The background of the cover features a photograph of the All Saints Academy Plymouth building, a modern structure with white and red facades. In the foreground, a person wearing a blue protective suit and gloves is welding, with bright sparks emanating from the point of contact. The scene is set outdoors on a paved area with greenery and a staircase in the background.

ALL SAINTS
ACADEMY PLYMOUTH

NEED TO KNOW BOOK

Year 7
Summer Term 2024

ALL SAINTS
ACADEMY PLYMOUTH

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Timetable

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 complete up to 1 hour 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



Your 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



Educake

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 <i>Maths</i>	Subject <i>English</i>	Subject <i>Science</i>	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 _____
signature _____

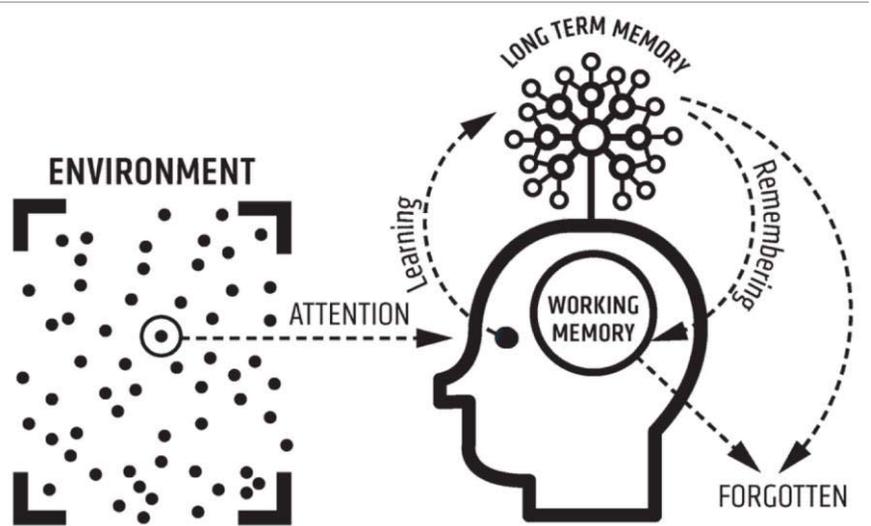
Tutor

Improving Your Long Term Memory

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.

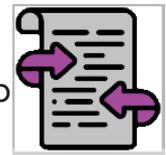
You can support your working memory by storing key facts and processes in long-term memory. These facts and processes can then be **retrieved** to stop your working memory becoming overloaded.



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.

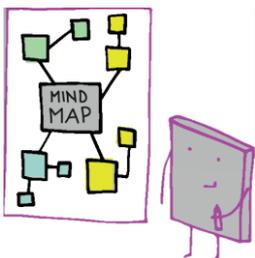
There is strong scientific evidence from cognitive psychology that shows the benefits of **self-quizzing** in promoting **retrieval strength**. This is your ability to quickly recall key facts related to your subject or topic

How should I self-quiz and how often?



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

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.

BOLD steps to your **BRIGTT** future



www.ASAPaspirations.co.uk

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

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

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 will look like.

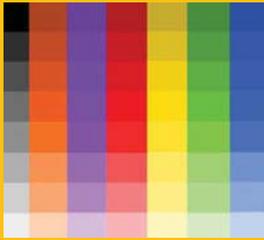
Line

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 to show contours, movements,



Tone

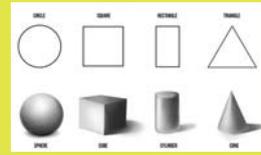
Tone means the lightness and darkness of something. This could be a shape and/or how dark or light a colour appears.



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 of actual texture.

Colour

There are three primary colours:

Red, Yellow, Blue

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

Orange, Green and Purple

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.



COLOR THEORY
Color is an element of art.

Everytime I use color, I am creating a color scheme.

This is a color wheel.

The most common color schemes are listed below.

Primary.... { I can make all the other colors by mixing different amounts of primary colors }

Secondary.... { I can mix two primary colors to make a secondary color. }

Warm.... { Yellow and all the colors with red and orange tones are warm. }

Cool.... { Violet and all the colors with blue and green tones are cool. }

Complementary.... { Opposites on the color wheel are complementary. } etc

Analogous... { Colors that are close neighbors on the color wheel are analogous. }

Rainbow... { Using primary and secondary colors placed in order from the color wheel, I can make a rainbow }

Intermediate.... is a color term I need to know. It is the color in between the primary and secondary colors on the color wheel.

Post Impressionism:

Post-Impressionism is an art movement that developed in the 1890s in France as a reaction to Impressionism (Post meaning after). Post Impressionist artists continued to develop the Impressionist style but rejecting its limitations. They continued to use vivid colours, a thick application of paint and real-life subject matter, but were more inclined to emphasize geometric shapes, distort forms for an expressive effect and use unnatural colours. Post impressionism was characterized by how artists used colour, movement and line to reflect and evoke emotion through their work

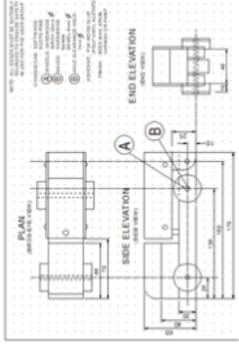


Vincent Van Gogh: Vincent van Gogh was a **Dutch painter**, generally considered to be one of the greatest in the world. He sold only one piece of art in his life time, but in the century after his death he became perhaps the most recognised painter of all time. The Post impressionist art movement was led by Vincent Van Gogh, Paul Cézanne, Paul Gauguin and Georges Seurat. Van Gogh's **striking use of colour, expressive brushstrokes, and contoured forms** of his work has powerfully influenced the modern art movement Expressionism. During his life, Van Gogh was plagued by psychiatric illness and eventually van Gogh committed suicide in 1890. Evidence suggests that he had **manic depression**, a chronic mental illness.

Key words

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.
Psychiatric	relating to mental illness or its treatment.
Texture	The feel or appearance of a surface, how rough or smooth it is.
Formal Elements	The Formal Elements of Art are the parts used to make a piece of art work.
Refine	To develop and improve a piece of artwork.
Expressive	Effectively conveying thought or feeling.
Evoke	Bring or recall (a feeling, memory, or image) to the conscious mind.
Art movement	Is a tendency or <i>style</i> of <i>art</i> with a specific common philosophy or goal, followed by a group of artists during a specific period of time.
Post Impressionism	An art movement that explored colour, line, and form, and the emotional response of the artist.
Emphatic	expressing something forcibly and clearly.

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 Evaluate your success	RECORD	Observational drawings Collecting image Taking photos Annotating your work	PRESENT	Produce a final piece Link to prep work from project.
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Week 2	Week 4	Week 6	Week 8	Week 10
<p>know how to mark out</p> <p>When you mark out material you must always leave room for the cut. SAWS, CHISELS etc are all 'wasting' tools so they produce waste when used i.e. saw dust. We call this space a cutting gap. Remember you can always take material away but you can never put it back.</p>  <p>The diagram above shows two areas for cutting that are hatched to mark the waste material. You should cut between the lines.</p> <p>To measure and mark out accurately in the workshop you should use a TRI SQUARE and a STEEL RULE for small jobs or a TAPE MEASURE for larger materials.</p>  	<p>know about manufacturing drawings</p> <p>Engineers and manufacturers use orthographic projection drawings to gain information about parts and assemblies. They are scaled 2D views, measured and dimensioned in mm. they are most commonly produced in CAD (Computer Aided Design)</p> 	<p>know your clamping tools</p> <p>A BENCH HOOK fits into the BENCH VICE for sawing at 90° to the grain.</p>  <p>A 'G' CLAMP is a portable clamp that can be used on work benches or machines like the Pillar drill for example. It is a good idea to use scrap to protect your work and avoid denting flat surfaces.</p> <p>A MACHINE VICE is for use on the Pillar Drills to hold your work in position. It is a good idea to support your work both at the sides and underneath with scrap timber when drilling.</p>  <p>know your machine tools</p> <p>The workshop is full of tools and equipment. In Y7 you will use a Belt Sander, Pillar Drill and Power Fret Saw to accurately produce parts in timber and manufactured board. You must wear PPE for them all. The belt sander and power fret saw have extraction built in to remove the majority of the saw dust as soon as it is created.</p>	<p>know your workshop safety</p> <p>Make sure you always follow the rules of the workshop.</p> <ol style="list-style-type: none"> 1. Wear goggles on machines and when hammering 2. Only use a machine when you are confident, have permission and have seen a demonstration to use it 3. Wear an apron if available. 4. Tie you hair back 5. Do not run in the workshop 6. Only the person using the machine should stand in the yellow/black safety area 7. Always switch a machine off and wait for it to slow down after use 8. Do not shout in the workshop 9. Do not talk when you are using a machine 10. Remove loose clothing and jewellery 	<p>know your PPE</p> <p>PPE stands for Personal Protective Equipment. In the workshop you must always wear goggles on machines and using impact tools i.e. hammers and mallets. You should also wear an apron and remove loose clothing/jewellery. On occasions you may need to wear ear defenders, gloves, a leather apron and more robust shoes depending on what you are doing.</p>  <p>Eye protection must be worn</p>

POETIC POEMS		Definition	Examples	Upgrade	
Personification	Giving something non-human human qualities.	<i>His heart laughed.</i>	Volta	A turning point in the poem	
Oxymoron	Two opposite ideas next to each other	<i>It tasted awfully good.</i>	Caesura	Punctuation which breaks up the line	
Enjambment	A line which runs on	<i>As his heart soared He felt himself rise</i>			
Tone	The mood or attitude	<i>Humorous, lighthearted.</i>			
Imagery	Vivid, descriptive language	<i>The autumn leaves turn gold, orange and red.</i>			
Contrast	Two opposite ideas	<i>The black ink on the white towel.</i>			
Perspective	Point of view	<i>1st or 3rd person</i>		Repeated words	
Onomatopoeia	A word which imitates the sound	<i>Smash!</i>			The use of an object to represent something
Extended	A continued comparison throughout a poem	<i>Hope is a thing with feathers</i>			
Metaphor	A comparison when something is something else	<i>The sea is a monster</i>			
Simile	A comparison using 'like' or 'as'	<i>The sea is like a monster</i>			A recurring idea

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.



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.

Foods high in fats and sugars.

Eat less often and in small amounts.

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.

Oils and spreads (fats).

Choose unsaturated oils and use in small amounts.

Preparation Skills and Techniques

Chopping, Slicing, Dicing and Peeling Skills



Bridge Hold



Claw Hold



Peeling



What could happen?

A

B

C

Rubbing -in Method

Cake and Pastry Making Methods

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
- ◇ **Raising agents** help the cake to rise



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

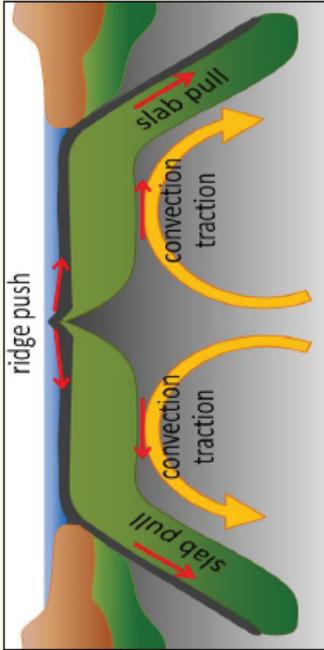
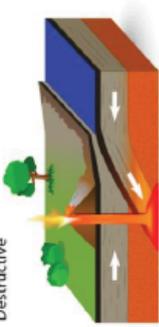
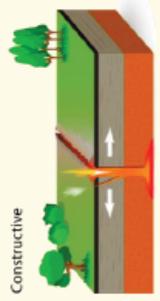
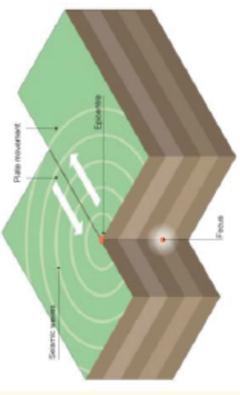


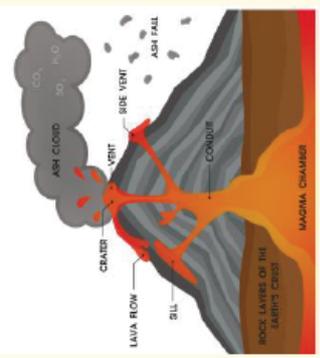
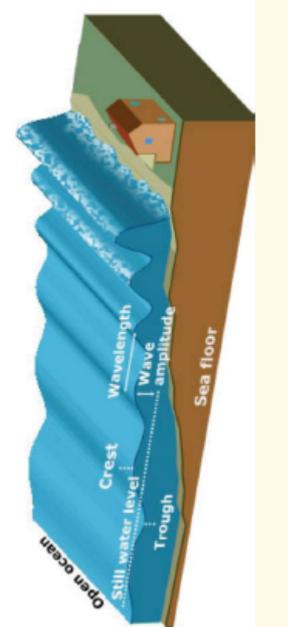
French

apprendre	to learn, learning	la langue	language
comprendre	to understand, understanding	les maths (mpl)	maths
dire	to say, saying	la matière	subject
je dis	I say, I am saying	la musique	music
tu dis	you say, you are saying	la science	science
il dit	he says, he is saying	le nom	full name
elle dit	she says, she is saying	quel ?	which? (m)
prendre	to take, taking	quelle ?	which? (f)
je prends	I take, I am taking	combien ?	how much? / how many?
tu prends	you take, you are taking	pourquoi ?	why?
il prend	he takes, he is taking	parce que	because
elle prend	she takes, she is taking	dormir	to sleep, sleeping
l'erreur (f)	mistake	je dors	I sleep, I am sleeping
la vérité	truth	tu dors	you sleep, you are sleeping
facile	easy	il dort	he sleeps, he is sleeping
sortir	to go out, going out	elle dort	she sleeps, she is sleeping
je sors	I go out, I am going out	l'équipe (f)	team
tu sors	you go out, you are going out	le bureau (m)	desk
il sort	he goes out, he is going out	parfois	occasionally
elle sort	she goes out, she is going out	sous	under
venir	to come, coming	sur	on
je viens	I come, I am coming	le café	café
tu viens	you come, you are coming	le cinéma	cinema
il vient	he comes, he is coming	la plage	beach
elle vient	she comes, she is coming	la rue	street
devenir	to become, becoming	derrière	behind
revenir	to come back, coming back	devant	in front of
l'Algérie (f)	Algeria	entre	between
algérien	Algerian (m)	le bâtiment	building
algérienne	Algerian (f)	l'église (f)	church
important(e)	important (m/f)	le pont	bridge
de	of, from	le jardin	garden
Alger	Algiers		
que ?	that, what?		

French

belle	beautiful (f)	différent(e)	different (m/f)
bonne	good (f)	prochain(e)	next (m/f)
haut(e)	high (m/f)	bientôt	soon
nouveau	new (m)	demain	tomorrow
nouvelle	new (f)	devoir	must, to have to
vieille	old (f)	je dois	I must, I have to
vieux	old (m)	tu dois	you must, you have to
je vais	I go, I am going	il doit	he must, he has to
tu vas	you go, you are going	elle doit	she must, she has to
il va	he goes, he is going	dormir	to sleep, sleeping
elle va	she goes, she is going	visiter	to visit, visiting
partir	to leave, leaving	vouloir	to want (to), wanting (to)
je pars	I leave, I am leaving	je veux	I want (to), I am wanting (to)
tu pars	you leave, you are leaving	tu veux	you want, you are wanting (to)
il part	he leaves, he is leaving	il veut	he wants (to), he is wanting (to)
elle part	she leaves, she is leaving	elle veut	she wants (to), she is wanting (to)
l'avenir (m)	future	le billet	ticket
madame	Miss, Mrs, Ms, madam	aider	to help, helping
le match	match	chercher	to look for, looking for
monsieur	Sir, Mr	partager	to share, sharing
encore	again	pouvoir	can, to be able to
en retard	late	je peux	I can, I am able to
tôt	early	tu peux	you can, you are able to
à l'avenir	in the future	il peut	he can, he is able to
nous allons	we go / we are going	elle peut	she can, she is able to
vous allez	you (all) go / you are (all) going	savoir	to know how to, knowing how to
ils vont	they go / they are going (masc)	je sais	I know how to
elles vont	they go / they are going (fem)	tu sais	you know how
l'allemand	German	il sait	he knows how to
l'avion (m)	aeroplane	elle sait	she knows how to
la lettre	letter	le projet	plan
allemand	German nationality (m)	désolé	sorry (m)
allemande	German nationality (f)	désolée	sorry (f)
		peut-être	maybe

<h2>Year 7 - Geography- Cycle 3</h2> <h3>Key vocabulary</h3> <p>Lithosphere: Outer layer of the Earth. Sometimes called the crust.</p> <p>Mantle: Much thicker mass of rock under the lithosphere. Rocks hot enough to deform and move like plastic.</p> <p>Outer core is liquid. Inner core is solid and made of iron and nickel.</p> <p>Oceanic plate: 50-100km thick.</p> <p>Continental plate: Up to 200km thick.</p> <p>Slab pull - where the denser plate sinks into the mantle under the influence of gravity. It pulls the rest of the plate along behind it.</p> <p>Ridge push: Magma rises as the plates move apart. The magma cools to form new plate material.</p>	<h2>Week 1 – Structure of the Earth</h2> <p>In 1912, Alfred Wegener, a German meteorologist, put forward his theory of continental drift. He argued that millions of years ago, the continents that we know today were joined together into one supercontinent called Pangea. The continents have been drifting apart and together ever since.</p> 	<h2>Week 2 - Destructive & Collision</h2> <p>Destructive plate boundary: Plates move together.</p> <ul style="list-style-type: none"> If an oceanic plate moves towards a continental plate, the heavier oceanic plate sinks (called subduction) beneath the continental one. This creates an ocean trench. Continental plate moves up to form mountain belts. The melting oceanic plate creates magma which rises to the surface as a volcanic eruption. The pressure can trigger earthquakes. <p>Collision zone: Two continental plates meet and push upwards to create high mountain belts. No volcanoes.</p>  
<h2>Week 3 – Constructive & Conservative</h2> <p>Constructive plate boundary: two plates are forced apart.</p> <ul style="list-style-type: none"> Magma rises and the hot rocks melt, forming a ridge of volcanoes and new ocean lithosphere. Forms a mid-ocean ridge. <p>Conservative plate boundary: Two plates slide slowly past each other.</p> <ul style="list-style-type: none"> Friction causes the plates to stick together and pressure builds. As the friction is overcome, the sudden movement creates a severe earthquake. No magma escapes so there are no volcanic eruptions.  	<h2>Week 4 – Earthquakes</h2> <p>Focus: the centre of an earthquake below the Earth's surface.</p> <p>Epicentre: the area on the surface directly above the focus. Seismic waves: waves of energy.</p> <p>Richter scale: measurement of the magnitude or size of an earthquake. Recorded on a seismometer.</p> <p>Mercalli scale: measurement of the intensity of the earthquake by recording the effect and damage it caused.</p> 	<h2>Week 5 – Nepal</h2> <p>Nepal earthquake (25 April 2015)</p> <ul style="list-style-type: none"> Collision zone between Indian and Eurasian plate. Focus 8km deep 8,632 dead 19,009 injured Worst in 80 years Temperatures fell at night, survivors suffering hypothermia. Landslides cut off remote villages. Triggered an avalanche at Mt Everest. International aid from China and India: \$1 billion to help. 

Key vocabulary	Week 6 – Volcanoes	Week 7 – Eyjafjallajökull
<p>Primary Effects: effects that occur immediately as a result of a hazard.</p> <p>Secondary Effects: the indirect effects caused by the primary impacts, after the main event.</p> <p>Immediate Response: a response in the days and weeks immediately after a disaster has happened.</p> <p>Long-term Response: responses that go on for months and years after a disaster.</p> <p>Volcano: an opening in the Earth's crust that allows molten rock from beneath the crust to reach the surface.</p> <p>Risk: the probability of a hazard event causing harmful consequences.</p>	<p>Magma chamber: A store of molten rock deep within the Earth.</p> <p>Pyroclastic flow: a fast-flowing current of hot gas, ash and other volcanic matter. Can reach speeds of 700km/h and temp of 1000oC.</p> <p>Shield volcano: gentle slopes forming from runny lava spreading far e.g. Mauna Loa, Hawaii</p> <p>Composite volcano: Steep sides, cone shape. Form from thick, viscous lava that does not flow easily e.g. Mt Fuji, Japan.</p> 	<p>Eyjafjallajökull eruption, Iceland (April 2010)</p> <ul style="list-style-type: none"> Started on 20 March when a 500 metre fissure opened up. Constructive plate margin. The eruption happened under an ice sheet. Dissolved gases in the molten rock along with steam generated from the melting ice caused a huge column of volcanic ash. Areas were flooded by the Jökulhlaups (glacier meltwater floods). Farm land was affected by heavy ash fall, poisoning animals. Perishable foods were wasted as they could not be transported into Europe e.g. flowers from Kenya. 95,000 flights were cancelled. People were not able to get to work because they were stranded. The eruption cost airlines \$200 million per day.
Week 8 – Tsunamis	Week 9 – SE Asia Tsunami	Week 10 – Management
<p>Tsunami: a large ocean wave caused by an underwater earthquake or volcanic eruption. They are NOT tidal waves!</p> <p>A tsunami can have a very long wavelength that can be hundreds of kilometres long. You tend not to notice them at sea; they increase in height when they meet the shallow water and friction at the shore.</p> <p>In deep water, tsunamis travel over 500mph or as fast as a jet plane. A sign that a tsunami is coming is often the withdrawal of water from a beach.</p>	<p>SE Asia Tsunami (26 December 2004)</p> <ul style="list-style-type: none"> Indo-Australian plate subducting beneath Eurasian plate. Magnitude 9.1 quake. Speed of tsunami up to 800km/h. 15 metre height onshore. 250,000 people died across 14 countries. Two million homeless. Indonesia and Thailand most affected. Now an Indian Ocean early warning system. <p>Japan tsunami (11 March 2011)</p> <ul style="list-style-type: none"> Magnitude 9.0. Pacific and North America plate. Epicentre 129km away from Japan. Wave travelled 10km inland in Sendai. Destroyed sea walls. Fukushima nuclear power plant flooding – radioactive disaster. 18000 people died. Total damages \$300 billion. 	<p>Managing earthquakes: People may have earthquake survival kits and earthquake drills to practise what people would do during a real earthquake (drop, cover, hold on). Buildings can be made earthquake resistant using cross bracing and sheer walls. Old buildings can be modified to make them more resistant (called retrofitting).</p> <p>Managing volcanic eruptions: Easier to predict than earthquakes – changes in gases, deformed land, foreshocks. Communities can have evacuation plans and hazard maps prevent building in vulnerable places. Some cities, like Tokyo, have hazards guides educating people about what to do in the event of tectonic hazards.</p> <p>Predict: Try to work out when the hazard is going to happen.</p> <p>Prepare: Change the physical or human surroundings to reduce the damage.</p> <p>Protect: Be ready for when something does happen - have a plan.</p>
		

HISTORY

What was the most significant medieval event?

How do historians decide if an event is significant?

Historians decide what events are significant by working out which events are more important than others. This is worked out by looking at:

- What impact and consequences did the event have?
- What changed as a result of the event?
- Did it affect a lot of people for a long time afterwards?

When was the First Crusade and what was the impact of it?

- The Crusades were military attacks aimed at taking the city of Jerusalem.
- In 1095, Pope Urban II gave a speech that asked Christians to take the city of Jerusalem.
- The city was captured in 1099 by the thousands of people that volunteered.
- Many new ideas were learnt from the people that lived in the area such as Arabic numerals and paper. However, relations between Christians and Muslims got worse.

Why is the year 1170 significant in British history?

- In 1170, the Archbishop of Canterbury was murdered by knights sent by the King of England.
- The King and the Archbishop had argued about how to run the Church and the king had finally lost his temper.
- King Henry II had to walk barefoot to Canterbury to show that he was sorry, and the Church was kept separate from the King's control for another 400 years.

Why did the English Lords force King John to sign the Magna Carta?

- King John abused his power by demanding illegal taxes from his people.
- The lords and barons got so angry they led a rebellion against the King and forced him to sign a document called the "Magna Carta" in 1215.
- The Magna Carta contract said that the law was above the power of the monarch.

What was the impact of the Black Death?

- A new disease called "plague" arrived in England in 1348.
- The disease killed up to half the population, villages were deserted, and the people thought it was the end of the world.
- The survivors felt blessed by God and they started to question ideas about society, and the universe.

Did England become stronger or weaker between 1381 and 1485?

- In 1381, the peasants (angry about a new tax) rebelled against the lords.
- The peasants attacked London but the King betrayed them and crushed the revolt.
- In 1415 King Henry V won a victory at Agincourt that won England lots more land in France. This was part of the "Hundred Years War" between England and France.
- England was torn apart by civil war for 30 years after 1455 with many members of the royal family being killed or going missing (as with the Princes in the Tower in 1483).

HISTORIAN SKILLS

- Knowledge
- Explanation
- Using Sources
- Interpretation

KEYWORDS

- Archbishop** = leader of the Church
- Civil war** = a fight inside a country
- Crusade** = fight for God
- Epidemic** = lots of people get sick
- Peasant** = poor farmers
- Revolt** = fight against leaders
- Significant** = most important

IMPORTANT DATES

- 1096-1099 = The First Crusade to take Jerusalem
- 1170 = Thomas Becket murdered in Canterbury Cathedral
- 1215 = Magna Carta signed
- 1348 = Black Death arrives in England
- 1381 = The Peasants' Revolt
- 1415 = The Battle of Agincourt
- 1455-1485 = Wars of the Roses
- 1483 = Princes go missing from the Tower of London

FAMOUS SOURCE

Nature = The Magna Carta (Great Charter)

Origin = Written by the English barons and signed in 1215 by King John

Purpose = To force the king to follow the laws of the land

The Magna Carta was forced on the king by his barons and nobles. It made the law more important than the monarch. Even the king or queen now had to follow the law of the land. It also set up the idea of a jury in a court case.

What was it like to live through the Black Death?

How did the Black Death end up in England?

- A mysterious disease was reported first in Asia (north of modern day India) along the Silk Road trade route.
- The Mongolian soldiers attacking the city of Caffa got sick with the disease.
- From Caffa the disease was spread onto the ships and trade routes to Italy.
- French and English trade ships brought the disease to western Europe.

How did people try to avoid or cure the Black Death?

- The disease was named the "Black Death" because it caused dark patches to appear on the skin (caused by internal bleeding and rotting).
- The Black Death caused fear and panic because the symptoms were visible and death could be sudden. The main symptom was the "buboes" (swelling of the lymph glands) and it took only three days to kill a healthy person.
- People at the time blamed the disease on a punishment from God, an imbalance of the Four Humours, and bad smells caused "miasmata".
- As a result people tried to cure the plague with praying, not eating, lancing the buboes, and strong herbal smells.
- Likewise, people tried to avoid the Black Death by whipping themselves, going on pilgrimages, carrying herbs in a posey, and blood letting.

What was the wider affect of the Black Death around the world?

- In Islamic countries the disease was more controlled as people were told to accept their deaths as a sacrifice to Allah and not to run away. Islamic scholars and doctors were more advanced than their Christian counterparts at the time.
- In modern day Austria, Germany, and Hungary; Jewish people and other minority groups were blamed for the Black Death and attacked.
- Historians believe that 40% of Europe's population died as a result of the Black Death.

How did the Black Death save England from Scotland?

- In 1349, Scotland took advantage of a weakened England and invaded the north.
- However, some of the Scottish soldiers got sick in the city of Durham and took the disease home with them.
- The next summer (1350), the Black Death spread throughout Scotland and prevented further invasions.

How did the Black Death affect England?

- The loss of life in England was 30%-50%. This reduced the amount of farmers and workers.
- Villages were deserted and towns such as Bristol lost up to 60% of their people.
- Workers demanded higher pay, and the survivors inherited from the dead.

HISTORIAN SKILLS

Knowledge
Explanation
Using Sources
Interpretation

KEYWORDS

Contagious = something that spreads from one person to another
Flagellants = people that whipped themselves
Miasma = bad air
Pandemic = a disease that affects many people in a large area
Quarantine = isolation
Trade route = the path taken by people selling things. These can be on land or sea

IMPORTANT DATES

1127 = The word "quarantine" used for the first time as a 40 day isolation to avoid the spread of disease in Venice.
1337 = Hundred Years' War between England and France began
1345 = Black Death appears in Asia along the Silk Road
1346 = Siege of Caffa
1347 = Plague arrives in Italy along trade routes
1348 = Plague arrives in Weymouth, Dorset on a trade ship
1349 = Scotland invaded England and attacked the city of Durham.
1350 = Plague spreads in Scotland
1351 = Wages reduced to pre-plague levels and workers not allowed to demand more
1377 = New poll tax
1381 = Peasants' Revolt

FAMOUS SOURCE

Nature = an extract from a book called "History of the Scottish Nation"

Origin = John Fordun in c.1380

Purpose = to record and remember events for future generations

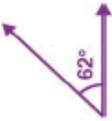
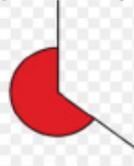
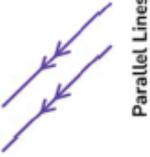
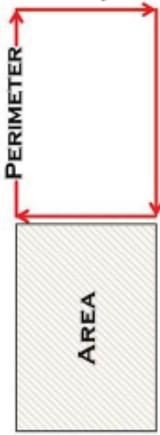
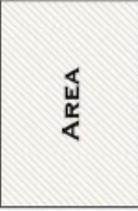
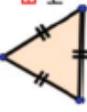
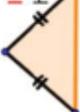
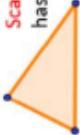
In the year 1350, there was, in the kingdom of Scotland, a great plague. Nearly a third of mankind died. By God's will, this evil led to a strange kind of death, the flesh of the sick was somehow puffed out and swollen. Now this attacked everywhere, especially the common people but rarely the nobles.

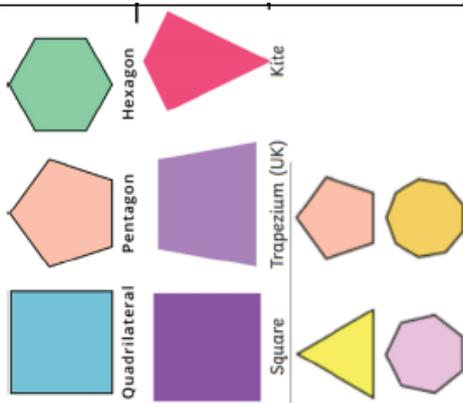
Using ICT

Topic of Learning	I will need to know:	So that I can:
ASAP Computer Network	<p>What a computer network is and how they work. To include the benefits of using a computer network along with the different drives on the school network. The purpose of the Home area of the school computer network and its benefits along with the purpose of the shared network area. The importance of being able to log into the school computer network correctly and also to save work and log off correctly.</p>	<p>Confidently log on to the school computer network and successfully save work to the Home area and access files</p>
Effective file and folder management	<p>The importance of saving work files using appropriate file names so that they can be easily accessed in the future. How to create new folders and name them using logical folder names. How to search for files and folders on a network directory and open required files.</p>	<p>Navigate a network directory and locate folders in order to successfully open required files. Create and name new folders</p>
Using E-mail	<p>The benefits of using email and how an e-mail system works. The process of setting up, writing and sending an e-mail such correctly using the To, From, Subject, Message sections and knowing the purpose of CC and BC when sending e-mails. How e-mails can be used in a malicious way for example phishing, spam, identity theft and sending viruses.</p>	<p>Write, send and save e-mail messages and manage my own school e-mails effectively and use the system in an</p>
Digital Footprint	<p>What the term digital footprint means, how it can be created and the steps that can be taken to manage a digital footprint. How a digital footprint can be used to create an online reputation or impression depending on what is accessed online. Online posts, shares, likes can be permanent and can be used to gain personal information about an individual. How to manage a digital footprint and take steps to stay safe whilst online.</p>	<p>Manage my own digital footprint and be aware of my online presence and take steps to reduce my digital footprint.</p>
E-Safety	<p>The term e-safety and what it relates to. That e-safety is defined as the safe and responsible use of technology including the internet, social media, gaming and email. The potential risks when using the internet and being online and some of the responsibilities of users of digital technology. The SMART rules and how to apply them when</p>	<p>Use the internet in a safe and responsible way. Recognise the risks and know how to avoid them.</p>

Using ICT

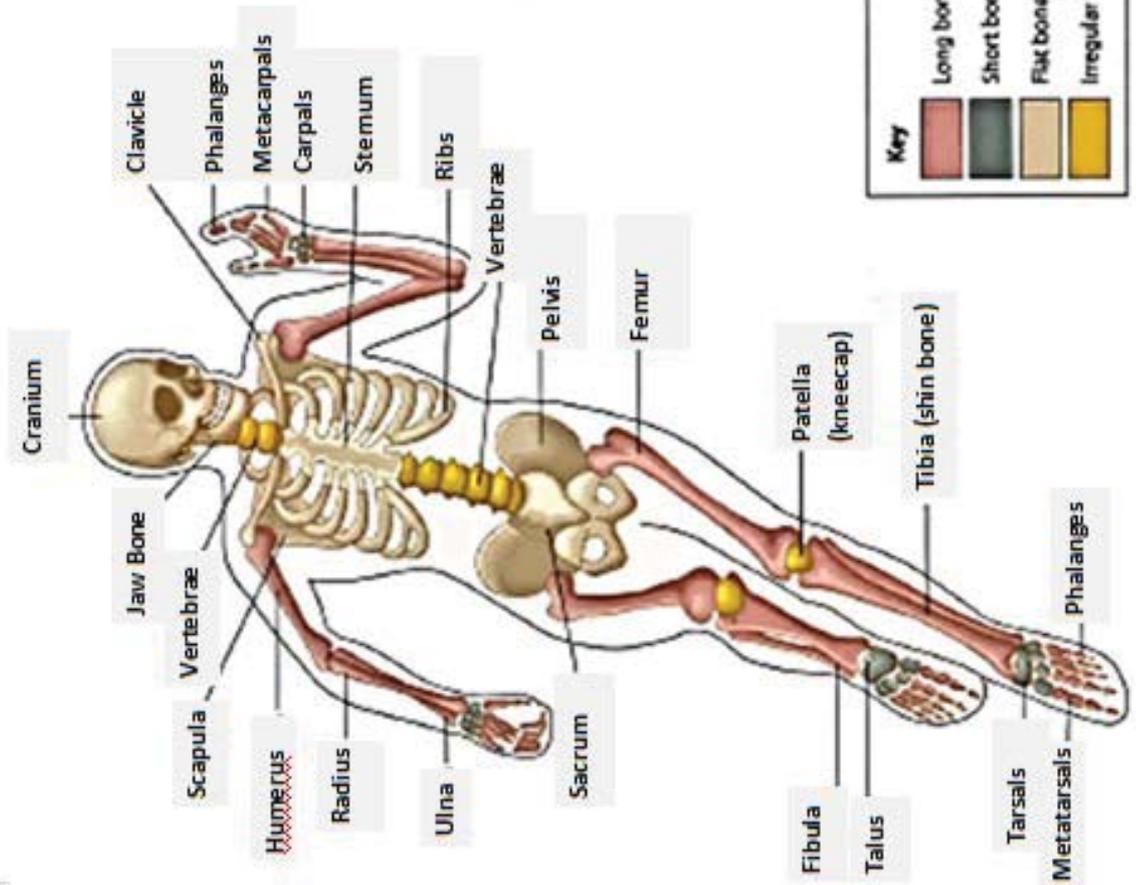
Topic of Learning	I will need to know:	So that I can:
Input and output devices	<p>Input and output devices can be connected to a computer via a cable or wireless. An input device allows a user to input data into a computer. An output device allows a user to get information out of a computer. These devices can be adapted to suit computer users who may need to use the devices in a different way.</p>	<p>Correctly identify examples of input/output devices and explain their purpose.</p>
Storage devices	<p>Secondary storage devices are used to store data (work). Secondary storage devices are typically high capacity e.g. can store a lot of data, and portable e.g. can be moved from one computer to another. There are two types of storage device used with computers, primary storage, such as RAM, and secondary storage such as a hard drive. Secondary storage can be removable, internal or external. There are three types of media storage used to store computer data, magnetic storage, optical storage and solid-state storage.</p>	<p>Identify examples of secondary storage and be able to group them into their correct media type.</p>
Communication methods	<p>How communications technology has revolutionised the way in which we can communicate with family, friends, teachers, and the way in which businesses can communicate with their staff and customers. Examples include, email, text, direct and instant messaging, social media and VoIP. Some of the benefits and drawbacks of using this technology along with future communication technology.</p>	<p>Confidently use a range of communication technology effectively and comment on their benefits and drawbacks.</p>
Hardware and software	<p>A computer system is made up of two parts, hardware and software. Hardware is any physical part of the computer system that can be touched, picked up or moved. Software contains the instructions that the computer needs to carry out specific tasks. There are two main types of software, 'system software' and 'application software'. System software controls the way the computer works and tells it what to do. Application software is software that is used to complete work or to have fun such as word processing software and gaming software.</p>	<p>Identify the hardware components of a computer and explain their use/purpose. Explain examples of system and application software.</p>
Health and safety using computers	<p>When using computers, there are a number of health and safety issues that need to be taken into consideration. Health issues include eyestrain, neck and back strain and injuries to the wrists. Steps that must be taken to reduce the possibility of these health issues. How computer cables should be secured to avoid causing trip hazards. Electrical sockets should not be overloaded and electrical equipment should be tested once a year.</p>	<p>Identify health and safety issues when using computers and know how to avoid issues occurring.</p>

<u>Word</u>	<u>Used in context</u>	<u>Definition</u>	<u>Example</u>
Acute	Identify the acute angle in the triangle	An angle measuring between 0° and 90°	
Obtuse	Which of these angles are obtuse ?	An angle measuring between 90° and 180°	
Reflex	Identify the reflex angle	An angle measuring between 180° and 360°	
Right Angle	A rectangle has four right angles	An angle equal to 90°	
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	
Perimeter	Find the perimeter of the hexagon	The total distance around the outside of a shape	
Area	Find the area of the rectangle	The 2D space taken up by an object or shape	
Equilateral triangle	All angles in an equilateral triangle equal 60°	A triangle with three equal angles and three sides of equal length	
Isosceles triangle	Identify the isosceles triangle	A triangle with two equal angles and two sides of equal length	
Scalene triangle	All sides are unequal on a scalene triangle	A triangle with three unequal sides	

Word	Used in context	Definition	Example
Polygon	Square, rectangle, triangle and pentagon are all examples of polygons	A closed shape with straight sides	 <p>Quadrilateral Square Trapezium (UK) Pentagon Hexagon Kite</p>
Quadrilateral	A rectangle is a quadrilateral	A four sided polygon	
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	
Probability	What is the probability of flipping a coin and it landing on heads	The likelihood of an event happening	$P(\text{Heads}) = 0.5$
Data	Display the data in either a bar chart or a tally chart	A collection of facts e.g. numbers, measurements	Heights of students in a class, age of people visiting the cinema
Primary data	If you conduct a survey, you have collected primary data	Data collected from an original source	Surveys, experiments
Secondary data	I found a pie chart online displaying how people travel to work in London. This is secondary data	Data that has not been collected by the user	Data collected from the internet, experiments run by somebody else
Mean	To find the mean of a set of data, add all the numbers and divide by the frequency	The average of a set of values	$1, 4, 6, 5$ Mean = $16 \div 4 = 4$
Median	Find the median value	The middle value in a sorted list of numbers	1, 3, <u>7</u> , 8, 10
Mode	Find the modal value	The most frequent number	1, 4, 2, 3, 1, 6, 1 Mode = 1
Range	What is the range of the data?	The difference between the lowest and highest values	3, 7, 5, 2 Range = $7 - 2 = 5$

Week 1, 3, and 5- Can you recall the location of the bones.

Week 2- Look at the colour coding for different bones. Make sure



Types of Bones and their function- Can you link the role that the types of bones have to different sporting examples **Week 5**

Flat Bones (Cranium, Ribs, Clavicle, Sternum)	Protect vital organs and the brain
Long Bones (Humerus, Radius, Ulna, Metacarpals, Metatarsals, Phalanges, Femur, Tibia, Fibula)	Enable gross (large) movements- Running, jumping, kicking, throwing
Irregular Bones (Patella, Vertebrae Column)	Specifically shaped to protect.
Short Bones (Carpals, Tarsals, Talus) e.g. Using wrist to add spin to table tennis shot or spin bowling in cricket	Enable finer, controlled movements

Functions of the Skeletal System (Memory Tip: My super skeleton makes big plays) Week 6- Explain why we have a skeleton.

Movement	Occurs at joints (where two or more bones meet). Muscles contract and pull on bones.
Shape and Structure	Provide basic body shape
Support	Point of attachment for the muscles
Mineral Storage	Essential for major body functions (i.e. Calcium).
Blood Cell Production	Takes place in bone marrow. Red Blood Cells, White Blood Cells and Platelets.
Protection	Protect vital organs and decrease injury risk.

Types of Joints and movement produced

Hinge Joints- Knee (Flexion and Extension), Elbow (Flexion and Extension)

Ball and Socket Joints- Hip and Shoulder (Abduction, Adduction)

WK1

Diversity in the UK and Devon

With considerable migration after the Second World War the UK has and continues to become an increasingly ethnically and racially **diverse** state especially in London.

Religions in the UK:

Christianity: 59%	Sikhism: 0.7%	No religion: 25%
Judaism: 0.4%	Islam: 4%	Buddhism: 0.4%
Hinduism: 1%	Other: 0.4%	Not stated: 7.2%

There is relatively little ethnic diversity in Plymouth. According to the 2011 Census 92.9% of Plymouth's population considered themselves White British. This is significantly higher than the average (79.8%) in England.

Christianity is the most common religion in Plymouth. However, 32.9% of the Plymouth population stated they had no religion. Those following Hinduism, Buddhism, Judaism or Sikhism combined totaled less than 1.0%.¹¹

Enquiry Task:

1. Copy out and rank the Religions in UK from the largest to the smallest.
2. How do the UK statistics compare to Plymouth's? Outline the similarities and differences.



WK2

Immigration and Emigration

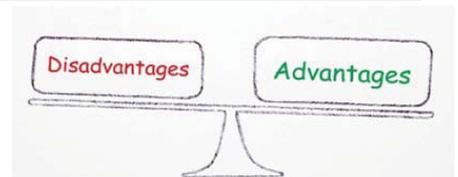
The words immigration and emigration both refer to leaving one country or region to live in another and you will often see them being used interchangeably, but it's important to understand what these words mean so you can use them correctly.

Immigration: is the act of immigrating, or the act of moving to another country. An immigrant is one who comes into a new country.

Emigration: is an act or instance of emigrating. An emigrant is someone who is moving out of a country.

Enquiry Task:

1. Explain the difference between immigration and emigration.



WK3

Push and Pull Factors

People migrate for many different reasons. These reasons can be classified as **economic, social, political or environmental**.

Push factors are the reasons why people leave an area. They include: lack of services/lack of safety/high crime/crop failure/drought/flooding poverty & war.

Pull factors are the reasons why people move to a particular area. They include: higher employment/more wealth/better services/good climate safer/less crime/political stability/more fertile land and lower risk from natural hazards.

Enquiry Task:

1. Choose one push and pull factor that you feel is the most valid reason for wanting to migrate.
2. Give an example of a real life push factor that has occurred in the 21st century

WK5

Segregation the causes and effects

Misunderstanding can lead to fear. Fear can cause:

Prejudice: preconceived opinion that is not based on reason or actual experience.

Discrimination: the unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or sex.

Persecution: hostility and ill-treatment, because of race or political or religious beliefs.

Stereotyping: a widely held but fixed and oversimplified image or idea of a particular type of person or thing.

These challenges can lead to conflict in a community if they are not properly addressed. If people from different communities do not, or cannot, integrate with one another they may feel excluded and isolated.

Enquiry Task:

1. Using examples explain the difference between prejudice and discrimination.
2. Give three examples of a stereotype.

WK4

Multiculturalism the advantages and disadvantages

Advantages:

- Different cuisines
- Better lifestyle
- There is help of overcoming ignorance and arrogance
- Allows people to bring in new skills to the country.
- It allows the country to bring in more income and the economic values increase.

Disadvantages:

- Unrest between different groups
- Tendency to blame immigrants
- Communication difficulties because of language
- Less jobs
- Protests like BMP and EDL

Enquiry Task:

1. Do the advantages outweigh the disadvantages? Give reasons for your opinion.



WK6

Religious attitudes towards others

Christians believe that all humans are made in the **image** of God. Therefore any action that devalues a person is an insult to God who created and loves that person.

At the centre of the Christian faith is the belief that Jesus Christ shed his blood on the cross to **atone** for the sins of all people everywhere.

Many Christians today actively fight prejudice and discrimination in all its forms.

Teachings from the Bible:

- *Love your enemies and pray for those who persecute you.*
- *'Love thy neighbour as thy self'*
- *'God made man in his image'*
- *'There is neither Jew nor Greek, slave nor free, male nor female for we are all one in Jesus Christ'*

Enquiry Task:

1. Record each of the Bible quotes above and record its meaning in your own words what it means.
2. Explain Christian attitudes towards prejudice. Refer to religious teachings in your answer.

WK7

The Holocaust

After 1919, Jewish people in Germany were free and legally equal and often felt more German than Jewish. Many were wealthy and successful.

However, there was an undercurrent of anti-Jewish racism, called '**anti-Semitism**', in Germany. Hitler appealed to this anti-Semitism by blaming the Jewish people for Germany's defeat in the First World War.

As soon as Hitler came to power he introduced a programme of **persecution**.

The Nuremberg Laws (1935) deprived Jewish people of many of their civil rights. On 9 November 1938, Kristallnacht or the 'Night of Broken Glass' took place. Jewish businesses, synagogues and homes were attacked and destroyed.

After the outbreak of World War Two in 1939, the Nazis stepped up the persecution of the Jewish people: They were herded into over-crowded '**ghettos**'.

In 1942, a Nazi conference at Wannsee decided on the 'Final Solution' – the Jewish people were to be systematically taken to camps such as Auschwitz and gassed. Nobody knows how many Jewish people died during the Holocaust, but the usual figure given is 6 million.

Enquiry Task:

1. What is anti-Semitism?
2. Describe what happened to Jewish community.

WK8

The Holocaust continued

Jewish people reacted in different ways: in some places, the Jewish people resisted, e.g. the Warsaw Uprising of 1943. Some of them fled from Germany and other countries such as Poland. Some put their children on Kindertransport trains, which took them to Great Britain, where they were fostered. Some hid and in some places, the Jewish people accepted their fate and even cooperated with the Nazis. Some survived the concentration camps, often against all odds.

Enquiry Task: 1. Describe the physical and emotional challenges victims of the Holocaust went through.



WK9

Holocaust: Irena Sendler

Irena Sendler, a Roman Catholic who created a network of rescuers in Poland who smuggled about 2,500 Jewish children out of the Warsaw ghetto in World War II.

Sendler regularly used her position as a social worker to enter the Warsaw ghetto and help smuggle children out. Hiding them in orphanages, convents, schools, hospitals, and private homes. She provided each child with a new identity, carefully recording in code their original names and placements so that surviving relatives could find them after the war.

Enquiry Task:

1. List 4-6 qualities of Irena e.g. courageous
2. What impact did her actions have?



WK10

Community Cohesion

Community cohesion describes the ability of all communities to function and grow in harmony together rather than in conflict. It aims to build communities where people feel confident that they belong and are comfortable mixing and interacting with others, particularly with people from different ethnic backgrounds or people of a different faith. Building cohesion within and between communities is an essential step towards improving people's quality of life. Viewed from outside, a cohesive community is one in which people will want to live and invest.

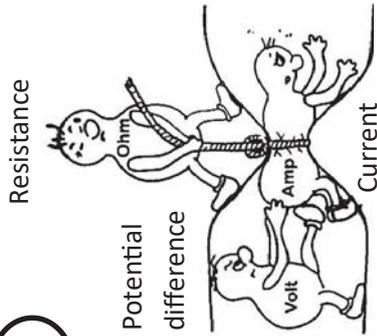
Enquiry Task:

1. People will always be prejudice. Do you agree? Give reasons for both sides of the argument

Keywords and their definition

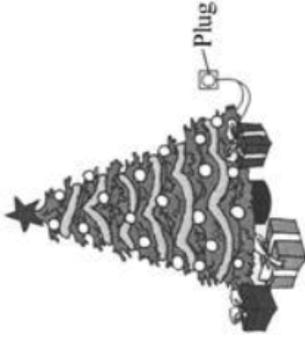
Keyword	Definition	Measured in
Potential difference	The amount of energy that an electron has between two points in a circuit. The energy is transferred to the electrical components in a circuit when electrons pass through them.	Volts (V)
Current	The flow of charge around the circuit	Amps (A)
Resistance	The measure of how easy it is for the current to flow around a circuit	Ohms (Ω)

Relationship between the variables



Resistance is restricting the current (flow of electrons) around the circuit.
The higher the resistance, the harder it is for electrons to flow around the circuit

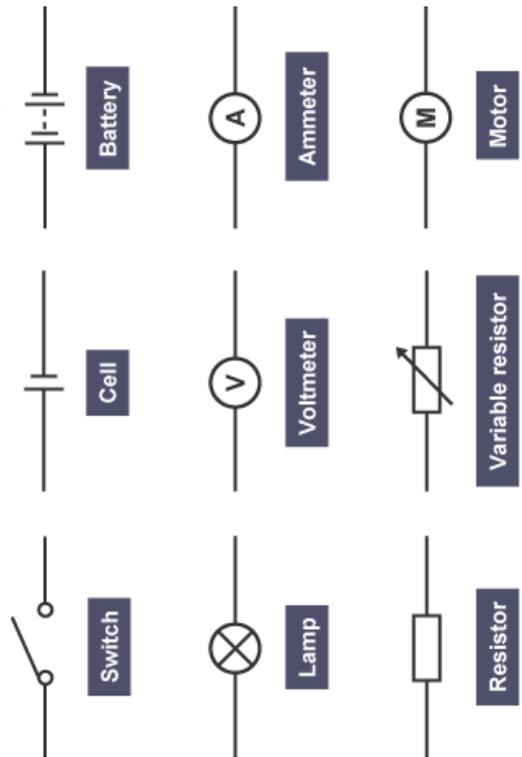
1 A set of Christmas tree lights is made from twenty identical lamps connected in series



Each lamp is designed to take a current of 0.25 A. The set plugs directly into the 230 V mains electricity supply

- Write down the **equation** that links current, potential difference and resistance.
- Calculate the **resistance** of one of the lamps. Show clearly how you work out your final answer and give the unit.

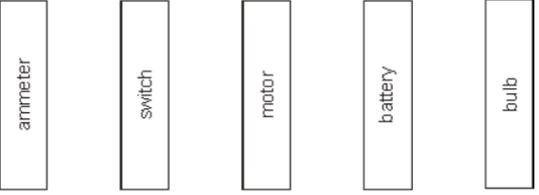
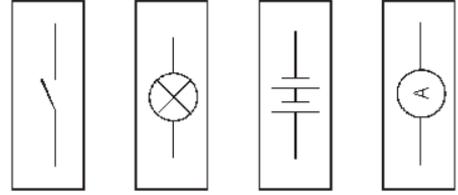
Electric circuit symbols



Measuring/ calculating the variables:

Current	Use an ammeter
Potential difference	Use a voltmeter
Resistance =	Potential difference / current

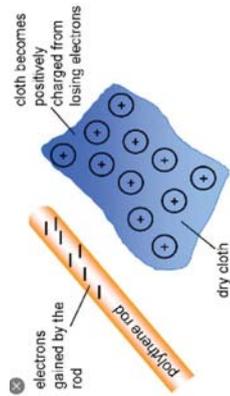
2 Draw a line from each circuit symbol to the correct name. lines.



Static Electricity

3

When you rub two different materials against each other, they become electrically charged. This only works for electrically insulated objects and not with materials like metals, which conduct. For example, if you rub an acetate plastic rod with a duster



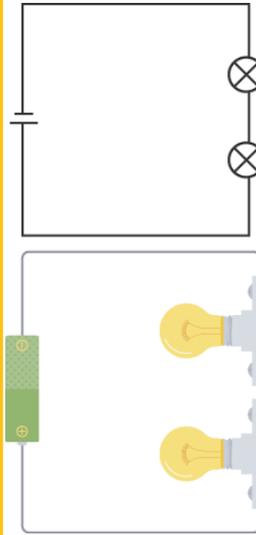
- electrons move from the rod to the duster
- the duster becomes negatively charged and the rod becomes positively charged

Task: research how static electricity could be removed from a charged item.

Series circuit

4

If you follow the circuit diagram from one side of the cell to the other, you should pass through all the different components, one after the other, without any branches.

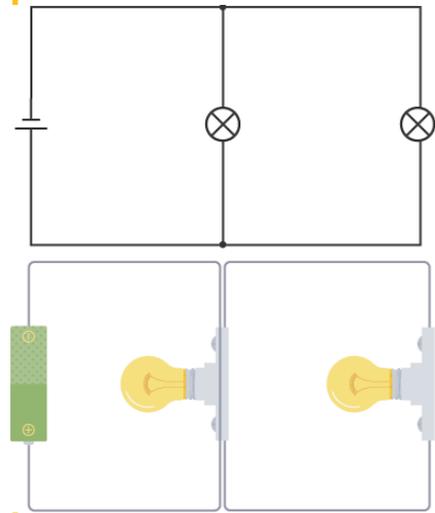


In a series circuit, if a lamp breaks or a component is disconnected, the circuit is broken and all the components stop working.

Parallel circuit

4

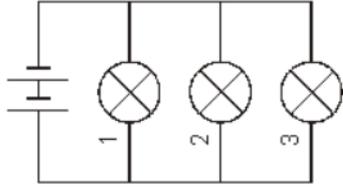
In a parallel circuit, different components are connected on different branches of the wire.



In a parallel circuit, if a lamp breaks or a component is disconnected from one parallel wire, the components on different branches keep working.

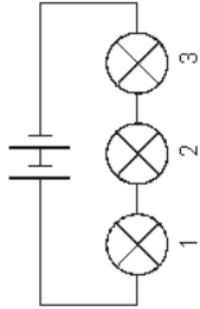
4

Under each circuit diagram below, tick the correct boxes to show if bulb 2 and bulb 3 are **on** or **off**.



circuit B

bulb 1 breaks	on	off
bulb 2		?
bulb 3		



circuit A

bulb 1 breaks	on	off
bulb 2		?
bulb 3		

Give the name of the part that provides energy for each circuit.

.....

Why is copper used for wires in a circuit?
Tick the correct box.

- Copper does **not** stick to a magnet.
- Copper is a good conductor of electricity.
- Copper is a brown metal.
- Copper is a good conductor of heat.

1. SOUND

Sound is caused by vibrations and is a LONGITUDINAL wave.

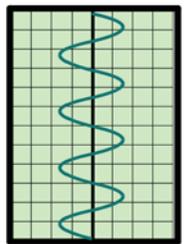
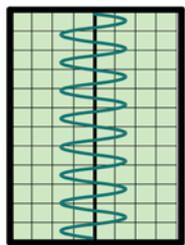
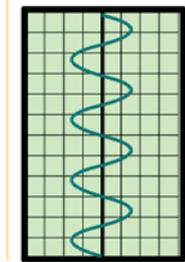
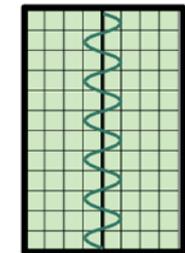
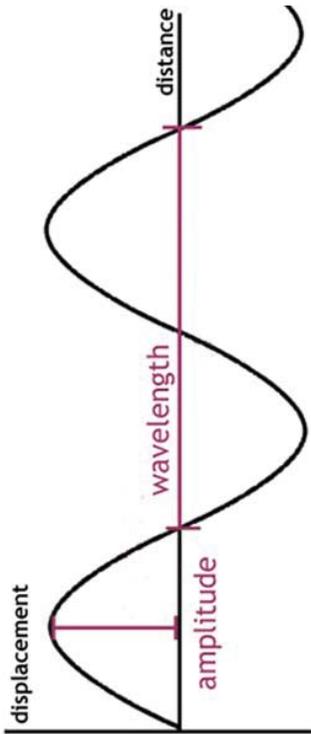
Sound needs a substance to travel through.

This means sound cannot travel through a vacuum, like space.

Sound waves travel faster through a solid than a liquid, but faster through liquids than gas.

The larger the amplitude ('higher') of the wave on the trace, louder the sound.

The longer the wavelength of the wave on the trace, the lower the frequency of the sound and the lower the pitch.



✓ A quiet sound.

✓ A louder sound.

✓ A high pitch sound.

✓ A low pitch sound.

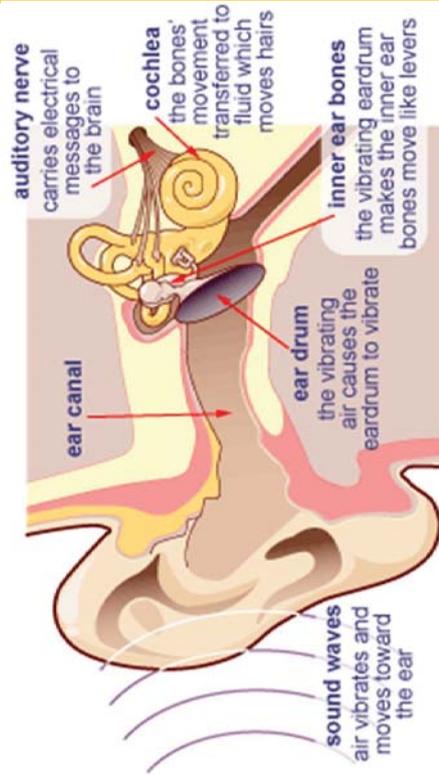
2.

Hearing

The unit of loudness is the dB (decibels).

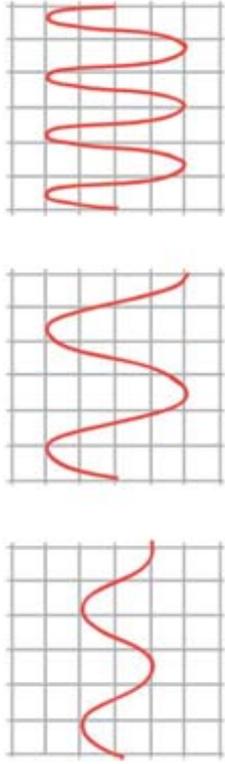
The unit of frequency is the Hertz (Hz); it is the number of complete wave per second.

Sound waves are collected by the ear lobe. The waves travel along the ear canal. The waves make the ear drum vibrate. The small bones [ossicles] amplify the vibrations. The cochlea turns the vibrations into electrical signals. The auditory nerve takes the signals to the brain.



TASK 1-

A) Make three comparisons between the waves below (use the keywords wavelengths, frequency and amplitude).



B) How would a quiet, high pitch sound wave look like?

TASK 2-

A) Complete the table to show the level of sound in the following activities: leaves rustling, heavy traffic, whispering, jet taking off, silence.

Loudness (dB)	Activity
0	
20	
40	
60	Normal speech
80	
100	

B) Describe how can hearing become impaired during life?

Task 3-

Number the sentences to show the process of how the eye enables us to see objects:
 The size of the pupil is altered by the iris.
 The retina contains 2 light sensitive cells called rods and cones. When light hits these cells, chemical reactions produce electrical impulses that travel via the optic nerve to the brain.

- Light enters the eye through the pupil
- The cornea and lens focus light onto the retina.

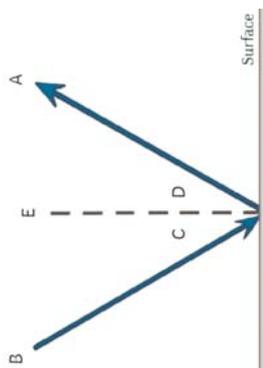


Complete the diagram to show how we see the car

Task 4-

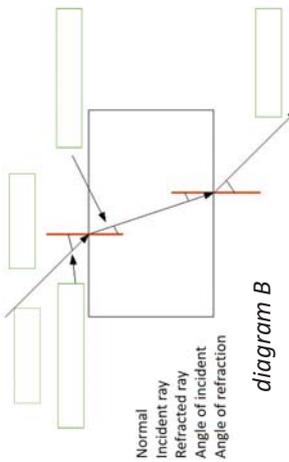
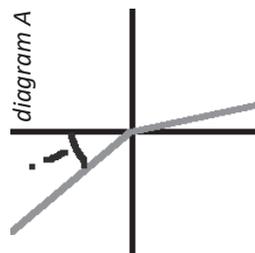
Label the parts A, B, C, D, E

If the angle of incidence is 40° , what is the angle of reflection?
 If the angle of reflection is 26° , what is the angle of incidence?
 How do we call the image produced by reflection?



Task 5-

A) Look at diagram A and write an explanation of why the ray moves in such a way. Include the words: refraction, incident ray, refracted ray, denser, towards or away and medium.



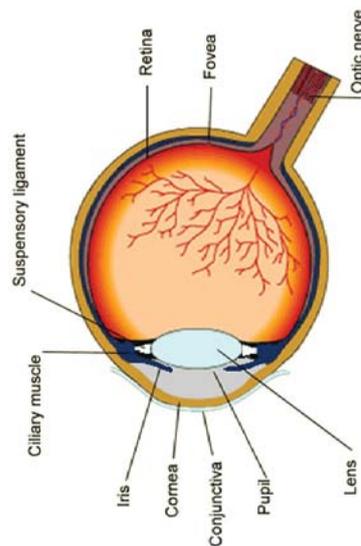
B) Copy and label diagram B

3. LIGHT:

Visible light is an electromagnetic wave. It is a TRANSVERSE wave. Luminous objects give out their own light, e.g. stars, light bulbs, candles. Non-luminous objects do not give out their own light, they absorb and reflect light from luminous objects. Opaque - materials which do not allow light to pass through them (e.g. a brick wall). Transparent - materials which do allow light to pass through them (e.g. a glass window). Translucent - materials which only allow part of the light to pass through them (e.g. paper).

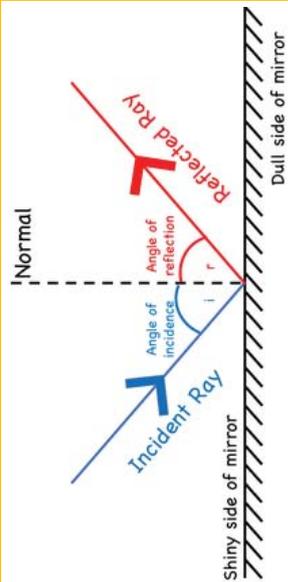
HOW WE SEE:

Light waves travel from the object, through the pupil of your eye, through the lens and land on the back of your eye (the retina). This image is upside down and the information is transmitted down the optic nerve to the brain. The brain interprets the image and turns it the right way up. Cameras work in a very similar way.



Reflection

A plane mirror reflects light and produces a clear image. This is the same size as the real object (and appears to be behind the mirror), the same distance away, and the right way up, but it is back to front (left is right etc.). This is called lateral inversion.



Reflection in a plane mirror.
Angle of incidence = Angle of reflection

Refraction

As light waves travel through a more dense material, it changes speed and turns. When the light wave exits the material it changes speed and turns again. The light wave exits in a different path. This is called refraction. As light waves travel through air, when they hit glass (which is denser) they slow down. As they slow down, they turn towards the normal line. As the light wave exits, it speeds up and turns away from the normal.

TASK

1

1- Name 2 acids that you can eat or drink (2)

2- Describe the taste of acids (1)

3- In the boxes below, draw and label 2 hazard symbols that you might see on a bottle of acid (2)



TASK

2

1- What does the pH of a substance tell you? (1)

2- What could the pH of lemonade be? (1)

3- Litmus paper changes colour to show whether a substance is an acid or an alkali. Describe how universal indicator is different to litmus paper (2)

Acids: If you look around your kitchen, you may find some acids to eat or drink.

Vitamin C - Ascorbic Acid



Lemons - Citric Acid



Vinegar - Ethanoic Acid



Some acids are more dangerous. Hydrochloric Acid (HCl), Sulfuric Acid (H₂SO₄) and Nitric Acid (HNO₃) are acids which we use in the Science Lab. These acids can come as dilute or more concentrated.

Dilute acids are not as dangerous as concentrated acids. This is because there are fewer acid particles in the same volume.

Acids have a pH between 1 and 6, the smaller the number, the stronger the acid

Irritant hazard sign, used for substances that are not corrosive but are irritants. Usually found on more dilute acids and alkali.



Corrosive hazard sign. Usually found on more concentrated acids and alkali.

Bases: A base is a substance that can react with acids and neutralise them.

Bases have a pH of 8 to 14, the smaller the number the weaker the base. Neutral solutions have a pH of 7.

Metal oxides, metal hydroxides and metal carbonates are examples of bases.

Many bases are insoluble - they don't dissolve in water. However, if a base does dissolve in water, we also call it an alkali.

Some alkalis are harmful. However, many are harmless and useful. Many cleaning products such as bleach, washing

Neutralisation

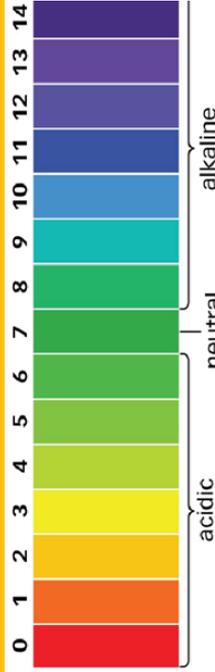
2 Mixing an acid and an alkali produces a chemical reaction, neutralisation, forming a chemical called a salt and water.

Indicators:

Universal indicator changes colour according to the pH of the solution. It tells you not only whether it is an acid or an alkali, it also tells you how strong it is.

Blue litmus paper turns red when it is put into an acid. If the substance was an alkali or neutral, the blue litmus paper would stay blue

Red litmus paper turns blue in an alkalis. If the substance was an acid or neutral the red litmus paper would stay red.



Metals

3 Shiny in colour, solids at room temperature (except mercury), high density, strong, malleable, good conductor of heat and electricity

Non metals

Dull in colour, can be solids, liquids or gases at room temperature, low density, brittle, poor conductors of heat and electricity.

Metals react with acids to produce a salt and hydrogen. The name of the salt depends on the acid used.

Hydrochloric Acid - Chloride

Sulfuric Acid - Sulfate

Nitric Acid - Nitrate

E.g. Magnesium + Hydrochloric Acid → Magnesium Chloride + Hydrogen

Magnesium + Sulfuric Acid → Magnesium Sulfate + Hydrogen

Magnesium + Nitric Acid → Magnesium Nitrate + Hydrogen

Oxidation Reactions

4 In an oxidation reaction, a substance gains oxygen. Metals and non-metals can take part in oxidation reactions.

Metals react with oxygen in the air to produce metal oxides. For example, copper reacts with oxygen to produce copper oxide when it is heated in the air.

Copper + Oxygen → Copper Oxide



Reactivity Series

Some metals are very unreactive. This means they don't take part in chemical reactions. For example platinum. Some metals are very reactive and they take part in chemical reactions easily to form new substances.

Displacement reactions

Displacement reactions involve a metal and a compound of a different metal. In displacement reactions, a more reactive metal will displace a less reactive metal from its compound.

Magnesium + Copper Sulfate → Magnesium Sulfate + Copper

Magnesium is more reactive than copper, so it displaces (pushes out) the copper within the compound.

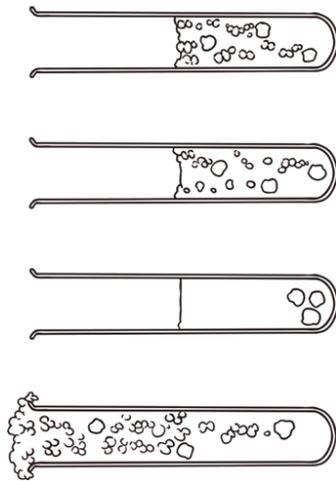
TASK

3 1- Copper is a metal that has many different uses; it is strong and shiny. Give 2 other properties that would show copper is a metal

1- _____ (1)

2- _____ (1)

2- The following metals were placed in hydrochloric acid and their results are shown below.



Ca

Cu

Zn

Mg

List the metals in order of reactivity, starting with the most reactive. _____ (4)

Name the gas being released. _____ (1)

TASK

4

Copy and complete the following text

using the words: oxides added

potassium gold

When metals react with oxygen in the air

they produce metal This is an

example of an oxidation reaction because

oxygen is to the metal. Some

metals that are more reactive such as

..... Others such as are

very unreactive and never react with oxygen.

most reactive

K

Na

Ca

Mg

Al

C

Zn

Fe

Sn

Pb

H

Cu

Ag

Au

Pt

least reactive



potassium

sodium

calcium

magnesium

aluminium

carbon

zinc

iron

tin

lead

hydrogen

copper

silver

gold

platinum



Need to Know Dictionary: English

Word	Definition
Imagery	Where the writer uses words to paint a picture to help the reader visualise what is being described.
Tone	The feelings and atmosphere created by language.
Stanza	A group of lines in a poem. Like a 'paragraph' in a poem.
Simile	A comparison using 'as' or 'like'.
Metaphor	A metaphor is a word or a phrase used to describe something as if it were something else.
Repetition	When a word, image or phrase is repeated in a text.
Theme	A recurring idea in a text.
Personification	When non-human objects are given human characteristics or form.
Alliteration	The repetition of the same letter at the beginning of two or more words.
Rhyme	The repetition of similar sounds.

Need to Know Dictionary: Math

Word	Definition
Trapezium	a quadrilateral with at least one pair of parallel sides
Surface area	total area of the surface of a three-dimensional object measured in square units
Cuboid	a polyhedron or 3D shape - a right prism with six rectangular faces, sometimes referred to as a right rectangular prism
Ratio	commonly a ratio is the comparison of two values of the same kind, which may be written as a to b, a:b
Equivalent ratio	ratios that are in proportion, e.g. 4:5, 8:10 and 16:20
Translation	move an item in any direction without rotating it
Quadrilateral	a polygon with four angles and four sides
Polygon	a plane shape having three or more straight sides
Perpendicular	at right angles to the horizon or another object
Data	data is a collection of information gathered by observation, questioning or measurement



Need to Know Dictionary: Science

Word	Definition
Electrical Conductor	A material that allows current to flow through it easily, and has a low resistance.
Electrostatic Force	Non-contact force between two charged objects.
Resistance	A property of a component, making it difficult for charge to pass through, in ohms (Ω).
Ecosystem	The living things in a given area and their nonliving environment.
Environment	The surrounding air, water, and soil where an organism lives.
Interdependence	The way in which living organisms depend on each other to survive, grow, and reproduce.
Community	The collection of the different types of organisms present in an ecosystem.
Resultant Force	Single force that can replace all the forces acting on an object and have the same effect.
Equilibrium	a state of rest or balance due to the equal action of opposing forces.
Gravitational force	A non-contact force that acts between two masses

Need to Know Dictionary: Geography

Word	Definition
Population distribution	The pattern of where people live and how spread out the population is.
Low Income Country (LIC)	A country with a gross national income per capita (per person) of \$1,025 or less.
Natural Increase	Birth rate (Number of babies being born per 1000 people per day) - Death rate (Number of people dying per 1000 people per day).
Overpopulation	when a country has too many people for the number of resources available.
Voluntary migrant	Someone who chooses to move.
Refugee	A person who has been forced to leave their country in order to escape war, persecution or natural disaster.
Rural-Urban Migration	Where people move from the countryside (rural areas) to the city (urban areas) within their own country.
Birth rate	the number of births in a country, usually recorded per thousand/per year
Death rate	the number of deaths in a country, usually recorded per thousand/per year
Population density	The number of people per area (mile/KM)



Need to Know Dictionary: French

Word/ Definition/ In a sentence/ Word Knowledge

- 1 Francophone (noun)** - A person who speaks French, especially a native speaker. Madagascar is a francophone country. The suffix 'phone' means 'sound' or 'speaking'.
- 2 Accent (noun)** - A mark indicating stress, vowel quality, form or pitch. The symbols above or below letters in French are called accents. From the Latin 'cantus' which means 'singing'.
- 3 Phonics (noun)** - A method of teaching people to read by matching sounds with letters or groups of letters. It is important to learn your phonics so you can pronounce words correctly. The prefix 'phone' means 'sound' or 'speaking'.
- 4 Language (noun)** - The main method of human communication. The French language is spoken by 220 million people. From the Latin 'lingua' meaning 'tongue'.
- 5 Indefinite article (noun)** - The word 'a', 'an' or 'some'. In French, there are two indefinite articles, depending on whether the noun is masculine feminine. The indefinite articles in French are: 'un' or 'une'.
- 6 Definite article (noun)** - The word 'the' In French, there are three definite articles, depending on whether the noun is masculine, feminine or plural. The definite articles in French are la, l' or les.
- 7 Conjugate (verb)** - To change the verb, depending on who is performing the action. To conjugate a verb, you must start with the infinitive. The prefix 'con' means 'to join'.
- 8 Adjective (noun)** - A word that describes a noun. In French, the adjective must agree with the noun it's describing, both in gender and number. From the Latin meaning 'added to'.
- 9 Infinitive (noun)** - The verb in its unchanged state. An infinitive ends in either -er, -ir or -re. The Latin root word 'fin' means 'end'.
- 10 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'.

Need to Know Dictionary: History

Word	Definition
Banner	A flag that represents a group, person, or idea.
Cavalry	Soldiers on horseback
Century	100 years
Contemporary	At the same time of the event or person
Contender	A person who has a chance of winning
Decade	10 years
Intimidate	To scare or frighten
Morale	A feeling about how well or badly something is going
Rebellion	To fight back against the people in charge
Siege	To surround and wait for your enemy to give up



Need to Know Dictionary: Design and Technology

Word	Definition
Engineering	The branch of science and technology concerned with the design, building, and use of engines, machines, and structures.
Design	A process which includes: identify a problem, research the problem, generate possible solutions, select the best solution, create a model, test the model, refine and retest the model, and communicate the final solution.
Manufacture	Make (something) on a large scale using machinery.
Ergonomics	Designing for ease of use, comfort and making a task easier and more efficient.
Aesthetics	Designing for visual appearance, aiming to make a product look attractive / beautiful, visually appealing.
Sustainable	Designing products that cause less or no harm to the environment.
Pine	An evergreen coniferous tree which has clusters of long needle-shaped leaves. Many kinds are grown for the soft timber, which is widely used for furniture.
Tenon saw	A small saw with a strong brass or steel back for precise straight cuts.
Try-square	A try square or try-square is a woodworking tool used for marking and checking 90° angles on pieces of wood.
Steel rule	More accurate than a plastic ruler and often has half millimetres as well as millimetres.

Need to Know Dictionary: Art

Word	Definition
Emphatic	expressing something forcibly and clearly.
Evoke	Bring or recall (a feeling, memory, or image) to the conscious mind.
Expressive	Effectively conveying thought or feeling.
Composition	The position and layout of shapes on the paper
Post Impressionism	An art movement that explored colour, line, and form, and the emotional response of the artist.
Art movement	Is a tendency or style of art with a specific common philosophy or goal, followed by a group of artists during a specific period of time.
Psychiatric	relating to mental illness or its treatment.
Refine	To develop and improve a piece of artwork.
Formal Elements	The formal elements of art are the parts used to make up a piece of artwork.
Line	Defines shape, the outer edges of something.



Need to Know Dictionary: Drama

Word	Definition
Physical theatre	is a type of performance where physical movement is the primary method of storytelling; puts emphasis on movement rather than dialogue.
Cross- Cutting	is a device to move between two or more scenes staged in the space at the same time.
Tension	A sense of anticipation or conflict within characters or character relationships.
Atmosphere	the interaction between the audience and the mood of a drama performance.
Improvisation	created spontaneously or without preparation (making it up as you go along).
TIR	Teacher in Role refers to the teacher working in role, within class drama.
Role play	Communicating a story using physical and vocal skills.
Narrating	is adding a spoken commentary for the audience about the action onstage.
Vocal skills	Pitch, Pace, Pause, Emphasis, Volume, Accent.
Soundscape	Performers create sounds to mimic a real or imaginary environment.

Need to Know Dictionary: Music

Word	Definition
Melody	Melody is a series of different tones, or sounds, in a piece of music (tune)
Accompaniment	is the music that accompanies (goes with) something else. (A piece of music may have a melody (tune) and an accompaniment underneath).
Chords	in music is when three or more notes are played together at the same time.
Orchestra	An orchestra is a large group of musicians who play together on a variety of string, wind and percussion instruments.
BPM (beats per minute)	Unit of measurements of a piece's tempo.
Music notation	is a way of writing down music so that anyone can play it.
Treble Clef	shows you the notes to play with your right hand
Quaver	is a musical note that lasts half a beat.
Semi-quaver	is a musical note played for half the duration of a quaver.
Semitone	is the distance from a white key to a neighbouring black key on the piano keyboard.



Need to Know Dictionary: PE

Word	Definition
Types of bone:	
Flat Bones	Protect vital organs and the brain. (Cranium, Ribs, Clavicle, Sternum)
Long Bones	Enable gross (large) movements– Running, jumping, kicking, throwing. (Humerus, Radius, Ulna, Metacarpals, Metatarsals, Phalanges, Femur, Tibia, Fibula)
Irregular Bones	Specifically shaped to protect. (Patella, Vertebrae Column)
Short Bones	Enable finer, controlled movements. (Carpals, Tarsals, Talus)
Functions of the Skeletal System:	
Movement	Occurs at joints (where two or more bones meet). Muscles contract and pull on bones.
Shape and Structure	Provide basic body shape.
Support	Point of attachment for the muscles.
Mineral Storage	Essential for major body functions (i.e. Calcium).
Blood Cell Production	Takes place in bone marrow. Red Blood Cells, White Blood Cells and Platelets.
Protection	Protect vital organs and decrease injury risk.

Need to Know Dictionary: Religious Studies

Word	Definition
Equality	the state of being equal, especially in status, rights, and opportunities.
Prejudice	unfairly judging someone before the facts are known; holding biased opinions about an individual or group.
Discrimination	actions or behaviour that results from prejudice.
Heterosexual	to be sexually attracted to members of the opposite sex.
Homosexual	to be sexually attracted to members of the same sex.
Exploitation	misuse of power or money to get others to do things for little or unfair reward.
Human rights	the basic rights and freedoms to which all human beings should be entitled.
Protest	an expression of disapproval, often in a public group.
Persecution	is the systematic mistreatment of an individual or group by another individual or group.
Reconciliation	restoring harmony after relationships have broken down.



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 prepared 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
Storyboard	A visual way to present information, created in a linear way to help explain a story, a process, a set of sequential drawings to tell a story.
Storyline	The plot of a story in a comic and the way in which it develops.
Comic genre	The style of comics e.g. fantasy, comedy, action, super hero, manga.
Textables	Speech or thought bubbles which contain a comic character's words. Used to help tell a story.
Infographic	A diagram or illustration that uses graphics to present information in a visually appealing way.
Edit	Changing, correcting or modifying an element of design.
Panel	One of the boxes on the page of a comic.
Webcomic	Comics that are made for viewing on the Internet.
Gutter	The space between the panels of a comic.
Caption	Words that are in a box separated from the rest of the panel, usually to give voice to a narrator, or used for a character's thoughts.