

ACHIEVING **SUCCESS** TOGETHER

YEAR 9 **KNOWLEDGE** **ORGANISER** **BOOKLET**



FINHAM
PARK 2

**HOW WE LEARN,
PRACTISE AND SUCCEED**



PRIDE



RESPECT



RESPONSIBILITY

NAME: _____

MENTOR GROUP: _____

YEAR GROUP: _____



KNOWLEDGE ORGANISER

FINHAM PARK 2 

PARENTS & CARERS: HOW YOU CAN SUPPORT YOUR CHILD WITH HOMEWORK

Consistent, well-organised homework habits help build confidence, independence and long-term success. Your support makes a big difference.

✓ HOMEWORK ROUTINE: THE BASICS

- Two subjects per night – no more than 30 minutes per subject.
- Use the timetable to plan ahead.
- Encourage consistency – same time and place helps build good habits.
- Encourage your child to use their Knowledge Organisers and exercise books.
- Celebrate effort and progress, not just outcomes.



🏠 WHAT MAKES A GOOD STUDY ENVIRONMENT?



-  Quiet and calm – minimise distractions (TV, phone, games).
-  Well lit and comfortable seating.
-  Everything they need to hand – pens, paper, books, water.
-  Technology on silent and only used for the task.
-  Encourage short breaks (5–10 mins) if needed.
-  Positive and supportive atmosphere.

? WHAT CAN STUDENTS DO IF THEY'RE STUCK?

- 1 Re-read the question or task carefully. 
- 2 Check your Knowledge Organiser and class notes. 
- 3 Try a different strategy (e.g. mind map, flashcards, self-quizzing). 
- 4 Look for examples in your exercise book or textbook. 
- 5 Ask a friend – can they explain it differently? 
- 6 Ask your teacher at the start of the next lesson or use your knowledge organiser to prepare your question. 
- 7 Keep going! Struggle is part of learning. 

SPARX: YOUR DIGITAL HOMEWORK

sparx
Reader



Build comprehension and strengthen reading skills with tailored articles and quizzes.

www.sparxreader.com

sparx
Maths



Practise maths skills with personalised questions and videos.

www.sparxmaths.com

📺 VIDEO SUPPORT: STUDY SKILLS EXPLAINED

Watch our short videos on YouTube to learn effective study strategies.

Look Cover
Say Write
Check



<https://youtu.be/tXZW8UI4NvM>

Key words
and
definitions



<https://youtu.be/1-8-tB9BgMc>

Flashcards



<https://youtu.be/3nzZQXMyNsc>

Self-
quizzing



<https://youtu.be/usroIcRREzE>

Mindmaps



<https://youtu.be/twKZprhSIEg>

Using the
Frayer model
to improve
vocabulary and
comprehension



<https://youtu.be/VNCNWzTOcac>

★ WHY THESE STRATEGIES MATTER



Help your child learn, recall and understand key information.



Build effective revision habits that will last a lifetime.



Boost confidence and improve assessment performance.



Prepare for Key Stage 4 and future success.



WORKING TOGETHER

Your encouragement, routine and support help your child become a confident, independent learner.



COMMUNICATION IS KEY

If you have any questions or concerns, please contact your child's subject teacher.



REASONABLE ADJUSTMENTS

We can apply reasonable adjustments to homework. Please speak to the SEND Hub if this is an issue.



THANK YOU

Thank you for supporting your child's learning journey.

PRIDE • RESPECT • RESPONSIBILITY

HOMWORK PLANNER

AUTUMN TERM 2026

FINHAM PARK 2 

EVERY WEEK
NON-NEGOTIABLE



sparx
Maths

sparx
Reader

Complete your weekly SPARX
Maths and SPARX Reader
tasks set by your teacher.

1 WEEK 1 – KNOWLEDGE ORGANISER HOMEWORK

Build knowledge and practise effective study techniques.

STARTS (MONDAY)	WHAT TO DO (DURING WEEK 1)	FOCUS STRATEGY
 14 th Sept	During week 1, you will be expected to develop the study skills needed to remember more.	 Frayer Model
 28 th Sept	You will complete a focus strategy each week and then have free choice at the end of term.	 Key words & definitions
 12 th Oct	The pattern for these weekly study skills sessions is:	 Look, Cover, Say, Write, Check
 2 nd Nov	Monday: English/Languages/Food	 Flashcards
 16 th Nov	Tuesday: Maths/Art	 Self-quizzing
 30 th Nov	Wednesday: Science/Music/Drama	 Mind Maps
 14 th Dec	Thursday: History/PE/RE	 Retrieval Practice (Your choice)
	Friday: Geography/DT	

2 WEEK 2 – SUBJECT HOMEWORK

Apply your knowledge to subject tasks set by your teacher.

STARTS (MONDAY)	WHAT TO DO (DURING WEEK 2)
 7 th Sept	Complete subject homework set by your subject teacher and record in your planner for the details. This homework links to what you are learning in class. Follow the instructions carefully and ask your teacher if you need help.
 21 st Sept	
 5 th Oct	
 19 th Oct	
 9 th Nov	
 23 rd Nov	
 7 th Dec	

HOW TO USE THIS PLANNER

Spend up to 20 minutes per subject

-  Check your homework diary each day to see which subject you need to complete.
-  Spend up to 20 minutes per subject.
-  In your exercise book, write the date and subject.
-  Complete 1 A4 page of revision per subject.
-  Clip flashcards to your homework page.

KEY TO WEEK TYPE

- 1** Week 1
Knowledge Organiser homework – build knowledge and practise study strategies.
- 2** Week 2
Subject homework set by your teacher.



HOW IT WORKS

WEEK 1 – KNOWLEDGE ORGANISER HOMEWORK

Each week, you will complete ONE Knowledge Organiser task per subject using the study strategy shown in the planner.

WEEK 2 – SUBJECT HOMEWORK

- ✓ Each week, you will complete subject homework set by your teacher.
- ✓ Record the details in your planner.
- ✓ This homework links to what you are learning in class.
- ✓ Follow the instructions carefully and ask your teacher if you need help.

WEEK 1 STUDY STRATEGIES YOU WILL USE



FRAYER MODEL
Understand a word deeply by exploring its meaning, features, examples and non-examples.



KEY WORDS & DEFINITIONS
Learn and understand important terms and what they mean.



LOOK, COVER, SAY, WRITE, CHECK
A step-by-step method to practise and remember information effectively.



FLASHCARDS
Create cards with questions and answers for quick and effective revision.



SELF-QUIZZING
Test yourself regularly to strengthen memory and confidence.



MIND MAPS
Organise information visually and show connections between ideas.



RETRIEVAL PRACTICE (YOUR CHOICE)
Choose the strategy that works best for you to retrieve and remember.



REASONABLE ADJUSTMENTS

We can apply reasonable adjustments to homework. Please speak to the SEND Hub if this is an issue.



COMMUNICATION IS KEY

If you have any questions or concerns, please contact your child's subject teacher.



WORKING TOGETHER

Your encouragement, routine and support help your child become a confident, independent learner.



THANK YOU

Thank you for supporting your child's learning journey.

PRIDE ★ RESPECT ★ RESPONSIBILITY

YEAR 9 KNOWLEDGE ORGANISER

RETRIEVAL, VOCABULARY, READING & ORACY

1 KNOWLEDGE ORGANISER – RETRIEVAL STRATEGIES

Use these strategies to help you retrieve and remember key knowledge from your Knowledge Organisers.



LOOK, COVER, SAY, WRITE, CHECK

Look, cover your KO, say what you know, write it down, then check.



DEFINITIONS OF KEY WORDS

Write the definition and use it in a sentence.



FLASHCARDS

Create flashcards and test yourself or someone else.



SELF QUIZZING

Write your own questions and answer them without looking.



MIND MAPS

Create a mind map to show connections between ideas.



PAIRED RETRIEVAL

Quiz a partner or family member using your KO.



FREE CHOICE

Choose your own way to retrieve – be creative! Use any method that helps you remember best.



Retrieval practice strengthens memory and builds long-term knowledge.

2 BUILDING VOCABULARY – FRAYER MODEL

Vocabulary is powerful! Use the Frayer Model (F-R-A-Y-E-R) to help you understand and remember new words from your subjects. Choose new key words from your KOs to complete.

DEFINITION What does it mean? Write a clear definition in your own words.	CHARACTERISTICS What are its features? List key characteristics or important facts.
WORD	
EXAMPLES Show me examples. Give specific examples of the word in action.	NON-EXAMPLES What is it NOT? Give examples of what the word is not.
EXAMPLE WORD: EVAPORATION	
DEFINITION The change of a liquid into a gas.	CHARACTERISTICS - Happens at the surface - Below boiling point - Needs energy (heat)
EXAMPLES Puddles drying in the sun. Wet clothes drying on a washing line.	NON-EXAMPLES Ice melting. Water boiling.

3 READING LIKE AN EXPERT

Good readers use strategies to help them understand and remember what they read. Use these strategies whenever you read.

	NUMBER	Number each paragraph (where appropriate).
	FOLLOW	Follow along with a ruler, pen or finger.
	CIRCLE	Circle or underline unfamiliar words.
	SUMMARISE	Summarise each paragraph in one sentence.
	QUESTION	Write a question about what you have read.
	PREDICT	Predict what might happen next.
	CLARIFY	Look up or ask about anything you don't understand.
	EVALUATE	Consider the writer's purpose and your opinion.

Reading is the key that unlocks all **learning**.



4 ORACY – SPEAK, LISTEN, LEARN

Oracy helps you share ideas, listen to others and build confidence in your learning. Use our 6 Oracy Dispositions in discussions.



CLARIFIER

Clarifies by asking questions and seeking understanding.



INSTIGATOR

Starts discussion or introduces a new idea or topic.



CHALLENGER

Challenges ideas respectfully and presents an alternative view.



PROBER

Probes deeper, asks for evidence and justification of ideas.



BUILDER

Builds on ideas, adds to others' thinking and develops points.



SUMMARISER

Summarises the main ideas and helps conclude the discussion.



Listen actively, speak clearly, respect others. That's how we learn together.



TOP TIPS FOR SUCCESS

- ✓ Plan your time and stick to it.
- ✓ Do a little each night – it adds up!
- ✓ Use the right strategy for the task.

- ✓ Ask for help if you get stuck.
- ✓ Be proud of your effort and progress.
- ✓ Keep your homework book tidy and up to date.



The assessment windows are critical moments. Use your Knowledge Organisers regularly in the weeks leading up to assessments.



YEAR 9 ART KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This project is about creating artwork that makes a strong statement about a social issue. A social issue is a problem that affects people in everyday life, such as poverty, pollution, racism or bullying. You will explore a theme and learn how artists use different media, such as paint, text, fabric and photography, to share an important message. You will study how artists use layout, colour, line and scale to make their ideas powerful. You will then plan and create your own artwork that clearly communicates your chosen message. You will also reflect on your work and think about how to improve it.

KEY DATES

1960s – Pop artists began using bold text and images to comment on society.
1970 – Conceptual art grew, focusing on ideas over materials.
1985 – Artists used posters and graphics to raise awareness about AIDS.
2000 – Street art expanded as a way to discuss community issues.
2015 – Digital activism in art became more widespread on social media.

CORE KNOWLEDGE AND FACTS

Artists often use their work to make people think about issues in the world. To do this, they choose formal elements like colour for emotion, line for direction, shape for focus and texture for meaning. Good composition helps guide the viewer's eye and makes the message clear. Studying other artists helps you understand how ideas develop. Practising skills such as drawing, stitching, text design and experimenting with mixed media helps you build a strong final piece. Reflection is important because it helps you understand what worked and what needs improving.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Theme: The main idea you explore.
Composition: How objects are arranged.
Media: Materials used to make art.
Formal elements: Tools like line and colour.
Texture: Surface feel of an image.
Scale: Size of objects in artwork.
Contrast: Difference between elements.
Message: The idea the artwork shares.
Symbolism: When an image stands for something.
Layout: The plan for placing images.
Tone: Lightness or darkness.
Influence: Inspiration from another artist.
Refinement: Improving your work.
Evaluation: Judging what works.
Stitching: Sewing thread into fabric.

COMMON MISCONCEPTIONS

Some people think art about social issues must look messy or angry, but it can be calm and still make a strong point. Others believe you must be very skilled to make meaningful art, but simple ideas can be powerful when planned well. Many students think composition does not matter, yet layout is one of the main ways artists guide meaning. Some assume that copying an artist's style is wrong, but learning from artists helps you grow. Another misconception is that adding text is easy, but fonts and styles need careful choices.

YEAR 9 COMPUTING KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This term explores three key topics: data, digital safety and design. You will learn how data is used, stored and turned into useful information. You will also explore how cyber security protects personal information from threats such as hackers and malware. In design, you will study how companies use logos to communicate identity, before creating your own visual identity using colour, shape and typography.

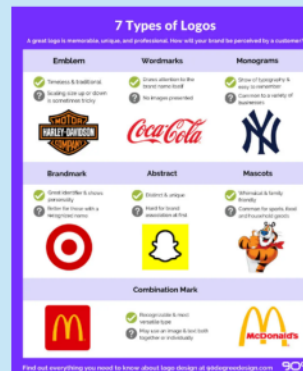
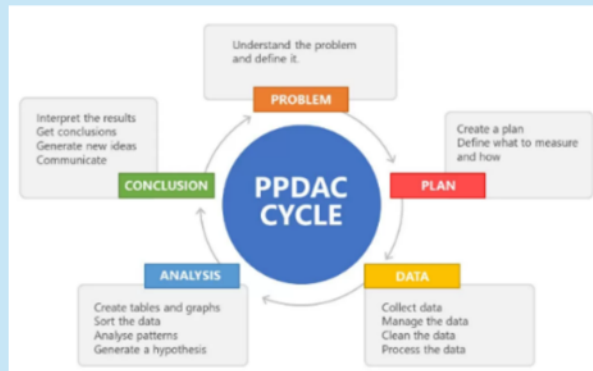
KEY DATES

1984 – The UK creates the first version of the Data Protection Act.
1990 – The Computer Misuse Act becomes law to stop hacking.
2000 – Major DDoS attacks shut down websites such as Yahoo.
2017 – The NHS is hit by the worldwide WannaCry malware attack.
2023 – AI tools and bots are widely used in logo design and online data tracking.

CORE KNOWLEDGE AND FACTS

Data becomes information when it is sorted and given meaning. It can be used to make decisions, track trends and solve problems. Data must be protected from hackers, malware and human error. Cyber laws such as the Data Protection Act and Computer Misuse Act help to keep it safe. Online services collect data when you sign up or click agree. In design, companies use colours, fonts and shapes to build visual identities. Logo creation involves careful planning, using software such as Photopea, and improving ideas in response to feedback.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Data – Unprocessed facts or figures.
Information – Data that has meaning.
Cyber security – Protecting digital systems from harm.
Malware – Software that damages or steals data.
DDoS attack – Excess traffic used to crash a service.
Brute-force attack – Trying many passwords to gain access.
Human error – A mistake made while handling data.
Hacking – Accessing computers without permission.
Data Protection Act – UK law that protects personal data.
Computer Misuse Act – UK law against hacking.
Visual identity – A company's recognisable design style.
Logo – A picture or symbol representing a brand.
Typography – The style and design of lettering.
Shape – The outline used within a design.
Feedback – Advice used to improve work.

COMMON MISCONCEPTIONS

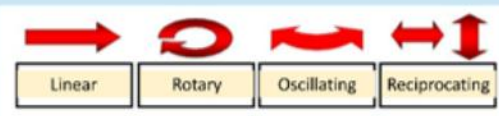
Data placed online does not automatically remain private. Online services may share or sell data, so personal information must be handled carefully. Cyber security is not only for experts: human error is a major risk, and even simple malware can cause serious problems. A logo is more than colour and shape; its typography, composition and meaning create the visual identity. The first design is rarely the best—effective design develops through testing and feedback.

YEAR 9 D&T KNOWLEDGE ORGANISER

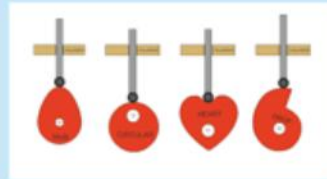
SUBJECT & TOPIC INFORMATION

In this project, students will design and make a sweetie dispenser for children aged 5–12. The product should be made mainly from timber, release small treats, and be fun, safe and easy to use. Students will explore how design, materials and simple mechanisms work together, developing creative thinking, accuracy and a broad range of practical Design and Technology skills.

MOTION



CAMS



CORE KNOWLEDGE AND FACTS

Sweetie dispensers use simple mechanisms to release a small sweet or treat. Levers, sliders and rotary cams can control movement and help the dispenser work. Timber is a strong, natural material that is easy to cut and shape. A good design is both useful and attractive. Using materials wisely reduces waste and supports environmentally responsible choices. Testing and improving designs helps products work more effectively. A well-made dispenser should be durable, safe and enjoyable for children to use repeatedly without breaking.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Mechanism – A part that makes a machine work.
Timber – Wood used for making products.
Durable – Strong and long-lasting.
Aesthetic – The way something looks.
Sustainable – Designed to reduce environmental harm.
Prototype – A first model used for testing.
Function – How something works.
User – The person using the product.
Design brief – A statement explaining what the product must do.
Material – The substance from which something is made.
Slider – A component that moves backwards and forwards.
Lever – A bar used to lift or move something.
Cam – A rotating component that creates movement.
Efficiency – Working effectively with little waste.
Safe – Unlikely to cause harm.

COMMON MISCONCEPTIONS

Simple mechanisms still require careful planning and accurate construction. Appearance matters, but it cannot replace function: a successful sweetie dispenser must work reliably and also look appealing. Timber can be sustainable when it is responsibly sourced and used efficiently. A larger dispenser is not automatically better; for children, a compact design may be easier and safer to use.

YEAR 9 **DRAMA** KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

In this 12-week unit, students explore *Blood Brothers*, a play by Willy Russell. Set in Liverpool, it follows twin brothers separated at birth who grow up in very different worlds. Through drama activities, students perform and analyse scenes, study character development, and examine key themes such as social class, fate and superstition. Technical design, vocal skills and movement work are also covered. The unit builds key drama skills, encourages teamwork and introduces GCSE-level performance techniques while developing students' understanding of character and context.

KEY DATES

1945 – End of the Second World War; Britain's post-war class divide deepens.
1950s–1960s – The period in which much of *Blood Brothers* is set.
1981 – *Blood Brothers* is first performed in Liverpool.
1983 – The play opens in London's West End.
1993 – *Blood Brothers* wins the Laurence Olivier Award for Best Musical Revival.

CORE KNOWLEDGE AND FACTS

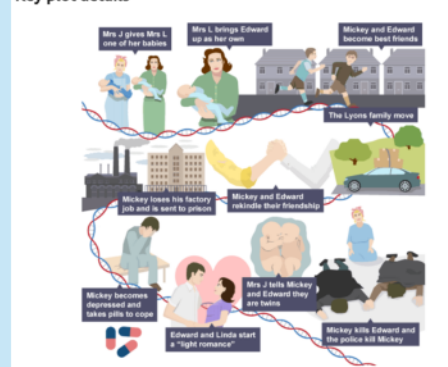
Blood Brothers is a modern tragedy written by Willy Russell. It explores the lives of Mickey and Edward, twins separated at birth because of poverty and social class. Key themes include inequality, fate, superstition, family, friendship and brotherhood. The Narrator comments on the action throughout, using Brechtian techniques. Students learn to perform with vocal tone, movement, proxemics and stage blocking. They also explore set, lighting, costume and sound. The dramatic structure and characters help students develop analytical understanding and practical theatre skills.

KEY THEMES

- Class and social inequality
- Fate and destiny
- Nature versus nurture
- Friendship and brotherhood
- Superstition and fate
- Love and relationships
- Violence and tragedy



Key plot details



KEY WORDS AND DEFINITIONS

Narrator – A voice that tells and comments on the story.
Superstition – A belief in luck or magic affecting events.
Class – A social group within society.
Fate – Events believed to be outside human control.
Status – A character's level of power or respect.
Proxemics – The use of space between characters on stage.
Hot-seating – Asking questions to a character in role.
Monologue – A speech delivered by one character.
Duologue – A scene involving two characters.
Blocking – Planning actors' movements on stage.
Symbolism – When something represents a wider idea.
Choral voice – A group speaking in unison.
Brechtian – A theatre style that makes the audience think.
Guilt – A strong feeling after doing something wrong.
Tragedy – A story that ends in sadness or death.

COMMON MISCONCEPTIONS

Blood Brothers is not simply a sad story about two boys; it is a social and political play about inequality. Mrs Lyons is not simply evil: her actions are shaped by fear and guilt. Acting like a child involves posture, movement, pace and energy—not only a high voice. The Narrator is not a conventional character; he represents fate and moral judgement. Lighting, costume and sound are essential storytelling tools, not optional extras. Brecht's influence is also sometimes overlooked.

YEAR 9 **ENGLISH** KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This unit explores the Gothic genre in literature. Students learn how Gothic stories use setting, character, structure and language to create mystery, fear and suspense. They study extracts from classic Gothic texts and explore how writers use foreshadowing and foreboding. Lessons focus on Victorian London, character types such as villains and damsels, and Gothic objects and settings. Students complete creative writing tasks to use what they have learned in their own Gothic descriptions. They are also assessed on decoding, comprehension, analysis and evaluation of fiction.

KEY DATES

1818 – Mary Shelley publishes *Frankenstein*.
1847 – Charlotte Brontë publishes *Jane Eyre*.
1886 – Robert Louis Stevenson publishes *Dr Jekyll and Mr Hyde*.
1890 – Oscar Wilde publishes *The Picture of Dorian Gray*.
1901 – Queen Victoria dies, ending the Victorian era.

CORE KNOWLEDGE AND FACTS

Gothic stories often include dark settings, old buildings, strange events and mysterious characters. Common character types include villains, victims and heroes. Writers use language and structure to build fear and suspense. Victorian London was dirty, foggy and full of crime, making it an effective setting for Gothic fiction. Gothic writing explores foreboding, decay, duality and the supernatural. The genre often explores good versus evil, danger, secrets and fear. Important writers include Mary Shelley, Bram Stoker, Oscar Wilde and Robert Louis Stevenson.

CHARACTER ARCHETYPES

Types of characters - archetypes



• **Villain (antagonist)**
Usually male because they were considered more capable of violence than a female, the **epitome** of evil, tries to blame others, something "odd" about him, destructive.



• **Monsters**
Not human, has been created in some way, doesn't have morals as they aren't human, instils fear, linked to the idea of **devolution** (an ideology Victorians were terrified of).



• **Persecute Maiden**
Young, beautiful, pure, innocent, usually attacked/hurt by the villain. Unable to look after herself, needs to be saved ("damsel-in-distress"). Fits with the stereotype of women at the time.



• **Supernatural**
Ghosts, vampires, werewolves etc., evil spirits, disappearing characters, fascination around death and escaping/subverting death. Very intriguing for such a religious time period.

KEY WORDS AND DEFINITIONS

Gothic – A genre of fiction associated with mystery and fear.
Foreboding – A feeling that something bad will happen.
Decay – Rotting, decline or breaking down.
Duality – Two contrasting sides to something or someone.
Setting – The place and time in which a story happens.
Villain – The main harmful or threatening character.
Archetype – A recognisable and recurring character type.
Motif – A repeated idea, image or symbol.
Atmosphere – The mood or feeling created in a story.
Contrast – A clear difference between elements.
Structure – The way a text is organised and developed.
Physiognomy – Judging character from facial appearance.
Phrenology – A discredited belief linking skull shape to character.
Supernatural – Events that cannot be explained by science.
Empathy – Understanding another person's feelings.
Foreshadowing – A hint or clue about what may happen later.

COMMON MISCONCEPTIONS

Gothic fiction is not simply horror; it often creates mystery and atmosphere rather than jump-scares. Not every Gothic story contains ghosts. The Gothic villain is not always a monster: villains may be complex and human. Gothic literature is not limited to old books—modern novels and films also use its ideas. Gothic settings can be cities, streets or homes, as well as castles and isolated mansions.

KEY ASSESSMENTS

AP1: Gothic writing
Speaking and Listening: Newsround
AP2: Comparing villains

YEAR 9 FOOD KNOWLEDGE ORGANISER



FP2
JUNIOR CHEF
ACADEMY

KNOWLEDGE ORGANISER

YEAR 9 FOOD & NUTRITION | AUTUMN TERM

REAL SKILLS. REAL FOOD. REAL WORLD.



1 STROMBOLI

ITALY / USA



Roller pizza dough filled with sauce, cheese and toppings. Baked until golden and crisp.

2 PASTA LAB

FRESH PASTA



Make, shape and cook fresh pasta. Understand gluten development and dough consistency.

3 CACIO E PEPE

ITALY



A classic Roman pasta using cheese, black pepper and pasta water to create a silky sauce.

4 CHOCOLATE MOUSSE

PÂTISSERIE



Light, airy mousse using egg whites and chocolate. Learn about aeration and folding.

5 PUMPKIN SPICE MUFFINS

SEASONAL BAKING



Moist muffins with warming spices and a soft, perfect autumn bake.

6 FOOD SAFETY & TEMPERATURES

KNOWLEDGE FOR LIFE



Understand key temperatures, safe zones, storage, cooking and food safety rules.

DOUGH & GLUTEN

- Gluten gives dough strength and elasticity.
- Kneading develops gluten.
- Proving allows yeast to produce gas and make dough rise.
- Resting dough improves texture and flavour.



SAUCES & EMULSIONS

- Use pasta water to emulsify cheese and pepper.
- Add liquid gradually to create a smooth sauce.
- Fat and liquid must combine to form an emulsion.
- Season to balance and enhance flavour.



AERATION & FOAMS

- Whisking eggs whites traps air.
- Fold gently to keep the air in the mixture.
- Over-mixing knocks air out.
- Chocolate must be cooled before folding.



TEMPERATURE CONTROL

- Danger zone: 5°C – 63°C (bacteria grow fastest).
- Cook food to 75°C or above.
- Reheat to 75°C and above.
- Chill food quickly and store below 5°C.
- Hot hold above 63°C.



BAKING SCIENCE

- Raising agents create bubbles of gas.
- Heat sets structure and changes texture.
- Sugar helps with browning and moisture.
- Spices and fats add flavour and keep bakes soft.



KNIFE SKILLS

- Bridge and claw grip for safety.
- Chop, slice and dice evenly.
- Accurate cutting improves cooking and presentation.



PRACTICAL SKILLS

- Mise en place – get organised.
- Follow the recipe and plan ahead.
- Work clean and keep your area tidy.
- Use equipment safely and correctly.
- Cook evenly and manage your time.
- Taste as you go and adjust seasoning.
- Present your dish neatly and creatively.



FOOD SCIENCE

- Protein coagulation happens with heat.
- Starch gelatinisation thickens sauces and binds dishes.
- Maillard reaction creates colour and deep flavour.
- Emulsification combines fat and liquid smoothly.
- Fermentation produces gas in dough.
- Aeration adds air for light and fluffy textures.



QUALITY CHECKS

- Texture – is it right for the dish?
- Flavour – is it balanced and tasty?
- Appearance – does it look appealing?
- Temperature – is it cooked safely?
- Portion – is the serving size suitable?

Check, taste, adjust, improve. That's how great chefs work.



RETRIEVAL QUESTIONS

- What is gluten and why is it important in dough?
- How does pasta water help make a smooth sauce?
- What is the purpose of whisking egg whites?
- Why must chocolate be cooled before folding?
- What is the danger zone and why is it important?
- How do raising agents work in baking?
- Why should you taste and adjust seasoning?
- How do you store food safely to prevent bacteria?



KEY WORDS & DEFINITIONS

- Mise en place** Preparing ingredients and equipment before cooking.
- Gluten** Protein in flour that gives dough strength and elasticity.
- Maillard reaction** Chemical reaction creating browning and flavour.
- Aeration** The process of incorporating air into a mixture.
- Fermentation** Yeast feeds on sugar and produces gas.



THE CHEF'S JOURNEY



DID YOU KNOW?

Pasta is one of the oldest foods in the world! It has been enjoyed for over 4,000 years.



COOKING IS A SKILL FOR LIFE

✦ BE ORGANISED ✦ BE SAFE ✦ BE RESPECTFUL ✦ BE PROUD

YEAR 9 FOOD

Finham Park 2



YEAR 9 GEOGRAPHY KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION – RESTLESS EARTH

The Earth is always moving beneath our feet because it is made of large pieces called tectonic plates. These plates float on molten rock beneath the surface and move slowly. Where plates crash, slide or pull apart, they can cause earthquakes, volcanoes and tsunamis. Students investigate how the Earth moves, the natural disasters it creates and their impacts. They also explore how wealth and prediction, prevention, preparation and monitoring influence the severity of a natural hazard.

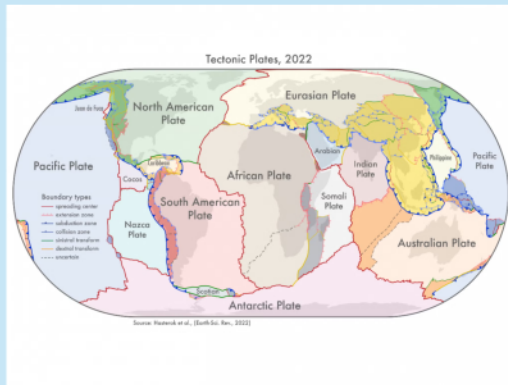
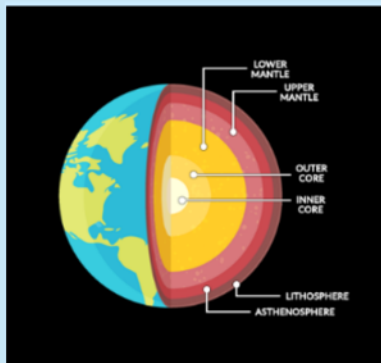
KEY DATES

2004 – Indian Ocean tsunami caused by a powerful undersea earthquake.
2010 – Haiti earthquake caused major destruction and loss of life.
2010 – Chile earthquake was very strong but had better protection.
2015 – Nepal earthquake killed thousands and damaged buildings.

CORE KNOWLEDGE AND FACTS

The Earth has four main layers. Its crust is divided into tectonic plates, which move in different directions at different speeds. Plate boundaries may be destructive, constructive, conservative or collision. Volcanoes have different shapes, including shield and composite volcanoes. Supervolcanoes are much larger and may have global effects. Earthquakes happen when plates move suddenly. Buildings can be designed to resist damage. Tsunamis may follow underwater earthquakes. Hazard maps help identify areas where volcanic danger may occur.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Tectonic plates – Giant pieces of the Earth's crust.
Mantle – The hot layer beneath the crust.
Crust – The thin outer layer of the Earth.
Plate boundary – The edge where two tectonic plates meet.
Earthquake – A sudden shaking of the Earth's crust.
Volcano – An opening or mountain from which magma erupts.
Shield volcano – A broad volcano with gentle slopes.
Composite volcano – A steep-sided, explosive volcano.
Supervolcano – A vast volcanic system with global effects.
Tsunami – A large sea wave caused by underwater movement.
Hazard – A natural event that threatens people or places.
Seismic – Connected with earthquakes or Earth vibrations.
Prediction – Forecasting where or when a hazard may happen.
Protection – Actions or structures designed to reduce harm.
Preparation – Planning and practising how to respond.
Monitoring – Measuring changes that may signal a hazard.

COMMON MISCONCEPTIONS

Volcanoes are not all the same. Shield volcanoes have gentle slopes and fluid lava; composite volcanoes are steeper and more explosive. Supervolcanoes do not erupt frequently. Tsunamis are caused by sudden movement of water, usually after an undersea earthquake—not by ordinary tides. Buildings are not all equally safe during earthquakes. Destructive and conservative boundaries create different hazards.

MANAGING NATURAL HAZARDS

Prediction identifies warning signs and locations.
Protection reduces damage through stronger buildings and defences.
Preparation includes education, drills, supplies and evacuation plans.
Monitoring uses instruments and observations to track changes over time.

YEAR 9 HISTORY KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION – THE RISE OF THE NAZIS

This topic explores the rise of the Nazi Party and how Adolf Hitler came to power in Germany. You will consider the impact of the Treaty of Versailles, the difficulties faced by the Weimar Republic and the methods the Nazis used to win support. You will also study how Hitler established a dictatorship and how Nazi policies affected everyday life in Germany before and during the Second World War.

KEY DATES

1918 – The First World War ends.
1919 – Treaty of Versailles is signed.
1923 – Munich Putsch and hyperinflation crisis.
1929 – Wall Street Crash; Great Depression begins.
1933 – Hitler becomes Chancellor; Reichstag Fire.
1934 – Hitler becomes Führer.
1935 – Nuremberg Laws introduced.
1939 – Second World War begins.

CORE KNOWLEDGE AND FACTS

The Treaty of Versailles punished Germany after the First World War. Germany lost territory, had its armed forces restricted and had to pay reparations. Many Germans believed the treaty was unfair. The Weimar Republic faced serious challenges, including political violence, hyperinflation in 1923 and unemployment after the Wall Street Crash of 1929. The Nazis gained support by promising "work and bread", attacking the Treaty of Versailles and using powerful propaganda. Hitler was appointed Chancellor in January 1933. The Reichstag Fire gave the Nazis an excuse to restrict civil liberties; the Enabling Act then allowed Hitler to make laws without the Reichstag. By 1934, Germany was a dictatorship.

CORE SKILLS AND TECHNIQUES

Chronology – putting events in their correct order.
Cause – explaining why something happened.
Consequence – explaining the results of an event or decision.
Significance – judging why an event or person mattered.
Interpretation – explaining different views of the past.



NAZI PROPAGANDA AND POWER

KEY WORDS AND DEFINITIONS

Reparations – money paid for loss or damage caused by war.
Führer – leader; Hitler's title after 1934.
Putsch – a violent attempt to overthrow a government.
Propaganda – information designed to influence opinion.
Reichstag – the German parliament.
Communist – someone who supports a classless society.
Autarky – making Germany self-sufficient.
Lebensraum – "living space" for the German people.
Anti-Semitism – prejudice against Jewish people.
Anschluss – union of Germany and Austria in 1938.
Gestapo – Nazi secret police.
SS – Nazi organisation that helped control Germany.
Enabling Act – law allowing Hitler to rule without parliament.
Dictatorship – government controlled by one person or group.

COMMON MISCONCEPTIONS

Hitler did not take total control immediately in 1933; he used a series of laws, intimidation and political events to remove opposition. The Nazi Party did not win a majority of votes in a free election. The Treaty of Versailles was one cause of Nazi support, but economic crisis, fear of communism, propaganda and weaknesses in the Weimar system also mattered.



RECAP QUESTION

How did the Nazis turn Germany from a democracy into a dictatorship?



YEAR 9 MANDARIN KNOWLEDGE ORGANISER

SHOPPING – FOOD, CLOTHES, MONEY AND ONLINE SHOPPING

FRUIT 水果 shuǐ guǒ 我想买... I want to buy...

苹果, 橙子, 香蕉, 葡萄, 西瓜
píng guǒ, chéng zi, xiāng jiāo, pú tao, xī guā
apples, oranges, bananas, grapes, watermelon

VEGETABLES 蔬菜 shū cài

青菜, 白菜, 西红柿 多少钱一斤?
Qīng cài, bái cài, xī hóng shì duō shǎo qián yì jīn?
How much do greens, Chinese leaves, tomatoes cost per "jin"?

元/块	yuán/kuài	1 yuan
角/毛	jiǎo/máo	ten cents
分	fēn	1 cent
斤 jīn	500g	(used in markets)

超市购物 (used in supermarkets)

这件毛衣怎么样?

Zhè jiàn máo yī zěn me yàng?

How's this jumper?

我最喜欢这条裤子。

Wǒ zuì xǐ huan zhè tiáo kù zi.

I most like this pair of trousers

我给丽丽买了书包/笔/本子/手机。太贵了/不太贵!

Wǒ gěi Lìlì mǎi le shū bāo/bǐ/běn zi/shǒu jī. Tài guì le/Bú tài guì.
I bought Lili a school bag/pen/exercise book/mobile phone. It was very/not very expensive.

请问, 文具在几层? 文具在楼上/楼下。

很方便/便宜/安全。Zài wǎng shàng mǎi dōng xī hěn fāng biàn, pián yi, ān quán. Online shopping is very convenient.

去商店。Wǒ méi yǒu shí jiān qù shāng diàn. I don't have time to go to the shops.

站用信用卡买东西。Wǒ xǐ huan zài wǎng zhàn yòng xìn yòng kǎ mǎi dōng xī. I like to buy things online using a credit



RECAP

Can you ask the price of an item?



YEAR 9 MANDARIN KNOWLEDGE ORGANISER

TRAVEL IN CHINA – SEASONS, LOCATIONS AND TIME EXPRESSIONS

Talking about one's like/dislike of a season		Talking about the location of a place			
chūn tiān 春天	Spring	dōng 东	East	dōng nán 东南	Southeast
xià tiān 夏天	Summer	nán 南	South	xī nán 西南	Southwest
qiū tiān 秋天	Autumn	xī 西	West	dōng běi 东北	Northeast
dōng tiān 冬天	Winter	běi 北	North	xī běi 西北	Northwest
wǒ xǐ huān chūn tiān 我喜欢春天，	I like spring, because it is very beautiful.	běi jīng zài zhōng guó (de) běi biān 北京在中国（的）北边。		Beijing is in the North of China.	
yīn wéi chūn tiān hěn piào liang 因为春天很漂亮。		chāo shì de nán biān shì tú shū guǎn 超市的南边是图书馆。		To the South of the supermarket is the library.	
wǒ bù xǐ huān xià tiān 我不喜欢夏天，	I don't like summer, because it is very hot.	Describing past, present and future events			
yīn wéi xià tiān hěn rè 因为夏天很热。		zuó tiān wǒ qù le chāo shì 昨天我去了超市。		Yesterday I went to the supermarket. (on a particular day)	
wǒ xǐ huān qiū tiān 我喜欢秋天，	I like autumn, because it is not cold nor hot.	míng nián xià tiān wǒ yào qù fǎ guó 明年夏天我要去法国。		Next (year in) Summer I'm going to France.	
yīn wéi qiū tiān bù lěng bù rè 因为秋天不冷不热。		tā zhèng zài zuò fàn 她正在做饭。		She's cooking. (ongoing activity)	
wǒ xǐ huān dōng tiān 我喜欢冬天，	I like winter, because there is snow in winter.	wǒ qù guò zhōng guó 我去过中国。		I have been to China. (past experience)	
yīn wéi dōng tiān yǒu xuě 因为冬天有雪。		wǒ méi qù guò zhōng guó 我没去过中国。		I haven't been to China. (past experience)	



YEAR 9 MANDARIN KNOWLEDGE ORGANISER

TRAVEL IN CHINA - TIME EXPRESSIONS, CITIES AND SPRING FESTIVAL

TIME FRAMES		CITIES AND ATTRACTIONS		SPRING FESTIVAL	
shénme shíhou 什么时候	When? What time?	Běijīng 北京	Beijing	fàng biānpào 放鞭炮	to set off fireworks
你什么时候去中国? nǐ shénme shíhou qù Zhōngguó?	When are you going to China?	Shànghǎi 上海	Shanghai	xīnnián 新年	New Year
...的时候 ...de shíhou	When...	Xī'ān 西安	Xi'an	xīnnián hǎo 新年好	Happy New Year
昨天的时候, 我常常听音乐。 zuó zuóyè de shíhou, wǒ chángcháng tīng yīnyuè.	When doing homework, I often listen to music.	Guǎngzhōu 广州	Guangzhou	hóngbāo 红包	red money packet
有时候 yǒushíhou	sometimes	Chángchéng 长城	the Great Wall	Chūnjié 春节	Spring Festival
有时候我去奶奶家吃饭。 yǒushíhou wǒ qù nǎinai jiā chīfàn.	Sometimes I go to Grandma's for a meal.	Gùgōng 故宫	the Forbidden City	quánjiā 全家	the whole family
...以前 ...yǐqián	before...	Tiān'ānmén Guǎngchǎng 天安门广场	Tian'anmen Square	sūnzi 孙子	grandson
我每天七点以前起床。 wǒ měitiān qī diǎn yǐqián qǐchuáng.	I get up before 7 am every day.	Niǎocháo 鸟巢	Bird's Nest Stadium	sūnnǚ 孙女	granddaughter
...以后 ...yǐhòu	after...	Dòngwùyuán 动物园	zoo	rènnào 忙碌	hustling/busy
我每天十点以后睡觉。 wǒ měitiān shí diǎn yǐhòu shuìjiào.	I go to sleep after 10 pm every day.	Zhōnglóu 钟楼	Bell Tower	jiérì 节日	festival
第一次 dì-yī-cì	(for the) first time	Bīngmǎyǒng 兵马俑	Terracotta Army	dǎ diànhuà 打电话	to make a phone call
我第一次去中国。 wǒ dì-yī-cì qù Zhōngguó.	I'm going to China for the first time.	kāimén 开门	to open/opening	fàndiàn 饭店	restaurant/hotel
今年 jīnnián	this year	guānmén 关门	to close/closing	diàncài 点菜	to order food
		ménpiào 门票	entrance ticket	gāoxìng 高兴	happy
		yǒumíng 有名	famous	rènshi 认识	to know someone





Unit 1: Number Calculations

Lowest Common Multiple (LCM)

Q - Find the LCM of 6 and 7:

6 – 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, ...

7 – 7, 14, 21, 28, 35, 42, 49, 56, ...

LCM = 42

Highest Common Factor (HCF)

Q – Find the HCF of 18 and 24

18 – 1, 2, 3, 6, 9, 18

24 – 1, 2, 3, 4, 6, 8, 12, 24

HCF = 6

Prime Factorisation

$$30 = 2 \times 3 \times 5$$

Multiply and divide decimals

To **divide decimals** we can treat the division like a fraction and find an equivalent fraction which has an integer denominator.

If we are dividing by an integer, we can use the short division method.

E.g.

$$\begin{array}{r} 0.124 \\ 6 \overline{) 0.744} \\ \underline{6} \\ 14 \\ \underline{12} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

$$0.744 \div 6 = 0.124$$

If we are dividing by a decimal, we can adjust the division problem to make the decimal an integer.

E.g.

$$\begin{array}{l} 8.75 \div 0.7 \\ \xrightarrow{\times 10} 87.5 \div 7 \\ = \frac{87.5}{7} = 12.5 \end{array}$$



To **multiply decimals** we first need to multiply by powers of ten to turn the decimals into whole numbers. We then need to divide by powers of ten at the end to get our final answer.

E.g.

$$\begin{array}{r} 3.4 \times 2.86 \\ \xrightarrow{\times 10} \quad \xrightarrow{\times 100} \end{array} \quad \begin{array}{r} 286 \\ \times 34 \\ \hline 1144 \\ 8580 \\ \hline 9724 \end{array} \quad \begin{array}{l} 9724 \div 10 \div 100 \\ = 9.724 \end{array}$$

Key Words

Factor: The numbers which fit into a number exactly.

Multiple: The numbers in the times table.

Highest Common Factor: The highest factor which is common for both numbers.

Lowest Common Multiple: The smallest multiple which is common to both numbers.

Sparx Maths

M704, M522,
M111, M431,
M994, M131, M113

Rounding

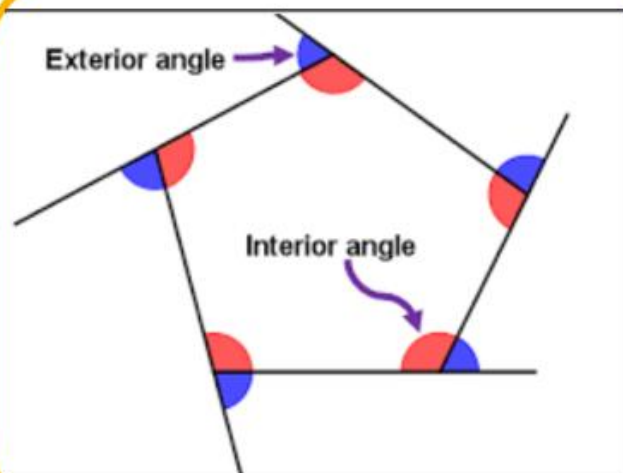
The purpose of **rounding** is to make a number simpler but keep its value close to what it was.

The digit to the right of the rounding digit tells you if you should round up or down. If **is less than 5, round down.**

If the digit to the right of the rounding digit is **5 or more, round up.**



Unit 2: Geometry Shape



Interior and Exterior Angles of Polygons

Polygon	Sides	Sum of Interior Angles	Each interior angle of regular polygon	Sum of Exterior Angles
Triangle	3	180°	60°	360°
Quadrilateral	4	360°	90°	360°
Pentagon	5	540°	108°	360°
Hexagon	6	720°	120°	360°
...				
Any Polygon	n	$(n-2) \times 180^\circ$	$\frac{(n-2) \times 180^\circ}{n}$	360°

Key Words

Parallel lines – lines that will never touch

Transversal – a line that crosses at least two other lines

Polygon – a 2d enclosed shape made of straight lines

Regular – all the sides and angles are equal

Irregular – the sides and angles are not equal

Interior angles – angles inside the shape

Exterior angles – angles outside the shape

Maths Core

Sparx Maths

M606, M653

Angles on parallel lines

Alternate angles	Corresponding angles	Co-interior angles
Alternate angles are equal.	Corresponding angles are equal.	Co-interior angles are supplementary (add to 180°).

Unit 3 – Algebra

Maths Core Simplifying

Finham Park 2



Multiplying and Dividing Algebraic Terms

$$4a \times 5b = 20ab$$

Multiplying and Dividing Positive Indices

$$8^5 \div 8^3$$

$$\frac{\cancel{8} \times \cancel{8} \times \cancel{8} \times 8 \times 8}{\cancel{8} \times \cancel{8} \times \cancel{8}} = 8^2$$

Expanding and Factorising Expressions
Factorising

$$4(x + 2) \quad \rightleftharpoons \quad 4x + 8$$

Expanding

Read and write expressions, equations and inequalities

Expression $2x + 7$

Equation $3x + 4 = 9$

Inequality $6x + 1 > 13$

Adding and Subtracting Algebraic terms

Like terms

$$3y + 2x + 4x - y = 2y + 6x$$

Like terms

Sparx Maths

Key Words

Algebraic Expression -

A mathematical phrase that can include numbers, variables (letters), and operation symbols.

Variable - A symbol, often a letter, that represents one or more numbers.

Coefficient - A number that is multiplied by a variable in an algebraic expression.

Term - A single part of an algebraic expression, which can be a constant, a variable, or a combination of both multiplied together.

Constant - A fixed value that does not change

Unit 1:

Number Calculations

Maths Higher

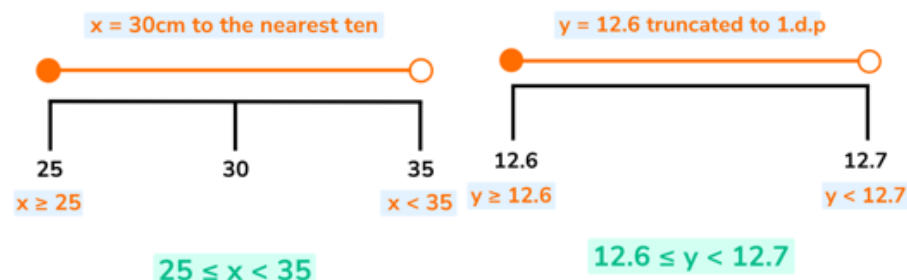
Finham Park 2



Error intervals are the limits of accuracy when a number has been rounded or truncated. They are the range of possible values that a number could have been before it was rounded or truncated.

To do this we think about what the smallest and biggest numbers that would round, or be truncated, to a value for a given degree of accuracy.

E.g.



Addition Law for Indices

$$a^m \times a^n = a^{m+n}$$

Examples

- $2^2 \times 2^3 = 2 \times 2 \times 2 \times 2 = 2^5$
- $k^8 \times k^2 = k \times k \times k \times k \times k \times k \times k \times k = k^{10}$

Subtraction Law for Indices

$$a^m \div a^n = a^{m-n}$$

Examples

$$5^3 \div 5 = \frac{5 \times 5 \times 5}{5} = 5^2$$

$$d^5 \div d^2 = \frac{d \times d \times d \times d \times d}{d \times d} = d^3$$

Key Words

Truncated: Cut off

Error interval: The range of possibilities that a number could have been before being rounded

Standard form: a way of writing really big or really small numbers

Ordinary form: the normal way of writing numbers

Laws of indices – the rules of how we can calculate with indices

Evaluate - give an exact answer

Sparx Maths

U657, U301,
U108, U235,
U662, U330,
U534, U290,
U264, U161

Converting ordinary numbers into standard form

Any integer n

Any number between 1 and 10 A

$A \times 10^n$

Examples

700

$7 \times 10 \times 10 = 7 \times 10^2$

12500

$125 \times 10 \times 10 \times 10 \times 10 = 125 \times 10^4$

0.00034

3.4×10^{-4}

Remember: a negative power means the number is smaller than 1, so the power is negative.

Converting standard form into ordinary numbers

Example 1

2×10^3

$2 \times 10 \times 10 \times 10 = 2000$

Example 2

4.12×10^2

$4.12 \times 10 \times 10 = 412$

Non-Examples

$12 \times 10^2 = 1200$ (must be between 1 and 10)

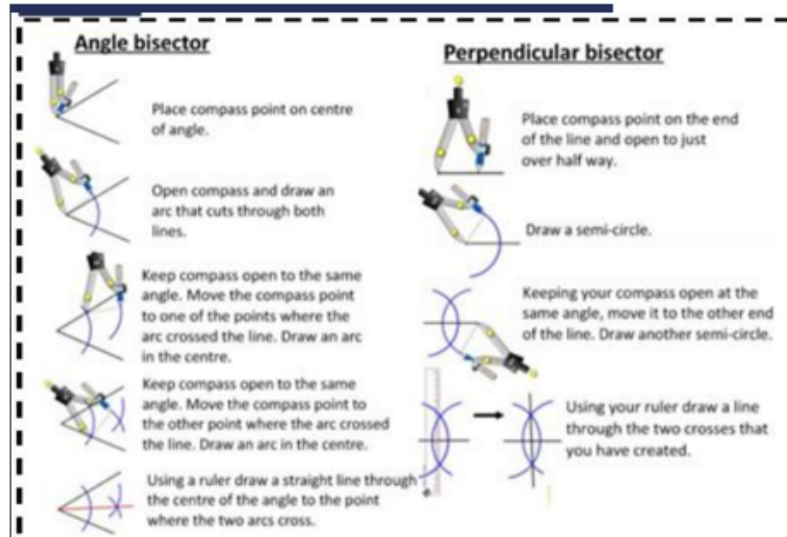
$184 \times 10 = 1840$ (must be an integer)

$64 \times 10^5 = 32768$ (must be a power of 10)

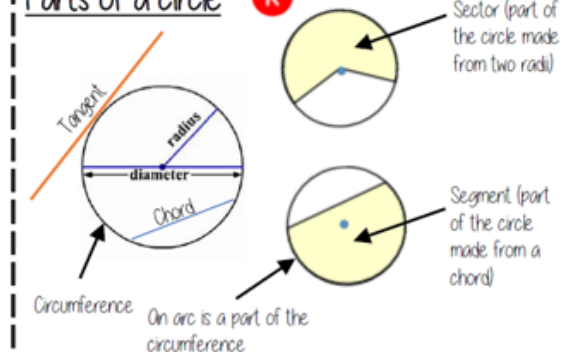
Unit 2:

Geometry Visualising

Finham Park 2
Maths Higher

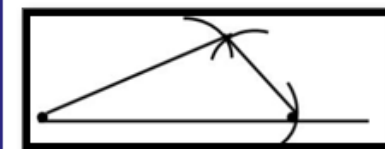
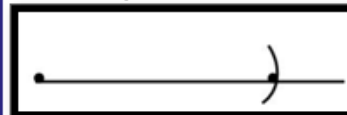


Parts of a circle



Examples

Constructing an isosceles triangle using a compass.



Sparx Maths

U767, U187, U820, U979, U787,
U245

Key Words

Radius – The distance from the middle of the circle, to the circumference

Diameter- The distance from one end of the circle to the other, passing through the centre
Circumference- the distance around the outside of the circle

Bisect – splitting in two

Perpendicular – Meets at a right angle

Locus/loci – the set of all points that satisfy a certain condition

Unit 3: Algebra Simplifying

Finham Park 2
Maths Higher



Expand & Simplify...

$$5(x+3) + 6(x-4)$$

$$5x + 15 + 6x - 24$$

$$11x - 9$$

Expand and simplify...

$$(5x+2)^2$$

$$(5x+2)(5x+2)$$

$$25x^2 + 10x + 10x + 4$$

$$25x^2 + 20x + 4$$

Expand and simplify: $(4y-3)(2y-5)$

×	4y	-3
2y	8y ²	-6y
-5	-20y	+15

$$(4y-3)(2y-5) = 8y^2 - 6y - 20y + 15$$

$$= 8y^2 - 26y + 15$$

Ex1 Factorise the following quadratic expression into double brackets.

Solution

$$2x^2 + 5x + 3$$

$$\Rightarrow (2x+2)(2x+3)$$

$$= (x+1)(2x+3)$$

2x × 2x = 4x²
so we need to divide the brackets by their HCFs.

2 × 3 = 6
Factors of 6
1, 6
2, 3

x × 2x = 2x²
We have finished!

Key Words

Expression – a selection of variables, numbers and operators

Equation – has an equals sign

Distributive law – multiplying a number by a group of numbers added together is the same as doing each multiplication separately

Expand - remove the brackets

Factorise – put into brackets

Sparx Maths

U179, U768, U437, U963

Unit 4: Ratio & Proportion – Scaling

Finham Park 2



Maths Higher

y is proportional to a becomes $y = ka$
 y is inversely proportional to a becomes $y = \frac{k}{a}$

e.g.3 y is proportional to $\sqrt{x}$

When $x = 9$, $y = 6$

What is the value of y when $x = 25$?

$$\begin{aligned} y &= k\sqrt{x} & y &= 2\sqrt{x} \\ 6 &= k \times \sqrt{9} & y &= 2\sqrt{25} \\ 6 &= k \times 3 & y &= 2 \times 5 \\ k &= 2 & \underline{y} &= \underline{10} \end{aligned}$$

e.g.4 y is inversely proportional to x

When $x = 10$, $y = 2$

What is the value of x when $y = 5$?

$$\begin{aligned} y &= \frac{k}{x} & y &= \frac{20}{x} \\ 2 &= \frac{k}{10} & 5 &= \frac{20}{x} \\ k &= 20 & \underline{x} &= \underline{4} \end{aligned}$$

Percentage of an amount – Non calculator

To calculate any percentage it is useful to start with 10%.

30% of 120: $10\% = 120 \div 10 = 12$

$30\% = 3 \times 12 = 36$

To find 10% we divide by 10.

To find 30% we multiply 10% by 3.

45% of 80: $10\% = 80 \div 10 = 8$

$40\% = 4 \times 8 = 32$

$45\% = 40\% + 5\% = 32 + 4 = 36$

$5\% = 8 \div 2 = 4$

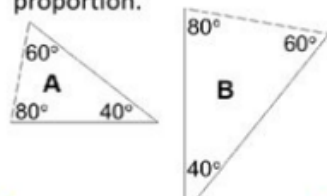
5% is half of 10% so we divide by 2.

To find 1% we divide the starting amount by 100.

1% of 30 = $30 \div 100 = 0.3$.

Properties of similar shapes:

- The corresponding angles will be the same if shapes are similar.
- Corresponding edges must remain in proportion.



Simple interest

To calculate simple interest we start by calculating the percentage and multiplying it by the period of time.

Example: £250 is in a bank account which is paying 5% simple interest per year. How much will be in the bank account at the end of 3 years?

$5\% = 0.05$

$0.05 \times 250 = £12.50$

$3 \times £12.50 = £37.50$

$£250 + £37.50 = £287.50$

Multiply by 3 because the question asks for 3 years.

Add your answer to the original amount in the question.

Key Words

Congruent – identical

Similar – an enlargement of each other

Interest – the amount paid for the use of others' money

Scale factor – how much something has been enlarged

Proportion – a mathematical comparison between numbers

Inverse – opposite

Density – a way of comparing how heavy different materials are

Sparx Maths

U533, U286,
U278, U578,
U527

YEAR 9 MUSIC KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

In this unit, you will learn how to perform and understand the 12-bar blues. You will play music using keyboards, ukuleles, and your voice. You will also learn how to form triads and 7th chords, use the blues scale, and create swing rhythms. There will be chances to rehearse and perform both as a soloist and in groups. You'll explore how jazz and blues music uses pitch, rhythm, tempo, and expression. This unit includes learning a group performance of *I Feel Good*. You will practise riffs and rhythms, listen to each other, and perform with confidence and good technique.

KEY DATES

1900s – Blues music begins in the southern USA.

1910s – Jazz starts to grow in New Orleans.

1930s – Swing music becomes popular in jazz bands.

1965 – James Brown releases *I Feel Good*.

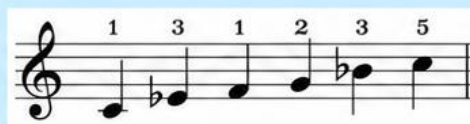
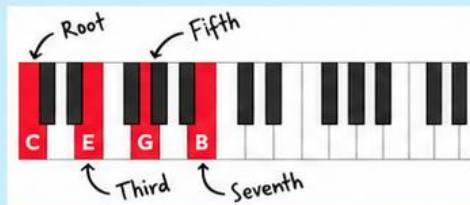
CORE KNOWLEDGE AND FACTS

The **12-bar blues** follows a set pattern of three chords, known as a chord progression. You will learn to build triads and 7th chords and use correct hand positions. The blues scale uses special notes to create its sound, and swing rhythms give jazz a bouncy feel. Scat singing uses made-up words to copy rhythms. You will learn to perform with expression and control. In ensemble work, each person plays a part. Listening and working as a team helps the whole group improve and perform better together.

CORE SKILLS AND TECHNIQUES

12 BAR BLUES CHORDS

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



KEY WORDS AND DEFINITIONS

Chord – A group of notes played together.

Triad – A chord with three notes.

12-bar blues – A chord pattern used in blues music.

Blues scale – A special set of notes used in blues.

Improvisation – Making up music as you go.

Scat – Singing using made-up words.

Swing rhythm – A bouncy, uneven rhythm style.

Jazz – A music style with blues, improvisation, and swing.

Pitch – How high or low a sound is.

Tempo – The speed of the music.

Expression – Showing feeling in music.

Rhythm – A pattern of sounds and silences.

Ensemble – A group of musicians playing together.

7th chord – A chord with four notes, adding a 7th.

Melodic riff – A short, catchy tune.

COMMON MISCONCEPTIONS

Some people think all blues music sounds the same, but it uses many rhythms and feelings. Students often believe chords are random, but the 12-bar blues follows a clear pattern. Others may think that improvisation is just guessing, but it uses scales and rhythms. People also forget that good technique, like correct hand positions, helps you play fluently. Some think scat singing is just silly sounds, but it takes skill and timing. Performing in a group takes practice and listening, not just playing your own part loudly.

YEAR 9 PE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION Year 9 PE: Football and Netball

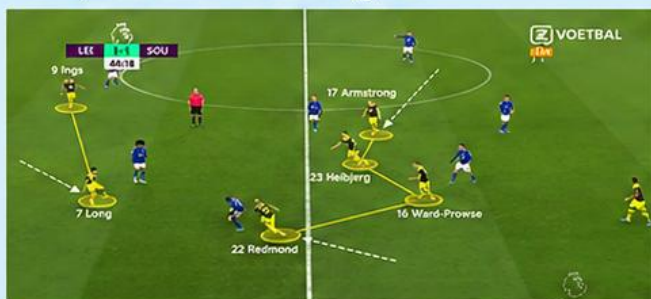
This unit introduces students to the more complex skills, tactics and strategies needed to be successful in Football/Futsal and Netball.

What is a sport skill? A sport skill is a specific movement or technique that a player performs to successfully take part in a sport.

What is a sport tactics? A sport tactic is a planned action used during a game or competition to gain an advantage over an opponent.

What is a sport strategy? A sport strategy is an overall plan that a team or athlete follows to achieve success throughout a match, event, or season.

Skills, Tactics and Strategies:



Football: More complex football skills include dribbling past opponents, executing through balls, controlling aerial passes, and shooting accurately under pressure.

Netball: More complex netball skills include dodging to create space, intercepting passes, shooting from different positions, and using advanced passing techniques while under pressure.

Football: Common football tactics include pressing high up the pitch, counter-attacking quickly after winning possession, using width to stretch the opposition, and playing through balls to create scoring opportunities.

Netball: Common netball tactics include creating space through dodging, using quick give-and-go passes, setting screens to free teammates,

Football: Common football strategies include maintaining possession for long periods, playing a defensive style to protect a lead, using a high-pressing approach throughout the match, and building attacks through quick passing and movement.

Netball: Common netball strategies include controlling possession through patient passing, using fast transitions from defence to attack, applying full-court defensive pressure, and creating space to maximise shooting opportunities.

YEAR 9 PSHE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This topic explores the history of human rights and why they matter today. You will learn about the core values that support human rights, like fairness and safety. We'll look at how human rights can sometimes be difficult to balance, especially when people have different views or when problems like poverty and crime are involved. You'll also study the UN Convention on the Rights of the Child (UNCRC), what causes poverty in rich and poor countries, and how it can lead to things like human trafficking or gang involvement. This helps us understand how to protect people and respect their rights.

KEY DATES

- 1948** – The Universal Declaration of Human Rights was signed
- 1989** – The UN Convention on the Rights of the Child (UNCRC) was adopted
- 2000** – The UK passed the Human Rights Act
- 2015** – The UN launched the Sustainable Development Goals to end poverty
- 2017** – UK launched the Modern Slavery Helpline

CORE KNOWLEDGE AND FACTS

Human rights are basic freedoms and protections for all people. They are based on fairness, respect, equality, and dignity. The UNCRC was set up in 1989 to protect children's rights. Balancing rights can be hard, like when freedom of speech clashes with safety. Poverty has many causes, like war, poor education, or lack of jobs. MEDCs are richer countries; LEDCs are poorer ones. Poverty can lead to exploitation, like human trafficking and modern slavery. Gangs often offer a sense of belonging. People may join gangs for money, friendship, protection, or pressure from others.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

- Human Rights** – Basic rights everyone has
- UNCRC** – A treaty protecting children's rights
- MEDC** – More Economically Developed Country
- LEDC** – Less Economically Developed Country
- Poverty** – When people do not have enough money or resources
- Exploitation** – Using someone unfairly for benefit
- Human Trafficking** – Moving people to exploit them
- Modern Slavery** – Forcing someone to work with no freedom
- Gang** – A group involved in crime
- Belonging** – Feeling accepted or part of a group
- Inequality** – Not being treated the same as others
- Rights** – Legal or moral entitlements
- Abuse** – Treating someone cruelly

COMMON MISCONCEPTIONS

Some people think human rights only apply to adults, but children have rights too. Another myth is that human rights always agree with each other, but they can clash in real life. It's wrong to believe poverty only happens in poor countries; it exists in rich ones too. Many assume all trafficking involves kidnapping, but it can involve tricking people. Gangs are often seen as cool or powerful, but they are dangerous and illegal. Not everyone who joins a gang wants to – some are forced or feel they have no choice.

YEAR 9 RE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This topic explores key Christian beliefs, starting with the Trinity, the idea that God is three persons in one: Father, Son, and Holy Spirit. Students will also study Christian ideas about how the world was created and how these may or may not fit with science. The unit covers important beliefs like the Incarnation, the afterlife, and atonement. It also looks at the Christian response to evil, and how Christians celebrate important events like Christmas and Easter. Finally, the unit explores how the Church helps people today and how Christians work for peace and face persecution around the world.

KEY DATES

4 BCE – Approximation of the birth of Jesus (incarnation)

325 CE – Nicene Creed was written

33 CE – Crucifixion and Resurrection of Jesus

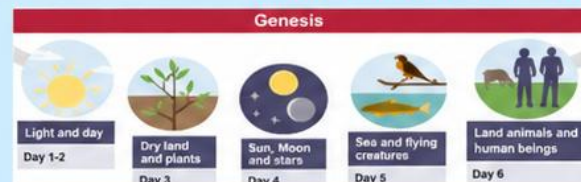
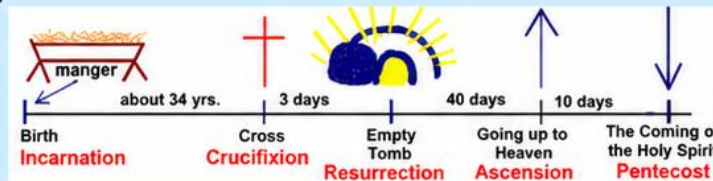
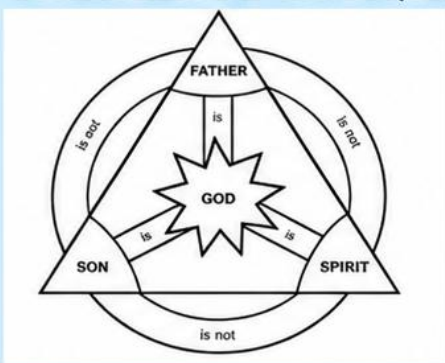
1961 – Christian Aid is founded

Present day – Ongoing Christian persecution in some countries

CORE KNOWLEDGE AND FACTS

Christians believe in one God who exists as the Trinity. The creation story in Genesis can be taken literally or symbolically. The Incarnation means that God became human in the form of Jesus. Christian views on the afterlife include Heaven, Hell, and Purgatory. Atonement is the belief that Jesus died to repair the relationship between humans and God. Christians explain evil using free will, soul-making, or as a test. Pilgrimage helps people grow in faith. Churches support their local communities. Christian Aid works globally for peace, while some Christians still suffer for their beliefs today.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Trinity – One God in three persons

Incarnation – God becoming human in Jesus

Creation – How the world began

Literal – Taking the Bible word for word

Metaphorical – A symbolic meaning

Atonement – Making up for sin

Sin – Wrong actions against God

Eschatology – Beliefs about the afterlife

Pilgrimage – A religious journey

Evil – The presence of suffering or badness

Church – Christian place of worship

Reconciliation – Restoring broken relationships

Peace – Absence of conflict or war

Persecution – Being mistreated for beliefs

Christian Aid – A charity helping people in need

COMMON MISCONCEPTIONS

Some people think Christians believe in three gods, but the Trinity means one God in three persons. Another mistake is thinking all Christians read the creation story the same way; some believe it literally, others see it as symbolic.

Not all Christians have the same view of the afterlife—there are many different ideas. It's also wrong to think all evil proves God doesn't exist; Christians have answers for this. Finally, not all Christian work is done by priests—many everyday people and groups help bring peace and support to others in the world.

YEAR 9 SCIENCE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This topic is all about how light behaves. Light is a type of energy that travels in straight lines and can pass through different materials. It can reflect off shiny surfaces and bend when it moves from one material to another. You will learn how to measure angles, draw ray diagrams, and understand how lenses work. You will also study how the eye uses lenses to focus light and how we see things. You will look at the differences between materials that let light through clearly, partly, or not at all. This knowledge is important in science and everyday life.

KEY DATES – you do not need to memorise these

1666 – Isaac Newton used a prism to show white light is made of colours.

1801 – Thomas Young showed light behaves like waves through his double-slit experiment.

1865 – James Clerk Maxwell showed light is an electromagnetic wave.

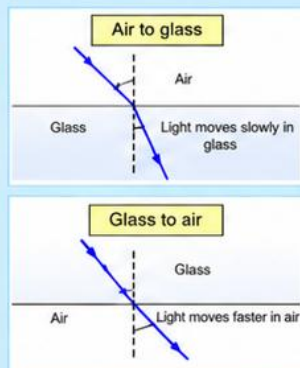
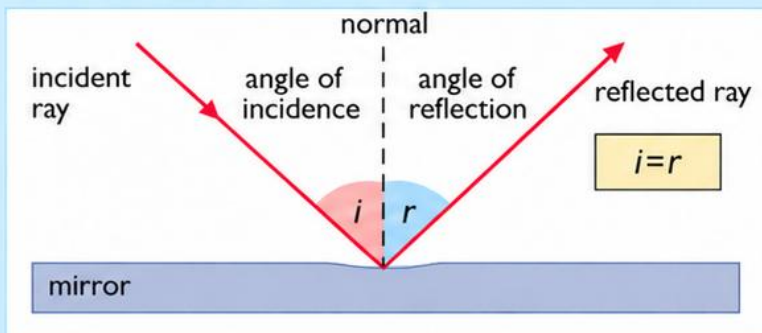
1905 – Albert Einstein explained the photoelectric effect, proving light also acts like particles.

1930s – Development of optical lenses improved vision in eyeglasses and microscopes.

CORE KNOWLEDGE AND FACTS

Light travels in straight lines and can go through a vacuum. Its speed is about 300,000 km/s. It can be reflected, absorbed, or refracted depending on the material. Reflection happens when light bounces off a surface, and the angle of incidence equals the angle of reflection. Reflection is when light bends as it enters a new medium, like from air into glass. Lenses change how light moves. Convex lenses bring light rays together, while concave lenses spread them out. The eye uses a convex lens to focus light at a point called the focal point.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Light – Energy that travels in straight lines.

Reflection – When light bounces off a surface.

Refraction – When light bends passing into a different material.

Ray – A straight line showing the direction of light.

Vacuum – A space with no matter, including air.

Angle of incidence – Angle where light hits a surface.

Angle of reflection – Angle where light bounces off.

Transparent – Lets light through clearly.

Translucent – Lets some light through.

Opaque – Blocks light.

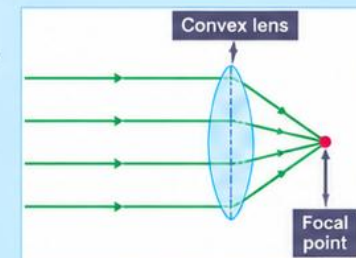
Convex lens – Curved outward, focuses light.

Concave lens – Curved inward, spreads light.

Focal point – Where rays meet after bending.

Medium – Material light travels through.

Normal – Imaginary line at 90° to a surface.



COMMON MISCONCEPTIONS

Many people think light can bend around corners on its own, but it always travels in straight lines unless it reflects or refracts. Some believe light needs air to travel, but it can move through space, which is a vacuum. Another mistake is thinking all materials let light pass the same way, but transparent, translucent, and opaque materials are different. Students often mix up concave and convex lenses, forgetting that only convex lenses focus light to a point. Some also confuse angle names in ray diagrams or forget which way arrows point.

HELPFUL LINKS: Seneca – <https://senecalearning.com/en-GB/>

YEAR 9 SCIENCE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

Biodiversity means the variety of life on Earth, including plants, animals, and microbes. It helps ecosystems stay balanced and healthy. Humans affect biodiversity through pollution, deforestation, and farming. We use sampling to study populations and understand how environments are changing. Keeping biodiversity safe is called conservation. We also study food chains using pyramids of biomass and think about how farming and food choices affect the planet. Problems like pollution and global warming also change how living things survive. Learning about biodiversity helps us understand how to protect the Earth and make better choices for the future.

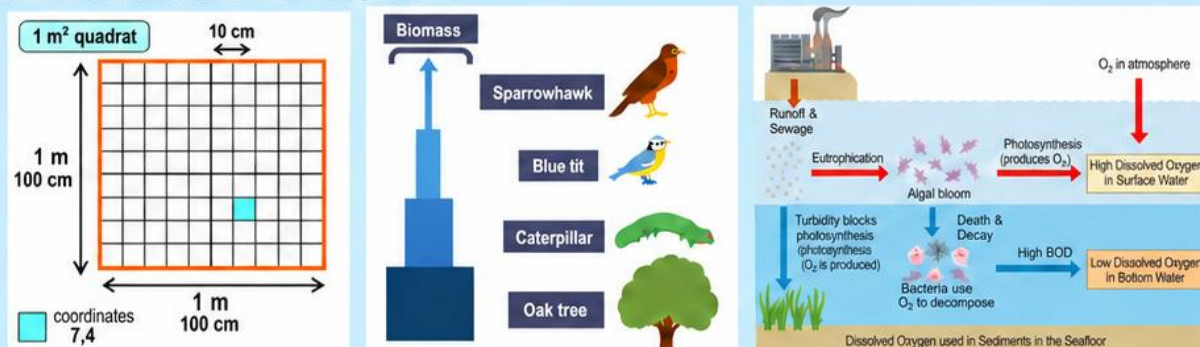
KEY DATES

1972 – First UN Environment Conference held in Stockholm
 1987 – Brundtland Report introduces “sustainable development”
 1992 – Earth Summit in Rio, world leaders agree to protect biodiversity
 2005 – Kyoto Protocol takes effect to reduce greenhouse gases
 2015 – Paris Agreement signed to tackle climate change

CORE KNOWLEDGE AND FACTS

Biodiversity is important because it supports life and provides food, clean air, and water. Sampling, like using quadrats, helps scientists estimate population sizes. Systematic and random sampling methods can both be used. Deforestation and pollution reduce biodiversity and increase carbon dioxide in the air. Conservation methods include protecting habitats and breeding programs. Global warming is caused by greenhouse gases like carbon dioxide and methane. Farming techniques affect the environment. Pyramids of biomass show how energy moves through a food chain. Food security is about making sure everyone has enough healthy food to eat.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Biodiversity – Variety of living things in an area
Conservation – Protecting nature and wildlife
Deforestation – Cutting down trees and forests
Sampling – Studying a small part to understand the whole
Quadrat – A square used in sampling to count plants or animals
Ecosystem – A community of living things and their environment
Pollution – Harmful substances added to air, water, or land
Eutrophication – Too many nutrients in water causing plant overgrowth
Indicator species – Species used to show pollution levels
Greenhouse gases – Gases that trap heat in the atmosphere
Biomass – Total mass of living things in an area
Trophic level – The position of an organism in a food chain
Pyramid of biomass – Diagram showing energy at each food chain level
Food security – Access to enough safe, healthy food
Global warming – The Earth’s temperature rising over time

COMMON MISCONCEPTIONS

Some students think biodiversity only includes animals, but it also includes plants and microbes. People may think cutting down a few trees doesn’t affect the environment, but deforestation has large impacts. Sampling doesn’t give exact numbers but helps estimate populations. Pollution is not just litter – it includes gases and chemicals in water and air. Not all farming is harmful, but factory farming is less sustainable. Some believe global warming only causes hot weather, but it affects rain, sea levels, and ecosystems. Buying imported food is not always better than local food for the environment.

HELPFUL LINKS: Seneca – <https://senecalearning.com/en-GB/>

YEAR 9 SCIENCE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

This topic explores the reactivity of metals and how we use this knowledge in science and daily life. Students learn about the reactivity series, how metals react with acids, and how to compare their reactivity through simple experiments. It also looks at how metals are extracted from ores using displacement reactions. The unit covers how water is treated to make it safe to drink, how materials like glass and ceramics are made, and how we assess the impact of materials using life cycle assessments. Finally, it explores recycling, reusing, and how to choose and evaluate materials based on data and evidence.

KEY DATES – you do not need to memorise these!

1974 – UK Safe Drinking Water Act is passed

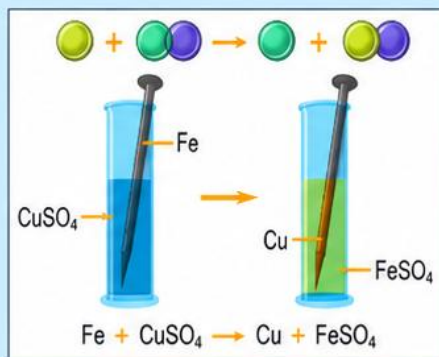
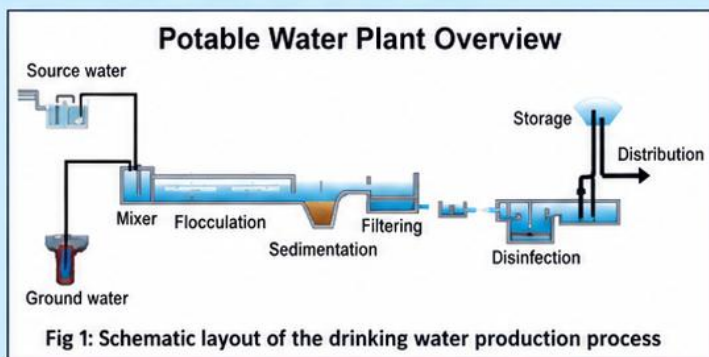
2005 – Kyoto Protocol encourages global sustainable development

2015 – Paris Agreement signed to reduce global waste and emissions

CORE KNOWLEDGE AND FACTS

The reactivity series shows how easily metals react, with potassium being most reactive and gold least. When metals react with acids, they make a salt and hydrogen gas. Rusting is a reaction of iron with water and oxygen. Displacement reactions use more reactive substances like carbon to extract metals. Clean water is made by filtering and removing salt or dirt. Ceramics and composites are strong and useful. Life cycle assessments check the environmental impact of materials. Recycling and reuse reduce waste. Reliable sources give trustworthy information, which we can use to support our conclusions.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Reactivity series – List of metals in order of reactivity

Displacement – Reaction where a more reactive element replaces another

Rusting – Iron reacting with oxygen and water

Oxidation – When a substance gains oxygen

Ore – A rock that contains metal

Potable water – Water that is safe to drink

Filtration – Removing solid particles from liquids

Desalination – Removing salt from seawater

Ceramic – A hard, heat-resistant material

Composite – A material made from two or more parts

Finite resource – A resource that will run out

Sustainable – Using resources in a way that protects the future

Life cycle assessment – Test of a product's environmental impact

Recycling – Turning old materials into new ones

Reliable source – A source of information that can be trusted

COMMON MISCONCEPTIONS

Some think all metals react the same way, but reactivity depends on the metal. Not all metals rust – only iron and steel do. Many students believe all water is safe to drink, but only potable water is. People sometimes think glass is a metal – it's actually a ceramic. Recycling isn't just about being green; it also saves money and resources. Life cycle assessments are not just about pollution – they look at all stages of a product's life. Finally, not all sources online are reliable; it's important to check facts and compare information carefully.

HELPFUL LINK: Seneca – <https://senecalearning.com/en-GB/>

YEAR 9 SCIENCE – TOPIC 3

FINHAM PARK 2



YEAR 9 SCIENCE KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

Waves help carry energy or information from one place to another. There are two main types of waves: transverse and longitudinal. Sound is a longitudinal wave, while light and water waves are transverse. Waves can change direction when they hit a new surface, which is called reflection or refraction. We can measure waves using terms like frequency, amplitude, and wavelength. Waves are also useful in real life, such as in medical scans and helping people hear. Understanding how waves work lets us use them safely and in smart ways in science, medicine, and everyday life.

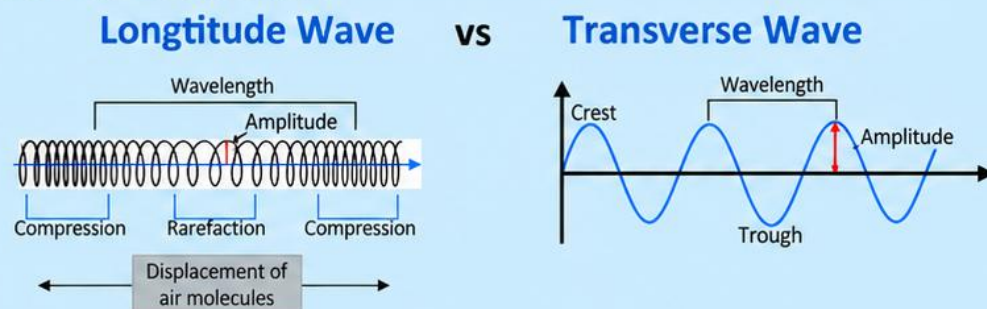
KEY DATES – you do not need to memorise these

1665 – Robert Hooke studies wave patterns in springs and light.
1801 – Thomas Young proves light behaves like a wave.
1842 – Doppler describes how sound changes with motion.
1873 – James Clerk Maxwell explains electromagnetic waves.
1950s – Ultrasound begins being used in medical imaging.

CORE KNOWLEDGE AND FACTS

Transverse waves move energy at a right angle to the direction the wave travels. Longitudinal waves move energy in the same direction as the wave. Sound is made when something vibrates and causes air particles to move. The frequency tells us how many waves pass per second and is measured in hertz. A higher frequency makes a higher pitch. The amplitude shows how strong the wave is and affects volume. Light can bounce (reflect) or bend (refract). We can use equations to work out wave speed, frequency, and wavelength.

CORE SKILLS AND TECHNIQUES



KEY WORDS AND DEFINITIONS

Wave: A way of moving energy.
Frequency: How many waves pass per second.
Amplitude: Height of the wave from rest.
Wavelength: Distance between two wave points.
Transverse: Wave energy moves across the direction.
Longitudinal: Wave energy moves with the direction.
Compression: Squashed part of a sound wave.
Rarefaction: Spread-out part of a sound wave.
Velocity: Speed of the wave.
Refraction: Bending of waves.
Reflection: Bouncing of waves.
Medium: Material a wave moves through.
Oscillation: Repeated movement back and forth.
Ultrasound: Sound with frequency above 20,000 Hz.
Hertz (Hz): Unit for frequency.

COMMON MISCONCEPTIONS

Some students think sound can travel in space, but sound needs air or matter to move through. People often confuse transverse and longitudinal waves. In transverse waves, energy moves across the wave's direction, not along it. Others think amplitude affects pitch, but pitch depends on frequency, not how tall the wave is. Students may also believe reflection and refraction are the same, but reflection bounces light back, while refraction bends it. Another mistake is thinking that humans can hear all sounds, but we can only hear from 20 to 20,000 Hz.

Helpful link: Seneca – <https://senecalearning.com/en-GB/>

YEAR 9 SPANISH KNOWLEDGE ORGANISER

SUBJECT & TOPIC INFORMATION

In this unit you will learn to discuss what subjects you study and given opinions on them, describe your teachers and your school and describe a typical day at school.

KEY WORDS AND DEFINITIONS

Las asignaturas – subjects

Estudio / (no estudio) ... - I (don't) study...

el alemán - German
el chino - Mandarin
el dibujo - art
el español - Spanish
el francés - French
el inglés - English
el teatro - Drama
la biología - biology
la educación cívica - PSHE
la educación física - PE
la economía doméstica - home technology
la física - physics
la geografía - geography
la historia - history
la informática - ICT
la música - music
la química - chemistry
la religión - religious studies
la tecnología - technology
los idiomas - languages
las empresariales/el comercio - business studies
las matemáticas - maths
las ciencias - sciences

Tengo que estudiar... - I have to study...
Me gustaría estudiar - I would like to study

Las opiniones - opinions

Es importante - it's important
Es interesante - it's interesting
Es fascinante - it's fascinating
Es emocionante - it's exciting
Es práctico - it's practical
Es fácil - it's easy
Es útil - it's useful
Tengo buenas notas - I have good marks
Es malo/a - it's rubbish
Es aburrido/a - it's boring
Es complicado/a - it's complicated
Es agotador/a - it's tiring
Es difícil - it's difficult
Es inútil - it's pointless
Es una pérdida de tiempo - it's a waste of time
Tengo malas notas - I have bad marks
Tenemos demasiado deberes - we have too much homework

Mi asignatura favorita es... - my favourite subject is...

Mi mejor asignatura es... - my best subject is...

Se me da bien... - I'm good at...

No se me da bien... - I'm bad at...

Me interesa - it interests me

Me aburre - it bores me

Los profesores – teachers

mi profe de inglés... - my English teacher...
el director / la directora... - the headteacher
es simpático/a - is nice
es paciente - is patient
es impaciente - is impatient
es amable - is kind
es severo/a - is strict
es tranquilo/a - is laidback
es perezoso/a - is lazy
es malhumorado - is bad tempered
me ayuda - s/he helps me
me escucha - s/he listens to me
me critica - s/he criticises me
me hace reír - he makes me laugh
tiene un sentido del humor - he has a sense of humour
explica bien - s/he explains well
nunca se enfada - she never gets angry
aprendo mucho - I learn a lot

Las instalaciones – school facilities

En mi colegio hay... - there is...

no hay... - there isn't

Me gustaría tener - I would like to have

un campo de fútbol - fball pitch

un comedor - canteen

un gimnasio - gym

un patio - playground

un salón de actos - hall

una biblioteca - library

una pista de baloncesto - a basketball court

una piscina - swimming pool

unos aseos - some toilets

unos vestuarios - some changing rooms

muchos laboratorios - lots of science labs

muchas aulas - lots of classrooms

Key phrases

Mi colegio es - my school is

las clases empiezan a las nueve y

cuarto - lessons start at 9 :15

las clases terminan a las cuatro -

lessons finish at 4 :00

COMMON MISCONCEPTIONS

When we talk about school subjects we have to use the article before the subject. E.g. Estudio el español.

HELPFUL LINKS: <https://quizlet.com/user/FP2languages/folders/y9-spanish-m3-mis-estudios?i=315dm4&x=1xqt>

