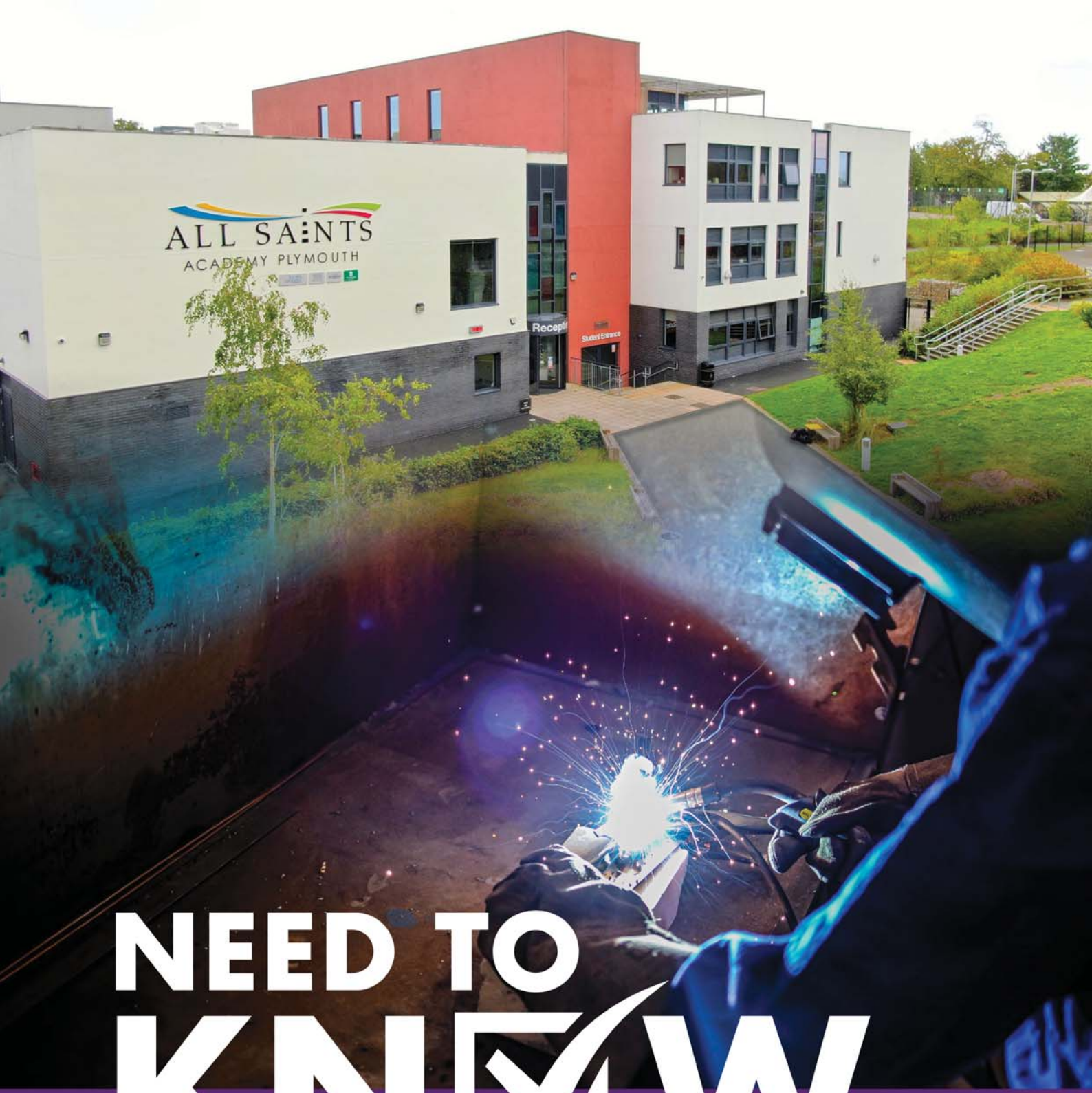


NEED TO KNOW BOOK

Year 8
Summer Term 2024

ALL SAINTS
ACADEMY PLYMOUTH

Table of Contents

Week A

Period	Monday	Tuesday	Wednesday	Thursday	Friday
Tutor					
1					
2					
3					
4					
5					
6 or Extra Curricular					

Week B

Period	Monday	Tuesday	Wednesday	Thursday	Friday
Tutor					
1					
2					
3					
4					
5					
6 or Extra Curricular					

Homework Expectations

You are expected to compete up to 1hour of Homework per night. This is split into 3 subjects at 20mins each.

	3 x 20 Minute Sessions		
	Subject 1 20 mins	Subject 2 20 mins	Subject 3 20 mins
Monday	Sparx Reader	Science	Science
Tuesday	Sparx Reader	Geography	French
Wednesday	Sparx Reader	Maths : Sparx	History
Thursday	Sparx Reader	Maths : Sparx	RE
Friday	Sparx Reader	Maths : Sparx	

Where is my homework?

Maths

You maths homework is found at www.sparxmaths.uk. You will complete your Compulsory Homework on a Monday.
If you have completed over 80% and are stuck on your last few questions, your teacher will help you on Tuesday.

Sparx Reader

Your Sparx reader homework is found at www.sparxreader.com You will complete 20 minutes of reading every day Tuesday – Friday. You can, of course, complete more if you like!

Science

Your Science homework can be found at www.educake.co.uk. You will answer a series of questions once a week. When it comes to revising, you will have the option of picking a topic, reading an overview, and taking a quiz.

English, History, French and RE

Homework for these subjects will be found in your Google Classroom in the form of a quiz. These quizzes are to test that you have learned the knowledge in your Need to Know booklet. We have high expectations of you and expect students to try their best and achieve the best possible marks. We will give rewards for excellent attainment and we will help everyone achieve by using after school interventions to make sure no one falls behind.

At All Saints, we are organised and don't make excuses for ourselves. If we know we have evening plans, we complete our homework the night before to make sure we are free to go to our planned event. We always want the best for ourselves and my teachers want the same.

Reflection Sheet

Name: Tutor: Year:

Use this reflection sheet to track your progress and attitude to learning score after each progress check. This sheet will be used in your parent evening meetings with your teachers to discuss your areas of strengths, weaknesses and ways to improve. If your average attitude score is below a certain average your parents will be called in for a meeting with your Head of house and SLT member.

ATL SCORES	What will I get at GCSE?
0-1	Students who achieve an average of 1 or below usually leave school with no GCSEs.
1-2	Students who achieve an average of 1-2 usually leave with 1s or 2s (E or F) at GCSE
2-3	Students who achieve an average of 2-3 usually leave with 2s or 3s (D or E) at GCSE
3-4	Students who achieve an average of 3-4 usually leave with 3/4/5s (C or D) at GCSE
4-5	Students who achieve an average of 4-5 usually leave with 6/7/8s at GCSE

Average attitude to learning score	Term 1	Term 2	Term 3	Term 4

Subject rank	***Subject*** *Maths*	***Subject*** *English*	***Subject*** *Science*	***Subject***	***Subject***	***Subject***	***Subject***	***Subject***	***Subject***	***Subject***
Term 1	/	/	/	/	/	/	/	/	/	/
Term 2										
Term 3										

Term 1 - Reflection (Answer the questions by filling in the boxes in blue or black pen)

Are you happy with your rank scores and ATL?	What subjects do you need to improve?	How will you get there?

Reflection Sheet

Term 2 - Reflection

Has your rank scores and ATL improved from term 1? If no, why not?	What subjects do you need to improve in?	How will you get there?

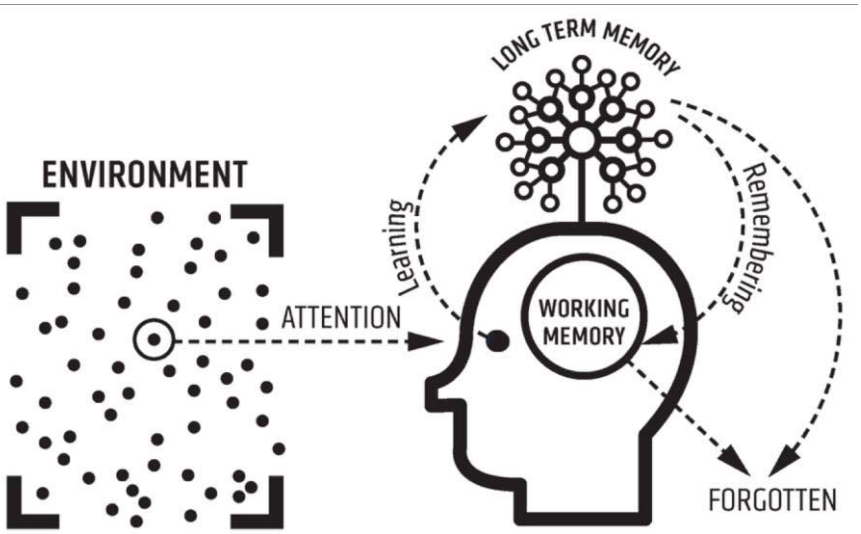
Term 3- Reflection

Has your rank scores and ATL improved from term 2? If no, why not?	What subjects do you need to improve in?	How will you get there?

Signed_____ Tutor
signature_____

Memory

Your memory is split into two parts: the working-memory and the long-term memory. Everybody's working-memory is limited, and can therefore become easily overwhelmed. Your long-term memory, on the other hand, is effectively limitless.



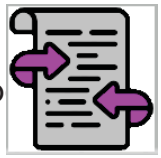
You can support your working memory by storing key facts and processes in long-term memory. These facts and processes can then be **retrieved** to stop your working memory becoming overloaded.

Need to know booklets are a key way to help you learn. Each booklet has the key information that needs to be memorised to help you master your subject and be successful in lessons.

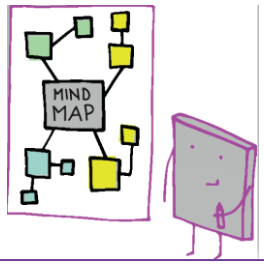
There is strong scientific evidence from cognitive psychology that shows the benefits of **self-quizzing** in promoting **retrieval strength**. This is your ability to quickly recall key facts related to your subject or topic

How should I self-quiz and how often?

There are lots of different ways to learn the material in your need to know b

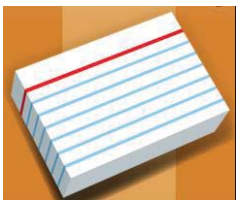


You could:



Draw a mind map, jotting down everything that you can remember from the need to know booklet.

Cover up one section of the need to know booklet and try and write out as much as you can from memory.



Make flash cards based on the need to know booklet and ask someone to quiz you.

SENTENCES.
HAND
ARTICULATE.
PROJECT
Eye contact

Make up mnemonics to help you remember key facts, then write these out from memory.

Making revision notes and self-quizzing will help you be a more successful learner.

Post 16 pathways of Plymouth — Sixth forms — Apprenticeships — Employment — Resources

Support — Opportunities — Choosing a career — Parents guide —Writing a CV— Employability skills

Year 8: Graffiti Art or Vandilism

AQA Assessment Objective Checklist

AO1 Ideas & Artist Research

Develop ideas through investigations, demonstrating critical understanding of sources.

- I have researched **a wide range** of artists' craftsmen and designers.
- I have worked **in the style** of the artists using my own photographs.
- I have written about the artist and how they have informed and influenced my practice.

AO2 Experimenting with materials

Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

- I have experimented with a wide range **of relevant media** and techniques.
- All my work has been refined.
- I have pushed ideas to their full limitations to show the process and development of my ideas.

AO3 Recordings and drawings

Record ideas, observations and insights relevant to intentions as work progresses.

- I have **drawn from observation** using a range of different media.
- I have worked from my **own photographs**.
- I have used **annotation to explain the development** of my research and ideas.

AO4 Personal response/final piece

Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

- I have produced **my own** imaginative outcomes.
- My work shows **a clear connection** and a journey throughout my project.
- I have thought carefully about the **selection and presentation** of my work.

The Formal Elements:

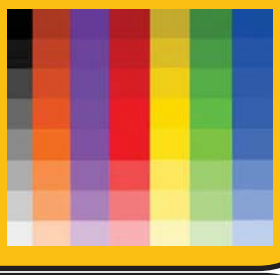
The Formal Elements of Art are the parts used to make a piece of art work. It is impossible to create a piece of art, even if it is only a doodle, without using some or all of them. The art elements are Line, shape, form, tone, texture, pattern, colour and composition. They are often used together and how they are organised in a piece of art determines what the finished piece

Line

A line is a path, left by a moving point. E.G. a pencil, or a paintbrush dipped in paint. A line can take on many forms. E.g. Horizontal, diagonal or curved. A line can be used

Tone

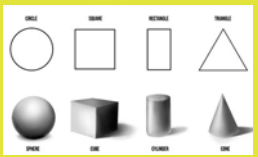
Tone means the lightness and darkness of something. This could be a shape and/or how dark or light a colour appears.



Shape & Form

A shape is an area enclosed by a line. It could be just an outline or it could be shaded in.

Form is a three dimensional shape such as a sphere, a cube or a cone.



Texture

Texture is the surface quality of something, the way something feels or looks like it feels. There are two types of texture, actual texture and visual texture.

Actual Texture: really exists so you can feel it or touch it.

Visual Texture: Created by using different marks to create the impression

Colour

There are three primary colours:

Red, Yellow, Blue

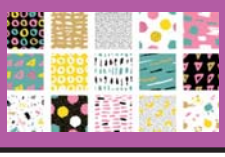
By mixing any two primary colours together, you get secondary colours.

Orange, Green and

Pattern

Pattern is a design that is create by repeating lines, shapes and tones or colours.

Patterns can be manmade such as a design on fabric or natural like the print on animal fur.



Art & Design

Keith Haring

May 4, 1958 – Feb 16, 1990

Keith Haring was an American artist and social activist whose work responded to the New York City street culture of the 1980s by expressing concepts of birth, death, sexuality, and war. Haring's work was often heavily political and his imagery has become a widely recognised visual language of the 20th century.




Banksy

Name & identity unconfirmed

Banksy is an England-based street artist, political activist and film director whose real name and identity remain unconfirmed. Active since the 1990s, his satirical street art and subversive epigrams combine dark humour with graffiti executed in a distinctive stencilling technique. His works of political and social commentary have appeared on streets, walls and bridges throughout the world.




Keywords & Vocabulary:

Composition	The position and layout of shapes on the paper
Line	Defines shape, the outer edges of something.
Tone	How dark or light a shape is.
Shape	The outline of objects.
Form	Appearing three-dimensional.
Controversial	Describes something that is likely to create disagreement.
Graffiti	writing or drawings scribbled, scratched, or sprayed illicitly on a wall or other surface in a public place.
Stencil	a technique for reproducing designs by passing ink or paint over holes cut in cardboard or metal onto the surface to be decorated.
Blending	Mixing colours together smoothly .
Collage	Sticking art materials down to create artwork.
Mixed media	Artwork made up of a mixture of art materials.
Street Art	Artwork that is created in a public space, typically without official permission.
Epigrams	An epigram is a brief, interesting, memorable, and sometimes surprising or satirical statement.
Satire	the use of humour, irony, exaggeration, or ridicule to expose and criticize people's stupidity or vices

Art and Design Assessment Objectives:								
	DEVELOP	Artist Research. Explore Ideas. Be Inspired. Personal comments and opinions.	EXPERIMENT	Explore different materials Explore different techniques Refine your work	RECORD	Observational drawings Collecting image Taking photos Annotating your work	PRESENT	Produce a final piece Link to prep work from project.

Week	I will need to know:	So that I can:
1 Design Brief	A designer or engineer will begin every project with a ***design brief***. This is either created with the ***client*** or given to the designer by the client. The client is the person or company requiring the design of the new product. A design brief will include important details about the requirements of the product to be designed. After receiving the design brief, the designer will begin ***market research*** in order to learn more about the target market and similar products already out there.	Respond to a design brief effectively.
2 Design specification	After the research phase, designers and engineers will write a ***design specification***. This is a list of detailed and ***measurable criteria for the success of the product***. It will take account of all that has been learnt in the research and state clearly what the product must be like. This includes, cost, materials, manufacture, features, ergonomics and aesthetics as well as other things too. This will then be used while designing to ensure that the designer is keeping on the right track.	Create and follow a design specification and design successful products as a result.
3 Generating design ideas	Designers will use many techniques to create a wide variety of designs. As the designer will want to find the best possible solution, they will produce a ***great many quick sketch ideas*** at the start. This allows them to narrow down to the best ideas often with the help of the client. Techniques include ***biomimicry*** (finding inspiration in natural forms) and ***user centred design*** (thoroughly investigating the user and their requirements while designing accordingly)	Create a variety of appropriate design ideas in response to a design brief.
4 User requirements	The ***user*** is the person that will buy or use the product. We talk about the ***target market*** when we are considering what type of people these are. Designers will investigate the user in order to hope to solve the issues they raise with the product. To find out what the requirements of the user are designers often carry out a ***focus group*** where they make a group of their target market and ask them questions. Sometimes ***product observations*** are useful where the designer will observe a product being used and then ask the user questions in order to improve the design.	Design products that meet the needs and wants of the user.
5 Product Analysis	Designers will investigate similar or competitor products to ensure that the product they design will be competitive and to learn from all the design decisions that have taken place in the design of the product. Often ***ACCESSFM*** is used, this is where the designer will analyse a product in terms of Aesthetics, Customer, Cost, Environment, Size, Safety, Function, Materials and Manufacture.	Create products that are effective and competitive.
6 Sustainable products	Products that are better for the environment are called sustainable products. A product can be sustainable in many ways. A re-usable plastic bottle will prevent hundreds of disposable plastic bottles being needed. An electric vehicle will produce less harmful emissions and use less fossil fuels. Products which have spare parts available can be repaired and made to last longer therefore not needing to be replaced. Some products are made to be ***biodegradable***.	Be responsible and protect our planet through my design decisions.
7 The 6 Rs	These should be considered when designing any product and will help the designer create a ***more sustainable product***. Recycle (can materials be recycled?), Re-use (can parts be used again?), Reduce (can less material or energy be used?), Re-think (can the design be changed), Refuse (refuse to use harmful materials or processes), Repair (spare parts? Easy to fix?)	Be responsible and protect our planet through my design decisions.
8 Quality Control	When manufacturing products, it is important that ***quality control checks*** are in place. These checks will ensure that the components or products are not faulty. These will take place at the ned of manufacturer but also after each of the main stages of manufacture. The earlier mistakes are spotted the less likely an expensive problem will occur.	Make quality products that are consistent.
9 Testing and evaluating a prototype	***Prototypes*** are models of a design , these are created so that a concept can be tested. Prototypes are carefully tested to see if they function as intended, look appealing to the target market, fit with other components, are strong enough and more. ***Evaluating*** prototypes takes account of these tests and looks at ways the design can be improved further.	Develop products to their best possible outcome.

Year 8 English – The Tempest by Shakespeare

A	The writer presents [topic] through... The theme of [topic] is shown by the writer through... The idea of [topic] has been used by the writer to...
N	The phrase '...' suggests... We can see this in the phrase '...' which implies... This is highlighted through the line '...' which shows...
A	Additionally, the line '...' also emphasises... Linking with this, the quotation '...' shows... The idea is [extended/contrasted] through the line '...'
L	The imagery suggests... The word choice '...' could imply... The [method] might show...
Y	Although there is a sense of..., there is also the idea of... Alternatively, it could be argued that... A reader may also understand that...
S	Structurally, the use of... may show... The perspective may imply... The writer has chosen to use a .... form to suggest...
I	The writer's intentions may have been to show... The writer felt it was necessary to present this as... The writer did this to demonstrate...
S	Contextually, the writer may be reflecting the time as... The writer used these themes to reflect on society as... The text reflects society as...

Key Vocabulary	Definition
Tempest	A storm
Pathetic Fallacy	Nature representing the mood of the characters
Patriarchy	A society controlled by men
Subservient	To obey
Magical Realism	Adding a magical element to an otherwise normal society
Imperative language	Command words
Hierarchy	An order of power in society
Servitude	To serve someone
Colonialism	Taking over another country
Manipulation	To control someone through an imbalance of power for personal gain

Text Summary:

Prospero (former Duke of Milan) lives on an island with his **daughter Miranda**, **Caliban** (Prospero's slave) and **Ariel** (a magical spirit and servant).

Prospero ran away to the island after his brother (**Antonio**) forced him off the throne with the help of **King Alonso.**

When **Antonio and Alonso** are passing Prospero's island on a ship, Prospero uses magic to create a storm and shipwreck them on the island.

With the help of **Ariel**, **Prospero** separates **Alonso, Antonio** and the other characters on the ship, and interferes with their plans.

Ferdinand, Alonso's son, is also on the boat and separated in the shipwreck.

Prospero plans to make **Ferdinand** and **Miranda** fall in love to take back the throne.

Caliban plots to kill **Prospero** but is stopped by **Ariel.**
The characters are reunited and all **conflict is resolved.**

Prospero grants Ariel his freedom and prepares to leave the island.

Key themes: Conflict Power Nature Supernatural

Health, Safety and Hygiene

Health, safety and hygiene.

- Always listen to the teacher and follow instructions.
- Do not run in the food room.
- Do not leave bags and blazers where they can get in the way and cause a tripping hazard.
- Walk sensibly around the room when carrying equipment especially knives.
- Always return equipment once its finished with and cleaned especially knives. These will be counted in at the end of every lesson.
- Always listen carefully when the teacher is demonstrating how to use equipment. Make sure you ask questions if you do not understand.
- Take your blazers off and roll up your sleeves when doing a practical lesson.
- Tie your hair back.
- Always wash your hands thoroughly when preparing foods.
- Always use hot soapy water to wash your equipment.
- Make sure all spillages are cleaned up immediately.
- **Always** use an oven cloth when taking food from the oven.

The Eatwell Guide

Fruits and vegetables.

Eat at least 5 portions of a variety of fruits and vegetables a day.

Drinks.

6-8 glasses a day. Water, lower fat milk, sugar free drinks including tea and coffee count.

Potatoes, bread, rice, pasta and other starchy carbohydrates.

Choose wholegrain or higher fibre versions with less added salt, sugar and fat.

Beans, pulses, fish, eggs meat and alternatives (protein).

Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat.

Dairy and alternatives.

Choose lower fat and lower sugar options.

Oils and spreads (fats).

Choose unsaturated oils and use in small amounts.

Foods high in fats and sugars.

Eat less often and in small amounts.

Preparation Skills and Techniques

Chopping, Slicing, Dicing and Peeling Skills

A

B

C

Bridge Hold | **Claw Hold** | **Peeling** | **What could happen?**

Cake and Pastry Making Methods

Rubbing -in Method

Used for pastry and cakes that **do not have a large amount of fat** compared to flour

- Fat is **cut into chunks** (block margarine is best)
- Air is trapped when sieving the flour and by lightly **rubbing the fat in to the flour**
- Any optional ingredients (e.g. sultanas) are **added before the liquid or egg** that binds the crumb together

Creaming Method

Used for cakes containing **more fat and sugar** compared to flour

- The fat and sugar are **creamed together** using a **wooden or plastic spoon**. Air is **trapped** by **creaming** the sugar and fat together
- Soft margarine is better as it is **easier to cream**
- **Caster sugar** has **smaller crystals** than **granulated** so it **traps more air** and mixes better
- **Self raising flour** is used to make the cakes **rise**

Melting Method

-Fat is melted with the sugars and syrup

-Dry ingredients added

-Liquids bind all ingredients together

l'italien (m)	Italian language
plus	more
moins	less
aussi	also, as
que	that, what?, than
dangereux	dangerous (m)
dangereuse	dangerous (f)
gentil(le)	kind (m/f)
gros(se)	fat (m/f)
italien(ne)	Italian nationality (m/f)
meilleur(e)	better (m/f)
mince	thin
pire	worse
sûr(e)	safe (m/f)
l'Italie (f)	Italy
la décision	decision
le soin	care
dur(e)	hard
facilement	easily
lentement	slowly
mal	badly
mieux	better
vite	quickly
dépendre (de)	to depend, depending
entendre	to hear, hearing
répondre (à)	to reply, to answer
l'annonce (f)	announcement
la conversation	conversation
l'espagnol (m)	Spanish

le message	message
le soleil	sun
le temps	weather
espagnol(e)	Spanish nationality (m/f)
l'Espagne (f)	Spain
décrire	to describe, describing
traduire	to translate, translating
il/elle lit	he/she reads, is reading
la communauté	community
la culture	culture
l'expérience (f)	experience
l'information (f)	information
le produit	product
le programme	schedule
tout(e)	all, the whole (m/f)
tous	all, the whole (mpl)
attendre	to wait, waiting
descendre	to go down, going down
le bas	bottom
en bas	at the bottom
l'histoire (f)	history, story
la règle	ruler, rule
la piste	ski slope
le roman	novel
le texte	text
conduire	to drive, driving
vous dites	you (pl/fml) say, are saying
interdire	to ban, banning
inscrire	to write down, writing down

le lieu	place
l'arbre (m)	tree
l'autobus (m)	bus
chaud	hot, warm
froid	cold
la neige	snow
scolaire	school (adj)
commencer	to start, starting
expliquer	to explain, explaining
emprunter	to borrow, borrowing
quitter	to leave (somewhere), leaving (somewhere)
le cours	lesson
la tâche	task, chore
la bibliothèque	library
la fois	time
déjà	already
enfin	finally
toujours	always
bu	drank, drunk (pp)
eu	had (pp)
pris	took, taken (pp)
l'accident (m)	accident
le bras	arm
la jambe	leg
le mal	ache
la maladie	illness
le petit-déjeuner	breakfast
la photo	photo
déjà	already, yet
pas encore	not yet
ensuite	next

avoir mal	to hurt, be sore
lever	to raise, raising
je lève	I raise, am raising
il/elle lève	s(he) raises, is raising
reposer	to put down, putting down
le chapeau	hat
la cuisine	cooking, kitchen
la main	hand
le manteau	coat
le matin	morning
la pluie	rain
la tête	head
que ?	that, what?
quel ?	which? (m)
quelle ?	which? (f)
combien ?	how much? / how many?
pourquoi ?	why?
parce que	because

Year 8 - Geography- Cycle 3

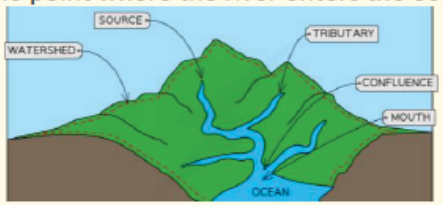
Key Vocabulary

Processes of Erosion;
Abrasion: Material carried by the river hits the sides and bed breaking bits off.
Attrition: Rocks and stones bang against each other chipping bits off.
Hydraulic action: The force of water pushing into cracks in the rock, breaking bits off.
Corrosion/Solution: Rocks dissolving in the water.

Rivers then transport this material through;
Suspension: water carrying fine particles.
Solution: Dissolved material being carried in water.
Traction: Boulders and rocks rolling along the bed.
Saltation: Small pebbles and stones bouncing along.

Week 1 – Drainage Basin

A river is water flowing downhill in a channel. Much of the landscape has been shaped by rivers. A **drainage basin** is an area of land which feeds a river. All of the precipitation that falls in this area will into the river system. Within the drainage basin you find the following features; **Watershed:** the outer edge of the drainage basin. **Channel:** A landform that contains a river at the bottom of a valley. **Source:** The start of the river. **Tributary:** A small river that joins a larger river. **Confluence:** The point where two rivers join. **Mouth:** The point where the river enters the ocean.



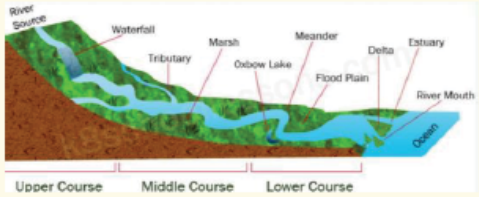
Week 2 - Upper Course

Most rivers share similar characteristics in gradient (steepness) and shape and are split into three sections; **Upper**, **middle** and **lower course.**

The upper course is usually steep with the water having a lot of energy. This causes vertical erosion resulting in steep valley sides and a narrow valley floor. This is called a **V-shaped valley**. The river winds its way through the hills but does not have the power to cut through them so leaves bit of land sticking from the valley sides. These are called **interlocking spurs**. Another feature of the upper course are **waterfalls** which form where there is hard and soft rock. Soft rock is eroded more easily, leaving an overhang of hard rock. As the soft rock erodes further a plunge pool is created.

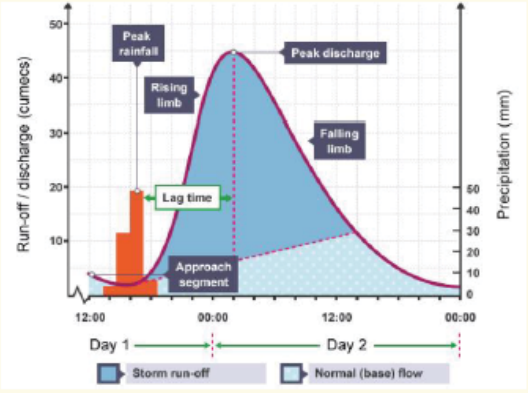
Week 3 – Middle - Lower Course

In the middle course the river has more energy and a high volume of water. The gradient here is gentle and lateral erosion has widened the river channel. The river channel has also deepened. **Meanders** form and slowly move across the landscape due to lateral erosion. Eventually the channel cuts through leaving an **ox-bow lake**. In the lower course, the river channel is now deep and wide and the landscape around it is flat. The energy of the water is low so lots of deposition takes place and **floodplains**, areas that regularly flood and **estuaries** form. In the lower course, the velocity of the water is the fastest due to less friction and sediment.



Week 4 – Hydrographs

Discharge: The amount of water flowing through a river. A hydrograph shows two graphs - a bar chart showing rainfall, usually from a storm and a line graph showing discharge from before, during and after the rain storm. A **hydrograph** shows how a river is affected by a storm and how long it takes rainwater to enter the river system.



Week 5 – Flooding

A river floods when the water normally flowing in the channel overflows its banks and spreads out onto the surrounding land. This causes major problems for people living close to the river.

Physical causes of flooding: heavy rainfall, long periods of rain, snowmelt, steep slopes, **impermeable** rock (doesn't allow water through), very wet, saturated soils, **compacted** or dry soil.

Human factors increasing flood risk:
Urbanisation - because towns and cities have more **impermeable** surfaces.
Deforestation - because removing trees reduces the amount of water **intercepted** and increases **runoff**.

Key Vocabulary

Fair Trade: Fairtrade means that the producer receives a guaranteed and equitable price for their product regardless of the price on the world market.

Sustainable: To meet the needs of the present without compromising future generations meeting their own needs.

FAIRTRADE

Week 6 – Boscastle

Boscastle is a small coastal settlement in the south west of England. It flooded in August **2004**, washing cars and buildings into the sea and putting peoples' lives in danger.
Causes: Heavy localised rainfall - 89 mm of rain fell in an hour and saturated ground from previous rainfall. The landscape upstream of Boscastle, a steep-sided valley, acted as a funnel directing vast volumes of water into the village. Narrow river channels in the village itself. **Responses:** £4.5 million has been spent on a flood defence scheme and includes better drainage, sewerage and land regrading. The car park has been raised in height and acts as a barrier. The river channel has been made deeper and wider so it can hold more water.

Week 7 – Bangladesh

Bangladesh (LIC) in Asia and it is frequently affected by flooding. In **2007**, flooding made 9 million people homeless & approximately 1,000 people died from drowning and diseases. **Causes:** Cyclones cause coastal flooding, low-lying land, melt water from the Himalayas, deforestation, monsoon rains and increasing urbanisation. **Immediate responses:** Food aid from the Government and other countries, water purification tablets, repairing embankments, rescuing people, seeds given to farmer whose crops were destroyed. **Long-term responses:** Building embankments, building raised flood shelters, flood warning systems, emergency planning, dams planned and deforestation reduced.

Week 8 – Ethiopia

Population: **111 million people** (2021)

Capital: **Addis Ababa** with 5 million inhabitants.

The country is located on the African continent in a central and eastern position on the **Horn of Africa**. Ethiopia is **a landlocked** country and its six neighbouring countries.

The country entirely lies within the tropical latitudes, thus the lowlands have **tropical savannah** or **desert climate** while the higher mountain plateau experiences a more temperate climate.

The lowest point in Ethiopia is the **Danakil Depression** which is 125 m/ 410 ft below sea level. This is the hottest place on our planet, considering the average annual temperature!

Week 9 – The Blue Nile

Ethiopia's longest river is the **Blue Nile**.

The river has a length of 2,574 m or 8,444 ft and originates in Lake Tana.

Ethiopia's largest inland lake is **Lake Tana**.

Ethiopia has built the **Grand Ethiopian Renaissance dam GERD)**, a $4.5bn (£3.6bn) mega-project on the Blue Nile river that runs from Lake Tana in Ethiopia to meet the White Nile in Khartoum, flowing north into Egypt.

Week 10 – Fair Trade

Ethiopia is one of the poorest countries in the world.

The economy in Ethiopia is mainly driven by **agriculture** and fisheries due to the favourable climate in many regions and the many rivers of the country. Coffee is the biggest export product of Ethiopia.

Oromia Coffee Farmers Co-operative Union (OCFCU), the largest **Fairtrade** coffee producer in Ethiopia, was founded in 1999.

They are dedicated to promoting **environmental stewardship** and **social justice** in their communities. Women hold prominent positions throughout the organisation and all six varieties of OCFCU's award-winning coffee are produced with **organic** techniques in bird-friendly conditions.

Why did Britain support slavery and then end it?

How did Britain become richer than other countries?

- Britain was the first country to have an industrial revolution.
- As a result they became very rich and powerful as they could make products quickly in factories and sell them to other countries.
- This trade was also improved by British ships that became better due to the steam engines that could power them without sails.

Why did Britain take over other parts of the World?

- Soon the British were taking over areas of the world where they wanted to trade, or explore, or to take resources from.
- These areas became known as "colonies" within the British Empire.
- By 1900 the British Empire covered a fifth of the land on earth.

Why did Britain trade humans as slaves?

- As the British were trading lots and setting up farms (plantations) and factories around the world, they needed lots of workers.
- In Africa they found some tribes who were willing to sell people as slaves.
- The British and Spanish turned this into a business and started transporting thousands of African people across the Atlantic Ocean on a route called the Middle Passage; to sell them as slaves in America and the West Indies.
- The slaves were sold at auction where they were checked for their health and strength.
- The slave ships returned to Britain with products such as rum, tobacco, and sugar.
- The Triangular Trade (as it became known) made people very rich but it exploited the Africans and forced them to work for no money.

Why were the punishments so horrible?

- The lives of slaves were incredibly hard: working from dawn to dusk and living in basic huts called "slave quarters".
- If the slaves didn't work hard enough or fought back they faced terrible punishments from their overseers.
- Punishments included: whipping, ears being cut off, and execution.

How was slavery ended in the British Empire?

- British people started to hear about how bad slavery was by reading autobiographies written by ex-slaves and by hearing speeches by people who wanted to end slavery called the Abolitionists.
- Slave-owners were offered compensation (£16 billion) for their lost slaves.
- MPs in the House of Commons supported the law and slavery in the British Empire was banned.

HISTORIAN SKILLS

Knowledge and understanding – knowing your facts and when to use them!
Explanation – telling people what you mean!
Using Sources – finding out the truth!
Interpretation – other people's points of view!

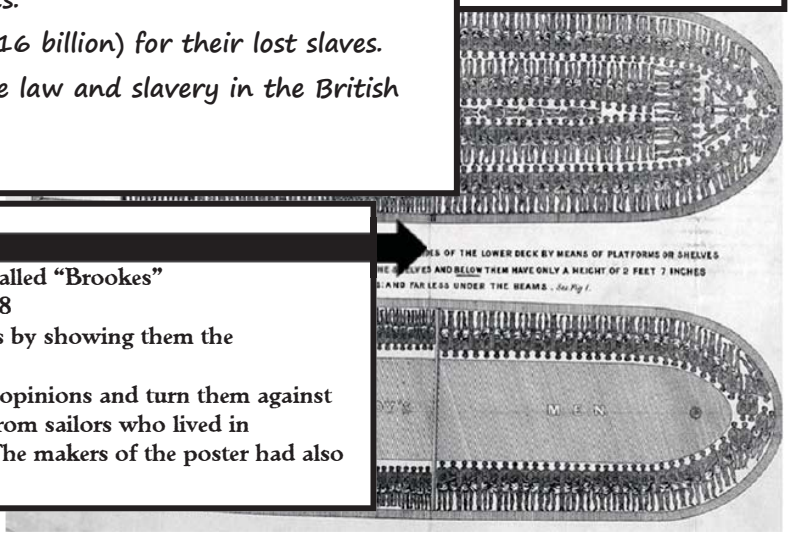
KEYWORDS

Abolition = banning something
Industry = factories and trade
Parliament = group that controls GB
Slavery = working without pay and without any human rights

IMPORTANT DATES

1760 = Industrial Revolution begins
1763 = Canada claimed by Britain
1770 = Australia claimed by Britain
1787 = Abolition Society formed
1807 = Slave trade abolished
1822 = First Royal Navy steam ship
1831 = Mary Prince's book published
1831 = Sam Sharpe's rebellion
1833 = Slavery abolished

FAMOUS SOURCE



Nature = a poster showing a diagram of the slave ship called "Brookes"
Origin = made by a Plymouth Abolition Society in 1788
Purpose = to make people realise how awful slavery was by showing them the conditions on a slave ship.
The Source is biased as it was made to change people's opinions and turn them against slavery. However, it was based on reliable descriptions from sailors who lived in Plymouth and they had worked on-board slave ships. The makers of the poster had also seen slave ships at the docks.

Will the First World War be forgotten?

What caused the First World War?

- No one is still alive that fought in the First World War, as we get further and further away from the event is it going to be forgotten by people in Britain?
- Between 1914 and 1918, a war was fought that was unlike any before it.
- The "Great War" as it was known at the time, used modern, industrial weapons such as artillery guns.
- In July 1914, the empires of Britain, France, and Russia (known as the "Entente" alliance) went to war against Germany and Austria-Hungary (known as the "Central Powers").
- Later in the war, the Ottoman Empire, Italy, and the USA joined in too and so the whole world seemed to be at war.
- The long-term causes of the war include militarism, alliances, imperialism, and nationalism.
- The European countries became more aggressive towards each other, they built up their armed forces, and made secret deals to support other nations. All that was needed was a spark to trigger a war.
- The short-term cause of the Great War was Franz Ferdinand being assassinated by Gavrilo Princip and the Black Hand Gang in Sarajevo.

Give examples of evidence that historians can use to learn about the War.

- The war was fought using "trench warfare" on the Western Front, Eastern Front, in Gallipoli, and in the deserts of the Middle East.
- There were also battles at sea such as Jutland.
- The artefacts from these battle zones provide evidence of the Great War. Shrapnel, artillery, barbed wire, machine guns, magazine loaded rifles, and grenades all provide evidence about the war and the trench warfare.
- Soldiers who fought in the Great War wrote letters home, poetry, and articles, whilst they were serving in the armed forces.
- Any soldiers who were injured also have medical records about their treatment.
- Newspapers also printed stories about what was happening in the war.
- The British government wanted to keep people happy during the war, so they controlled what the media could say and they even changed soldiers' letters.
- These contemporary Sources are very useful as evidence for Historians as long as they compare them and remember that some may have been changed.

Why do the interpretations of the First World War sometimes differ?

- Many of the people who lived through the Great War wrote books or did interviews about what they experienced.
- This contemporary evidence has been used by historians to create their interpretations of the events.
- Historians' conclusions differ depending on their point of view and the different evidence they use.

FAMOUS SOURCE

Nature = a poem called "Dulce Et Decorum Est" (How Sweet and Right it is)
Origin = written in 1918 by Wilfred Owen
Purpose = to express his feelings about the war
Wilfred Owen was a soldier on the Western Front. He was awarded a medal for bravery after taking a German machinegun post. He suffered from "shell shock" during the war and he was treated in an Edinburgh hospital for "exhaustion"; writing poetry was part of his treatment.

HISTORIAN SKILLS

Knowledge
Explanation
Using Sources
Interpretation

KEYWORDS

Biased = one sided
Contemporary = from the time
Interpretation = version of events
Reliable = trustworthy
Source = piece of evidence
Militarism = building up armed forces
Alliances = making deals between countries
Imperialism = European countries taking over other places.
Nationalism = love for a country

IMPORTANT DATES

1903 = first German Submarine built
1906 = first Dreadnought ship launched
1914 28th June = assassination of Franz Ferdinand
1914 28th July = war begins
1915 Feb = Gallipoli landings
1915 Apr = poison gas used for the first time in the war
1916 Feb-Dec = Battle of Verdun
1916 May = Battle of Jutland
1916 July-Nov = Battle of the Somme
1916 Sep = first tank used in the war
1917 June = Sidcup hospital opened
1918 Apr = RAF set up
1918 11th Nov = armistice
1919 = Treaty of Versailles

DULCE ET DECORUM EST

Bent double, like old beggars under sacks,
Knock-kneed, coughing like hags, we cursed through sludge,
Till on the haunting flares[2] we turned our backs
And towards our distant rest[3] began to trudge.
Men marched asleep. Many had lost their boots
But limped on, blood-shod. All went lame; all blind;
Drunk with fatigue; deaf even to the hoots[4]
Of tired, outstripped[5] Five-Nines[6] that dropped behind.

Gas![7] Gas! Quick, boys! – An ecstasy of fumbling,
Fitting the clumsy helmets[8] just in time;
But someone still was yelling out and stumbling,
And flound'ring like a man in fire or lime[9] . . .
Dim, through the misty panes[10] and thick green light,
As under a green sea, I saw him drowning.
In all my dreams, before my helpless sight,
He plunges at me, guttering,[11] choking, drowning.

If in some smothering dreams you too could pace
Behind the wagon that we flung him in,
And watch the white eyes writhing in his face,
His hanging face, like a devil's sick of sin;
If you could hear, at every jolt, the blood
Come gargling from the froth-corrupted lungs,
Obscene as cancer, bitter as the cud[12]
Of vile, incurable sores on innocent tongues,
My friend, you would not tell with such high zest[13]
To children ardent[14] for some desperate glory,
The old Lie; Dulce et Decorum est
Pro patria mori.[15]

Purposes of digital media

Topic of Learning	I will need to know:	So that I can:
Purposes of digital media	Digital media feature in many areas of our lives and play an important part in today's world. The digital media sector relies heavily on using visual stimulants within products it produces to communicate messages effectively to a target audience. Digital media can be printed or used online and can be used for many different purposes, including to entertain, to advertise, to promote, to inform, to educate and instruct.	Design and create effective digital graphics to ensure it meets a given purpose.
Digital media and target audience	Digital media content creators create digital graphics and media for a range of different uses, including on magazine covers, CD/DVD covers, online and printed adverts, multimedia products and computer games. Before the media product is created, the target audience must be identified so that the final design is suitable and meets the intended purpose.	Understand the requirements of a client brief and target audience to ensure the final design of a digital graphic is appropriate.
Digital media file formats	When working with digital media, there are a number of different file formats that can be used to save them. These formats include, jpg, png, gif, tiff, psd, pdf, bmp, mp4, mp3. It is important to save a digital media using the most appropriate file format so that it can be opened or used within different software applications and on different platforms. A final version of a digital media product will either be printed or used online.	Save digital graphics using the most appropriate file format depending on how the final product will be used.
Project planning techniques	When planning to create digital media there are various planning techniques that can be used during the design process. These techniques include mind maps, visualisation diagrams and mood boards. Using these planning techniques will make the production of the final product quicker and easier and will help to create a final product for the client which meets the intended purpose and target audience.	Use appropriate planning techniques to help plan the design, layout and content of a digital graphic.
Desk-top publishing	Desktop publishing is the use of computer software to produce content in various formats for publishing on different platforms – online and offline. Traditionally, DTP software was used to create layouts combining text and images for print publications such as newspapers, magazines, books, brochures and leaflets. However, DTP software has developed significantly and is now commonly used to create layouts for online content. This ranges from web and app design to interactive pdfs and traditional magazine layouts.	Use a wide range of DTP tools in order to create effective digital graphics.

ICT and the way we communicate:

There was a time when people had limited options for communicating with one another. Face to face, letters and telephones were the main methods. Developments in ICT have given us limitless ways to communicate with others. Texting, skyping, social media, email, apps, instant messaging and virtual platforms are just some of these options.


ICT in Education:

The impact of ICT on how we learn has been significant. Learning has become more personal, knowledge, skills and talents can be shared with others in a fun and creative way. computers for learning provides us with an interactive audio-visual tool. Animation and presentation software along with projectors, screens, microphones and speakers can be combined to create effective and engaging teaching and learning tools. Remote learning tools enable learning to take place outside a classroom.

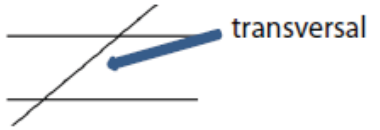
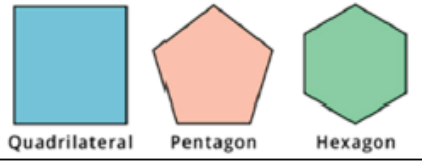
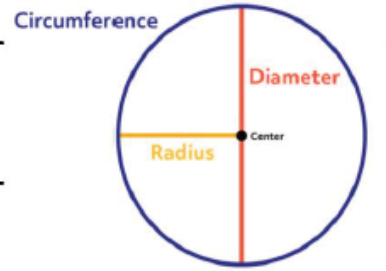

ICT and Entertainment:

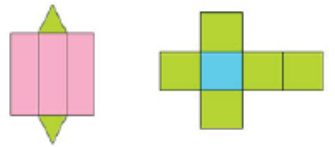
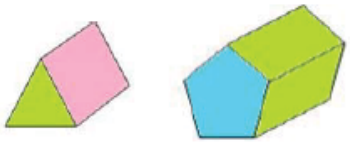
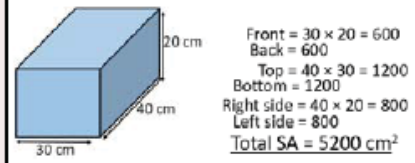
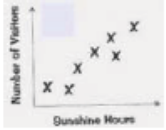
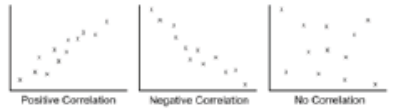
ICT has changed the way we access entertainment. The news can be read via the internet, we can read books by downloading e-books using e-readers. Our ability to download files onto our personal devices mean we have access to a vast range of music and films. Gamers can experience the very latest in AR and VR technology giving them a very immersive gaming experience.



ICT and the way we shop:

The way we shop has changed significantly in the past few years. We no longer have to physically go into a shop to buy the goods we want. The evolution of e-commerce enables us to shop online using a vast number of online shops 24/7 from the comfort of our own home. We can view products up close, watch videos of the product and read reviews to help us make decisions. Shops collect our data in order to make our shopping experience more personal.


Word	Used in context	Definition	Example
Parallel	*A square is made up of two sets of **parallel lines***	Lines that do not meet or cross and are always the same distance apart	
Perpendicular	*Two sides of a square meet at a right angle. Therefore, they are **perpendicular***	Two lines intersecting to form a right angle	
Transversal	*Which of the lines below is the **transversal**?*	A line that crosses at least two other lines	
Polygon	*Square, rectangle, triangle and pentagon are all examples of **polygons***	A closed shape with straight sides	
Regular Polygon	*A pentagon with all sides the same length is a **regular polygon***	A polygon with all angles equal and all sides the same length	
Circumference	*Calculate the circumference of this circle*	The perimeter of a circle	
Diameter	*Use the **diameter** to work out the circumference of the circle.*	A straight line passing from side to side of a circle, through the centre	
Radius	*Use the **radius** to calculate the area of the circle*	A straight line from the centre to the circumference of a circle. Half of the diameter	
Compound Shape	*Calculate the area of the compound shape shown in the diagram*	A shape made up of two or more geometric shapes	

Word	Used in context	Definition	Example
Net	*Show the **net** of a cube with edges 3cm long*	Describes what a 3D shape looks like when opened and laid flat	
Prism	*How many faces does this **prism** have?*	A solid object with a constant cross section	
Volume	*Calculate the **volume** of the cuboid*	The amount of 3D space an object takes up Volume = length x width x height	
Surface Area	*Work out the **surface area** of this prism*	The amount of space covering the outside of a 3D shape	
Scatter graph	*The **scatter graph** shows the heights and weights of ten children*	A graph displaying values for two variables for a set of data	
Bivariate data	*What type of graph shows bivariate data?*	Data that has two (usually related) variables	Weight and height
Correlation	*What type of correlation is shown by this scatter graph?*	The relationship between two variables	
Probability	*What is the **probability** of flipping a coin and it landing on heads*	The likelihood of an event happening	P(Heads) = 0.5
Relative Frequency	*Calculate the relative frequency of getting a 6 after the dice was rolled thirty times*	The number of times an event happens divided by the number of trials in an experiment	Emma has won ten tennis matches and lost seven. The relative frequency of Emma winning a match is $\frac{10}{17}$

Training Zones

Make sure that you can recall the guidelines for each zone. Can you link to sporting activities that would require training in each zone.

	Aerobic Training Zone	Anaerobic Training Zone
% of Maximum Heart Rate	60-80% of MHR	80-90% of MHR
Intensity of Exercise	Low to moderate intensity	High intensity
Length of Time in Zone	At least 15-20 minutes to have a training effect	15 seconds to 1 minute intervals
Related Training Methods	Continuous, Fartlek, Interval, Circuit	Weight, Interval, Circuit
Fitness Components that can be worked	Cardiovascular and muscular endurance	Speed, Power, Strength Tolerance to lactic acid

Calculating Intensity of Exercise through Heart Rate Zones– Example

A 20 year old joins a local gym and has been set a training programme where they will need to monitor their heart rate, to make sure that they are working hard enough but not overtraining.

Step 1– Calculate maximum heart rate. 220 - 20 = 200 bpm

Step 2– Aerobic Training Zone (lower threshold) 220 x 0.6 = 120 bpm

Step 3– Anaerobic Threshold

(upper end of Aerobic Zone/lower end of Anaerobic Zone) 220 x 0.8 = 160 bpm

Step 4– Upper End of Anaerobic Zone 220 x 0.9 = 180 bpm

Can you calculate training zones for yourself and a member of your family?

Training Methods– Memory Tip– WIFCC

Can you describe training methods and the component of fitness they target. What type of training would different athletes use? Why would it improve their performance? **Can you attempt the example sessions.**

Training Method	Description	Example Session
Weight Training	Lifting a resistance to cause adaptation to the muscles. Involves repetitions (the amount of times the movement is performed) and sets (a group of repetitions).	3 sets of 10 repetitions @60% of One Rep Max (the greatest amount you can lift once). Exercises– Bench Press, Leg Press, Shoulder Press, Bicep Curl. Can improve muscular strength, muscular endurance and muscular power.
Interval Training	Training which involves alternating work and rest periods. Can be structured to improve either speed or cardiovascular endurance.	Short Interval Training– 10-15 seconds sprinting with 90 seconds slow jog x 10 sets Long Interval Training– 2 minutes steady running with 1 jogging x 5 sets
Fartlek Training	Speed play. Working at a range of intensities, varying the speeds with no rest periods. Improves cardiovascular endurance.	5 minutes jog to warm up, then 15 seconds sprint, 45 seconds walk, 30 seconds steady, 15 seconds sprint and so on. Work for 15 minutes.
Continuous Training	Working at a low to moderate intensity for a long period of time with NO	20-30 minutes steady jogging @60-80 % of Maximum Heart Rate.
Circuit Training	Performing a series of exercises at different stations often with a brief rest in between to complete a set Improves muscular and cardiovascular endurance.	30 seconds work– 30 seconds rest Order of exercises– Press Up, Squats, Sit Ups, Shuttle Runs, Tricep Dips, Step Ups, Plank, Skipping

WK1 The creation of the world: Christianity

According to Christian belief, God created the universe this story can be found in the beginning of the Bible in the book of **Genesis**.

Day 1: light and dark
Day 2: sea and sky
Day 3: land and vegetation
Day 4: sun, moon and stars
Day 5: sea creatures and birds
Day 6: animals and humans

Day 7: God rested

Fundamentalist Christians believe that as the Bible comes directly from God, everything in it must be the **exact truth**. Anything that contradicts the Bible is wrong.

Other **Liberal Christians** regard these accounts as more like parables or **symbolic accounts** that tell, in story form, the profound truth that God brought the universe and all that is in it into being, and sustains his creation. These Christians might look to science to help them understand how God did this.

Enquiry Task:

1. Explain how the world was made according to Genesis
2. Explain how the creation story can be interpreted differently by Christians

WK2 The creation of the world: Science

One of the leading scientific theories for the origin of the world is **Big Bang theory**.

Put simply, around **14 billion years ago**, all matter and energy in the universe was at a point of infinite density and temperature. It then **expanded rapidly**, and eventually stars, galaxies and planets formed.

This expansion was the beginning of time and continues to this day. The Big Bang theory is supported by evidence that space is expanding, including the **redshift** of light from distant galaxies and the existence of **cosmic background radiation** in all directions.

Enquiry Task:
1. Explain two different beliefs about the creation of the world.

"Rule over the fish in the sea and the birds in the sky and over every living creation that moves" (Genesis)

WK3 Stewardship Vs Dominion

Christians believe that God has given humans the privilege of living on planet Earth but with the responsibility of looking after and preventing it from being ruined. This **special responsibility of looking after** the earth is known as **stewardship.**

In order to manage the Earth, Christians teach that humans were given power and **authority to rule over** the world, this is known as **dominion**. A minority of Christians have interpreted this to mean people can do what they like as they are in charge.

Enquiry Task:
1. Explain why some Christians think they have dominion over the earth
2. Give examples of how a Christian can be a good steward

WK4 Pollution causes and effects

Pollution puts the health of humans, animals and plants at risk. There are **many forms of pollution**, of which a few include;

Air pollution: caused mainly by fumes from factories and vehicles.
Long term exposure can lead to asthma attacks, lung cancer, acid rain and climate change.

Land pollution: caused by the ineffective disposal of waste. When chemicals enter the earth this can poison wildlife, make farming less efficient and result in contaminated food.

Water pollution: caused by dumping waste into the sea. It can have a devastating effect on marine life killing thousands of birds and marine animals.

Enquiry Task:
1. Explain the effects of each type of pollution. Is one type of pollution worse than other? Give reasons for your opinion.

WK5 The destruction of natural habitats

Tropical rainforests contain far more species of plants and animals than any other biome. **Deforestation** means the removal of trees. It is happening at an alarming rate. It is estimated that an area of rainforest about the size of a football pitch is destroyed each second. Land is cleared e.g. by **slash and burn** and planted with cash crops, usually just one - such as palm oil.

Alternatively, it will be used for grazing by **cattle ranchers**. Most cash crops and cattle are eventually sold to developed countries. These actions affect the soil for future use because fertility falls after just a few years.

Enquiry Task:
1. Explain the consequences of deforestation
2. What could be done to stop this from happening?

WK6 Caring for the environment

The **Earth's resources are limited**, therefore they must be protected and supported wherever possible.

Conservation aims to reduce the amount of resources used by human activity. It protects endangered species, e.g. by placing a limit on the amount of fish that can be caught and making areas of natural importance into national parks so that they cannot be exploited.

International action and legislation: through international treaties, governments across the world can agree to regulate the use of harmful chemicals, or to reduce the output of greenhouse emissions. One such agreement was the Kyoto Protocol in 1997.

Recycling: some waste products can be broken down and turned back into new products. This reduces the amount of waste going into landfill sites or being incinerated. Glass, paper, metal and some plastics are common materials that can be recycled.

Enquiry Task:
1. Which of the above methods is the most effective? Give reasons for your opinion.
2. Make a list of other ways people can care for the environment

WK7 Sustainable development

As the world's population increases, demand for natural resources is getting greater, so it is becoming increasingly important to encourage **sustainable development**.

Renewable energy is a natural source of energy that will never run out. These sources of energy are much cleaner to use than fossil fuels because they do not produce harmful gases that cause pollution and climate change.

There are different types of renewable energy:

Hydropower - moving water helps create electricity by turning turbines under the sea as the tide moves in and out, or by using water stored in a dam.

Solar energy - solar panels collect energy from the Sun to create electricity.

Wind energy - wind turns turbines to create electricity.

Geothermal energy - volcanic activity can be used for heating water and the steam produced can be used to power generators and create electricity.

Enquiry Task:
1. Explain how each renewable energy source works
2. What are the benefits of using renewable energy?

WK8 Animal experimentation

Christians believe that animals were **created by God** for humans to use and care for. Many believe God values animals but that humans are more important because they were created in the **'image of God'** and **have souls**. Animals are used by humans as pets, for transport and work, for food, sport, experimentation and entertainment. Scientists test new products, such as medicines, cosmetics and additives used in processed foods on animals to check they are safe for humans to use. Christians **generally support limited animal testing** providing there is no other safe way to develop medicines and it is carried out as caringly as possible.

Enquiry Task: 1. Explain Christian beliefs about animal experimentation

WK9 Animals for food

According to **Romans 14:2-3** Christians have the choice to be **meat-eaters, vegetarians or vegans**.
They should be sensitive to the beliefs of others about what they wish to eat. Most Christians do eat meat as it is a **good source of protein, vitamins and minerals.**
Those who decide to be **vegetarians or vegans** usually do so because they are against killing animals, as they believe that animals should not be harmed.
A **vegan** goes a step further and refuses to use any animal product, including milk, cheese, eggs, fur and leather.

Enquiry Task:
1. Explain why some Christians choose to eat meat and others do not

WK10 Pressure groups

Greenpeace is a movement of people who are passionate about defending the natural world from destruction. This is done by investigating, exposing, and confronting environmental abuse, championing environmentally responsible solutions, and advocating for the rights and well-being of all people. All work is funded almost entirely by donations given by passionate individuals from all over the world who care about the planet and by grants from private charitable foundations who share their values.

Enquiry Task:
1. Everyone should take responsibility to protect the environment not just Greenpeace. Do you agree? Give reasons for both sides of the argument

RESPIRATION:

1

We need energy for movement, warmth, growth and to keep all organs working. We get energy from respiration. The differences between oxygen and respiration are outlined in the table below:

When oxygen is available, plants and animals transport it, together with glucose, to tiny structures in their cells, called mitochondria. Here, the glucose and oxygen take part in **aerobic respiration** which produces energy

Aerobic respiration makes two waste products: **carbon dioxide and water.** Animals remove carbon dioxide from their bodies when they breathe out. In daytime, plants use some of this carbon dioxide for photosynthesis. At night, they release the carbon dioxide to their surroundings.

Most living things use aerobic respiration but switch to anaerobic respiration, which provides less energy, when oxygen is unavailable.

	Respiration	**Breathing**
What it is	Chemical reaction	Physical movement of gases
Where it takes	In mitochondria inside of cells	In lungs
What the process involves	Glucose + oxygen —> carbon dioxide + water	Air that contains oxygen and carbon dioxide moves through respir-

RESPIRATION AND EXERCISE:

2

When you need to transfer energy from glucose to your muscles very quickly (for example in intense exercise), your body cannot get oxygen to its muscles quickly enough for aerobic respiration to occur; the glucose breaks down **without oxygen.**

The **anaerobic respiration** equation: Glucose —> **lactic acid**

Unfortunately this can lead to **painful muscle cramps**. When you finish exercising you keep breathing heavily to get the oxygen needed to breath down the lactic acid. This is called the oxygen debt.

1

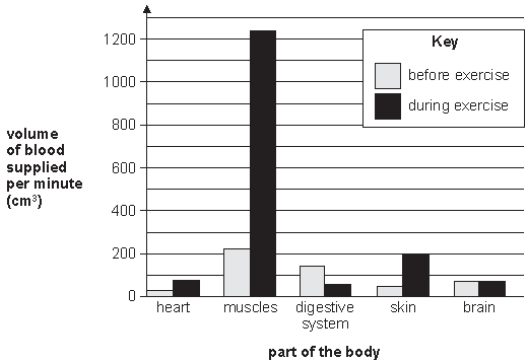
When people exercise, the volume of blood per minute needed to supply different parts of the body changes.

This is shown in the bar chart below

(a) Explain why muscles need **more** blood during exercise. Give **three** reasons.

(b) Look at the bar chart. Suggest why you should not go for a long run just after eating a meal.

(c) Why is it important that the blood supply to the brain stays constant? Explain why muscles need **more** blood during



2

Paula is training for a marathon. When she runs, her heart beats faster than it does when she is resting.

Complete the sentences, using words from the box.

blood	**breathe**	**carbon dioxide**	**glucose**
heat	**nitrogen**	**oxygen**	**respire**

When she is running, Paula's muscle activity increases. To do this, her muscle cells ..... at a faster rate to give her more energy. Her muscles need to be supplied with .....
and ..... more quickly. Her heart beats faster to increase the flow if ..... which carries the products .....
and ..... away from her muscles.

3

Photosynthesis

Photosynthesis is the process by which plants make glucose from Carbon dioxide and water using light energy from the Sun.

Carbon dioxide + **Water** → **SUNLIGHT** → **Glucose** + **Oxygen**

The glucose is used for energy, to build new tissues or to store as starch.

Plants and algae make their own food (glucose) through photosynthesis. They have specially adapted organs that allow them to get what they need for photosynthesis. Plants and algae can only carry out photosynthesis in the light.

FACT: iodine can be used to test the presence of starch. Iodine turns black in the presence

4

Carbon dioxide: Plants get the carbon dioxide they need from the air through their leaves. It moves by **diffusion** through small holes in the underside of the leaf called **stomata**. **Guard cells** control the size of the stomata so that the leaf does not lose too much water in hot, windy or dry conditions.

Water: The water needed for photosynthesis is absorbed through the roots and transported through tubes to the leaf. The roots have a type of cell called a root hair cell. These cells have a big surface area and thin walls. This lets water pass into them easily. Since they are in the soil, they do not have chloroplasts nor can they photosynthesis.

Sunlight: Photosynthesis takes place inside plant cells in small objects called **chloroplasts**. Chloroplasts contain a green substance called **chlorophyll**. This absorbs the light energy needed to make photosynthesis happen.

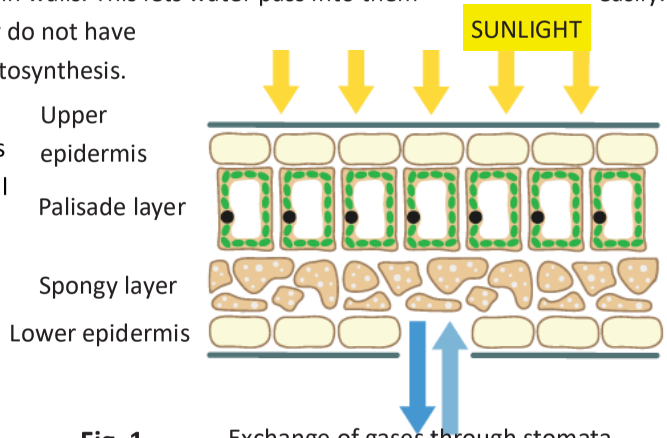
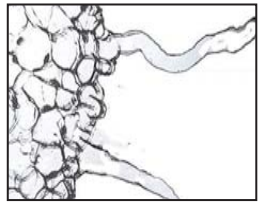


Fig. 1 Exchange of gases through stomata

3

You will need to complete extra research for these questions

TASK:



A) Can you write the word equation for photosynthesis?

B) Which part of a plant cell absorbs light energy?

C) The ends of roots are normally covered in tiny root hair cells. What is their function?

Number the sentences to explain how to test a leaf for starch.

	Cover the leaf with iodine – the areas with starch in will stain black
	Take the leaf out of the ethanol carefully as it will be brittle – then wash it in the water bath to soften it.
	Place the leaf in boiling water for 1 minute to stop it photosynthesising
	Spread the leaf out on a white tile
	Place a test tube full of ethanol into the hot water and place the leaf into the ethanol – this will remove the chlorophyll

4

TASK:

A) Copy and label the diagram of the leaf (fig. 1).

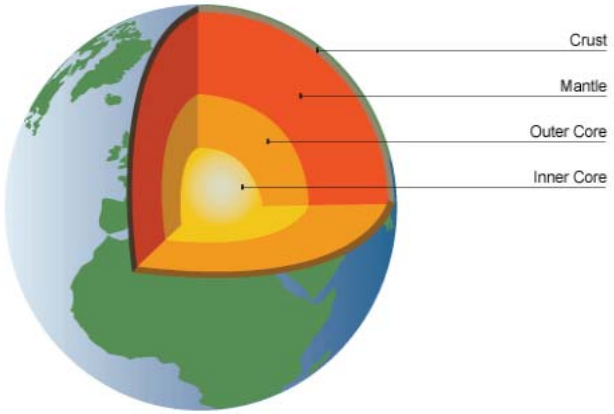
B) What is the purpose of the small holes in the lower layer of the leaves?

C) Tick **one** box in each row to show whether the statement is true for photosynthesis **or** for respiration.

statement	photosynthesis	respiration
carbon dioxide is produced		
light is needed		
it occurs in plants and animals		
oxygen is produced		

1. Earth Structure

The Earth is made up from layers called the **core, mantle & crust.** The Earths core is extremely hot, the inner core is solid and the outer core is liquid, made up from nickel and iron. The mantle is a very thick layer (about 3000 km) of semi-liquid and solid material in between the core and the crust. It flows and transfers heat from the core outwards to the crust. The crust is the outer part of the Earth and is thin compared to the core & mantle. The oceanic crust is dense, thin and made up from basalt rocks whereas the continental crust is less dense, thicker and made from granite rocks. The mantle causes the crust to move very slowly across the surface in pieces of rock called tectonic plates. When these tectonic plates meet they can either push together (making mountains), pull apart or slide over each other. Earthquakes and volcanic eruptions happen at these boundary points. Magma (molten mantle) can rise up as it is less dense to form volcanoes where lava makes new rocks as it cools.

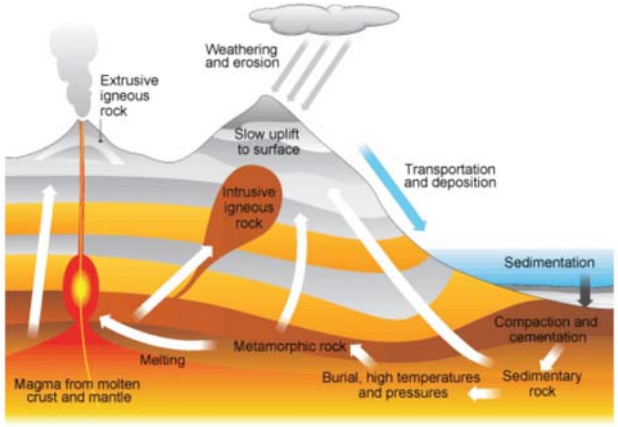


2. Rocks

There are 3 types of rocks: **igneous, sedimentary & metamorphic.**

Igneous rocks are commonly found near volcanoes and at **plate tectonic** boundaries. Igneous rocks form when hot magma from the mantle cools down. Igneous rocks do not contain fossils, as the rocks are formed from cooling magma. Some common types of igneous rocks are basalt and granite. Crystals form in the rocks. When the magma cools quickly the rocks have smaller and tighter crystals. Slower cooling rocks form larger crystals which is common in granite.

The rocks suffer from **weathering** and **erosion**. Weathering breaks the rocks apart by biological (animal burrows or tree roots), chemical (acid rain) or physical means (waves, wind or freeze-thaw). Erosion then transports these rocks via water, wind & ice to a new place. This process of weathering & erosion takes millions of years.



Sedimentary rocks are formed by weathered & eroded rocks being deposited in new layers. They have lots of grains or boulders which make up the layers in the rock, held loosely together by a matrix (like a cement or glue to hold them together). Some examples of sedimentary rocks are sandstone, siltstone and limestone. Sedimentary rocks can also contain fossils.

3. Rock cycle

Over millions of years the plate tectonics move the crust around. This process causes the rocks to build up, get weathered away & eroded constantly (just like a conveyor belt). In other words, the rocks are continually recycled in the rock cycle. Rocks can be bent & folded or even break apart during an earthquake.

1. Enquiry Task

A) Using the information about the Earth Structure, draw your own version of the Earth structure and label each section. Explain the similarities and differences for the layers.

B) Research 3 different types of volcanoes. Draw a diagram of each. Add the name of the volcano, the tectonic plate where they are found and explain why they are different.

2. Enquiry Task— Research & explain 6 different types of weathering (2 biological, 2 chemical & 2 physical), can use either diagrams or storyboard.

3. Enquiry Task

Using the information on the page, write a story or a storyboard to explain how **'Sammy the Sand Grain'** will travel the world changing into different rocks over 5 million years. He should become a different rock type every million years.

Solar System

The Solar System consists of a Star called the Sun, 8 planets, a dwarf planet, lots of moons and the asteroid belt.

There are eight planets in the solar system. Starting with Mercury, which is the closest to the Sun, the planets are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

The Earth is one of 4 rocky planets orbiting close to the Sun. The other 4 planets are the gas giants and they orbit the Sun much further away past the asteroid belt. Pluto is the furthest away from the Sun and is a dwarf planet (it is slightly different and much smaller than the others). Stars form when a cloud of gas is pulled together by its own gravity.

TASK:

1. Research how stars are formed.
2. Make a sentence using the first letter of each planet to help you remember the order of the planets.

The Universe — it's a large space!

Many stars group together to form a galaxy. Our galaxy is called the Milky Way. Lots of different stars and galaxies make up the whole of the observable Universe. Stars can also be different types. Our star, the Sun, is a main sequence star and is a yellow dwarf. There are many types of stars for example gas giants, neutron stars and dwarf stars of many colours.

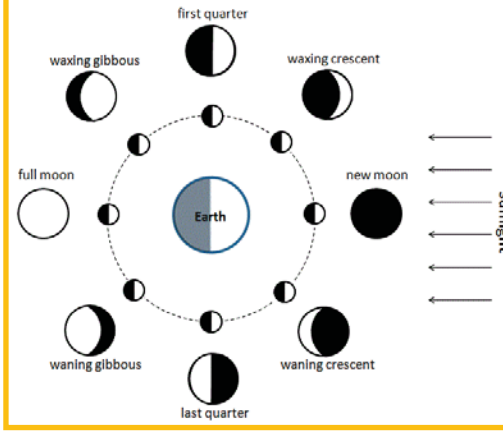
It's really difficult to use standard units or to talk about distances in the Universe as it is so vast. For light we use a light year (ly). The light from our Sun travels through a vacuum for 150 million km (150 000 000 km) at a speed of 300 million meters per second (300 000 000 m/s). So in just one light year, light will travel 9 460 000 000 000 km through space. Light from the distant parts of the Universe take 15 billion years to reach Earth. When we see light from stars, we are seeing what those stars looked like 15 billion years ago.

TASK: Research 4 constellations.

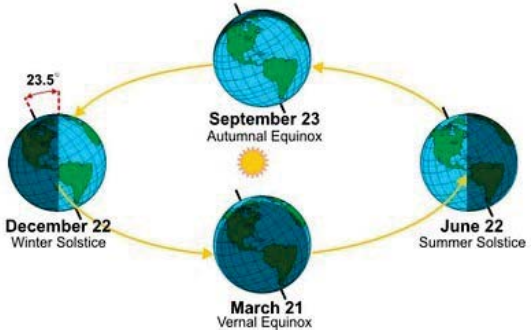
1. Research 4 constellations
2. Draw a diagram of each constellation and name the main stars.
3. Draw a table of comparison giving the name of the constellation, the main star, distance away from Earth and the type of star.

Earths motion

The Earths rotation causes the length of the day, 24 hours. The side with sunlight is the daytime while the side in shade is the night time. One orbit around the Sun defines the year.



The Earths rotation is tilted on an axis causing the seasons. When the northern hemisphere is closest to the Sun it is summer and so the southern hemisphere has winter.



This effect also causes longer daylight in the summer as the sunlight is more focused and shorter daylight in the winter when the sunlight is more spread out.

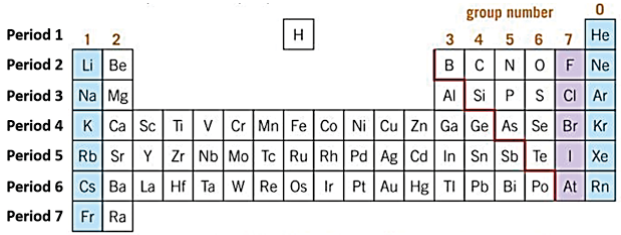
The light from the Sun reflects off many objects in the Solar System, especially the Moon. The Moon rotates around the Earth every 28 days and throughout that time we see different phases. The sunlight will illuminate one half of the Moon but this changes the appearance of the Moon depending on where you see it from.

TASK:

1. The diagram opposite shows the Earth in its orbit around the Sun. Describe how the tilt of the Earth affects the Earth's seasons.
2. Describe how the tilt on the Earth affects the distance Plymouth is from the sun.

1. THE PERIODIC TABLE

- Vertical columns = groups
- Horizontal rows = periods
- Metals = left side of the stepped line
- Non-metals = right side of the stepped line



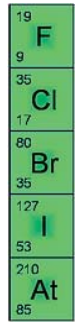
KEYWORD	DEFINITION
Alkali metals	The elements in the left column of the Periodic Table. Also called Group 1.
Chemical properties	Features of the way a substance reacts with other substances.
Group	A column of the Periodic Table. The elements in a group have similar properties.
Halogens	The name for elements in the group that is second from the right of the Periodic Table. Also known as the Group 7 elements.
Physical properties	Features of a substance that can be observed without changing the substance itself.
Trends	A pattern in properties, such as n increase of decrease.
Unreactive	Elements that take part in few chemical reactions are unreactive.

Enquiry tasks

a) Using flashcards or cut paper into rectangles, write the keyword on one side and the definition on the other. Ask family or friends to test you to improve your recall.

b) State the group and period number of the following elements: Na, C, S and Cl.

3. GROUP 7 ELEMENTS (HALOGENS)



Properties of group 7 elements

1) Non-metals **2)** Low melting points 3) Do not conduct electricity

4) Exist as simple diatomic molecules (Cl_2, Br_2...)

Trends

- Melting and boiling point increases as you go down the group.
- Colours of the elements get darker as you go down the group (pale yellow (fluorine) —> dark purple (iodine)).
- Reactivity decreases as you go down the group.
- State changes from gas to liquid to solid as you go down the group.

Enquiry tasks

a) State whether F or At has the lowest boiling point.

b) State whether F or At is the most reactive

c) Describe three differences between a group 1 and group 7 element.

2. GROUP 1 ELEMENTS (ALKALI METALS)

Properties of group 1 elements

1) Good conductors of electricity and heat
2) Shiny when freshly cut
3) Soft (can be cut with a knife)
4) Very reactive
5) Relatively low boiling/ melting points
6) Low densities

Trends

- Melting point decreases as you go down the group.
- Reactivity increases (gets more vigorous) as you go down the group.

Reactions with water

- Produce hydrogen gas and a metal hydroxide.
- Make alkaline solutions (universal indicator turns purple)
- Sodium + water → sodium hydroxide + hydrogen

General equations

Alkali metal + water → alkali metal hydroxide + hydrogen

Enquiry tasks:

a) State whether Li or Fr has the lowest boiling point.

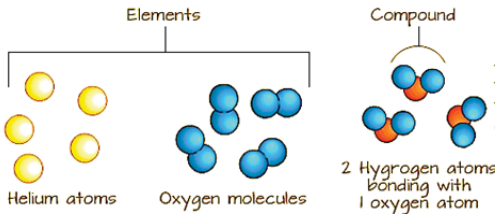
b) State whether Li or F is the most reactive

c) State the products of the following reaction

Lithium + water —> _____ _____ + _____

4. ATOMS, ELEMENTS and COMPOUNDS

- Every element is made up of one type of atom.
- One atom does not have the properties of an element (e.g. gold atoms are NOT shiny or yellow). The properties of an element are the properties of many atoms joined together (together the atoms make gold yellow and shiny).



Compounds and molecules

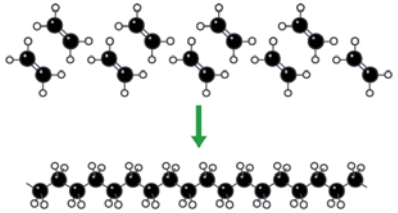
- A compound has different properties to the elements in it.
- All compounds are molecules, but not all molecules are compounds. Hydrogen gas (H_2) is a molecule, but not a compound because it is made of only one element.
- Water (H_2O) can be called a molecule or a compound because it is made of hydrogen (H) and oxygen (O) atoms.

Enquiry tasks:

a) Give two examples of an element and compound.

b) Describe the difference between an element and compound.

6. POLYMERS



- Polymers are made by chemical reactions that join lots of small molecules together to make long molecules.
- For example, a molecule of poly(ethene) is made by joining thousands of ethene molecules together.
- Polymer molecules are big and heavy. This means they have high melting points.

NATURAL POLYMERS	SYNTHETIC POLYMERS
Wool— fibres trap air between them. It traps heat so is used for jumpers and socks.	Poly(ethene) • Low-density (LDPE) —> molecules slide over each other, making it flexible. It is strong. Used for carrier bags. • High-density (HDPE) —> strong and flexible. It is harder LDPE. Surfaces can be smooth. It is used in artificial knee joints.
Rubber—long and bendy molecules so they slide over each other. Used for tyres as its flexible, waterproof and durable.	
	Both do not wear away or decay naturally.

Enquiry tasks

a) Describe how polyethene is made

b) Explain why polymer molecules have high melting points.

c) Explain why rubber is used to make tyres .

5. NAMING COMPOUNDS

- Compounds made up of oxygen and another element have two-word names. The second word is oxide. (e.g. alumininum + oxygen —> aluminium oxide)
- In any compound of a metal with a non-metal, the end of the name of the non-metal becomes –ide.
- (e.g. sodium + chlorine —> sodium chloride)

CHEMICAL SYMBOLS

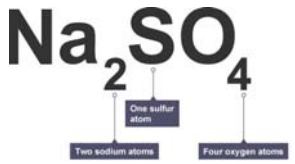
Every chemical symbol starts with a capital letter, with the second letter written in lower case.

Mg	mg	mG	MG
✓	✗	✗	✗

CHEMICAL FORMULA

- Shows the elements present in a compound.
- Shows the number of atoms of each element.
- Numbers are written to the right of their chemical symbol
- Numbers are $_{\text{smaller}}$ than the chemical symbol.

Example: sodium sulfate



Number of elements: 3
Elements: Na (sodium), S (sulfur), O (oxygen)
Number of atoms: 7

Enquiry tasks:

A) Complete the following equation

sodium + oxygen —> _____ _____

B) Complete the following equation

Potassium + chlorine —> _____ _____

C) For each compound, state the number of elements and atoms:

$CaCO_3$	$CuSO_4$

Need to Know Dictionary: English

Word	Definition
Fiction	Literature that describes imaginary events and characters.
Protagonist	The main (usually 'good') character in a text.
Antagonist	A character who opposes the protagonist.
Allegory	A story with a hidden meaning behind it. Usually a moral or political one.
Characterisation	The way in which a fictional character is created.
Setting	The background or location in which a text is set.
Moral	A lesson that can be learned from a story.
Theme	A recurring idea in a text.
Narrative	A spoken or written account of something . A story.
Civilisation	An organised society or group of people. A civilisation has laws, culture, food production and protection for its people.

Need to Know Dictionary: Maths

Word	Definition
ratio	commonly a ratio is the comparison of two values of the same kind, which may be written as a to b, a:b
circumference	the distance around a circle
prism	a prism is a solid three-dimensional shape with two identical, parallel polygon bases
surface area	total area of the surface of a three-dimensional object measured in square units
loci	a set of points that satisfy a particular condition or rule
translation	move an item in any direction without rotating it
transformation	a change in position or size, including a reflection … flip, a translation … slide, a rotation … turn and a dilation … zoom
congruent	having the same shape and the same size
similar	having the same shape but not necessarily the same size
scale	having the same shape but not necessarily the same size

Need to Know Dictionary: Science

Word	Definition
Electromagnet	A non-permanent magnet turned on and by controlling the current through it.
Magnetic Field	A region in which there is a force on a magnet or magnetic material.
Solenoid	Wire wound into a tight coil, part of an electromagnet.
Photosynthesis	The process plants and algae use to make their own food, glucose. In photosynthesis, carbon dioxide and water react together to make glucose and oxygen.
aerobic respiration	Breaking down glucose with oxygen to release energy and producing carbon dioxide and water.
Producer	Organism that makes its own food using photosynthesis.
Contact Force	A force that acts when an object is in contact with a surface, air, or water.
Equilibrium	State of an object when opposing forces are balanced.
Deformation	Changing shape due to a force.
Atmospheric Pressure	The pressure caused by the weight of the air above a surface.

Need to Know Dictionary: Geography

Word	Definition
Ecosystem	A community of plants and animals that interact with each other and their environment.
Biome	A plant and animal community that covers a large area of the Earth's surface (e.g. desert, tropical rainforest).
Adaptation	the process of change by which an organism or species becomes better suited to its environment.
Deforestation	The cutting down of trees, transforming afforest into cleared land for other uses such building or growing crops.
Pollution	the presence in or introduction into the environment of a substance which has harmful or poisonous effects.
Nutrient Cycle	are on-going recycling of nutrients between plants and animals and their environment.
Desertification	is when the physical land in an area becomes drier and vegetation struggles to grow there.
Overgrazing	is when too many animals are allowed to eat the vegetation in an area for too long, so the vegetation cannot recover.
Biodiversity	is the wide range of plant and animal life that lives in an area or ecosystem.
Biome	A plant and animal community that covers a large area of the Earth's surface (e.g. desert, tropical rainforest).

Need to Know Dictionary: French

Week/ Word/ Definition/ In a sentence/ Word Knowledge

1 Irregular (adjective) - Not following the usual pattern. It's really important you learn irregular verbs because they don't follow the usual pattern. The prefix 'in' can mean 'opposite of' the Latin root word 'regularis' means 'having rules'.

2 Infinitive (noun) - The verb in its unchanged state. In French, infinitives end in either -er, -ir or -re. The Latin root word 'fin' means 'end'.

3 Past participle (noun) - The form of a verb, typically ending in -ed in English. The perfect tense is made up of the verb avoir (pronounced av-wa) or être (pronounced etruh) followed by a past participle. From the Latin for 'sharing'.

4 Gender (noun) - Whether the noun is masculine or feminine. Some verbs use être (pronounced et-ruh) in the perfect tense, the past participle needs to agree in gender and number. From the Latin root word 'genus' which means 'race', 'kind' or 'species'.

5 Negative (noun) - A word or statement that expresses denial, disagreement, or refusal. Always try to include a negative phrase in your writing and speaking. The prefix 'neg' means 'deny' or 'nothing'.

6 Conjugate (verb) - To change the verb depending on who is performing the action or when the action is taking place. We are now able to conjugate verbs in the present and the perfect tense. The prefix 'con' means to 'join'.

7 Indefinite article (noun) - The word 'a' or 'an'. In French, there are two ways to use the indefinite article depending on whether the noun is masculine or feminine. The indefinite articles in French are: 'un' or 'une'

8 Partitive article (noun) - The word 'some' In French, there are four different ways to use the partitive article, depending on whether the noun is masculine or feminine, singular or plural. The partitive articles in French are: 'Du', 'de la', 'de', 'l' des'.

9 Cognate (noun) - Cognates are words that share similar meaning, spelling and pronunciation. When trying to work out meaning, you should look for cognates. From the Latin word meaning 'of common descent'.

10 Tense (noun) - A set of forms taken by a verb to indicate time. You should use a variety of tenses in your speaking and writing, in order to achieve a higher grade. From the Latin word 'tens' meaning 'time'.

Need to Know Dictionary: History

Word	Definition
1800s	The correct way to write "the eighteen hundreds" as a number.
Abolish	To end or get rid of
Century	100 years
Contemporary	At the same time of the event or person
Decade	10 years
Empire	Different nationalities all controlled by one central government.
Morale	A feeling about how well or badly something is going.
Parliament	A group of people that debate and decide the laws and taxes for a country.
Rebellion	To fight back against the people in charge
Slave	A person with no human rights who is forced to follow orders and work without pay.

Need to Know Dictionary: Design and Technology

Word	Definition
Printed Circuit Board (PCB)	A Printed Circuit Board or PCB is essentially a board that connects electronic components.
Soldering	The process by which solder, which is an alloy of lead and tin, is heated until liquid and then added to components allowing electricity to flow from one point to another.
Bridal joint	A carpentry joint connecting a slotted end of one timber to the double-notched end of another timber.
Soldering iron	An electrical tool used for melting solder and applying it to metals that are to be joined.
Function	The special purpose or activity for which a thing is designed or used.
Illumination	To light up an area, our lamps will hopefully do this effectively.
Precision	Precision is defined as the reproducibility or repeatability of a result from repeated measurements under unchanged conditions.
Dimensions	A measurement of something in a particular direction, especially its height, length, or width:
Resistor	A device having resistance to the passage of an electric current.
Light Emitting Diode (LED)	A semiconductor diode which glows when a voltage is applied.

Need to Know Dictionary: Art

Word	Definition
Op Art	a form of abstract art that gives the illusion of movement by the precise use of pattern and colour, or in which conflicting patterns emerge and overlap.
Annotations	a note or comment added to a text to provide explanation or criticism about a particular part of it.
Geometric forms	characterised by or decorated with regular lines and shapes. "a geometric pattern"
Installation	The term installation art is used to describe large-scale, mixed-media constructions, often designed for a specific place or for a temporary period of time.
Contrast	It is one of the principles of art which refers to the striking difference between two elements. For example, there is a strong contrast when you place a vivid red next to a dull green, or a rough texture next to a smooth texture, or a hard edge next to a soft edge, and so on.
Composition	The position and layout of shapes on paper.
physiology and psychology	The study of how the human body and the study of how the human mind and behaviour.
Perception	The way in which something is regarded, understood, or interpreted.
Pattern	A repeated shape or line.
Disorienting	causing someone to lose their sense of direction and/or feel confused.

Need to Know Dictionary: Drama

Word	Definition
Characterisation	how an actor uses body, voice, and thought to develop and portray a character.
Slow motion	the speed is reduced to highlight a scene or bring a big moment into focus.
Genre	refers to the type of story being told. I.E comedy, tragedy, tragicomedy, melodrama.
Forum theatre	is a drama technique that encourages an audience to interact and explore different options for dealing with a problem or issue.
Stimulus	starting point, idea or inspiration for your devised drama.
Devising	is a group collaboration in response to a stimulus leading to the creation of an original performance.
Improvisation	created spontaneously or without preparation (making it up as you go along).
Marking the moment	is a way of highlighting the most important moment in a scene in order to draw the audience's attention to its significance.
Abstract techniques	is the representation of the underlying feelings, moods, themes and ideas of a performance rather than telling the story in a realistic manner.
Choral work	Actors moving, breathing and speaking together as one group.

Need to Know Dictionary: Music

Word	Definition
BPM (beats per minute)	Unit of measurements of a piece's tempo.
Musical phrase	is a substantial musical thought, which ends with a musical punctuation called a cadence.
Music for Film	A film score is original music written specifically to accompany a film.
Music genre	is a conventional category that identifies some pieces of music as belonging to a shared tradition or set of conventions.
Leitmotif	is a "short, recurring musical phrase" associated with a particular person, place, or idea.
Soundscape	refer to an audio recording or performance of sounds that creates the sensation of experiencing a particular acoustic environment.
Soundtracks	is a narrow strip running down a movie film that carries the recorded sound in synchronisation with the pictures.
Diegetic sound	is sound that comes from the setting of the film.
Non- diegetic	is any type of sound that does not specifically exist within the world of the film itself
Mickey-mousing	Matching movement to music.

Need to Know Dictionary: PE

Word	Definition
Training Methods	There are a number of different ways of training that can improve health and fitness necessary for a range of activities.
Weight Training	Lifting a resistance to cause adaptation to the muscles. Involves repetitions (the amount of times the movement is performed) and sets (a group of repetitions).
Interval Training	Training which involves alternating work and rest periods. Can be structured to improve either speed or cardiovascular endurance.
Fartlek Training	Speed play. Working at a range of intensities, varying the speeds with no rest periods. Improves cardiovascular endurance.
Continuous Training	Working at a low to moderate intensity for a long period of time with NO rest periods.
Circuit Training	Performing a series of exercises at different stations often with a brief rest in between to complete a set Improves muscular and cardiovascular endurance.
Maximum Heart Rate (MHR)	The highest number of beats per minute your heart can pump under maximum stress (220-age).
Aerobic Training	Training at an intensity level above the aerobic threshold but below the anaerobic threshold. Typically 60-80% of MHR.
Anaerobic Training	Training at an intensity level above the anaerobic (without oxygen) threshold. Typically 80-90% of MHR.
Anaerobic Threshold	The heart rate above which anaerobic (without oxygen) fitness improves. Typically above 80% of MHR.

Need to Know Dictionary: Religious Studies

Word	Definition
Abuse	misuse; of the world and environment.
Animal experimentation	using animals to conduct scientific experiments usually to try to improve human life.
Awe	A feeling of respect, mixed feelings of fear and wonder.
Vegetarian	a person who does not eat meat or fish.
Deforestation	the cutting down of large amounts of forests, usually for business needs.
Dominion	power over something ; having charge of something or ruling over it.
Vegan	a person who does not eat meat or food produced by animals e.g. eggs. a vegan will not use any products that have caused harm to animals e.g. leather.
Natural resources	materials found in nature, such as oil and trees that can be used by people.
Renewable energy	energy that comes from a source that does not run out, such as wind or the sun.
Stewardship	the idea that believers have a duty to look after the environment on behalf of God.

Need to Know Dictionary: Food Technology

Word	Definition
Combine	This refers to when ingredients are mixed together when following a method for a recipe. For example this could be combining yeast and bread flour with water to make bread dough or to combine sugar with butter and then adding the eggs and flour to make a cake.
Knead	You knead the bread dough to make it smooth and stretchy. The palm of the hand is used to push the dough away from you then it is pulled back towards you by folding it back over from the front then it is pushed away again. This is repeated to make the dough soft and stretchy and it activates the gluten in the flour along with the yeast.
Consistency	This refers to how a food holds together or what it looks and feels like. The consistency of a sauce could be thick or runny, smooth or lumpy
Incorporated	This refers to different ingredients being mixed together to make one thing such as bread dough, pastry and cheese sauce.
Equal	This refers to quantities being the same such as cake mixture being divided into cupcake cases or equal amounts of bread dough to make into rolls.
Even	This refers to products made evenly when cut out or shaped such as scones being all the same size and height. It could also refer to the surfaces being flat and smooth.
Presentation	How something looks when it is made and then presented on a plate or dish. It could be the edges of a pie or cupcake icing that has been presented in a decorative way or the meal may have been displayed on a plate with a salad garnish to make it look good and appetising.
Management	This could refer to time management where you are planning your time when preparing a dish to ensure the dish and its accompaniments (side dishes) are ready at the same time or management within a team working in a kitchen environment.
Method	When making a dish or a product a method is followed using step by step instructions. This helps to get each ingredient combined together in the correct order and pre-pared correctly as well.
Independent	Where you work on your own or follow a recipe by yourself with no help from others.

Need to Know Dictionary: ICT

Word	Definition
Audience	The group of people a product is specifically designed for to entertain, educate or to advertise.
Design brief	Instructions given by a client about how they want the finished product to look or contain.
Desk-top publishing (DTP)	Using a computer and graphic design software to design and create a publication.
Page layout	The placement of design and content within a page.
House-style	The use of consistent colours, fonts and layout.
Logo	A symbol which represents a company or organisation.
Layering	Putting objects in front of or behind each other on a page.
Resize	When an image or object is made larger or smaller.
Group/ungroup	Joining or splitting an image or object into one or separate component parts.
Align	Making objects line up on the left, centre or the right of a page.