



Frank Field
Education Trust

“The view from space is really very special. From the window you can look back at the earth and see the stars around you. I just hope that more people from Britain get the chance to experience it.”

- Helen Sharman

Helen Patrica Sharman OBE is a British chemist who became the first British astronaut and first woman to visit the MIR space station in 1991.



Year 8 Knowledge Organiser

Learning Programme 5

Pupil Name:

Form Group:

Contents page

Content	Page
Instructions to use the Knowledge Organiser	3
How do I self-quiz?	4
Homework diary	5-7
Art	8
Drama	9
English	10-11
Geography	12-13
History	14-15
ICT	16-17
Maths	18-19
Modern Foreign Languages	20-21
Music	22-23
Physical Education	24-25
Religious Education	26-27
Science	28-29
Technology	30
SPARX Maths and Science	31
The Oracy Compass	32

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

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>

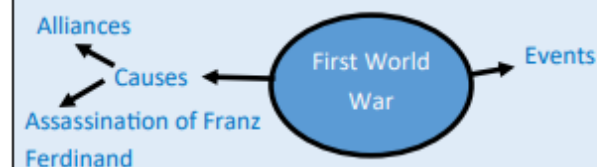
How to use... Look, Cover, Write, Check and Correct

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	Algorithm	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.

Act 1: **Hermia** and **Lysander** love each other but are not allowed to marry so decide to run away to the forest to get married in secret. **Demetrius** wants to marry **Hermia**. **Helena** loves **Demetrius**. They follow **Hermia** and **Lysander** into the forest.



Week	Subject	Task
LP5.1	English	Complete the retrieval quiz and task 1 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	History	Create a mind map of the things people could and could not do under DORA.
	RE	Describe the causes of 9/11.
	Art	Create a mind map with all of your final piece ideas.
	Technology	Write three descriptions of your final ideas, detailing how they are in response to Bauhaus and Memphis.
IT	Complete the task on Seneca.	

Week	Subject	Task
LP5.2	English	Complete the retrieval quiz and task 2 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	Geography	List the African countries which are on the Equator and the Greenwich Meridian.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Look at the key vocabulary. Choose 5 and learn the spelling and definition. Look, cover, write to test yourself.
	Music	Find out about job roles in the music industry. For each one define how their role is different to the role of the songwriter.
PE	Use the 'Look, cover, write, check' method to list the key training principles/key terms of striking and field sports.	

Week	Subject	Task
LP5.RLW	ALL	<p>This week is an opportunity to work on knowledge that has been identified during lessons as key areas for development.</p> <p>This could be additional revision and recall tasks from the knowledge organisers or it could be specific tasks set by classroom teacher.</p>

Week	Subject	Task
LP5.3	English	Complete the retrieval quiz and task 3 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	History	Create your own definition for 5 of the key vocab words.
	RE	Look, cover, write and check the definitions for the key words.
	Art	Select one final piece idea and sketch it, annotate and label to explain your idea, what materials you will use.
	Technology	Write three descriptions of your final ideas, detailing how they are in response to Bauhaus and Memphis.
	IT	Complete the task on Seneca.

Week	Subject	Task
LP5.4	English	Complete the retrieval quiz and task 4 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	Geography	State 3 things which have surprised you so far when learning about Africa.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Learn and rehearse your lines and movement for your PRT.
	Music	Create a poster about 'What Makes A Good Pop Song?'
	PE	Create a list of the positions (team sports) or events in your sport (striking and fielding).

Week	Subject	Task
LP5.5	English	Complete the retrieval quiz and task 5 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	History	Write a PEE paragraph explaining why the Treaty of Versailles impacted countries after WW1.
	RE	Describe the impact religious differences can have on creating wars.
	Art	Draw an A5 natural forms themed pencil drawing, focus on the use of various tones to create form.
	Technology	Draw a labelled diagram of your final piece, annotate it to include your thought process and how it links to the design movements.
IT	Complete the task on Seneca.	

Week	Subject	Task
LP5.6	English	Complete the retrieval quiz and task 6 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.
	Geography	Describe the features of one of Africa's biomes.
	Spanish	Use your knowledge organiser to revise the vocabulary for a short vocabulary test.
	Drama	Learn and rehearse your lines and movement for your PRT.
	Music	Complete the musical elements activity in your homework booklet.
	PE	Practice some of the key techniques that are used within your sport/activity at home.

Week	Subject	Task
LP5.7	English	Complete the retrieval quiz and task 7 from the homework booklet.
	Maths	Complete the Maths homework task set on Sparx Maths.
	Science	Complete the Science homework task set on Sparx Maths.

Natural Forms

This Learning Programme you will be focusing on completing your final piece.

1. Evaluate your work so far
2. Elore your ideas
3. Explore your ideas
4. Test your process' and materials
5. Produce final piece
6. Produce final piece
7. Refine final piece



Key Word	Definition
Resolution	The level of detail in an image or artwork; higher resolution means clearer and sharper detail.
Evaluate	To judge or review something carefully, explaining what works well and what could be improved, and why.
Tone	The lightness or darkness of a colour or shade, used to create form, depth, and mood.
Texture	The surface quality of an artwork, either real (how it feels) or visual (how it looks like it feels).
Refine	To improve or adjust an artwork by making thoughtful changes to details, techniques, or ideas.
Reflect	To think carefully about your work or the work of others, considering decisions, outcomes, and improvements.
Observational	Drawing or creating art by closely looking at real objects, people, or scenes from life.
Art Elements	The basic visual components used in art, such as line, shape, form, tone, texture, colour, and space.

A01 EXPLORE
 BEGIN TO LINK A
THEME IMAGES
 TO YOUR CHOSEN ARTISTS WORK
 WRITTEN ANALYSIS
 LINK ARTISTS WORK TO
 IDEAS AND ARTWORK

A02 EXPERIMENT
 WITH A
RANGE
 OF MEDIA
 TEXTILES WATERCOLOUR
 CLAY MIXED MEDIA
 PHOTOGRAPHS
 OIL PASTEL

A03 IDEAS
 LINKING TO
 ARTISTS WORK
 ALL ARTWORK
 LINKING TOGETHER
 PLANS, DESIGNS
 IN A RANGE OF EXPLANATIONS
 DIFFERENT MEDIA ANNOTATION

A04 FINAL
 MEANINGFUL
 PIECE OF WORK
 INFORMED SHOW UNDERSTANDING
 RESPONSE
 LINKS
 LINK BETWEEN TO ARTISTS WORK
 VISUALS AND ARTISTS
 PRESENTATION RELEVANT

This Learning Programme you will be learning about:

PLATFORM THEATRE

Key Vocabulary

Collaboration	Collaboration - Working together with other individuals.
Devising	Devising - the process of creating theatre.
Efficiency	Efficiency – Using the least amount of energy and effort to create a desired movement i.e. transition.
Static Staging	Static staging - Staging that stays still throughout the scene and is constructed to assist the overall look of the image.
Interactive staging	Interactive staging – A scene created which is choral based and interactive eg. a talking door.

LP2.1

LP2.2

LP2.3

LP2.4

LP2.5

LP2.6

LP2.7

AIM / INTENTION

- To be a cost-effective and therefore accessible style of theatre.
- To focus on the actors' physical performance, voice and movement to tell a story.
- To hold a minimalist approach to devising relying on the actors to create everything within a limited space.
- To encourage exploration of various theatrical techniques such as multi-rolling, mime and choreographer movement.

Box House Theatre are a professional theatre company who specialise in Platform Theatre. They create, perform and teach theatre. The company has two co-owners, Lewis Evans and Amy Fielding who both visited BHA to teach a workshop in 2024. They currently have 6 other actors in their company. Platform Theatre is Box House Theatre's brand-new theatre style that restricts actors to the confined space of a gym mat. This style is incredibly unique as the actors do not have assistance from props, set, costume and sound. This means the actors only have their physical selves and voice to tell their stories.



Mime – Movement without sound

Choral movement – Movement which uses unison to be completely synchronised as an ensemble.

Multi-roleing – Adapting the voice and physicality to represent more than one character.

Audible cue – A breath or sound such as 'shtum' used to trigger movements. The breath is to prepare the cast. The 'sh' triggers the cast and lasts throughout the movement. The 'tum' is the end point of the mark.

Use of body to create set – Box House Theatre use their body to create static staging and interactive staging.

Prop making - Using two fingers to draw the prop for the audience. This creates clear and concise start and end points of the prop.

Group prop – When all the actors in the cast come together as one to create the different elements of an inanimate object.

In this unit on Blood Brothers, you will explore the plot, characters, themes and context of the play. You will learn how Willy Russell uses characters, themes, language and dramatic techniques to explore ideas such as class, fate and family in Blood Brothers.

Key Vocabulary

Context	Context is the information around something (like a word, event, or quote) that helps you understand its meaning.
Narrator	A narrator is the voice that tells or comments on a story.
Foreshadowing	Foreshadowing is when a writer gives clues or hints about something that will happen later in the story.
Contrast	Contrast is when a writer shows differences between things to highlight ideas.
Symbol	A symbol is something that represents a deeper meaning.
Fate	Fate is the idea that events may already be decided and cannot be avoided.
Technique	Techniques are the methods a writer uses to create effects.
Interpretation	An interpretation is an explanation of what a text means.

1

LP 5.1

I will know how context shapes Blood Brothers, including social class and setting, and how life in Liverpool influences characters why characters face difficult choices

2

LP 5.2

I will know how the narrator and structure guide the audience, and what role the narrator plays in the play how tension and foreshadowing are created

3

LP 5.3

I will know how characters are contrasted, especially Mickey and Edward, and how their lives are different why those differences matter

4

LP 5.4

I will know how symbols, songs and stagecraft create meaning, and what key symbols represent how music and staging affect the audience

5

LP 5.5

I will know how fate and superstition influence events, and how the idea of fate is shown whether characters have real choice

6

LP 5.6

I will know how writers use techniques deliberately, and which techniques Willy Russell uses what effects those techniques create

7

LP 5.7

I will know how to form interpretations of the play, especially the ending, and how themes are revealed how to explain ideas using evidence

Plot:

Blood Brothers tells the story of twin brothers, Mickey and Edward, who are separated at birth and raised in very different families. Although they become friends without knowing they are brothers, their lives are shaped by class differences, fate and difficult choices, leading to a tragic ending.



“The devil’s got your number.” - The Narrator

Characters:

The play focuses on characters such as:



- **Mrs Johnstone**, a struggling mother
- **Mrs Lyons**, who adopts one of the twins
- **Mickey**, who grows up in poverty
- **Edward**, who grows up wealthy
- **Linda**, who is the twins' best friend
- **The Narrator**, who warns of tragedy.



Through these characters, Russell explores relationships, conflict and society.

Playwright:

Willy Russell is a British playwright and writer from Liverpool. His work often explores ordinary people's lives, especially issues like class, education and inequality, which are central to *Blood Brothers*.



Context:

The play is set in Liverpool and reflects issues in Britain in the **1960s–1980s**, including **poverty, unemployment and social class divisions**. Understanding this context helps explain the characters' struggles and the choices they make.

Themes:

Important themes in *Blood Brothers* include class inequality, fate versus free will, family, friendship and superstition. Willy Russell uses these ideas to explore whether people control their own lives or are shaped by society and destiny.

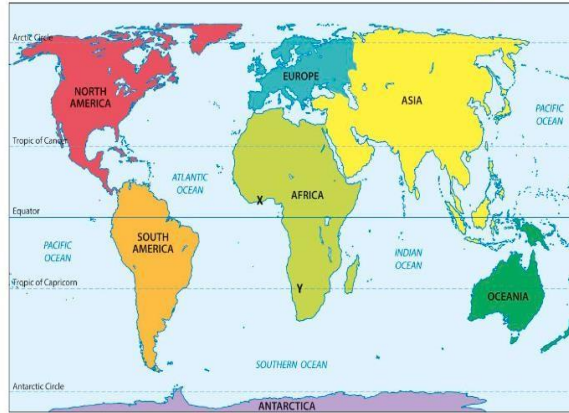


This Learning Programme you will be learning about the continent of Africa, and its wide ranging diversity.

Key Vocabulary

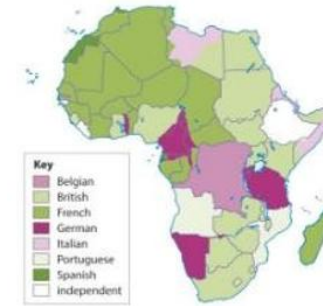
Diversity	The range of different people, cultures, environments, or species in an area.
Population	The number of people living in a particular place.
Biome	A large natural area with similar climate, plants, and animals, such as desert or rainforest.
Features	Natural or human characteristics of a place, such as mountains or cities.
Relief	The shape and height of the land, including mountains, valleys, and plains.
Landscape	The visible features of an area of land, including natural and human features.
Conflict	A serious disagreement or fighting between groups or countries.
Ghana	A country in West Africa, known for political stability and economic growth

1



A little History

Who colonised Africa?



The European colonisers took away resources like gold timber and rubber. So, they got richer, and Africa did not.

European slave traders took at least 10 million Africans to work on plantations in North America this made the Europeans richer

2

Africa Today

Africa is the second largest continent in both area and population. Africa has a population of 1.3 billion people. Africa has a young population, over half are under 20 years old. 60% of African's depend on farming for a living. There are hundreds of different ethnic groups- many have their own traditions.



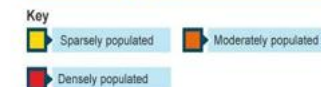
What are Africa's Main Physical Features



- Sahara Desert
- Mount Kilimanjaro
- Victoria Falls
- Atlas Mountains

- The Nile
- Lake Chad
- Ethiopian Highlands
- Mt Kenya
- Kalahari Desert

Population distribution in Africa



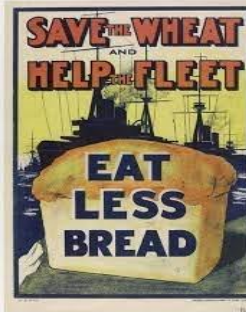
3

Weapon	Key features
Rifle	<ul style="list-style-type: none"> Slow (20 bullets per minute) Accurate Snipers used them to kill any soldier with his head above the trenches.
Machine gun	<ul style="list-style-type: none"> One of the deadliest weapons Up to 10 bullets per second Caused 40% of all British wounds 200,000 French lost in 12 days
Artillery	<ul style="list-style-type: none"> Huge guns that shot bombs or shells. Could shoot up to 13 miles. Caused shrapnel when shells exploded, cutting the enemy Caused shell-shock
Gas	<ul style="list-style-type: none"> First used in 1915. Chlorine Gas: suffocated the lungs. Mustard Gas: rotted the body, skin blistered and eyes bulged.
Tank	<ul style="list-style-type: none"> Armour-plated Maximum of 4 - 8mph Broke down easily Could travel over mud and barbed wire.
Flame-thrower	<ul style="list-style-type: none"> Powered by oil Could shoot up to 15 m Deadly in small spaces.

This Learning Programme you will be learning about How WW1 changed life in Britain for various groups, both socially and politically.

Key Vocabulary

Daylight saving	time as adjusted to achieve longer evening daylight in summer by setting the clocks an hour ahead of the standard time.
suffrage	The term given for the right to choose or vote, mainly used for the fight for woman's voting rights.
Gurkhas	A group of soldiers from Nepal, who fought for Britain.
Penicillin	Newly discovered antibiotic used in WW1 to kill bacteria and kill infections.
Decolonisation	the process of a colony becoming independent from an Empire.
Treaty of Versailles	Peace treaty created at the end of WW1 to attempt to prevent future wars.
interpretation	A historical source of information, written from an individual's perspective



Defence of the Realm Act

These were a list of laws which told people in Britain what they could and could not do in WW1. These rules were issued in 1914, days after the outbreak of war and included:

- No-one is allowed to talk about naval or military matters in public places.
- No-one is allowed to spread rumours about military matters.
- No-one is allowed to buy binoculars.
- No-one is allowed to ring church bells.
- No-one is allowed to buy rounds of drinks in pubs.
- Beer is to be watered down.
- Pub opening hours to be reduced.
- The government could take over any land it wanted.
- The government could censor newspapers.

The WAAC

The Women's Army Auxiliary Corps was formed during World War One. The WAAC was organised into four units: cookery, mechanical, clerical and miscellaneous.

To be accepted into the Women's Army Auxiliary Corps, you had to provide two references and go before a selection board. They also had to have a medical exam. Far more women applied to join the Women's Army Auxiliary Corps than had been anticipated. The Army Council Instruction Number 1069 of July 7th, 1917, is the date considered to be the official start of the Women's Army Auxiliary Corps.

Pay in the Women's Army Auxiliary Corps was dependent on work done. In the lower ranks, unskilled work was paid at the rate of 24 shillings a week. Shorthand typists could get 45 shillings a week. 12 shillings six pence was deducted per week for food though uniforms and accommodation were free.

Women's Land Army.

Because of naval battles and blockades during the war food supplies from abroad became scarce and food production on the home front had to be massively increased, in Britain 113,000 women joined the Women's Land Army which was set up in 1917, to provide a workforce to run the farms.

Role of women

VAD

The Voluntary Aid Detachment (VAD) was a voluntary unit providing field nursing services, mainly in hospitals, in the UK and various other countries in the British Empire.

By the summer of 1914 there were over 2,500 Voluntary Aid Detachments in Britain. Of the 74,000 VAD members in 1914, two-thirds were women and girls

At the outbreak of the First World War VAD members eagerly offered their service to the war effort. The British Red Cross was reluctant to allow civilian women a role in overseas hospitals: most volunteers were of the middle and upper classes and not used to hardship and traditional hospital discipline. Military authorities would not accept VADs at the frontline. However, the growing shortage of trained nurses opened the door for VADs in overseas military hospitals. Female volunteers over the age of twenty-three and with more than three months' hospital experience were accepted for overseas service. As the war dragged on and due to terrible battles such as the Somme in 1916, more and more nurses were needed.

During four years of war 38,000 VADs worked in hospitals and served as ambulance drivers and cooks. They were invaluable in the hospitals during wartime. Many were decorated for distinguished service.

Munitionettes

Early in the war, the UK munitions industry found itself having difficulty producing the amount of weapons and ammunition needed by the country's army, this was known as the Shell Crisis of 1915. More women were employed because so many of the nation's men were fighting in the war. By June 1917, roughly 80% of the weaponry and ammunition used by the British army during World War I was being made by munitionettes. Women in the industry were paid on average less than half of what the men were paid.

Munitionettes worked with hazardous chemicals on a daily basis without adequate protection. Many women worked with trinitrotoluene (TNT), and the sulphuric acid that turned the women's skin a yellow colour. The women whose skin was turned yellow were popularly called canary girls. Prolonged exposure to the chemicals also created serious health risks for the munitionettes. It also caused other health issues such as severe harm to the immune system, liver failure, anaemia, and spleen enlargement; TNT can even affect women's fertility.



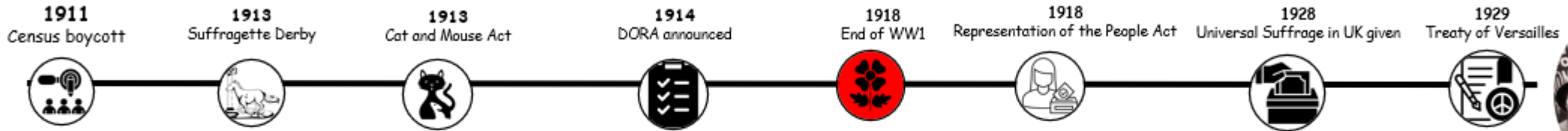
Suffragettes:

Women were not allowed to vote at all in Britain before WW1. A group of women known as the WSPU - Women's Social and Political Union, campaigned to get women the vote. The Suffragette movement, led by Emmeline Pankhurst believed that 'Deeds not words' was the way to gain votes for women. They set about targeting politicians, going on marches, chaining themselves to buildings and even petrol bombing the Chancellor's house!

In 1911 there were calls for women to boycott the census and many took this stand; Emily Davison famously hid in the broom cupboard in the Houses of Parliament to avoid being counted. In 1913 the Government passed the Cat and Mouse Act, allowing them to force feed women in prison who were going on hunger strike in protest for the vote. In 1913 Emily Davison was killed, trampled by the King's horse at the Epsom Derby, one of the biggest horse races in Britain.

From 1914 - 1918 the women concentrated their efforts on the war; this is what ultimately gained them the vote.

In 1918 the government passed the Representation of the People Act, this gave all men over 21 and women over 30 who owned property or were married to men who owned property the vote. In 1928 all British men and women over 21 were eligible to vote. This is known as universal suffrage.



Empire soldiers: Soldiers from all across the British Empire, joined up to fight in WW1, without those soldiers Britain would not have had the enough troops to win WW1.

India: 1,400,000
Australia: 75,000
Canada: 500,000
Africa: millions
West Indies: 25,000



4

Why were Empire soldiers important?

They provided extra soldiers
Helped in major battles like the Western Front and Gallipoli
Brought useful skills - riders, fighters, engineers and manual labour
Supplied resources - food, weapons, materials, money, animals
Protected Britain's empire.

Empire soldiers helped Britain win WW1 by providing people, skills, supplies, and global support. Without them, Britain would have struggled to fight such a huge war.



5

Medicine during WWI

World War One caused injuries on a scale doctors had never seen before. Medical care had to improve quickly so soldiers had a better chance of surviving.

Medical problems:

- Trench Foot
- Trench Fever
- Shell Shock
- Gas Injuries
- Bullet and shrapnel wounds

Medical Improvements:

- Thomas Split
- Blood Transfusion
- X-rays
- Plastic Surgery
- Infection Control

Organisation:

- Regimental Aid Posts
- Dressing Station
- Casualty Clearing Stations
- Base Hospitals

Problems doctors faced:

- Mud and bacteria
- Limited antibiotics
- New types of horrific injuries
- Huge numbers of wounded soldiers

Why is WW1 medicine so important?

It led to:

- Better emergency care
- New surgical techniques
- Improvements in infection control
- X-ray use becoming normal
- Beginnings of plastic surgery

6

World War One (1914-1918) had a massive effect on Britain. Life after the war looked very different from life before it. Here are the key changes:

- women gained more independence
- More people gained the right to vote under the Representation of the People Act (1918)
- The class system began to weaken
- The economy struggled
- The empire began to weaken
- Society and culture changes
- Politics shifted - rise of the Labour Party



7

After WW1:

At the end of WW1 the victorious countries (Britain, France and USA) signed an agreement called the Treaty of Versailles. This treaty was very harsh on Germany, France, led by Clemenceau, wanted to cripple Germany, they had suffered the most in the war and wanted to ensure Germany could not attack them again. Britain, led by David Lloyd George, wanted Germany punished but not crippled as they still wanted to trade with them. America, led by Woodrow Wilson, believed punishing Germany was a terrible idea. He wanted peace, as he was worried Germany would want revenge from a harsh treaty. The [League of Nations](#) was Wilson's idea.

This Learning Programme you will be learning about app development

Key Vocabulary

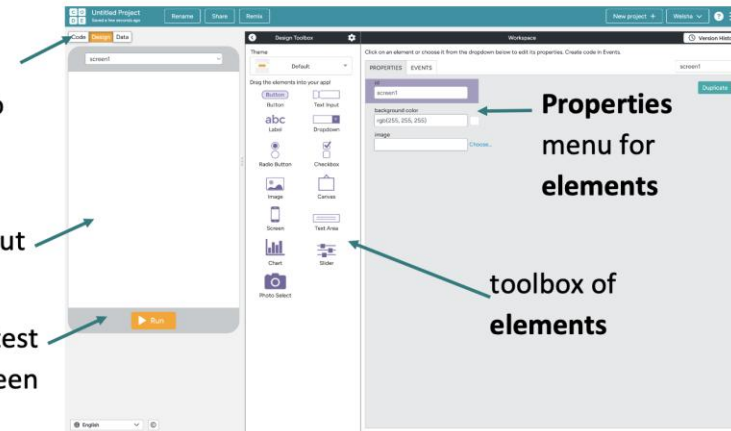
User interface	how you as a human can interact with a device
Event	an action that happens in the app which the app can respond to
Function	a named block of code that performs a task when called
Variable	a named piece of data stored in a computer's memory which can be accessed and changed by a computer program
Navigation	moving from one screen of the app to another
Wireframe	a plan that outlines the basic structure and layout of visual content
Testing	to check if something works correctly and as expected

Create a simple user interface



change the view from **design mode** to **code mode**

screen layout
to preview and test the screen



Screenshot: code.org, 2024, licensed under CC BY-NC-SA



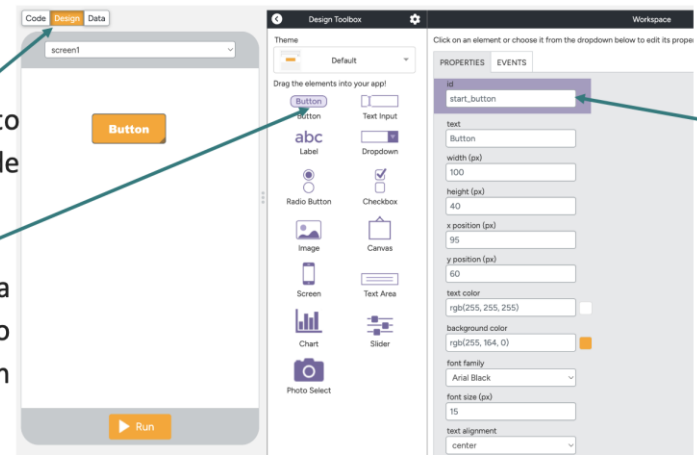
Create a button-based interaction within an app



Creating a button

click into design mode

drag a button onto the screen



give the button a unique ID

Screenshot: code.org, 2024, licensed under CC BY-NC-SA

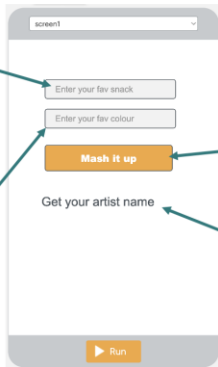


Use variables to store and display user input



text **input** to enter value to be stored as **fav_snack**

text **input** to enter value to be stored as **fav_colour**



button to run the function to create the artist name

label to display the artist name

All elements must have a unique ID.

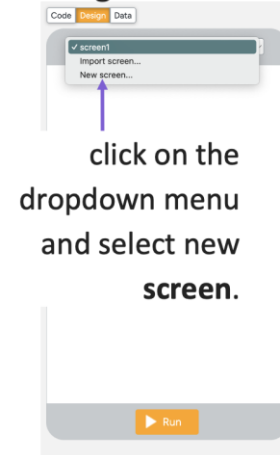
Screenshot: code.org, 2024, licensed under CC BY-NC-SA



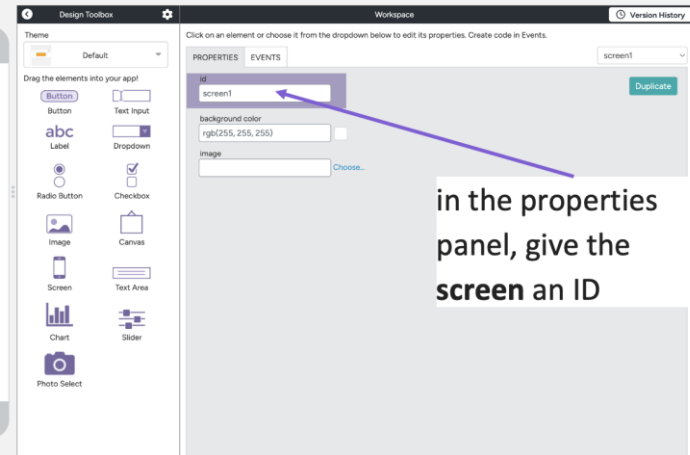
Create multiple screens in an app



Creating a new screen



click on the dropdown menu and select **new screen**.



in the properties panel, give the screen an ID

Screenshot: code.org, 2024, licensed under CC BY-NC-SA



Implement interactivity in the app



Common code blocks to create interactivity

feature	what it does
<pre>onEvent(▼ "id", ▼ "click", function () { });</pre>	responds to user actions
<pre>setScreen(▼ "screen1");</pre>	moves the user to a different screen
<pre>setText(▼ "screen1", "Welcome to the app");</pre>	changes what appears on a label



Implement interactivity in the app



Common code blocks to create interactivity

feature	what it does
<pre>getText(▼ "q5_input")</pre>	gets what the user typed into a text input
<pre>var score = 0;</pre>	creates a variable to store a value to use in the app

This LP I will learn about statistical diagrams, inequalities, brackets, algebraic fractions and recurring decimals

Quantitative Data	Data that is described in numbers
Grouped Data	Data organised into categories or intervals.
Term	Algebraic terms are individual letters, groups of letters, or groups of letters and numbers separated by addition or subtraction in algebraic expressions.
Expression	An expression is a set of terms combined using the four operations.
Denominator	The bottom number of a fraction.
Variable	A variable is a symbol, usually a letter such as x or y , that is used to represent a value or quantity that can change.
Infinite	Something that has no end.

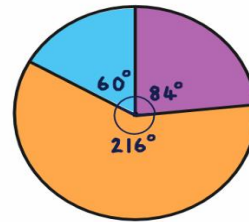
1

Draw Pie Charts

The table shows information about some people's favourite exercises.

Use the table to complete the pie chart.

Exercise	Frequency	Central Angle
Walking	7	$\frac{7}{30} \times 360 = 84^\circ$
Jogging	18	$\frac{18}{30} \times 360 = 216^\circ$
Gym	5	$\frac{5}{30} \times 360 = 60^\circ$
Total	30	



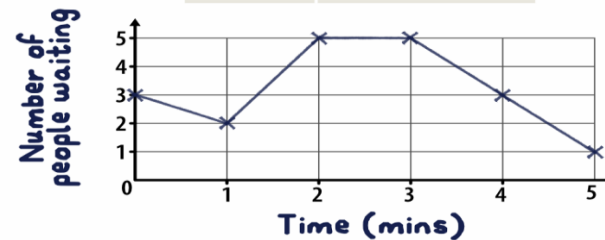
Key	
Walking	
Jogging	
Gym	

Draw Line Graphs

The table shows the number of people waiting in a queue in the first 5 minutes after a bank opens.

Use the axes given to draw a line graph of this data.

Time (mins)	Number of people waiting
0	3
1	2
2	5
3	5
4	3
5	1



2

Stem and Leaf Diagrams

The times 12 people spent walking are shown below.

Time (minutes)			
30	14	25	3
21	10	30	26
8	19	14	8

Draw an ordered stem-and-leaf diagram to represent this data.

0	3 8 8
1	0 4 4 9
2	1 5 6
3	0 0

Key	
2	represents 21 minutes

3

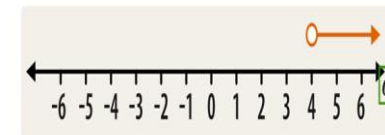
Reading and drawing inequalities

The number lines below show information about c and d .

Work out which of the following values c and d can take.

4, 0, 3, 6, -5, 2, 13, -12

a)



c is greater than 4

$c > 4$

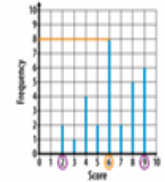
4, 0, 3, 6, -5, 2, 13, -12

Answer: c could be

6 and 13

Calculating Averages from Diagrams

This vertical line chart shows the scores that some contestants got in a quiz.



a) What was the modal score?

Mode is the most common score

Modal score = 6

Answer: 6

b) Work out the range of the scores.

Range = maximum - minimum

= 9 - 2

= 7

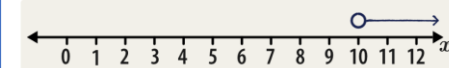
Answer: 7

Solving inequalities

Solve the following inequalities and draw each result on a number line:

a) $x - 4 > 6$

$$\begin{aligned} x - 4 &> 6 \\ + 4 & \quad + 4 \\ x - 4 + 4 &> 6 + 4 \\ x &> 10 \end{aligned}$$



Solve the following inequalities:

a) $3p > 21$

$$\begin{aligned} 3p &> 21 \\ \div 3 & \quad \div 3 \\ p &> 7 \end{aligned}$$

Answer:

$p > 7$

4

Expand Double Brackets

Expand and simplify $(y + 5)(y - 1)$

$$(y + 5) \times (y - 1)$$

	y	-1
y	y^2	$-y$
$+5$	$5y$	-5

$$\begin{aligned}
 &= y \times y + y \times -1 + 5 \times y + 5 \times -1 \\
 &= y^2 + -y + 5y + -5 \\
 &= y^2 + 4y - 5
 \end{aligned}$$

Expand and simplify $(6u - 11)(2u - 7)$

$$(6u - 11) \times (2u - 7)$$

	$2u$	-7
$6u$	$12u^2$	$-42u$
-11	$-22u$	77

$$\begin{aligned}
 &= 6u \times 2u + 6u \times -7 + -11 \times 2u + -11 \times -7 \\
 &= 12u^2 + -42u + -22u + 77 \\
 &= 12u^2 - 64u + 77
 \end{aligned}$$

5

Calculate with Fractions

a) Work out $\frac{3}{5} + \frac{1}{10}$

$$\begin{aligned}
 &\frac{3}{5} + \frac{1}{10} \\
 &= \frac{6}{10} + \frac{1}{10} \\
 &= \frac{7}{10}
 \end{aligned}$$

Work out $\frac{4}{7} \times \frac{5}{11}$

Give your answer in its simplest form.

$$\begin{aligned}
 \frac{4}{7} \times \frac{5}{11} &= \frac{4 \times 5}{7 \times 11} \\
 &= \frac{20}{77}
 \end{aligned}$$

Work out $3\frac{1}{5} + 2\frac{3}{4}$

$$\begin{aligned}
 3\frac{1}{5} + 2\frac{3}{4} &= 3 + 2 + \frac{1}{5} + \frac{3}{4} \\
 &= 5 + \frac{4}{20} + \frac{15}{20} \\
 &= 5 + \frac{19}{20} \\
 &= 5\frac{19}{20}
 \end{aligned}$$

b) Work out $\frac{9}{22} - \frac{3}{11}$

$$\begin{aligned}
 \frac{9}{22} - \frac{3}{11} \\
 = \frac{9}{22} - \frac{6}{22} \\
 = \frac{3}{22}
 \end{aligned}$$

Work out the following, giving your answers as integers or fractions in their simplest forms:

a) $\frac{4}{13} \div \frac{1}{5}$

$$\begin{aligned}
 \frac{4}{13} \div \frac{1}{5} &= \frac{4}{13} \times \frac{5}{1} \\
 &= \frac{4 \times 5}{13 \times 1} \\
 &= \frac{20}{13}
 \end{aligned}$$

Work out $\frac{4}{9} \times 2\frac{4}{25}$

$$\begin{aligned}
 \frac{4}{9} \times 2\frac{4}{25} &= \frac{4}{9} \times \frac{54}{25} \\
 &= \frac{4 \times 54}{9 \times 25} \\
 &= \frac{216}{225} \\
 &= 2\frac{4}{25} \\
 &= 2 + \frac{4}{25} \\
 &= \frac{50}{25} + \frac{4}{25} \\
 &= \frac{54}{25}
 \end{aligned}$$

6

Simplify Algebraic Fractions by Factorising

Fully simplify

$$\frac{10fh + 15f}{20f}$$

$$\begin{aligned}
 \frac{10fh + 15f}{20f} &= \frac{5f(2h + 3)}{4 \times 20f} \\
 &= \frac{1 \cancel{f}(2h + 3)}{4 \cancel{f} \times 4} \\
 &= \frac{2h + 3}{4}
 \end{aligned}$$

7

Use Recurring Decimal Notation

Write the recurring decimal below using dot notation.
0.444444...

$$0.444444... = 0.\dot{4}$$

Fill in the first seven digits after the decimal point when the following recurring decimals are written out in full:

a) $0.2\dot{6}\dot{8}$

$$0.2\dot{6}\dot{8} = 0.2682682...$$

Write Fractions as Recurring Decimals

Write $\frac{9}{11}$ as a recurring decimal using dot notation.

$$\frac{9}{11} = 9 \div 11$$

$$\begin{array}{r}
 0.818181... \\
 11 \overline{) 9.02090209020...}
 \end{array}$$

$$\begin{aligned}
 \frac{9}{11} &= 0.818181... \\
 &= 0.8\dot{1}
 \end{aligned}$$

This Learning Programme you will be learning how to talk about holiday activities and look at the different summer camps that are popular in Spain.

Key Vocabulary

Noun	A word to identify a person, place or thing
Verb	A word to show an action taking place
imperative	How to give instructions
Infinitive verb	A verb that tells you the action, but not who is doing it
Present tense	Referring to an action happening now, or that happens regularly
Preterite tense	Referring to an action that has been completed in the past
Near future tense	Used to talk about what is 'going to' happen
Preferir	To prefer
Comparative	How to compare two different things
Superlative	How to say the biggest, or the most...

Year 8 Spanish LP5 Knowledge Organiser

LP5.1 – ¿Qué casa prefieres? – Which house do you prefer?

¿Qué casa prefieres? Which house do you prefer?

Esta casa es...	This house is...	moderno/a	modern
Este piso es...	This flat is...	pequeño/a	small
amplio/a	spacious	La casa/El piso está...	The house/The flat is...
antiguo/a	old	cerca de la playa	near the beach
bonito/a	nice, pretty	en el centro	in the centre
cómodo/a	comfortable	en la montaña	in the mountains
enorme	enormous	más... que	more... than
feo/a	ugly	menos... que	less... than
grande	big	Prefiero...	I prefer...
maravilloso/a	marvellous	porque	because

La casa The house

Tiene...	It has...	una chimenea	a fireplace
una cocina	a kitchen	un jacuzzi	a hot tub
un comedor	a dining room	un jardín	a garden
un cuarto de baño	a bathroom	una piscina	a swimming pool
un dormitorio	a bedroom	una terraza	a balcony, a terrace
un salón	a living room	vistas al mar	views of the sea

LP5.2 – ¿Qué se puede hacer en...? – What can you do in...?

¿Qué se puede hacer en...? What can you do in...?

Se puede(n)...	You can...	ir de paseo en bicicleta	go on a bike ride
hacer actividades náuticas	do water sports	ir a la playa	go to the beach
hacer artes marciales	do martial arts	ir al restaurante	go to the restaurant
hacer senderismo	go hiking	jugar al golf	play golf
ir a la bolera	go bowling	jugar al voleibol	play volleyball
ir al cine	go to the cinema	jugar al tenis	play tennis
ir de compras	go shopping	ver la catedral	see the cathedral
		visitar un castillo	visit a castle

LP5.3 – ¿Dónde está? – Where is it?

¿Dónde está...? Where is...?

la catedral	the cathedral	Dobla a la izquierda.	Turn left.
la estación de tren	the railway station	Toma la primera a la derecha.	Take the first on the right.
el minigolf	the minigolf	Toma la segunda a la izquierda.	Take the second on the left.
el parque de atracciones	the theme park	Cruza la plaza.	Cross the square.
el parque acuático	the water park	Está a la derecha.	It's on the right.
la pista de karting	the go-kart track	Está a la izquierda.	It's on the left.
el zoo	the zoo		
Sigue todo recto.	Keep straight on.		
Dobla a la derecha.	Turn right.		

LP5.4 – Campamentos de verano – summer camps

	infinitive	present	preterite	near future
regular verbs	visitar comer escribir	visito como escribo	visité comí escribí	voy a visitar voy a comer voy a escribir
stem-changing verbs	jugar	juego	jugué	voy a jugar
irregular verbs	hacer ir ver tener	hago voy veo tengo	hice fui vi tuve	voy a hacer voy a ir voy a ver voy a tener

LP5.5 – ¡Destinos! - Destinations

Expresiones de tiempo Time expressions

ayer	yesterday	hoy	today
el fin de semana pasado	last weekend	mañana	tomorrow
el verano pasado	last summer	este fin de semana	this weekend
el año pasado	last year	el verano que viene	next summer
hace dos años	two years ago	el año que viene	next year

LP5.6 – De vacaciones en España - Holidays in Spain

Gramática

To say 'better' or 'the best' and 'worse' or 'the worst' in Spanish, you use **mejor** and **peor**.

In the **comparative** (better, worse), they work like this:

Ibiza es mejor que los Picos de Europa.	Ibiza is better than the Picos de Europa.
La comida en Ibiza es peor que la comida en Madrid.	The food in Ibiza is worse than the food in Madrid.

In the **superlative** (the best, the worst), they work like this:

El mejor parque de España.	The best park in Spain.
Fue la peor experiencia de mi vida.	It was the worst experience of my life.

>> p120

LP5.7 – Repaso – revision

Use the other boxes within the knowledge organiser to revise your vocabulary

This Learning Programme you will be learning about Songwriting

Key Vocabulary

Song Writer	A songwriter creates songs by writing lyrics (words) and choosing chords and melodies
-------------	---

Lyrics	The words to songs
--------	--------------------

Chord	Two or more notes played together at the same time
-------	--

Composer	Somebody that writes or composes music
----------	--

Genre	a type or style of music. Songs in the same genre often sound similar
-------	---





Melody	The main tune of a piece of music
--------	-----------------------------------

Tonality	Tonality is whether music is major or minor, or which key it is in.
----------	---

The role of a songwriter

A songwriter **creates songs** by writing **lyrics (words)** and choosing **chords and melodies**. They decide how a song should sound and what it is about.

Main Responsibilities

-  Write **lyrics** that tell a story or share a message
-  Choose **simple chord sequences** to match the mood
-  Use **repetition and structure** (e.g. ABA or verse–chorus)
-  Listen back and **improve the song**






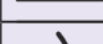

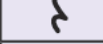




What is Eurovision?

The Eurovision Song Contest is a competition where countries perform original songs to win votes. The winning songs are normally written using catchy melodies and choruses using strong hooks and riffs to get listeners to vote for the song. The lyrics can vary with some being comical whilst others are more traditional and related to the entrant's country.

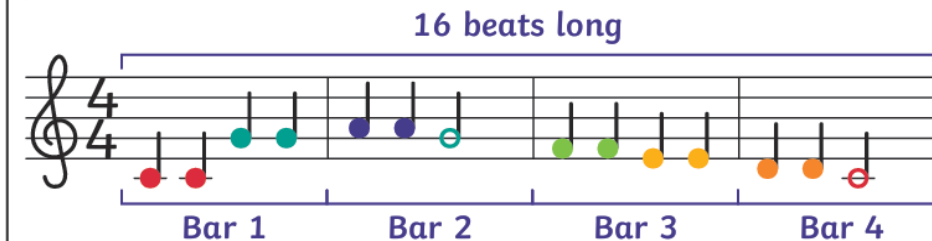
Rhythm Notation

Each note length has an equivalent rest that lasts for the same duration.

	semibreve		semibreve rest
	minim		minim rest
	crotchet		crotchet rest
	quaver		quaver rest
	semiquaver		semiquaver rest

Four-Bar Phrases

A four-bar phrase is often 8 or 16 beats long. It can form a section of a longer piece of music. Many composers use four-bar phrases in their music.

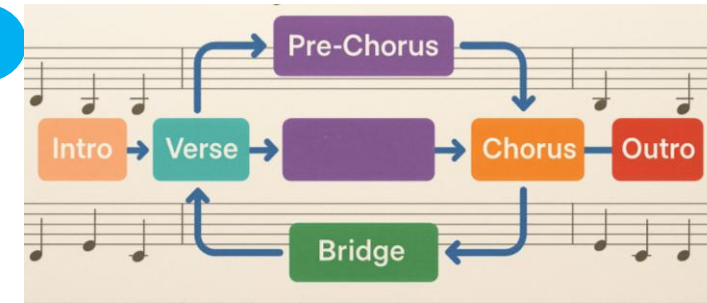


Four-bar phrases are often repeated in songs and longer pieces of music. Each phrase is like a sentence in the music. It makes sense on its own.

How song writers use chords and lyrics to create songs

Songwriters use **lyrics** to tell a story or share a message and **chords** to support the mood of the song. They choose a **simple chord sequence** and repeat it so the song is easy to remember, then fit the lyrics over the chords so they match the beat. By repeating ideas and using a clear structure, such as ABA or verse and chorus, songwriters create songs that sound organised and catchy.

4



5

1



Find Inspiration

Start with a feeling, story, or message. Pick 3 key words that match your theme.

2



Craft Your Lyrics

Use simple lines, repetition, and rhyme. Make the chorus the 'main message'.

3



Play with Melody & Chords

Choose a chord sequence, then hum/sing melodies over it. Keep the hook easy to remember.

Common Chord Progressions

Pop / Catchy



Sounds familiar and memorable.

Happy / Bright



Simple and uplifting.

Sad / Emotional



Minor start creates emotion.

6

Major and Minor Chords

A chord is a group of notes played together to create a musical effect.

C Major



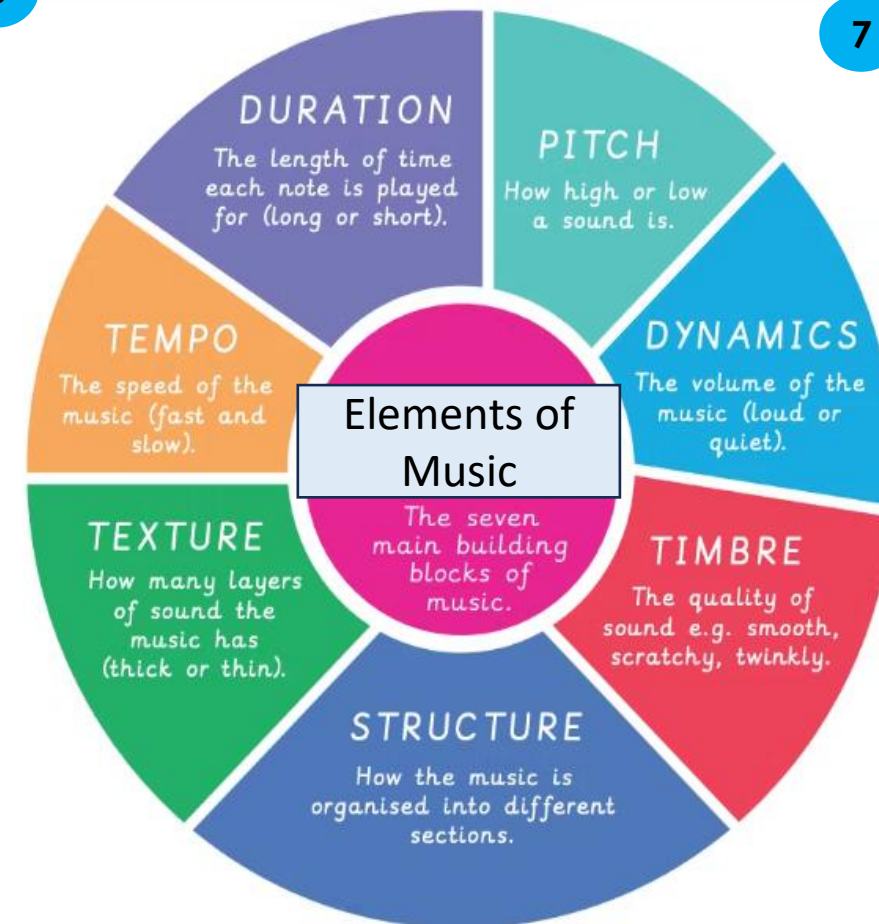
When a chord sounds bright and happy it is usually a major chord.

D Minor



When a chord sounds sad or spooky it is usually a minor chord.

7



This Learning Programme you will develop your fundamental skills of throwing and catching in striking and fielding sports including rounders, cricket and softball.

Key Vocabulary

Tactical Skills	The ability to make smart decisions and apply strategies during a game.
Free space	An area on the field where there are no fielders positioned.
Outwitting an opponent	Using clever tactics or quick thinking to gain an advantage
Decision making	The ability to quickly choose the best action during play – like when to run or stop.
Teamwork	Players working together by communicating, supporting each other and coordinating actions.
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.
Speed	How quickly a player can run between bases, chase the ball or react during play.

1

Students will know to investigate what they will be learning this LP and know how to examine the correct technique for controlling and catching the ball impacts a match.

2

Students will know how to examine the use of use of under and over arm throws in a match, students will know how to compare different teams fielding techniques and know how to effectively demonstrate under and over arms throws.

3

Students know how to examine the effectiveness of different bowling styles and explain how power and spin can be developed when bowling. Students will be able to effectively demonstrate two different bowling styles.

4

Students will know how to examine the effectiveness of different batting styles and explain how accuracy can be improved when batting and effectively demonstrate and explain how accuracy can be improved when batting.

5

Students will know how to examine how striking and fielding techniques can affect performance in a game. Students will know how to review their own throwing, bowling, batting and catching techniques.

6

Students will know how to explain the rules and regulations of on striking and fielding sport and know how to explain the scoring system for a striking and fielding game.

7

Students will know how to accurately replicate striking and fielding techniques and review their one striking and fielding techniques and how this impacts on a game.

1

This Learning Programme you will be learning about issues surrounding radicalisation and extremism. We will look at the impact of 9/11 and other acts of terrorism on the world we live in today and consider religious beliefs about these.

Key Vocabulary

Stereotype	A widely held but fixed and oversimplified image or idea of a particular type of person or thing
Terrorism	The unlawful use of violence and intimidation, especially against civilians, in the pursuit of political aims.
Radicalisation	The action or process of causing someone to adopt radical positions on political or social issues.
Patriotism	Devotion to and vigorous support for one's country.
nationalism	Identification with one's own nation and support for its interests, to the exclusion or detriment of the interests of other nations.
Alt-right	Right wing online political movement
Conflict	When two or more parties disagree, or to be incompatible with something else.
Extremism	The holding of extreme political or religious views.

Stereotypes about terrorism

Five myths that have been proven untrue:

- Terrorism is not largely dissatisfied individuals from one country attacking another—more than 90% of terrorist attacks are domestic
- Terrorist attacks are not irrational—most attacks involve rational political disputes over territory
- Terrorist attacks do not have to be lethal—more than half of terrorist attacks since 1970 had no fatalities
- Terrorism does not involve sophisticated weaponry—80% of attacks are carried out with explosive and readily available firearms
- Terrorist attacks are not infallible—random, brutal attacks are more common

If we look at worldwide terrorism over the past four decades, we find not one single kind of terrorist threat, but rather successive waves of attacks by groups with very different ideologies and goals. The common pattern is that a group or set of groups gets organised, stages increasing numbers of attacks and then decline.

Radicalisation and extremism

Extremism is the holding of extreme political or religious views. Extremism can lead to radicalisation.

Radicalisation is the process through which a person comes to support or be involved in extremist ideologies. It can result in a person becoming drawn into terrorism and is a form of harm. The European Commission defined and coined the term "radicalization" in the year 2005 as "violent radicalisation" which is the phenomenon of people embracing opinions, views and ideas which could lead to acts of terrorism. Radicalisation to terrorism can be motivated by extremist groups/ideologies, or it can occur at an individual level.

2

Causes and impacts of 9/11

After the 1991 Gulf war, the USA kept troops stationed in Saudi Arabia.

Saudi Arabia is the home of the holiest sites in Islam (Mecca and Medina) and many Muslims were upset at the USA permanent military presence there.

This angered Osama bin Laden who issued a *fatwā* (a legal ruling by an Islamic scholar) in 1996 which was a declaration of a *jihad* or holy war against the United States.

In the year 2001 the world changed in an instant. On a bright morning, on the 11th of September, terrorists hijacked four airliners and crashed three of them into 2 of the most important landmarks in America. The World Trade Centre in New York and The Pentagon in Washington. The world watched in horror as the images of the North and South Towers of the World Trade Centre collapsed, killing nearly 3,000 people. The US responded by launching a war on terror.

Guantanamo Bay

3

In 2002, following the terrorist attacks on the World Trade Centre, the U.S. imprisoned around 600 men. They came from 43 different countries and were put in a camp in a US naval base in Guantanamo Bay, Cuba. The aim was to interrogate or aggressively question people they suspected of being involved with al-Qaeda.

The U.S. government labelled these men 'unlawful enemy combatants'. In other words, what they were suspected of doing was against the law and the actions of an enemy.

The techniques used were reportedly violating human rights.

4

ISIS

ISIS (also known as ISIL, IS or Daesh) is a group seeking to create its own state, governed by their interpretation of the Laws of the Qur'an, and to destroy all other branches of Islam as well as convert or destroy all non-Muslims.

Islam has undergone much change and many splits since its founding 1400 years ago. The biggest branches are Sunni and Shia, but within each there have been many further splits. ISIS is part of a Sunni branch who reject modern Islam and prefer to return to its early teachings as they think Islam has become too liberal for their liking.

6

Alt Right

The alt-right (abbreviated from alternative right) is a far-right, white nationalist movement. A largely online phenomenon, the alt-right originated in the United States during the late 2000s before increasing in popularity and establishing a presence in other countries during the mid-2010s, and has been declining since 2017. Critics charge that the term "alt-right" is merely a rebranding of white supremacism.

FAKE NEWS is false or misleading information (misinformation, including disinformation, propaganda, and hoaxes) presented as news. Fake news often has the aim of damaging the reputation of a person or entity.

7

Year 8 Religious Studies LP5 Knowledge Organiser

5

CHRISTCHURCH MOSQUE SHOOTINGS

The Christchurch mosque shootings were two consecutive mass shootings on two mosques in Christchurch, New Zealand on 15 March 2019. They were committed by Brenton Tarrant who entered both mosques during Friday prayer.

Tarrant live-streamed the first shooting on Facebook, marking the first successfully live-streamed far-right terror attack, and had published an online manifesto before the attack. 51 people died, 40 more were injured and it was determined to be a terror act. Tarrant received life imprisonment without the possibility of parole – the first such sentence in New Zealand.

The attacks were mainly motivated by white nationalism, anti-immigrant sentiment, and white supremacist beliefs. He voiced support for the far-right "Great Replacement" conspiracy theory in the context of a "white genocide".

Boko Haram

Boko Haram, officially known as 'Group of the People of Sunnah for Dawah and Jihad' is an Islamist jihadist organization based in northeastern Nigeria, which is also active in Chad, Niger, northern Cameroon, and Mali.

When the group was first formed, their main goal was to "purify", meaning to spread Sunni Islam, and destroy Shia Islam in northern Nigeria, believing jihad should be delayed until the group was strong enough to overthrow the Nigerian government. The group formerly aligned itself with the Islamic State of Iraq and the Levant. The group has been known for its brutality, and since the insurgency started in 2009, Boko Haram has killed tens of thousands of people, in frequent attacks against the police, armed forces and civilians. It has resulted in the deaths of more than 300,000 children and has displaced 2.3 million from their homes. Boko Haram has contributed to regional food crises and famines.

THE TROUBLES

The Troubles were an ethno-nationalist conflict in Northern Ireland that lasted for about 30 years from the late 1960s to 1998. Also known internationally as the Northern Ireland conflict, it is sometimes described as an "irregular war" or "low-level war". The conflict began in the late 1960s and is usually deemed to have ended with the Good Friday Agreement of 1998.

The Troubles were between the Unionists and loyalists, who for historical reasons were mostly Ulster Protestants, wanted Northern Ireland to remain within the United Kingdom. Irish nationalists and republicans, who were mostly Irish Catholics, wanted Northern Ireland to leave the United Kingdom and join a united Ireland.

The Troubles also involved numerous riots, mass protests, and acts of civil disobedience, and led to increased segregation and the creation of temporary no-go areas. More than 3,500 people were killed in the conflict, of whom 52% were civilians, 32% were members of the British security forces, and 16% were members of paramilitary groups.

Key Vocabulary

Variation	Differences between individuals of the same species.
Gene	A section of DNA that carries instructions for making a specific protein or characteristic in an organism.
DNA	A long molecule found in cells that carries genetic instructions used to control growth, development, and characteristics of an organism.
Chromosome	A long, coiled structure made of DNA that contains many genes and carries genetic information in a cell.
Asexual Reproduction	A type of reproduction where only one parent is involved, producing genetically identical offspring
Genetic modification.	A process where an organism's DNA is deliberately changed by scientists to give it new or improved characteristics.
Complete combustion.	reaction where a fuel burns fully in plenty of oxygen, producing carbon dioxide, water, and energy.
Thermal decomposition.	A chemical reaction where a compound breaks down into simpler substances when heated

Year 8 Science LP5 Knowledge Organiser

This Learning Programme you will be learning about how characteristics are passed from parents to offspring. Explore genes and DNA, understand how inherited and environmental factors affect variation, and what happens when substances react and how new substances are formed specifically looking at combustion and thermal decomposition.

1

Variation

- The differences in characteristics of living things is known as **variation**
- There is a large amount of variation between different **species**, but within species many more characteristics are shared
- Even though two organisms may look the same, they will always have variation between them

Inherited variation	Environmental variation
<ul style="list-style-type: none"> Is anything that comes directly from your parents, anything that you inherit Examples can include lobe less or lobed ear lobes and eye colour 	<ul style="list-style-type: none"> Is any type of variation that is caused by your surroundings Factors that can cause environmental variation include diet, education and lifestyle

- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
- Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

2

Inheritance

- Characteristics** are passed along from parents to their offspring
- Half of the genetic information comes from each parent, this is passed on through the sex cells in the process of fertilisation



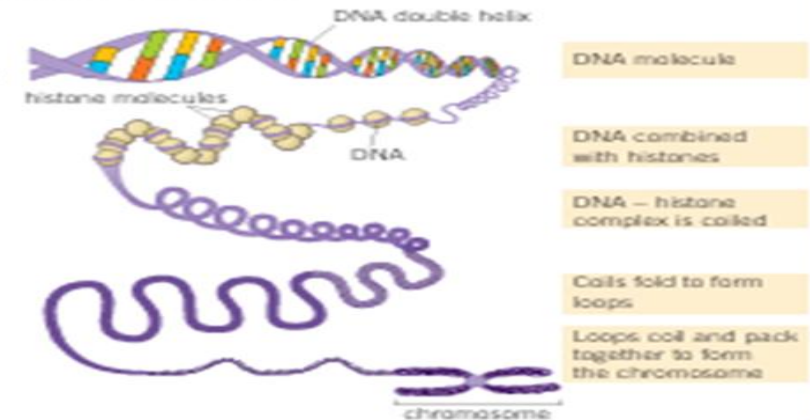
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- DNA** is the material which contains all of this genetic information

DNA – in the shape of a double helix

Genes – a section of DNA which hold the information for a particular characteristic

Chromosomes – long strands of DNA which hold many genes, humans have 46 of these in the nucleus of cells



4

Asexual

Sexual

Number of parents	One parent	2 parents
What do offspring look like?	Identical to parent	Different from parents but still similar
DNA	Same as parent	Combined DNA of 2 parents

5

Genetic modification

- **Genetic modification** is the process which scientists can use in order to alter the genes of an organism
- Examples of this include altering cotton to produce higher yields, altering bacteria genes to produce medicines and altering crops to produce their own insecticides

6

Combustion

- **Combustion** is the burning of a **fuel** in oxygen
- A fuel is a substance which stores energy in a chemical store
- Examples of fuels include petrol, diesel, coal and hydrogen
- When a carbon based fuel undergoes combustion, it will produce water and carbon dioxide



- Hydrogen can also be used as a fuel, this is much better than traditional fossil fuels as it does not produce carbon dioxide:



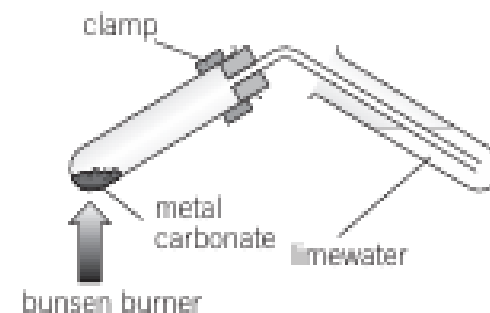
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Thermal decomposition

- A **thermal decomposition** reaction is one where the reactants are broken down (decomposition) using heat (thermal energy)
- An example of this is with metal carbonates:



- We can test for this carbon dioxide by bubbling the gas through limewater, if the limewater turns cloudy, the gas is carbon dioxide



Key Word	Definition
ACCESS FM	A design criteria tool used to analyse and develop products. It stands for Aesthetics, Cost, Customer, Environment, Size, Safety, and Materials.
Design Brief	A short statement that explains what needs to be designed and made, who it is for, and what the product must do.
Evaluation	Judging a product or design process by reviewing what works well and what could be improved, based on the design criteria.
Iteration	The process of developing and improving a design by making changes, testing ideas, and refining them multiple times.
Safety	Measures taken to reduce risk and prevent harm during design, making, and use of a product.

1. Plan your practical
2. Execute your ideas safely
3. Refine your final piece
4. Evaluate your final piece



DESIGN & TECHNOLOGY

ACCESS FM



AS DESIGNERS WE USE ACCESS FM TO HELP US ANALYSE EXISTING PRODUCTS AND TO SUPPORT US IN WRITING A PRODUCT SPECIFICATION.

AESTHETICS

WHAT DOES THE PRODUCT LOOK LIKE?
 You should describe the product. Has the product been inspired by anything in particular? You could comment on: Colour, shape, texture, pattern and style.

COST

HOW MUCH DOES IT COST TO BUY/MAKE THE PRODUCT?
 How much do the materials cost to make the product? Is the product good value for money? Is it expensive or cheap compared to similar products on the market?

CUSTOMER

WHO HAS THE PRODUCT BEEN DESIGNED FOR?
 Who is the target market for the product? You could consider: Age, gender, wants, needs and preferences.

ENVIRONMENT

WHAT IS THE IMPACT ON THE ENVIRONMENT?
 Does the product being made or used have a negative impact on the environment? Consider the 6R's of sustainability.

SIZE

HOW BIG/SMALL IS THE PRODUCT?
 What are the products measurements? Is this similar to other products on the market? Does the product work well at this size? Is it easy for the consumer to use?

SAFETY

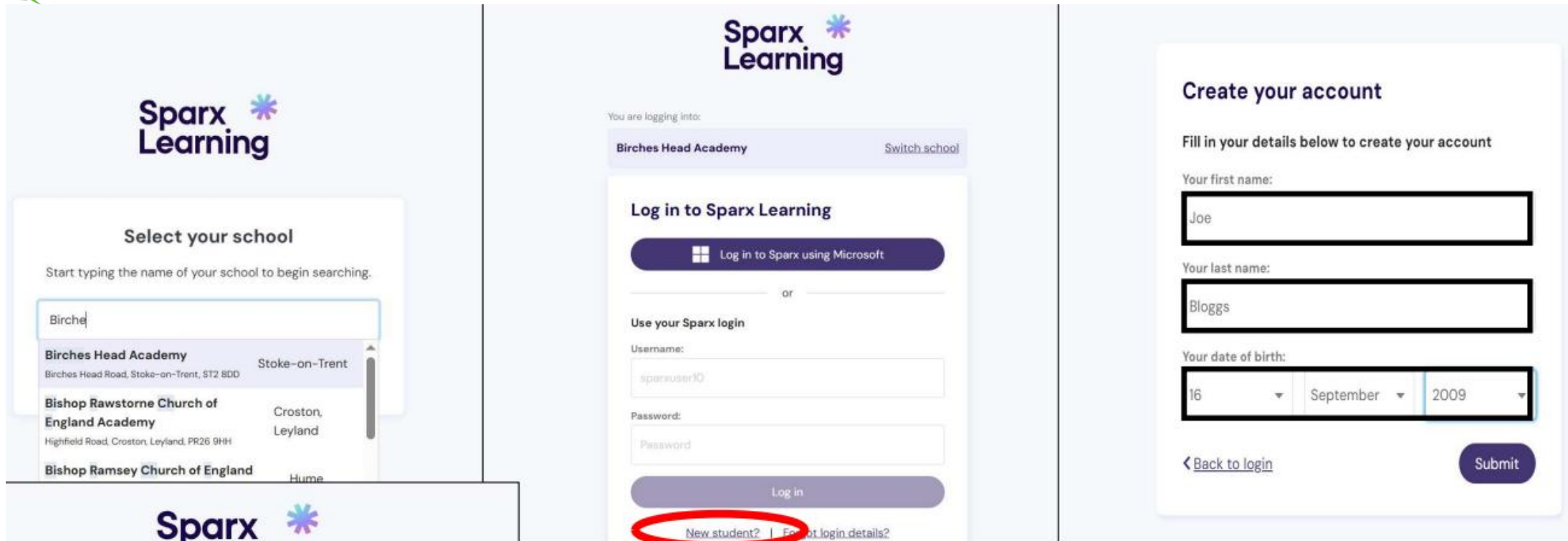
ARE THERE ANY SAFETY CONCERNS WHEN USING THE PRODUCT? Are there any safety risks to consider when using the product? Is the consumer aware of how to correctly and safely use the product? You could consider: Sharp edges, weight, small components and hazardous materials.

FUNCTION

WHAT IS THE PRODUCT DESIGNED TO DO?
 What is the products job? How well does it do the intended job? Could the products function be improved? Is the product one of a kind or are there similar products that do the same job already on the market?

MATERIAL

WHAT IS THE PRODUCT MADE OUT OF?
 What materials have been used to make the product and why? How was the product made? What manufacturing techniques were used?



Sparx Learning

Select your school

Start typing the name of your school to begin searching.

Birche

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Birches Head Road, Stoke-on-Trent, ST2 8DD
- Bishop Rawstorne Church of England Academy** Croston, Leyland
Highfield Road, Croston, Leyland, PR26 9HH
- Bishop Ramsey Church of England** Hume

Sparx Learning

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Birches Head Academy [Switch school](#)

Log in to Sparx Learning

[Log in to Sparx using Microsoft](#)

or

Use your Sparx login

Username:
sparxuser10

Password:
Password

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Fill in your details below to create your account

Your first name:
Joe

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Your date of birth:
16 September 2009

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Step 1. Remember your username

This is your username, you'll use this each time you log in to Sparx.

joebloggs

Make sure you remember your username – you might even want to write it down somewhere.

[Set a password >](#)

1. Go to maths.sparx-learning.com/student
2. Select your school and click 'Continue'
3. Click 'New user' underneath the login fields
4. Follow the steps to create your account:
5. Enter your name and date of birth
6. Note down your username
7. Create a password (minimum 6 characters)

THE ORACY COMPASS



Are you thinking about the speed and volume of your voice?

Are you facing who you are speaking to?

Do you appear to be talking confidently?



Are you being respectful and responding appropriately?

Are you using expression to make your point?

Are you using gestures to show you are listening?

Are you taking turns to talk?

Are you inviting others to share their opinions?



'I would like to start by saying...'

'I agree and would like to add...'

'To challenge you X, I think...'



'Could you provide an example'

'Could you clarify what you mean by...'

'The main points raised today were...'

