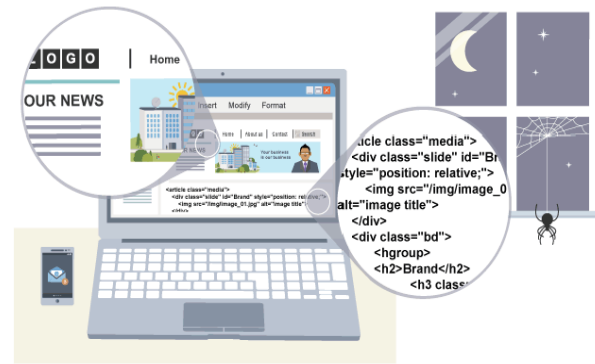
Common HTML Tags

Html uses tags to tell the browser how to format text and images. A tag uses this syntax **<open a tag>** then it must be closed with a / later **</close a tag>**.

<code><html> ... </html></code>	The root element. ...
<code><head> ... </head></code>	The document head. ...
<code><title> ... </title></code>	The page title. ...
<code><body> ... </body></code>	The page's content. ...
<code><h1> ... </h1></code>	A section heading. ...
<code><p> ... </p></code>	A paragraph. ...
<code><a> ... </code>	A link. ...
<code></code>	An image.

Hyper Text Markup Language - HTML

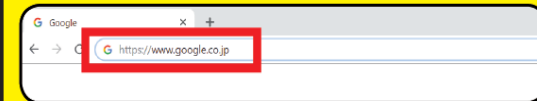
Webpages are created in a simple language called **HTML**. This is downloaded from the Internet and arrives at your computer and is interpreted by your Browser.



Web Address

Each website has its own unique address that is used to host all its information, and that you can type into the address bar to find the page.

Every browser has a location (usually at the top) that shows you the address of pages, in Chrome it looks like this:



http - Each address contains the prefix 'http:' which tells the computer to use the hyper text transfer protocol for communicating with the website. The browser then connects to the internet, finds the website at its address and downloads the information stored there onto our computer for us to view.

www - **World Wide Web** - This means the page is located on a server and is available globally on the Internet.



More Info...

If you are interested in doing more Web Design visit: <https://www.w3schools.com/>



Computer Science

Year 8 Python - Knowledge Organiser

Python's Development Environment

Python's Development Environment

Called IDLE – Integrated Development Environment

Two Modes:

Interactive Mode lets you see your results as you type them.

Script Mode lets you save your program and run it again later.

Writing error-free code

When writing programs, code should be as legible and error free as possible. Debugging helps keep code free of errors and documenting helps keep code clear enough to read.

Syntax errors

Syntax is the spelling and grammar of a programming language. In programming, a syntax error occurs when:

- there is a spelling mistake.
- there is a grammatical mistake.

Data Types

String - holds alphanumeric data as text

Integer - holds whole numbers

Float - holds numbers with a decimal point

Boolean - holds either 'True' or 'False'

Defining Variable Data Types

Python automatically assigns a data type to a variable. You can override this to manually define or change the data type using:

str() , **int()** or **float()**

Selection

When designing programs, there are often points where a decision must be made. This decision is known as selection and is implemented in programming using IF statements.

Operator	Meaning	Example	Evaluates to
==	equal to	7==7	True
!=	not equal to	6!=7	True
>	Greater than	7>6	True
<	Less than	5<8	True
>=	Greater than or equal to	6>=8	False
<=	Less than or equal to	7<=7	True

Procedures

A procedure is a small section of a program that performs a specific task. Procedures can be used repeatedly throughout a program. Procedures can make code shorter, simpler, and easier to write. Writing a procedure is extremely simple. Every procedure needs:

1. A name
2. The program code to perform the task

Variables

A variable is a location in memory in which you can temporarily store text or numbers. It is used like an empty box or the Memory function on a calculator. You can choose a name for the box (the "variable name") and change its contents in your program.

Using a Variable (firstname)

```
print ("What is your name?")
firstname = input()
print ("Hello," ,firstname)
```



Functions

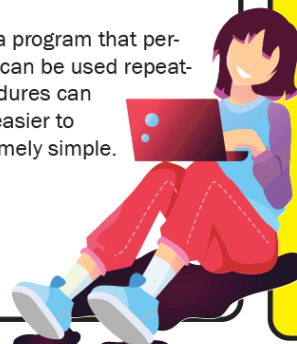
Functions are special keywords that do a specific job. Functions appear in purple. print() and input() are examples of functions

```
print ("What is your name?")
firstname = input()
print ("Hello," ,firstname)
```

Adding Comments

Comments are useful to help understand your code. They will not affect the way a program runs. Comments appear in red and have a preceding # symbol.

```
#firstname is a variable
print ("What is your name?")
firstname = input()
print ("Hello," ,firstname)
```



Key Words

String
Integer
Float
Boolean

Variable
IDLE - Intergrated
Development Environment
Interactive
Syntax

Selection
Procedures
Functions
Script
Program

Find out more...

<https://replit.com/languages/python3>



Overview of the Play

'Refugees don't exist. Only blown away people exist, people blown by the wind all over the world.' Set in the indescribably savage Bosnian civil war, this play tells the story of one boy's search for his mother. Mirad is a story for our time, and for all times and for people caught up in the desperate tragedies of war.



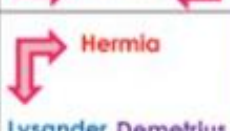
Year 8 – Unit 3 Mirad, A Boy From Bosnia

Dramatic Conventions

Improvisation	When you act out/create a scene on the spot or with limited planning, without a script
Still Image	Where every person on the stage freezes – as if you could take a photograph.
Thought Tracking	When you speak your characters thoughts/feelings out loud, usually during a still image.
Direct Address	When you speak directly to the audience 'in role'.
Soundscape	is when performers each choose a sound effect or line of dialogue that they repeat on stage so that the noises overlap and build up.

Lighting Design Terminology



Plot Summary	Who loves Whom
Act 1: Hermia and Lysander love each other but are not allowed to marry so decide to run away to the forest to get married in secret. Demetrius wants to marry Hermia . Helena loves Demetrius . They follow Hermia and Lysander into the forest.	
Act 2: In the forest, Oberon and Titania are arguing. Oberon sees Demetrius and Helena arguing and commands Puck to use the potion on the Athenian man to make him fall in love with Helena . However, the first Athenian man Puck sees is Lysander , so he puts the love potion on him. Lysander falls madly in love with Helena .	
Act 3: Puck sees Bottom in the forest and transformed his head into a donkey's head. He puts the love potion on Titania, who falls in love with Bottom. Puck puts the love potion on Demetrius so that he falls in love with Helena . As a result, both men love Helena so there is chaos. Puck eventually drops a herb in Lysander's eyes to put him back to normal.	
Acts 4 and 5: Oberon finds Titania and Bottom and decides that he has had enough fun. Puck drops a herb in her eyes, she wakes and leaves with Oberon. The lovers return to Athens where Bottom and the other actors perform their play at the wedding of the three happy couples: Theseus and Hippolyta, Lysander and Hermia and Demetrius and Helena .	

Characters	
Theseus The duke of Athens. He is a strong and strict ruler of the city.	Oberon The king of the fairies who controls the love potion.
Hippolyta Theseus's bride. She was a fearless warrior.	Titania The fierce queen of the fairies who falls in love with Bottom when the love potion is put on her.
Egeus Hermia's stubborn father who wants her to marry Demetrius or be put to death.	Bottom A weaver and actor who has his head turned into a donkey. Titania falls in love with him when she is under the love potion's influence.
Hermia Egeus's daughter who is in love with Lysander.	Puck Oberon's mischievous servant who puts the potion on people's eyes. 
Lysander He is in love with Hermia and runs away to the forest with her.	The Love Potion The love potion is made from a flower in the forest. The flower is magical because Cupid hit it with his arrow when he was aiming at a young girl. When the potion is put on characters' eyes, they fall in love with the first person they see. It is very powerful.
Demetrius He wants to marry Hermia and is disgusted by Helena's love for him.	
Helena Hermia's friend who is desperately in love with Demetrius.	

Year 8 – Cycle 2

A Midsummer Night's Dream

History

Shakespeare went to a grammar school where he was taught Ancient Greek.
The play is set in Ancient Greece and follows the rules of a comedy from Ancient Greece.
When the play was written, Elizabeth 1 st was Queen. She decided not to get married which many people disagreed with.
Many Elizabethans believed in and feared magic.
Cupid is the ancient god of love. He is usually presented as a baby whose arrows make people fall in love. 

soliloquy - a speech in a play that the character speaks to himself or herself or to the audience, rather than to the other characters
severe - very strict or harsh
conflict - a serious disagreement, battle or struggle between two sides or ideas.
unrequited love - If a person loves someone who doesn't love them back, the person's love is unrequited
to mock - To mock someone is to make fun of them
chaos - a situation where there is no order and everyone is confused
to resolve - to solve a problem or difficulty

Key Vocabulary

Lesson 1 Amazing Asia's Biomes

Asia has a wide variety of biomes

Tundra is the furthest north. It is cold here and ground is deeply frozen but thaws in the summer. There is only low growing shrubs and animals such as caribou.

Taiga is south of the tundra. It has thick coniferous forests with trees such as spruce and fir which have pine needles rather than leaves. Winters are long and very cold.

Steppes are plains of grassland. Summers are hot, winters are cold.

Cold deserts are south of the steppes. They are dry.

temperate forest biome has deciduous trees. Summers are hot here. Winters are cold and very cold in some places.

Hot desert is at 30° latitude there is the hot desert. It is usually very hot during the day. There is very little vegetation.

Mountain ranges The higher you go the colder it gets. There are various unique species that live here including the ibex.

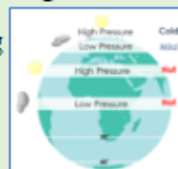
1. Which biome is characterised as being cold/ dry/ no plants and semi frozen?
2. What type of trees are in the taiga?
3. Are deserts always hot?



Lesson 2: Features of the rainforest

The tropical rainforest are characterised by **dense vegetation**.

They are located along the **equator** which receives the **highest levels of insolation**,



which forms **convectional rain**, so the climate is hot and wet, it has both cloudy and sunny skies.

They receive **12 hours of sunlight 365 days a year**.



There are no seasonal extremes e.g. winter or summer.

The trees lose water through a process of **evapotranspiration**. This means they form their own clouds. **70%** of the rain has come from the trees

Soils store carbon. Some of it is absorbed by the trees through growth. The **trees roots stabilise the soil** and stop it being **eroded**. It is infertile as the plants roots absorb it so quickly

1. Where are the tropical rainforest located?
2. The tropical rainforest receives the highest levels of in _____
3. How many hours of daylight do they receive?
4. Describe the climate like?

Lesson 3 Plant Adaptations

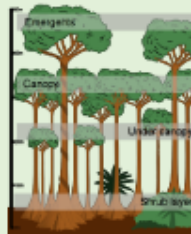
Structure of the rainforest

The **emergents** grow above the canopy layer.

The **canopy** is the thickest layer of vegetation

The **under canopy** is a darker layer where the leaves grow large.

Only 2% of light reaches the ground so the **shrub layer** is thick with dark green leaves



Plant adaptations

Emergents Trees have adapted to absorb sunlight by growing tall above the canopy layer.

Buttress Roots support the trees

Epiphytes have adapted to be able to grow without soil and can grow on other plants

Drip tips to allow the heavy rain to roll off easily without damaging the plant

Plants in the shrub layer are **dark green** so that they can absorb as much light to help them grow

1. How have some trees adapted to reach the sunlight?
2. What are the plants called that can grow on other plants?
E _____
3. Leaves are dark g _____ and have d _____ t _____

Lesson 4 Resources of the rainforest

HEP

The **Bakun Dam** is located in Sarawak, Malaysia, on the Balui River. It flooded 700 km² of land.

Construction required the relocation of more than 9,000 native residents. Water is forced through two small pipes in the dam, this turns a turbine which generates electricity for the whole of Malaysia. This can encourage investment and economic growth

Palm oil



Malaysia is the world's second-largest producer. It is used in cosmetics, shampoo, cleaning products and can be used as a biofuel.

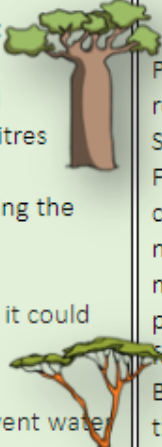
It provides valuable jobs and income for people and companies. The Malaysian Government pledged to limit palm oil plantation expansion by retaining at least half of the nation's land as forest cover.

Mining

Borneo is rich in natural resources such as tin, gold, bauxite and copper. These resources are valuable and can be sold. It also provides jobs and income.

1. What resource can the Bakun Dam produce? H _____ E _____ P _____
2. State 3 other resources that Malaysia can export

Lesson 5 Russia's biomes	Lesson 6 Threats to the tundra	Lesson 7 Opening up the Arctic	Lesson 8 Future of the Arctic
Taiga Resources : The trees can grow quickly so timber is an important, as well as coal, oil, gas and other metals Services to the planet: Carbon is stored in the leaf litter Threat: Deforestation and forest fires Tundra Resources: There are huge quantities of natural gas, oil and coal. Services: The permafrost, it holds a lot of carbon and methane The ice/snow reflect the sun's light keeping the planet cool Threat: Climate change is causing the permafrost to melt which will release the methane and carbon. Grasslands Resource: Farmland Threats: The main threat is conversion from grassland to farmland which degrades the soil Desertification on the southern edge of the grasslands.	Environmental Arctic sea ice has been decreasing at a rate of almost 13% per decade since 1979. In 2020, the hottest Arctic temperatures on record (38°C), contributed to forest fires Reindeer struggle to access foods like lichens, threatening traditional herding of Sami and Nenets people. Social Moscow has seen an increase in the number of mosquitos and malaria Melting permafrost resulted in flooding in Siberia in the summer of 2019. Over 400 people were injured and 10,150 houses were flooded. Economic damage to buildings and infrastructure alone could cost Russia up to 9 trillion Rubles (£75 billion) by 2050. In June 2020, melting permafrost toppled a diesel storage tank near the Arctic city of Norilsk, spilling 21,000 tonnes of diesel into the Ambarnaya river	Where is it? The Arctic refers to anywhere inside the Arctic Circle which is 66° North What are the physical features? There is no landmass This region is dominated by Arctic Ocean which is where the North Pole is It is surrounded by 8 countries It is covered by floating sea ice which is 2m thick The ice is really important as it joins landmasses and animals use it to migrate and hunt The ice sheet reduces in size during the summer melt Scientists have predicted it will be ice free by 2040 How have animals adapted? Animals have adapted to the cold, frozen, windy climate usually through colour, blubber (fat reserves) wide paws/ hooves, small ears, short legs	Why is it threatened? The Antarctic has a treaty signed by 50 countries. There is no treaty in the Arctic. It is contested by 8 countries which can exploit their 200 nautical mile exclusive economic zone. Threats <i>Fishing:</i> Over fishing (taking too much) can disrupt ecosystems <i>Tourism:</i> could disrupt animals breeding and hunting <i>Political tension</i> means there is competition for resources and increasing conflict. <i>Resource extraction</i> There are vast amounts of oils, gas and precious metals that can be mined will disrupt ecosystems especially if there are leaks or spillages <i>Climate change:</i> Ice continues to melt which means species such as polar bear can't hunt and seals have no resting place
1. Which biome stores the most carbon? 2. Which biome is at threat from farming? 3. What is the key term used to describe the useful functions of an ecosystem? Ecosystem S _____	1. How much is sea ice reducing by? 2. How hot does it get and what is the main threat during summer? 3. What is melting? 4. What gas is released? 5. Which insect and disease is likely to become more common?	1. Is there land at the Arctic? 2. How thick is the ice in the Arctic? 3. Which country has the largest coastline to the Arctic? 4. How does a polar bear adapt to hunting on the ice? 5. How long can a Greenland Ice Shark live for?	1. How many countries have signed the Antarctic Treaty? 2. According to this, it can only be used for ... 3. How many countries claim the Arctic? 4. They are allowed to exploit resources up _____ nautical miles off their coasts 5. What do you think should happen in the Arctic

Lesson 10 Africa's Grasslands	Lesson 11 Life on the edge	Lesson 12 Desertification	Lesson 13 Africa's Great Green Wall
Location and features The largest grassland biome is in Africa covering nearly half of the continent. Other major grasslands are in South America and northern Australia. In the wet season vegetation grows, There is very little rain in the dry season, this is when vegetation begin to brown and die Plant adaptations: The baobab stores water in its thick and corky trunk up to 120,000 litres which is also fire-resistant It only produces leaves during the wet season saving energy The umbrella thorn acacia Has a deep taproot so that it could get water during the dry season It has small leaves also prevent water loss Sharp thorns protect acacia's leaves from herbivorous animals A chemical defence system is triggered releasing poison into the leave if animals eat the leaves 	Location and features Deserts are arid (dry) or semi-arid areas that receive less than 250mm of rain each year and can be hot or cold. The Sahara is the largest. It receives between 20mm and 100mm annually. Temperatures are 37°C to 25°C in the winter. However, at night time it can drop below freezing. How have people adapted? People tend to live in the semi-arid regions on the edge such as the Sahel. Food and water are the main challenges, so many societies are nomadic (or semi nomadic). This means moving around from place to place to find water and vegetation for their animals. The Tuareg are Berber people who migrate across the Sahara and use camels to transport various resources such as salt. The Sahel is an important region that stretches across Africa from the Atlantic to the Red Sea and includes 14 countries. 	Formation of soil The parent rock is weathered (broken down) to form the mineral components (rain is important in this process) Dead plants and animals decay which provides organic matter (humus) Fungi, earthworms, woodlouse (decomposers) help breakdown the matter into nutrients Plants can absorb the nutrients and grow. Dead plants and animals decay which further contributes to organic matter (humus) Desertification – where fertile land becomes like a desert, usually through misuse Human and Physical Causes of desertification Climate change and unreliable rainfall contribute to desertification Other human activities such as over grazing, deforestation remove the vegetation. This means there is no leave litter to contribute to the soil, there is less moisture so the soils becomes dusty and is eroded away	Africa's Great Green Wall 11 countries are working together to plant, 11 million trees, 15km wide and 8000km long. They shelter soil from wind and sun, and help rain soak into the soil. You can plant crops between them. Zai Pits Dig a hole, line with leaves/ vegetable scraps / animal manure. It fertilises the plant and stores a little water when it rains. It is low tech and uses local materials. Smart Irrigation Use narrow pipes with tiny holes to drip water right over the plant's roots. It reduce waste from evaporation and leakage The pipes are low cost Rotational grazing Let animals graze an area for a short time Compaction is less likely to happen because the animals are moved on quickly. The manure fertilises the soil and provides waste for more humus.
1. Where are the grasslands located? 2. When is the rainy season? 3. Which tree can store 120 litres of water in its trunk? 4. Which trees leaves become toxic when it is threatened?	1. On what lines of latitude are deserted located? 2. What is the name of the region south of the Sahara that stretches across 14 countries 3. What is the key term for people who move around?	1. What is the main part of soil made of? 2. What adds important nutrients 3. What is a physical cause of desertification 4. Name 3 other human causes of desertification	1. How many countries are part of the Great Green Wall? 2. What do the roots of the trees do? 3. What do the leaves provide? 4. What is the strategy that uses pipes with small holes to irrigate the crops?

Lesson 14 Mangroves the unsung heroes

Location and features

Mangroves are forests of salt-tolerant trees that grow in the warm shallow tidal tropical waters Supporting a complex aquatic food web, acting as a fish nursery and being a rich source of fish, shellfish, oysters, shrimp and other crustaceans such as crabs.



Services

They remove up to 6-8 times more CO₂ from the atmosphere than rainforests
Prevent coastal erosion
Reduce wave height by up to 66% during storm events
Act as a sink absorbing pollutants from sewage and water wastes.

Threats

30-50% are lost due to shrimp farming, tourism and other developments.
Dumping wastes, over logging for timber or fuel wood. Pollution; for example, oil and other industrial pollutants. Increased storm frequency will damage them



1. Where are Mangroves located?
2. Name 3 services that Mangroves provide
3. What do they store in the soil and vegetation
4. They are a important h_____ and nursery for

Lesson 15 Oil Spill in the Ogoni

What type of country is Nigeria?

The capital city is Abuja.
GNI Per capita \$5,200 (UK \$49,420, China \$19,160)
Life expectancy 52 years old
34% are subsistence farmers
It is in the top 20 oil producing countries in the world
TNC's such as Shell have been extracting oil for decades. In 2008 there was a major spill in Bodo.



Environmental effects

20km² of mangroves have been degraded or polluted
There has been a 90% reduction in the number of species of fish, crab and snails Including the rare red colobus monkey



Social and economic effects

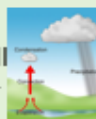
The Ogoni Periwinkle catch has been reduced by 90%
People have reported sinus problems and increase in the rates of mouth ulcers and cancer
85% of people relied on Mangroves for herbal remedies which they can no longer receive
Fishermen now have to travel over 40 miles away to fish

1. What is the capital of Nigeria?
2. What type of country is Nigeria?
3. Where did the oil spill occur?
4. Which ethnic group were most effected?
5. Which TNC was involved?

Key Words

Bauxite a clayey rock that is the chief commercial ore of aluminium.

Convictional rainfall Rainfall formed due to heating of air



Evapotranspiration is the process by which water is transferred from the land to the atmosphere by evaporation and by transpiration from plants.



Decomposer an organism (bacteria, fungus, or insects) that breakdown organic material

HEP hydroelectric power, is a renewable source of energy that generates power by using water to turn a turbine



Herbivorous Feeding off plants

Humus the organic component of soil, formed by the decomposition of leaves and other plant material by soil microorganisms.



Insolation the amount of solar radiation reaching a given area.

Irrigation The large scale watering of crops usually using pipes and sprinkler or channels

Key Words

Nomad/ nomadic a member of a people that travels from place to place to find fresh pasture for its animals and has no permanent home.



Parent Rock is the original rock from which younger rock or soil is formed.



Periwinkle a small marine snail

Subsistence farmers a person who owns or manages a farm on which they grow crops or raise livestock sufficient only for their own use, without any surplus for trade

Resources is any physical material constituting part of Earth that people need and value. Natural materials become resources when humans value them.

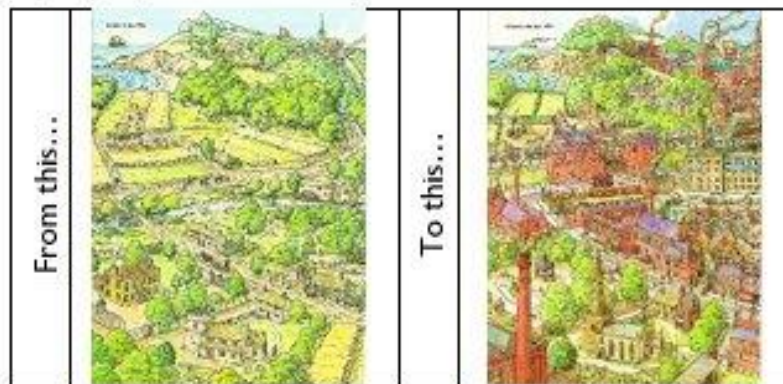
Sustainability is the practice of using natural resources responsibly today, so they are available for future generations tomorrow.



**Overview of the Industrial Revolution:**

From 1750 to 1900 Britain went through a process of rapid change in:

- **Agriculture** – (farming) New tools, fertilizers and harvesting techniques were introduced, this meant more farming became more efficient and more food was grown. This supported the growing population.
- **Industry** – Before the Industrial Revolution people had worked in their own homes, working on their own. The Industrial Revolution brought factories and mass production, meaning more goods could be produced, quicker and cheaper.
- **Transport and communications** – Thomas Telford built roads and canals in the 1700s and George Stephenson and Isambard Kingdom Brunel oversaw the 'Railway Mania' of the 1800s. There had previously been no very fast, cheap way of transporting goods and people around the country, steam power changed this.
- **Technology** – There were also many scientific discoveries and technological inventions that changed society and industry. Changes to sanitation (hygiene) and medical treatment such as the work of John Snow and Edward Jenner improved people's quality of life.

**Key dates**

1750-1900	The period in which the Industrial Revolution took place in Britain. Britain was the first country to industrialise.
1712	Thomas Newcomen invents the first usable steam engine. It could be used to power machines in factories.
1825	The first steam railway is opened between Stockton and Darlington. It used engines created by George Stephenson.
1829	The Metropolitan Police Force was formed. (London only).
1832	The Great Reform Act gave more people the right to vote
1847	The 10 Hours Act is passed – the law made it illegal for women & children to work more than 10 hours per day in textile mills
1858	Joseph Bazalgette begins the building of 1300 miles of sewers in London.

Key concepts

Working conditions	Conditions for workers were generally poor. Jobs were very dangerous, children were expected to work, pay was poor, especially for women and children.
Living conditions	Life in towns/cities was very unhygienic. Only the wealthy had water supplies to their homes. The poor lived in overcrowded, unhygienic, poor quality slum homes. They often lived in lodging houses with strangers. The lack of proper sewage systems meant that even the wealthy couldn't avoid the smell and disease. Cholera and other 'filth diseases' were common and there were no cures.
Law and order	There was no police force until 1829, and that was only in London. Crime was common, especially theft. Poor people had nowhere safe to keep valuables and unlit streets made crime easy to get away with. The police were distrusted as they were new. There was also lots of violent crime, e.g. Jack the Ripper murders.
The political system	Before 1832 only 3% of the population could vote! It was only after 1867 that some working-class men were allowed to vote. No women were allowed to vote at all. Politicians were rich, white men who were often business owners. They didn't want to change the rules as it would make them lose money.

Key vocab

population	The amount of people who live in a particular place. The population of the Britain rose over 600% during the Industrial Revolution – 6 million to 37 million!
mass production	Producing large quantities of identical goods, in a factory, often using machines.
urbanisation	The movement of people from the countryside to towns and cities. By the end of the Industrial Revolution , the majority of people lived in towns.
Industrial Revolution	A time of rapid change in the way that things are manufactured (made), going from being hand made at home, to using machines in factories. E.g. Britain between 1750 and 1900.
interpretation	An historian's view of the past. E.g. Emma Griffin has a positive interpretation of the Industrial Revolution .
technology	Anything that is man-made in order to make life easier or more enjoyable.
agriculture	farming
mechanisation	Changing from things being made by hand to things being made with the help of machines.
cottage industry	When people worked from their homes e.g. weaving cloth on a hand loom.
labour	Work, especially hard, physical work (done with your hands).
child labour	When children work. This was common in the Industrial Revolution, e.g. in mines, factories, on farms or as chimney sweeps.
slums	Poor quality housing.
rotten boroughs	Areas which still got to send MPs to parliament, but only had a few people living there. In other areas, e.g. Manchester, thousands of people lived, but were not allowed to send any MPs to parliament.

History Year 8 Knowledge Organiser: Empire

Overview of The British Empire

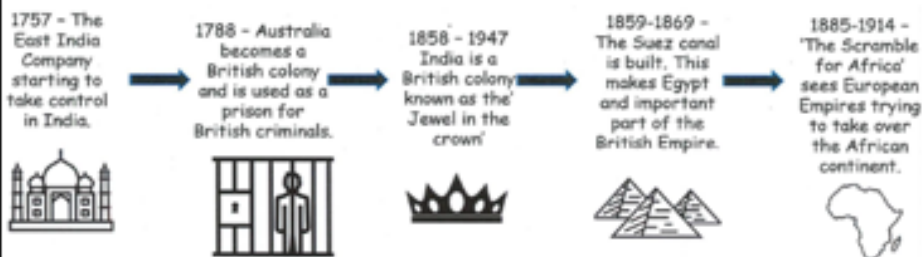
What was it? An 'empire' is a group of countries ruled over by one country. The **British Empire** was made up of Britain, the 'mother country', and the **colonies** (countries that were controlled by Britain). By the 1800s, the British had built a worldwide **empire**. It covered 1/4 of the world and included over 50 countries like India, Australia, Canada, New Zealand, and Kenya.

Why did Britain want it? Having a global **empire** gave Britain access to raw materials (e.g. crops, precious metals etc), large trading markets (places to buy their goods) and strategic military ports. It also gave them **prestige** (made them look good).

Impact? Britain made some improvements to the countries they ruled. For example, they built railways and roads, schools and hospitals. However, it came at a cost. The countries they ruled were taxed heavily, their resources and land were given to British companies, and control was maintained through violence and massacres.

How did it end? After World War II, Britain started to give back the colonies, known as decolonization. Britain decided to give back nations because World War II left the British Empire essentially bankrupt. Also, many of the people the Empire had ruled wanted to be in charge of their own countries. One of the last parts of the British Empire was Hong Kong. Hong Kong was given back to China in 1997.

How did the British Empire grow over time?



Key concepts

imperialism	Imperialism is a belief in empire . It describes an economic, political, and social system in which one country takes others, and brings them under its power and control.
power	Power means the right or ability to govern, rule, or strongly influence people or situations. Power is a general word that suggests the ability to control or influence what is done and felt. If a country has " power " (as influence) in military, diplomatic, cultural, and economic spheres, it might be called a "power" (as status).
civilisation	A society with a system of government and writing. A civilization is often defined as a complex culture with five characteristics: advanced cities, specialized workers, complex institutions, record keeping, and advanced technology.

Key vocab

empire	A group of countries (colonies) that are ruled or controlled by another country
humanity	The concept of humanity describes the human race, which includes everyone on earth.
reasonable	Having a sound, fair, and sensible judgement
mutiny	A revolt or uprising, especially by the military.
interpretation	An historian's view of the past. E.g. Richard Gott has a negative interpretation of the British Empire .
colony	The countries that are controlled by an empire
legacy	A legacy is what is left behind after something ends of someone dies.
The Commonwealth	Name given to a group of former British colonies who chose to remain allies with the British after the British empire ended
scramble for Africa	The name given to a fight between European empires to gain control of large parts of Africa.

Knowledge organiser - Cycle 3 – Transatlantic Trade in Enslaved People

Timeline of key events		Key terms	
Date	Event	Note: Language is very important in this unit for two reasons. 1. You will come across language in sources that was commonly used at the time that is highly offensive and must not be used today. 2. The words and terms used to describe this topic often come from the people who enslaved people and are therefore offensive. We need to make sure we use language that is specific and emphasises that terrible nature of slavery.	
1560s onward	Start of British involvement in the Transatlantic trade in enslaved people. Remember that slavery has existed in many cultures throughout history.		
1700-1800	6 million Africans enslaved and taken to Americas		
1787	Thomas Clarkson launches campaign against slavery		
1804	Successful fight for independence by enslaved people in Haiti. Haiti becomes an independent country.		
1807	The trade in enslaved people in the British empire is banned.	Key Word	Definition
1833	Slavery Abolition Act – A law that banned slavery in the British empire.	slavery	The state of being enslaved (not free)
1861-65	American Civil War – The Union (Northern states) win and slavery is abolished in USA	enslaved person	A person that has no freedom, is forced to work without pay and treated with no respect. We use this term rather than 'slave' to show that they were people who had been forced into this way of life, it was not, and is not, normal for anyone to be enslaved.
Key people		Transatlantic slavery	Transatlantic = across the Atlantic, i.e. between the west coast of Africa and the Americas. This phrase is used to describe the trade in enslaved people 1500s-1900. It was at its height in the 1700s
Thomas Clarkson		triangular trade	The three part trading journey between Europe, Africa and America.
		middle passage	The journey from Africa to the Americas on which enslaved people were transported in terrible conditions.
Olaudah Equiano		plantations	Huge farms, growing a single crop, that used enslaved people to complete the work. Main crops = cotton, sugar, tobacco
		resistance	Fighting back - refusing to accept or obey. Enslaved people used many forms of resistance, from actually fighting to purposely working slowly, or running away.
Toussaint Louverture		freedom fighters	Enslaved people that fought for their freedom. They are often referred to as rebels, but shouldn't be as this makes what they did sound like a bad thing.
		Maroons	Enslaved people who became freedom fighters e.g. in the British colony Jamaica where they successfully fought for their freedom.
Mary Prince		campaign	Organised course of action to achieve a goal
		abolition	To formally bring something to an end. This is known as being abolished

Key Question: Why did slavery end?

Resistance
Freedom fighters fought back. There were revolutions in places like Haiti. Individual people Equiano and Prince campaigned and wrote books. There were every day acts of resistance like running away, working slowly and breaking tools



Economy
 Enslavement is used because it is a way to make money. As crops that used to be only grown in the Americas became available from Europe it was cheaper to get them from there. Freedom fighters' resistance also cost a lot of money to try and deal with



Moral
 Due to the campaigning of **abolitionists** like **Equiano**, **Prince** and **Clarkson**, people were forced to acknowledge the terrible living and working conditions that **enslaved people** had and began to realise it was wrong.



Y8Fr LC2 : Sentence Builder 1 : Visiting cities - Tu es allé à Paris ?

Time marker	verb phrase	Verb phrase 2	Noun	Negative	past tense	adjective
L'année dernière (last year)	je suis allé(e) à Paris (I went to Paris) je suis allé(e) à Londres (I went to London)	J'ai visité la tour Eiffel (I visited the Eiffel Tower)	mais (but) cependant (however) pourtant (however)	je n'ai pas visité la tour Eiffel (I didn't visit the Eiffel Tower)	c'était (it was) ce n'était pas (it wasn't)	bien (good)
L'été dernier (last summer)		J'ai mangé au restaurant (I ate in a restaurant)		je n'ai pas mangé au restaurant (I didn't eat in a restaurant)		bizarre (weird)
Récemment (recently)		J'ai admiré Big Ben (I admired Big Ben)		je n'ai pas admiré Big Ben (I didn't admire Big Ben)		cher (expensive)
Hier (Yesterday)		J'ai acheté des souvenirs (I bought souvenirs)		je n'ai pas acheté de souvenirs (I didn't buy souvenirs)		effrayant (scary)
La semaine dernière (last week)		J'ai pris des photos (I took photos)		je n'ai pas pris de photos (I didn't take photos)		fabuleux (fabulous)
		J'ai vu la Joconde (I saw the Mona Lisa)		je n'ai pas vu la Joconde (I didn't see the Mona Lisa)		marrant (funny)
		on a fait les magasins (we went shopping)		on n'a pas fait les magasins (we didn't go shopping)		passionnant (exciting)
		on a fait un tour en bus (we did a tour by bus)		on n'a pas fait de tour en bus (we didn't do a tour by bus)		barbant (boring)
		on a fait une balade en bateau (we did a trip by boat)		on n'a pas fait de balade en bateau (we didn't do a boat trip)		nul (rubbish)
		on s'est promenés (we went for a walk)		on ne s'est pas promenés (we didn't go for a walk)		

Y8Fr LC2: Sentence Builder 2: How I travel - Tu as voyagé comment?

Time marker	Verb Phrase	Transport	Connective	Past Tense Verb	Comparative	Adjective	Comparative	Transport
L'année dernière (Last year) L'été dernier (Last summer) Récemment (Recently) Hier (Yesterday) La semaine dernière (Last week) 	je suis allé(e) à... (Paris) (I went to...)	en avion (by plane) en bus (by bus) en car (by coach) en bateau (by boat) en métro (by underground) en train (by train) en voiture (by car) à vélo (by bicycle) à moto (by motorbike) à pied (on foot)	car parce que	c'était (it was)	plus (more) moins (less)	rapide (fast) facile (easy) amusant (fun) sain (healthy) tranquille (calm) confortable (comfortable) intéressant (interesting) cher (expensive) lent (slow)	qu' que (than)	en avion (by plane) en bus (by bus) en car (by coach) en bateau (by boat) en métro (by underground) en train (by train) en voiture (by car) à vélo (by bicycle) à moto (by motorbike) à pied (on foot)

Y8Fr LC2 : Sentence Builder 3 : What you can do in Paris - Qu'est-ce qu'on peut faire à Paris ?

Place marker	Noun	verb phrase	activities	opinion phrase	verb	adjective
À Paris il y a (In Paris there is) 	la tour Eiffel (the Eiffel Tower)	où on peut (where you can)	voir des vues spectaculaires (see some spectacular views)	à mon avis (in my opinion) selon moi (according to me) je pense que (I think that) je crois que (I believe that) je trouve que (I find that)	c'est (it is)	bien (good) fabuleux (fabulous) génial (great) intéressant (interesting) marrant (funny) passionnant (exciting) bizarre (weird) cher (expensive) effrayant (scary) ennuyeux (boring) horrible (horrible) nul (rubbish)
	le Musée du Louvre (the Louvre museum)		voir la Joconde (see the Mona Lisa)			
	la Cathédrale Notre Dame de Paris (the Notre Dame Cathedral)		admirer l' architecture (admire the architecture)			
	l'Avenue des Champs-Élysées (the Champs-Élysées Avenue)		faire des courses (go shopping)			
	le Musée d' Orsay (the Orsay museum)		voir l' art impressionniste (see the Impressionist Art)			
	le Palais Garnier (the Garnier Palace)		regarder un opéra (watch an opera)			
	les Catacombes (the Catacombs)		voir les squelettes (see the skeletons)			
	le Centre Pompidou (the Pompidou Centre)		voir l' art moderne (see modern art)			
	le Sacré-Cœur (the 'Sacred Heart' Basilica)		voir le beau dôme (see the beautiful dome)			
	l'Arc de Triomphe (the 'Arc de Triomphe')		profiter de la vue (enjoy the view)			

Y8Fr LC2 : Sentence Builder 5 : Which French speaking countries I can visit - Dans quel pays francophone vas-tu aller ?

Time marker	Future tense	French speaking country	Future tense	place/activity	Adjective/Opinion
La semaine prochaine (Next week) Le mois prochain (Next month) L' été prochain (Next summer) L' année prochaine (Next year) Dans le futur (In the future) À l'avenir (In the future) 	je vais aller (I am going to go) on va aller (we're going to go) Nous allons aller (we're going to go)	en France (to France) en Belgique (to Belgium) en Suisse (to Switzerland) à la Martinique (to Martinique) au Canada (to Canada) au Sénégal (to Senegal) au Mali (to Mali) au Cameroun (to Cameroon) au Luxembourg (to Luxembourg) à la Réunion (to la Réunion)	je vais aller (I'm going to go) on va aller (we're going to go) nous allons aller (we're going to go) je vais faire (I'm going to do) on va faire (we're going to do) nous allons faire (we're going to do)	à la plage (to the beach) à la montagne (to the mountains) en centre-ville (to the town centre) en forêt (to the forest) au lac (to the lake) au marché (to the market) du shopping du vélo (cycling) de l'escalade (climbing) de la natation (swimming) des randonnées (hiking)	 j' ai hâte d'y être (I can't wait to be there) je suis un peu nerveux/se (I'm a bit nervous) je suis très impatient(e) (I'm very excited)

¿Por qué lees? – Why do you read?

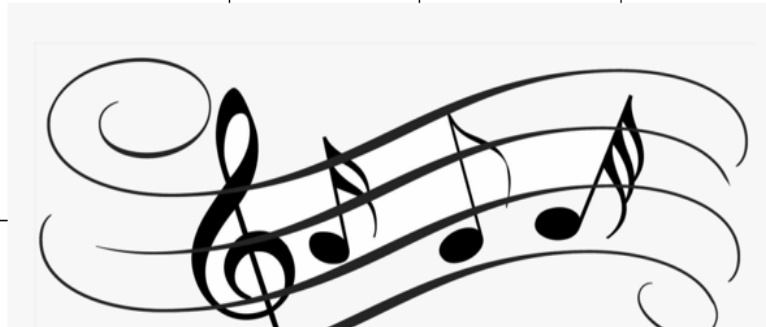
Pronoun	Verb	Noun	Time phrase	Connective	Verb
(Yo) = I	leo = I read	novelas = novels biografías = biographies revistas = magazines periódicos = newspapers blogs = blogs libros de... = the books of...	todos los días = every (the) day cada día = each day dos veces a la semana = two times a week tres veces al mes = three times a month a menudo = often a veces = at times (sometimes) de vez en cuando = now and again casi nunca = almost never nunca = never	y = and también = also pero = but sin embargo = however porque = because ya que = since dado que = given that	me encantan = I love them me gustan = I like them me inspiran = they inspire me me interesan = they interest me me fascinan = they fascinate me me preocupan = they worry me me aburren = the bore me me fastidian = they irritate me me obligan = they make me
(Tú) = You (sing)	lees = you (s) read				
(Él) = He (Ella) = She Mi padre = my dad Mi madre = my mum	lee = he/she/it reads				
Nosotros = we	leemos = we read				
Vosotros = you (pl)	leéis = you (pl) read				
Ellos/Ellas = they	leen = they read				



Year 8 Learning Cycle 2 Sentence Builder 2:

¿Qué música escuchaste recientemente? – What music did you listen to recently?

Time phrase	Verb	Noun	Connective	Noun	Verb	Qualifier	Adjective
Ayer = Yesterday Anoche = Last night Recientemente = Recently	escuché = I listened escuchaste = you (s) listened escuchó = he/she/it listened escuchamos = we listened escuchastéis = you (pl) listened escucharon = they listened	pop rock rap RnB música clásica = classical music música latina = latin music la música de ... = the music of ... de todo = everything	porque = because	el ritmo = the rhythm la letra = the lyrics la melodía = the tune	es = (he/she/it) is	muy = very bastante = quite más = more menos = less	buen@ = good mal@ = bad guay/chul@ = cool interesante = interesting gracias@ = funny aburrid@ = boring repetitiv@ =repetitive fatal = terrible triste = sad alegre = happy deprimente = depressing entretenid@ = entertaining informativ@ = informative



¿Qué viste en la tele anoche? = What did you watch on TV last night?

Time Phrase	Verb	Noun	Verb	Quantifier	Adjective	Con.	Noun
Ayer = Yesterday Anoche = Last night	vi = I watched	los programas de música = music shows los programas de deportes = sports shows los realities = reality TV shows los concursos = gameshows los documentales = documentaries	son = (they) are	más = more menos = less	interesantes = interesting informativ@s = informative entretenid@s = entertaining divertid@s = fun gracios@s = funny aburrid@s = boring rar@s = weird emocionantes = exciting deprimentes = depressing	que = than	los programas de música los programas de deportes los realitys los concursos los documentales las comedias las series policiaacas las telenovelas las noticias
Normalmente= Normally	veo= I watch	las comedias = comedies las series policiacas = cop shows las telenovelas = soap operas las noticias = the news					



Year 8 Learning Cycle 2 Sentence Builder 4:

¿Te gusto Voces Inocentes? = Did you like Innocent Voices?

Time Phrase		Opinion	Verb	Adjective	Noun	Verb	Noun
Ayer = yesterday Hace dos días = two days ago La semana pasada = last week	vi <<Voces Inocentes>> con mi clase de español = I watched "Innocent Voices" with my class of Spanish	para mí = for me creo que = I think that	fue = it was	emotivo = emotional deprimente = depressing interesante = interesting educativo = educational aburrido = boring raro = weird alegre = happy triste = sad histórico = historical	lo mejor = the best thing lo peor = the worst thing	fue = was	el argumento = the plot el ambiente = the atmosphere los actores = the actors la banda sonora = the soundtrack los personajes = the characters el protagonista = the main character los efectos especiales = the special effects 

Year 8 Learning Cycle 2 Sentence Builder 5:

¿Cuándo usas la tecnología? – When do you use technology?

Time Phrase	Verb	Noun	Prep		
todos los días = every day cada día = each day dos veces a la semana = two times a week tres veces al mes = three times a month a menudo = often a veces = sometimes de vez en cuando = now and again casi nunca = almost never nunca = never normalmente = normally ayer = yesterday	Uso = I use Usas = you (s) use Usa = he/she/it uses Usamos = we use Usáis =you (pl) use Usan = they use	mi móvil = my mobile mi ordenador = my computer tu móvil = your (s) phone tu ordenador = your (s) computer su móvil = his/her phone su ordenador = his/her computer	para = (in order) to	sacar fotos = to take photos hablar por Skype = to talk on Skype mandar SMS = to send texts jugar = to play leer = to read descargar melodías = download ringtones chatear = to chat (online) compartir vídeos = to share videos ver películas = to watch films estudiar = to study escuchar música = to listen to music organizar las salidas = to organise going out hacer compras = to do shopping	
	Usé = I used Usaste = You (s) used Usó = he/she/it used Usamos = we used Usásteis = you (pl) used Usaron = they used	nuestros móviles = our phones nuestros ordenadores = our computers		vuestros móviles = your (pl) phones vuestros ordenadores = your (pl) computers	
		sus móviles = their phones sus ordenadores = their computers			
					



GAMING MUSIC

VOCABULARY

8-Bit	<i>A style of music that uses simple, digital sounds created with limited audio channels.</i>
Loop	<i>A section of music that repeats continuously, often used in games to create background music without interruptions.</i>
Chiptune	<i>A genre of music made using sound chips from vintage computers and gaming consoles, characterized by catchy melodies and retro sounds.</i>
Theme	<i>A melody associated with a character, level, or event in a game.</i>
Synthesizer	<i>An electronic instrument that generates sounds which don't mimic "real" or acoustic instruments.</i>

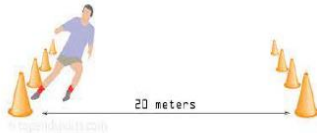
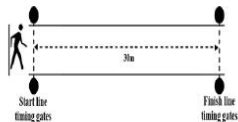
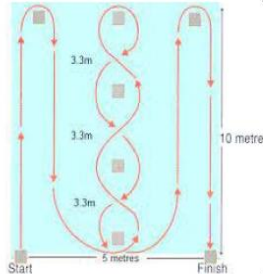
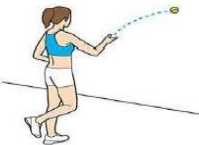
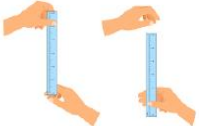
MUSIC FOR SCREEN

VOCABULARY

Jingle	<i>A short, catchy song or tune used in advertisements to help people remember a product or brand.</i>
Theme Song	<i>The main musical piece associated with a TV show, played during the opening credits.</i>
Soundtrack	<i>A collection of songs featured in a TV show or movie, often available as an album.</i>
Cue	<i>A signal for when a piece of music should start or stop, used in TV and film to match the music to the action onscreen.</i>
Diegetic Sound	<i>Sound the characters can hear, such as a character singing or music playing from a radio.</i>
Non-Diegetic Sound	<i>Sound that the audience can hear but the characters cannot, like the soundtrack.</i>
Mood	<i>The emotional feeling created by the music.</i>
Voiceover	<i>A spoken commentary added to a TV show or advertisement to explain or promote something.</i>
Foley	<i>The sound effects added to films, videos, and TV shows to enhance audio quality.</i>

Mastery	- I can explain a number of rules. I can make links between the strategies and tactics in different activities. - I am able to apply how key words on the knowledge organiser relate to different activities. - I am able to analyse performance to prioritise strengths and areas for development. I can communicate feedback and explain key coaching points.	- I am hard working and consistently give 100% effort. I eagerly accept challenges and am a role model to others. - I am able to bring out the best in others to increase success when working as a team. - I demonstrate confidence and authority when officiating, leading and participating.	- I can make links between skills and techniques which will enable me to be successful across a range of sports and activities. - I can explain a problem to a team and communicate strategies to solve that problem. - Demonstrates excellent fitness across all activities.
Secure	- I can explain a number of rules. I can apply strategies and tactics in different activities. - I am able to explain all key words on the knowledge organiser - I am able to analyse performance and communicate strengths and areas for development.	- I am consistently on task and putting in my best effort - I am effective when working as a team and show respect to staff and equipment - I can demonstrate confidence to lead a group successfully	- I can apply appropriate skills and techniques to be successful within a competitive scenario - I can identify a problem and suggest solutions for pre-determined and spontaneous situations. - Demonstrates very good fitness across a range of activities.
Developing	- I can describe a limited number of rules, strategies and tactics - I am able to describe some key words on the knowledge organiser - I am able to identify strengths and areas for development and communicate basic feedback	- I am able to follow most instructions and am consistently on task - I am respectful when working as a team, to staff and equipment - I am developing my confidence and can demonstrate leadership qualities	- I am Developing the ability to apply skills and techniques within a competitive scenario - I can identify a problem and suggest solutions for pre-determined situations. - I can Demonstrate good fitness across most activities.
Emerging	- I can identify a limited number of rules, strategies and tactics. - I am able to name some key words on the knowledge organiser - I am able to identify strengths and areas for development.	- I am able to follow simple instructions and am developing the ability to stay on task - I am developing the ability to be respectful when working in a team - I am developing my confidence and understand the qualities that make a good leader	- The quality of technique is maintained for few skills and often deteriorates in challenging practises. Developing problem solving skills but this may be ineffective for both pre-determined and spontaneous situations. - Fitness is a key area for development to become more effective within activities.
KS3    Head Heart Hands Assessment	 Head Knowledge Understanding Feedback Analysis Rules Strategies and Tactics	 Heart Effort Teamwork Respect Leadership Resilience Confidence	 Hands Fitness Physical Ability Technique Competition Problem solving

Year 8 Cycle 2 Sport and PE Knowledge Organiser

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 7 and 8	Week 9 and 10	Week 11 and 12
Components of Physical Fitness:	Components of Skill-related Fitness:	Tests for Physical fitness:	Tests for Physical fitness:	Tests for skill-related fitness:	Tests for skill-related fitness:
Aerobic Endurance – The ability of the heart, lungs and blood to transport oxygen to the working muscles whilst exercising. Muscular Endurance – The ability to use voluntary muscles repeatedly without tiring. Strength – The amount of force a muscle can exert against a resistance  Flexibility – The range of movement at a joint 	Agility – The ability to change the position of the body quickly and control the movement. Balance – The ability to maintain the body's centre of mass above the base of support. Co-ordination – The ability to use two or more body parts together. Power – The ability to perform a strength exercise quickly.  Reaction Time – The time taken to respond to a stimulus.  Speed – The ability to put body parts into motion quickly.	PHYSICAL Aerobic Endurance – Multi-Stage Fitness Test/Cooper Run   Muscular Endurance – 60 seconds sit up Test/Press up test  Research the methods for these on BBC Bitesize	Strength – Hand Grip Dynamometer Test/ 1 rep max   Flexibility – Sit and Reach Test  Research the methods for these on BBC Bitesize	SKILL Speed – 30 metre Sprint Test  Agility – Illinois Test  Balance – Standing Stork Test  Research the methods for these on BBC Bitesize	Co-ordination – Alternate Hand Wall Toss Test  Power – Vertical Jump Test  Reaction Time – Ruler Drop Test.  Research the methods for these on BBC Bitesize

My PE Targets

Cycle 1	Knowledge Organiser score:	Emerging	Developing	Secure	Mastery
My Target:					
Cycle 2	Knowledge Organiser score:	Emerging	Developing	Secure	Mastery
My Target:					
Cycle 3	Knowledge Organiser score:	Emerging	Developing	Secure	Mastery
My Target					

How to make a SMART target in PE

- Read the assessment band that you have been awarded
- Self-assess the most important area for you to develop out of Head, Heart and Hands
- Choose one bullet point from the band above that you are going to try and focus on in the next cycle

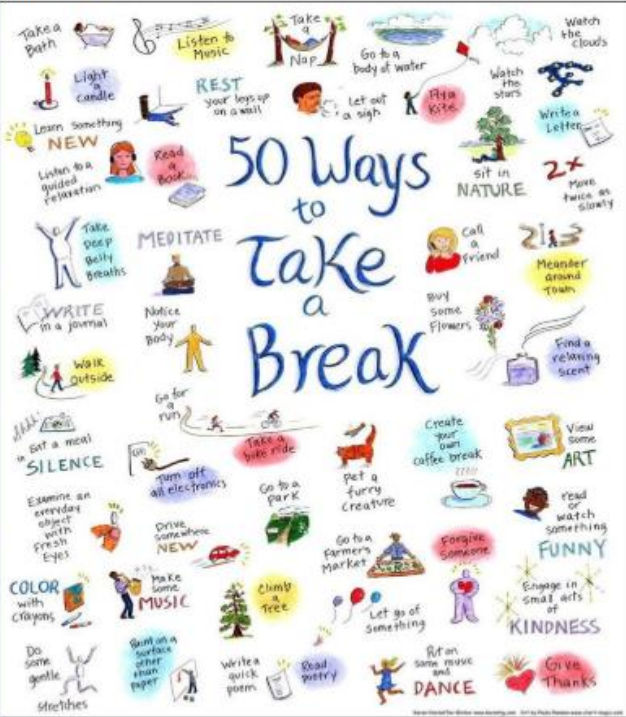
Examples of Targets

- This cycle I am going to try and work with different students in my group
- To demonstrate respect to others I am going to focus on listening when they are talking
- To show resilience even when practices get more challenging
- To improve my cardiovascular fitness by attending fitness suite club
- To improve my skill level by attending Badminton club



PSHE: How can I look after my well- being?

Key terms:

Mental health 	Mental health is about how we think, feel, and cope with life. Everyone has mental health, just like we all have physical health. Our mental health can change from day to day, or over time, depending on what's happening in our lives.	Take a break: do something you enjoy Try to plan some activities that you enjoy and which will take your mind off things, whether that's texting or face-timing a friend, watching a film, reading a book or going for a walk.
Good mental health 	Having good emotional and mental health is when we are in control of our thoughts, feelings, and behaviour. We are able to cope with life's challenges, and we mostly feel good about ourselves and have good relationships with others.	
Mental 	Relating to the mind	
Physical 	Relating to the body as opposed to the mind.	
Emotions 	These are also called feelings . They can be affected by situations and our relationships with others	
Healthy coping strategy	Good things we can do to help us to manage our most intense, thoughts and emotions.	

PSHE: How we can we look after our well-being?

Further support

At school:
Inclusion Team
PSHE teacher
Tutor
MHA
Safeguarding Lead Ms Ray



There are lots of places to get advice about emotional wellbeing, social media or to discuss feelings.

ChildLine:
www.childline.org.uk Phone: 0800 1111

Young Minds:
www.youngminds.org.uk

Samaritans:
www.samaritans.org Phone: 116 123

In a crisis, text 'Shout'

shout
85258
here for you 24/7

31



EH4MH
EARLY HELP & MENTAL HEALTH

'10 a day' choices towards balancing our mental health



1
Talk about your feelings



2
Do something you enjoy and are good at



3
Keep yourself hydrated



4
Eat well



5
Keep active in mind and body



6
Take a break



7
Stay connected to those you care about



8
Ask for help



9
Be proud of your very being



10
Actively care for others

5 minute mental wellbeing actions

These are simple, free actions you can do daily.

Many take very little time or energy, and most can be done in less than five minutes.

- Breathe – take a few deep breaths
- Have a glass of water
- Have a healthy snack
- Do a 5 minute burst of exercise
- Connect with someone you care about – give them a hug, send them a message
- Take a moment to be still and present

Week 1	Week 2	Week 3	Week 4
What is the purpose of life? Key Terms: Purpose: a person's central goals and motivations that give meaning to their life 	The Arrow of Aquinas Key Terms: Aquinas Arrow: An arrow, an unintelligent object, cannot achieve its end goal, of hitting the target without something guiding it. Therefore, the archer must direct the arrow to fulfil its end goal of hitting the target. Duty: a moral obligation or responsibility.	Humanism Key Terms: Humanism: a system of thought that focusses on the importance to human rather than divine or supernatural matters. Responsibility: the state or fact of having a duty to deal with something or of having control over someone. Freedom: the power or right to act, speak, or think as you want.	The Categorical Imperative Key Terms: Categorical Imperative: A rule of conduct that must be followed by all people. It's not a command to perform specific actions, but rather a formal procedure for evaluating actions based on their universality, impartiality, and rationality. Moral: being concerned with the principles of right and wrong behaviour
Content: What is the meaning of life is one of the most important ultimate questions. There is a huge number of possible responses to the question, such as to enjoy ourselves, to earn and spend money or to have ultimate experiences. Followers of religion might say to reach enlightenment or to worship their God. Other things that this unit will focus on is how our purpose can change or how we might have more than one purpose at any point in time.	Content: Our purpose in life can have a significant impact on how we live our lives. If we say that our purpose is to worship God, then we might spend much of our time living in a way that we think pleases Him/Her. A Sikh would say that their purpose is to follow Waheguru (their God) in their life, looking at the actions, they do and how they live their life. 	Content: Humanists do not believe in a god. They believe it is possible to live a good and fulfilling life without following a religion. They do not follow a holy book either. Instead, they value traits like reason and rely on science to explain the way things are. Humanists believe that people have one life to live - there is no afterlife. As a result, they focus on being happy and making the most of their life.	Content: Immanuel Kant did not believe in a predetermined purpose from God. Instead, he argued that individuals should act according to their moral duty, guided by reason. His <i>Categorical Imperative</i> directs people to act in such a way that their actions could be universalized (applied to all), and he saw fulfilling one's moral duties as the purpose of rational beings.
Questions: What is the purpose of life? What is the meaning of life?	Questions: How might your purpose impact how you live your life?	Questions: What is Humanism? What is a Humanists response to key questions?	Questions: Is there a moral principle that we should live our life by?

Week 5	Week 6	Week 7	Week 8
Helping the World	Telos	Islam	The 5 Pillars
Key Terms: Global Warming: Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change Environmentalism: concern about and action aimed at protecting the environment. Dominion: To look after something	Key Terms: Telos: An end or a purpose. The Afterlife: A term used to describe a life that begins when we die. 	Key Terms: Allah: The Muslim name for their God. Tawhid: Faith in the oneness of Allah The Quran: The Muslim holy book Mosque: Place of worship for a Muslim Muslim: A Follower of Islam Muhammed: The Final Prophet of Allah	Key Terms: Shahadah: Declaration of Faith Salah: Praying 5 times a day Zakat: Donating a % of your money to the poor Sawm: Fasting during the month of Ramadan Hajj: A Pilgrimage to the Holy city of Mecca.
Content: A core belief for most of the main religions is that our planet is a gift from God and we are instructed by God to look after it. We know that things like Global Warming are currently taking place and therefore are we failing in our duty to look after the world? 	Content: Aristotle introduced the concept of <i>telos</i>, meaning an end or purpose. He believed that everything in nature has a purpose, including human beings. For humans, there are many different ideas about the highest purpose, but a belief in the afterlife will often lead people to live a life that is aimed towards this.	Content: Islam is the 2nd largest religion in the world. Followers of Islam are known as Muslims, and they worship their God Allah. Muslims believe Muhammed was his final messenger (prophet). Muslims worship in a Mosque, led by an Imam. The Muslim and Friday is their holy day.	Content: The Five Pillars are a visible sign of the Muslim way of life and a demonstration of Muslims' unity with each other. They are accepted by Muslims globally, regardless of ethnic, regional, or sectarian differences 
Questions: What do religions believe about looking after the world? Is it our duty to be environmental and look after the world?	Questions: If there is an afterlife, how might that impact our purpose in life?	Questions: What are some of the basic ideas about Islam? What does a Muslim call their God?	Questions: What are the 5 pillars of Islam? Why are they important? How does a Muslim follow them?

Week 9	Week 10	Week 11	Week 12
Lesson 9 – The Day of Judgment	Lesson 10 – Assessment Preparation	Lesson 11 – End of Cycle Assessment	Lesson 12 – Assessment Repair Work
Key Terms: Yawm Ad-Din: The Day of Judgement Barzakh: A state of waiting the soul goes to after we die. Akhirah: Life after death Nafs: The Muslim word for the Soul			
Content Muslims believe that when we die our souls are taken by an angel and enter Barzakh - a waiting stage until the day of judgement. On this day all souls will be judged by Allah. On the day of judgement Allah will add up all our good and bad deeds – almost on a scale. If the good outweighs the bad we will go to paradise to be with him.			
Questions: What is the Day of Judgement? What do Muslims believe about life after death?			

The Brief: A local gift shop would like you to design and manufacture a keyring or pendant to be sold in their shop. They would like you to use natural forms as inspiration and consider the packaging.

The Task: Use CAD, CAM and casting techniques to produce a keyring or pendant.

The Design Criteria: A list of targets that you set for yourself to achieve with your product.

The Making Stages:

Audit and measure
CAD mould
CAM production
Cutting Pewter
Preparing mould
Heating Pewter
Casting Pewter
Remove excess
Emery
Buff Polish Drill



The Engineering Design Process:

Response to brief
Research
Design criteria
Ideas
Compare to design criteria
Develop
Test
Make Test Modify Test Evaluate

Key words:

Alloy Casting
Ferrous Non
ferrous
Malleable
Composition
Iterative
Modifications
Sustainability
ore

CAD CAM:

2D design - CAD	Computer software for drawing flat parts
Laser cutter - CAM	A machine which cuts and engraves with a laser



Melting point of Pewter: 170°C - 230°C

Materials:

Pewter (Non-Ferrous Alloy) – a malleable metal alloy. It is traditionally composed of 85–99% tin, mixed with copper, antimony, bismuth, and sometimes silver or lead, although the use of lead is less common today. Pewter is 100% recyclable.

MDF (Manufactured board) – an engineered wood product made by breaking down recycled hardwood or softwood residuals and then gluing the fibers back together with a resin. The MDF is laser grade MDF.

Health and Safety:



Assessment:

A range of theory tasks and practical assessment

Year 8 Engineering – Pewter casting

Year 8 Engineering – Pewter casting



Hack Saw



Heat proof gloves



Senior hack saw



Scribe



Brasso



Blow Torch



Buffer



Hand vice



Needle files



Pillar Drill



Pewter casting ladle



Emery paper



File



2D design



Laser cutter

Pewter

KEY Vocabulary



sewing machine



needle



pin / pinned
/pinning



scissors



Embroidery thread



thread/ threaded/
threading



Conductive thread



Circuit Diagram



Iron



Tack/tacked/
tacking



Stitch/ stitches



Sew/sewn/
sewing/
sewed



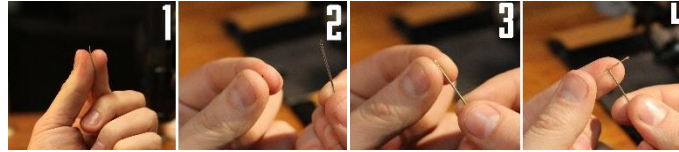
LED Light Emitting
Diode

Day of the Dead Knowledge Organiser



During Day of the Dead, or Día de Muertos, October 31 through November 2, families gather together to remember and honour their deceased loved ones. A sacred, joyous time, Day of the Dead traditions include food and flowers, visits with family members, prayers, and stories about those who have died.

How to thread a needle



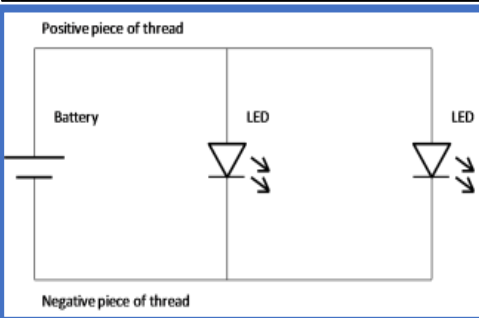
How to sew
on a button



RISK ASSESSMENT

Hazard	Risk	Risk Assessment	Risk Control
What things might cause harm or damage?	What harm or damage might the hazard cause?	How likely is it that an accident might happen? (%)	What should be done to prevent the accident happening?

How to make a simple circuit



A **light-emitting diode (LED)** is a semiconductor device that emits **light** when an electric current is passed through.



Conductive thread can carry current the same way that wires can



A **switch** controls the current flow through the circuit.

Safe use of Iron

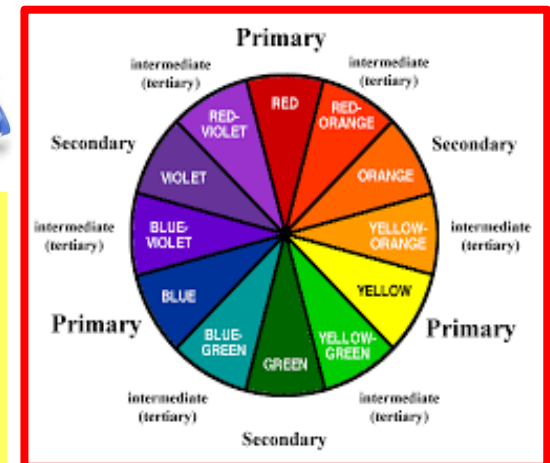
Do not touch the base plate.
Never leave sitting upright on its heel.
Always switch off after use.



Quality Control

Identify 5 tests for quality control

- Even stitches
- Strong stitches
- Size
- Quality of stitching
- Placement of embellishment
- Neatness



Knowledge Organiser

How much dietary fibre do we need?

The NHS recommended daily intake for dietary fibre is:

2–5-year olds, about 15g

5–11-year olds, about 20g

11–16-year olds, about 25g

16 year olds and older, about 30g

SACN recommends that the dietary fibre intake for adults should be 30g each day. However, if a person has a digestive disorder such as irritable bowel syndrome (IBS) then they may need to alter their fibre intake.

1/3 OF THE DIET
SHOULD COME
FROM STARCHY
FOODS

The sources of dietary fibre in the diet

Insoluble fibre: whole grain cereals, wholemeal bread, bran, nuts, corn, oats, fruit and vegetables (especially the skins).

Soluble fibre: oats, barley, rye, most beans and peas, fruit such as bananas and apples, and root vegetables such as carrots.

Biological raising agent

Yeast is a living organism grown commercially for bread making and alcohol production. Yeast can be bought either fresh or dried.

Yeast + moisture + oxygen + food + time will produce masses of carbon dioxide gas bubbles. Bread needs lots of gas bubbles to raise the dough so yeast is the perfect raising agent when bread making.

To make bread the yeast is added to strong flour and water to form a dough. After kneading the dough must be left to rise or 'prove' in a warm environment allowing the yeast to do its work. The yeast is activated by the warmth, oxygen and moisture found in the dough and it feeds on the natural sugars in the flour creating the carbon dioxide gas bubbles. This process is called **fermentation**.

As the dough rises the gluten strands in the flour form a complex mesh trapping the gas bubbles which creates a soft, spongy doubled in size dough. Traditional bakers **knock back** the risen dough and give it a second proving. This helps give a better flavour and creates a uniform, finer texture to the finished bread.



WHY WE NEED CARBS



The key nutrients in the diet

Nutrients are chemicals found in food which give the body nourishment and are needed for the maintenance of life. The body needs nutrients to perform its daily **functions** properly. Health problems might occur if any one of these nutrients is lacking in a person's diet.

There are two main types of nutrients:

Macronutrients refer to carbohydrates, protein and **fat** which the body needs in large amounts. They are measured in grams.

Micronutrients refer to vitamins, minerals and trace elements which the body needs in small amounts. They are measured in mg (milligram) or µg (microgram).

The body also needs dietary fibre and water.

Gelatinisation



What happens to carbohydrate

The change that starches undergo during cooking is called **gelatinisation**. When starch and liquid are heated together visible changes occur. The starch granules absorb water causing them to soften and swell up, and this makes the liquid mixture thicken. The thickness of a starch-based sauce is determined by the ratio of starch to liquid. It must be stirred continuously to prevent lumps from forming. Gelatinisation occurs at 66°C and above.

Roux based sauces

A roux is a combination of fat and flour cooked for a particular length of time, depending on the colour of the sauce required. The example on page 173 uses a white roux sauce with milk as the liquid. To make an infused sauce, ingredients such as herbs, carrot, peppercorns and onion are gently heated in milk and or stock in order to flavour the liquid. The flavoured liquid is then used to make the roux.

Basic ingredients in white roux sauces include fat, flour, liquid and seasoning. Other ingredients such as cheese, parsley and mushrooms may be added for flavouring.

The proportion of liquid to flour depends upon the desired consistency of the sauce. If too much liquid is used the sauce will not be as thick as required; if too little is used the sauce will be too thick.

A white sauce can be made using the one-stage method. All the weighed and measured ingredients are placed in a pan and brought to the boil until thickened, or alternatively placed in a jug and cooked in a microwave oven.

types of vegetarian include;

- lacto-vegetarians eat dairy products but not eggs, poultry, meat, fish or seafood
- lacto-ovo vegetarians eat egg and dairy products but not poultry, meat, fish or seafood
- vegans do not eat any foods from animal origin. This includes meat, fish, dairy foods and honey.

COELIAC DISEASE

Celiac disease is triggered by gluten (a collective term for protein found in cereals, wheat, rye and barley) and causes the body's immune system to attack its own tissues.

Foods that are naturally gluten-free such as rice, corn, maize, potato, buckwheat, polenta, soya and millet can be made into flours which can be used in gluten-free dishes.

All types of plain meat, fish, eggs, cheese, milk, most yoghurts, fruits, vegetables and pulses (peas, beans and lentils) are also naturally gluten-free and can be eaten freely on a gluten-free diet.

Foods such as bread, biscuits, cakes, couscous and pastas must be avoided.

Gluten can also be found in custard powders, thickening starch, some cheese spreads and sauces.

Gluten-free products are widely available and their packaging carries a special symbol.

LACTOSE INTOLERANCE

Lactose intolerance means that the person must avoid cow milk. This can be replaced with other milks such as hazel, hemp, almond, rice or soya milk. Lactose-free products such as cheese are also available.

People with lactose intolerance cannot digest the milk sugar, lactose, because of an enzyme deficiency in the body. The body digests lactose using a substance called lactase to break down lactose into two sugars called glucose and galactose, which can then be easily absorbed into the bloodstream. People with lactose intolerance do not produce enough lactase, so lactose stays in the digestive system where it is fermented by bacteria, leading to the production of various gases, causing the symptoms associated with lactose intolerance.

Many processed foods contain lactose. Lactose intolerant people should read the labels to check.

Understanding how ingredients work

FLOUR	provides bulk and volume in baked products and, through gelatinisation, will thicken liquids.
FAT	gives food products flavour, moisture, colour and traps air.
EGGS	add colour, flavour, will set a liquid and aerate cake and some dessert mixtures.
SUGAR	adds flavour, colour and texture to food. A biscuit will not be crisp if sugar is not used in the mix.
BAKING POWDER	with moisture and heat will produce carbon dioxide bubbles causing a cake/biscuit mixture to rise.
YEAST	given food, moisture, warmth and time produces carbon dioxide bubbles enabling bread dough to rise.

Geography Answer Sheet

Geography HL Complete the questions from the knowledge organiser here.

Lesson 1	Lesson 2	Lesson 3	Lesson 4
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____

Lesson 5	Lesson 6	Lesson 7	Lesson 8
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____

Lesson 9	Lesson 10	Lesson 11	Lesson 12
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____

Lesson 13	Lesson 14	Lesson 15	Lesson 16
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____

Lesson 17	Lesson 18	Lesson 19	Lesson 20
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____

Lesson 21	Lesson 22	Lesson 23	Lesson 24
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 _____	4 _____
5 _____	5 _____	5 _____	5 _____