HIGHDOWN SCHOOL

Year 8

Knowledge Organiser

2026 - 2027

GLF

Where Children Grow, Learn and Flourish

Name	
Mentor Group	

Subject	Teacher
Art	
D&T	
Drama	
English	
Ethics	
Geography	
History	
ICT	
Maths	
MFL	
Music	
PE	
Science	

THE HIGHDOWN APPROACH TO MULTIPLE-CHOICE QUIZZING

OUR BELIEF: We learn more when we actively retrieve knowledge.
Regular quizzing helps you remember more and achieve more.

WHY ARE MULTIPLE-CHOICE QUIZZES SO EFFECTIVE?

STRENGTHEN MEMORY
Each question is retrieval practice. The more you retrieve, the stronger your memory becomes.

IDENTIFY GAPS
Quizzes show you what you know well and what you need to focus on next.

EFFICIENT REVISION
You can test lots of knowledge in a short amount of time.

BUILD CONFIDENCE
Regular success builds confidence and reduces stress before assessments.

CORRECT MISCONCEPTIONS
Reviewing wrong answers helps you fix mistakes and avoid them in the future.

THE HIGHDOWN APPROACH

A simple cycle for powerful learning

LEARN
Use knowledge organisers, notes and lessons to build strong understanding.

RETRIEVE
Answer questions from memory. Make your brain work!

REVIEW
Check your answers. Understand the feedback and fix any gaps.

REPEAT
Return to difficult topics and quiz again. Repetition leads to retention.

WHAT MAKES IT A HIGHDOWN QUIZ?

- Regular, low-stakes quizzing in lessons.
- Built around knowledge organisers and the curriculum.
- Instant feedback used to close gaps.
- Helping every student improve, every day.

HOW CAN YOU USE THIS APPROACH?

1 PREPARE BEFORE THE QUIZ

- Review your knowledge organiser, notes or textbook.
- Focus on key facts, dates, vocabulary and concepts.
- Revise little and often.

EXAMPLE:
Spend 15 minutes each evening revising key terms and definitions.

2 TEST YOURSELF DURING REVISION

- Attempt questions without looking at your notes.
- Make your brain work to recall information.
- Treat every quiz as a learning opportunity.

EXAMPLE:
Complete a short quiz on the Rivers topic from memory.

3 REVIEW YOUR MISTAKES AFTER THE QUIZ

- Check every incorrect answer.
- Find out why the correct answer is right.
- Identify topics that need more revision.

EXAMPLE:
If you missed questions on river landforms, revisit that section of your notes.

4 IMPROVE BEFORE THE NEXT QUIZ

- Revisit weak topics.
- Complete another quiz.
- Track your improvement over time.

EXAMPLE:
Retest yourself in a few days to see how much you've remembered.

QUIZ-DAY STRATEGIES

READ CAREFULLY
Read the whole question and every answer option.

ELIMINATE
Cross out answers you know are incorrect.

LOOK FOR KEYWORDS
Watch for words such as:
MOST | BEST | MAIN | FIRST | LAST | ALWAYS | NEVER

THINK BEFORE YOU GUESS
Reduce the options first, then make your best choice.

EXAMPLE QUESTION

Who was the first Tudor king?

- [ ] A Henry VIII
- [x] B Henry VII
- [ ] C Edward VI
- [ ] D Richard III

Take your time, use the strategies and choose the best answer!

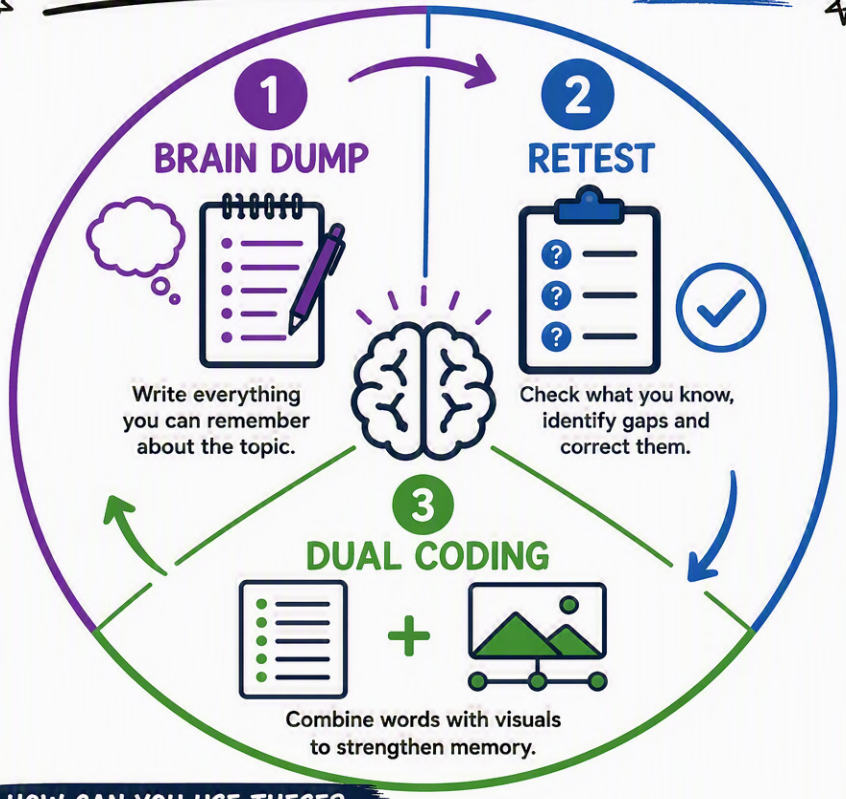
THE HIGHDOWN SUCCESS CYCLE

LEARN → RETRIEVE → REVIEW → REPEAT → SUCCEED

REMEMBER
Multiple-choice quizzes are not just a test of learning – they are *a powerful way of learning!*

HIGHDOWN SCHOOL | RETRIEVE • REVIEW • REPEAT • SUCCEED
A little practice often creates a lifetime of success.

RETRIEVAL OPTIONS



HOW CAN YOU USE THESE?

1. BRAIN DUMP

Pick a topic you've been learning. Write down everything you can remember about it – facts, dates, keywords, events, people, ideas – don't look at your notes!

Example: Write everything you can remember about the causes of the First World War.

2. RETEST

Check your notes or textbook. Tick what you got right, add what you missed, and correct any mistakes. Focus on the gaps and brain dump again tomorrow!

Example: Check your answers to find out what you forgot about the alliance system.

3. DUAL CODING

Turn your information into a visual (mind map, diagram, timeline, chart, sketch) and pair it with keywords or short notes. This helps your brain remember it better!

Example: Create a timeline of events and add key words and images to help you remember.

RETRIEVE • SPACE IT • MIX IT UP • EXPLAIN IT • CHECK IT

Do a little bit often and keep testing yourself – your future self will thank you!

HIGHDOWN SCHOOL

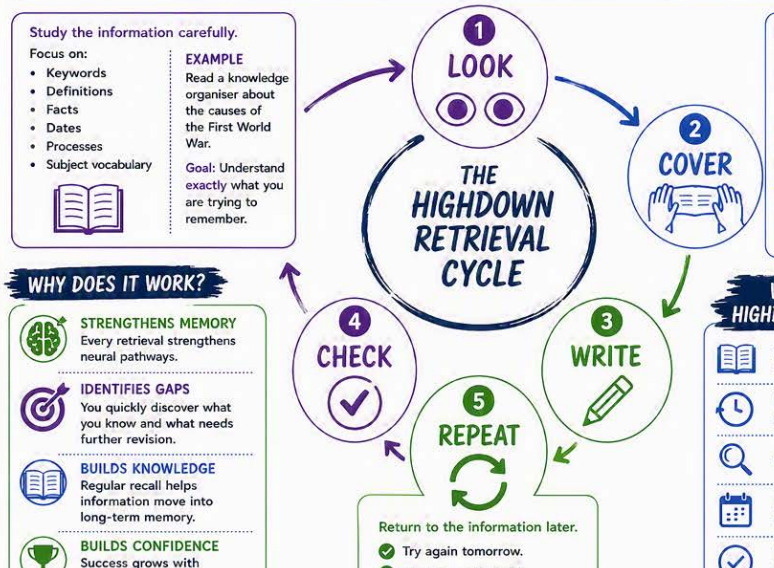
THE HIGHDOWN APPROACH TO LOOK • COVER • WRITE • CHECK

A simple retrieval strategy for powerful learning

OUR BELIEF

At Highdown, we believe that learning becomes stronger when students actively retrieve information from memory.

Look • Cover • Write • Check is a simple but powerful strategy that helps students remember more, identify gaps in knowledge and improve long-term retention.



1 LOOK

Study the information carefully.

Focus on:

- Keywords
- Definitions
- Facts
- Dates
- Processes
- Subject vocabulary

EXAMPLE

Read a knowledge organiser about the causes of the First World War.

Goal: Understand exactly what you are trying to remember.

2 COVER

Hide the information.

Close the book, fold over the sheet or cover your notes.

EXAMPLE

Cover the list of causes completely.

Goal: Force your brain to recall information rather than copy it.

3 WRITE

Write down everything you can remember.

EXAMPLE

Write down all the causes you can remember.

Goal: Check what you know and what you've forgotten.

4 CHECK

Compare your answers with the original information.

EXAMPLE

Check your causes against your knowledge organiser.

Goal: Identify gaps and correct mistakes.

5 REPEAT

Return to the information later.

- Try again tomorrow.
- Try again next week.
- Test yourself regularly.

Goal: Retrieval plus repetition creates long-term memory.

WHY DOES IT WORK?

STRENGTHENS MEMORY
Every retrieval strengthens neural pathways.

IDENTIFIES GAPS
You quickly discover what you know and what needs further revision.

BUILDS KNOWLEDGE
Regular recall helps information move into long-term memory.

BUILDS CONFIDENCE
Success grows with repeated practice.

IMPROVES ASSESSMENT PERFORMANCE
Students remember more and retrieve information more easily.

WHAT DOES A HIGHDOWN STUDENT DO?

- Uses knowledge organisers regularly
- Revisits learning from previous lessons
- Learns from mistakes
- Practices retrieval little and often
- Reviews and improves answers
- Takes responsibility for their own learning

TOP TIPS FOR SUCCESS

DO	DON'T
Keep revision sessions short and regular	Copy information while writing
Focus on key knowledge	Ignore mistakes
Use subject vocabulary accurately	Give up when you forget something
Check every mistake carefully	Leave revision until the last minute
Repeat the process regularly	

EXAMPLE

Topic: The Norman Conquest

LOOK	Study the key events of 1066.
COVER	Close your knowledge organiser.
WRITE	Record everything you remember.
CHECK	Compare with the original and correct errors.
REPEAT	Try the same task again in a few days.

REMEMBER

The aim isn't to get everything right first time.

The aim is to make your memory stronger every time you practise.

Regular use of Look • Cover • Write • Check helps you learn more, remember more and achieve more.

Small steps. Big impact. Every day.

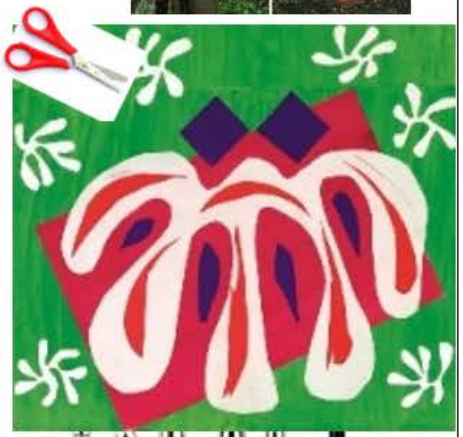
HIGHDOWN SCHOOL | RETRIEVE • REVIEW • REPEAT • SUCCEED

Small amounts of retrieval practice today create powerful learning tomorrow.

ART

Term 1	**ENVIRONMENT 1850 – 1920**

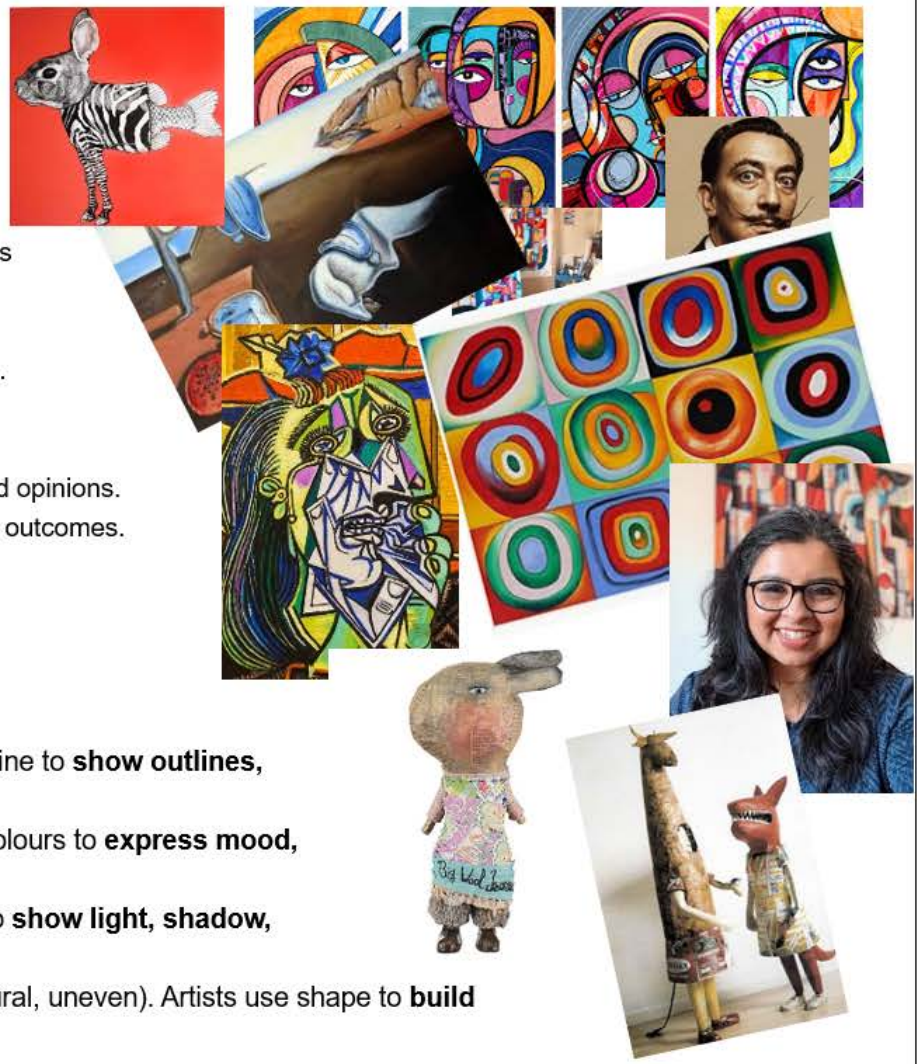
- **Research and context in Art** means finding information about artists and understanding the meaning behind their work.
- **William Morris and Henri Matisse** are especially important artists for paper-cutting and pattern inspiration in this topic.
- The **Arts and Crafts Movement** aimed to create handmade, high-quality designs inspired by nature.
- **William Morris's design style** is known for nature-inspired repeating patterns.
- When Matisse described paper cutting as **"drawing with scissors,"** he meant cutting shapes freehand from paper to create artwork.
- **Observational drawing** is drawing what you see in real life.
- A **repeat pattern** can overlap, while a **tessellation** fits together with no gaps.
- Artists create artwork about **environmental issues** to highlight problems such as pollution and climate change.
- Important environmental issues studied include **global warming and plastic pollution**.
- Students learn from environmental activist **Greta Thunberg** in this topic.
- **Andy Goldsworthy** creates nature sculptures using natural materials.
- The famous Hokusai artwork studied is ***The Great Wave***.
- A suitable technique for a mixed-media poster about plastic pollution is **pen and watercolour combined with collage**.
- An effective **artist research page** should include the artist's name, images of their work, facts, and personal opinions.
- **Experimenting and taking risks with materials** is important because it leads to more expressive and original outcomes.



KEY VOCAB	Formal elements in Art, Line Tone, Colour, Composition, Shape, Form, Pattern, Colour, Texture,	Research, Design, Develop, Experiment, Explore, Reflect, Improve, Refine, Compose, Present. Sketch, draw, apply, create, mix, blend, pressure, mark make, cross hatch, gesture, layer, mix, brush, charcoal, chalk, graduate, measure.
H/W's	MCQs, Contextual research page.	

Term 2	**IN A DIFFERENT WAY 1900 – 1950**

- **Surrealism** is mainly inspired by dreams and imagination.
- **Salvador Dalí** is an artist strongly linked to the Surrealist movement.
- In Art, a **hybrid** means a mix of two or more things combined into one.
- Artists use **hybrids** to combine ideas and create imaginative artworks.
- **Julie Arkell** creates surreal, animal-like figures using mixed materials.
- **Lucy Casson** is known for layered, detailed drawings inspired by animals and nature.
- **Alexis Díaz** is best known for detailed animal drawings with surreal themes and hybrids.
- **Observational drawing** means drawing what you can see in real life.
- **Composition** is how the formal elements in art are arranged in an artwork.
- To **develop an idea** means to improve and build on it.
- To **refine an artwork** means to improve the details and overall quality.
- A good **artist research page** includes the artist's name, images, facts, and opinions.
- **Experimenting with materials** is important to create original and creative outcomes.
- **Collage** is made by sticking different materials together.
- **Papier mâché** is a 3D modelling technique using paper and paste.
- **Cubism** shows objects from multiple viewpoints.
- **Ishita Banerjee** links Cubism to 21st-century art.
- **Kandinsky** believed that sound could influence drawing and art.
- **Line** – Lines can be thick, thin, straight, curved, or broken. Artists use line to **show outlines, movement, detail, and emotion**.
- **Colour** – Colour can be **bright, dark, warm, or cool**. Artists choose colours to **express mood, meaning, or make work stand out**.
- **Tone** – Tone means how **light or dark** something is. Artists use tone to **show light, shadow, and depth**, even when using only one colour.
- **Shape** – Shapes can be **geometric** (circles, squares) or **organic** (natural, uneven). Artists use shape to **build images and organise designs**.



H/W's	MCQs, Contextual research page.	
KEY VOCAB	Formal elements in Art, Line Tone, Colour, Composition, Shape, Form, Pattern, Colour, Texture	Research, Design, Develop, Experiment, Explore, Reflect, Improve, Refine, Compose, Present.

ART

Term 3	**POP ART 1950s – 1960s**

- **Pop Art** gets its name from **popular culture** (things people see every day) and it began in the **1950s**.
- **Andy Warhol** is famous for repeating images of everyday objects and celebrities, such as soup cans.
- **Roy Lichtenstein** was inspired by **comic strips**.
- **Ben Day Dots** are tiny dots invented by **Ben Day** to make printing cheaper; they were used in newspapers and comics to show shading and colour.
- Roy Lichtenstein's style uses **block colour and dots**.
- **Claes Oldenburg** created large sculptures of everyday objects, such as food.
- **Peter Blake** helped introduce Pop Art to Britain.
- A key feature of Pop Art is **bright, bold colours**.
- Pop Art is important because it reflects **everyday life and popular culture**.
- **Keith Haring** is known for simple figures and bold outlines.
- **Typography** means the **style and design of text**.
- A photograph can be turned into Pop Art by **simplifying it using block colour and strong outlines**.
- **Mono printing** is a print that is made **only once**.
- Pop Artists often **repeat images** to reflect **mass production**.
- **Observational drawing** means drawing what you can see in real life.
- Pop Art commonly uses **bright, primary colours**.
- A good **Pop Art research page** includes the artist's name, images of their work, facts, and personal opinions.
- **Experimenting and taking risks** helps artists create **bold and original Pop Art**.
- Pop Art often focused on everyday life and popular culture, but many artists—especially women and artists of colour—were left out of the original movement. These artists used Pop-style ideas to tell their own stories.

H/W's	MCQs, Contextual research page	
KEY VOCAB	Formal elements in Art, Line Tone, Colour, Composition, Shape, Form, Pattern, Colour, Texture	Research, Design, Develop, Experiment, Explore, Reflect, Improve, Refine, Compose, Present. Technique, Process, Skill, Apply, Amend, Solve, Incorporate, Repeat, consumer, mass production.

Art and Design Process Terms: Definitions

Research
The process of gathering information, references, and inspiration to inform and support your artistic ideas and decisions.
Design
The act of planning and organising visual elements in a composition, considering both aesthetics and functionality.
Develop
To expand and improve initial ideas through sketches, studies, trials, and feedback, moving towards a final outcome.
Experiment
Trying out different materials, techniques, or styles in a creative and open-minded way to discover new possibilities.
Explore
Investigating different approaches, themes, and ideas in depth to better understand and define your artistic direction.
Reflect
Thinking critically about your own work or process to identify strengths, weaknesses, and areas for growth.
Refine
Polishing and adjusting elements of your artwork to achieve greater clarity, cohesion, and precision.
narrative elements.

Improve
Making changes based on evaluation and reflection to enhance the quality or impact of your artwork.
Compose
Arranging elements such as line, shape, colour, and space in a deliberate way to create a balanced and effective artwork.
Present
The final display or sharing of artwork, considering presentation methods, context, and audience.
Context
The background, setting, or circumstances in which an artwork was created or is being viewed, including historical, cultural, or personal influences.
Form (in context)
The visible shape or configuration of something, often referring to how an artwork is constructed or its three-dimensional aspects.
Process
The series of actions or steps taken from concept to final artwork, including planning, experimentation, and refinement.
Mood
The atmosphere or emotional tone conveyed by an artwork, often created through choices in colour, lighting, and subject matter.
Content
The subject matter, meaning, or message conveyed by an artwork.

Year 8 Food and Nutrition Theory

Recall Theory from year 7:
Biological raising agent – **yeast**. Food safety, Eatwell Guide

Recall

Eatwell Guide: Nutritional needs of different people

Teens and **older people** have different nutritional needs due to biological and lifestyle changes. Teens will be going through **growth spurts** and are very active. So high energy needs from food, as well as foods rich in **protein, calcium, iron** and **vitamin D.**

Older Adults (over 65)

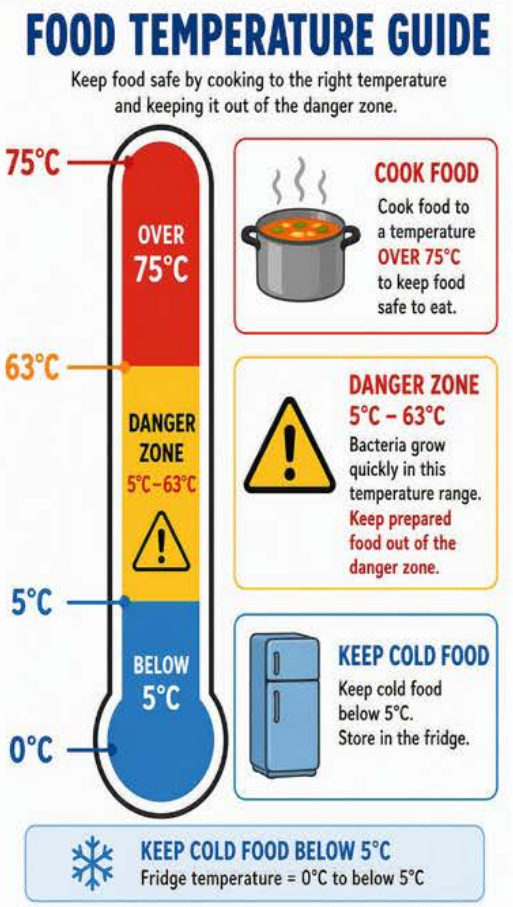
Lifestyle can slow down due to limitations of the body, so less energy is needed. Older adults do not absorb nutrients as well. Older people start to lose their thirst reflex and need plenty of watery drinks. Additional nutrition from fibre, **calcium and vitamin D, iron and vitamin C.**

Temperature control, Food Storage and high-risk foods

Cooking with **high-risk** foods can cause **food spoilage** and **food poisoning.** Bacteria in food can grow rapidly via **binary fission** (splitting in two). Storing food at the correct temperature stops bacterial growth. Using a **temperature probe** ensures food is cooked to the correct temperature **(over 75°C)**.

Raising agents – To help products rise to give a light and airy texture

- **Chemical raising agents** – produce carbon dioxide when heated with a liquid.
- **Mechanical raising agents** – air and steam incorporated into a mixture to help it rise.
- **Biological raising agents** – yeast is a single-cell plant fungus that needs warmth, sugar, liquid and time to produce carbon dioxide.



Traffic Light Labelling – Fat, saturated fat, salt and sugar are labelled on a food product either green (low), amber (medium) or red (high).

The traffic light label also includes the percentage of the reference intake (RI). This is the percentage of the recommended daily amount of **fat, saturated fat, salt and sugar** the food item provides. How much RI per portion/serving,100g or 100ml provides. The amount of energy that the food provides in kcal (Calories).

Each serving (150g) contains

Energy	Fat	Saturates	Sugars	Salt
1046kJ 250kcal	3.0g LOW	1.3g LOW	34g HIGH	0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake

Year 8 Food and Nutrition Practical Skills and Techniques

Knife skill		Description	Use
Julienne (fine matchsticks)		Cutting vegetables into matchsticks strips equal size	Stir fry for quick cooking, buddha bowls. Before making into brunoise dice
Brunoise (fine dice)		Tiny dice from julienne sticks	Vegetable Sauce base soffrito or mirepoix
Macédoine (cubed)		Medium dice vegetables. Even sized cubes	Parmentier potatoes, chunky vegetable soup.
Jardinière (baton)		Cutting vegetables into equal size batons	For making veg into chips or carrot sticks for dipping
Chiffonade		Finely slicing leafy vegetables or herbs	Herbs for dressings or adding into muffins

Techniques	Description	Use
Shortcrust pastry	Using cold butter to 'rub in' to flour and slowing adding cold water to create a dough with shortened gluten strands	For crumbly texture can be used for sweet or savoury. Mini quiche
Panné/ breading	Dipping meat or alternative in flour, egg and breadcrumbs. Using dry hand wet hand method to avoid cross contamination	Adding crunchy texture while ensuring meat is still moist and flavourful, chicken nuggets
Emulsification	Process of bringing together water and oil. Using an egg as the emulsifier.	Improved texture in a muffin. Mayonnaise

Shortcrust pastry – Success Criteria

Golden brown crumbly short crust pastry with well cooked filling.

Golden rules of pastry

Keep everything cold – ingredients, hands & water
Handle as little as possible – don't overwork the gluten, keep gluten strands **short**
Add water a little at a time – too much water will make your pastry sticky.

Sausage rolls

Skills
Preparing a dough, shaping and combining.
Knife skills
Adapting a recipe
Testing for readiness – Checking meat is over 75C

Buddha bowl
Knife skills
Presentation
Modifying a recipe

Savoury muffins
Emulsification for moist crumb
Nutritional analysis and food labelling

Apple Turnovers
Knife skills
Pastry skills test
Using the oven

Swiss Roll
Whisked cake method
Mechanical raising agent
Preparation of equipment

KS3 Food & Nutrition Glossary

- **Mise en place** A French term meaning *"everything in its place."* It refers to preparing and organising all ingredients and equipment before cooking.
- **Nutritional analysis** The process of examining a dish or food to find out its nutrient content (e.g. energy, fat, sugar, protein, vitamins and minerals).
- **Sensory analysis** Testing and evaluating food using the senses (taste, smell, sight, touch, and sometimes sound) to judge its quality.
- **Texture** How food feels when it is touched or eaten (e.g. crunchy, soft, chewy, smooth).
- **Mouthfeel** How food feels inside the mouth during eating, including texture, temperature, and moisture (e.g. creamy, dry, greasy).
- **Appearance** How food looks, including colour, shape, presentation, and portion size.
- **Aroma** The smell of food, which can affect how appetising it seems.

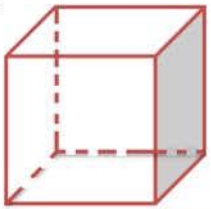
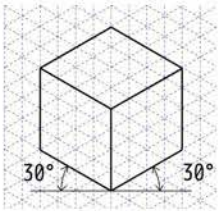
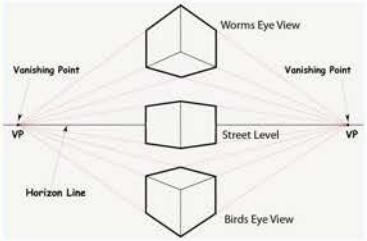
Independence skill – Success Criteria

- Ingredients weighed and measured at home by student.
- Ingredients stored correctly.
- Health, safety and hygiene routine completed independently
- Ovens on and temperature selected independently
- Mise en place completed before starting to cook.
- Working in kitchen teams to ensure all washing up is done and kitchen unit is left clean and tidy

Year 8 Design & Technology
Trinket Box Theory

Key vocabulary:
Client or Target Market – The intended user of the product
Mood Board – A collage of images describing the client or target market
Design Specification - A specification is a detailed checklist of what the product needs to do. It will be shared between the client, designer and manufacturers to ensure everyone has the same information.

3D Drawing techniques enable you to accurately represent your design ideas

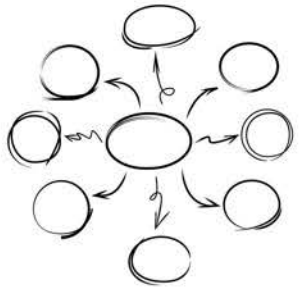
3D Drawing Technique for drawing a cube	Explanation	Tutorial
Oblique 	Simplistic way of drawing in 3D Starts with the face of the shape Horizontal lines are at 45º	
Isometric 	Can be done on dotted or lined isometric paper Horizontal lines are at 30º Shape is not distorted by distance Used when sharing designs with manufacturers due to accuracy	
Two Point Perspective 	Horizon line and vanishing points vary by viewpoint Horizontal lines run back to vanishing points More realistic way of drawing due to perspective – things get smaller as they get further away Used when sharing designs with clients or designers due to stylised nature	

Recall from year 7

- Health and Safety in the workshop
- The Design Process
- Types of timber

Designing and making for a client

Put the name of your client in the centre.
Around the outside, describe their tastes – what they like. You could include their age, favourite tv programme, game, sport, football team, hobbies, food....



Using your mind map as a starting point, you can then create a mood board – a collage of images to help inspire your designs

Year 8 Design & Technology
Trinket Box Practical

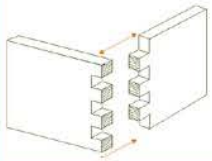
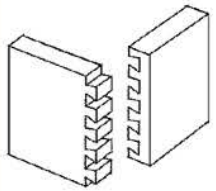
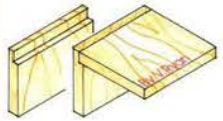
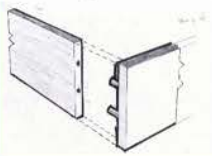
Developing practical skills from year 7

Name of tool	Use
Steel rule	For marking out Starts at zero
Try square	For marking out right angles
Bench vice	Holds your work securely on the table
Flat file	To smooth your work For flat edges and convex curves
Rasp	To start shaping your work
Tenon saw	For cutting straight lines • Point your finger to steady the blade • Use the whole length of the blade • Slow and steady pace –don't press too hard
Coping saw	For cutting curves • Only hold the handle • Twist your wrist whilst cutting • Slow and steady pace –don't press too hard

New skills for year 8

Name of tool	Use
Bench hook	Helps to hold material whilst cutting Can be used in a vice or on the side of a bench

Wood joints

Joining method	Description	Advantages	Disadvantages
Finger or comb joint 	Interlocking shape cut out of both parts, used in boxes and drawers	Increased surface area for gluing and interlocking shape makes this joint secure	Can be difficult to make
Dovetail joint 	Interlocking fan shaped tails and pins. Used in high quality furniture	Increased surface area for gluing and interlocking shape makes this joint secure. Flared edges makes it difficult to disassemble. Visually appealing	More difficult to make
Lap joint 	An 'L' shape cut out of one or both parts, depending on the type of lap joint Used in cabinet making and timber frame construction	Easy to make	Not as strong as other methods
Dowel joint 	Wooden pegs or dowels hold the pieces together using drilled holes	Can be invisible Easy to make	Wood can split easily

Techniques

Measuring: Using mm as standard unit of measurement
Marking out: Marking with a pencil, hatching the waste
Cutting to shape: Cutting the waste side of the line
Filing to smooth: Using a file to file up to marked line

Year 8 Textile Design
Jon Burgerman Monsters Theory

The Design Process

- Design brief: A statement summarising the intended purpose of the product.
- Research: Gathering information on relevant aspects of the project e.g. the artist.
- Design ideas: Creating a range of possible solutions to the brief.
- Product manufacture: Making the chosen design.
- Evaluation: Reflecting upon the process as a whole to determine what has been successful and what could be improved and how.

Techniques

- Resist: Techniques used to block, 'resist', dye from touching fabric.
- Dying fabric: Using colourful dyes and resist methods to change the colour of fabric.
- Sewing: Using a needle and thread to fasten fabric together and add decoration.
- Pattern/Template: Using paper as a guide when cutting out fabric.
- Accuracy: Being precise with measurements e.g. when drawing paper templates and cutting fabric.

Jon Burgerman

Jon Burgerman is a British artist known for his bright colours, playful doodles, and bold, cartoon-like characters. He often uses simple lines and shapes to create expressive faces, creatures, and patterns that feel energetic and full of personality. His artwork includes funny monsters, quirky figures, and imaginative designs that can be both silly and thoughtful at the same time.

Burgerman's work explores themes like creativity, emotions, and everyday life, often with a sense of humour. He has created art on walls, paper, digital screens, and even everyday objects. His style stands out because it is lively, spontaneous, and encourages people to have fun, be creative, and not take themselves too seriously.

Material	Description
Cotton	Cotton fabric is a natural fabric, derived from the fibres surrounding the seeds of cotton plants, which emerge in a round, fluffy formation
Felt	Felt is a textile that is produced by matting, condensing, and pressing fibres together. It does not fray when cut
Thread	A thread is a fine, string-like strand of material used to join fabrics together. It's typically made from fibres like cotton, silk, or synthetic materials, twisted together to form a strong, durable strand
Batik Wax	Batik wax is a specialized wax used in textile art as a resist agent to create patterns on fabric.

Year 8 Textile Design
Jon Burgerman
Monsters Practical

Equipment	Use
Tjanting	Tool used to apply batik wax.
Shears	Fabric scissors – For cutting fabric only.
Pin	For securing materials together.
Needle	Used for sewing. The thread goes through the eye of the needle.
Iron	For flattening or pressing fabrics to remove creases. Also sets dye.
Batik Wax pot	A batik wax pot is a small heated container used to melt and keep wax warm while creating batik designs.

Batik

1. Take the tjanting and leave it to warm up in the wax pot for 1 minute.
2. Take the tjanting and fill it halfway with hot wax
3. Use a piece of newspaper to control the flow of wax.
4. Bring the tjanting to your white cotton
5. Start drawing. The hot wax will seep out. It's important you work quickly and use the piece of newspaper to control the amount of wax
6. Once you have drawn your design using the tjanting, place the tjanting back in the hot wax
7. Use the batik dyes and a paint brush to dye in the areas you have not filled with wax.
8. The dye will only be applied to the areas without wax.

Technique		
Batik	Create a wax resist when dying fabric	
Applique	Attaching pieces of fabric to a larger piece, using stitching (decorative).	
Running stitch	A dashed line of stitching	
Back stitch	A solid line of stitching	
Cross stitch	Two stitches to form a cross	

Year 8 Knowledge Organiser

Drama

Core Glossary
CORE CONCEPTS

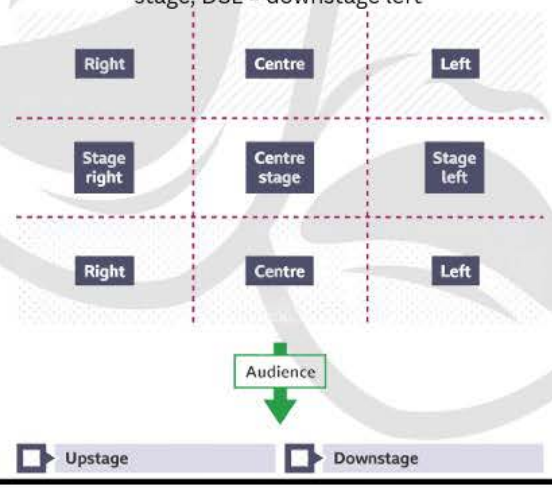
Stimulus: The starting point, idea or inspiration to create a piece of theatre
Context: Background to the play; when and where the play is set
Audience: People who watch a performance
Devising: A collaborative process of creating original theatre from a stimulus
Improvisation – Spontaneous performance used to explore ideas
Structure: The way a play is organised, including the order of scenes, events, and how the story unfolds from beginning to end.
Blocking: Planned positioning and movement of actors on stage
Corpsing: Laughing or breaking character on stage.
Characterisation: how an actor creates and presents a character on stage using voice, movement, facial expressions, gestures, and personality traits.
Form – The type of drama (e.g. devised, scripted, physical theatre)
Genre – The category of the play (e.g. comedy, tragedy)
Style – The specific theatrical approach (e.g. naturalism, Brechtian, physical theatre)

Roles & Theatre Makers

Actor – Uses vocal and physical skills to communicate character
Character – A constructed role with motivations, status, and relationships
Playwright – Crafts narrative, dialogue and structure
Director – Interprets text and shapes performance through staging and actor guidance

Stage Directions

• From the point of view of the ACTOR •
Stage positions are often abbreviated eg. CS = centre stage, DSL = downstage left



Dramatic Techniques

Still-image: A frozen picture which communicates meaning
Hot-seating: Where a character is questioned by the group about their background, behaviour and motivation
Thought-track: When a character steps out of a scene to address the audience about how they are feeling
Split-stage: When two different scenes are performed/present at the same time, side by side on stage
Soundscape: A series of sounds that create a setting or suggest a scene
Improvisation: Invent and create content on your feet/making it up as you go along
Flashback: Interrupting the chronological order of the main narrative to take the audience back in time to past events in a character's life
Flash-forward: Takes the narrative forward in time from the current point in the story
Narration: Spoken commentary for the audience about the action onstage (storyteller)
Marking the moment: Highlighting the most important moment to draw the audience's attention to its significance
Mime: Suggesting action, character, emotion without words using only gesture, expression and movement to play out a role.

5 Ws WHO? WHAT? WHERE? WHY? WHEN?

Year 8 Knowledge Organiser

"Build the world, then tell the story."

VOCAL SKILLS

Breath Control: The ability to regulate breathing for speech.
Articulation: The clarity and precision of speech.
Projection: The strength of speaking or singing whereby the voice is used loudly and clearly.
Pitch: The highness or lowness of the voice.
Pace: The speed at which someone speaks.
Pause: A temporary stop in speech for effect.
Tone: The quality or character of sound.
Volume: The loudness or softness of the voice.
Emphasis: Special importance or significance given to a word or phrase.
Intonation: The rise and fall of the voice in speaking

PHYSICAL SKILLS

Posture: The way in which someone holds their body.
Gesture: A movement of part of the body to express an idea or meaning.
Facial Expression: The use of the face to show mood, feeling or character.
Eye Contact: The act of looking directly into another's eyes.
Movement: The act or process of moving.
Body Language: The use of physical behavior to communicate. .
Proximity: The physical closeness between characters.
Stance: The way in which someone stands.

THEATRE IN EDUCATION

Core TIE Concepts

Theatre in Education (TIE) – A form of theatre created to educate, often performed in schools with an explicit learning aim.
Educational objective – The key message or learning outcome (e.g. anti-bullying, history, social issues).
Target audience – The specific group the performance is designed for (age, background, needs).
Participatory theatre – Theatre where the audience is actively involved rather than just watching.
Intervention – Moments where actors step out of the narrative to interact directly with the audience.

BERTOLT BRECHT

- **Born –** 10 February 1898 in Augsburg, Germany (died 1956).
- **From –** German; grew up in a middle-class family.
- **Career Roles –** Playwright, theatre director, practitioner, and poet

Epic Theatre – A style of theatre that aims to provoke thought rather than emotional immersion.
Alienation Effect (Verfremdungseffekt) – Techniques used to distance the audience and prevent emotional attachment.
Breaking the Fourth Wall – Characters directly address the audience.
Narrator – A figure who comments on or explains the action.
Placards / Projections – Written signs or titles used to convey information.
Gestus – A clear physical gesture or movement that reveals social attitude or character.
Episodic Structure – Scenes structured as separate episodes rather than a continuous plot.
Didactic – Theatre intended to teach or communicate a message.
Minimal Set / Visible Mechanics – Simple staging where lighting, scene changes, and tech are exposed.
Multi-roling – Actors play multiple characters.
Social / Political Theatre – Focus on class struggle, capitalism, and society.
Song / Music – Used to interrupt action and comment on themes.
Direct Address – Speaking straight to the audience to highlight ideas.

Drama

Year 8 Knowledge Organiser

Key Ingredients of Comedy

Exaggeration - Over-the-top acting, emotions, or situations
Stock Characters / Archetypes - Recognisable character types
Status & Power Play - Comedy often comes from shifts in status (high vs low)
Timing - Precise delivery of lines, pauses, or actions. Includes comic pause, reaction timing, and pace
Physical Comedy - Use of the body to create humour. Includes pratfalls, chases, exaggerated movement (slapstick, mime)
Mistakes & Mishaps - Things going wrong (accidents, misunderstandings, wrong props/lines)
Misunderstanding & Confusion - Characters misinterpret situations or information
Repetition - Repeated actions, phrases, or gags that build humour
Surprise / Unexpected Outcomes - Sudden twists or reversals
Audience Awareness - Direct address, breaking the fourth wall
Use of Props - Props used in unusual or exaggerated ways. Essential in slapstick and physical theatre
Character Flaws - Weaknesses (greed, stupidity, arrogance) create humour. Characters often unaware of their flaws
Farce - Fast-paced, chaotic comedy. Improbable events, doors slamming, mistaken identity
Silence & Visual Storytelling - Comedy through facial expression and gesture rather than dialogue
Contrast - Opposites placed together (e.g. serious vs silly, calm vs chaos). Heightens comic effect.

Comedy Through the Ages

- **Ancient Greece (c. 500-300 BCE)**
  Early comedic theatre using satire and chorus to mock society
- **Ancient Rome (c. 200 BCE-400 CE)**
  Adapted Greek comedy with stock characters and farcical plots
- **Medieval Period (500-1500)**
  Simple comic performances often teaching moral lessons
- **Commedia dell'Arte (1500s-1700s)**
  Improvised comedy with masks and fixed character types
- **Restoration (1660-1710)**
  Witty, satirical plays about relationships and high society
- **Victorian / Music Hall (1800s)**
  Popular variety entertainment with songs, sketches and slapstick
- **Silent Film Era (1900s-1920s)**
  Non-verbal comedy using mime, physicality and visual gags
- **Slapstick (early 20th century)**
  Exaggerated physical humour with falls, chases and props
- **Modern Comedy (late 20th century)**
  Blends styles including satire, realism and physical comedy
- **Mischief Theatre (2008-present)**
  Contemporary theatre where things go wrong for comic effect

Drama

TECHNICAL THEATRE

Set

Levels – Using height (platforms, stairs) to create visual interest and status.
Entrances/Exits – How actors move on and off stage.
Set Pieces – Large items (e.g. flats, furniture, structures).
Props – Objects used by actors on stage.
Backdrop – Background scenery (painted cloth, projection, cyclorama).

Lighting

Intensity – Brightness or dimness of the light.
Colour/Gel – Filters used to change the colour of light.
Position/Angle – Where the light comes from (e.g. side, top, front).
Fade – Gradual change in lighting (up or down).
Spotlight – Focused beam highlighting a performer or area.

Costume

Silhouette – The overall shape of a costume.
Texture – The feel/appearance of fabric (e.g. rough, smooth).
Colour Symbolism – Colours representing emotions or ideas.
Period – The historical time the costume represents.
Accessories – Smaller items (e.g. hats, jewellery, shoes)

Sound

Diegetic Sound – Sound that exists within the world of the play.
Non-Diegetic Sound – Sound only the audience hears (e.g. underscore).
Cue – A signal for when sound should start or stop.
Underscore – Background music supporting action/dialogue.
Sound Effects (SFX) – Created or recorded sounds (e.g. thunder, footsteps).

Drama Year 8 Knowledge Organiser Drama

FRANTIC ASSEMBLY

Frantic Assembly are a UK theatre company known for their bold, dynamic physical theatre style.

Key facts:

- Founded in 1994
- Known for combining dance, theatre, and storytelling
- Perform in schools, theatres and internationally

Frantic Assembly Style

Frantic Assembly use movement to create emotion, relationships and story.

Their work includes:

- Fast-paced, energetic movement
- Lifts, balances and physical contact
- Everyday actions turned into choreography
- Ensemble work (teamwork)

Key Techniques

Chair Duets

Two performers create a sequence using chairs
Combines movement, lifts, and contact
Tells a story through physical interaction

Round-by-Through

A signature Frantic Assembly technique
One performer moves:
Round (around a partner)
By (past them)
Through (using space and contact)

Canon

The same movement performed at different times
Creates a ripple or wave effect

Unison

Everyone performs the same movement at the same time
Shows unity and teamwork

Contact Work

Using touch and physical connection
Includes:
Leaning
Counterbalance
Lifts

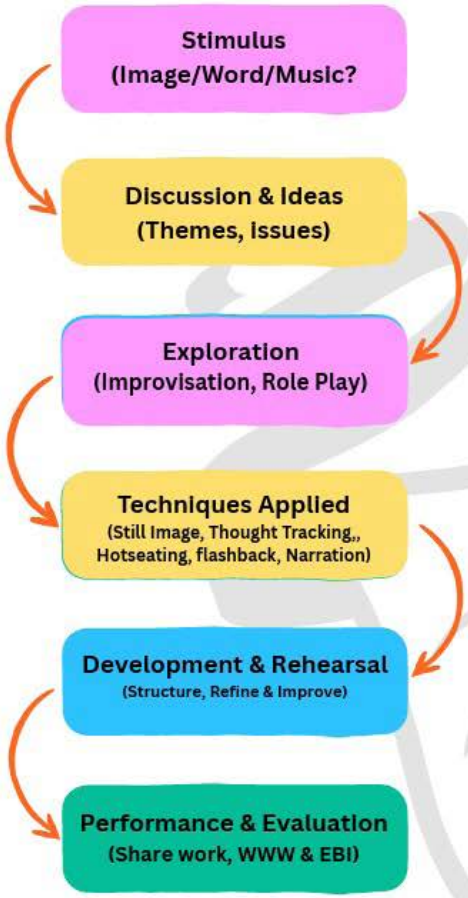
PHYSICAL THEATRE

Word	Meaning
Physical Theatre	Storytelling through movement
Ensemble	A group working together
Canon	Same actions at different times
Unison	Same actions at the same time
Choreography	Planned movement sequence
Dynamics	The energy/quality of movement (fast, slow, sharp, soft)
Contact	Physical connection between performers
Counterbalance	Supporting each other's weight

Year 8 Knowledge Organiser

Drama

The Devising Process



HARRY POTTER AND THE CURSED CHILD

Context

- Written by Jack Thorne, based on a story by J.K. Rowling, John Tiffany, and Jack Thorne
- First performed: 2016 (West End, London)
- Sequel to the original Harry Potter novels
- Set 19 years after Deathly Hallows
- Focus: next generation (Albus Potter, Scorpius Malfoy)

Plot Overview

Part 1

- Albus Potter struggles with living up to Harry's legacy
- Forms unlikely friendship with Scorpius Malfoy
- They steal a Time-Turner to save Cedric Diggory
- Their interference creates dangerous alternate timelines

Part 2

- Alternate realities worsen (including Voldemort victory timeline)
- Revealed: Delphi = daughter of Voldemort
- She manipulates boys to restore Voldemort
- Final plan leads to the Battle of Hogwarts (past)
- Harry reconciles with Albus → themes of family and love resolved

Key Characters

Albus Severus Potter – Struggles with identity and expectations
Scorpius Malfoy – Intelligent, kind, outsider figure
Harry Potter – Now a Ministry worker; flawed father
Hermione Granger – Minister for Magic
Ron Weasley – Comic relief, loyal friend
Delphi Diggory –Cousin to Cedric

Big Messages

- The past cannot be fixed without cost
- Being a parent is difficult and imperfect
- Friendship can overcome prejudice
- Identity is not defined by family history

PAGE TO STAGE

UNDERSTANDING SCRIPT MORE DEEPLY

Scene - A section of a play set in one place or time.
Act - A larger section of a play made up of scenes.
Subtext - The hidden meaning behind what a character says.
Cue - A signal for when to speak or act.
Aside - When a character speaks directly to the audience.

CHARACTERISATION

Intentions - What a character wants in a moment.
Backstory - What happened to the character before the play.
Conflict - A problem or disagreement between characters.

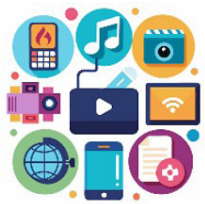
ENGLISH

Autumn Term – Non-Fiction – The Other Side of the Story

In this unit, you will explore the influence of the media within society through writing and analysing non-fiction texts. Through this unit, you will develop your ability to critically analyse and evaluate a range of media texts.

Key term	Definition
Fake news	False or misleading information presented as real news.
Misinformation	Information that is incorrect or misleading but shared without the intention to harm.
Disinformation	False information that is deliberately created and shared to mislead or deceive.
Source	The place, person, or organisation where information comes from.
Tentative language	Words that show uncertainty or caution (e.g. might, could, possibly).
Multiple interpretations	The idea that a text or message can be understood in different ways by different people.
Bias	A one-sided view that favours a particular perspective or opinion.
Informed opinions	Opinions based on evidence, facts, and reliable information.
Disseminated	Spread or shared widely, especially through media.
Pervasive	Something that is widespread and found everywhere.

Society is saturated with media. Why not use the knowledge from this unit to create a balanced resource promoting the benefits of and dangers of the different forms you have explored for your wider community?



Autumn Term – Novel – British Classic

By studying 'Animal Farm' by George Orwell, you will learn how a writer uses characters and stories to explore important ideas about power, control, and fairness. You will closely analyse different ways a writer creates meaning.

Key term	Definition
Exposition	The beginning of a story where characters, setting, and background information are introduced.
Rising action	The series of events that build tension and develop the conflict.
Climax	The most intense or exciting point of the story, where the main conflict reaches its peak.
Falling action	Events that happen after the climax as the story begins to resolve.
Denouement	The final resolution where everything is resolved and loose ends are tied up.
Denotation	The literal, dictionary meaning of a word.
Connotation	The ideas, feelings, or associations a word suggests beyond its literal meaning.
Prioritise	To decide what is most important and focus on it first.
Hook	An engaging opening that grabs the reader's attention.
Convention	A typical feature or rule commonly used in a particular type of text (genre).

'Animal Farm' is just one novel on 'The 100 Greatest British Novels' list produced by the BBC. Why not search the list and see how many of the novels you can read by the end of year 8?

Spring Term – Play – Macbeth

In studying 'Macbeth', you will explore how Shakespeare presents powerful ideas about ambition, guilt, and the consequences of choices. You will learn the different ways this influential writer seeks to engage an audience.

Key term	Definition
Ambition	A strong desire to achieve power, success, or a particular goal.
Duplicity	Being deceitful or hiding the truth; pretending to be honest while being dishonest.
Paranoia	An irrational fear or belief that others are against you or trying to harm you.
Prophecy	A prediction about what will happen in the future.
Soliloquy	A speech where a character speaks their thoughts aloud, usually when alone on stage.
Superstition	A belief based on fear or the unknown, often linked to magic or luck rather than reason.
Hubris	Excessive pride or overconfidence, often leading to a character's downfall.
Hamartia	A tragic flaw or weakness in a character that causes their downfall.
Pathetic Fallacy	When the weather or setting reflects a character's emotions (e.g. a storm showing anger).
Treason	The crime of betraying one's country or ruler.

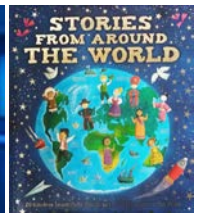
Did you know that many of Shakespeare's plays have influenced more recent films like 'The Lion King' and 'Gnomeo and Juliet'? Why not challenge yourself to create your own modern adaptation of 'Macbeth'?

Spring Term – Prose – Commonwealth Adventure

You will explore a range of powerful literary extracts from across the Commonwealth, discovering how writers from different cultures present identity, place, and experience.

Key term	Definition
Literal	The exact or straightforward meaning of something, without any hidden ideas.
Explicit	Clearly stated or explained in the text; easy to identify.
Implicit	Suggested or hinted at, rather than directly stated.
Foreshadowing	Clues or hints that suggest what might happen later in the story.
Sibilance	The repetition of soft "s" sounds to create a hissing or whispering effect.
Disjointed	Lacking clear connection or flow; ideas feel broken or out of order.
Significance	The importance or meaning of something in a text.
Ambiguity	When something has more than one possible meaning or is unclear.
Tension	A feeling of suspense, worry, or anticipation created for the reader.
Imagery	Language that creates vivid pictures or appeals to the senses.

Why not continue your journey around the world by exploring more about the wider world through texts? You could read the world news section on a news website, or perhaps read a novel from a different country you would like to explore?



ENGLISH

Summer Term – Graphic Novel Project

You will work collaboratively to create an engaging adventure and mystery narrative, focusing on building suspense, atmosphere, and compelling plot twists. You will develop your skills in crafting character, setting, and structure.

Key term	Definition
Narrative structure	The way a story is organised, including how events are arranged and developed.
Vonnegut's theory	The idea that stories follow simple emotional patterns (e.g. rise and fall of fortune) that shape how the reader experiences them.
Direct hook	An opening that immediately grabs attention through action, dialogue, or a striking statement.
Visual hook	An opening that uses vivid description to create a strong image in the reader's mind.
Backstory	Information about events that happened before the main story begins.
Flashback	A scene that takes the narrative back to an earlier time.
Flashforward	A moment where the narrative jumps ahead to show future events.
Framing device	A structure where a story is set within another story (e.g. a narrator telling a past event).
Plot twist	An unexpected change in the story that surprises the reader.
Cyclical structure	When a story ends in a similar way or place to where it began.

Fancy exploring the form of graphic novels further? Why not use the BookTrust website to explore their recommendations for Graphic Novels and read some more of this form of text?

BookTrust
Inspire a love of reading

Summer Term – Poetry – Human Rights and Protest Poetry

In this unit, you will examine how poets express ideas about injustice and equality. You will develop analytical and creative skills by responding to these themes and crafting your own poetry with a clear message.

Key term	Definition
Caesura	A pause or break in the middle of a line of poetry, often shown with punctuation (e.g. a comma or dash).
Enjambment	When a sentence or phrase runs over onto the next line without a pause.
Oxymoron	A phrase that combines two opposite or contradictory words (e.g. deafening silence).
Ballad	A poem that tells a story, often about love, conflict, or adventure.
Couplet	Two lines of poetry that usually rhyme and form a complete idea.
Elegy	A poem written to mourn or reflect on someone who has died.
Foot	A small unit of rhythm in a line of poetry, made up of stressed and unstressed syllables.
Tercet	A group of three lines of poetry.
Pastoral	Poetry that focuses on nature, the countryside, and rural life.
Quatrain	A group of four lines in a poem, often with a set rhyme pattern.

Have the stories you have explored through poetry in this unit inspired you? Why not take action and use your writing skills to participate in Amnesty International's 'Write for Rights' campaign?

AMNESTY INTERNATIONAL

Writing Focus: Creativity and Experimentation

We want you to build on the work you did in year 7 to ensure that your writing across units was accurate and clear by focusing on being creative and experimenting with your writing in year 8.

Key term	Definition
Voice	The style or tone of the narrator or writer. It shows their personality, emotion, and attitude.
Perspective	The point of view from which something is written. It's about the position, background, and beliefs of the speaker/narrator.
Perspective Shift	A change in viewpoint, voice, or way of seeing within a piece of writing.
Characterisation	The development of a character through: **Traits** – qualities (e.g. kind, cruel, ambitious) **Motivation** – why they act the way they do(e.g. power, fear, loyalty) **Relationships** – how they interact with others **Power/status** – who is in control **Conflict** – struggles they face.
Direct Characterisation	The writer tells us explicitly what a character is like.
Indirect Characterisation	We infer information about a character from: Speech (what they say) Actions (what they do) Thoughts/feelings Appearance Other characters' opinions
Zooming in	Focusing closely on a small detail to give precise, vivid description or insight.
Zooming out	Widening the focus to show the bigger picture, context, or overall setting.
Climax	When ideas are arranged in order of increasing intensity or importance.

Reading Focus: Developing What/How/Why Paragraphs

We want you to develop your analytical skills in every English unit, so that you can confidently analyse texts using What/How/Why paragraphs and the six skills of analysis. In year 8, we want you to focus on how you use quotations.

What/How/Why Paragraph Structure	
What – What is your point? (The Main Idea)	This is your topic sentence. Clearly state what you are analysing — a specific idea, technique, or moment in the text. It should be a focused point that sets up the rest of the paragraph.
How – How is your point shown in the text? (The Evidence & Technique)	Provide specific evidence: a quote, event, or moment in the text. Explain how the writer conveys the idea — e.g. through language features, literary devices, structure, or style. Break down the technique being used
Why – Why is this important? (The Effect or Deeper Meaning)	Analyse the significance of the technique and evidence. Explain the impact on the reader, character, and/or theme. Connect back to your argument or a bigger idea

Six Skills of Analysis	
Tentative Language	Using the language of uncertainty to recognise that texts are open to different interpretations and explanations. For example, perhaps' or 'maybe'.
Three Part Explanation	An interpretation that contains three ideas in the format of a triadic list.
Zooming In	Choosing an important word or phrase from within a larger quote to explore more deeply.
Multiple Interpretations	Presenting or discussing more than one opinion or viewpoint.
Embedding Quotations	Smoothly incorporating a quote into your own sentence to support your point without disrupting the flow of writing.
Links Across Text	Using different ideas from across a text to support the same point or analytical idea.

Key term	Definition
Single Word Embedding	**Example**: *The word 'equal' suggests the animals originally believed in fairness.* **The writer has**: ➢ selected just one key word from the original quote ('all animals are equal'). ➢ integrated it into their own sentence instead of using the whole quote. ➢ focused closely on meaning (zoomed in).
Short Phrase Embedding	**Example**: *The animals are taught that 'all animals are equal,' showing their hope for a fair society.* **The writer has**: ➢ taken a short phrase from the text. ➢ fit it grammatically into their sentence after a clause. ➢ made the quote part of the sentence, not separate from it.
Mid-Sentence Embedding	**Example**: *Napoleon, described as 'a large, rather fierce-looking Berkshire boar,' is presented as intimidating.* **The writer has**: ➢ placed the quote in the middle of their sentence. ➢ used commas to embed it smoothly. ➢ made the quote act as extra descriptive detail within their own idea.
End of Sentence Embedding	**Example**: *The pigs begin to act like humans, as they start to 'walk on two legs'.* **The writer has**: ➢ written their idea first, then added the quote at the end. ➢ linked the quote with “as” so it supports the point. ➢ made it fit grammatically into the sentence, not as a separate sentence.
Split Quote	**Example**: *The commandment changes from 'all animals are equal' to 'more equal,' highlighting the pigs' hypocrisy.* **The writer has**: ➢ broken the original quote into parts. ➢ used two shorter quotations instead of one long one. ➢ compared specific words/phrases closely.
Reporting Verb	**Example**: *Orwell shows the pigs' corruption when they claim, 'all animals are equal, but some animals are more equal than others.'.* **The writer has**: ➢ introduced the quote with a reporting verb ('shows'), making the sentence sound analytical rather than narrative. ➢ clearly linked the quote to the writer's intention.
Comparative Embedding	**Example**: *The pigs begin to act like humans, as they start to 'walk on two legs'.* **The writer has**: ➢ embedded two quotations in one sentence. ➢ selected key words rather than full sentences. ➢ **u**sed the quotes to compare ideas directly.

Religion, Belief and Worldviews: Religion is a way people understand the world, human life, morality and questions about meaning. Religions often include beliefs about God, sacred texts, rituals, communities and ways of living. A worldview is a wider way of seeing life, which can be religious or non-religious. Some people are theists, meaning they believe in one or more gods, while atheists do not believe in any gods. Agnostics believe that it may be impossible to know whether God exists. Humanism is a non-religious worldview that focuses on human reason, compassion, evidence and improving life for people.

Secularism and Religion in Society: Secularism is the idea that society should not be controlled by one religion and people of different beliefs should have equal rights. A secular society allows people to practise religion, change religion or have no religion. In the UK, religious ideas still influence culture, traditions and laws, but people are free to follow different beliefs. Humanists often support secularism as they believe public decisions should be on evidence and human values rather than one religious tradition.

The Established Church (Church of England): An established church is a religious organisation that has a special relationship with the state. The Church of England is the established church of England. It developed during the Reformation when Henry VIII separated from the Roman Catholic Church. The monarch is the Supreme Governor of the Church of England, and senior bishops have a role in the House of Lords. The Church of England teaches Christian beliefs such as belief in one God, the importance of Jesus, the authority of the Bible and the importance of love and forgiveness.

THE CHURCH OF ENGLAND

Christianity began with the teachings, life and death of Jesus Christ. Christians believe Jesus is the Son of God and that his resurrection offers hope of salvation. The Bible is the sacred text, and churches are places of worship.

Islam began with the Prophet Muhammad and teaches belief in one God, Allah. The Qur'an is the holy book, and Muslims worship in mosques. Muslims follow the Five Pillars, which include prayer, charity, fasting and pilgrimage.

Judaism is one of the oldest monotheistic religions and is based on the relationship between God and the Jewish people. The Torah contains important teachings and commandments that guide Jewish life. Jewish worship takes place in synagogues.

Hinduism is a diverse religion with no single founder. Many Hindus believe in karma, dharma and reincarnation. Hindu traditions include many gods and goddesses, although some Hindus understand these as different expressions of ultimate reality.

Buddhism began with Siddhartha Gautama, who became known as the Buddha. Buddhists focus on overcoming suffering through understanding, compassion and following the Eightfold Path.

Sikhism began with Guru Nanak and teaches belief in one God, equality and service to others. The Guru Granth Sahib is the Sikh holy text, and Sikhs worship in gurdwaras where everyone is welcomed.

ETHICS

Rites of Passage: Birth and Belonging: Rites of passage are ceremonies that mark important moments in a person's life. They help communities celebrate identity and belonging. In Christianity, baptism uses water as a symbol of cleansing and welcoming a person into the Church. In Sikhism, the Amrit ceremony marks commitment to the Khalsa and Sikh values. Many religious and non-religious families also hold naming ceremonies to celebrate a child's arrival and identity.

Coming of Age Ceremonies: Many religions have ceremonies that recognise when a young person takes on greater responsibility. In Judaism, a Bar Mitzvah or Bat Mitzvah marks the point when a young person becomes responsible for following Jewish commandments. In Sikhism, receiving Amrit can represent a serious commitment to faith. Other traditions have different ways of recognising adulthood, including Hindu sacred thread ceremonies and Buddhist practices on shared values.

Marriage: It is often seen as a sacred ceremony. In Christianity it's viewed as a divine institution and holy covenant (a sacred promise before God). In the Catholic and Orthodox traditions, it is also a sacrament (a visible sign of God's grace). In Islam marriage (Nikah) is a sacred covenant and legal contract. The ceremony requires witnesses and a mandatory bridal gift from the groom to the bride. In Hinduism it's considered one of the essential life-cycle rites (samskaras) and is a lifelong spiritual partnership. Symbolism includes vows around a sacred fire and seven steps or repeated rituals. In Judaism it is viewed as a holy union and the ideal state of human existence. It is formalized by a contract, a ceremony under a canopy symbolizing a new home, and traditions like breaking a glass to remember the destruction of the Temple in Jerusalem. In Buddhism marriage is more a secular, social commitment. In Sikhism marriage is a spiritual union - the ceremony is Anand Karaj ("blissful union"), and couples walk around the Guru Granth Sahib (holy scripture) while hymns are sung.

Death, Funerals and the Body: Religions have different beliefs about what happens after death and how bodies should be treated. Christian beliefs include resurrection (physical or spiritual which refers purely to the soul), where the dead are raised to new life. Muslims and Jews traditionally place great importance on respectful and rapid burial. Hindus and Sikhs often practise cremation because of beliefs about the soul's journey. Buddhists often choose cremation, and focus on rebirth and continuous change.

Life After Death: Resurrection and Reincarnation: Resurrection is the belief that a person who has died will be brought back to life. This belief is important in Christianity, Islam, and Judaism. Reincarnation is the belief that life continues through rebirth into another existence. This is especially important in Hinduism, Sikhism and some Buddhist traditions.

Religion and the Natural World: Many religions teach humans have responsibilities towards the environment. Christianity teaches stewardship, meaning humans should care for God's creation. Islam teaches the idea of khalifah, where humans are guardians of the Earth. Hinduism and Buddhism often emphasise respect for living things, while Sikhism teaches that nature reflects the greatness of God. Humanists may support environmental protection because humans depend on the natural world.

Sacred Spaces: A sacred space is a place that has special meaning for a religious community. Churches, mosques, synagogues, mandirs, temples and gurdwaras are places where people worship, pray, learn and gather. Sacred spaces often contain important symbols, texts and objects and provide a connection to beliefs and communities.

Justice, Mercy and the Golden Rule: Religions often teach people should balance justice with mercy. Justice means fairness and ensuring people are treated properly, mercy means showing forgiveness and compassion. The Golden Rule appears in many traditions: treat others as you would want to be treated. This singular rule is often seen as behind teachings such as the Ten Commandments in Judaism and Christianity, the Eightfold Path in Buddhism and the mitzvot (commandments) in Judaism -described as the core of all and the rest as 'commentary' (still worth studying) by a famous teacher.

Religious and Humanist Ethics: Religious and humanist ideas about right and wrong often focus on how people should treat each other. The Ten Commandments teach duties such as not stealing or murdering. The Buddhist Eightfold Path encourages wise thinking, speech and action. The 613 mitzvot guide Jewish religious life. Humanists often believe morality comes from empathy, reason and concern for human wellbeing.

"What is hateful to you, do not do to your neighbour."

- Talmud, Shabbath 31a

"Hurt not others in ways that you yourself would find hurtful."

- Udunavarga, 5:18

"And as ye would that men should do to you, do ye also to them likewise." - Luke 6:31

"Do naught unto others what you would not have them do unto you." - Mahabharata 5:15:17

Humanism: A non-religious worldview that believes people should use reason, evidence and compassion to make decisions.
Secularism: The idea that governments and society should not favour one religion over another.
Established Church: A church that has an official connection with the government of a country.
Torah: The most important holy book in Judaism, containing God's laws and teachings.
Dharma: In Hinduism, a person's duty or the right way to live.
Karma: The belief that a person's actions affect what happens to them in this life or future lives.
Reincarnation: The belief that after death a soul is reborn into a new life.
Resurrection: The belief that someone is brought back to life after death.
Salvation: Being saved from sin and gaining eternal life with God.
Eightfold: Path The Buddhist guide to living wisely and ending suffering.
Guru: A respected religious teacher, especially in Sikhism.
Guru Granth Sahib: The Sikh holy book, treated as the eternal Guru.
Gurdwara: A Sikh place of worship.
Synagogue: A Jewish place of worship.
Mandir: A Hindu place of worship.
Rite of Passage: A ceremony that marks an important stage in a person's life.
Baptism: A Christian ceremony using water to welcome someone into the Christian faith.
Amrit: A Sikh initiation ceremony showing commitment to the Khalsa.
Khalsa: A community of committed Sikhs who follow Sikh teachings closely.
Bar/t Mitzvah: A Jewish ceremony marking a boy/girl becoming responsible for following Jewish law, usually at age 12/13.
Covenant: A special promise or agreement, especially between God and people.
Sacrament: A sacred Christian ceremony that shows God's grace, such as baptism or marriage.
Nikah: The Islamic marriage ceremony and marriage contract.
Samskara: An important Hindu ceremony marking a stage in life, such as marriage.
Anand Karaj: The Sikh marriage ceremony, meaning "blissful union."
Cremation: The burning of a body after death instead of burying it.
Golden Rule: The teaching to treat other people as you would like to be treated.
Mitzvot: The commandments or religious duties that Jews follow.

Destination 1: Exploring Lifestyles
Focus: Development

Development: - Development in geography is the continued **improvement in quality of life.**
Quality of life is often defined as **"health, wealth and education".**
A country's development often depends on its wealth. Geographers refer to countries as low-income countries **(LICs),** high income countries **(HICs)** and newly emerging economies **(NEEs).** A country may be classed as a **HIC, a LIC, or a NEE** but there can be disparity within a country or even with a town or city.

Measuring Development:
Single Indicators:
There is no single way to measure development.
Social and economic development indicators which can be used to look at different aspects of the quality of life.

Development Indicator	S OR E?	Definition
GNI per capita	Economic	The total value of the goods and services produced by a country in a year divided by the population.
Birth rate	Social	The number of babies born per 1000 people per year.
Infant mortality	Social	The number of children under 1 who die per 1000 people per year.
Adult literacy rate	Social	The percentage of people over 15 who can read and write.
Life expectancy	Social	The average age that people are expected to live until.
Doctors per capita	Social	The number of doctors per 1000 people in the country.
Access to clean water	Social	The number of people with access to clean water & sanitation.
Vehicles per capita	Economic	The number of cars per 1000 people in the country.

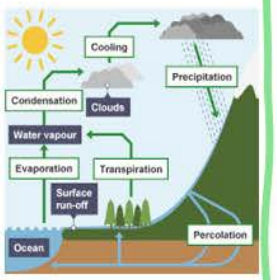
The Brandt Line

The **Brandt Line** is a visual, imaginary division of the globe into **two economic regions** based on wealth and development. It separates the wealthy **"Global North"** from the poorer **"Global South",** though it dips south to include **Australia** and **New Zealand.**
The Global North: Richer, more developed countries **(HICs)** with higher Gross National Income (GNI) per capita.
Examples: USA, UK, Germany, and **Japan.**
The Global South: Poorer, less developed countries **(LICs).**
Examples: Most of **Africa, South America,** and **Southern Asia**
Limitations:
Brandt Line is too simplistic for the modern world.
Rapid Growth: Countries like **China** and **India** have experienced massive economic booms, lifting millions out of poverty but still officially sitting geographically "below" the line.
Unequal Wealth: Some countries in the "South" (like **Qatar**) have incredibly high wealth and GDPs, while some countries in the "North" struggle economically

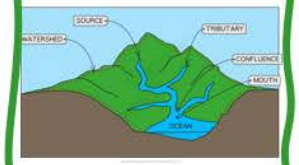
Social: Anything which affects **people and families.**
Economic: Anything to do with money or which affects the ability of people or a country to make money.
Disparity: Differences in development between two areas.
LIC: Low-income country
MIC: Middle income country
HIC: High income country
NEE: Newly emerging economy country
BRICS: Brazil, Russia, India, China, South Africa. Often referred to as **'Superpowers'** OR **Emerging Economies.**
Primary industry: getting raw materials from the sea or ground e.g. fishing & farming.
Secondary industry: turning raw materials into a manufactured product. E.g. textiles, cars.
Tertiary industry: providing a service or selling the manufactured goods.
Quaternary industry: knowledge-based sector of the economy, focusing on intellectual activities, innovation, and information services.
NGO: Non-governmental organisation
Subsistence lifestyle: farming to survive/ own needs.

Aid – Long or short term
Bilateral (from one country to another)
Multilateral (money from multiple countries which is given to other countries).
Aid can also have conditions **tied** to it.
Disadvantages of aid:
LICs can become **dependent** on countries who give them aid. Aid may not reach those who need it most because of **corruption.**
Aid as loans, LICs often find this loan difficult to repay.
NGOs try to make sure that the aid they give is **sustainable.**
Practical Action - NGO. This charity helps people who live settlements to build houses uses local resources and their own labour. When Practical Action stops giving aid, people can continue to build good quality houses

The hydrological cycle



The drainage basin



Source: Where the river begins.
Mouth: Where the river meets the sea.
Tributary: A small river that joins a larger river.
Confluence: The point 2 rivers join.
Drainage basin: An area of land drained by a river and its tributaries .
Watershed: An imaginary line that marks the edge of a drainage basin.

Water cycle terms

Precipitation: Any moisture/water falling from the sky
Condensation: Water vapour (gas) cooling down and turning into a liquid.
Evaporation: Water (liquid) warming up and turning into water vapour (gas).
Infiltration: Water soaking into the ground.
Surface runoff: Water running over the surface of the land. It happens when the ground is too wet and no more water can soak in.
Throughflow: Water soaks into the soil and flows downhill through the soil
Groundwater flow: Water that has infiltrated deep underground slowly flows back to the sea or river through the rocks.

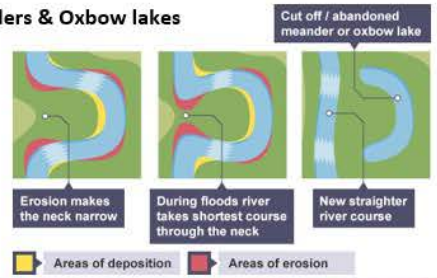
Soft engineering strategies: natural, generally cheaper, and work with nature to reduce flood risk.
Flood Plain Zoning: set aside land/low value e.g. pasture.
Afforestation (Planting Trees):interception, slow down the water reaching the river reducing surface run-off.

Destination 2: 'A River Story!'

River Processes

Erosion: where rocks are worn away and the land changes shape.
Transportation: where eroded material is carried by the river downstream.
Deposition: where transported material is dropped when the river loses energy, such as when it enters the sea.

Meanders & Oxbow lakes



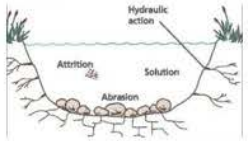
Meander – a bend in a river.
1.The formation of meanders is due to both **deposition and erosion** and meanders gradually move downstream.
2. The **force** of the water erodes and **undercuts** the riverbank on the outside of the bend where water flow has **most energy.**
3. On the **inside of the bend**, where the river flow is slower, material is **deposited**, as there is more **friction.**
4. Over time the **horseshoe** become tighter, until the ends become very close together.
As the river breaks through **the ends join**, the **loop is cut-off from** the main channel.
5. The cut-off loop is called an oxbow lake.

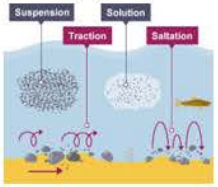
Erosion Processes

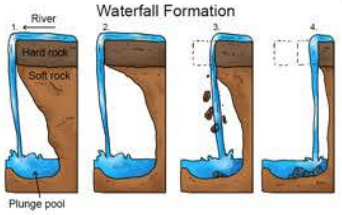
Hydraulic Action: Water is forced into cracks in the rock. This forces the air out quickly and breaks down the bank.
Attrition: The rocks being carried by the water knock into each other and break. This will make them smaller and rounder.
Abrasion: Rocks carried by the water rub against the river bed and bank, wearing it away like sandpaper.
Corrosion/Solution: Acids in the water dissolve some of the rock.

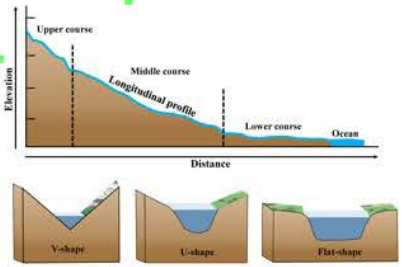
Transportation Processes

Traction: Heavy, large rocks and boulders are rolled along the riverbed. This requires high river energy, often occurring near the source during floods.
Saltation: Smaller pebbles and stones are bounced or "hopped" along the riverbed.
Suspension: the water current picks them up briefly before they drop back down.
Fine, light materials like silt and clay are carried continuously suspended within the flowing water, giving rivers a muddy appearance.
Solution: Minerals dissolved in the water (such as limestone or chalk) are transported invisibly downstream.









Hard Engineering: large, artificial structures to control and stop the natural flow of a river.
Dams and Reservoirs: Large concrete walls built across a river valley to trap water, releasing it slowly to prevent downstream flooding.
Channel Straightening: Cutting through meanders to make the river channel straighter and deeper so water moves away quickly.
Embankments (Artificial Levees): Raised banks built along river edges to make the channel deeper so it can hold more water.
Flood Relief Channels: Man-made, artificial river channels built to divert excess water around built-up areas.

Formation of a Waterfall

1.The soft rock erodes more quickly, undercutting the hard rock.
2. The hard rock is left overhanging and eventually collapses.
3. The fallen rocks crash into the plunge pool. They swirl around, causing more erosion.
4. Over time, this process is repeated and the waterfall moves upstream.
5. A steep-sided gorge is formed as the waterfall retreats.

Global population distribution

Population Density: The average number of people living in a specific area (calculated by total population ÷ total area), usually measured in people per km².

Densely Populated: Areas crowded with people. This is usually driven by flat terrain, mild climates, fertile soils, abundant water, and good transport/job opportunities (e.g., coastal cities).

Sparsely Populated: Areas with very few people. Usually caused by harsh climates (extremely hot or cold), steep mountainous terrain, dense forests, or a lack of resources and jobs.

Where Are All the People on Earth?

- Most people live in **Asia** (especially China and India).
- **High population densities** in cities and coastal areas. New York, Tokyo, Lagos
- **Sparse populations** in deserts, mountains, and cold regions e.g. Sahara desert.

BBC Bitesize KS3 Globalisation

BBC Bitesize KS3 Population & Migration

Population changes:

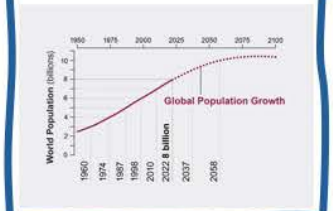
The world's population has changed over time. During the 1st century AD, the world population was about 300,000 people. The current population is over 8 billion, and most of the growth has taken place within the last 100 years.

Rapid population growth is now happening in the developing world. **LICs / NEEs.**

What causes population to change?

- **birth rate**
- **death rate**
- **migration**

Improvements in healthcare decreased death rates. Vaccines help to protect people from diseases. Life expectancy has increased.



What is Migration?

Migration: The movement of people from one place to another.

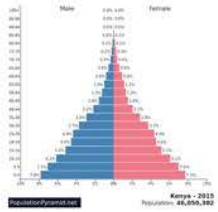
Immigration: Moving into a country.

Emigration: Leaving a country.

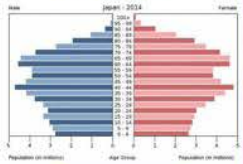
Destination 3: 8 Billion people and counting! Focus: Population & Migration

Population pyramid: A graph which shows the age and gender structure of a population.

- **Wide base** lots of young people and suggests a high birth rate.
- **Narrow base** smaller proportion of young people, suggesting a low birth rate.
- **Thin middle**, short pyramid means a smaller ageing population, suggesting that there is not a long-life expectancy.
- **Bulge in middle** indicates larger economically active population.
- **Improvements** in healthcare have lowered death rates and increased life expectancy.
- **Access to contraception** has lowered birth rates.



Typical LIC



Typical HIC

Push Factors: reasons for leaving a place

- Rural poverty
- Lack of services /infrastructure/ resources
- War
- Famine (starvation/food shortages)
- Few Jobs
- Natural Disasters

Pull Factors: reasons for moving to a place

- Safety
- Higher quality of life (better homes, food / water security)
- Access to education
- 'Bright Lights, Big City'
- Better healthcare
- Better job opportunities

Key Words

Ageing Population: high proportion of people over the age of 65.

Birth Rate: the number of people born per 1000 of the population.

Death Rate: the number of people who die per 1000 of the population.

Fertility Rate: the average number of babies born, per woman in her lifetime.

Life Expectancy: the average number of years a person is expected to live.

Population Growth Rate: a measure of how quickly the number of people in an area increases.

GNI $ per person: Gross national income, measure of people's wealth.

Sustainable: can be carried on into the future without harming people's quality of life, the economy or the environment.

Exponential growth: When something increases more with passing time - rapid growth.

Distribution: The way something is arranged or located.

Population density: The average number of people in a certain area.

Population pyramid: A graph which shows the age and gender structure of a population.

Population structure: The number of males and females in each age group that are found within a specific place.

Ageing population: When the average age of a population is rising.

Rural-Urban migration: The movement of people from the countryside to the city.

Natural Increase: When birth rate is higher than death rate, so the population increases.

Population policies are government strategies used to manage population size, growth, or distribution.

Example: China's One-Child Policy

Impacts: Gender imbalance; ageing population; fines; rewards for following policy; decrease in birth rate

Year 8 Knowledge Organiser
Destination 4: Megacities!

Key terms: **Settlement, site, situation, function, hierarchy, sphere of influence, urbanisation, migration, push factor, pull factor, megacity, slum, squatter settlement, favela, inequality, infrastructure, CBD, suburb, sustainability**

Key issues: Urban growth creates both opportunities and challenges e.g., inequality. Solutions must be sustainable and affordable.

Settlements

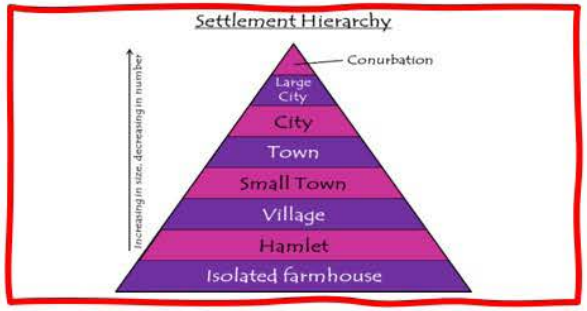
- **Settlement** = place where people live
- **Function** = role of a settlement (e.g. port, market town)
- **Urban function** = jobs/services in a city
- **Site** = physical location (e.g. water, flat land)
- **Situation** = surrounding connections (roads, trade)

Good sites have: Water supply, flat land, resources, shelter.

Why settlements grow: Trade, industry, transport links, migration.

Settlements ranked by:

- Population size, number of services, sphere of influence (area served).
- Larger settlements: More services, higher-order goods (e.g. hospitals).



Urbanisation

Urbanisation = increasing % of people living in cities

Causes: Rural-urban migration, natural increase (birth rate higher than death rate)

Push factors: poverty, lack of jobs

Pull factors: jobs, services

Cities are growing fastest in: LICs & NEEs

Megacities

- **Megacity** = city with 10+ million people, rapid growth, global importance
- Increasing in Asia, Africa, South America

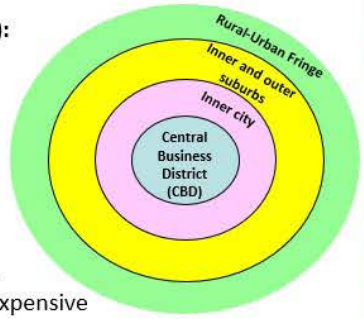
Urban Land Use (Burgess Model)

Central Business District (CBD): Large shops, office blocks, restaurants, museums, cinemas.

Inner city: Old, poor-quality terraced housing mixed with factories.

Suburbs: Newer, semi-detached homes with gardens.

Rural-urban fringe: New and expensive housing, countryside, business parks.



Improving Quality of Life

Strategies:

- Self-help schemes
- NGOs (e.g. WaterAid)
- Housing improvements
- Education & healthcare projects

Squatter Settlements (Slums): Areas built illegally on unused land

Why they form: Rapid urbanisation, lack of affordable housing

Conditions:

- ❌ Poor sanitation
- ❌ Overcrowded housing
- ❌ Unsafe structures

Opportunities:

- ✅ Close to jobs
- ✅ Strong community

Case Study: Mumbai (India)

Location: India, Asia

Growth reasons: Rural–urban migration, jobs in industry/services, natural increase

✅ **Opportunities:** Jobs, education, healthcare

❌ **Challenges:** Traffic congestion, housing shortages, pollution

Case Study: Rio de Janeiro (Brazil)

Location: Brazil, South America

Key issue: Inequality, rich areas vs favelas (slums)

✅ **Opportunities:** Community support, small businesses

❌ **Challenges:** Poor housing, limited sanitation, informal economy

Changes to society from the medieval period to the present day

How advanced was medieval society?

Key term	Definition
Silk roads	A network of trading routes in which merchants bought and sold goods from China to the UK during the medieval era.
Trade route	A network of established paths, waterways, and stopping points used for the commercial transport of goods, often across long distances
Merchant	A businessperson who made their living by buying and selling goods for profit
Empire	A group of countries ruled by a single government or ruler
The Mongols	East Asians native to Mongolia and parts of China and Russia who created the vast Mongol Empire under Genghis Khan in the 13th century
Guild	A powerful association of craftsmen or merchants who shared the same trade (e.g., bakers, weavers, or stonemasons)
Black Death	The devastating global pandemic of bubonic or pneumonic plague which killed 1/3 of the world's population. It started in Asia in 1346 and arrived in England in 1348
Physician	A medieval medical scholar who relied heavily on classical medical texts to treat patients
Urine charts	These displayed flasks of urine in various colours and shades. Physicians would match each one to a specific illness, organ problem, or imbalance of the Four Humours
Four humours	Medieval doctors (physicians) believed health depended on a perfect balance of four liquids: blood, phlegm, yellow bile, and black bile. If these were out of balance, a person would become ill
Mansa Musa	The 14th-century ruler of the West African Mali Empire, widely considered the wealthiest person in history
Hajj	The Islamic sacred pilgrimage to the holy city of Mecca in Saudi Arabia

How far was the Renaissance a period of advancement?

Key term	Definition
Renaissance	A French term meaning rebirth which is used to describe roughly the 14th to 17th century
Martin Luther	A German monk who sparked the Protestant Reformation
Reformation	A movement to reform the Catholic Church which stemmed from the ideas of Martin Luther and split the Christian Church into Protestants and Catholics
Protestant	From the word to protest – those like Martin Luther who protested against the Catholic Church
Break with Rome	Henry VIII's decision to establish the Church of England and break from the Roman Catholic Church
Black Tudors	Hundreds of men and women living and working freely in England in the Tudor period (1485-1603)
European witch-craze	A period of mass hysteria and religious panic in Europe in the 17th century leading to the deaths of tens of thousands of people, mainly women
The Diabolic Pact	The belief that witches had made a deal with the Devil, renounced God, and gained dark powers to cause harm
Matthew Hopkins	A witch-hunter who called himself the Witchfinder General and had over 100 suspected witches tried and executed, mostly during the English Civil War
English Civil War	The conflict between King Charles I and Parliament 1642-1649 and a period of turbulence in England
Daemonologie	The book written by James I to educate the public on the dangers of witchcraft
Leonardo Da Vinci	The ultimate “Renaissance Man” – a creative genius in both the arts and sciences
Printing Press	A machine that transfers text and images onto paper using inked, movable metal type invented by Johannes Gutenberg in the 15th century, it revolutionized communication by allowing books and documents to be mass-produced quickly, cheaply, and uniformly for the first time
Isaac Newton (1642-1727)	A groundbreaking English mathematician and physicist who revolutionized science. He served as the bridge between the Renaissance and the Age of Enlightenment.

1206	1312-1337	1324	1348	1368
The Mongol Empire is founded by Genghis Khan	Mansa Musa rules as Emperor of the Mali Empire	Mansa Musa embarks on hajj to Mecca	The Black Death arrives in England	The Mongol Empire ends when the Mongols lose control of China

1440	1480	1490s	1517	1534	1563	1665-1666	1642	1644	1649
The printing press is invented by Johannes Gutenberg in Germany	Malleus Maleficarum – the most important document on the identification of witches	The High Renaissance period begins	Martin Luther nails his 95 Theses to a church door in Wittenburg, Germany, sparking the Reformation	Parliament passes the Act of Supremacy, making Henry VIII head of the Church of England	Witchcraft Act - being a witch is made a crime punishable by death in Scotland	Isaac Newton's 'Year of Wonder”	The English Civil War begins	Matthew Hopkins gives himself the title of Witchfinder General	Charles I is executed for treason

HISTORY

Did the British Empire do more harm than good?

Key term	Definition
British Empire	A global system of colonies and territories controlled by the UK. Spanning from the late 1500s to the mid-1900s, it grew to be the largest empire in history, eventually covering roughly a quarter of the Earth's land surface and ruling over 400 million people
Colony	A territory under the political and economic control of another, more powerful country
Missionary	Someone who travelled to parts of the British Empire to convert others to Christianity
Transatlantic Slave Trade	The largest forced migration in history. Between the 16th and 19th centuries, European traders trafficked an estimated 12 to 15 million African men, women, and children across the Atlantic Ocean to be sold into forced labour in the Americas
The Triangular Trade	This was the three-stage route that made the trade incredibly profitable for European empires
Middle Passage	The terrifying, deadly second leg of the journey across the Atlantic. It is estimated that around 2 million enslaved Africans died during this voyage due to brutal conditions, disease, and abuse
Slave auction	A public marketplace event, where captured African people were sold as property to the highest bidder
Plantation	Large agricultural estates (mostly in the Americas and the Caribbean) where enslaved people were forced to do gruelling physical labour
Abolition	The movement led by campaigners (such as William Wilberforce and Olaudah Equiano) to end the slave trade. In Britain, this resulted in the Slave Trade Act in 1807, though slavery itself was not completely abolished until later
East India Company	A powerful English, and later British, trading corporation which eventually controlled large parts of India and had its own private army in the 1700s-1850s
Battle of Plassey 1757	A decisive victory for the British East India Company (EIC) over the Nawab of Bengal. Led by Robert Clive, the British vastly outnumbered army defeated the Nawab due to the betrayal of his top commander, Mir Jafar. This marked the beginning of British imperial rule in India
Great Rebellion 1857	A widespread but unsuccessful uprising against the rule of the British East India Company in India
British Raj	The period of direct British rule over the India between 1858 and 1947, set up after the Great Rebellion
Amritsar Massacre 1919	Event where British Indian Army troops opened fire on a large, unarmed crowd of peaceful Indian protesters and festival-goers in Amritsar, Punjab. It was a major turning point in the Indian independence movement
Indian National Congress	Created in 1885 as the primary nationalist organization leading the Indian independence movement against British rule
Mahatma Gandhi	Leader of the nationalist movement who spearheaded India's independence from British rule using non-violent protest
Partition of India 1947	The division of the British Indian Empire into two independent nations: a Hindu-majority India and a Muslim-majority Pakistan

1500s	1600	1757	1807	1808	1834	1857	1858	1865	1876	1884-1885	1919	1947
Start of the Transatlantic Slave Trade	The East India Company is chartered, spearheading British trade and expansion in Asia	The East India Company wins the Battle of Plassey, beginning British control over Bengal and the Indian subcontinent	British government passes the Slave Trade Act, abolishing the transatlantic slave trade	USA banned the importation of slaves	The Slavery Abolition Act took effect, freeing the vast majority of enslaved people across the British colonies	The Great Rebellion in India	The British Raj is established	The 13th Amendment is ratified in the USA following the American Civil War, abolishing slavery	Queen Victoria is declared Empress of India	The Berlin Conference formalizes the "Scramble for Africa," dividing the continent among European powers	Amritsar Massacre	The Partition of India into India and Pakistan, marking Indian independence from British rule

Why was there an Age of Revolution 1763-1848?

Key term	Definition
American Revolution 1775- 1783	A war where 13 British colonies in North America fought to win their independence. They successfully defeated Great Britain to form a new, independent nation: the United States of America
Monarchy	Changes made by government to improve people's rights or conditions
Liberty	The right to live freely without oppression or unfair control by an absolute monarch
Equality	Every person should be treated exactly the same under the law
Fraternity	The idea of brotherhood, kindness, and solidarity among citizens
Nationalism	An ideology that emphasizes intense loyalty and devotion to a specific nation, placing its culture and interests above others. It often involves the belief that a specific nation should have its own independent government
Democracy	A system of government where power belongs to the people, usually through elections
Independence	Freedom from outside control
Enlightenment (17th and 18th centuries)	Also known as the Age of Reason, it was a time when people in Europe stopped blindly following the Church or powerful kings and started using science, reason, and logic to understand the world and improve society
Boston Massacre March 5 1770	A deadly clash where British soldiers fired into an angry crowd in Boston, Massachusetts. It happened because locals hated British troops being stationed there to enforce unfair taxes
French Revolution	A period when ordinary French people overthrew their king and the old, unfair system of society. Tired of starvation and heavy taxes while wealthy nobles lived in luxury, citizens demanded "Liberty, Equality, and Fraternity". It established France as a republic
Absolute monarchy	A type of government where a king or queen has unlimited power
Republic	A country with no monarch
Louis XVI	The last absolute monarch of France, ruling from 1774 to 1792. He was executed by guillotine in 1793
Marie Antoinette	The last Queen of France, married to Louis XVI. She was beheaded by guillotine in 1793
Bourgeoisie	The middle class: people who gained wealth and power through business, trade, and education, rather than inheriting titles from royal or noble families
Haitian Revolution 1791- 1804	A massive and successful rebellion in the Caribbean by slaves against French colonial rule.
Toussaint Louverture	The leader of the Haitian Revolution
1848 revolutions	A wave of over 50 rebellions that swept across Europe in 1848
Luddites/Swingers	Protest groups in England in the early 1800s who objected to an increased use of machinery in the workplace. They feared losing their jobs and so smashed new machines.

March 1770	December 1773	1775-1783	1776	June 1789	August 1789	1791	1793-1794	1799	1804	1811-1816	1815	1830-31	1848
The Boston Massacre takes place, with British soldiers killing 5 protestors	Boston Tea Party unfolds, with protestors dumping 342 chests of tea in the harbour to protest the Tea Act	The American War for Independence	The Declaration of Independence is adopted in the USA	The French Revolution begins with the storming of the Bastille	The National Assembly adopts the Declaration of the Rights of Man and of the Citizen	The Haitian Revolution begins in the French colony of Saint-Domingue	The Reign of Terror takes place in France, including the executions of Louis XVI and Marie Antoinette	Napoleon Bonaparte takes power, ending the French Revolution	Saint-Domingue is renamed Haiti and is declared to be independent, establishing the world's first free Black republic	Luddites resist industrialisation by smashing machinery in the north	France is restored to the Bourbon monarchy	The Swing Riots take place in rural Southern and Eastern England	A series of republican revolts spreads across Europe from Sicily, including in France, Germany, Italy and the Austrian Empire

HISTORY

Key term	Definition
Windrush generation	Immigrants who arrived in the UK from British colonies – named after the first ship from the Caribbean in 1946
Migrants	People who have moved from one place to another to live permanently
Claudia Jones	Black civil rights campaigner who set up the Caribbean Carnival
Bristol Bus Boycott 1963	A civil rights protest where people refused to use the city's buses. It successfully forced the bus company to stop its "colour bar," which banned Black and Asian people from working as bus drivers and conductors
'Colour bars'	Policies that denied opportunities to people of African, Caribbean and Asian heritage
British Civil Rights Movement	National movement against racial discrimination
Race Relations Acts	A series of laws in the 1960s and 70s to combat racism
Brixton riots/uprising 1981	Violent clashes in South London between the police and local residents—mostly young Black men. They were caused by anger over racial discrimination, unfair policing, mass unemployment, and poor housing
First Black MPs 1983	Diane Abbott, Bernie Grant and Paul Boateng were elected in 1983 in London constituencies
Macpherson Report 1999	Report that publicly acknowledged, for the first time, that the Metropolitan Police Force (London's police force) was institutionally racist

Historical skills terminology

Key term	Definition
Primary source	Account or object produced by someone who experienced the event or era being studied
Interpretations	Different ways in which history has been understood and presented
Significance	The evaluation of the importance of events and people in history
Chronology	The order in which events took place
Inference	'Reading between the lines' of evidence to draw a conclusion

1948	1948	1958	1963	1965	1970	1981	1983	1993	1999	2018	2020
The British Nationality Act grants subjects of the British Empire the right to live and work in the UK	Empire Windrush arrives at Tilbury Docks carrying over 1000 passengers, mainly from the Caribbean, to fill post-war labour shortages	Rising racial tensions trigger the Notting Hill and Nottingham riots. Claudia Jones sets up the West Indian Gazette and Caribbean carnivals	The Bristol Bus Boycott forces the Bristol Omnibus Company to end the 'colour bar'	The first Race Relations Act is passed making it illegal to discriminate based on colour or race in public places	The trial of the Mangrove Nine highlights systemic police racism	The Brixton Riots break out over racial discrimination and inequality	The first three Black MPs are elected to Parliament	The racist murder of Stephen Lawrence shocks the nation	The MacPherson Report diagnosed the Metropolitan Police as institutionally racist	The Windrush Scandal begins, in which the government wrongly classifies thousands of legal, long-term UK residents as "illegal immigrants"	Black Lives Matter protests take place across the UK

3D Printing & CAD using Tinkercad

Design → Model → Print

Aim: create accurate 3D designs and understand how digital models become physical objects.

Key vocabulary

CAD: Computer-aided design software.
Tinkercad: Browser-based CAD tool.
3D model: A digital object with height, width and depth.
Primitive: Basic shape such as a cube, cylinder or sphere.
Workplane: The flat design surface.
Ruler: Tool for precise measurements.
Align: Place objects evenly or centrally.
Group: Combine shapes into one object.
Hole: A shape that removes material when grouped.
STL: Common file type for 3D printing.
Slicer: Software that converts a model into print layers.
Infill: Internal structure that affects strength and time.

Core knowledge

- 3D printing is additive manufacturing: material is built up layer by layer.
- A good CAD model uses precise dimensions, alignment and grouping.
- Models are exported as an STL and prepared in slicing software before printing.
- Print quality depends on wall thickness, overhangs, supports, orientation, bed adhesion and infill.

Watch out for...

- Resizing by eye instead of using measurements.
- Parts floating above or below the workplane.
- Overhangs that need support material.
- Models with very thin walls that may snap.
- Confusing the CAD model with the sliced print file.

Use these skills

- Use the ruler to set exact sizes.
- Use align and group to make neat, accurate models.
- Use hole shapes to create slots, cut-outs and text engravings.
- Follow the design cycle: brief → research → prototype → test → improve.
- Explain how a model could be made stronger, faster to print or easier to assemble.

Retrieval check

1. What does CAD stand for?
2. Why is 3D printing called additive manufacturing?
3. Which Tinkercad tool helps make objects line up neatly?
4. Why might a designer change infill?
5. What is the purpose of a slicer?

Essential takeaway: Tinkercad designs should be accurate, printable and improved through testing, not just visually attractive.

CyberSecurity

Protect systems & data

Aim: recognise common cyber threats and choose appropriate ways to reduce risk.

Key vocabulary

Cybersecurity: Protecting devices, networks and data.
Threat: Something that could cause harm.
Vulnerability: A weakness that can be exploited.
Malware: Software designed to harm or spy.
Phishing: Fake message used to steal data.
Social engineering: Manipulating people rather than hacking code.
Authentication: Proving who you are.
MFA/2FA: Extra verification factor, e.g. an app code.
Encryption: Scrambling data so it needs a key.
Firewall: Filters network traffic.
Patch/update: Fixes bugs and security flaws.
Data breach: Unauthorised access to data.

Core knowledge

- Security protects confidentiality, integrity and availability of information.
- Attacks often target people: urgency, fear, curiosity and trust.
- Strong passphrases, password managers and MFA reduce account risk.
- Updates, backups, firewalls and antivirus are layers of defence.
- Cybersecurity also includes ethical and legal choices.

Watch out for...

- HTTPS means the connection is encrypted; it does not prove a site is honest.
- Antivirus cannot stop every attack.
- A familiar logo does not guarantee a real message.
- Reusing one password makes multiple accounts vulnerable.
- Backups must be separate from the device they protect.

Use these skills

- Spot phishing clues: suspicious sender, links, attachments, spelling, pressure and requests for personal data.
- Create a strong passphrase using length and unpredictability.
- Choose a sensible response: stop, check, report, change passwords, enable MFA.
- Explain the likely impact of a breach on different stakeholders.

Retrieval check

1. What is phishing?
2. Give two signs of a suspicious email.
3. What does MFA add to a login?
4. Why are updates important?
5. What is the difference between a threat and a vulnerability?

Essential takeaway: Most cyber risk is reduced by layered security and careful human decisions.

Scratch Programming

Events, logic & control

Aim: build interactive programs by combining sequence, selection, iteration and variables.

Key vocabulary

Algorithm: Step-by-step solution.
Sequence: Instructions in order.
Selection: A decision, usually if / else.
Iteration: Repetition using loops.
Variable: Named storage for a value.
Condition: Test that is true or false.
Event: Something that triggers code.
Sprite: Programmable character or object.
Stage: Background area of the project.
Broadcast: Message sent between scripts.
Debugging: Finding and fixing errors.
Decomposition: Breaking a problem into smaller parts.

Core knowledge

- Scratch is event-driven: scripts start when an event happens.
- Programs use sequence, selection and iteration to control behaviour.
- Variables store values such as score, lives, time or answers.
- Broadcasts help sprites communicate.
- Testing should check normal, boundary and unexpected inputs where possible.

Watch out for...

- Scripts may run in the wrong order if events are unclear.
- Forever loops can make code hard to control.
- Variables can be for all sprites or one sprite only.
- Copying blocks repeatedly makes programs harder to improve.
- A program is not finished until it has been tested and refined.

Use these skills

- Plan the program before building it.
- Use loops to avoid repeated blocks.
- Use if / else for decisions and conditions.
- Use variables to track scores, timers and game states.
- Debug by isolating the script, predicting behaviour, testing, then changing one thing at a time.

Retrieval check

1. What is a variable used for?
2. What is the difference between selection and iteration?
3. Why might you use a broadcast?
4. What does debugging mean?
5. Give an example of an event in Scratch.

Essential takeaway: Successful Scratch projects are planned, decomposed, tested and improved using clear logic.

Web Design

HTML + CSS + users

Aim: build clear, accessible web pages using structure, styling and good design choices.

Key vocabulary

HTML: Markup language that structures content.
Tag: Code inside angle brackets, e.g. <p>.
Element: Opening tag, content and closing tag.
Attribute: Extra information inside a tag.
CSS: Stylesheet language for presentation.
Selector: Chooses which HTML to style.
Property: Style feature, e.g. colour.
Value: Setting for a property.
Hyperlink: Clickable link to another page or site.
Alt text: Description of an image.
Accessibility: Design that works for different users.
Responsive: Adapts to different screen sizes.

Core knowledge

- HTML gives web content structure: headings, paragraphs, lists, images and links.
- CSS controls appearance: colours, fonts, spacing, borders and layout.
- Separating content from style makes sites easier to edit.
- Good web design considers audience, purpose, readability, navigation and accessibility.
- Files and folders must be organised so links and images work.

Watch out for...

- Missing closing tags can break page structure.
- CSS uses braces, colons and semicolons.
- Image links fail if the path or file name is wrong.
- Alt text is for meaning, not just “image”.
- Decorative design should not make the page harder to use.

Use these skills

- Create a page with headings, paragraphs, lists, images and links.
- Write CSS rules using selector { property: value; }.
- Use meaningful file names and relative paths.
- Test in a browser and fix broken links or images.
- Improve readability using contrast, spacing and consistent navigation.

Retrieval check

1. What is the purpose of HTML?
2. What is the purpose of CSS?
3. Give one reason alt text is important.
4. What is a selector in CSS?
5. Why should a website be tested in a browser?

Essential takeaway: A strong web page is structured correctly, styled consistently and designed for its users.

Digital Impact in Computing

Technology changes society

Aim: evaluate how digital technology affects people, organisations and the environment.

Key vocabulary

Digital footprint: Data trail left by online activity.
Privacy: Control over personal information.
Data: Facts or values stored and processed.
Consent: Permission for data to be used.
Algorithm: Rules followed to solve a problem.
Bias: Unfair influence in data, design or decisions.
Automation: Technology performing tasks with little human input.
Copyright: Legal protection for creative work.
Accessibility: Technology usable by as many people as possible.
Digital divide: Gap in access to technology.
E-waste: Discarded electronic equipment.
Sustainability: Meeting needs while reducing future harm.

Core knowledge

- Digital technology creates benefits and risks for different stakeholders.
- Personal data can be collected, shared, sold, analysed and misused.
- Algorithms can reflect bias in data or design choices.
- Automation can improve efficiency but may change jobs and skills.
- Devices, data centres and e-waste have environmental impacts.

Watch out for...

- Deleting something online does not always remove every copy.
- "Free" apps may be funded by advertising or data collection.
- Algorithms are not automatically fair.
- Not everyone has equal access to devices, broadband or support.
- Environmental impact includes manufacture, energy use and disposal.

Use these skills

- Evaluate impact using stakeholders: users, companies, workers, schools, families and society.
- Balance benefits and drawbacks instead of giving one-sided answers.
- Judge whether online content is reliable, legal and ethical to use.
- Credit sources and respect copyright.
- Suggest practical ways to reduce harm, such as privacy settings, recycling and inclusive design.

Retrieval check

1. What is a digital footprint?
2. Give one example of algorithmic bias.
3. Why is copyright important?
4. What is the digital divide?
5. Name one environmental issue linked to computing.

Essential takeaway: Responsible digital citizens understand both the power and the consequences of technology.

Accuracy and Estimation		
Key Terms	Approximation	Close but not equal to the exact value
	Significant figure	The first non-zero digit in a number
	Lower bound	The lowest possible value
	Upper bound	The highest possible value
	Decimal place	Position after a decimal point
	Integer	A whole number (positive, negative or zero)
	Interval	All values between two numbers
	$A < B$	A is less than B
	$A > B$	A is greater than B
	$A \leq B$	A is less than or equal to B
	$A \geq B$	A is greater than or equal to B

Key Facts	Digits 0 - 4	Round a number down
	Digits 5 - 9	Round a number up
	To estimate a calculation	Round every number to 1 significant figure first and then perform the calculation
	0.9999999...	0.9 = 1

Key Skills	Round decimals to a given number of decimal places
	Round to a given number of significant figures
	Estimate calculations
	Find bounds of more complex calculations
	Express bounds as intervals

Percentages		
Key Terms	Percentage	A proportion out of 100
	Original Value	The starting amount before a change
	Numerator	The number at the top of a fraction
	Denominator	The number at the bottom of a fraction
	Appreciate	The increase in value of something
	Depreciate	The decrease in value of something

Key Facts	100%	Whole
	50%	$\frac{1}{2}$
	25%	$\frac{1}{4}$
	20%	$\frac{1}{5}$
	10%	$\frac{1}{10}$
	A as percentage of B	$\frac{A}{B} \times 100$
	Increase A by P%	$A \times (1 + \frac{P}{100})$
	Decrease A by P%	$A \times (1 - \frac{P}{100})$

Key Skills	Find percentages of amounts
	Increase and decrease by a percentage
	Use multipliers to increase and decrease by percentages
	Convert between fractions, decimals and percentages

Expressions		
Key Terms	Variable	Unknown number represented by a letter
	Coefficient	Number in front of a variable
	Term	Single part of an expression
	Like Terms	Terms with the same variable and power
	Expand	Multiply out brackets
	Factorise	Express as a multiplication (using brackets)

Key Facts	$a^m \times a^n$	$a^m \times a^n = a^{m+n}$
	$a^m \div a^n$	$a^m \div a^n = a^{m-n}$
	$a \div b$	$a \div b = \frac{a}{b}$

Key Skills	Simplify expressions by collecting like terms
	Expand single brackets
	Factorise into single brackets
	Use an area model to represent expanding and factorising
	Substitute into expressions

Sequences		
Key Terms	Sequence	List of numbers that follow a pattern or rule
	Term	Value in sequence
	n^{th} Term	General position to term rule for a sequence
	Arithmetic	Sequence with a common difference between terms
	Geometric	Sequence with a common ratio between terms
	Term to term rule	Rule that connects one term to the next
	Position to term rule	Rule that connects a term to its term number

Key Skills	Continue a sequence given a term to term rule
	Continue a sequence give a position to term rule
	Find the n^{th} term for an arithmetic sequence

Equations and Inequalities		
Key Terms	Equation	Statement showing two expressions are equal
	Linear Equation	An equation where the highest power of any variable is 1 (there are no squared, cubed, etc terms)
	Inequality	Statement comparing two expressions that are not strictly equal
	Inverse Operation	The reverse of an operation (eg addition is the inverse operation of subtraction)
	Solution	Value(s) of a variable that satisfy an equation or inequality

Key Skills	Solve linear equations with unknown on one side
	Solve linear equations with unknown on both sides
	Solve linear equations with brackets
	Solve linear inequalities
	Represent inequalities on number lines

Angles in Polygons

Key Terms		
	Polygon	A closed 2D shape with straight edges
	Interior Angle	Inside angle in a polygon
	Exterior Angle	Outside angle of a polygon, formed by extending a side
	Regular Polygon	A polygon with all sides and angles equal
	Vertex	A point (or corner of a polygon)
	Vertices	Plural of vertex
	Edge	The line connecting to vertices
	Triangle	3-sided polygon
	Quadrilateral	4-sided polygon
	Pentagon	5-sided polygon
	Hexagon	6-sided polygon
	Heptagon	7-sided polygon (also called a Septagon)
	Octagon	8 sided polygon
	Nonagon	9 sided polygon
	Decagon	10 sided polygon
	Square	Regular quadrilateral
	Rectangle	Quadrilateral with 4 right angles
	Rhombus	Quadrilateral with all sides equal
	Parallelogram	Quadrilateral with 2 pairs of parallel sides
	Trapezium	Quadrilateral with only 1 pair of parallel sides
	Kite	Quadrilateral with 2 pairs of adjacent sides of equal length
	Equilateral Triangle	Regular triangle
	Isosceles Triangle	Triangle with one pair of equal sides
	Scalene Triangle	Triangle with all sides of different lengths
	Adjacent	Next to
	Acute	An angle less than 90°
	Obtuse	An angle between 90° and 180°
	Reflex	An angle greater than 180°

Key Facts		
	Sum of interior angles	(n-2)×180
	Sum of exterior angles	360°
	Exterior + Interior	An exterior angle + the matching interior angle = 180°
	Interior angle of an equilateral triangle	60°

Key Skills
Find the sum of the interior angles of any polygon
Find missing interior angles in regular and irregular polygons
Find missing exterior angles in regular and irregular polygons
Calculate the number of sides of any polygon given information about its angles
Solve problems involving angles in polygons

Linear Graphs		
Key Terms	Gradient	A measure of how steep a line is
	y-intercept	Where a graph crosses the y-axis
	Linear	Straight line
	Coordinates	(x,y) values
	Ordinate	Just the x or y value of a coordinate

Key Facts	Gradient is…	Calculated as $\frac{\text{change in y}}{\text{change in x}}$
	Gradient represents…	The rate of change of y with respect to x
	Parallel lines	Have the same gradient
	Horizontal lines	Have a gradient of 0
	Vertical lines	Do not have a gradient (they are infinitely steep)
	The graph of an equation represents	All of the values of x and y that satisfy that equation

Key Skills	Plot graphs by calculating coordinates from an equation
	Plot graphs using gradient and intercept
	Find the gradient of a straight line
	Find the equation of a straight line from its graph
	Solve problems involving parallel and perpendicular lines

Proportion and Real-Life Graphs		
Key Terms	Displacement	Distance from a starting point
	Rate of change	How 1 quantity changes with respect to another
	Distance-time graph	A graph showing how distance changes with time
	Speed-time graph	A graph showing how speed changes with time
	Direct proportion	2 quantities increase (or decrease) at the same rate
	Inverse proportion	1 quantity increases at the same rate as the other decreases
	k	Traditionally used to represent a constant

Key Facts	Direct Proportion Formula	y=kx
	Inverse proportion Formula	xy=k

Key Skills	Use gradient to find speed
	Interpret real life graphs
	Plot real life graphs
	Understand and use ratio tables to solve problems
	Use a unitary method to solve ratio problems

Circles		
Key Terms	Radius	Line from circumference to centre
	Diameter	Line across a circle through the centre
	Circumference	Perimeter of a circle
	Chord	Straight line between 2 points on a circumference
	Tangent	Straight line that touches the circumference once only
	Sector	Area between two radii and the circumference
	Arc	Part of the circumference
	Segment	Area between a chord and the circumference
	Radii	Plural of radius
	π (pi)	The ratio of the circumference to the diameter

Key Facts	Circumference =	$2\pi r$ or πd
	Area =	πr^2
	π =	3.14159…

Key Skills	Find the area of circles
	Find the circumference of circles
	Find the area of sectors
	Find the perimeter of sectors
	Solve problems involving circles and sectors

Volume and Surface Area of Prisms		
Key Terms	Prism	3D solid with a constant cross section
	Face	Flat surface
	Edge	Line between vertices
	Vertex	Corner
	Net	2D pattern of shapes that can be folded to form a 3D solid
	Volume	The 3D space enclosed by a solid
	Area	The 2D space enclosed by a shape

Key Facts	Prism volume =	Cross sectional area x length
	Surface area =	Sum of the areas of the faces

Key Skills	Find the surface area of a prism
	Find the volume of a prism
	Solve problems involving prisms

Univariate and Bivariate Data		
Key Terms	Mean	The single number you get by sharing out a set of data equally
	Median	The exact middle of a set of data
	Mode	The most frequent item in a set of data
	Range	The difference between the largest and smallest values in a data set
	Bivariate	Data concerning two variables
	Scatter Graph	A graph that shows whether and how two things may be connected
	Correlation	The relationship between two variables
	Positive Correlation	Both variables increase together
	Negative Correlation	One variable decreases as the other increases
	Univariate	Data concerning one variable
	Frequency	How often something happens

Key Facts	Mean	Add up all values and divide by the number of pieces of data
	Median	Arrange data in order and find the middle value
	Mode	Find the item with the highest frequency
	Range	Largest value – smallest value
	Correlation	Correlation ≠ Causation

Key Skills	Calculate mean, median and mode from a data set
	Solve problems involving mean, median and mode
	Interpret and compare data sets
	Plot scatter graphs
	Describe trends

NUMBERS 0–100 · Les nombres

0 zéro	1 un	2 deux	3 trois	4 quatre	5 cinq	6 six
7 sept	8 huit	9 neuf	10 dix	11 onze	12 douze	13 treize
14 quatorze	15 quinze	16 seize	17 dix-sept	18 dix-huit	19 dix-neuf	20 vingt

Tens

10 dix	20 vingt	30 trente	40 quarante	50 cinquante	60 soixante	70 soixante-dix	80 quatre-vingts	90 quatre-vingt-dix	100 cent

Building numbers: 21 = vingt et un · 22 = vingt-deux · 31 = trente et un · 45 = quarante-cinq
Watch out! 70 = soixante-dix (60+10) · 71 = soixante et onze · 80 = quatre-vingts (4×20) · 90 = quatre-vingt-dix · 91 = quatre-vingt-onze · 100 = cent

COMMON VERBS — present tense · Les verbes

	être (to be)	avoir (to have)	aller (to go)	faire (to do/make)
je	suis	ai	vais	fais
tu	es	as	vas	fais
il/elle/on	est	a	va	fait
nous	sommes	avons	allons	faisons
vous	êtes	avez	allez	faites
ils/elles	sont	ont	vont	font

Regular -ER verbs (e.g. jouer = to play): je joue · tu joues · il/elle joue · nous jouons · vous jouez · ils/elles jouent
Endings: -e · -es · -e · -ons · -ez · -ent. Other -er verbs: parler (speak), regarder (watch), écouter (listen), manger (eat), habiter (live), aimer (like).

OPINIONS · Les opinions

Opinion phrases	Opinion verbs	Opinion adjectives	
à mon avis — in my opinion	j'aime — I like	c'est génial — it's great	c'est nul — it's rubbish
je pense que — I think that	j'adore — I love	c'est intéressant — it's interesting	c'est ennuyeux — it's boring
je trouve que — I find that	je n'aime pas — I don't like	c'est amusant — it's fun	c'est fatigant — it's tiring
	je déteste — I hate	c'est super — it's great	c'est difficile — it's hard
	je préfère — I prefer	c'est facile — it's easy	

NEGATIVES · La négation

Negative structures	How it works
ne … pas — not — je ne joue pas	**Rule** — ne + verb + negative wraps around the verb
ne … jamais — never — il ne mange jamais	**ne → n'** — before a vowel: je n'aime pas

CONNECTIVES & INTENSIFIERS · Les connecteurs

et and	**mais** but	**un peu** a little	**trop** too
parce que because	**car** because/for	**très** very	**assez** quite
ensuite next	**d'abord** first	**vraiment** really	**beaucoup** a lot
aussi also	**ou** or		
donc so	**puis** then		
enfin finally	**cependant** however		

QUESTION WORDS · Les mots interrogatifs

qui ? who?	**que / qu'est-ce que ?** what?	**quand ?** when?
où ? where?	**pourquoi ?** why?	**comment ?** how?
combien ? how much/many?	**quel(le) ?** which/what?	**à quelle heure ?** at what time?

USEFUL CLASSROOM PHRASES · En classe

Je ne comprends pas I don't understand	**Comment ça s'écrit ?** How is it spelt?
Que veut dire… ? What does … mean?	**Comment dit-on… ?** How do you say…?
Pouvez-vous répéter ? Can you repeat?	

TIME & FREQUENCY · Le temps

aujourd'hui today	**demain** tomorrow	**hier** yesterday	**souvent** often
toujours always	**quelquefois** sometimes	**tous les jours** every day	**le weekend** at the weekend

Days & months

Days: lundi, mardi, mercredi, jeudi, vendredi, samedi, dimanche

Months: janvier, février, mars, avril, mai, juin, juillet, août, septembre, octobre, novembre, décembre

MFL - MANDARIN

DAILY ROUTINES & TIME · 日常作息

起床 qǐchuáng get up	穿衣服 chuān yīfu get dressed	每天 měitiān every day
吃早饭 chī zǎofàn have breakfast	开始 kāishǐ start	总是 zǒngshì always
上学 shàngxué go to school	到达 dàodá arrive	一般 yìbān generally
吃午饭 chī wǔfàn have lunch	上班 shàngbān go to work	有时候 yǒu shíhou sometimes
回家 huíjiā go home	早上 zǎoshang morning	很少 hěn shǎo rarely
吃晚饭 chī wǎnfàn have dinner	中午 zhōngwǔ noon	周末 zhōumò weekend
做作业 zuò zuòyè do homework	下午 xiàwǔ afternoon	今天 jīntiān today
睡觉 shuìjiào sleep	晚上 wǎnshang evening	明天 míngtiān tomorrow
洗澡 xǐzǎo take a shower	夜间 yèjiān night	昨天 zuótiān yesterday

SCHOOL & SUBJECTS · 学校和科目

中文 Zhōngwén Chinese	历史 lìshǐ History	有意思 yǒu yìsi interesting
汉语 Hànyǔ Mandarin	地理 dìlǐ Geography	没意思 méi yìsi boring
英文 Yīngwén English	体育 tǐyù PE	有用 yǒuyòng useful
法文 Fǎwén French	音乐 yīnyuè Music	没用 méiyòng useless
德文 Déwén German	课 kè lesson	容易 róngyì easy
科学 kēxué Science	上学 shàngxué go to school	难 nán difficult
数学 shùxué Maths	放学 fàngxué finish school	考试 kǎoshì exam

PHYSICAL DESCRIPTIONS · 身体描述

高 gāo tall	聪明 cōngming clever	眼睛 yǎnjing eyes
矮 ǎi short	美丽 měilì beautiful	头发 tóufa hair
胖 pàng fat	笨 bèn stupid	鼻子 bízi nose
瘦 shòu thin	强壮 qiángzhuàng strong	嘴巴 zuǐba mouth
漂亮 piàoliang beautiful	弱 ruò weak	比 bǐ than
好看 hǎokàn good-looking	年轻 niánqīng young	比较 bǐjiào rather
帅 shuài handsome	老 lǎo old	非常 fēicháng very

FOOD & DRINK · 食物和饮料

面包 miànbāo bread	水 shuǐ water	早饭 zǎofàn breakfast
面条 miàntiáo noodles	茶 chá tea	午饭 wǔfàn lunch
米饭 mǐfàn rice	果汁 guǒzhī juice	晚饭 wǎnfàn dinner
饺子 jiǎozi dumplings	牛奶 niúnǎi milk	好吃 hǎochī tasty
包子 bāozi steamed bun	咖啡 kāfēi coffee	难吃 nánchī not tasty
牛肉 niúròu beef	红茶 hóngchá black tea	健康 jiànkāng healthy
鸡蛋 jīdàn egg	绿茶 lǜchá green tea	觉得 juéde think/feel
青菜 qīngcài vegetables	奶茶 nǎichá milk tea	吃 chī eat
巧克力 qiǎokèlì chocolate	汽水 qìshuǐ soft drink	喝 hē drink

PLACES & LEISURE · 地方和娱乐

公园 gōngyuán park	踢足球 tī zúqiú play football	看电视 kàn diànshì watch TV
运动中心 yùndòng zhōngxīn sports centre	打篮球 dǎ lánqiú play basketball	看书 kàn shū read books
电影院 diànyǐngyuàn cinema	跑步 pǎobù running	上网 shàngwǎng surf internet
商店 shāngdiàn shop	游泳 yóuyǒng swimming	听音乐 tīng yīnyuè listen to music
博物馆 bówùguǎn museum	打乒乓球 dǎ pīngpāngqiú table tennis	买东西 mǎi dōngxi shopping
看展览 kàn zhǎnlǎn see exhibition	打羽毛球 dǎ yǔmáoqiú badminton	玩滑板 wán huábǎn skateboard
散步 sànbù go for a walk	看电影 kàn diànyǐng watch films	好玩 hǎowán fun

TRANSPORT · 交通

坐火车 zuò huǒchē by train	骑自行车 qí zìxíngchē ride a bike	飞机 fēijī plane
坐汽车 zuò qìchē by car	走路 zǒulù walk	船 chuán boat
坐公共汽车 zuò gōnggòng qìchē by bus	站 zhàn station	自行车 zìxíngchē bike
坐出租车 zuò chūzūchē by taxi	停车场 tíngchēchǎng car park	快 kuài fast
坐飞机 zuò fēijī by plane	汽车 qìchē car	慢 màn slow
坐船 zuò chuán by boat	火车 huǒchē train	

CLOTHES & COLOURS · 服装和颜色

黑色的 hēisè de black	大衣 dàyī coat	漂亮 piàoliang beautiful
白色的 báisè de white	衬衣 chènyī shirt	丑 chǒu ugly
红色的 hóngsè de red	裙子 qúnzi skirt	好看 hǎokàn good-looking
绿色的 lǜsè de green	袜子 wàzi socks	不好看 bù hǎokàn not good-looking
蓝色的 lánsè de blue	裤子 kùzi trousers	新的 xīn de new
黄色的 huángsè de yellow	鞋子 xiézi shoes	旧的 jiù de old
上衣 shàngyī top	运动鞋 yùndòngxié trainers	

WEATHER & SEASONS · 天气和季节

冷 lěng cold	晴天 qíngtiān sunny	这个季节 zhège jìjié this season
热 rè hot	有雾 yǒu wù foggy	春天 chūntiān spring
有风 yǒu fēng windy	下雨 xiàyǔ raining	夏天 xiàtiān summer
有雨 yǒu yǔ rainy	下雪 xiàxuě snowing	秋天 qiūtiān autumn
有雪 yǒu xuě snowy	天气 tiānqì weather	冬天 dōngtiān winter
有云 yǒu yún cloudy	温度 wēndù temperature	

ADVERBS & INTENSIFIERS · 副词

很 hěn very	有点 yǒudiǎn a bit	有时候 yǒu shíhou sometimes
非常 fēicháng extremely	最 zuì the most	很少 hěn shǎo rarely
相当 xiāngdāng quite	比较 bǐjiào rather	常常 chángcháng often
特别 tèbié especially	总是 zǒngshì always	快速地 kuàisù de quickly
真 zhēn really	一般 yìbān generally	慢慢地 mànmàn de slowly

HOME & ROOMS · 家和房间

家 jiā home	书房 shūfáng study	在…左边 zài … zuǒbiān on the left
房子 fángzi house	卧室 wòshì bedroom	在…右边 zài … yòubiān on the right
客厅 kètīng living room	花园 huāyuán garden	在…旁边 zài … pángbiān next to
饭厅 fàntīng dining room	房间 fángjiān room	在…中间 zài … zhōngjiān between
厨房 chúfáng kitchen	在…里 zài … lǐ in	大 dà big
厕所 cèsuǒ toilet	在…外 zài … wài outside	小 xiǎo small
浴室 yùshì bathroom		

HOLIDAYS & TRAVEL · 假期和旅游

去博物馆 qù bówùguǎn go to museum	去…旅游 qù … lǚyóu travel to	饭馆 fànguǎn restaurant
滑雪 huáxuě go skiing	去…度假 qù … dùjià holiday to	旅馆 lǚguǎn hotel
散步 sànbù go for a walk	海边 hǎibiān seaside	漂亮 piàoliang beautiful
照照片 zhào zhàopiàn take photos	山区 shānqū mountain area	美丽 měilì beautiful
吃饭 chīfàn have a meal	农村 nóngcūn countryside	无聊 wúliáo boring
晒太阳 shài tàiyáng sunbathe	城市 chéngshì city	

LOCATION & FACILITIES · 地点和设施

书店 shūdiàn bookshop	图书馆 túshūguǎn library	常常 chángcháng often
电影院 diànyǐngyuàn cinema	火车站 huǒchēzhàn train station	有时候 yǒu shíhou sometimes
游泳池 yóuyǒngchí swimming pool	邮局 yóujú post office	很少 hěn shǎo rarely
学校 xuéxiào school	银行 yínháng bank	在…对面 zài … duìmiàn opposite
饭馆 fànguǎn restaurant	医院 yīyuàn hospital	
咖啡店 kāfēidiàn café	总是 zǒngshì always	

FUTURE PLANS & CAREERS · 未来计划和职业

老师 lǎoshī teacher	商人 shāngrén businessperson	工程师 gōngchéngshī engineer	护士 hùshi nurse	医院 yīyuàn hospital	小学 xiǎoxué primary school
学生 xuésheng student	医生 yīshēng doctor	记者 jìzhě journalist	厨师 chúshī chef	工厂 gōngchǎng factory	大学 dàxué university
工人 gōngrén worker	演员 yǎnyuán actor	科学家 kēxuéjiā scientist	服务员 fúwùyuán waiter	公司 gōngsī company	电视台 diànshìtái TV station

NUMBERS 0–100 · Los números

0 cero	1 uno	2 dos	3 tres	4 cuatro	5 cinco	6 seis
7 siete	8 ocho	9 nueve	10 diez	11 once	12 doce	13 trece
14 catorce	15 quince	16 dieciséis	17 diecisiete	18 dieciocho	19 diecinueve	20 veinte

Tens

10 diez	20 veinte	30 treinta	40 cuarenta	50 cincuenta	60 sesenta	70 setenta	80 ochenta	90 noventa	100 cien

Building numbers: 16–29 are one word — 21 = veintiuno · 22 = veintidós · 25 = veinticinco

From 30, use "y": 31 = treinta y uno · 45 = cuarenta y cinco · 99 = noventa y nueve · 100 = cien (cien before a noun, ciento for 101 = ciento uno)

COMMON VERBS — present tense · Los verbos

	ser (to be)	estar (to be)	tener (to have)	ir (to go)	hacer (to do/make)
yo	soy	estoy	tengo	voy	hago
tú	eres	estás	tienes	vas	haces
él/ella/usted	es	está	tiene	va	hace
nosotros	somos	estamos	tenemos	vamos	hacemos
vosotros	sois	estáis	tenéis	vais	hacéis
ellos/ellas/ustedes	son	están	tienen	van	hacen

Regular verb endings (present tense): -AR hablar (speak): hablo, hablas, habla, hablamos, habláis, hablan · -ER comer (eat): como, comes, come, comemos, coméis, comen · -IR vivir (live): vivo, vives, vive, vivimos, vivís, viven

Other useful verbs: escuchar (listen), mirar (watch), trabajar (work), estudiar (study), comprar (buy), jugar (play), querer (want), poder (can), deber (must).

COMMON VERBS — pretérito & near future · ir · comer · beber · ser · jugar

Pretérito (simple past — "I went / I ate")

	ir	comer	beber	ser	jugar
yo	fui	comí	bebí	fui	jugué
él/ella	fue	comió	bebió	fue	jugó

Fue interesante — It was great

Futuro próximo (near future – "I am going to go / I am going to eat")

	ir	comer	beber	ser	jugar
yo	voy a ir	voy a comer	voy a beber	voy a ser	voy a jugar
él/ella	va a ir	va a comer	va a beber	va a ser	va a jugar

OPINIONS · Las opiniones

Opinion phrases

en mi opinión — in my opinion
creo que — I think/believe that
pienso que — I think that
me parece que — it seems to me that
para mí — for me
desde mi punto de vista — from my point of view

Opinion verbs

me gusta(n) — I like
me encanta(n) — I love
no me gusta — I don't like
odio — I hate
prefiero — I prefer
es... genial / horrible — it's... great / awful

NEGATIVES · La negación

Negative words

no ... — not — no juego
nunca / jamás — never — no como nunca
ya no — no longer — ya no fumo
nada — nothing — no veo nada
nadie — nobody — no conozco a nadie
ni ... ni — neither...nor — no tengo ni perro ni gato

How it works

Double negative — Normal in Spanish: no + verb + nada/nunca/nadie
tampoco — not either — yo tampoco (me neither)

CONNECTIVES & INTENSIFIERS · Los conectores

y and	**pero** but	**también** also	**o** or	**porque** because	**como** as/since
así que so	**después** then/after	**luego** then	**primero** first	**por fin** finally	**sin embargo** however
muy very	**bastante** quite	**un poco** a little	**demasiado** too	**realmente** really	**mucho** a lot
es... divertido fun	**... aburrido** boring	**... fácil / difícil** easy / hard	**... interesante** interesting	**... guay** cool	**... increíble** amazing

QUESTION WORDS · Las preguntas

¿quién? who?	**¿qué?** what?	**¿cuándo?** when?
¿dónde? where?	**¿por qué?** why?	**¿cómo?** how?
¿cuánto? how much/many?	**¿cuál?** which?	**¿a qué hora?** at what time?

USEFUL CLASSROOM PHRASES · En clase

No entiendo I don't understand	**¿Cómo se escribe?** How is it spelt?
¿Qué significa...? What does ... mean?	**¿Cómo se dice...?** How do you say...?
¿Puede repetir? Can you repeat?	

TIME & FREQUENCY · El tiempo

hoy today	**mañana** tomorrow	**ayer** yesterday	**a menudo** often
siempre always	**a veces** sometimes	**todos los días** every day	**el fin de semana** at the weekend

Days & months

Days: lunes, martes, miércoles, jueves, viernes, sábado, domingo
Months: enero, febrero, marzo, abril, mayo, junio, julio, agosto, septiembre, octubre, noviembre, diciembre

YEAR 8 KNOWLEDGE ORGANISER

MUSIC

Musical Element	Meaning	NEW! Key terms to learn
Pitch	the highness or lowness of a sound	high, low, ascending, descending
Tempo	the speed of a sound or piece of music	**adagio** - slow **andante** - a walking pace **moderato** - moderately **allegro** - quick and lively **metronome** - device used to stay in time
Dynamics	the volume of a sound or piece of music	**forte** - loud **piano** - quiet **fortissimo** - very loud **pianissimo** - very quiet **crescendo** - getting louder **diminiuendo** - getting quieter
Duration	the length of a sound	**semibreve** - 4 beats **minim** - 2 beats **crotchet** - 1 beat **quaver** - 1/2 beat **semiquaver** - 1/4 beat **long** **short**
Texture	how layers of sound within a piece of music interact	**monophonic** - one melody and no accompaniment **melody and accompaniment** - melody and backing part
Timbre	the unique sound or tone quality of different instruments, voices or sounds	**synthesizer** - electronic keyboard instrument that turns electricity into sounds
Articulation	how individual notes or sounds are played	**legato** - played smoothly **staccato** - played short & detached
Structure	the order in which a piece of music is arranged	**ABA** - ternary form **verse - chorus** - pop music structure **theme & variation** **ground bass** - bass part repeated throughout the song

NOTE VALUES

Note Name	Note Symbol	Note Value
Semibreve	𝅝	4 beats
Minim	𝅗𝅥	2 beats
Crotchet	♩	1 beat
Quaver	♪	½ of a beat
Pair of Quavers	♫	2 x ½ beats = 1
Semiquaver	𝅘𝅥𝅯	¼ of a beat
Demisemiquaver	𝅘𝅥𝅰	⅛ of a beat

CHORDS

Harmony - the sound created when two or more sounds of different pitches are played at the same time

Chord - Two or more notes sounding together

Triad - A chord made of three notes

Primary Chords - Chords 1, 4 & 5 of the key being used e.g. C major = C (1), F (4) and G (5)

Roman numerals are used to number chords

I = 1 IV = 4 V = 5

Accompaniment chord styles:

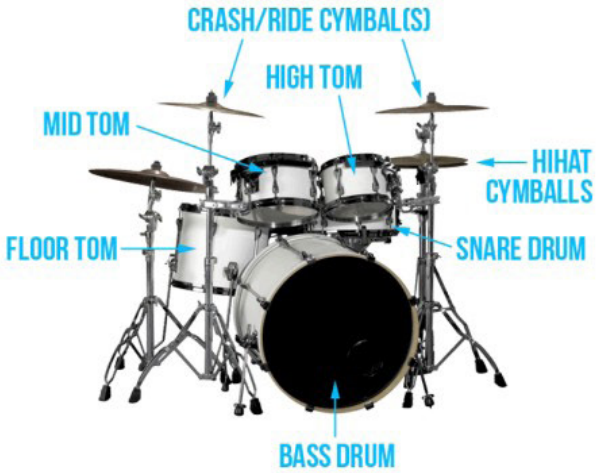
Block - notes played all together

Broken chord - notes of the chord played separately

Arpeggio - a type of broken chord usually played going up or down

DYNAMICS

Term	Symbol	Definition
Fortississimo	*fff*	very, very loud
Fortissimo	*ff*	very loud
Forte	*f*	loud
Mezzo forte	*mf*	a little loud
Mezzo piano	*mp*	a little soft
Piano	*p*	soft
Pianissimo	*pp*	very soft
Pianississimo	*ppp*	very, very soft
Crescendo	<	gradually getting louder
Decrescendo	>	gradually getting softer
Sforzando	*sfz*	suddenly, with a sudden emphasis



TONALITY – MAJOR & MINOR

Scale - an organised sequence of notes. Scales can ascend (go up) or descend (go down)
Major tonality - the use of major scales and chords in a piece of music, generally creating a happy, bright, and positive mood
Minor - the use of minor scales and chords in a piece of music, generally creating sadder, darker or more serious mood
Tonic - the first note of a scale
Root note - the first note of a chord or scale
Passing note - a non chord note that bridges two chord notes in a melody

GAME MUSIC

MOTIF - a short musical idea
BASSLINE - has a low pitch and is the lowest part of the music. It creates rhythm, as well as harmony with the chords. This adds to the texture of the music. Only one note played at a time.
SYNCOPATION - is a rhythmic device used when you want the weaker beats in a bar to be emphasized or accented. It provides a jumpy, on-edge feel to the music.
MELODIC SEQUENCING - A short melody that, when repeated, lowers or raises in pitch each time

MUSICAL THEATRE

Musical - A form of theatrical performance (could be on stage, a film, or TV show) that combines songs, spoken dialogue, acting and dance.
Solo - a song sung by one character.
Duet - a song sung by two characters.
Chorus/Ensemble - numbers for larger groups of performers. It is often a commentary on the action or plot and helps set the mood.

MUSIC TECHNOLOGY

Four to floor - rhythm played on every beat of the bar by the kick drum
Backbeat - emphasis of beats 2 & 4 by the snare drum
Chord progression - A pattern of chords that is usually repeated
Melody - the tune of a piece of music
Dissonance - clashing sounding notes
Range - the space between the highest and lowest notes

Ableton
https://learningmusic.ableton.com / - music technology program

Performance Skills
Fluency
Confidence
Accuracy of notes and rhythms
Starting, ending and maintaining **time** with partner / group
Count in to start **together**
End with **silence** (for audience signal to clap)

Term 1 & 2 Outdoor Sports

T1 Rugby

Skills

Passing and Support
- Swing arms across body to spin the ball accurately
- Pass accurately under pressure to maintain possession
- Create effective support lines

Running with the Ball
- Hold the ball in two hands for more options
- Use width to create attacking space
- Run into space to support attacking play

Defending
- Apply defensive pressure to limit attacking space
- Maintain defensive shape and organisation
- Communicate with teammates to organise defence

Scrums and Lineouts
- Form safe and organised scrum formations
- Take up correct positions in lineouts
- Restart play effectively from set pieces

Rules

- **Backward Passing Rule:** The ball must always be passed backwards
- **Touch Rule:** When a touch has been made, the player must stop and the defending team create a tackle triangle.
- **5-Touch Rule:** A team has 5 touches before possession changes
- **Try Scoring:** A try is scored by placing the ball over the try line

Key Vocabulary

- **Possession:** Having control of the ball
- **Support:** Positioning to receive a pass
- **Knock-on:** Dropping the ball forward
- **Scrum + Lineouts:** Set piece to restart game

Netball

Skills

Passing
- Select appropriate pass (chest, bounce, overhead)
- Adjust speed and direction of pass
- Pass and move into space

Footwork
- Land in a balanced position ready to pivot
- Use pivot to create passing options
- Starting to pivot in the air landing the intended direction

Shooting
- Aim for high arc towards the ring
- Keep shooting arm straight on release
- Maintain balance when shooting under pressure

Defending
- Mark at correct distance (1 metre rule)
- Sidewards marking player without the ball
- Force attacker to shoot from further away, by blocking them out

Rules

- **Obstruction Rule:** Defender must stay 1 metre away when marking
- **Out of Court:** Ball is out when it touches the ground or area outside the court
- **Centre Pass:** Used to restart play after each goal
- **Offside Rule:** Players must stay within their designated areas

Key Vocabulary

- **Interception:** Winning the ball by cutting off a pass
- **Pivot:** Turning on one foot to find space
- **Marking Distance:** Space a defender must give (1 metre)
- **Rebound:** Gaining the ball after a missed shot

Term 1 & 2 Indoor Sports

Health Related Fitness

Skills

Continuous Training
- Maintain a steady pace over a period of time
- Can be running, swimming, cycling etc
- Focus on improving endurance

Fartlek Training
- Means 'speed play' as alter pace on different terrains
- Builds your aerobic and anaerobic speed

Interval Training
- Alternate between periods of work and periods of rest
- Recover actively between intervals

Circuit Training (Fitness + Skills)
- Move around different stations
- Maintain correct technique at each station
- Work for set time or repetitions

Strength Training
- Use controlled movements with resistance (bodyweight/weights)
- Target specific muscle groups

Rules

- **Intensity Rule**: Work at an appropriate level to challenge fitness safely
- **Work/Rest Rule**: Follow correct work and recovery times
- **Equipment Use Rule**: Use equipment safely and correctly
- **Hydration Rule**: Drink water before, during, and after exercise

Key Vocabulary

- **Training Methods:** Type of exercise used to improve fitness
- **Intensity:** How hard you are working
- **Repetition (Rep):** Number of times an exercise is performed
- **Set:** A group of repetitions

Gymnastics

Skills

Approach Run for Vaulting
- Building speed, controlled, straight run
- Keep head up and focus on the vault
- Take off- strong final steps

Take-Off (Springboard)
- Jump off both feet onto the board
- Swing arms forward to generate lift
- Keep body tight to maximise height

Flight (Over Vault)
- Push strongly off the apparatus with straight arms
- Keep body in a tight, controlled shape (tuck/straddle)
- Lift hips upward to create height and distance

Landing
- Land on both feet with knees bent
- Keep balance and chest upright
- Stick landing with control and no extra steps

Rules

- **Safety First:** Always perform on mats
- **Control Rule:** Skills must be performed with control, not speed only
- **Aesthetics:** awarded points for neatness, alignment and control
- **Start & Finish Positions:** All routines must have a clear beginning and end

Key Vocabulary

- **Springboard:** Equipment used to generate lift for vaulting
- **Take-off:** The jump phase before flight
- **Flight:** Movement through the air over the vault
- **Landing:** Final phase where control and balance are shown
- **Momentum:** Speed built during the run-up to aid performance

Term 3 & 4 Outdoor Sports

Football

Skills

1v1 Attacking Moves
- Recognise when to use skills based on defender positioning
- Combine slow approach → skill → explosive acceleration
- Dribble with control at speed using different surfaces of the ball
- Keep head up to scan for space and teammates

Shooting
- Use laces for power and inside foot for placement
- •Select appropriate shooting type based on distance and pressure

Creating 2v1 Opportunities
- Make supporting runs to exploit space created

Rules

- **Throw-ins:** Taken when ball leaves the sideline using both hands over the head
- **Free Kicks:** Awarded after a foul; can be direct or indirect
- **Corner Kicks & Goal Kicks:** Restart methods depending on last touch
- **Offside (Intro):** Player cannot be too far ahead when receiving the ball

Key Vocabulary

- **Dribbling:** Moving with the ball under control
- **Ball mastery:** Close control using different parts of the foot
- **Change of direction:** Turning away from defender
- **Support:** Offering a passing option
- **Transition:** Change from attack to defence (or vice versa)

Hockey

Skills

Passing
- Use push pass or slap pass depending on distance
- Adjust power and accuracy of passes
- Pass and move into space to support play

Dribbling
- Use Indian dribble, a side-to-side movement on the flat side of the stick
- Change speed and direction to beat opponents
- Keep ball under control while moving at speed

Shooting
- Strike the ball with controlled power
- Aim for corners of the goal
- Shoot quickly when in a scoring position

Defending
- Approach attacker at an angle to guide direction
- Time tackles to win the ball cleanly
- Stay low with stick and apply controlled pressure

Rules

- **Obstruction Rule:** Players cannot block opponents using their body or stick
- **Free Hit:** Awarded after a foul and must be taken from the correct spot
- **Sideline Hit:** Used to restart play when the ball goes out
- **Safety Rule:** No high sticks or dangerous play

Key Vocabulary

- **Possession:** Control of the ball
- **Free Hit:** Restart after a foul
- **Support:** Moving to help the player with the ball
- **Applying Pressure:** Closing down an opponent quickly

Term 3 & 4 Indoor Sports

Swimming

Skills

Front Crawl
- Rotate body slightly to improve reach and efficiency
- Breathe to the side without lifting the head fully
- Maintain strong, consistent leg kick

Backstroke
- Rotate shoulders to improve arm reach
- Keep arms straight and enter water with little splash
- Maintain steady kick for propulsion

Breaststroke
- Coordinate pull, breathe, kick, glide
- Keep strokes smooth and timed correctly
- Reduce drag by maintaining a streamlined glide

Turns & Starts
- Push off wall in streamlined position
- Turn efficiently at the wall
- Start with strong push to gain early speed

Rules

- **Emergency Exit from Pool:** 3 blasts on the whistle means exit the pool at the nearest point and sit with your back against the wall
- **Stroke Rules:** Must follow correct technique (e.g. breaststroke kick)
- **Turn Rules:** Must touch wall correctly before turning
- **Race Starts:** Understanding safe and correct starting position

Key Vocabulary

- **Coordination:** Ability to keep going over a period of time
- **Glide:** Ability of muscles to exert force
- **Rotation:** Repetitive movements over time
- **Propulsion:** Range of movement at a joint

Table Tennis

Skills

Forehand
- Stand side-on with balanced stance
- Swing bat forward and slightly upwards
- Make contact in front of the body for control

Backhand
- Keep elbow close to body
- Use short, controlled movement
- Angle the bat to direct the ball

Serving
- Throw the ball up 15cm
- Strike behind the ball to hit yours and opponent side of the table
- Aim for controlled placement, not just power

Ready Position & Movement
- Stay low with knees bent
- Hold bat in front, ready for both sides
- Move quickly using small side steps

Rules

- **Service Rule:** Ball must be thrown up 15cm and struck before the bounce
- **One Bounce Rule:** Ball must bounce once on each side during a rally
- **Scoring System:** Games are played to 11 points (win by 2)
- **Let:** Rally is replayed if serve touches the net but lands correctly

Key Vocabulary

- **Rally:** Continuous hitting between players
- **Serve:** Starting shot to begin play
- **Spin:** Rotation placed on the ball affecting its movement
- **Control:** Ability to keep shots accurate and consistent
- **Placement:** Hitting the ball into space

Term 5 & 6 Outdoor Sports

Athletics

Skills

Sprinting (100m)
- Use a strong drive phase at the start
- Increase stride length while maintaining speed
- Keep head and body controlled and stable

Middle Distance (800m)
- Use a strong drive phase at the start
- Increase stride length while maintaining speed
- Keep head and body controlled and stable

Long Jump
- Build speed during approach run-up
- Drive knee upwards during take-off
- Extend legs forward for controlled landing

Throwing (Shot & Javelin)
- Rotate body to generate more power
- Use legs and core, not just arms
- Follow through towards target

Rules

- **Stay in Lane (Track):** In sprint races, runners must stay in their lane
- **Valid Jump:** A goal is scored when the whole ball crosses the goal line
- **Safe Throwing:** Throws must only happen when safe and instructed
- **Relay Basics:** Baton must be passed between teammates

Key Vocabulary

- **Stride Length:** Distance covered per step
- **Pacing:** Controlling speed during a race
- **Sector:** Marked area where throws must land
- **Exchange Zone:** Area where baton is passed in a relay race

Striking and Fielding

Skills

Striking (Shot Selection)
- Select when to attack, defend, or place the ball
- Hit into gaps based on field positioning
- Begin to apply controlled power

Bowling/Pitching Variation
- Introduce different deliveries (speed, height, length)
- Aim to make the batter uncertain
- Maintain consistent technique under pressure

Fielding & Positioning
- Understand where to stand and why
- Work as a team to limit scoring
- Introduce specialist roles (e.g., wicket keeper/backstop)

Batting Partnerships & Support
- Communicate to allow scoring opportunities
- Support teammates through decision-making & develop simple tactics

Rules

- **Run-Out Rule:** Batter is out if the base/stump is hit before they arrive
- **No Ball/Wide:** The ball must be within the correct area to count as a good ball
- **Runs:** Scored by hitting the ball out of the playing area or running in between or around bases)

Key Vocabulary

- **Shot Selection:** Choosing the right shot
- **Placement:** Hitting into space
- **Variation:** Changing bowling type
- **Field Placement:** Positioning to stop runs
- **Partnership:** Working together to score

Term 5 & 6 Indoor & Outdoor Sports

Basketball

Skills

Chest Pass
- Step towards target and push ball from chest
- Extend arms fully and snap wrists

Dribbling
- Keep ball at waist height or lower
- Use fingertips, not palm, to control the ball
- Keep head up to scan the court

Set Shot
- Position feet shoulder-width apart
- Aim using elbow under the ball and follow through ("goose neck")
- Use legs to generate power

Lay Up
- Two steps are allowed
- Jump up towards the hoop with shooting hand leading
- Aim for the top corner of the square

Defending
- Stay low with knees bent
- Keep arms out to block passing lanes
- Move quickly to stay between player and basket

Rules

- **Double Dribble:** Player cannot dribble, hold in two hands and dribble again
- **Travelling Rule:** Player cannot move without dribbling
- **Scoring:** 2 points for field goal, 3 points outside 3-point line & 1 point for free throw

Key Vocabulary

- **Dribble:** Bouncing the ball while moving
- **Pass:** Moving the ball to a teammate
- **Shoot:** Attempting to score
- **Back Board:** The board behind the basket which the ball can be played off
- **Rebound:** Gaining the ball after a missed shot
- **Key:** The area marked out on the floor near the basket

Tennis

Skills

Forehand and top spin
- Rotate hips and shoulders to generate power
- Brush up on the top of the ball to top spin
- Contact the ball in front of the body

Backhand and slice
- Step into the shot for control and balance
- Use smooth swing and follow-through
- Aim shots into space on court to move your opponent
- Swing downwards (cutting) and through the ball to create backspin

Serving
- Toss the ball consistently above head height
- Strike ball at highest point
- Aim serve into different areas within the service box to create advantage

Movement and Positioning
- Return to ready position after each shot
- Move sideways using small adjustment steps
- Let the ball bounce in front of you before striking

Rules

- **Second Serve:** Player has two chances to get serve in
- **Fault:** A mistake on serve (e.g. out or into net)
- **Let:** Serve is replayed if it touches the net but lands in
- **Scoring Games:** Players must win by two clear points

Key Vocabulary

- **Top Spin:** Spin on the ball to cause it to dip into the court and bounce up higher
- **Back Spin:** Spin on the ball to cause it to skid low and bounce unpredictably
- **Let:** A replayed serve due to net contact
- **Baseline:** Back line of the court

Year 8 Science: Knowledge Organiser

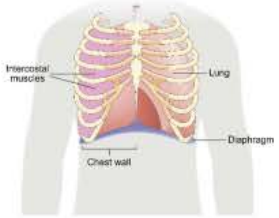
Topic B2.1 Tissues & Organs

The Musculoskeletal System

1. The musculoskeletal system is made up of bones, muscles and other connective tissue.
2. The skeleton is made up of bones. It has 4 important functions:
   - to **support** the body and give it shape
   - to **protect** the internal organs
   - to allow body **movements**
   - to produce **blood cells** ,
3. **Antagonistic muscles** work in pairs, for example the **biceps** and **triceps.**
4. **Joints** occur where two or more bones join together.

5. **Cartilage** in joints prevents bones rubbing together.
6. We can use the **force applied** as a measurement of **muscle strength,** which can be measured with a **newtonmeter**.

Gas Exchange and Breathing



7. **The respiratory system** is made of the organs involved in gas exchange.
8. Breathing occurs through the action of muscles in the **ribcage** and **diaphragm**.
9. The ribs have **intercostal muscles** between them which contract and relax to move the ribcage, changing the size of the **chest cavity.**
10. Below the lungs sits a layer of muscle called the **diaphragm** which can contract and relax to change the size of the **chest cavity.**
11. Air enters the body through the **nose** and **mouth.** It then travels down the **windpipe** (**trachea**), through a **bronchus** then a **bronchiole** into an **alveolus.** Oxygen diffuses into the blood at the alveoli.
12. The **trachea** is the rigid tube that connects the mouth and nose to the lungs.
13. The **bronchi (singular: bronchus)** are rigid tubes that allow air to pass into each of the two lungs. These divide into smaller branches called **bronchioles.**
14. The **alveoli** are microscopic air pockets in the lungs lined with cells that form a **very thin membrane**. These surround the ends of bronchioles.
15. The alveoli provide an efficient exchange surface because:
    - The walls are thin, made of just one layer of **epithelial cells**
    - They have a **large surface area**: There are lots of them and they are spherical in shape
    - They have a **good blood supply**: There are lots of blood capillaries wrapped around them.
    - They are **moist**, which helps gases to diffuse across more easily.
16. In gas exchange, oxygen and carbon dioxide move between alveoli and the blood.
17. Exercise, smoking and asthma can all affect the gas exchange system
18. Asthma is a common condition where the airways (bronchi and bronchioles) become **narrower.**
19. Asthma can be treated by **inhaling** a drug (Ventolin) that widens the airways to allow more air to move in and out of the lungs.

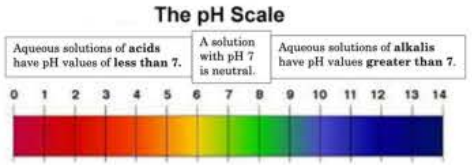
Drugs

20. A drug is any substance that has an **effect** on the body
21. A drug taken to treat an illness is called a **medicine.**
22. Recreational drugs are taken by people for **enjoyment.** They can often be **addictive**
23. Drugs are classified as illegal if they cause serious harm to the body.
24. **Stimulants** increase alertness and activity.
25. **Depressants** relax the nervous system and slow down reflexes.

Topic C2.1 Acids and Alkalis

The pH Scale

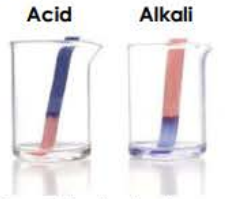
1. Substances can be classified into **acidic**, **alkaline** and **neutral** solutions
2. The pH scale, from **0 to 14**, is a measure of the acidity or alkalinity of a solution
3. The pH scale can be measured using litmus, universal indicator or a pH probe.



4. An aqueous solution is any solution in which the solvent is water
5. Strong acids have a pH from 0 to 3.
6. Weak acids have a pH of 4 to 6.
7. Strong alkalis have a pH from 11 to 14.
8. Weak alkalis have a pH from 8 to 10.
9. Strong acids and strong alkalis are both **corrosive**.
10. Weak acids and alkalis are less corrosive.

Indicators

11. Indicators will show the pH of the substance by a colour change.
12. Litmus indicator can show if a solution is acidic or alkaline.
13. Litmus indicator is red in an acidic solution and blue in an alkaline solution. It remains the same colour in a neutral solution.
14. Blue litmus paper turns red in an acidic solution.
15. Red litmus paper turns blue in an alkaline solution.



16. Universal indicator is sometimes called UI
17. Universal indicator can be used as a liquid solution or as paper strips to dip into a solution.
18. **Acids** will turn universal indicator **red or orange**.
19. **Neutral** solutions will turn universal indicator **green**.
20. **Alkaline** solutions will turn universal indicator **blue or purple**.

Neutralisation

24. In neutralisation reactions an acid reacts with an alkali to form a salt and water.
25. Neutralisation forms a neutral (pH7) solution.
26. A salt is a metal compound made from acid.
27. A salt is formed when the hydrogen in an acid is replaced by a metal.

Acids + alkali/base → salt + water

Acronym: A + A/B → S + W

Metal Carbonates

28. Metal carbonates react with acids in neutralisation reactions to form a salt, water and carbon dioxide

Acids + metal carbonates → salt + water + carbon dioxide
Acronym: A + C → S + W + C

29. In an open system these products can escape, and the system is neutral
30. In a closed system carbon dioxide reacts with water to form carbonic acid, which makes the system acidic

Topic P2.1 Movement and Pressure

Speed

1. Speed is how much distance is covered per unit time
2. Speed = Distance/Time
3. The SI unit for speed is m/s
4. If an object is stationary its speed is 0 m/s
5. Average speed is the overall distance divided by the overall time taken for a journey

$$Speed = \frac{Distance}{Time}$$

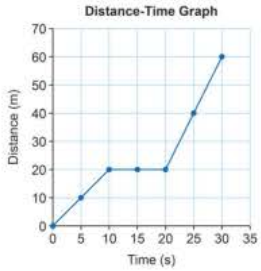
$$Time = \frac{Distance}{Speed}$$

$$Distance = Speed\ x\ Time$$

6. Relative motion describes how different observers judge speed differently if they are in motion too
7. If an observer is stationary, the relative motion of the moving object will be the same as its actual speed
8. If an observer is travelling in the same direction as the moving object, the relative motion is the difference in their speeds and the object will seem to be moving more slowly
9. If an observer is travelling in the opposite direction as the moving object, the relative motion is their speeds added together and the object will seem to be moving faster
10. Acceleration describes how quickly a speed is changing (either speeding up or slowing down)
11. An object speeding up has positive acceleration
12. An object slowing down has negative acceleration

Distance–Time Graphs

13. A distance-time graph can be used to describe an object's motion
14. A horizontal line represents a stationary object (speed = 0m/ s)
15. A straight line represents an object moving at constant speed
16. The gradient of a distance-time graph represents speed
17. The steeper the gradient the greater the speed
18. A line returning to the x-axis represents an object returning to its starting position
19. A curved line represents an object accelerating



Pressure

20. Pressure is the force applied per unit area.
21. Pressure (N/m²) = Force (N)/ area (m²)
22. Pressure is increased by a smaller area and decreased by larger area
23. Pressure is increased by a larger force and decreased by a smaller force

Moments

24. A moment is the turning effect of a force
25. Moment (Nm) = Force (N) x perpendicular distance from pivot (m)

Topic B2.2 Photosynthesis & Respiration

Respiration

1. Respiration is a chemical reaction that gives out heat (**exothermic**)
2. All living things respire.
3. The purpose of respiration is to release energy for organisms to use for movement, keeping warm and for other chemical reactions to build molecules
4. The word equation for aerobic respiration is:

Glucose + oxygen → carbon dioxide + water

5. During exercise, cells require a greater rate of respiration to provide more energy for movement
6. Heart rate and breathing rate increase during exercise to meet the increase demand for the reactants during respiration.

Anaerobic respiration

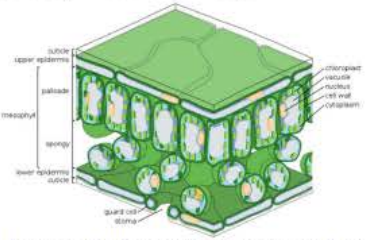
7. Anaerobic means 'without oxygen'
8. Anaerobic respiration takes place without oxygen and releases less energy than aerobic respiration
9. During intense exercise, if there is not enough oxygen then anaerobic respiration takes place
10. Aerobic respiration uses oxygen and releases more energy than anaerobic respiration
11. Anaerobic respiration in muscle cells causes a build-up of lactic acid which results in an oxygen debt
12. After a long period of intense exercise, muscles become fatigued and cannot contract normally
13. The word equation for anaerobic respiration is:
Glucose → lactic acid (in animal muscles)
14. Anaerobic respiration in yeast cells is called fermentation and is used to make bread and alcoholic drinks
15. The word equation for fermentation is:
Glucose → ethanol + carbon dioxide (in yeast)

Photosynthesis

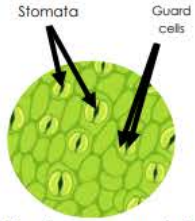
16. Plants and algae make their own food using a process called photosynthesis.
17. Light provides the energy needed for photosynthesis
18. The word equation for photosynthesis is:

carbon dioxide + water → glucose + oxygen

19. Plants use glucose for energy by the process of respiration.
20. Leaves are the primary site of photosynthesis in plants.
21. Chloroplasts in plant cells contain a green pigment called **chlorophyll** which uses the energy in light for photosynthesis.
22. Leaves have a number of adaptations which allow them to carry out photosynthesis effectively.



23. **Epidermis**– thin and transparent to allow more light to pass through leaf to get to chloroplasts
24. **Palisade mesophyll** - site of photosynthesis and contains lots of chloroplasts to absorb max sunlight
25. **Spongy mesophyll** – contains lots of air spaces to increase surface area and allow carbon dioxide and oxygen to diffuse easily
26. **Stomata** – holes in the leaf to allow carbon dioxide to diffuse in and oxygen to diffuse out. Water also evaporates out of the leaf through these holes



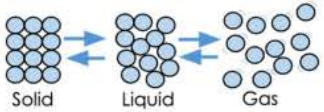
27. **Guard cells** – to open and close the stomata to let substances in and out and to close it in order to prevent water loss

28. **Xylem** vessels transport **water** from **roots to leaves** and the wall is strengthened with **cellulose** and **lignin**
29. **Phloem** vessels transport **water and glucose** in a **two way system**.
30. Some plants are **non-photosynthetic**, which means they cannot carry out photosynthesis

Topic C2.2 Changing Substances

Chemical and Physical Changes

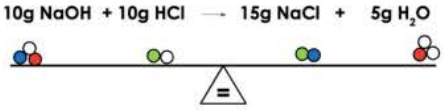
1. A **chemical change** produces a new substance whereas in a **physical change** no new substance is produced.
2. A chemical change is **irreversible** whereas a physical change is **reversible**.
3. Melting, evaporating, condensing, freezing and sublimation are examples of **physical changes** because they only change the <u>state</u> (solid, liquid or gas) of the substance.
4. These processes only change the energy that each particle has (how much it moves) and <u>not</u> its arrangement or properties (e.g. its boiling or melting point).



5. A chemical change can be identified if there is a change in colour or temperature, or if the reaction produces light.
6. In a chemical change, a new substance (or product) is always made.

Chemical Reactions

7. A chemical change can also be called a chemical reaction.
8. The number and type of atoms do not change in a chemical change and are only rearranged.
9. The total overall mass is **conserved** in a chemical change (the mass of the reactant is equal to the mass of the products).
10. Every reactant atom will become a product atom.
11. Extra atoms cannot be made, and atoms cannot disappear.



Reactions of Metals with Oxygen

12. Metals react with oxygen to produce metal oxides.
13. The general equation is: Metal + oxygen → Metal oxide
    Example 1: Copper + oxygen → copper oxide
    Example 2: Lithium + oxygen → lithium oxide
14. These reactions are oxidation reactions because the metals gain oxygen
15. **Reduction** is the loss of oxygen
16. **Oxidation** is the gain of oxygen
17. **Exothermic** reactions transfer energy **to** the surroundings
18. **Endothermic** reactions take in energy **from** the surroundings

Reactions of Metals with Acid

19. Acids react with some metals to produce salts and hydrogen
20. Metal + acid → salt + hydrogen
21. This can be remembered by MASH: **M**etal + **A**cid → **S**alt + **H**ydrogen
    Example 1:
    Copper + Hydrochloric acid → copper chloride + hydrogen
    Example 2:
    Sodium + Nitric Acid → sodium nitrate + hydrogen

Tests for Gases

22. The **test for hydrogen** uses a burning splint held at the open end of a test tube of the gas. Hydrogen burns rapidly with a squeaky pop sound.
23. The **test for carbon dioxide** uses a solution of calcium hydroxide (limewater).
24. When carbon dioxide is shaken with or bubbled through limewater the limewater turns milky (cloudy)

Reactions of Acids with Alkalis, Bases and Metal Carbonates

25. Acids are **neutralised** by alkalis (e.g. soluble metal hydroxides) and bases (e.g. insoluble metal hydroxides and metal oxides) to produce salts and water,
26. Acid + alkali → salt + water
27. Acid + base → salt + water
28. Acids are neutralised by metal carbonates to produce salts, water and carbon dioxide.
29. Acid + metal carbonate → salt + water + carbon dioxide
30. The particular salt produced in any reaction between an acid and a base or alkali depends on the acid and metal in the base, alkali or carbonate

Acid	Salt produced
Hydrochloric Acid	Chloride
Sulfuric Acid	Sulfate
Nitric Acid	Nitrate

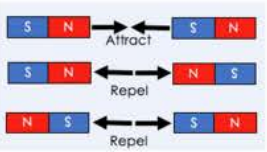
31. Hydrochloric acid produces chloride salts, nitric acid produces nitrate salts, and sulfuric acid produces sulfate salts

    Example 1:
    Hydrochloric Acid + sodium hydroxide → sodium chloride + water
    Example 2:
    Sulfuric Acid + sodium chloride → sodium sulfate + water

    Example 3:
    Nitric Acid + sodium hydroxide → sodium nitrate + water
    Example 4:
    Hydrochloric Acid + sodium carbonate → sodium chloride + water + carbon dioxide
    Example 5:
    Nitric Acid + sodium carbonate →sodium nitrate + water + carbon dioxide
    Example 6:
    Sulfuric Acid + sodium carbonate →sodium sulfate + water + carbon dioxide

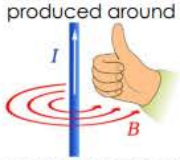
Topic P2.2 Magnets

1. The magnetic force is a **non-contact** force.
2. Only some metals are magnetic: **iron, cobalt, nickel** and their alloys (such as **steel**).
3. Magnets have a **north** and a **south** pole.
4. The poles of a magnet are where the magnetic force is the strongest.
5. **Opposite poles attract** and **like poles repel** (remember, opposites attract!)

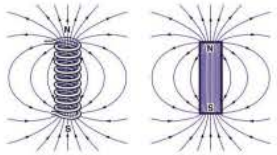


6. **Permanent magnets** are magnetic all the time. Bar magnets are permanent magnets.
7. Magnetic materials, including the Earth, create magnetic fields.
8. Magnetic field lines are used to describe the **strength** and **direction** of the magnetic field.
9. The direction of the magnetic field at any point is given by the direction of the force that would act on another north pole placed at that point
10. The arrows on the magnetic field lines always point from the North pole to the South pole.
11. Magnetic field lines never cross or touch.

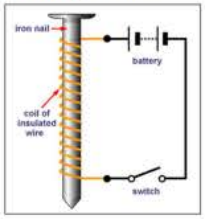
12. Field lines flow from the North pole to the South pole.
13. Closer field lines demonstrate that the magnetic force is stronger.
14. **Induced magnets** are materials that become magnetic when placed in a magnetic field and when removed, lose their magnetism.
15. When a current flows through a conducting wire a magnetic field is produced around the wire.



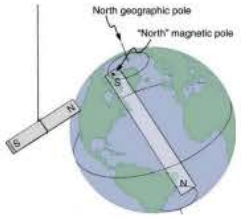
16. When a wire is wrapped around into a coil shape, we call it a solenoid.



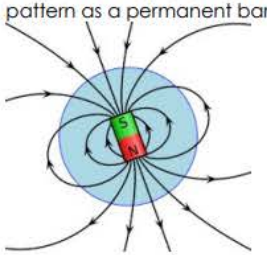
17. An **electromagnet** is a solenoid with an iron core. We can make an electromagnet by wrapping a wire around an iron nail and turning on the current.
18. The strength of the magnetic field around a solenoid is increased by **adding more turns in the coil, adding a magnetic material as a core or increasing current.**



19. The Earth has a magnetic field.
20. A compass will point to Earth's North "magnetic" pole which is different to Earth's geographic North pole which is also different to the true North pole of the Earth's magnetic field.
21. The Earth behaves like it has a giant bar magnet inside it, because of currents of molten iron and nickel in its core.



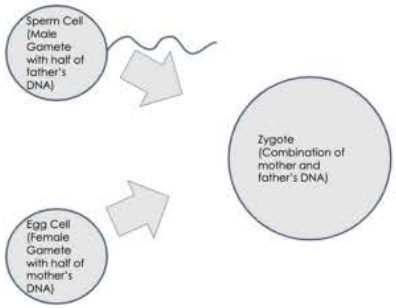
22. The Earth's magnetic field has the same pattern as a permanent bar magnet.



Topic B2.3 Life Diversity

Variation

1. **Variation** is the different **characteristics** between individual organisms.
2. Variation can be caused by **inherited** (genetic) factors, **environmental** factors or a combination of the two.
3. Characteristics are **inherited** from parents through reproduction.
4. The DNA inherited that causes a characteristic is called the **genotype**.
5. The **phenotype** is the physical characteristic resulting from the genotype.
6. DNA that is passed to offspring can be randomly mutated and result in new phenotypes that were not present in previous generations.



Artificial Selection

7. **Selective breeding** is when **humans choose** plants or animals with particular **characteristics** to breed.
8. Examples of selective breeding are pet dogs, crops resistance to disease, cows that make a lot of milk.
9. Selective breeding can cause inbreeding if closely related individuals are used so that offspring have inherited disease.

Natural Selection

10. **Natural selection** is when **variation** in the population makes some organisms **better suited** to live and reproduce in a particular environment.
11. **Adaptations** are characteristics that allow an organism to survive and **reproduce** in its habitat.

Evolution

12. **Evolution** is a change in the inherited characteristics of a population **over time**, caused by natural selection.
13. **The Theory of Evolution by Natural Selection** states that all life has evolved from simple organisms more than three billion years ago.

Extinction and Human Impact

14. **Extinction** is when there are no living individuals of a species left in the wild and in captivity.
15. Extinction can be caused by **changes** to **habitats**, new **predators** or **competitors**, or new **diseases**.
16. A variety of species helps to maintain the cycling of nutrients and population control.

Topic C2.3 Earth Systems

Rock cycle

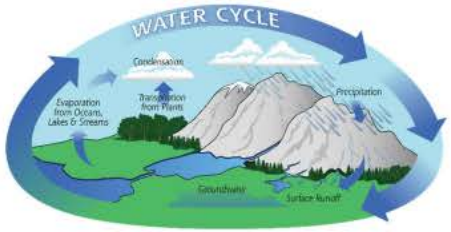
1. Magma and lava are **molten** (melted, very hot liquid) rock.
2. **Magma** is molten rock underground.
3. **Lava** is molten rock above ground.
4. When molten rock cools it solidifies to form igneous rocks.
5. Igneous rocks formed from magma underground are **intrusive** rocks.
6. Intrusive rocks cool slowly and have large crystals.
7. Igneous rocks formed from lava above ground are extrusive rocks. E.g., granite.
8. **Extrusive** rocks cool quickly and have small crystals. E.g., obsidian.
9. Rocks can be broken down into small pieces by **weathering**.
10. Weathering can be physical (*e.g. water getting into cracks and expanding when it freezes, forcing the crack wider*), chemical (*e.g. acid rain reacting with the rock to make salts*) or biological (*e.g. tree roots forcing cracks wider*)
11. **Erosion** is the movement of pieces of rock away from where they started.
12. Erosion can involve the wind, flowing water or ice, and gravity.

13. When pieces of rock sink to the bottom of lakes or seas they form layers of sediment. This is **sedimentation**.
14. Layers of sediment build up in layers and the bottom layer becomes compressed.

15. Dissolved minerals fill any spaces and bind rock particles together; this is **cementation**.
16. Sedimentation, compression, and cementation form sedimentary rocks. E.g., chalk or sandstone.
17. If rocks are pushed deep underground, they experience tremendous heat and pressure.
18. Heat and pressure change the structure of igneous and sedimentary rocks to form metamorphic rocks. E.g., marble formed from chalk.
19. The formation of rocks is related to each other in the rock cycle.

Water cycle

20. Water constantly evaporates from land surface, rivers, and the sea.
21. Sublimation is solid turning into a gas.
22. Water sublimes from ice and snow.
23. As water vapour rises it condenses into droplets.
24. Clouds are formed from **condensed** water droplets.
25. The droplets in clouds often freeze.
26. When droplets in clouds are heavy, they fall back to earth as **precipitation**.
27. Precipitation is hail, rain, sleet, and snow.
28. Water that falls over land goes into rivers or groundwater and makes its way back to the sea.
29. This cycle is called the water cycle.
30. The water cycle provides fresh water for animals and plants on land.
31. Plants take water from the ground and move it to their leaves where it evaporates into the atmosphere; this is **transpiration**.
32. Animals and plants produce water through **respiration**.
33. Animals **excrete** water in urine, faeces, and sweat.
34. Animals and plants decay when they die, which releases water.



Topic P2.3 Resistance

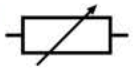
Electrical Circuits

1. **Current** is the **rate of flow of charge** and is measured in **Amps** (A) by an **Ammeter**.
2. Ammeters are connected in series.
3. Current transfers energy.
4. Current needs a **complete circuit** to flow.
5. Voltage is the **amount of energy** shifted from the power source to the moving charge, or from the charge to the circuit component
6. Voltage is measured in **Volts** (V) using a **Voltmeter**.
7. Voltmeters are connected in parallel.

Resistance

8. Resistance **decreases current**.
9. Resistance is measured in **ohms** (Ω).
10. Resistance is added by **all components.**
11. Electrical conductors have low resistance.
12. Electrical insulators have high resistance.
13. The circuit symbol for a resistor is:

14. A **variable resistor** can **change** the resistance in a circuit, whereas other resistors have a fixed resistance that cannot be changed.
15. The circuit symbol for a variable resistor is:



Ohm's Law

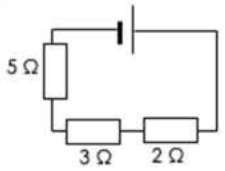
16. Current through a component depends on both **resistance** of the component and **voltage** cross the component.
17. **Increasing** the **voltage** gives the charges a bigger push, which **increases** the **current**.
18. **Increasing** the **resistance** makes it harder for the current to flow, which **decreases** the **current**.
19. Current, voltage or resistance can be calculated using the equation: $V = IR$ (**Ohm's Law**).

Measuring Resistance

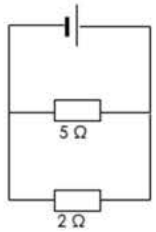
20. Resistance is measured by measuring voltage and current and using $R = \frac{V}{I}$
21. A **longer wire** has a **greater resistance.**
22. Resistance of a wire is also affected by the type of metal the wire is made of.

Resistance in Series and Parallel Circuits

23. Resistance in **series** is the **sum** of individual resistors.



24. The total resistance of this circuit is **10 Ω.**
25. Resistance in **parallel** is **less than** the **lowest** resistance branch.



26. The resistance of this circuit is **less than 2 Ω.**

Topic B2.4 Nutrition

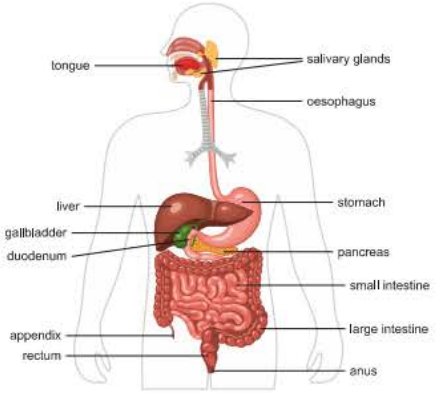
1. The contents of a healthy human diet include carbohydrates, lipids (fats and oils), protein, vitamins, minerals, dietary fibre and water
2. A balanced diet includes all the nutrients our body needs in the **right quantities**
3. Imbalances in the diet can result in health consequences, including obesity, starvation and deficiency diseases

Food Tests

4. **Iodine** solution changes colour from brown to black in the presence of **starch**
5. **Benedict's** reagent changes colour from blue to orange/red when heated in the presence of simple sugars such as **glucose**
6. **Biuret** reagent changes colour from blue to purple in the presence of **protein**

The Digestive System

7. The digestive system **breaks down** molecules in food into soluble substances that can be **absorbed** and used by cells
8. Food passes through the **mouth**, **oesophagus**, **stomach**, **small intestine**, **large intestine**, and **rectum**



9. **Mechanical** digestion is the physical cutting, squashing and churning of food in the digestive system, e.g. by teeth or the stomach
10. **Chemical** digestion is when enzymes and other chemicals are used to speed up reactions in the digestive system
11. **Chemical** digestion takes place in the small intestine. Small, soluble molecules move into the bloodstream by **diffusion**
12. The small intestine is well adapted to its function because it has many **villi** which increase the **surface area** to increase diffusion of nutrient molecules into the blood.
13. It also has a good **blood supply** which allows nutrient molecules to be absorbed into the blood

Enzymes

14. Enzymes speed up chemical reactions in the body
15. Digestive enzymes break down large nutrient molecules into smaller molecules that can be absorbed into blood and used by cells
16. **Carbohydrases**, such as amylase, break down **carbohydrates** into simple **sugars**
17. **Lipases** break down **lipids** into **glycerol** and **fatty acids**
18. **Proteases** break down **proteins** into **amino acids**
19. The lock and key theory models how enzymes work by having an active site that is a specific shape to the substrate it joins to

Plant Nutrition

20. Plants need **nitrates** to make proteins for growth.
21. Plants need **magnesium** to make chlorophyll.
22. Plants get the magnesium and nitrates they need from the **soil** via their **roots**
23. Plants can be damaged by deficiencies. A deficiency in magnesium affects **photosynthesis**

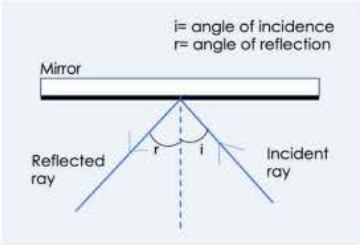
Topic P2.4 Light

Understanding Light

1. Light travels at 300 million metres per second (m/s).
2. Light travels faster than sound.
3. Light always travels in straight lines from a **luminous** object.
4. **Shadows** form when light is blocked by an **opaque** object.
5. **Ray diagrams** can show how light reflects off mirrors, forms images, and refracts.
6. **The normal line** is the dotted line from which angles are measured, at right angles (90°) to the surface.
7. Arrows are used to show the direction the light is travelling in.
8. **Transparent**: A material that allows most light to pass through it.
9. **Translucent**: A material that allows some light to pass through it.
10. **Opaque**: A material that allows no light to pass through it.

Reflection

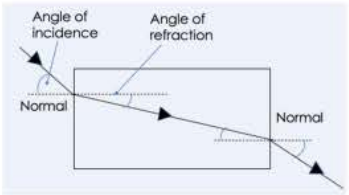
11. Reflection occurs when light hits a smooth surface (e.g. a mirror).
12. The light hits the surface and is reflected into the eye.
13. The angle of incidence is equal to the angle of reflection – this is the law of reflection.



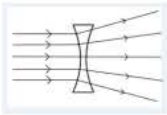
Refraction

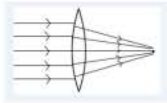
14. Refraction is the **change** in the **direction** of light going from one material (**medium**) into another.
15. This change in direction is because light changes **speed** when it moves from one medium to another.
16. When light enters a **more dense** medium it bends **towards** the normal. When light enters a **less dense** medium it bends **away** from the normal.
17. Refraction in water makes objects look as though they are nearer the surface than they actually are.

Lenses



18. Lenses refract light.
19. **Convex** lenses are thicker in the middle and refract light to a focal point.
20. **Concave** lenses are thinner in the middle and scatter the light (there is no focal point).
21. In the eye, the cornea and lens are both convex lenses and help to focus light onto the retina.





Colour

22. Prisms cause light to be dispersed.
23. **Dispersion** causes the white light to split into seven **component** colours called a **spectrum.**
24. **Spectrum:** A band of colours produced by separation of the components of light because they are each refracted differently.
25. The order of the colours is always the same ROYGBIV: red, orange, yellow, green, blue, indigo, violet.
26. **Red** light is **refracted** the least and **violet** is refracted the most.
27. Red, green and blue are called the **primary colours** of light.
28. Yellow, magenta and cyan are the **secondary colours** of light, made from combinations of the primary colours.
29. **White light** is produced from the **combination** of **all the colours**.

30. Objects appear the colour that they reflect, e.g. a red apple appears red because it reflects red light and absorbs all other colours
31. White objects appear white because they reflect all colours
32. Black objects appear black because they absorb all colours

Types of Variable

Independent – the variable that is **changed**

Dependent – the variable that is **measured**

Control – the variable that stays the **same**

Types of Data

Categoric – values that are labels e.g. type of plant

Continuous – values that are numbers e.g. temperature

Tables

Units **only** go in headings

Time (s)	Vol. gas (cm^3)

Types of Error

Systematic – a problem with the method or equipment used, e.g. using a beaker to measure the volume of a liquid instead of a measuring cylinder.

The effect cannot be reduced by taking repeat readings.

Random – whenever something is measured a random error is made, e.g measuring with a ruler.

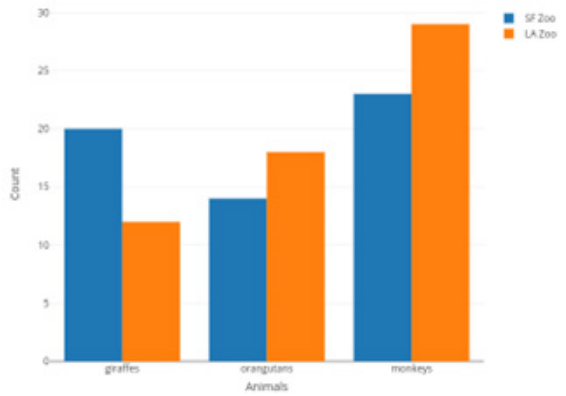
The effect can be reduced by taking repeat readings.

Zero – caused by a piece of equipment not reading zero when it should, e.g. a balance.

Either reset the piece of equipment or deduct the false reading from all measurements.

Bar Chart

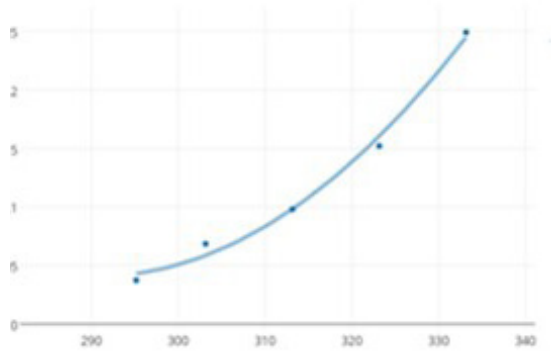
Type of graph plotted for one piece of **categoric** data and one piece of **continuous** data



Line Graph

Type of graph plotted for two pieces of **continuous** data

Has a **line of best fit**. This may be a **straight line** or a **curve** (not join the dots)



Key words

Accurate – close to the true value

Anomalous – a result that doesn't fit the pattern

Precise – small amount of spread around the mean

Resolution – the smallest reading on a piece of measuring equipment

Reproducible – if the same results are obtained by different people for the same investigation

Range – the biggest and smallest values of the independent or dependent variable e.g. 0-10 N

Volume – amount of a liquid

What is STEAM?

STEAM is a part of our curriculum at Highdown that stands out. Unlike other lessons, in STEAM, we use what we are learning from lots of different subjects to approach and undertake different projects that seek to develop vital **skills** that can't be pinned down to just one subject.

STEAM stands for Science, Technology, Engineering, Art and Maths and so we take some of the **knowledge** we gain from these subjects from each of these areas and apply them in STEAM. The following doesn't act as a **knowledge** organiser, but more of a **skills** organiser.

What are our core STEAM skills?

We have four core skills in STEAM: Problem Solving, Teamwork, Staying Positive, and Creativity.

These are four elements of the Skills Builder Universal Framework, a national leader in STE(A)M education.

To the right gives a short summary of these core skills, and on the next page is an outline of steps we will be using to mark our success over the year, and identify how we can make progress.

Why not use the checkboxes over the year to check off the progress you are making?

Problem Solving

What approaches can we take to go from identifying an issue, to having a tested and refined solution to that problem?

These approaches aid how we break down maths problems when they are tricky, or how we develop a design to meet a need in D&T.

Teamwork

How can we work with others well, sharing ideas, responsibilities and tasks to complete problems productively?

These skills support how we listen well to learn from our peers and how we communicate our ideas clearly when presenting ideas.

Staying Positive

When we feel a problem is tricky, or when we try something and it doesn't work, how can we use these experiences and feelings to our advantage?

Building resilience is vital for across the curriculum: developing a mindset that rises to the challenge rather than shrinks away.

Creativity

What if there is not only one path that gets to the finish line? How can we use our imagination and our past experiences to inform the next steps we take?

Taking experiences from Art and Design will strengthen our problem solving in the sciences, and here, STEAM acts as a bridge.

STEAM Skills: Problem Solving

STEP 5	I explore problems by thinking about the pros and cons of possible solutions
STEP 6	I explore complex problems by identifying when there are no simple technical solutions
STEP 7	I explore complex problems by building my understanding through research
STEP 8	I explore complex problems by analysing the causes and effects
STEP 9	I create solutions for complex problems by generating a range of options
STEP 10	I create solutions for complex problems by evaluating the positive and negative effects of a range of options
STEP 11	I analyse complex problems by using logical reasoning
STEP 12	I analyse complex problems by creating and testing hypotheses
STEP 13	I implement strategic plans to solve complex problems
STEP 14	I implement strategic plans to solve complex problems and assess their success
STEP 15	I implement strategic plans to solve complex problems and draw out learning to refine those plans over time

STEAM Skills: Teamwork

STEP 5	I work well with others by understanding + respecting diversity of others' cultures, beliefs and backgrounds
STEP 6	I contribute to group decision making
STEP 7	I contribute to group decision making, whilst recognising the value of others' ideas
STEP 8	I contribute to group decision making, encouraging others to contribute
STEP 9	I improve the team by not creating unhelpful conflicts
STEP 10	I improve the team by resolving unhelpful conflicts
STEP 11	I improve the team by building relationships beyond my immediate team
STEP 12	I influence the team by reflecting on progress and suggesting improvements
STEP 13	I influence the team by evaluating successes and failures and sharing lessons
STEP 14	I support the team by evaluating others' strengths and weaknesses, and supporting them accordingly
STEP 15	I support the team by bringing in external expertise and relationships

STEAM Skills: Staying Positive

STEP 5	I keep trying when something goes wrong and help cheer others up
STEP 6	I keep trying when something goes wrong and encourage others to keep trying too
STEP 7	I look for opportunities in difficult situations
STEP 8	I look for opportunities in difficult situations, and share these with others
STEP 9	I look for opportunities in difficult situations, and adapt plans to use these opportunities
STEP 10	I look for opportunities in difficult situations, and create new plans to use these opportunities
STEP 11	I identify risks and gains in opportunities
STEP 12	I identify risks and gains in opportunities, and make plans to manage them
STEP 13	I support others to stay positive, by managing my own responses
STEP 14	I support others to stay positive, by helping others to see opportunities
STEP 15	I support others to stay positive, by helping others to see opportunities and creating plans to achieve them

STEAM Skills: Creativity

STEP 5	I generate ideas by combining different concepts
STEP 6	I use creativity in the context of work
STEP 7	I use creativity in the context of my wider life
STEP 8	I develop ideas by using mind mapping
STEP 9	I develop ideas by asking myself questions
STEP 10	I develop ideas by considering different perspectives
STEP 11	I innovate effectively when working in a group
STEP 12	I innovate effectively by seeking out varied experiences and stimuli
STEP 13	I support others to innovate by sharing a range of tools
STEP 14	I support others to innovate by evaluating the right creative tools for different situations
STEP 15	I support others to innovate by coaching them to be more creative

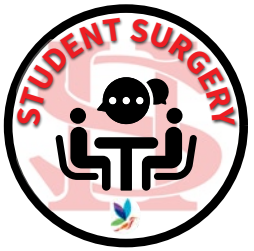
At Highdown we CARE

The CARE programme is designed to celebrate your engagement with co-curricular opportunities at Highdown. Across the academic year we are challenging you to complete as many of the activities from the following lists as possible. Once you have completed 20 challenges you will be awarded with a physical bronze badge. You will receive a silver badge for 30 challenges and a gold badge for 40.

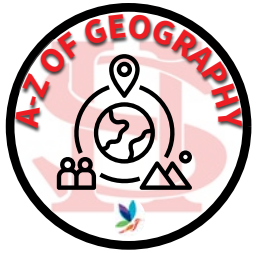
Community	Aspiration	Respect	Excellence
Open Evening Badge – Support with school Open Evening	Punctuality Badge - Be on time to school every day for a term	Active Listening Badge – Demonstrate active listening in one subject for a half term	Reader Badge - Borrow a library book and write a book review
Student Surgery Badge – Attend a student surgery to give feedback about the school	A - Z of Geography Badge – Enter the Geography poster competition	Classroom Helper – become a classroom helper in one subject for 3 weeks	Friday Three Badge- Receive 3 awards of Friday 3 from your teachers
Helper Level 1 Badge – Receive 5 P1s for being helpful	Effort Badge – Receive 10 P2s for Sustained effort with class and homework	Reliability Badge - Demonstrate completing a chore at home for at least 6 weeks to your mentor	Independent Study Badge - Receive 5 P2s for excellence In independent study
Helper Level 2 Badge – Receive 2 P2s for significant community contribution	Sporting Colours Badge – Attend one sports club for a whole term (separate badges for each sport)	Goals Badge - Write 5 improvement goals for the academic year share them with your mentor	Praise Points Bronze Badge - Achieve 250 P points
Helper Level 3 Badge – Receive a P3 for being a Community Star	Bebras Badge – Enter the Bebras competition	Gratitude Badge - Write 4 thank you notes to members of staff	Praise Points Silver Badge - Achieve 500 P points
Student Leader Badge – Become a KS3 House ambassador	Cocurricular Engager Badge – Attend clubs 20 times	House Star – Receive a P3 for being a House Star	Praise Points Gold Badge - Achieve 750 P points
Responsibility Badge – Demonstrate taking on a responsibility at home (e.g. looking after a pet)	Cocurricular Explorer Badge – Attend clubs 40 times	Lesson Star - Receive 3 positive emails home from your teachers	Performance Badge - Take part in a school show
Charity Badge – Raise money for a charity of your choice	Cocurricular Enthusiast Badge – Attend clubs 80 times	Mentor Star - Receive a positive email home from your mentor	MCQ Badge - Get an average of 12 or more in the end of term knowledge checks in all your subjects
Club Leader – Volunteer to help to run a club	Aspiration Badge – Achieve all Ms and Es for Aspiration in a report	Preparation Badge – Bring the correct equipment to one subject for an entire term	Excellence Badge - Achieve all Ms and Es for excellence in report
House Drama Badge – Take part in the House Drama competition	Maths Challenge Badge – Enter the Maths Challenge	Ready For The Day - Receive Ready for the day 40 times	Careers Badge - Research at least two job sectors on Unifrog
Great Get Together Badge – Run an activity at the Great Get Together	House Participant Badge – Enter two house competitions	Respect Badge - Achieve all Ms and Es for respect in a report	HEP Badge - Achieve 4 targets on Highdown Excellence Plan across the school year
Year 8 Buddy Badge – Support Y7 students as a buddy	Sports Day Badge – Take part in Sports Day	Supporter Badge – Receive 10 P1s for supporting other students	Headteachers Award Badge - Achieve a P4 Headteachers award

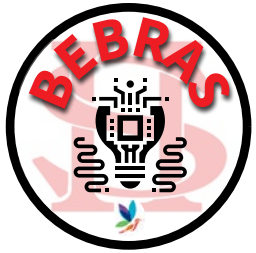
CARE BADGES

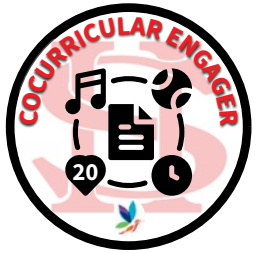
COMMUNITY



ASPIRATION







RESPECT

EXCELLENCE

WEEK A					
Period	Monday	Tuesday	Wednesday	Thursday	Friday
1					
2					
BREAK					
3					
4					
LUNCH					
5					

WEEK B					
Period	Monday	Tuesday	Wednesday	Thursday	Friday
1					
2					
BREAK					
3					
4					
LUNCH					
5					