Frank Field
Education Trust

"Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family"

- Kofi Annan

Year 9 Knowledge Organiser

Learning Programme 2

Pupil Name:	Form Group:

Birches Head Academy

Contents page

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Instructions to use the Knowledge Organiser

Use of the Knowledge Organiser

Every school day you should be studying at least 1 section of your Knowledge Organiser (KO) for homework.

The timetable outlines the tasks you will study during that week.

Your subject teacher will set the relevant homework task from the Knowledge Organiser booklet and inform you of when the homework is to be handed in.

Your homework is to be completed in your subject exercise book, unless the instructions are different within the task.

You need to bring your Knowledge Organiser and exercise books with you EVERYDAY to the academy.

You will also be tested in your lessons on knowledge from the organisers every week to ensure that the core knowledge is retained over time.

You should also be developing your core knowledge by developing your self-testing, revision and study skills techniques alongside the homework tasks.

You can use any of the adjacent techniques on top of the core homework tasks to enhance your revision skills.

Self-testing, revision and study skills techniques

You can use your KOs and book in a number of different ways but you should not just copy from the Knowledge Organiser into your book. Use the 'How to self-test with the Knowledge Organiser' booklet to help you.

Below are some possible tasks you could do in your workbooks, no matter which task you do you should always check and correct your work in a different coloured pen.

- Ask someone to write questions for you
- Write your own challenging questions and then leave it overnight to answer them the next day
- Create mind maps
- Create flashcards
- Put the key words into new sentences
- Look, cover, write and check
- Mnemonics
- Draw a comic strip of a timeline
- Use the 'clock' template to divide the information into smaller sections. Then test yourself on different sections
- Give yourself spelling tests
- Definition tests
- Draw diagrams of processes
- Draw images and annotate/label them with extra information
- Create fact files

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How do I self quiz?

How to use...Flashcards

1. On one side of the flash card, write the word or question.
2. On the other side, write the definition for the word, or answer to the question.
3. Once you have completed your set of cards, put them in a pile. Then for each card, see if you can remember the definition or answer to the question. Tick or cross when you get it right or wrong.
4. When you get the card right, place it in the 'correct' pile. When you get it wrong, place it in the 'wrong' pile. Repeat until all cards are in the 'correct' pile.

You can also use the Leitner Method: **https://www.youtube.com/watch?v=C20EvKtdJwQ**

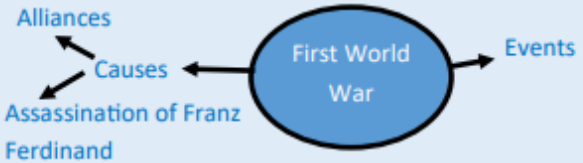
How to use... Look, Cover, Write, Check and Correct

1. Write your key words into the 'Look, Cover' column and then cover it.
2. Write out the meaning, definition or spelling in the 'Write' column.
3. Put a 'tick' or 'cross' in the 'Check' column depending on if you got the answer right.
4. If you got the answer incorrect, write the correct answer in the 'Correct' column.

Look , Cover	Write	Check	Correct
Noun	A person, place or	✓	
Algorithm	Algorithim	X	Algorithm

How to use... Mind Maps

1. Write out your topic or idea in the centre. E.g. The First World War.
2. Off of the main bubble, write out important categories to organise your ideas. E.g. causes of WWI and events in WWI
3. Then add your knowledge off of these branches. You might even be able to make connections between them.
4. Once made, then redraw as many of the connections as possible from memory. Correct any errors.



How to use... Explaining a process/ idea further

Your teacher might ask you to explain a key idea, process or event from your learning. This could be the water cycle (Geography), photosynthesis (Science) or something else. In your answer, try to use the words **because, but**, and **so.** These will help you to:

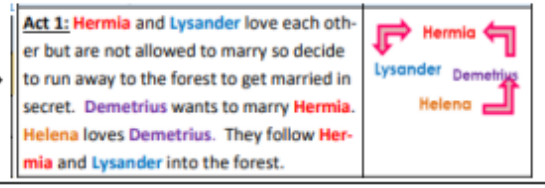
1. **Because:** helps to explain a reason, cause or why something works.
2. **But:** helps to explain a limitation or problem.
3. **So:** helps to explain what happens next in a sequence, process or event.

Check your sentences to see if your explanations or right or wrong. Correct any errors.

How to... Summarise a process/idea

Rather than expand or explain a process, your teacher might ask you to summarise it into its key parts. E.g. summarising the plot 'A Midsummer Night's Dream' in English.

1. Read through the relevant part of your knowledge organiser as directed by your teacher.
2. Write out the (up to) 5 most important parts in your KO book, leaving a two lines in-between.
3. For each part, add **one** main idea.
4. E.g. here, the 4 key characters are picked out, and the direction of love is shown through the arrows. Check and correct any errors.



How to use... Subject Specific Tasks or Questions

Your teacher might choose to set a task that is not outlined here, and which is specific to that topic or their subject.

In this case, your teacher will outline specifically what it is you need to do, and how. This will still include you checking and correcting any errors.

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Homework tasks

Week	Subject	Task
LP2.1	English	Complete Page 1 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Create a poster showing how simple machines (e.g. levers and pulleys) operate and describe and explain how they work.
	History	Write a PEE paragraph to explain the difference in the lives of the rich and poor in Russian society.
	RE	Using Christian beliefs, describe the importance of life.
	Art	Write the definitions of the following keywords: media, tone, shape, texture, pattern, colour.
	Technology	Write down what the components are of an eatwell plate.
	IT	Complete the fortnightly knowledge check homework on Teams.

Week	Subject	Task
LP2.2	English	Complete Page 2 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Write a comparison table showing how conduction, convection and radiation transfer energy.
	Geography	Summarise the structure of the earth in a paragraph.
	Spanish	Log onto your personal Languagenut account and complete the appropriate homework task.
	Drama	Make notes on the style and key influences of Blood Brothers.
	Music	Create a revision poster about how Reggae grew out of Mento, Ska and Rocksteady.
	PE	Create a list of the positions (team sports) or events in your sport (athletics).

Week	Subject	Task
LP2.RLW	ALL	This week is an opportunity to work on knowledge that has been identified during lessons as key areas for development. This could be additional revision and recall tasks from the knowledge organisers or it could be specific tasks set by classroom teacher.

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Homework tasks

Week	Subject	Task
LP2.3	English	Complete Page 3 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Write a method to investigate the effectiveness of different types of insulation. Include a hypothesis, variables, method, equipment list and a scientific drawing of the experiment.
	History	Look, cover, write, check how did Rasputin contributed to the downfall of the Tsar.
	RE	Create a P.E.E paragraph to explain the reasons FOR euthanasia.
	Art	Explain the key features of Philippe Jacquots work, explore your own opinions, reflecting on your thoughts.
	Technology	Create a spider diagram which explores what the government guidelines are in accordance with the eatwell plate.
	IT	Complete the fortnightly knowledge check homework on Teams.

Week	Subject	Task
LP2.4	English	Complete Page 4 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Create a revision sheet that includes: a levelled diagram of an atom and a timeline of how scientists developed the modern periodic table.
	Geography	Explain why the effects of earthquakes are different in richer and poorer countries.
	Spanish	Log onto your personal Languagenut account and complete the appropriate homework task.
	Drama	Look at the keywords in the knowledge organiser. Learn their spelling and definition. Then use look, cover, write, check to test yourself.
	Music	Create a flashcard about the 'skank' and 'bubble' rhythms in Reggae – include a diagram of what each might look like when played.
	PE	Practice some of the key techniques that are used within your sport/activity at home.

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Homework tasks

Week	Subject	Task
LP2.5	English	Complete Page 5 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Write a fact sheet investigating some of the uses of Group 1 elements including lithium, sodium and potassium.
	History	Write a PEE paragraph to explain how life changed for the Russian population after the Russia Revolution.
	RE	Create a for and against list for testing on animals.
	Art	Create a fact file about Richard Johnsons work, explore the key features and create a spider diagram.
	Technology	Draw the eatwell plate and add five ingredients for each section.
	IT	Complete the fortnightly knowledge check homework on Teams.

Week	Subject	Task
LP2.6	English	Complete Page 6 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Write a fact sheet investigating some of the uses of Group 7 elements including flourine, chlorine, bromine and iodine.
	Geography	Suggest how we can reduce the risks of earthquakes and volcanoes.
	Spanish	Log onto your personal Languagenut account and complete the appropriate homework task.
	Drama	Create flashcards on the key characters from Blood Brothers. Describe their character and how they might have led to the tragic death of both twins.
	Music	Create a 10 question quiz with answers about Reggae music.
	PE	Use a method of your choice to revise the rules for your sport/activity.

Week	Subject	Task
LP2.7	English	Complete Page 7 of the SPAG booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Write a fact sheet investigating some of the uses of Group 0 elements including helium, neon, argon and radon.

Y9 LP2 Art: AO2:– Circus & Theatre

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This Learning Programme you will be focusing on refining work by exploring ideas ,selecting, and experimenting with appropriate media, materials, techniques, and processes.

1. How to refine your work.
2. How to select and explore multiple materials
3. Select key media to explore specific techniques
4. Identify successful use of materials
5. Explore multiple materials
6. Evaluate your use of processes
7. Identify successful experimentation.

KEYWORDS	DEFINITION
Media	The materials used
Tone	Shades, ranging from dark to light
Shape	The outside line, joined to create a shape
Texture	Representation of how something feels
Pattern	A design in which shapes, lines and colours are repeated
Line	Basic visual element, used to create shapes
Form	Three dimensional shape, height, width, and depth
Colour	Different shades and tones
Review	An evaluation of artwork
Reflect	Think carefully and make comments
Analyse	Examine in detail

AO2 Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

What does this mean?
You need to demonstrate that you are able to explore, progress and improve your ideas through a development journey of experimentation, trails, samples, working things out as you go.

Refinement means to improve. You will learn from doing something then working out how to do it better and then having another go. This may take many steps.

AO2 should be seen as an integral part of your creative journey and not a separate thing.

How does it link with AO1?
Experimenting in response to your chosen artists
How does it link with AO3?
Recording your ideas and observations as you experiment and as your ideas develop. Recording your decisions.
How does it link with AO4?
Your experimentation and refinement of ideas should lead to a skilful personal and meaningful response.

How do I show this in my work?
- **Refine a dominant idea by trying various compositions**
- **Refined techniques in a variety of media**
- **Have you developed an idea and not just used your first idea?**
- **Clearly demonstrate purposeful trialling of materials supported by notes**
- **Attempts to mimic the style/technique of an artist in your own work**
- **Selection and rejection of ideas**
- **Problem solving**
- **Showing stages of development**

Reaching for the level 8/9:
How do I show
A highly developed ability to thoughtfully refine ideas.
A highly developed ability to effectively select and purposefully experiment with appropriate media, materials, techniques and processes.
The level to which you experiment. Do you go through a number of processes refining along the way? Have you copied the artists work in a superficial way or have you really explored their technique? Have you taken risks and shown a highly developed creative journey as a result? Are your ideas unique?

Annotate your own work
- What have you produced and why?
- How does it link to the artist you have been looking at?
- Has the technique been successful and why?
- How might your work now develop?
- What have your learnt?
- What are your decisions?

Refinement is important, not just repetition

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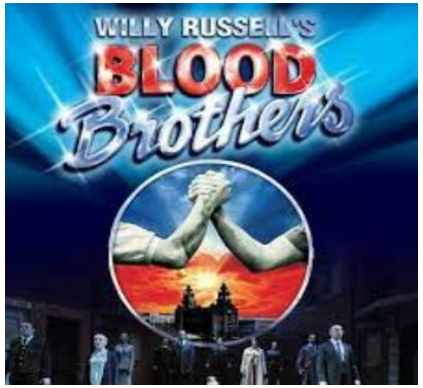
Year 9 Drama LP2 Knowledge Organiser

This Learning Programme you will be learning about Willy Russell's 'Blood Brothers' and Naturalistic Acting.



Key Vocabulary	
Dramatic Irony	When the audience knows more than the character.
Breaking the fourth wall	Speaking directly to the audience.
Multi-rolling	Taking on multiple roles. Narrator also plays the milkman and gynaecologist.
Verfremdungseffect	The alienation effect which separates the audience from the action.
Foreshadowing	an indication or warning of a future event.

LP2.1

LP2.2

LP2.3

LP2.4

LP2.5

LP2.6

LP2.7

Plot Summary:

'Blood Brothers" is a tragic musical play set in Liverpool, England. It tells the story of twin brothers separated at birth, Mickey and Edward. Mrs. Johnstone, their impoverished mother, gives one twin to the wealthy Mrs. Lyons, who cannot have children. The story follows the brothers as they grow up in contrasting environments, unaware of their true relationship. Their paths cross repeatedly, leading to a dramatic and heart-wrenching conclusion, the death of the twins.

Style

Blood Brothers was initially produced by Willy Russell as a play and later adapted into a musical. It has both naturalistic and non-naturalistic stylistic features. Non-naturalistic features include dramatic irony, breaking the fourth wall, multi-rolling and the alienation technique (verfremdungseffekt).

Aim / Intention

- To educate the audience on socio-political issues.
- To create an anti-Thatcher play to encourage the audience to think.
- To entertain.
- To decrease the divide between the working class and upper classes.

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Year 9 Drama LP2 Knowledge Organiser

Additional Keywords	
Hot seating	Answering question in role
Naturalism	Acting like you would in real life
Character	The role you take on
Cross cutting	Moving between 2 scenes on stage
Nature vs nurture	Are you born a certain way or does your environment make you who you become
Fate	Pre determined
Social class divide	The divide between working class, middle class and upper class
Emotion memory	Recalling emotions and using them in a scene

Influences

- Bertolt Brecht influenced through techniques such as educating the audience, narration and multi-rolling.
- Socio-political issues such as the recession, unemployment, and the widening of the social gap.
- Margaret Thatcher was the Prime Minister responsible for high rates of unemployment, closing the mines and factories.
- Marilyn Monroe was a famous Hollywood actress. She is known for her glamour but also struggled with depression which led to her suicide.

Author and Background: Willy Russell: British playwright, born in 1947. Known for his works exploring social issues and class divides. Other notable works include "Educating Rita" and "Shirley Valentine."

Social Context: Set in the 1960s-1980s, a period of significant social and economic changes in the UK. High unemployment rates and class disparities in Liverpool during that era. The play explores the impact of Margaret Thatcher's policies and the decline of the working class.

Character Profiles:

Mrs. Johnstone: Struggling mother of the twins, abandoned by her husband, and forced to make difficult choices.
Mrs. Lyons: Wealthy woman who adopts one of the twins, haunted by the fear of the truth being revealed.
Mickey: One of the twins raised in poverty, has a close bond with Edward.
Edward: One of the twins raised in privilege, unaware of his true origins.
Sammy: Mickey's older brother, involved in crime.
Linda: Childhood friend of Mickey and Edward, becomes a pivotal figure in their lives.
The Narrator serves as a Greek chorus, offering a commentary on the events and foreshadowing the tragic outcome. Represents the inevitable consequences of the characters' actions.

Social class divide – The divide between being upper class (rich) and Working class (poor)

Nature vs Nurture – Are we born they way we are or does our environment shape us?

Fate/Superstition – Do we have a choice in what happens to us or is it pre determined?

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Year 9 English LP2 Knowledge Organiser

This Learning Programme you will be learning about narratives. You will look at a range of short stories, and analyse the various techniques they use to create an effective narrative, before trying them out yourself.

Key Vocabulary	
Atmosphere	The mood a story makes the reader feel.
Perspective	The point of view of a person.
Imply	When a story hints at something without saying it directly.
Tension	Making a reader feel worried, nervous or scared.
Contrast	When two opposites are put together, e.g. hot and cold.
Reveal	To tell the reader something that has been hidden from them.

1. How to write a simple story that can interest your reader.
2. How to take an idea and turn it into a well thought out story.
3. How to use advanced writing techniques to keep your reader interested in your story.
4. How to change the tone of your story to best fit your audience.
5. How to write and layout your story using different techniques and varied sentence and paragraph length.
6. How to make sure your story makes sense, while making full use of your characters.
7. How to use advanced vocabulary, and ensure you have used spelling and punctuation correctly.

Structural technique: sentences.
Vary your sentence length to impact your reader. Use **short sentence** to have a sudden impact on your reader, **and long sentences** to slow down your story's pace.

Structural technique: paragraphs.
The length of paragraphs affects the pace of your story. **Shorter paragraphs** speed your story up, perfect for action scenes. **Longer paragraphs** slow your story down, letting you explain in detail.

Birches Head Academy

Year 9 English LP2 Knowledge Organiser

Punctuation Guide:
Exclamation mark (!) – Shows strong emotion, usually anger.
How dare you eat my cake!
Question mark (?) – Asks a question
Why did you eat my cake?
Colon (:) – Introduces a list
The cake needs: eggs, flour and milk.
Semi colon (;) – separates clauses in a sentence
The cake; which was chocolate; had been stolen from the fridge.
Brackets () – introduces extraa information.
Steve (who had secretly eaten the cake) felt guilty.

Terminology

Pathetic fallacy – When human emotion is reflected in the weather.

Symbolism – when an object represents something else, such as an idea or feeling

Metaphor – stating something is something else as a comparison.

Personification – giving an object human like features/qualities.

Pace – how fast or slow your story feels to the reader.

Emotive language
Language that makes the reader feel specific emotions.

Happy	Sad	Scared
Terrific	Appalling	Terrifying
Fantastic	Terrible	Ghoulish
Amazing	Tragic	Heart pounding
Joyful	Horrible	Evil
Pleased	Disgusting	Darkness
Jolly	Pointless	Nightmarish

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Year 9 Geography LP2 Knowledge Organiser

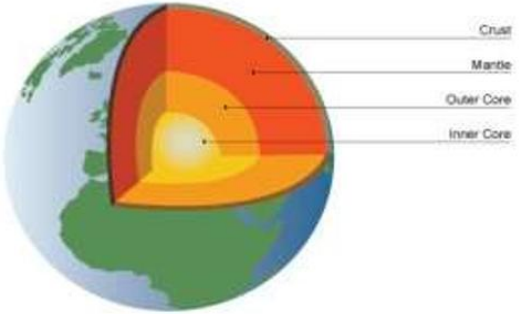
This Learning Programme you will be learning about global occurrences of tectonic hazards which I hear about in the news, enabling me to show empathy for those affected.

Key Vocabulary	
Distribution	the way something is spread out or arranged over a geographic area.
Location	the place where a particular point or object exists
Management	Coordinated strategies to reduce a hazard's effects
Social	is the branch of human **geography** that is interested in the relationships between society and space e.g. people
Economic	Economics is a social science that deals with the production, distribution, and consumption of goods and services. It is also how much money is earnt and how wealth is spread out.

1

The Earth has four main layers -
the inner core, the outer core, the mantle and the crust.

-The inner core is extremely hot and is a very dense solid.
-The outer core is 2,000 km thick and is a liquid.
-The mantle is semi-molten and about 3,000 km thick.
-The crust is the rocky outer layer; it is thin compared to the other sections, approximately 5 to 70 km thick.



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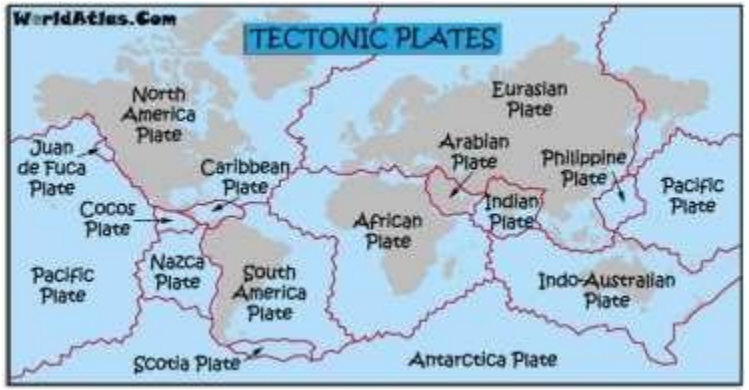

Plate tectonics
Plate margin: where two or more plates meet
Convection currents: movement within the Earth's mantle caused by the heat of the Core.
The Earth's crust is broken up into huge slabs called plates. The plates float on the mantle and are constantly moving by **convection currents**. When these plates move, they bump into, move away from, or rub up against other plates at the **plate margins**. How these plates move in relation to other plates dictates what type of plate margin it is and helps us understand what types of hazards will occur there.

3

Destructive plate margin
Destructive plate margins occur when tectonic plates move towards each other and collide. The effect this has depends on what kinds of plates are colliding.
Conservative plate margin
A conservative plate margin occurs where **plates slide past each other** in opposite directions, or in the same direction but at different speeds.
Constructive plate margin
A constructive plate margin occurs when **plates move apart**. Volcanoes are formed as magma wells up to fill the gap, and eventually new crust is formed.

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Year 9 Geography LP2 Knowledge Organiser

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Earthquakes

Earthquakes are the sudden violent shaking of the ground. This happens because the Earth's plates are constantly moving. Sometimes, because of **friction**, plates try to move and become stuck. **Pressure** builds up because the plates are still trying to move. When the pressure is released, it sends out huge amounts of **energy** causing the Earth's surface to shake violently. The point inside the Earth's crust where the earthquake originates from is known as the **focus.** The earthquake's energy is released in **seismic** waves and they spread out from the focus. The **epicentre** is the point on the Earth's surface directly above the focus. The seismic waves are most powerful at the epicentre.

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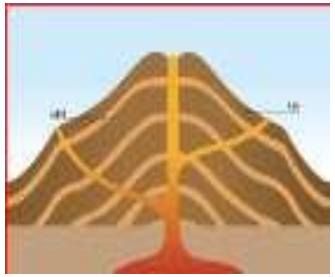
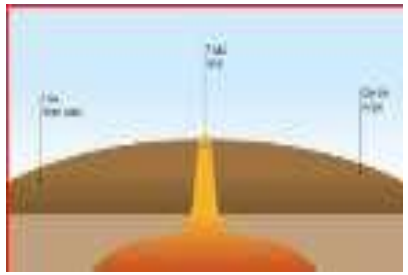




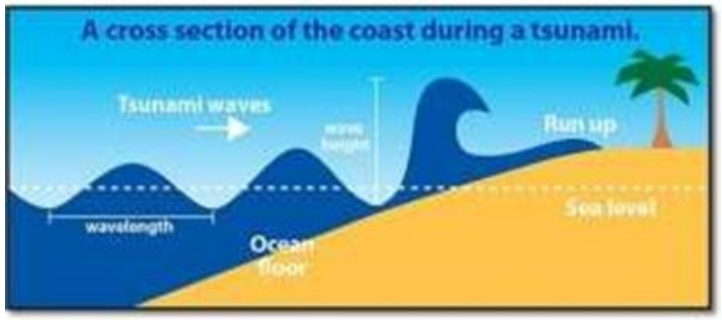
Volcanoes

Volcanoes are vents to the interior of the planet - they allow magma from the mantle to spill out as lava onto the Earth's crust. There are 2 types of volcanoes, shield and composite. A **shield volcano** has gently sloping sides and runny lava that covers a wide area. A **composite volcano** is steep sided and cone- shaped, it is made up of layers of ash and lava. The lava is sticky so it does not flow far.

6

Tsunami

Tsunami is a Japanese word which means '**harbour wave**'. A tsunami is a large sea wave caused by the displacement of a large volume of water. They can be caused by earthquakes triggered by moving sections of the Earth's crust under the ocean. Tsunamis have many social, economic, and environmental impacts depending on where they hit and their size.



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Managing hazards

There are 3 things we can do to lessen the affects of earthquakes, the 3 Ps.

Prediction - Using technology to estimate when and where we think an earthquake is going to happen. **We often know where one will happen but it is difficult to figure out when it will.**

Protection - Putting measures in place to help protect people during an earthquake. The most important and common one is **building special buildings that will not collapse.**

Preparation - This is all about getting ready for when the next one comes. It includes **special drills and practices so people know what to do, and preparing materials in advance**.

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Birches Head Academy

Year 9 History LP2 Knowledge Organiser

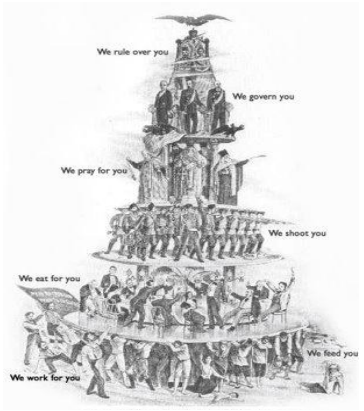
This Learning Programme you will be learning about how and why Russia became a communist state, the social, economic and political implications.

Key Vocabulary

T2 Words for the world	
World Superpower	A country with a dominant position in the world.
Socio-economic	Relating to social (people) and economic (money) factors
Communism	The idea that everyone is equal, and the state owns all industry. Extreme left of the political spectrum
Fascism	Extreme right wing, oppressive way of ruling.
Political movement	A group of people who share an idea for change.
Manifesto	A list of aims of a political party
Revolution	The forcible overthrow of power in favour of a new system.
T3 History specific words	
Tsarism	System of being ruled by the Tsar (King) in Russia.
Revolution	The overthrow of government, for a new system.
Rasputin	A healing monk who had great influence over the Tsar and Russian royal family.
April Thesis	Lenin's vision for the Russian Revolution when he returned from exile.
Trotsky	Russian revolutionary, journalist, central figure in the October revolution

1

Context of 19th century Russia
The Russian Empire covered 1/6 of earth's surface at 22,800,000 square kilometers. Land surface of Russia would fit Britain in 90 times. Remains the third largest empire in history. A lot of the land was useless -unhabitable due to harsh climates. Countries that were under the rule the Russian Empire: Ukraine, Latvia, Estonia, Lithuania. *Each of these countries spoke their own language instead of Russian.*



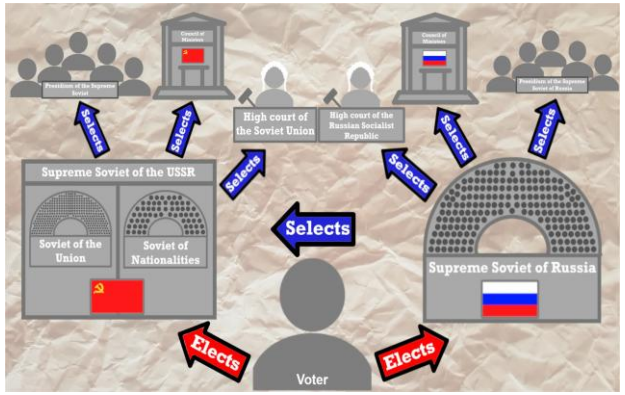
The 1905 revolution was created areligious leader, Father Gapon, who created a petition to give to the Tsar about the working conditions in the city and this was signed by 150,000 people. On 22nd January 1905, Father Gaponlead a march on the winter palace in St Petersburg in a peaceful protest, expressing the Tsar did not understand the common peoples struggles. To combat this the Tsar sent out the army and slaughtered over 200 people with rifle fire and Cossack Charges(Sword wielding horse riders) This became known as Bloody Sunday.
The Tsar created a new government called the Duma because of Bloody Sunday. The Duma were elected and spoke for the people. But the Tsar could close the Duma whenever he wanted to.

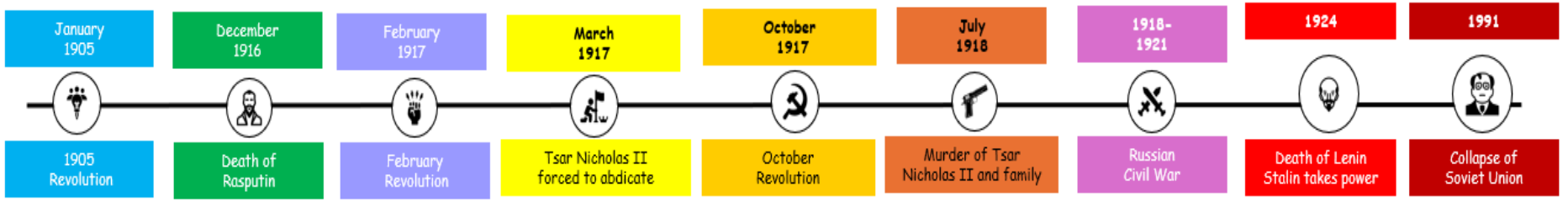
2

Challenges to the Tsars Power:
Strikes spread across the country and illegal trade unions were widespread. There was a general strike in October
The Russo Japanese War 1904-19095(Russia was humiliate
Unpopular Tsarist opinions:
The Tsar produced many unpopular policies, which included:
Oppression of ethnic minorities and Jewish people
Anyone criticizing the rulers were 'purged'
Middle class did not have a say in the how the country was run
New cities/living conditions caused major social and economic problems for workers and peasants.

3

Affect of World War One
After a year of fighting and around 2.5 million dead. Russians the Tsar took command of the army making himself Commander in Chief. His thought was that it would inspire the people to fight by his side. But, because Nicholas did not know how to lead an army into war, the defeats and humiliations got worse. There became a shortage of food, equipment, ammo and medical supplies. By 1916 and 5.3 millions Russians had died. The army had been mostly destroyed. The new recruits were conscripted peasants who resented being taken away from their land. During their training they were kept in barracks in cities such as Petrograd. This allowed them to come into contact with the increasingly unhappy civilian population. This was dangerous as not only were the recruits unhappy, but they also had access to weapons.





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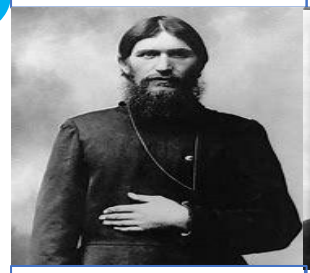
Birches Head Academy

Year 9 History LP2 Knowledge Organiser

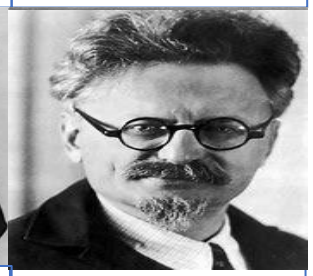
4

Rasputin



Spiritual healer, helped Alexis, became close to Tsarina

Lenin



Russian revolutionary, politician, first Head of the USSR

Lenin's influence in the rise of Communism

- Masterminded takeover of government – was behind July Days and October Revolution
- He promoted social, legal and economic reform
- Wanted to, and then succeeded in ending war with Germany – relieve Russian people of war
- Condemned antisemitism as a product of capitalism – promote communism
- Wanted to end Russian aristocracy – everything shared equally between all citizens, no split by title: 'All power to the Soviets' and 'Peace, bread and land'
- Wanted land to be given to peasants equally – a particularly attractive prospect for the large percentage of peasants

Many of these were attractive to the Russian population because they were fed up with war, fed up with being mistreated, fed up with their position in the social hierarchy and wanted a better life for themselves. Lenin's ideas sounded like that better life.

Source A: A caricature of Rasputin – the Ruling House

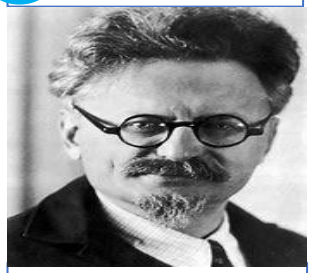
5

April Thesis/Communist manifesto

In Basic terms the outline of the Communist manifesto is that workers should being control of the things the create. There are always going to be more workers than royal family/upper-class people and this will always create problems.
So, in order to deal with this, the book suggest that revolution and removing those who have the money is the only way to make a fair and equal society.

6

Trotsky



Russian revolutionary, journalist, central figure in the October revolution

Lenin dismissed the Constituent Assembly, the parliament or old Duma, and declared the 'dictatorship of the proletariat' (which was really, the dictatorship of Lenin).

A secret police force was introduced called the Cheka. Their was to investigate opponents of the new government. They arrested, tortured and killed anybody who tried to destroy the Communist state.

Russia backed out of WWI. In order to do so, it had to sign the treaty of Brest-Litovsk, which gave land to Germany. However, it meant that Russian men were no longer fighting and dying, and the war had been very expensive.

Countries such as Britain sent large sums of money to help the Whites fight the Bolsheviks. This made the USSR suspicious of the West for years to come.

There was a huge campaign to teach everyone to read. Agents went around the country showing communist newsreels and giving lectures to teach peasants about Communism.

All businesses were owned by the state, meaning that they belonged to everyone in the country. Land was seized by the government and redistributed, so that it could be used by everyone.

Women's rights improved. Child care was freely provided, and divorce and abortion were legalised.

Lots more factories were built in an effort to improve Russia's development. This created jobs for many, but the working conditions were often unsafe.

They brought in an eight-hour day for workers, as well as unemployment pay and pensions.

The Russian economy dropped, causing some skilled workers to flee the country. This meant that, for a while, only essential items were available, and luxury goods could not be bought.

The Bolsheviks banned religion as they saw it as a tool of capitalism - promising Heaven in exchange for a hard life.

The Russian Civil War between the Reds (the Bolsheviks) and the Whites (the anti-Bolsheviks) that occurred between 1918 and 1920. Fifteen million people died due to the conflict and famine.

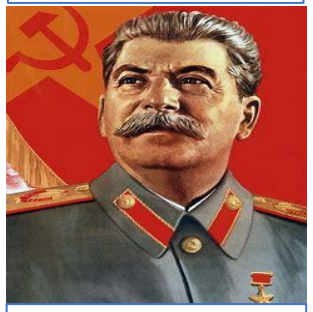
There were new programmes to build improved housing. This meant that everyone had somewhere to live, although some of the houses were poorly constructed.

Lenin refused to listen to the soviets, the worker's councils who had helped him come to power in the first place.

Lenin used the Gulag, a vast, brutal and cruel network of prison camps, for criminal and political prisoners. Prisoners faced harsh conditions and hard labour. Many died.

7

Stalin



Soviet revolutionary and political leader, led the Soviet Union from 1924-1954

Lasting impact of Russian Revolution

Wars in Asia: Asia had for a long time been a poor continent the people saw the impact that revolution/communism had on Russia and thought if they did the same it would make their countries better. Some of these wars were civil wars and others could have turned into WW3 as communism treated to spread.
Chinese Civil war/Vietnam War/Cambodian Civil War / Korean War.
Spies and Space: America and the USSR wanted to prove who had the best ideology and this led to both countries trying to get in to space first and eventually landing on the moon. However, because all of this was so secretive both countries used to send spies to watch and report back. This time in history was the speak of spying. If the spies were caught it lead to lots of harsh interrogations, punishments and even trading captured spies for others.

17

Y9 LP2 ICT Knowledge Organiser – Spreadsheets 2

Key Vocabulary	
Vocabulary	**Definition**
Excel	Spreadsheet software by Microsoft that you will use in lesson.
Cell	A location on a spreadsheet where data can be inputted
Cell Reference	The address of a cell. This is made up of columns and rows. For example A2.
Column	The vertical stack of cells. A column's name is a letter. For example, A, B, C
Row	The horizontal row of cells. A row's name is a number. For example, 1, 2, 3, 4
Function	A function is used to make the spreadsheet do things such as maths for you.
Chart	A visual representation of data.
Formatting	Arranging your spreadsheet so the data is readable and is visually pleasing.
Data	Facts and statistics (such as numbers) without context
Information	Groups of data with context.

Functions:

=SUM(cells) – Adds a range of cells together

=AVERAGE(cells) – Gives you the average number from a range of cells

=MAX(cells) – Gives you the biggest number from a range of cells

=MIN(cells) – Gives you the smallest number from a range of cells

=COUNT(cells) – Counts from a range of cells how many have numbers in. Gives you the number of cells with numbers in.

1. Identifying columns, rows and cells. Formatting techniques.
2. Basic formulas and autofill
3. Difference between data and information
4. Analysing data
5. Functions
6. Sort and filter
7. Conditional formatting

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Birches Head Academy

Year 9 Maths LP2 Knowledge Organiser

This Learning Programme you will learn about Ratio, Rounding, Coordinates.

Key Vocabulary	
Formula	A **formula** is a mathematical rule or relationship expressed using symbols, letters, and numbers. It shows how to calculate a value based on other known values.
Bisector	A **bisector** is a line or ray that divides something into two equal parts. In geometry, it often refers to: **Angle bisector**: A line that splits an angle into two equal angles. **Line segment bisector**: A line that cuts a segment exactly in half at its midpoint.
Area	The space inside a 2D shape
Sector	A **sector** is a portion of a circle bounded by two radii and the arc between them. It looks like a "slice of pie."
Volume	The space inside a 3D shape.
Hypotenuse	The longest edge on a right-angle triangle

1

Changing the subject of formulae

Changing the subject of a formula

This follows the same rules as when solving equations.

e.g. make u the subject of the formula

$y = 2u + 3p$

$-3p$ → $y - 3p = 2u$

$\div 2$ → $\frac{y - 3p}{2} = u$

e.g. make c the subject of the formula

$m = 5(c - 1)$

expand → $m = 5c - 5$

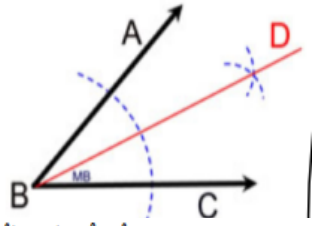
$+5$ → $m + 5 = 5c$

$\div 5$ → $\frac{m + 5}{5} = c$

Constructions

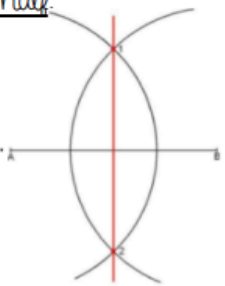
Angle bisector (cuts an angle in half)

1. Place the sharp end of a pair of compasses on the vertex.
2. Draw an arc, marking a point on each line.
3. Without changing the compass put the compass on each point and mark a centre point where two arcs cross over.
4. Use a ruler to draw a line through the vertex and centre point.



Perpendicular bisector (cuts an line in half at right angles)

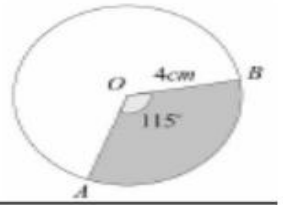
1. Put the sharp point of a pair of compasses on A.
2. Open the compass over half way on the line.
3. Draw an arc above and below the line.
4. Without changing the compass, repeat from point B.
5. Draw a straight line through the two intersecting arcs.



2

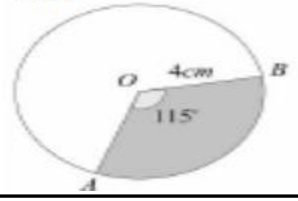
Area of a Sector

$$\text{Area} = \frac{115}{360} \times \pi \times 4^2 = 16.1cm^2$$



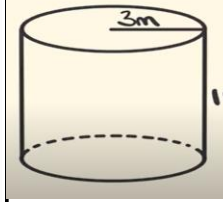
Arc Length of a Sector

$$\text{Arc Length} = \frac{115}{360} \times \pi \times 8 = 8.03cm$$



3

Surface Area of a Cylinder



$S.A. = 2\pi r^2 + 2\pi rh$

$= 2\pi(3^2) + 2\pi(3)(10)$

$= 2\pi(9) + 2\pi(30)$

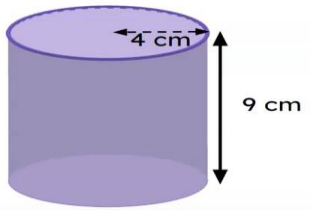
$= 18\pi + 60\pi$

$= 78\pi\ m^2$

Volume of a Cylinder

Volume of a cylinder $= \pi r^2 h$

where r is the radius and h is the height



$V = \pi \times 4^2 \times 9$

$= \pi \times 16 \times 9$

$= 144\pi\ cm^3$

$= 452\ cm^3$ (3 sf)

4

Truncation

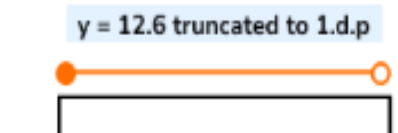
Truncation comes from the word *truncare*, meaning "to shorten," and can be traced back to the Latin word for the trunk of a tree, which is *truncus*.

3.14159265... can be truncated to 3.1415 (note that if it had been rounded, it would become 3.1416).

Error Intervals

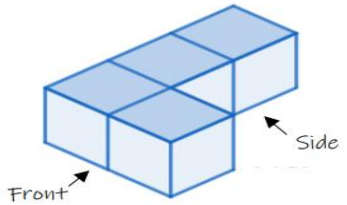
x = 30cm to the nearest ten

y = 12.6 truncated to 1.d.p



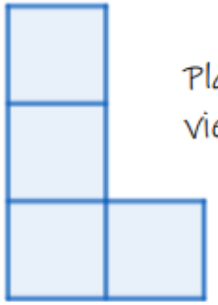
5

Plans and Elevations



Front elevation

Side elevation



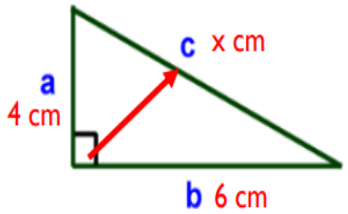
Plan view

The plan view is the view of the shape if viewed from above.

6

Pythagoras' Theorem - Hypotenuse

You should always label the hypotenuse first.
This is the side facing the right angle.



This is surd form. Sometimes you will be asked to leave your answer like this.

$a^2 + b^2 = c^2$

1) Substitute your values into the formulae:

$4^2 + 6^2 = x^2$

2) Work out the values that you can.

$16 + 36 = x^2$

$52 = x^2$

3) Now use inverse operations to isolate x.

$52 = x^2$

$(\sqrt{})\ (\sqrt{})$

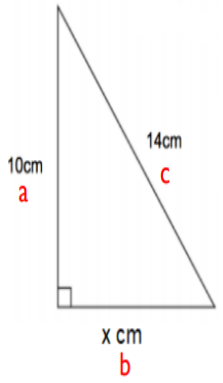
$\sqrt{52} = x$

7.211102551 cm = x or 7.21 to 3 s.f

7

Pythagoras' Theorem – Shorter Sides

$a^2 + b^2 = c^2$



Sometimes you are asked to calculate the shorter sides, see below.

1) Substitute your values into the formulae:

$10^2 + x^2 = 14^2$

2) Work out the values that you can.

$100 + x^2 = 196$

3) Now use inverse operations to isolate x.

$100 + x^2 = 196$

$(-100)\quad (-100)$

$x^2 = 96$

$(\sqrt{})\ (\sqrt{})$

$\sqrt{96} = x$

x = 9.797958971 cm or 9.80cm to 3 s.f

You need to get the numbers on one side, the x on it's own. An extra step is needed.

20

Birches Head Academy

Year 9 Spanish LP2 Knowledge Organiser

This Learning Programme you will be learning how to talk about your future and what job you would like

Key Vocabulary	
Infinitive verb	A verb which tells you the action but not who is doing the action, or what time the action is happening
Adjectival agreement	Making adjectives agree with the gender of the noun
Adjective	A word which describes a noun
Present tense	Used to talk about things happening now, or things that happen regularly
Near future tense	Used to talk about the future and what is **going to** happen
Preterite tense	It is the past tense and is used to talk about completed actions in the past.

LP2.1 – Hotel catástrofe

Los trabajos en el hotel	Hotel jobs		
Soy...	I am...	jardinero/a	a gardener
camarero/a	a waiter	limpiador(a)	a cleaner
cocinero/a	a cook	peluquero/a	a hairdresser
dependiente/a	a shop assistant	recepcionista	a receptionist
esteticista	a beautician		

¿En qué consiste tu trabajo?	What does your job involve?		
Tengo que...	I have to...	limpiar habitaciones	clean rooms
contestar al teléfono y ayudar a los clientes	answer the phone and help customers	preparar comida	prepare food
		servir la comida en el restaurante	serve food in the restaurant
cortar el pelo a los clientes	cut customers' hair		
cuidar las plantas	look after the plants	vender productos en la tienda	sell products in the shop
hacer manicuras	do manicures		

LP2.2 – Opiniones

Opiniones	Opinions		
¿Te gusta tu trabajo?	Do you like your job?	¿Cómo es tu jefe?	What is your boss like?
(No) Me gusta (nada) mi trabajo porque es...	I (don't) like my job (at all) because it is...	Mi jefe/a (no) es muy educado/a.	My boss is (not) very polite.
difícil	difficult	¿Cómo son los clientes?	What are the customers like?
duro	hard	Los clientes son exigentes / maleducados.	The customers are demanding / rude.
estimulante	stimulating	Mis compañeros son simpáticos.	My colleagues are nice.
estresante	stressful		
interesante	interesting		
monótono	monotonous		
repetitivo	repetitive		

LP2.3 – ¿En qué te gustaría trabajar? – What job would you like to do?

¿Cómo eres?	What are you like?		
En mi opinión, soy...	In my opinion, I am...	organizado/a	organised
Creo / Pienso que soy...	I think I am...	paciente	patient
Soy muy / bastante...	I am very / quite...	práctico/a	practical
ambicioso/a	ambitious	responsable	responsible
creativo/a	creative	serio/a	serious
independiente	independent	sociable	sociable
inteligente	intelligent		

Me gustaría ser...	I would like to be...
Quiero ser...	I want to be...
abogado/a	a lawyer
cantante	a singer
diseñador(a)	a designer
enfermero/a	a nurse
mecánico/a	a mechanic
periodista	a journalist
policía	a police officer
taxista	a taxi driver

Me gustaría...	I would like...
No me gustaría (nada)...	I wouldn't like... (at all)
trabajar al aire libre	to work in the open air
trabajar con animales	to work with animals
trabajar con niños	to work with children
trabajar en equipo	to work in a team
trabajar en una oficina	to work in an office
trabajar solo/a	to work alone
hacer un trabajo creativo	to do a creative job
hacer un trabajo manual	to do a manual job

Year 9 Spanish LP2 Knowledge Organiser

LP2.4 – ¿Cómo va a ser tu futuro? – What is your future going to be like?

¿Cómo va a ser tu futuro?	What is your future going to be like?
En el futuro...	In the future...
Voy a...	I am going to...
ganar mucho dinero	earn lots of money
hacer un trabajo interesante	do an interesting job
ir a la universidad	go to university
ser famoso/a	be famous
ser voluntario/a	be a volunteer
tener hijos	have children
viajar (mucho)	travel (a lot)
vivir en el extranjero	live abroad
Va a ser (muy) interesante.	It is going to be (very) interesting.

LP2.5 – ¿Cómo es un día típico? – What is a typical day like?

	infinitive	present	preterite	near future
regular verbs	trabajar leer decidir	trabajo leo decido	trabajé leí decidí	voy a trabajar voy a leer voy a decidir
irregular verbs	salir tener ir ser hacer	salgo tengo voy soy hago	salí tuve fui fui hice	voy a salir voy a tener voy a ir voy a ser voy a hacer

LP2.6 – ¿Cómo es un día típico? – What is a typical day like?

¿En qué trabajas?	What do you do for a living?
¿Por qué decidiste ser...?	Why did you decide to be a...?
Me gusta mucho... y por eso decidí ser...	I really like... and so I decided to be a...
Estudié... y me encantó.	I studied... and I loved it.
¿Cómo es un día de trabajo típico?	What is a typical working day like?
Hablo con clientes.	I talk to customers.
Leo mi agenda.	I read my diary.
Preparo mis cosas.	I prepare my things.
Trabajo con mi equipo.	I work with my team.
Voy a la oficina.	I go to the office.

¿Qué cualidades tienes que tener?	What qualities do you need to have?
Tienes que ser...	You need to be...
En mi trabajo, los idiomas son muy importantes.	In my job, languages are very important.
Hablo español, alemán e inglés.	I speak Spanish, German and English.
¿Cuáles son tus ambiciones para el futuro?	What are your future ambitions?
Voy a estudiar / trabajar en...	I am going to study / work in...
¡Va a ser guay / fenomenal / flipante!	It is going to be cool / fantastic / awesome!

Palabras muy frecuentes	High-frequency words		
mi/mis	my	a ver / bueno / pues	well
tu/tus	your	por eso	so / therefore
además	what's more	así que	so / therefore
más	more	primero	first
a veces	at times	luego	then
también	also		

LP2.7 – Navidad en España – Christmas in Spain

Ir a la Misa del Gallo – to go to mass

cantar villancicos – to sing carols

decorar el árbol de Navidad – to decorate the Christmas tree

Hacer una cena especial – to have a special meal

mandar postales navideñas – to send Christmas cards

Estar de vacaciones – to be on holiday

22

Birches Head Academy

Year 9 (Music) LP2 Knowledge Organiser

Key Vocabulary	
Reggae	A genre of music that originated in Jamaica.
Syncopation	Playing the music off the beat.
Rhythm	How long or short the notes are or how the music is played.
Bass	A low pitched part of the music.
Riff	A repeating phrase of a song.
Ostinato	A repeating musical pattern.
Bubble Rhythm	A pattern emphasising off beats usually played by a keyboard instrument.
Skank Rhythm	A rhythm emphasising off beats usually played on guitar.
Toasting	A type of vocal performance based around talking.
Improvisation	Making the music up on the spot, not rehearsing it.

1

Reggae is a unique form of rock music which originated in Jamaica. It has its roots in a number of other musical styles.
You can hear the influence of traditional Jamaican music as well as American rhythm 'n' blues, which would have been easily picked up in Jamaica in the early days of radio.
Music has always had a big role in the lives of Jamaican people. The roots of traditional Jamaican music can be traced back to African music due to number of Jamaicans who are descendants of Africans brought to the West Indies to work as slaves on sugar plantations.

This Learning Programme you will be learning about Reggae music, its cultural heritage and its important place in Music's rich history.

2

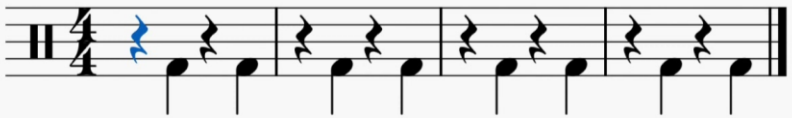
MENTO - This style of Jamaican folk music was popular in the 1950s. Like calypso it is strophic in form and has light-hearted lyrics accompanied by offbeat chords on guitar and banjo

SKA - A fast dance style with offbeat chords that emerged in the late 1950s. The lyrics tended to be about serious social issues. Folk elements of mento were mixed with the electric guitars and horn sections of rhythm 'n' blues

ROCKSTEADY - A slower style from the mid 1960s which followed on from ska. It featured a loud, repeated melody on bass guitar called a riff. The offbeat chords were emphasised and the lyrics were often political in nature.

3

The 'skank' rhythm is the most popular and well known rhythm in Reggae Music. It is often played by the guitar and sits at the top of the texture alongside the vocal. On the example opposite, you can see that the emphasis is on the second and fourth beats (SYNCOPATED)



Birches Head Academy

Year 9 (Music) LP2 Knowledge Organiser

Reggae emerged in the late 1960s:

- Time signature of 4/4 (common time) with heavy accent on the 2nd and 4th beat
- Strophic form – verse/chorus structure (this is typical of popular music)
- Typical rock instrumentation – vocals, backing vocals, electric guitar, bass guitar and drum kit (some versions of reggae use a horn section e.g. brass instruments)
- Prominent riff played on bass guitar
- Simple diatonic chord sequences (often in a major key)

4

REGGAE DRUM GROOVES		Have a listen...
One Drop	You don't hit on beat 1. You play the kick drum on beat 3.	'One Drop' – Bob Marley
Stepper	The kick drum is played on all 4 beats, which gives a strong driving rhythm.	'Exodus' – Bob Marley
Rocker	Beats 1 and 3 are emphasised.	'Night Nurse' – Gregory Issacs

6

Bob Marley

BOB MARLEY was a famous reggae singer, **SONGWRITER**, and musician who first became famous in his band The Wailers, and later as a **SOLO ARTIST**. He was born on February 6th, 1945 in Nine Mile, Jamaica. Although he grew up in poverty, he surrounded himself with music and the Rastafarian movement influenced his music style greatly. Bob Marley's career flourished and he became a cultural icon. He was the first international superstar to have been born in poverty in a Third-World country.

Sub genres such as dub also formed, consisting of recycled and remixed rocksteady and ska tunes, incorporating a toaster, essentially an MC, who spoke over the song with Rastafarian messages.
The dancehall genre also emerged using digital reggae influenced rhythms.
By 1978 a failing economy and political unease was at its peak and political issues along with the musical tradition all came together in reggae to form strong lyrics with an uplifting sound to empower.
Reggae's presence can still be felt today, influencing genres such as punk, hip hop and rock through artists such as Eric Clapton, Sean Paul, Rihanna, Protoje and Chronixx.

7

DEVELOPMENT OF REGGAE

5

MENTO:

- Jamaican folk music popular in the 1950s
- Used guitar, banjo & drums
- Featured lots of verses (Strophic Form)
- Light-hearted lyrics of every day life

SKA:

- Fast dance music that emerged in the late 1950s
- Fuses American Rhythm & Blues with Mento rhythms
- Uses electric guitars and jazzy horn sections (trumpets, saxophones & trombone)
- Uses offbeat jumpy rhythms
- Has lyrics about local issues

REGGAE:

- Slower than Ska and emerged in the 1960s
- Amplified bass guitar riffs
- Associated with **rastafarianism** (a religious movement worshipping Haile Selassie)
- Characteristic rhythm in 4/4 with missing beat emphasis
- Repeated off beat quavers
- Verse & Chorus form

ROCK STEADY:

- Dance music that emerged in the mid-1960s
- Rhythms more relaxed than Ska
- Loud bass guitar playing steady 4/4 beat
- Political themes in lyrics

DUB:

- Popular in the 1970s
- Instrumental remixes of existing reggae tracks
- Most of the vocals would be removed
- Drum and bass parts emphasised
- Effects such as echo delay and reverb added.
- Early form of popular electronic music.

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Y9 LP2 Physical Education Knowledge Organiser - Netball

This Learning Programme you will master the fundamental movement skills and knowledge of team games. LP3 you will explore a new team game and the rules, regulations and scoring systems in that sport.

Key Vocabulary	
Tactical Skills	The ability to make smart decisions and apply strategies during a game.
Attack	The actions taken by a player or team to try to score points or goals.
Defence	The actions and strategies used by a player or team to prevent the opponent from scoring.
Free space	An open areas on the filed, court or pitch where no players are present, allowing an athlete to move, pass or shoot.
Losing an opponent	Successfully moving away from a defender to create space or gain advantage.
Coordination	The ability to use different parts of the body smoothly and efficiently together.
Agility	The ability to move quickly and easily while changing direction
Reaction Time	The speed at which an athlete responds to a stimulus
Power	The ability to perform a strong and explosive movement quickly.
Stamina	The ability to sustain physical and mental effort over a long period of time.

Key Skills

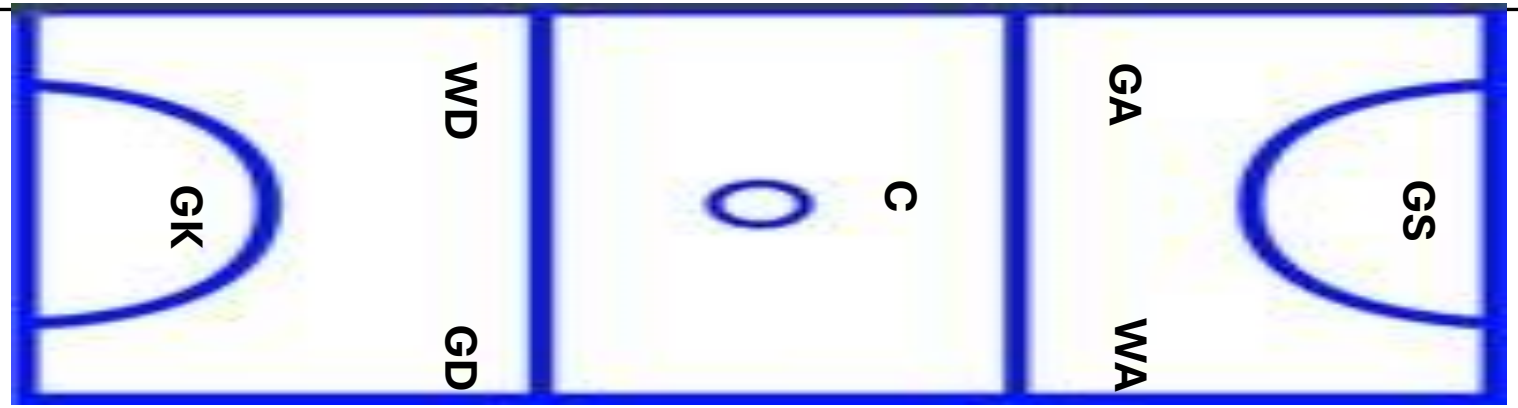
Passing – Various passes are used within a game; chest, bounce, overhead and shoulder with control and accuracy.

Catching – A skill used to receive the ball, enabling the team to keep possession of the ball. Catching is consistent and accurate

Footwork - Control is demonstrated when catching the ball performing both two- and one-foot landing.

Dodging –Advanced techniques to outwit opponents. A change of speed and direction in order to get free into space to receive the ball

Shooting - Fluency, control and accuracy when shooting. A skill used by Goal Attack and Goal Shooter within the game to score a goal



All sideline and back line passes must be taken behind the court lines.

Centre must step into the immediate, delaying play is not allowed.

A player must not drop the ball and then retrieve it, this is known as replaying the ball

A free pass given in the circle must be a pass, a shot is not allowed.

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Y9 LP2 Physical Education Knowledge Organiser - Netball

LP2.1

Students will know how to demonstrate different attacking principles through the use of width and seed and demonstrate a variety of passes with accuracy, control and fluency and evaluate the effectiveness of passing in a game situation.

LP2.2

Students will know how to demonstrate effective attackingg using dodging, speed and agility to outwit a defender, students will develop team tactics of attack, including use of space and playing forward.

LP2.3

Students will know how to demonstrate good ball control and maintain possession in some competitive situations, students are able to explore the benefits of strategic and tactical approaches to outwit opponents.

LP2.4

Students will know how to explore defensive skills including zonal and man to man marking, students will learn the benefits of strategic and tactical approaches to outwit approaches.

LP2.5

Students will know how to explore the positions and strategic formation used to prevent attack from opposition and demonstrate strategic and tactical plays in a competitive situation.

LP2.6

Students will know how to demonstrate outstanding knowledge and understanding of the rules and regulations.

LP2.7

Students will know how to explore set plays within a game situation to defend and attack effectively and know how to evaluate their performance against the assessment grid.

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Year 9 R.E LP2 Knowledge Organiser

This Learning Programme you will be reflecting to year 7 where you will look at ultimate questions again, with a mature focus particularly on abortion, euthanasia and life after death.

Key Vocabulary	
Euthanasia	The painless killing of a person who is suffering from an incurable and painful disease
Sanctity	Being holy, sacred or saintly
Assisted suicide	The act of deliberately assisting another person to kill themselves
Dominion	The power or right of governing and controlling
Stewardship	To look after the world for God.
Conception	When the sperm fertilizes the egg and the egg implants in the wall of the uterus
Quality of life	The standard of health, comfort, and happiness experienced by an individual or group

1

Why is life special?

Sanctity of life means that life is holy and sacred. Christians believe that human life is holy because it is a gift from God. This means human life is to be valued and preserved. This means that humans do not have the right to treat life as they wish. Life belongs to God.

How is life shown as sacred in the Bible?

- Human life is special because it comes directly from God and made "in his image".
- The Bible makes the special nature of human life clear in the 10 commandments where it says 'Though shall not kill'.
- St Paul describes the human body as a temple because God's spirit is in humans.

2

When does life begin?

What is abortion? **Termination of a pregnancy. This may involve taking medication or a surgical procedure.**

What does British Law say about abortion?

- The 1990 Abortion Act states that an abortion cannot happen after 24 weeks of pregnancy.
- The 1967 Abortion Act states that an abortion can be carried out in a medical facility if the mothers life, mental or physical health is at risk, the health of existing children is at risk or the baby is thought to be severely handicapped.

What do Humanists/atheists think about abortion?

Most Humanists believe that abortion should be allowed because:

- A foetus is not a life until it can survive outside of the mothers womb.
- A woman should have the rights to her own body.

What do Christians think about abortion?

Roman Catholics (against)	Liberal protestant (support)
Catholics believe that adoption is always a better	They believe that life does not begin at conception
Life begins at conception.	Parents should be allowed abortions on the basis of medical tests.
The Ten Commandments teach that it is wrong to take life;	Jesus told Christian to love their neighbour as themselves, and abortion may be the most loving thing to do
Life is holy and belongs to God, therefore only God has the right to end a pregnancy	If abortions were banned, rich women would pay for abortions in another country, but the poor would use 'back street' abortions

3

Euthanasia

The painless killing of someone suffering from a painful disease. (good death)

Forms of euthanasia are:

- Assisted suicide (provided someone with the means to commit suicide)
- Voluntary euthanasia (ending someone's life as they ask you to)
- -Non-voluntary (ending someone's life as they cannot ask but you believe it is the best for them).

In the UK, all forms of euthanasia are illegal and can lead to a charge of murder. However, UK law agrees that removing of life support or nutrition or not providing medication for someone close to death are acceptable. This is known as passive euthanasia.

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Year 9 R.E LP2 Knowledge Organiser

4

What happens after we die?

Why Christians believe in life after death?

Christians believe that this life is not all there is. They believe that God will reward the good and punish the bad in some form of life after death. They believe this because:

- The main Christian belief is that Jesus rose from the dead. If Jesus rose from the dead then there must be life after death.
- Jesus taught that he would come again at the end of the world for final judgement to send to heaven or hell
- All Christian Churches teach about life after death
- Many Biblical references to heaven and hell (St. Paul).

What do Muslims believe about life after death?

Muslims believe that Allah will raise the dead on Judgement Day. People will be divided by good] and bad deeds, before being sent to paradise (Jannah) or Jahannam (hell).

5

Animal rights

Animal testing is the procedures performed on animals for the purpose of research or testing the safety of new products.

The animal rights movement strives to make the public aware of the fact that animals are sensitive, emotional and intelligent beings who deserve kindness and respect.

The UK passed the Animal Welfare (Sentience) Bill in 2022. This provides animal rights activists with legal backing to oppose exploitative industries and practices.

Animal rights is a philosophy that argue that animals, domesticated, farmed and wild, deserve basic rights. Whereas, **animal welfare** take a pragmatic approach to the use of animals and demand protective rules and laws regarding the treatment of animals

Stewardship vs dominion

The term **stewardship,** means to look after the world for God. God has created a world in which humans have a special role as stewards of creation. This means they should look after the interests of the planet and all life on it.

The term **dominion,** means to rule over nature. This is the idea that humans oversee the world on behalf of God. Some Christians who have a literal interpretation of the Bible believe that this gives humans the right to use the world's natural resources for their own benefit.

6

Medical ethics Is the idea of what is right/wrong in medicine.

Organ donation is giving organs to be used in transplant surgery, whilst transplant Surgery is removing organs from one person and transplanting them into someone else. Most **Christians** agree with transplant surgery as they believe in the sanctity of life, Jesus healed the sick and transplants do the sqme, and the Bible says the 'body is a temple of the Holy Spirit' this means we should look after it. However, others may disagree as the donor may not be a Christian and may have sinned, and it could be breaking God's plan. **Muslims** also believe life is sacred as it was created by Allah and Allah gave doctors the knowledge and intelligence to transplant organs. Although some are against t, as the body should be buried intact for Judgement Day and interferes with God's plan.

7

Are we more than mere matter?

The belief that humans have both a body and another separate, invisible part such as a mind or soul is called **dualism.** The opposite of dualism is **materialism.** Materialists believe that the only thing that exists is physical matter and the movement, or physical reactions, of this matter. This means that there is no part of humans that is not physical. Our consciousness or mind is not separate, invisible part of us; it is just a word used to describe what our matter does. Our thought, memories, opinions and emotions are the movement, activity or physical reactions of our physical matter or body. This view has big consequences. If materialists are right, then when we die, our matter simply decays and there is no separate part of us that lives on.

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Year 9 Science LP2 Knowledge Organiser

This Learning Programme you will be learning about Energy and The Periodic Table

Key Vocabulary	
Energy	**Energy** is the ability to do work or cause change. It comes in many forms, like heat, light, sound, and movement. Energy can't be created or destroyed.
Temperature	**Temperature** is a measure of how hot or cold something is. It tells us how much thermal energy (heat) the particles in a substance have.
Conduction	**Conduction** is the way heat moves through solids. When one part of a solid gets hot, the particles vibrate and pass the energy to nearby particles.
Convection	**Convection** is how heat moves through liquids and gases. Warm particles rise because they are lighter, and cooler particles sink.
Radiation	**Radiation** is how heat travels through empty space. It doesn't need particles to move.
Element	A substance that cannot be broken down into simpler substances.
Atom	An atom is the smallest part of an element and is made up of protons (+), neutrons and electrons (-).
Ion	An ion is an atom that has gained or lost electrons, giving it electric charge.
Metal	Elements that are typically shiny, good conductors of heat and electricity.
Non-metal	Elements that are dull and poor conductors

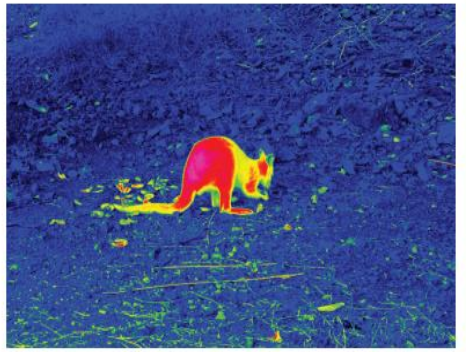
1 Energy and temperature

- The **temperature** of a substance is a measure of how hot or cold it is
- Temperature is measured with a **thermometer**, it has the units of degrees Celsius (°C)

- The **thermal energy** of a substance depends on the individual energy of all of the particles, it is measures in Joules (J)
- As all particles are taken into account, a bath of water at 30 °C would have more thermal energy than a cup of tea at 90 °C as there are many more particles
- The faster the particles are moving, the more thermal energy they will have
- When particles are heated they begin to move more quickly
- The energy needed to increase the temperature of a substance depends on:
  - the mass of the substance
  - what the substance is made of
  - how much you want to increase the temperature by

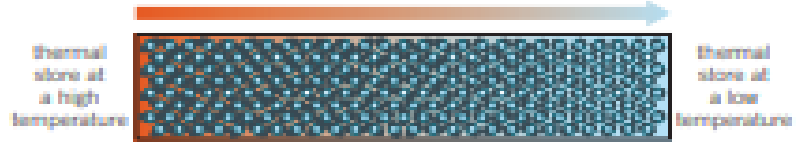
3 Radiation

- **Radiation** is a method of transferring energy without the need for particles
- An example of radiation is thermal energy being transferred from the Sun to us through space (where there are no particles)
- This type of radiation is known as **infrared radiation**, it is a type of wave just like light
- The hotter an object is the more infrared radiation it will emit (give out)
- The amount of radiation emitted and absorbed depends on the surface of the object:
  - Darker matte surfaces absorb and emit more infrared radiation
  - Shiny and smooth surfaces absorb and emit less infrared radiation, instead reflecting this
  - The amount of infrared radiation being emitted can be viewed on a **thermal imaging camera**



2 Conduction

- **Conduction** is the transfer of thermal energy by the vibration of particles, it cannot happen without particles
- This means that every time particles collide they transfer thermal energy
- Conduction happens effectively in solids as their particles are close together and can collide often as they vibrate around a fixed point
- Metals are also good **thermal conductors** as they contain electrons which are free to move
- In conduction the thermal energy will be transferred from an area which has a high **thermal energy store** (high temperature) to an area where there is a low thermal energy store (low temperature)
- Gases and liquids are poor conductors as their particles are spread out and so do not collide often, we call these **insulators**



2 Convection

- **Convection** is the transfer of thermal energy in a liquid or a gas, it cannot happen without particles
- As the particles near the heat source are heated they spread out and become less dense, this means that they will rise
- More dense particles will take their place at the bottom nearest the heat source creating a constant flow of particles
- This is known as a **convection current**
- Convection cannot happen in a solid as the particles cannot flow, they can only move around a fixed point

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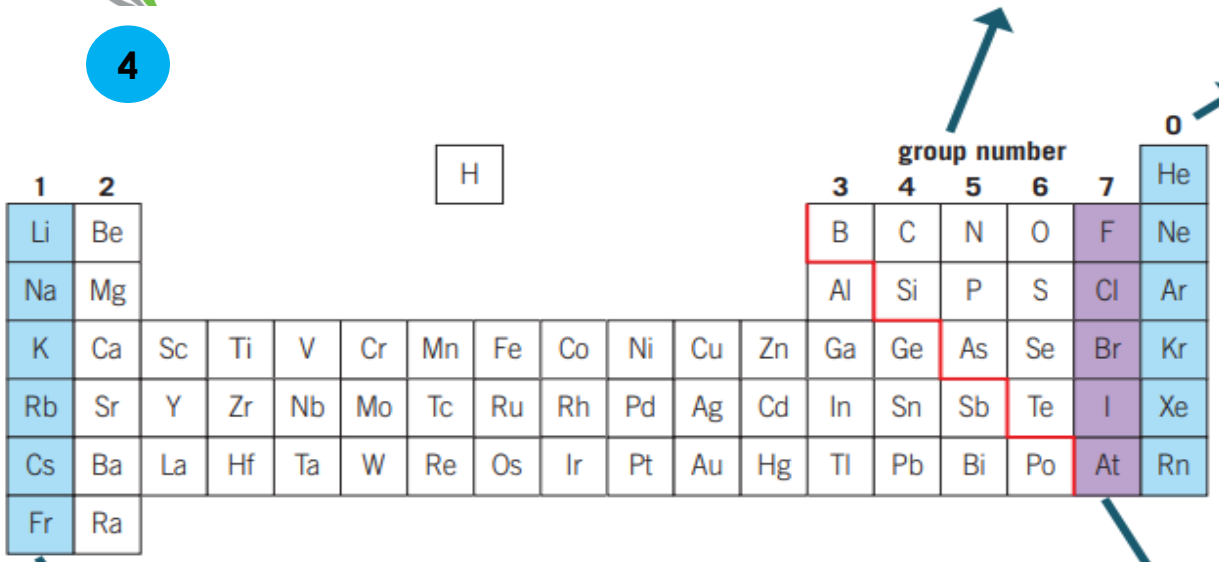
Year 9 Science LP2 Knowledge Organiser

4



5 Group 1

- **Group 1** elements are also known as the **alkali metals**
- They share similar properties with other metals such as:
  - Being shiny when freshly cut
  - Being good conductors of electricity and heat
- Group 1 metals are much softer than other metals and also have much lower melting and boiling points
- Group 1 elements react with water to form alkali solutions

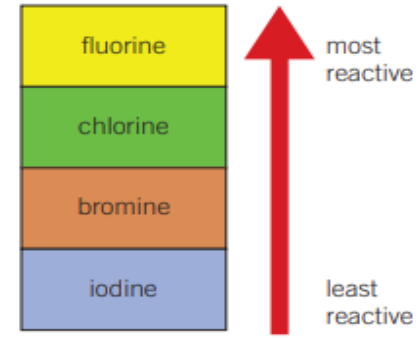
lithium + water → lithium hydroxide + hydrogen
metal + water → metal hydroxide + hydrogen

- The further down the group that the metal is, the more vigorous the reaction will be. This is called a **trend**
- Another trend seen in Group 1 is with the boiling and melting points: the further down the group, the lower the boiling and melting points are

7 Group 0

- **Group 0** elements are known as the **noble gases**
- They are all non metals with low melting and boiling points, meaning all are gases at room temperature
- The boiling point decreases going down the group
- All of the group 0 elements are unreactive
- When electricity is passed through the gas, they emit a brightly coloured light, this can be seen in neon signs

Halogens

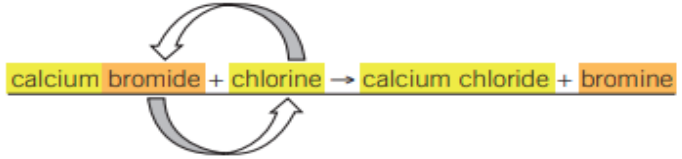


6 Group 7

- **Group 7** elements are also known as the **halogens**
- They share similar properties with other non metals such as:
  - Having low melting and boiling points
  - Not conducting electricity
  - Moving down the groups the elements have an increased melting and boiling point
- The halogens also react in a similar way to one another, for example with iron:

iron + chlorine → iron chloride
iron + bromine → iron bromide

- Halogens can undergo **displacement reactions**, this is where a more reactive halogen will take the place of a less reactive halogen
- The most reactive halogens are at the top of the group, and the least reactive halogens are at the bottom of the group
- If the most reactive halogen is on its own, it will take the place of the less reactive halogen in a compound



Y9 LP2 Technology Knowledge Organiser – Food Technology - Cultural Cuisine: ill health and cross contamination

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This Learning Programme you will be learning about different cooking and preparation techniques. Understand the effects of temperature on bacteria and how to prevent cross contamination

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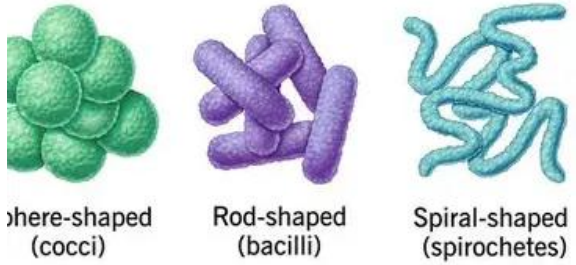
1: Identify what cross contamination is
2: Explore how bacteria grows
3: Understand the effects of temperature
4: Explore food poisoning and its symptoms



KEY VOCABULARY	DEFINITION
Cross contamination	The unintentional transfer of bacteria.
Bacteria	Small single cell organisms that can be seen with a microscope
Preparation	The process of preparing is being ready for an action
Temperature	The degree or intensity of heat/cold
Control	Being in charge of
Symptoms	A physical or mental feature
Visible	Can be seen
Non visible	Cannot be seen
Cuisine	A style or method of cooking

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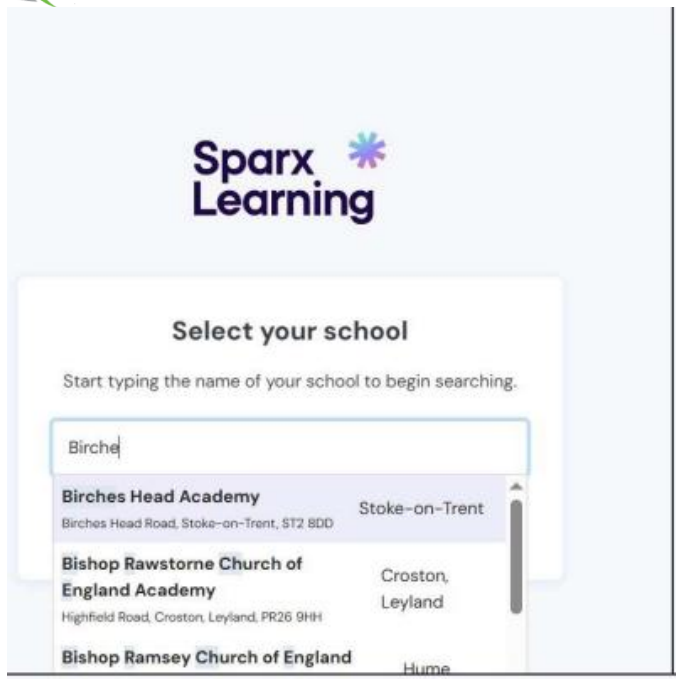
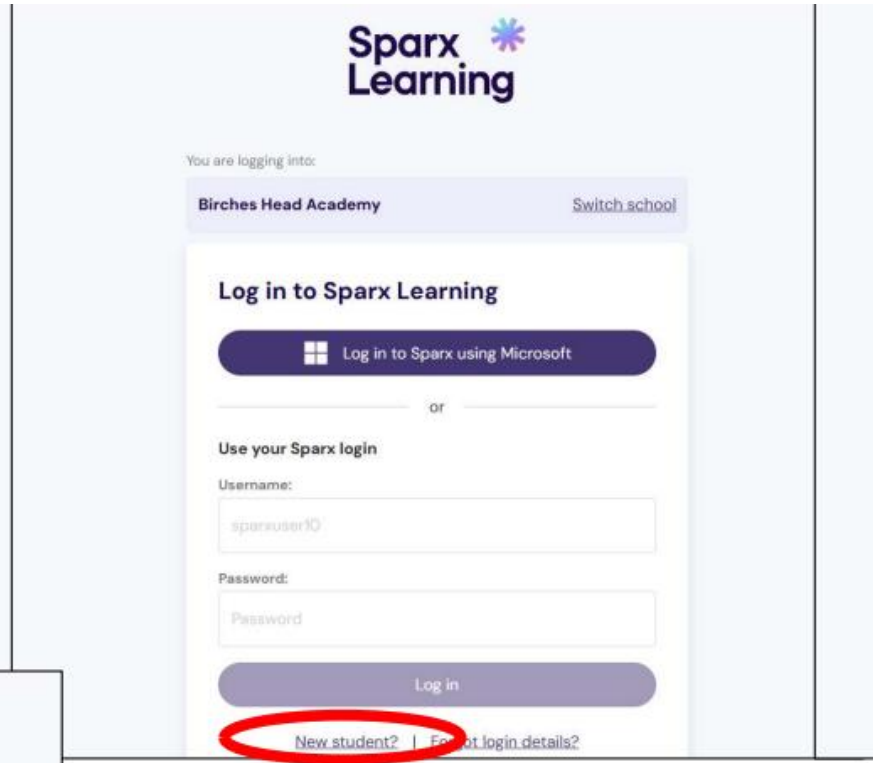
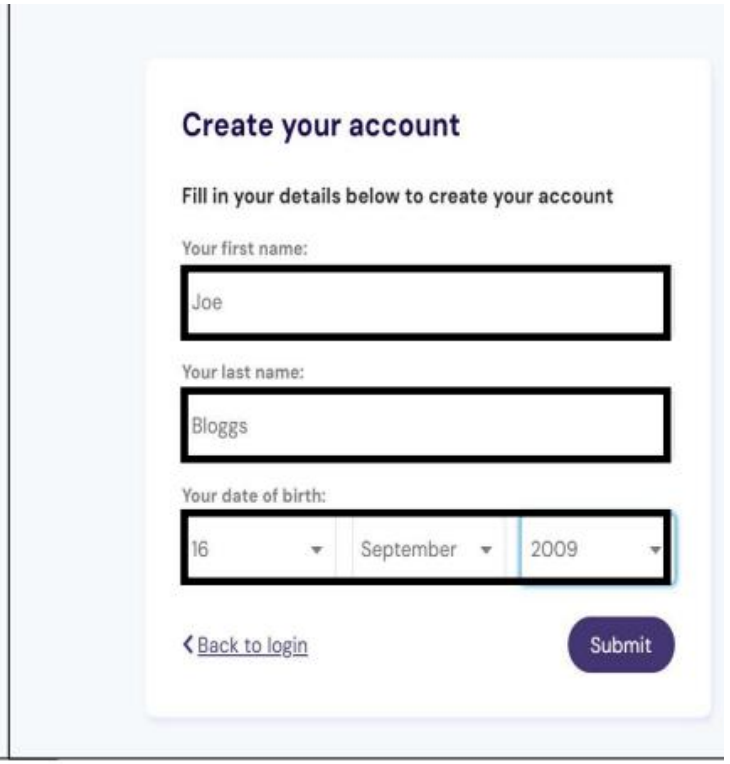
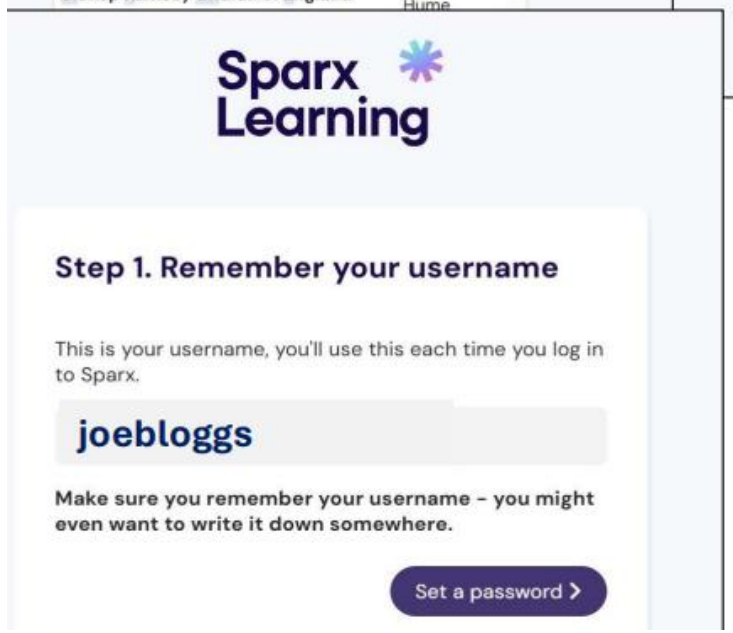
SPARX MATHS INSTRUCTIONS









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