Penryn College

Belong | Aspire | Succeed

Year 8 Autumn 2 Knowledge Booklet

2026 - 2027

Name _____

Tutor Group _____

CONTENTS

PROUD	3
Finding My VOICE	4
Equipment list	5
How to use your knowledge organiser	6
Art	7
Computing	8-9
Drama	10-11
English	12-14
Food	15-16
French	17-18
Geography	19-20
Humanities	21-23
Lifeskills	24-25
Maths	26-28
Music	29-30
PE	31
Personal Development	32
Science	33-37
Spanish	38-39
STEAM	40
Safeguarding	

At Penryn College, we are PROUD of the work in our books.



Penryn College

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We show this by:

P

Presentation



- I write the date neatly in the margin.
- I write and underline the LO and titles.
- I use black or blue pen for writing.
- I draw diagrams in pencil and label them.
- I use my best handwriting.

R

Response



- I complete all questions to the best of my ability.
- I write in full sentences.
- I highlight command words.
- I think deeply about the task.
- I show effort and do not rush my work.

O

Organisation



- I draw a line below each lesson's work.
- I set out my work clearly using steps or paragraphs.
- I keep my book tidy and in order.
- I cross out mistakes neatly with one line.
- I do not doodle in my book.

U

Use of Vocabulary



- I use key subject words.
- I check the spellings of key words.
- I highlight or underline keywords.
- I include definitions when needed.
- I use vocabulary in the correct context.

D

Dedicated Improvement



- I use red pen to respond to feedback.
- I correct my mistakes carefully.
- I edit and improve my work.
- I respond to my teacher's feedback.
- I rewrite incorrect spellings 3 times and apply in a new sentences.

★ PROUD work. Every lesson. Every book. Every student. ★

At Penryn College we want everyone

Finding My VOICE

Penryn College
"Belong, Aspire, Succeed"

We do this by:

V	O	I	C	E
VOICE	**OTHERS**	**INQUIRE**	**CRITICAL THINKING**	**EVALUATE**
Express my thinking and share my thoughts	Collaborate with others by listening and connecting ideas	Question and explore deeply	Analyse, Question and reason	Summarise and Conclude
"I think/feel that... because ... " "My view is... because ...."	"Building on what was said..." "That connects to my experience..."	"Can you explain what you mean by...?" "What makes you think that?"	"What evidence supports this?" "Could there be another explanation?"	"The most important point is..." "My thinking has changed because..."

Every lesson | Every discussion | Every student



Equipment List

Penryn College
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Come to every lesson ready to learn!

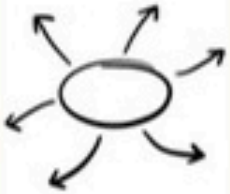
- Black / blue / red pens (you will need more than one)
- A ruler (15cm minimum)
- Rubber
- Pencils
- Colouring pencils
- Pencil sharpener
- Highlighters
- Glue Stick
- Whiteboard pens
- Geometry set (set square, protractor, compass)
- Scientific calculator
- Water Bottle
- iPad
- Pair of wired headphones for use with iPad

HOW DO I USE MY KNOWLEDGE ORGANISER?

SELF-QUIZZING

- **READ** a section of your knowledge organiser.
- **CREATE** a list of questions based on the information. For example: What are the causes of...? Define... Label the diagram...
- **COVER** the answers and test yourself.
- **ANSWER** the questions from memory, either verbally or in writing.
- **CHECK** your answers using the knowledge organiser and correct any mistakes with a different coloured pen.
- **REPEAT** the questions you found difficult until you can answer them confidently.

The more you practise retrieving information from memory, the more likely you are to remember it in assessments.





MIND MAPPING

1. **CHOOSE** a topic from your knowledge organiser and write it in the centre of a blank page.
2. **ADD** the main ideas as branches coming away from the centre.
3. **INCLUDE** key words, facts, dates, diagrams or examples on each branch.
4. **USE** colours, symbols and images to help organise the information.
5. **COVER** your knowledge organiser and add any extra information you can remember from memory.
6. **CHECK** your mind map against the knowledge organiser and use a different coloured pen to add anything you missed.

A mind map helps you see the links between ideas and remember information more easily.

How can parents support?

- Ask your childto talk you through their mind map — can they explain the links, not just recite the words?
- Set them a random 5-question quiz from their booklet with no notice.
- Encourage colour and drawing — visual detail helps recall, it isn't just decoration.

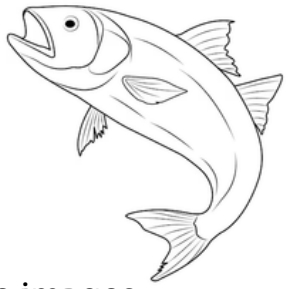
You will use your knowledge book regularly throughout this term. You will use this as part of your lessons, your homework and your revision. Your teachers will guide you to which bits of information to focus on at any given time.

ART – UNIT 1 – Cornish Sea Monster – Inspired by Charles Causley

Core Knowledge

By the end of this unit you will know ...

Poetry can inspire visual art.
Key imagery includes mermaids, whales, jumping fish, sea-gulls and the sea.
Students use line, shape, form, tone, texture and pattern to communicate mood, movement and depth.



- **Line –** flowing waves.
- **Shape –** organic sea forms.
- **Form –** 3D creatures.
- **Tone –** underwater depth.
- **Texture –** scales and shells.
- **Pattern –** ripples and repeated marks.
  Composition – balanced layouts.
- **Poetry to Art –** transforming words into images.

Keywords

Imagery, Composition, Atmosphere, Movement, Tone, Texture, Pattern, Form, Symbolism, Annotation.

Previous Knowledge

Students build on primary drawing and colouring experiences to learn the seven elements of art: line, shape, form, tone, texture, pattern and colour. The unit develops practical and analytical skills before culminating in an artist-inspired personal response.

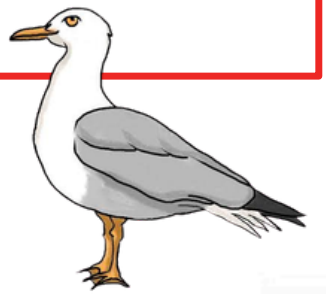
Think Deeper

Explore symbolism, atmospheric effects, visual storytelling, movement through line, and texture inspired by marine life and Cornish folklore.



Revision Support

Recall poem imagery, explain your sea monster design, identify elements of art used, practise tonal shading and review annotations.



COMPUTING – UNIT 3 – The Charity Fundraiser Project

Core Knowledge

▪Saving to **OneDrive** keeps your file in the cloud, so you can open it on any device. Clear folders and file names help you find your work.

▪ Every **cell** has an address: the column letter first, then the row number. This is called a **cell reference**.

▪ A spreadsheet treats text and numbers differently. Type numbers as digits, then apply formatting such as **currency**. ▪ Every **formula** starts with = and uses +, -, * or /, referring to **cells** so answers update automatically.

▪ A **function** is a ready-made formula: **SUM** adds a **range**, **AVERAGE** finds the **mean**, **MAX** the largest value and **MIN** the smallest.

▪ **Profit** = **income** - **expenditure**. You only raise money once you have paid your costs.

▪ A **pie chart** shows parts of a whole; a **bar chart** compares separate amounts. Every chart needs a title and labels.

▪ A good **logo** is simple and clear when small. Colours give people a feeling before they read any words.

▪ A professional email needs a **subject line**, greeting, short message and sign-off. **CC** copies someone in; **BCC** hides the addresses.

Keywords

Cloud; **OneDrive**; Sync; **Cell reference**; Data type; **Formula**; Operator; **Function**; **SUM**; **Range**; Hardcoding; Worksheet; **Income**; **Expenditure**; **Profit**; **Currency**; **Pie chart**; **Logo**; **Subject line**; **CC** / **BCC**

Think Deeper

▪ Avoid blank rows or columns inside a table; widen columns instead.

▪ Use pale, neutral fills so numbers remain easy to read.

▪ Use separate worksheets for **income**, expenses and a summary.

▪ =C2*D2 calculates raffle income from tickets × price and copies down.

▪ Excel has hundreds of functions: **SUM**, **AVERAGE**, **MAX** and **MIN** are a starting point.

Previous Knowledge

Office 365, **OneDrive**, PowerPoint, copying, cropping and screenshots.

Career links: Fundraising Manager, Data Analyst, Graphic Designer, Marketing Executive, Business Administrator.

COMPUTING – UNIT 3 – The Charity Fundraiser Project

Cloud & File Management

OneDrive > Year8Computing>Charity Fundraiser > Budget / Poster

Clear file name: smith_j_budget_v2.xlsx

Saving to OneDrive stores your file online so it is available at school or home.

Numbers and Dates

Type **24** as a number, then apply **currency** format to display £24.00. Formatting changes how the value looks.

Date: 24/06/2025 (dd/mm/yyyy)

Building the Budget

Income: Ticket sales £180.00; cake stall £65.50.
Expenditure: Printing £24.00.
Profit: £221.50.

B3 means column B, row 3.

Formulas: the Operators

+ =B2+B3 (add)

- =B2-B5 (subtract)

***** =C2*D2 (multiply)

/ =B6/30 (divide)

Use **=B2+B3**, rather than =180+65.5, so answers update with your data.

Functions

=SUM(B2:B3) adds a **range**.

=AVERAGE(B2:B3) finds the **mean**.

=MAX(B2:B3) largest value.

=MIN(B2:B3) smallest value.

B2:B3 means every **cell** from B2 to B3.

Choosing the Right Chart

Pie: parts of a whole.

Bar: separate amounts.

Select the data; add a title and labels.

Branding & Colour

Red: urgency. **Green:** nature.

Blue: trust. **Yellow:** hope.

Test a **logo** at stamp size. Avoid excessive detail or too many colours.

The Sponsorship Email

To: manager@localcafe.co.uk
Subject: Sponsorship request - Year 8 fundraiser

Dear Ms Chen,

I am a Year 8 student at Penryn College. We are raising money for ... and I am writing to ask whether you could support us with ...

Yours sincerely,
Jay Smith

Attachment: carefund_logo.png
CC copies in; **BCC** hides addresses.
This is a draft only.

Revision support

BBC Bitesize KS3 Computing: Spreadsheets. Comic Relief and NSPCC schools fundraising pages.

DRAMA – UNIT 1 – Physical Theatre

Core Knowledge

By the end of this unit you will know ...

- Physical Theatre tells stories using movement, body shape and facial expression instead of relying on dialogue.
- Actors use body language and movement to communicate characters, emotions and relationships.
- Frantic Assembly is a theatre company that specialises in Physical Theatre.
- The Hymn Hands technique creates connection and communication between performers.
- The Round, By, Through technique develops movement around other performers to create interesting staging.
- Repetition, rhythm and unison help communicate meaning.
- Trust and safe contact work are essential when performing lifts, balances and supports.
- Physical Theatre performances require strong focus, precision and teamwork.
- Feedback helps actors improve their performances.

Think Deeper

- How movement can communicate meaning without any dialogue.
- Why precision and timing are important in Physical Theatre.
- How repetition creates emphasis.
- How levels and staging affect audience focus.
- How Frantic Assembly combines realism with abstract movement.
- How symbolic movement can communicate emotions and relationships.

Keywords

Keyword	Definition
Physical Theatre	A style of theatre that uses movement as the main way of telling a story.
Frantic Assembly	A British theatre company famous for Physical Theatre.
Narrative	The story being told.
Hymn Hands	A Frantic Assembly technique using connected hand movements between performers.
Round, By, Through	A movement technique where performers travel around, beside or through one another.
Ensemble	A group working together as one team.
Counter-balance	Two performers supporting each other's weight safely.
Trust	Working safely and confidently with a partner.

Previous Knowledge

In Year 7 Drama Skills you learned...

- Freeze Frames
- Facial Expressions
- Body Language
- Voice Skills
- Teamwork
- Characterisation
- Focus
- Performance Skills

These skills are now developed further through movement-based storytelling.

DRAMA – UNIT 1 – Physical Theatre

1 PHYSICAL THEATRE

MOVEMENT
↓
BODY SHAPE
↓
FACIAL EXPRESSION
↓
RELATIONSHIPS
↓
STORYTELLING

- ✓ Little or no dialogue
- ✓ Uses movement to tell stories
- ✓ Requires teamwork
- ✓ Creates meaning through the body



2 FRANTIC ASSEMBLY TECHNIQUES

TECHNIQUE	WHAT IT DOES	EXAMPLE
HYMN HANDS	Creates connection between performers.	
ROUND	Move around your partner.	
BY	Move closely beside your partner.	
THROUGH	Travel through spaces safely.	
REPETITION	Repeat movements for emphasis and effect.	

3 PHYSICAL THEATRE PERFORMANCE

POOR EXAMPLE ✗

- ✗ Looking at the floor
- ✗ Weak posture
- ✗ Different timings
- ✗ Little energy
- ✗ No focus



GOOD EXAMPLE ✓

- ✓ Strong body shapes
- ✓ Different levels
- ✓ Everyone moving together
- ✓ Clear focus
- ✓ Strong facial expressions



4 SAFE CONTACT WORK

TRUST
↓
COMMUNICATION
↓
CONTROL
↓
BALANCE
↓
SAFE PERFORMANCE

SUPPORT EXAMPLES





KEY RULES

- Always ask before contact
- Communicate clearly
- Move with control
- Look after yourself and others
- Stop if something feels unsafe

5 PERFORMANCE CHECKLIST

Stay focused	Work safely	Move with control	Use clear body language	Show strong facial expressions	Stay in time	Support your ensemble	Perform confidently
☐	☐	☐	☐	☐	☐	☐	☐

National Theatre Discover

Frantic Assembly Learning Resources

ENGLISH – UNIT 1 – Heroes & Villains

Core Knowledge

By the end of this unit you will know how to select and embed quotes, how to structure and develop your analysis, how to use similar methods as Doyle to describe a moment of conflict.

How Doyle uses language devices to convey characters' feelings through:

✓	Identified	Applied
Personification		
Imagery		
Metaphor		
Simile		
Emotive language		
Verbs and adverbs		
Pathetic fallacy		
Zoomorphism		
Extended metaphor		
Characterisation		
Allusion		
Symbolism		
Semantic field		

Keywords

Amicable – friendly and peaceful
Hostile – unfriendly or unwelcoming
Heroic – brave and willing to help others, even in difficult situations
Villainous – having cruel or wicked intentions; characteristics of a villain
Atmospheric – somewhere with a strong mood or feeling
Legacy – something important left behind or passed down to future generations
Elemental – related to the **forces** of nature; fire, water, earth and air.
Devastation – a feeling of overwhelming sadness
Distress – a feeling or extreme worry or sadness
Reluctance – a feeling or being hesistant or unwilling
Indignation – a feeling of anger or annoyance because something seems unfair, wrong or unjust

Previous Knowledge

- In Year 7, you analysed how characters expressed their feelings and beliefs through a **range** of language devices
- You practised using quotes and making inferences.
- You described a setting

Think Deeper

- Incorporate **dual interpretation**
- Interpret Fionn's feelings as something which controls him and exploring what this suggests about the power of feelings
- Explore McGowan's views, concerns and attitudes about:
- Childhood
- Loss & Grief
- Strong bonds
- Resilience
- Legacy and Responsibility
- Hope & Despair

ENGLISH – UNIT 1 – Heroes & Villains

Example analytical paragraph

The writer's use of **personification** when Fionn feels 'indignation jostling the urge to cry' makes his feelings sound like they are all fighting one another and he isn't sure what to think. It conveys the sense that his feelings are overwhelming and many. Furthermore, the violent verb 'jostling' has **connotations** of bustling and fighting which helps to emphasise the chaos and lack of control Fionn has over his own emotions.

Why this?

Year 8 opens with an engaging coastal story full of interesting characters. Doyle expertly conveys the complexity of family relationships with her larger than life characters. This is an opportunity to hone your own skills of characterisation and tension building, taking inspiration from Doyle and other writers. You will also recap descriptive writing skills, building up to narrative and continue to develop language and structure analysis and application in greater depth and detail

Why now?

Building on your analysis of the novel form, this is a slightly more complex text and allows you to consider the complex roles of heroes and villains which will be a focus right through Key **Stage** 3 and 4.

Assessment and revision

Reading: An analysis of how a writer conveys feelings.
Writing: A description of a moment of conflict.

Revision Support

Audio of the book

ENGLISH – UNIT 1 – Heroes & Villains

Setting of the novel



Key symbols



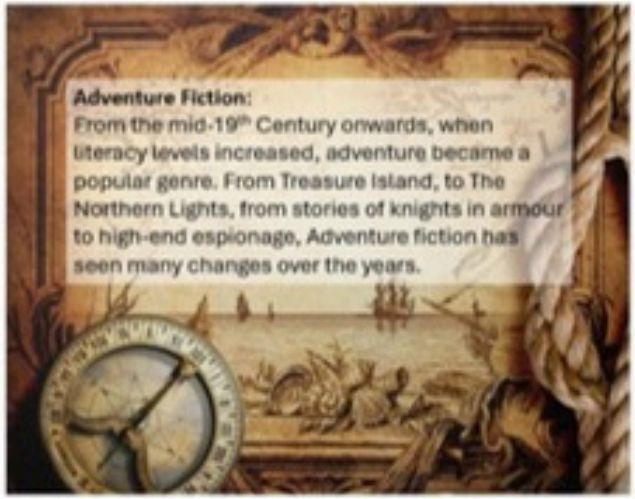
Gallery of characters



Arranmore Island landscape



Adventure fiction



Reading: PEEL

P	What	make a point about the theme/character from the question
E	When	embed a quotation to support your analysis
E	How	identify which method the writer has used
L	Why	zoom out to consider why the writer has made this choice; the effects of the method and the specific ideas/messages they want to convey





FOOD – UNIT 1 – Food Around The World

Core Knowledge

By the end of this unit you will know ...

- Cultural diversity influences ingredients, flavours, cooking methods and food traditions around the world.
- Fusion cookery combines ideas, ingredients and techniques from different cuisines.
- Ingredients should be selected ethically by considering Fairtrade products, food miles and sustainability.
- Bread varieties from around the world use different raising agents including yeast.
- Pasta and bread are staple foods in many cultures.
- Eggs perform functions such as binding, emulsifying and adding structure.
- Thickening agents are used to improve the consistency of sauces and dishes.
- Herbs, spices and seasoning add flavour and reflect cultural traditions.

Keywords

- **Cuisine –** A style of cooking linked to a country, region or culture.
- **Cultural –** Relating to the traditions, beliefs and customs of a group of people.
- **Ethical –** Making choices that consider people, animals and the environment.
- **Fusion –** Combining elements from different food cultures.
- **Beliefs –** Religious, moral or personal values that influence food choices.

Think Deeper

- Religious, ethical and moral beliefs affect dietary choices.
- Alternative proteins and plant-based ingredients can support specialist and religious diets.
- Food safety is essential when preparing meat and poultry to avoid cross-contamination.
- Different countries use unique flavour combinations, ingredients and cooking techniques.

Practise and revise through the Food Website

Previous Knowledge

- This unit builds on Year 7 healthy eating, hygiene, knife skills and bread making knowledge.
- Primary School Geography.
- Y7 RE Religious Beliefs.

FOOD – UNIT 1 – Food Around The World





FAIRTRADE



FRENCH – UNIT 2 – Les Vacances

Core Knowledge

- **Intensifiers** – words that add extra meaning to **adjectives** such as very, quite and a bit
- **Negatives** – go around the verb in French to say what you didn't do
- **Prepositions** – words that indicate position such as to / in
- **Pronouns** – words you use instead of names, such as I, you, he/she
- **Perfect Tense** – what has happened
- Use regular -er verbs with je in perfect tense
- Use key irregular verbs (I drank, I saw, I did, I took) with je in perfect tense
- Say what you didn't do on holiday and what it was like.
- Know how to say 'went' in singular forms; I went, you went, he/she went
- Describe where you went and how you travelled on holiday
- Talk about a disastrous holiday and what went wrong
- Say what you normally do on holiday and compare this to last/next year

Think Deeper

- Avoir in the **plural** form
- Vary **pronouns** with **perfect tense** -er verbs
- Vary pronouns with perfect tense irregular verbs
- Use 'went' with different pronouns

Keywords

Where did you go? - Où es-tu allé(e)?

Was it a disaster? - C'était un désastre?

What do you normally do? - Que fais-tu normalement?

Present Tense - What is happening now

Perfect Tense - What has happened in the past

Near Future Tense - What is going to happen in the future

Imperfect Tense - Was/Used to happen

Previous Knowledge

In this unit you will learn to talk about where you go on holiday. You will revisit hobbies and opinions from Year 7 to say what you do on holiday and why. You will also start to learn how to say what you have done on holiday and where you have gone.

FRENCH - UNIT 2 - Les Vacances

Holiday vocabulary and grammar

WENT (doesn't use avoir)
je suis allé(e) – I went
tu es allé(e) – you went
il est allé – he went
elle est allée – she went

Irregular Perfect Tense
*j'ai **bu*** (I drank)
*j'ai **vu*** (I saw)
*j'ai **fait*** (I did / made)
*j'ai **pris*** (I took)

I → Je
You → Tu
He/It → Il
She/It → Elle
We/One → On
You → Vous
We → Nous
They → Ils
They → Elles

C'est = It is... C'était = It was...
amusant – fun
sympa – nice
intéressant - interesting
nul – rubbish
ennuyeux/barbant = boring

Intensifiers
un peu = a bit
assez = quite
très = very

*Je **n'**ai **pas** visité le parc d'attractions.*
I didn't visit the theme park.
After a negative, ***un, une*** and ***des*** become ***de***:
*Je n'ai pas vu **de** spectacle.*
I didn't see a show.

NEGATIVES

TO / IN
feminine countries (e.g. *la France, l'Italie*): *en France, en Italie*
masculine countries (e.g. *le Canada*): *au Canada*
plural countries (e.g. *les États-Unis*): *aux États-Unis*
islands and towns *à Vanuatu*

Que fais-tu normalement pendant les vacances?

C'était un déastre? Was it a disaster?
J'ai oublié mon passeport
I forgot my passport
J'ai rate l'avion
I missed the plane
J'ai cassé mon portable
I broke my phone
J'ai perdu mon sac
I lost my bag
Je suis tombé(e)
I fell

Normally, during the holidays...
Normalement, pendant les vacances ...
je vais en colo, à la campagne.
je voyage en car.
je nage dans la piscine.
je fais du sport.
je mange des hamburger-frites.
C'est un peu ennuyeux.

Mais l'année dernière But last year...
Je suis allée à Vanuatu.
J'ai voyagé en avion.
J'ai nagé dans la mer.
J'ai fait de la voile et **j'ai vu** des dauphins!
J'ai mangé des fruits de mer.
C'était vraiment génial!

GEOGRAPHY – UNIT 2 – Pollution, Climate Change and Antarctica

Core Knowledge

- **Pollution** involves harmful substances or other disturbances released by human activity, including sewage and oil spills in water, smoke and gases from burning fuels, and waste dumped on land.
- **Non-renewable energy** will eventually run out. It is created by burning fuels such as coal, oil or gas which formed millions of years ago. This also releases air
- **pollution** and **greenhouse gases**.
- **Renewable energy** sources are replenished naturally. Energy can be generated from wind, sunlight and moving water, including rivers, waves and tides.
- The **greenhouse effect** is a natural process. The Sun's energy passes through the atmosphere and warms Earth's surface. **Greenhouse gases**, such as **carbon dioxide**, absorb some of the heat released by the surface.
- When human activity such as **deforestation** or burning **fossil fuels** releases more **greenhouse gases** in the atmosphere than is natural, more heat is held in the atmosphere, leading to **global warming**.
- **Climate change** is a result of **global warming**, and can be seen in the shifting patterns of temperature and rainfall around the world over long periods of time. **Antarctica** is the Earth's southernmost continent. It is the coldest place on Earth and also one of the driest. It is mostly covered with ice and **glaciers** can shape the land underneath over time.
- Wildlife must adapt to the harsh climate in **Antarctica**, for example penguins huddle together to keep warm, seals have sharp teeth to saw through sea ice and krill can withstand 200 days of starvation.

Keywords

Adaptation–a characteristic of an organism that improves its chances of surviving.
Climate change - changes in the average temperature and rainfall around the world.
Deforestation - the removal of a wide area of trees.
Food chain - a series of living things each dependent on the next as a source of food.
Food web - a system of connecting food chains.
Fossil fuels - **non-renewable energy** source from remains of ancient plants (coal, oil, natural gas).
Global warming - the warming of the Earth's atmosphere.
Greenhouse effect - the process by which **greenhouse gases** absorb heat released by Earth's surface, helping to warm the atmosphere. **Non-renewable resources**- resources that cannot be used over and over again so will run out eventually.
Pollution - harmful substances or disturbances released into the environment by human activity.
Renewable resources - resources that are naturally replenished and can be used repeatedly when managed sustainably.
Sustainability - using the Earth's resources without harming the environment today so that they are still available for future generations.

Think Deeper

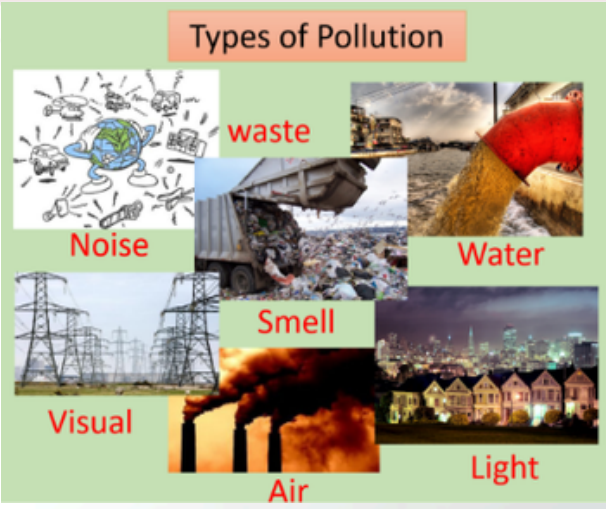
Pollution can also be caused by loud noise and bad smells, which are often linked with heavy primary and secondary industry such as mining and manufacturing. Some fuels are not necessarily renewable, but can be managed in a sustainable way so they are a better alternative than **fossil fuels** such as wood, biomass, or energy **recovery** from food waste.
The **greenhouse effect** is essential for life on Earth to survive because without it, temperatures would be too cold. However, human actions are quickly making it too strong for the environment to adapt.
Glaciers shape the land through **erosion** processes, wearing away the land with their movement like frozen rivers of ice over long periods of time.

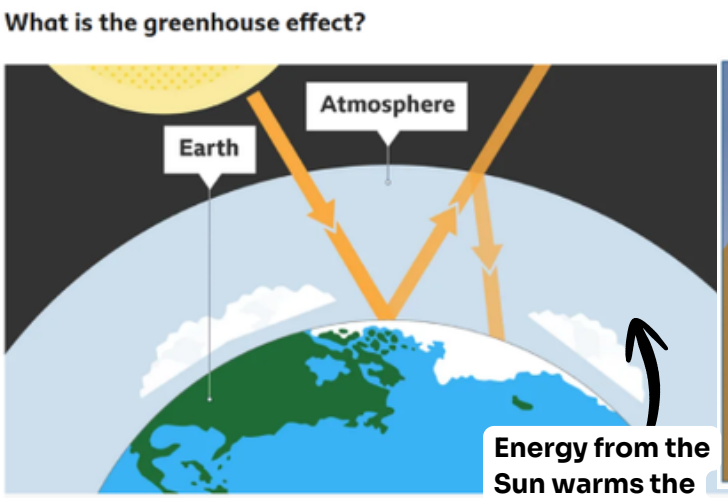
Previous Knowledge

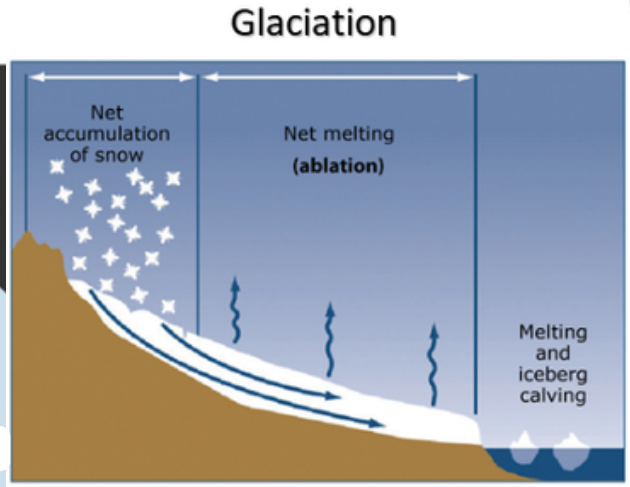
This unit builds on the Year 7 Unit 4 on weather and climate as well as Year 8 Unit 1 on industry to develop our understanding of the environmental threats to fragile ecosystems which are at risk from the effects of climate change. Looking specifically at Antarctica, we can consider how to mitigate these effects.

GEOGRAPHY – UNIT 2 – Pollution, Climate Change and Antarctica

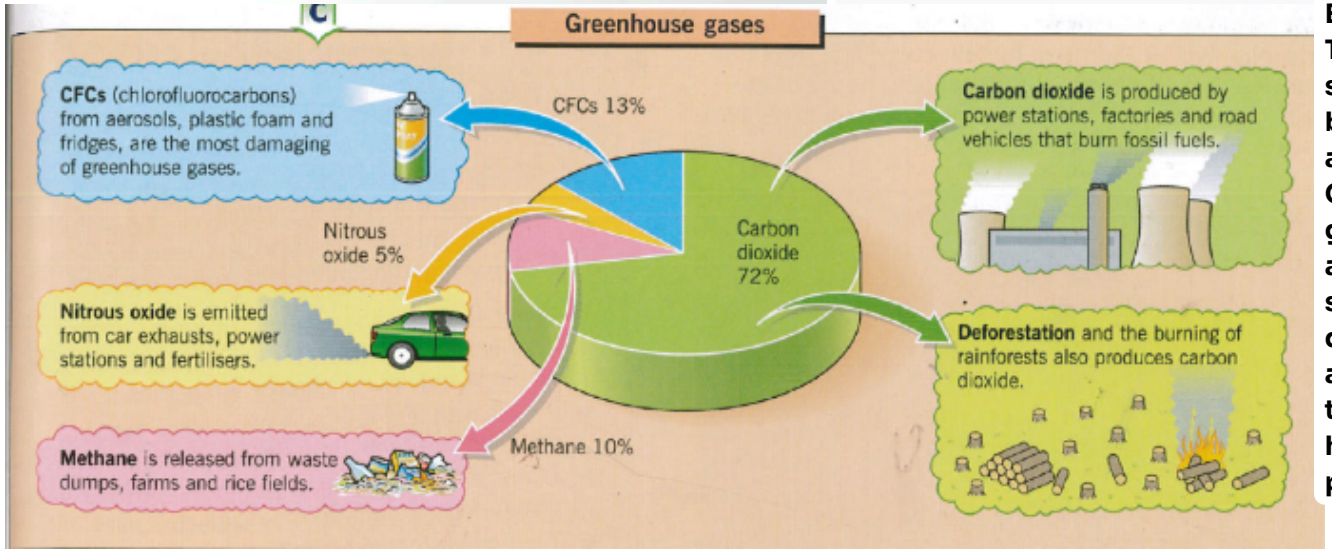
Pollution, climate change and Antarctic ecosystems

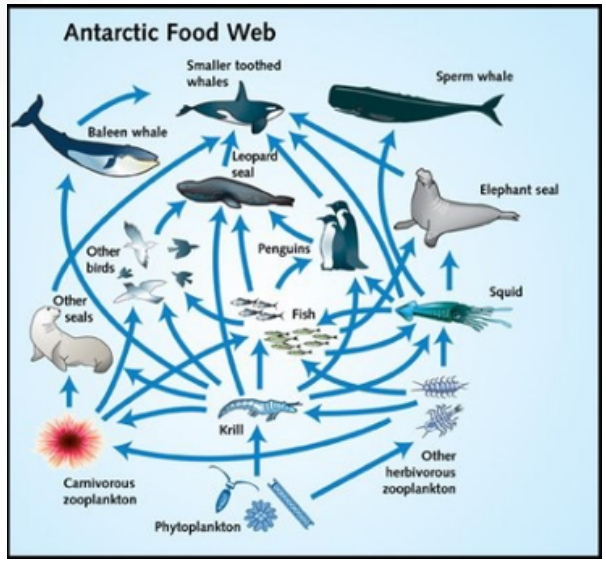






Energy from the Sun warms the Earth's surface. The earth emits some of this heat back out into the atmosphere. Greenhouse gases in the atmosphere, such as carbon dioxide, then absorb some of this heat, which helps to keep the planet warm.





Revision Support

BBC Bitesize: use the links or scan the codes to revise energy resources, climate change and Antarctica.

Revision link 1

Revision link 2

Revision link 3

HUMANITIES – UNIT 2 – Should Britain be ashamed of its colonial past?

Core Knowledge

▪Africa before **colonialism**: Mali, Mansa Musa and the Benin Bronzes demonstrate that Africa contained wealthy and advanced societies before European colonisation.
▪ Why Britain wanted an **empire**: power, wealth, trade, religion and the desire to civilise others.
▪ How trade made Britain rich through imports such as tea, cotton, sugar, cocoa and wool.
▪ Why the slave trade began and how the **Triangular Trade** operated.
▪ What the **Middle Passage** was and why the Zong became a symbol of the horrors of slavery.
▪ What life was like for **enslaved** people on plantations and how they preserved their culture.
▪ Why slavery was abolished and why historians disagree about who deserves the most credit.
▪ The positive and negative impacts of the British Empire on India, Africa, North America and Britain.
▪ How to analyse interpretations, identify viewpoints and construct a supported judgement.

Think Deeper

Historians continue to debate whether Britain should feel proud of its colonial past or be critical of it. Some argue that the British Empire helped spread education, trade, transport networks and new technologies across the world. Others contend that empire was built on conquest, exploitation, slavery and the suppression of local cultures and traditions.
By the end of this unit, you should be able to evaluate these different interpretations and use historical evidence to reach a well-supported judgement about the impact of the British Empire.

Keywords

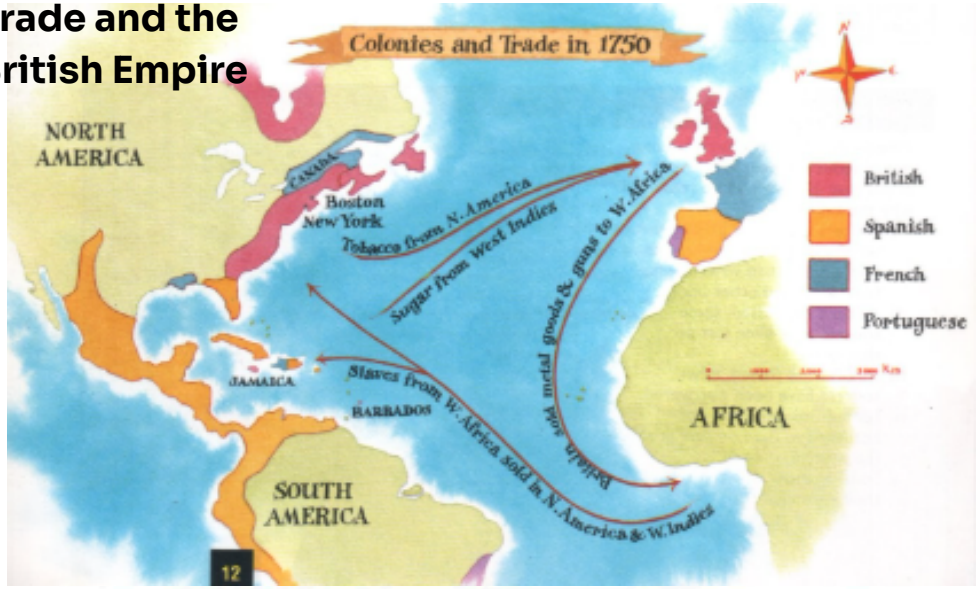
Empire - A group of countries or territories controlled by one powerful country.
Colony - A country or territory ruled by another country.
Colonialism - When one country takes control of another country or territory.
Trade - Buying or selling goods and services.
Import - Goods brought into a country.
Export - Goods sold to another country.
Enslaved - Forced to work without freedom.
Middle Passage - The journey enslaved Africans made across the Atlantic Ocean.
Plantation - A large farm growing crops such as sugar, tobacco or cotton.
Abolition - The ending of the slave trade.
Emancipation - Freedom from slavery.
Interpretation - A view or opinion about the past written after the event.
East India Company - A British trading company that gained control over much of India.
Windrush - Migration to Britain from Caribbean colonies after World War Two.

Previous Knowledge

This unit explores the history of the British **Empire** and asks the enquiry question: Should Britain be ashamed of its colonial past? Students begin by investigating Africa before **colonialism** before examining why Britain wanted an empire and how trade made Britain wealthy. The unit then explores the transatlantic slave trade, the **Middle Passage**, plantation life and the **abolition** of slavery. Finally, students **evaluate** the impact of the British Empire on Britain, Africa, India and North America before reaching a balanced judgement using evidence from across the enquiry. Throughout the unit, students will develop their understanding of interpretations, significance, **consequences** and historical debate.

HUMANITIES – UNIT 2 – Should Britain be ashamed of its colonial past?

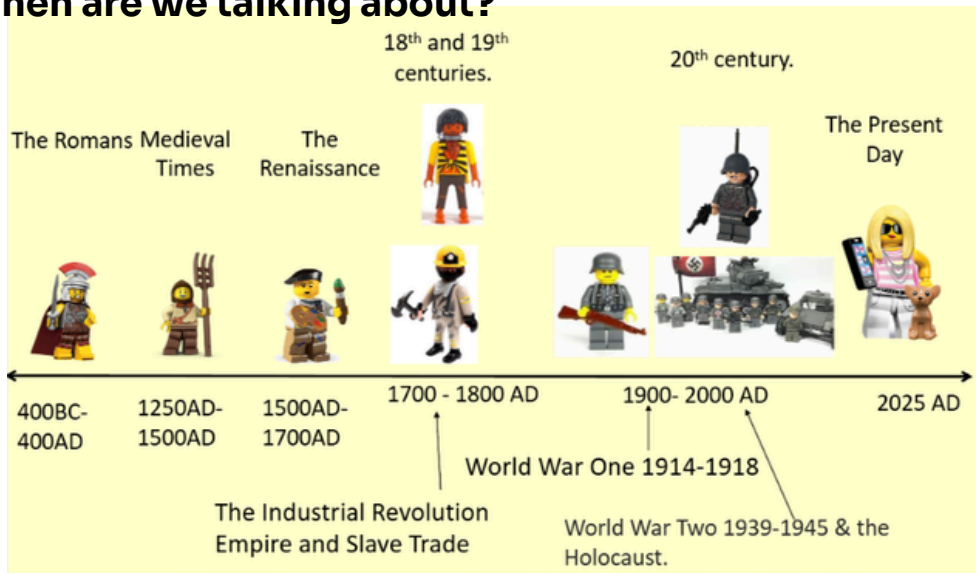
Trade and the British Empire



British Empire map



When are we talking about?



Revision support

BBC Bitesize: British **Empire**; Empire and Migration
BBC Teach: **Windrush** Generation; Transatlantic Slave Trade
National Archives: Black Presence and the British Empire
Migration Museum: Windrush Stories
International Slavery Museum: articles, resources and virtual exhibitions
Royal Museums Greenwich: British Empire
History Hit: British Empire
The Black Curriculum: Black British history, empire, migration and Windrush

HUMANITIES – UNIT 2 – Should Britain be ashamed of its colonial past?

Positive impact of Empire

Britain should be proud: use evidence to support this interpretation.

Negative impact of Empire

Britain should be ashamed: use evidence to support this interpretation.

Impact of the British Empire

America

Britain



Africa

India

LIFESKILLS – UNIT 2 – Health and Wellbeing

Core Knowledge

- The health, social and legal implications of **smoking** and **vaping**.
- How smoking and vaping can affect individuals and the people around them.
- How **caffeine** and energy drinks can affect the body, **sleep**, concentration and wellbeing.
- How to make informed choices about caffeinated drinks and identify healthier alternatives.
- Why sufficient, good-quality sleep is important for physical health, mental wellbeing and learning.
- How **screen time**, diet and daily routines can positively or negatively affect sleep quality.

Think Deeper

- How **nicotine** affects the body and why nicotine use can lead to **dependence** and **withdrawal**.
- How the **consequences** of **smoking** and **vaping** extend beyond physical health to include social and legal implications.
- How peer and social influences can affect decisions around smoking and vaping.
- How **caffeine** acts as a **stimulant** and why the amount and timing of caffeine consumption can affect **sleep**.
- How poor-quality or insufficient sleep can affect mood, concentration, memory, learning and physical health.

Keywords

Essential

Smoking: Breathing in smoke produced by burning tobacco.
Vaping: Using an electronic device to inhale an aerosol.
Nicotine: An addictive substance found in tobacco and many vapes.
Caffeine: A **stimulant** found in drinks and foods such as coffee, tea and energy drinks.
Energy drink: A drink containing stimulants, usually including caffeine.
Stimulant: A substance that increases activity in the brain and body.
Sleep: A period of rest essential for physical and mental health.
Screen time: Time spent using devices with screens.
Routine: A regular pattern of behaviours or activities.

Desirable

Dependence: When the body or mind becomes reliant on a substance.
Withdrawal: Physical or psychological effects that can occur when someone stops using an addictive substance.
Second-hand smoke: Smoke breathed in from another person's smoking.
Peer influence: The effect other people can have on someone's choices or behaviour.
Sleep deprivation: Not getting enough good-quality sleep.
Sleep hygiene: Habits and routines that support good-quality sleep.
Circadian rhythm: The body's natural 24-hour sleep-wake pattern.
Cognitive function: Mental processes - thinking, remembering, learning.

Previous Knowledge

- How **personal hygiene** helps to protect individual and community health.
- The characteristics of a healthy, **balanced diet** and how diet can affect long-term health.
- The role of **nutrients**, **calories** and **energy balance** in maintaining health.
- Why good-quality **sleep** is important for physical health, mood and learning.
- The stages of the **sleep cycle** and the importance of healthy sleep routines.
- How **screen time** can affect sleep quality.

LIFESKILLS – UNIT 2 – Health and Wellbeing

Independent Learning Lessons

Why smoking and vaping are risky?

Stimulants

Good sleep routines





MATHS – UNIT 2 – Data, Graphs and Probability

Interpret and Represent Data

Data can be qualitative (non-numerical) or quantitative (numerical). **Quantitative data** may be discrete, where values are counted, or continuous, where values are measured and can take any value within a range. Data can be summarised using the **mean**, **median** and **mode**, while the range measures how spread out the values are.
Different averages are useful in different situations, particularly when a data set contains an **outlier**.
Frequency tables organise data by showing how often each value occurs, while grouped frequency tables combine values into intervals. For grouped data, the mean can only be estimated because the exact individual values are not known.

Think Deeper

- Explain how an **outlier** can affect the **mean** and **range**, and why the **median** may sometimes be a better description of a "typical" value.
- Compare two distributions using an **average** and the range together, rather than only comparing the largest values.
- **Justify** the most appropriate graph for a data set and identify how an axis or scale could make a graph misleading.
- Explain why experimental **probability** may differ from theoretical probability and why more trials usually improve reliability.

Graphs and Charts

Graphs and charts represent data visually and should be chosen to suit the type of information being displayed. Pictograms use symbols and a key, while bar charts and vertical line charts show frequencies for discrete or categorical data. Pie charts show how a whole is divided into proportions, with all sector angles adding to 360°; the angle of a sector can be calculated using (**frequency** ÷ total frequency) × 360°. Line graphs are useful for showing how a quantity changes, particularly over time. Always check the labels and scale carefully, as graphs can be misleading if axes use unequal intervals, omit information or start from an unexpected value.

Tables and Probability

Probability measures how likely an event is to happen and is represented on a scale from 0 to 1, where 0 means impossible, ½ means an even chance and 1 means certain. For equally likely outcomes, probability is calculated as number of favourable outcomes ÷ total number of equally likely outcomes, and it can be written as a fraction, decimal or percentage. The probabilities of all possible **mutually exclusive** outcomes add to 1. **Sample space** diagrams organise all possible outcomes systematically, while two-way tables and **frequency** trees organise information so that probabilities can be calculated from totals or particular groups. A larger number of trials usually makes experimental results more reliable and closer to the theoretical probability.

MATHS – UNIT 2 – Data, Graphs and Probability

Keywords: Interpret and Represent Data

Qualitative data - non-numerical data that describes a quality or category, e.g. eye colour or favourite sport.
Quantitative data - numerical data, e.g. height, age or number of goals scored.
Discrete data - data made up of separate values that can be counted, e.g. number of siblings or number of tickets sold.
Continuous data - measured data that can take any value within a **range**, e.g. height, distance or time.
Mean - an **average** found by adding all the values and dividing by how many values there are
Median - the middle value when the data is put in order.
Mode - the value or item that occurs most often.
Range - the difference between the greatest and smallest values
Outlier - a value that is noticeably different from the rest of the data, e.g. 20 in 2,3,3,4,20
Frequency - the number of times a value or category occurs.

Previous Knowledge

- Calculate the **mean**, **median**, **mode** and **range** from a list of data.
- Interpret and draw pictograms and bar charts using keys, labelled axes and appropriate scales.
- Recognise and interpret simple pie charts and use **fractions** of a whole.
- Convert between fractions, **decimals** and **percentages** and order values on a number line.
- Use angle facts including a full **turn** of 360°

Keywords: Graphs and Charts

Pictogram -a diagram that uses symbols to represent data. A key tells you how much each symbol represents, e.g. = 5 students.
Bar chart - a chart using separate rectangular bars to show and compare frequencies.
Pie chart - a circle divided into sectors to show proportions of a whole. The sectors always total 360°
Line graph - points joined by lines to show how a value changes, often over time.
Scale - the numbered intervals used on an axis, e.g. an axis increasing in 5s.

Keywords: Tables and Probability

Outcome - one possible result of an experiment or trial, e.g. rolling a 4 on a dice.
Event - an outcome or group of outcomes that we are interested in, e.g. rolling an even number.
Probability - a measure of how likely an event is to happen, from 0 (impossible) to 1 (certain).
Sample space - the complete set of all possible outcomes of an experiment. For a normal dice this is 1,2,3,4,5,6
Mutually exclusive - events that cannot happen at the same time in one trial, e.g. a single dice roll cannot be both a 2 and a 5.
Frequency tree - a branching diagram that shows how a total is split into different groups or outcomes. The numbers on the branches at each **stage** must add to the total they came from.

MATHS – UNIT 2 – Data, Graphs and Probability

SKILL / TOPIC	SPARX CODE
INTERPRET AND REPRESENT DATA	
Types of data	U322
Calculating the range	M328
Calculating the median	M934
Finding the mode	M841
Calculating the mean	M940
Finding averages from frequency tables	M127
Finding averages from grouped data	M287
Choosing suitable averages and solving problems	M440
GRAPHS AND CHARTS	
Drawing and interpreting pictograms	M644
Drawing bar charts	M460
Interpreting bar charts	M738
Drawing pie charts	M574
Interpreting pie charts	M165
Drawing line graphs	M140
Interpreting line graphs	M183
TABLES AND PROBABILITY	
Using probability phrases	M655
Writing probabilities as fractions	M941
Writing probabilities as fractions, decimals and percentages	M938
Probabilities of mutually exclusive events	M755
Sample space diagrams	M718
Frequency trees	U280
Tree diagrams for independent events	M299

Types of data

Qualitative (categorical)	Quantitative (numerical)
Describes a quality or category. Example: colours, pet types, eye colour.	Gives a number. Example: age, number of goals, length.
Discrete (countable)	**Continuous (any value)**
Takes separate values. Example: shoe sizes, number of pets.	Can take any value in a range. Example: height, time, temperature.

Choose the graph to match the type of data.

Averages and range

Data: 3, 5, 5, 7, 10

Mean	(3 + 5 + 5 + 7 + 10) ÷ 5 = 30 ÷ 5 = **6**
Median	The middle value is **5** (3, 5, 5, 7, 10)
Mode	The most common value is **5** (5 appears twice)
Range	Largest value − smallest value = 10 − 3 = **7**

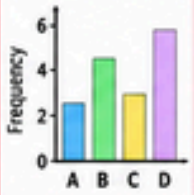
Frequency table

Value	Frequency
1	2
2	3
3	1
4	4

- To find the total frequency, add all frequencies.
- Mean from a frequency table uses value × frequency.

Graphs and charts

Bar chart



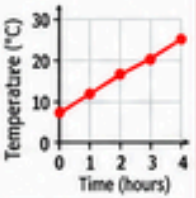
compare amounts

Pie chart



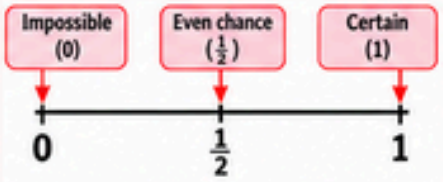
show proportions

Line graph



show change over time

Probability scale



A probability of 0 means it **cannot happen.**

A probability of $\frac{1}{2}$ means it is **equally likely** to happen or not.

A probability of 1 means it will **definitely happen.**

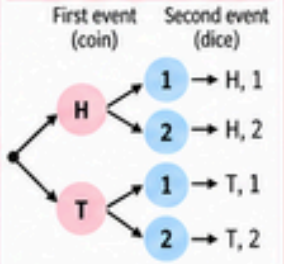
Sample space and tree diagrams

Sample space (coin and dice)

	1	2	3	4	5	6
H	H1	H2	H3	H4	H5	H6
T	T1	T2	T3	T4	T5	T6

List outcomes systematically.

Tree diagram (independent events)



MUSIC – UNIT 1 – Blues Music

Core Knowledge

By the end of this unit you will know ...

- Blues music is a genre that originated in African American communities, characterised by expressive lyrics, a strong emotional feel, and simple chord patterns often based on a 12-bar structure.
- To understand and demonstrate how the elements of music are used in Blues. To be able to perform using Tonality (Blues Scale), Harmony (12-Bar Blues and Walking Bass), Melody and Improvisation.
- **Blues instruments**: electric guitar, acoustic guitar, harmonica, piano, bass guitar (or upright bass), trumpet, drums, and vocals.

Think Deeper

Flattened notes -notes that are played or sung one semitone (half step) lower than their natural pitch (often a black key on the piano).
Blue notes - flattened 3rd, 5th and 7th notes that give Blues its distinctive sound.
Swung rhythm - a way of playing rhythms so they bounce, with the first note slightly longer and the second slightly shorter.
Extended Chords - chords with extra notes added to make them sound more interesting i.e. 7^{th} chords.
Primary Chords - the three most important chords in a key (I, IV and V) that are used most often in music.
Diatonic Harmony - music built using only the notes that naturally belong to a key.
Call and Response - one performer plays or sings a musical idea, and another performer answers it with a different or similar musical idea.
Phrasing - the way a musician shapes a melody to make it sound expressive and musical, like speaking in sentences.
Expression - how a musician plays or sings to communicate feeling and emotion, not just what they play.

Keywords

- **Tonality –** the key or scale a piece of music uses (e.g. major or minor), which helps create its overall mood
- **Harmony –** two or more notes played or sung together
- **Rhythm –** the pattern of long and short notes grouped together to create the "feel" of the music
- **Melody** - the tune in music that stands out and is usually the part you remember.
- **Texture –** how many layers of sound there are in music and how they fit together (e.g. melody, chords and bass).
- **12-Bar Blues –** a repeating chord pattern that lasts 12 bars, usually using chords I, IV and V, forming the basic structure of Blues music.
- **Walking Bass –** a bass line that moves step by step through a chord progression, usually one note per beat, to support the chords and keep a steady pulse.
- **Chords –** three or more notes played together to create harmony and support melody
- **Blues Scale –** a scale (group of notes) used in Blues music that includes "blue notes" to create an expressive sound.

Previous Knowledge

Y7 Unit 1: Rhythm, Beat and Improvising Melody
Y7 Units 2 & 3: Harmony, Tonality, Texture and Melody
How to improvise effectively and what makes a good melody
How to perform as part of an ensemble
In this Blues unit, students will learn the key features of Blues music, including the 12-Bar Blues structure and the primary chords I, IV and V (C, F and G). They will explore how melody, harmony, rhythm and texture work together, including the use of walking bass lines and chords. Students will create and improvise Blues melodies using the Blues scale. They will also develop their ensemble performance skills through rehearsal and performance.

MUSIC – UNIT 1 – Blues Music

Rhythm

A pattern of different note durations

In blues music, rhythms are often swung meaning the first note is longer than the second.

Texture

The layers of sound and how they work together

Unison: All together as one
Call & Response: one idea followed by a response

Monophonic
Homophonic
Polyphonic

Melody

A pattern of different note duration and pitches

Melody in Blues music is sometimes improvised or uses short ideas called a lick

Expression

Adding extra expression to bring the music to life

Staccato: Notes played short
Legato: Notes played smoothly
Accent: Played with force
Bend: Quick change in pitch

Harmony

When two or more notes are played together

Triad chord
Seventh chord

Chord sequence pattern of chords in a piece of music.

Example: The 12 Bar Blues

Tonality

The scale (group of notes) used in a piece of music

C Blues Scale

Timbre

The type of sound an instrument makes



For example: rich, brassy, breathy, warm, sharp or bright

Dynamics

The volume of the music

pp	Pianissimo = very quiet	f	Forte = loud
p	Piano = quiet	ff	Fortissimo = very loud
mp	Mezzo Piano = fairly quiet		Crescendo = getting louder
mf	Mezzo Forte = fairly loud		Decrescendo = getting quieter





Scan for revision support



C///	C///	C///	C///
F///	F///	C///	C///
G///	F///	C///	C///

I	I	I	I
IV	IV	I	I
V	IV	I	I

YEAR 8 PHYSICAL EDUCATION – UNIT 2

Unit Overview

In this unit, students will develop and embed core skills across two of five sports: Football, Gymnastics, Fitness, Badminton and Hockey. They will explore how applying **coordination** and **balance** improves performance, focusing on the consistency, control and effectiveness of previously learnt techniques.

Tick your two sports: ☐ Football ☐ Gymnastics ☐ Fitness ☐ Badminton ☐ Hockey

Core Knowledge

Football– Coordination

Deception and **double movement** involve moving one way before quickly changing direction to lose a defender and create space to receive the ball.
Dribbling and running with the ball require coordinated footwork, body movement and ball touches to maintain control.
Cruyff turns and **stepovers** use **deception** and coordinated footwork to change direction and escape defensive pressure.
Defensive techniques requires coordinated footwork, a side-on stance, low centre of gravity and correct timing to track an attacker and regain possession.
Attacking and defending movements require players to coordinate support, marking, covering and **recovery** as play changes.

Gymnastics – Balance

Balance involves maintaining the **centre of mass** over the **base of support**.
Jumps, rolls and weight-on-hands movements require **balance** and body control during take-off, **rotation** and landing.
Counterbalance and **counter-tension** allow partners to maintain stability through controlled body positions and shared forces.
Cartwheels and **tumbling** require controlled weight transfer, hand placement and body position during **rotation**.
Gymnastics routines combine skills across different levels of apparatus while maintaining **balance**, control and fluency.

Fitness – Coordination

Coordination is the ability to use two or more body parts together smoothly and efficiently.
Bodyweight exercises, including squats, lunges, press-ups and planks, require coordinated arm, leg and core movements to maintain correct technique.

Fitness – (continued)

Plyometric exercises require coordinated arm swing, leg drive and landing to generate power and maintain control.
Bench press and dumbbell exercises require coordinated arm and shoulder movements to lift and lower resistance smoothly and efficiently.
Kettlebell exercises require coordinated hip drive, leg and arm movements to perform dynamic exercises with control.

Badminton – Coordination

Coordination combines footwork, body position, racket action and timing to improve shot consistency.
The **short backhand serve** travels low towards the front of the service court, while the **forehand long serve** travels high and deep.
Overhead and **underarm clears** use coordinated racket movements to send the shuttle high and deep towards the back of the court.
The **overhead smash** requires body positioning, racket acceleration and timing to produce a powerful downward shot. **Net shots** require soft, controlled contact, while **drives** use a fast, flat trajectory through the mid-court.

Hockey – Coordination

The **slap pass** requires coordinated hand, arm and body movements to strike the ball accurately with control and power.
A **side-to-side dribble** combines hand, stick and foot movements to change direction while maintaining possession. The **jab tackle** requires coordinated footwork, stick positioning and timing to disrupt an attacker.
In a **2v1**, players combine passing, **dribbling** and shooting to create and finish attacking opportunities.
Coordinated movement and positioning help players apply previously learnt skills effectively in competitive games.

Think Deeper

Football: Coordinating **deception**, footwork and ball control helps players evade defenders, create space and maintain possession.
Gymnastics: Applying **balance** during transitions, rotations and partner movements improves stability, control and the quality of a routine.
Fitness: Coordinating arm, leg and core movements improves control, technique and efficiency when performing bodyweight and resistance exercises.
Badminton: Coordinating footwork, body position and racket action improves the accuracy, power and consistency of different shots.
Hockey: Coordinating stick movement, footwork and timing improves ball control, defensive challenges and attacking opportunities in a **2v1**.

Previous Knowledge

Demonstrate accurate passing and receiving using correct technique and control.
Perform fundamental movement skills, including **dribbling**, turning and changing direction.
Apply **body tension**, **balance** and control when performing jumps, rolls and gymnastics sequences.
Demonstrate safe exercise techniques, including bodyweight exercises, squats, deadlifts and plyometrics.
Perform basic badminton and hockey techniques, including serving, overhead shots, push passing, **dribbling** and tackling.
Apply **teamwork**, **communication** and rules in competitive games and practical activities.

PERIOD 4 – PERSONAL DEVELOPMENT – Taking Action in Our Community

Core Knowledge

- What **hate crime** is and why it is taken seriously.
- How the law protects people from hate crime.
- How to protect your **digital footprint**.
- How to respond to online harm safely.
- How to identify community needs.
- The key stages of project planning.
- How to lead and encourage participation.

Keywords

Hatecrime - A crime motivated by hostility to identity.

Digital footprint - Your trace left online.

Community need - A gap a community faces.

Empathy - Sharing how someone else feels.

Leadership - Guiding and encouraging a group.

Evaluate - Judge value using evidence.

Justify - Give reasons for a choice.

Think Deeper

- A law protecting a protected characteristic.
- Why some online harm goes unreported.
- Is a project only successful if it goes to plan?

Go deeper through: your Finding My Voice whiteboard tasks and reflections

Previous Knowledge

P4 Autumn Term1:
values, stereotypes and discrimination.

We are Reading

The Giver by Lois Lowry. Memory, Individuality, Choice, Community.



In Lifeskills

Health and Wellbeing

Personal hygiene, diet and **sleep**.

Foundations for the Future

Taking Ownership and Action

Get involved. Use failure and feedback to learn, grow and set new goals.

SCIENCE – Life Cycles

Core Knowledge

- Describe how **heredity** passes characteristics from parents to offspring through the **genome**.
- Identify the relationship between **genes**, **DNA**, **chromosomes** and the genome.
- Explain the causes of genetic and **environmental variation** within a species.
- Differentiate between continuous and **discontinuous variation** and present data appropriately.
- Describe growth as an increase in **cell** number through cell division.
- Explain the roles of sperm and egg **cells** in human **sexual reproduction**.
- Identify the structures and functions of the male and female reproductive systems.
- Describe **fertilisation**, **embryo** formation, pregnancy and foetal development in humans.
- Explain **pollination**, fertilisation, seed formation and **germination** in plants.
- Compare sexual and **asexual reproduction** and **evaluate** their advantages and disadvantages.

Keywords

Genome: the complete set of genetic information in an organism.

Gene: a section of **DNA** containing instructions for characteristics and **cell** processes.

DNA: the molecule that stores genetic information.

Chromosome: a tightly coiled package of DNA.

Heredity: the passing of characteristics from parents to offspring.

Variation: differences between individuals of the same species.

Fertilisation: the fusion of male and female **gametes**.

Gamete: a specialised sex cell such as a sperm or egg.

Pollination: transfer of pollen from anther to stigma.

Asexual reproduction: reproduction involving one parent and producing genetically identical offspring.

Think Deeper

- Analyse how combining parental genomes creates **genetic variation**.
- **Evaluate** how scientific evidence led to the discovery of the **DNA** double helix model.
- Interpret **variation** data and select the most appropriate graph type.
- Explain how the **placenta** is adapted for **diffusion** of substances between mother and **foetus**.
- Compare the impact of sexual and **asexual reproduction** on adaptation and survival.

Previous Knowledge

- Know that living things reproduce to produce offspring of the same species.
- Recognise the stages of human and plant life cycles from primary school learning.
- Describe the role of flowers in **pollination**, seed formation and **seed dispersal**.
- Understand that **cells** are the basic units of living organisms and contain genetic material.
- Recognise that offspring resemble their parents but are not usually identical.

SCIENCE - Life Cycles

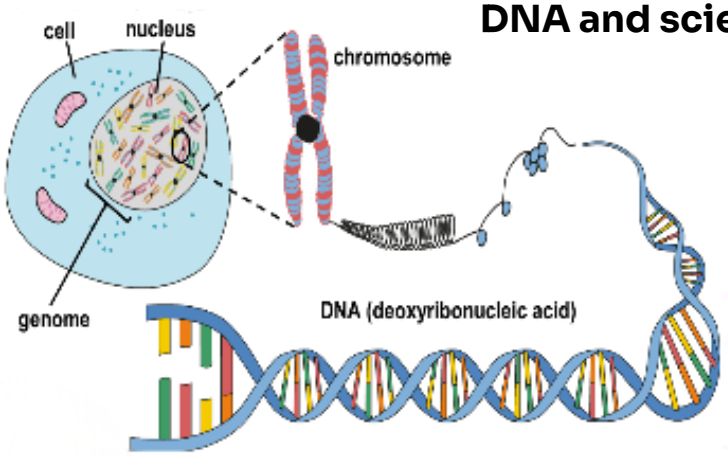
Life Cycles

Reproduction makes new organisms called offspring. Offspring inherit characteristics from both parents through their genomes. They usually look similar, but not identical, to their parents because they inherit half their **genome** from each.

Genome, Chromosomes, DNA and Genes

The **genome** is made of **DNA**, a natural polymer with two strands twisted into a double helix. DNA is coiled into **chromosomes** in the **nucleus**. Human body **cells** have 23 pairs of chromosomes, half from each parent. **Genes** are sections of DNA.

Smallest to largest:gene > DNA > **chromosome** > genome



DNA and scientific discovery

Rosalind Franklin's X-ray images revealed **DNA**'s spiral form and helped Watson and Crick determine the double helix **structure**.

Variation

A species can reproduce to produce fertile offspring.

Variation means differences within a species.

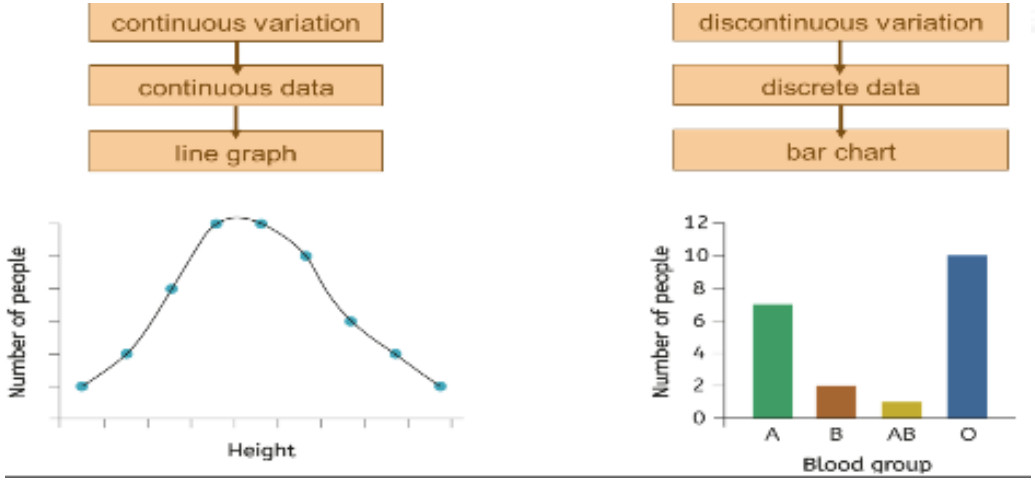
Genetic variation is inherited. **Environmental variation** comes from surroundings and lifestyle.

Discontinuous variation has categories, such as eye colour or blood type. It often depends on one or a few **genes**.

Continuous variation has a **range** of values, such as body mass or height. It often depends on many genes and the environment.

Data may be quantitative (discrete or continuous) or qualitative (categoric). Variation supports adaptation and survival.

Variation: choosing a graph

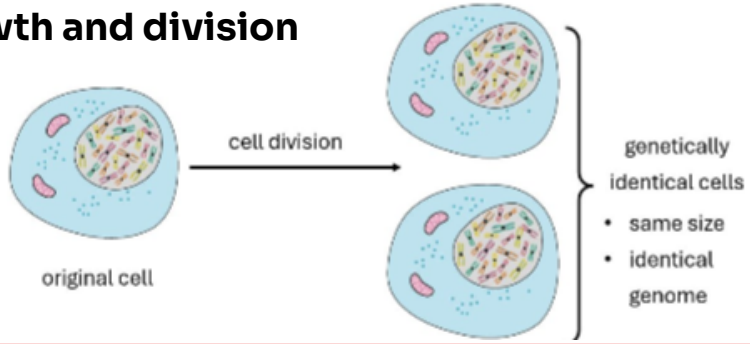


SCIENCE – Life Cycles

Growth and Development

In multicellular organisms, growth increases the number of **cells**. Cells enlarge and divide to form two genetically identical cells. As an organism develops, **specialised cells** carry out specific functions.

Cell growth and division

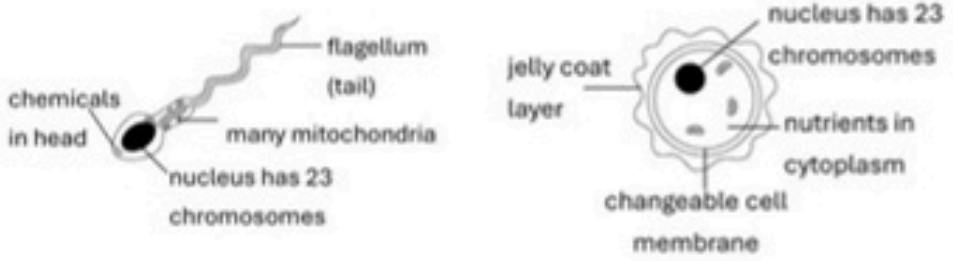


Sexual Reproduction and Fertilisation

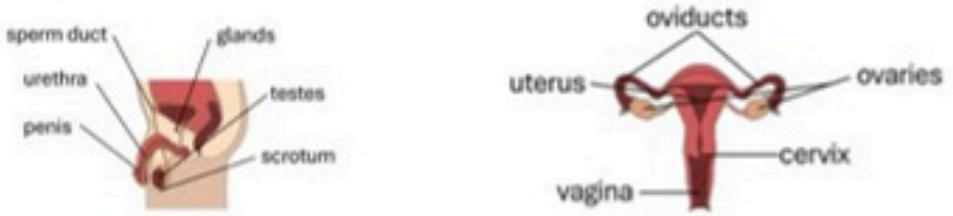
Sperm and egg **cells** each have 23 single **chromosomes**.

Fertilisation happens when they join in the oviduct, forming a zygote with 23 pairs. The zygote implants in the uterus lining. Combining parental genomes creates **genetic variation**. Digital microscopes help scientists record eggs, sperm and dividing zygotes.

Gamete adaptations: sperm and egg



Male and Female Reproductive Systems



Functions of the reproductive organs

Female: ovaries release eggs; oviducts carry eggs; uterus supports development; vagina receives sperm and is the birth canal; cervix keeps the baby in place.
Male: testes make sperm; scrotum controls **temperature**; sperm ducts carry sperm; glands make fluid; urethra carries semen and urine; penis releases semen.

SCIENCE - Life Cycles

Puberty and Adolescence

Both sexes experience underarm and pubic hair growth, stronger body odour, emotional changes and faster growth.

Males: deeper voice; larger testes and penis; sperm production; wider shoulders and chest; facial and chest hair.

Females: breast development; **ovulation** and menstrual cycles; wider hips.

The Menstrual Cycle

Ahormone-regulated cycle, approximately 28 days (often 21–35), prepares the body for pregnancy. It begins at **puberty**, stops during pregnancy and ends at menopause.

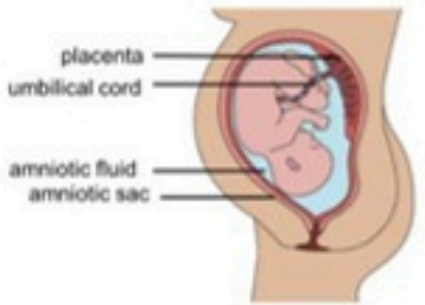
Days 1–5: menstruation.
Days 6–13: uterus lining thickens.
Day 14:ovulation.
Days 15–28: lining is maintained if **fertilisation** occurs; otherwise the cycle continues.

Pregnancy and Foetal Development

Fertilisation>zygote >**embryo** >**foetus**> baby > birth

A foetus develops in the uterus and needs protection, oxygen, **nutrients** and waste removal. Amniotic fluid protects it. The **placenta** exchanges oxygen, nutrients and wastes by **diffusion**. The **umbilical cord** links placenta and foetus. Alcohol, cigarette chemicals and drugs can cross the placenta.

The developing foetus

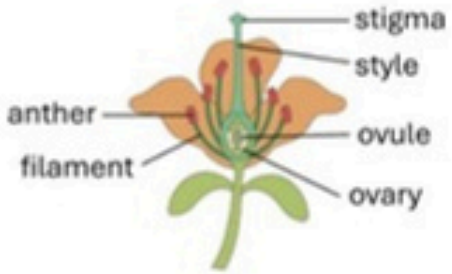


Birth

1. The uterus contracts and the cervix opens.
2. Stronger contractions push out the baby, usually head first. The **umbilical cord** is cut.
3. The **placenta** is pushed out.

SCIENCE - Life Cycles

Plant Reproductive System



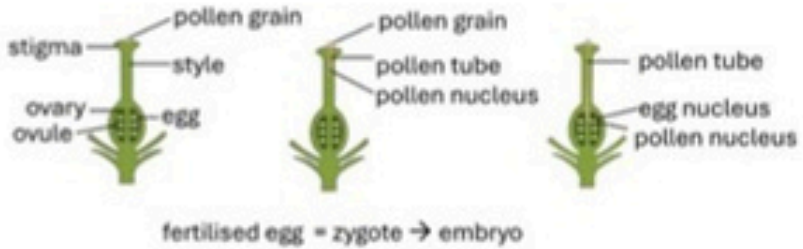
Name of structure	Male or female?	Function
stigma	female	catches the pollen (it is sticky)
style	female	connects the stigma to the ovary
ovule	female	produces the eggs
ovary	female	contains the ovules
anther	male	produces pollen
filament	male	holds up the anther

Pollination and Fertilisation

Pollination transfers pollen from anther to stigma, by wind or animals such as bees. A pollen tube delivers the pollen **nucleus** to the egg nucleus in an ovule.

Fertilisation forms a zygote, which develops into an **embryo**.

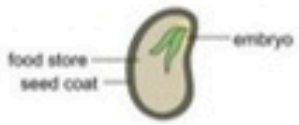
Fertilisation in a flower



Seed Formation and Germination

The ovule forms the seed; the ovary becomes fruit. The seed coat protects the **embryo**, and the food store supplies **nutrients**.
Germination needs water, oxygen and a suitable **temperature**. Water makes the seed swell and split. Roots grow down; shoots and leaves grow upwards.

Seeds and germination





Seed Dispersal

Dispersal reduces competition for light, water, space and minerals.

Wind: light seeds with hairs or wings.

Animals: eaten fruit, buried seeds or seeds attached to fur.

Explosion: ripe pods burst and scatter seeds.

Asexual Reproduction

One parent produces genetically identical clones, using runners, bulbs or tubers. **Bacteria** copy their **genome** and divide. **Sexual reproduction** creates **variation**; **asexual reproduction** is rapid but lacks diversity.

SPANISH – UNIT 2 – Mi ciudad

Core Knowledge

- Places in town (see link to vocab list)
- Use 'a', 'some' and 'many' to describe your town
- Telling the time in Spanish
- Know the verb 'ir' to say where someone goes
- Know vocabulary for food and drinks (see link in vocab list)
- Know the verb 'querer' to order in a restaurant
- Know how to use the **near future tense** to say what you are going to do this weekend
- Use primero, luego, más tarde and finalmente to say in which order you are going to do different things
- Use time phrases to say when you are going to do things – por la mañana, por la tarde
- Remember that 'b' and 'v' are pronounced the same in Spanish

Think Deeper

- Use two tenses (present + near future) together when speaking and writing
- Identify distractors when completing listening tasks
- Using a variety of sequencers, **connectives**, **intensifiers** and time expressions when writing
- Use the **near future tense** on the 'he/she/it' and 'we' forms

Keywords

What is there in your town or city? - ¿Qué hay en tu pueblo o en tu ciudad?
What do you do in the city? - ¿Qué haces en la ciudad?
What do you want? - ¿Qué quieres?
Anything else? - ¿Algo más?
And to drink? - ¿Y de beber?
How much is it, please? - ¿Cuánto es, por favor?
Sequencers - Words or phrases that show the order of events or ideas
Tapas - Small Spanish dishes or snacks served as appetisers or shared plates
Euros - Units of money used in many countries across Europe.

Previous Knowledge

In this unit, you will learn how to describe places in town, telling the time and you will also be able to say what you are going to do this weekend. You will also learn how to order food and drinks in a cafeteria.

SPANISH – UNIT 2 – Mi ciudad

Town, time, food and the near future

¿Qué hora es?





ir	= to go
voy	= I go
vas	= you go
va	= he/she goes
vamos	= we go
vais	= you all go
van	= they go

	a / an	some	many / a lot of
masc	un	unos	muchos
fem	una	unas	muchas



Gambas



tortilla española



calamares



un batido de fresa

querer	= to want
quiero	= I want
quieres	= you (s) want
quiere	= he/she/it wants
queremos	= we want
queréis	= you (all) want
quieren	= they want

SEQUENCERS

primero = *first*

luego = *then*

después = *after*

más tarde = *later*

finalmente = *finally*

Formula to build the near future tense:

You don't use this → ir

You USE one of these, depending on who 'is going to' do the action.

voy
vas
va
vamos
vais
van

+ a +

a verb in infinitive

- Meaning 'to do something'
- Ending in '-ar', '-er' or '-ir'.

e.g.
jugar, bailar, ser, ver, ir, comer...

STEAM D&T - Alessi Project

Core Knowledge

By the end of this unit you will know ...

- A mood board collects images and words that capture a brand's style before designing begins
- ACCESS FM evaluates products against eight criteria; a specification turns that into measurable targets
- Idea development combines the strongest features from several sketches into one annotated design
- An orthographic working drawing shows an object from three views — front, side, plan — with dimensions
- Packaging protects a product and carries its brand identity to help it sell
- A persuasive advert combines a slogan, image, price and reason to buy, aimed at one audience

Revise further: alessi.com (product research) and BBC Bitesize KS3 Design & Technology — Product Design

Think Deeper

- Alessi's style stays recognisable across products through a repeated visual language of colour, playfulness and material
- Projection lines align features across all three orthographic views; scaling preserves real proportions in a smaller drawing
- Sustainable choices — recyclable materials, minimal ink — are increasingly expected by customers alongside strong branding
- The same product can be marketed differently depending on audience, through different slogans, pricing and imagery

Keywords

Mood board	ACCESS FM	Specification	Annotate
Orthographic	Projection lines	Packaging	Net
Brand	Logo	Slogan	Target audience
Aesthetics	Dimensions	Persuade	Scale

Previous Knowledge

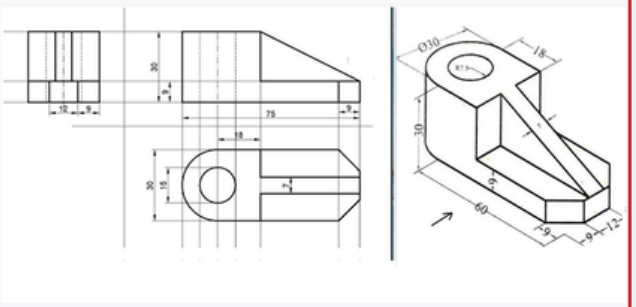
In Year 7 you used orthographic drawing, ACCESSFM-style product evaluation, and PowerPoint/Office 365 skills (Superhero project and STEAM Starter) — Alessi builds directly on all three.

Why this Project?

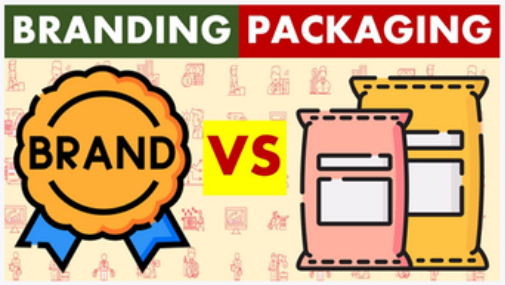
The Alessi Project teaches you to think and work like a professional product designer — researching a brand, analysing existing products, generating your own ideas, and communicating them through technical drawing, packaging and marketing, just as designers do in industry.

STEAM D&T – Alessi Project

Orthographic Working Drawing



Packaging & Branding



Persuasive Advert



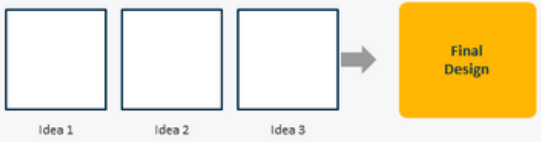
Mood Board & Style



ACCESS FM Analysis



Idea Development



Sketch several ideas, choose the strongest features, then combine and annotate them into one final design.

CAREER LINKS

- Product Designer
- Packaging Designer
- Brand / Graphic Designer
- Marketing Executive
- CAD Technician

STEAM Computing - The Charity Fundraiser Project

Core Knowledge

- Saving to OneDrive keeps your file in the cloud, so you can open it on any device; clear folders and clear file names mean you can always find your work.
- Every cell has an address — the column letter first, then the row number; this is called a cell reference , just like a grid coordinate on a map.
- A spreadsheet treats text and numbers differently; numbers must be typed as digits only — never type £, % or "kg" into the cell, or Excel reads it as text and cannot calculate with it.
- Every formula starts with = and uses the operators + − * / , pointing at cells rather than typed-in numbers, so answers update by themselves
- A function is a ready-made formula — SUM adds a range up, AVERAGE finds the mean, MAX the largest value and MIN the smallest.
- Profit = income − expenditure; you only raise money once you have paid for your costs.
- A pie chart shows parts of one whole and a bar chart compares separate amounts; every chart needs a title and labels.
- A good logo is simple and still clear when it is small; colours give people a feeling before they read any words.
- A professional email needs a subject line, a greeting, a short message and a sign-off; CC copies someone in, BCC hides them.

Think Deeper

- Never leave a blank row or column just to make space — it breaks a range and stops Excel reading the table as one block; widen the column instead
- Format with pale, neutral fills so the numbers stay the easiest thing on the sheet to read; colour should label a section, not compete with the data
- Use separate worksheets — the tabs along the bottom — to organise your data: one for income, one for expenses, and a summary that pulls totals from both
- Make the sheet do the arithmetic: =C2*D2 works out raffle income from number of tickets × price, then copies down the whole column
- Excel has hundreds of functions — SUM, AVERAGE, MAX and MIN are the start of the list, not the whole of it

Keywords

Cloud	OneDrive	Sync	Cell reference
Data Type	Formula	Operator	Function
SUM	Range	Hardcoding	Worksheet
Income	Expenditure	Profit	Currency
Pie Chart	Logo	Subject Line	CC / BCC

Previous Knowledge

In Year 7 you logged into Office 365, saved your work in OneDrive, and used PowerPoint to copy, crop and take screenshots. This unit uses those skills again and adds spreadsheets and branding.

Why this Project?

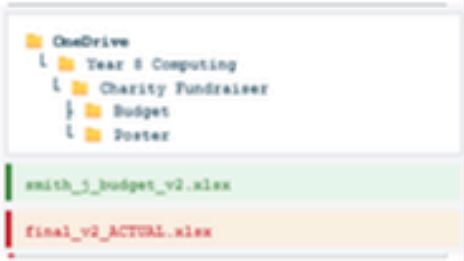
You will plan a real charity fundraiser using the tools a real organisation uses: a budget in Excel, a logo and poster to persuade people, and a professional email asking a local business to help. Each piece of work feeds into the next.

Career Links

Fundraising Manager	Data Analyst	Graphic Designer	Marketing Executive	Business Administrator

STEAM Computing – The Charity Fundraiser Project

Cloud & File Management



Saving to **OneDrive** stores the file online in the **cloud**. You will be able to open it on any device — at school or at home.

Numbers and Dates

TYPED AS TEXT wrong
£24.00
The £ makes it text, so SUM ignores it.

TYPED AS A NUMBER correct
24
Then use **currency format** to show £24.00

Type digits only for numbers, do not enter symbols like £ or other letters like ltrs. It is the formatting that changes how a number *looks* ; it never changes the value underneath.

A DATE NEEDS / in the format dd/mm/yyyy
24/06/2025

Building the Budget

	A	B
1	**INCOME**	
2	Ticket sales	£180.00
3	Cake stall	£65.50
4	**EXPENDITURE**	
5	Printing	£24.00
6	**PROFIT**	**£221.50**

The cake stall figure lives in **B3** — column B, row 3. That address is its **cell reference**.

Formulas: the Operators

+	=B2+B3	add
−	=B2-B5	subtract
*	=C2*D2	multiply
/	=B6/30	divide

REFERENCED =B2+B3
HARDCODED =180+65.5

Every formula starts with = . Then click on the cells to build the **cell references**. Then the answer changes when the data does automatically.

Functions: Ready-made Formulas

=SUM(B2:B3)	adds a whole range up
=AVERAGE(B2:B3)	finds the mean
=MAX(B2:B3)	the largest value
=MIN(B2:B3)	the smallest value

B2:B3 means "every cell from B2 to B3" — the **range**.

Functions do a job for you on a **range of cells**, so its much quicker.
There are special functions for most math problems.

Choosing the Right Chart



Select the data first, then give the chart a **title** and labels. A chart nobody can read is decoration, not evidence.

Branding & Colour



Test a logo **small** . If it still reads at stamp size, it will work anywhere.
Do not use too much fine detail or too many colours as they will not stand out as much.

The Sponsorship Email

To	manager@localcafe.co.uk
Subject	**Sponsorship request — Year 8 fundraiser**

Dear Ms Chen,

I am a Year 8 student at Penryn College. We are raising money for … and I am writing to ask whether you could support us with …

Yours sincerely, Jay Smith

Attached: carefund_logo.png

Put the email addresses of people you want to send to in the **To:** field
CC just copies someone in;
BCC means Blind Carbon Copy and hides the addresses from everyone.

This one is a **draft only** — never sent to a real business.

SAFEGUARDING

Penryn College
Belong | Aspire | Succeed

We are here to ensure everyone is as safe as they can be. If you have a worry about anyone's well-being or a concern about something you have seen or heard, please let us know.

We are located in the Key Stage Hubs.
Or you may report a concern by using the @Talk App on your iPad

REMEMBER OUR SAFEGUARDING LEADS ARE...



MRS WILLIAMS
DESIGNATED SAFEGUARDING LEAD



MRS EDGSON
DEPUTY DESIGNATED SAFEGUARDING LEAD



MRS MCGEE-HARRISON
EDUCATION WELFARE OFFICER



MRS COLLINS
DEPUTY DESIGNATED SAFEGUARDING LEAD