Wadham School

A Church of England Community School

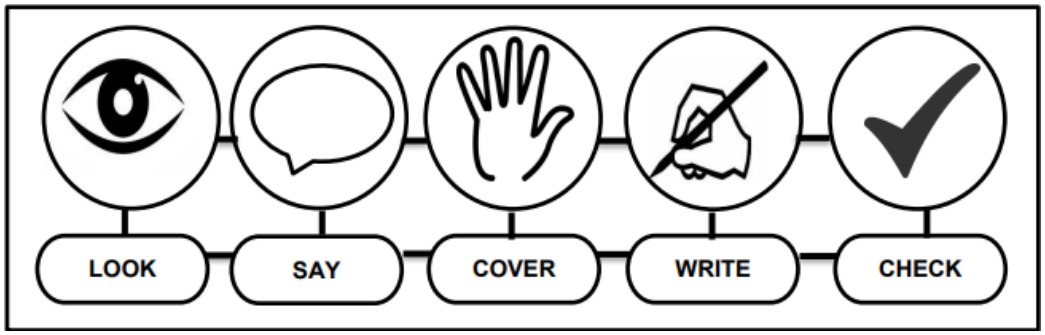
Knowledge Organisers
Year 9
Term 5 & 6
2025-2026

Name.....

Tutor group.....

"Life in all its fullness" John 10:10

Using Your Knowledge Organiser



Look-Say-Cover-Write-Check

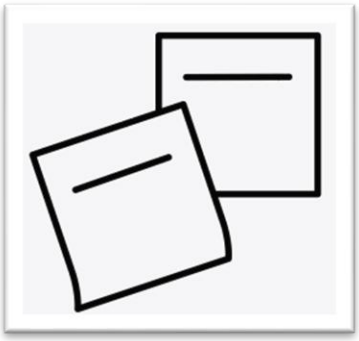
Retrieval practice using the look-say-cover-write-check technique, when done in regular small chunks, is one of the best ways you can learn relevant knowledge over time.

Working in Independent mode:

- Look at the first bullet point or sentence
- Read through it three to five times
- Cover
- Write it out exactly
- Remove and check what you wrote and tick if correct
- Repeat
- When you get it 100% right, move on to the next chunk of information

Flash Cards

Make flast cards with the definition on one side and key word on the other.

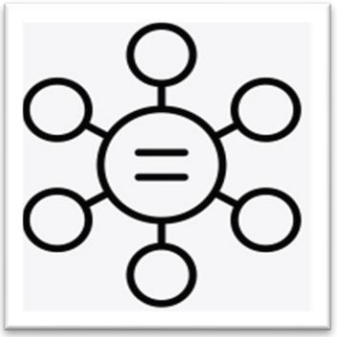


Self Quizing

Write quizzes with answers to test yourself in the future.

Mind maps

Create mind maps linking key information you need to remember.



LIBRARY INFORMATION

BOOK BINGO

Book set outside the UK	Non-Fiction	Author who shares one of your initials
Book begining with R	Recommended book	Book with an animal in it
One word title	One of the 50 books to read before you leave Wadham	Blue book cover

How many different book types can you cross off before the end of the Summer Term? READ and REVIEW books from the library or on Sparx. PRIZE for completing a row. FREE BOOK for a FULL HOUSE.

IF YOU LOOSE A BOOK, DON'T PANIC! IT CAN BE REPLACED WITH ANOTHER BOOK OR WITH A SMALL CHARGE

The library is open to all.
it is a safe space where you will always find an adult at break or lunch.
There are tablets in the library that can be used for completion of homework, please ask Mrs George for access.

ART

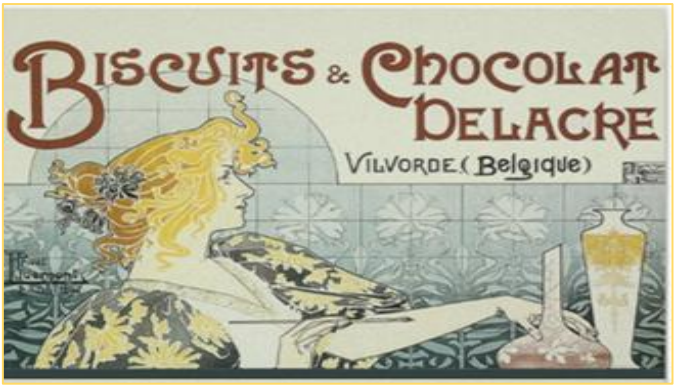
What is Art Nouveau?

A style of decorative art, architecture, and design prominent in western Europe and the USA from about 1890 until the First World War and characterized by intricate linear designs and flowing curves based on natural forms.

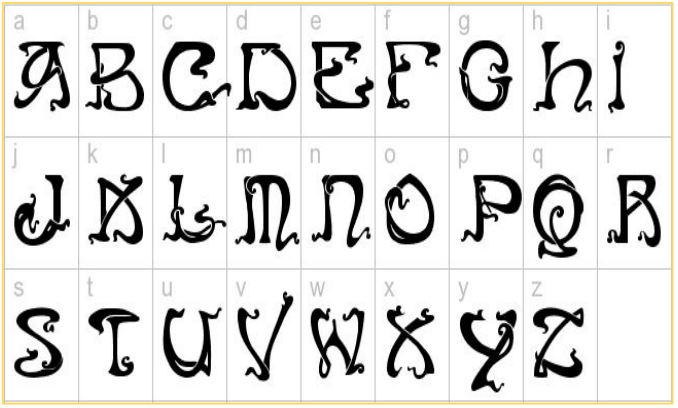
Keywords

Curve
Flow
Form
Design
Pattern
Decorative
Style
Motif
Elegant
Symmetrical
Whiplash
Advert

Motif: decorative image or design, especially a repeated one forming a pattern.



Nature was the inspiration behind much Art Nouveau. Artists took natural forms such as flowers, and stylised them. They were made elegant and flowing, often symmetrical.



The Art Nouveau style was very popular in advertising. Posters or printed advertisements in the paper would often include a figure with flowers and vines entwined around it. Lettering was also given the same elegant style.

Art Nouveau

ART

Classic

Alphonse Mucha

Mucha's most famous images were adverts for products. They were elegant, colourful and included natural elements, such as flowers and vines.

Aubrey Beardsley

Beardsley was an English illustrator who often worked in black and white. He was influenced by Japanese woodcuts with their use of line and blocks of flat black and white.

Contemporary

Inkie

Inkie is a contemporary Bristol based artist. His swirling, elegant designs are hugely influenced by the art nouveau artist Alphonse Mucha.

Iain Macarthur

Macarthur's work blends portraits with detailed geometric patterns based on natural forms. He works mainly in black and white.

Art Nouveau

Beliefs and World Views

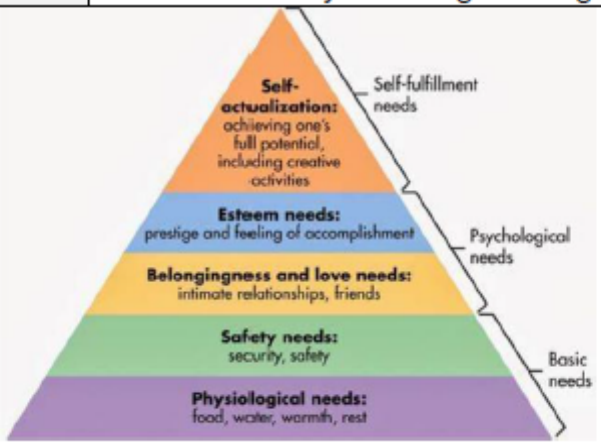
Beliefs and Worldviews – Year 9 Term 5 & 6

Topic 3: Ethics

1	**Ethics**	Moral principles that guide a person's beliefs and behaviour
2	**Moral**	'Right'- If an action is moral it is the right thing to do
3	**Immoral**	'Wrong' - If an action is immoral it is the right thing to do
4	**Utilitarianism**	That which brings the greatest good to the greatest number
5	**Deontological**	An action is inherently right or wrong
6	**Revelation**	God telling humans his will, especially what is moral
7	**Agape**	Universal love and compassion – the way of Jesus
8	**Abortion**	Terminating a unwanted pregnancy
9	**Sanctity of Life**	All life is sacred (valuable) and should be protected
10	**Quality of Life**	The level of health, comfort and happiness in a persons life
11	**Euthanasia**	Assisted Suicide – Ending a life due to severe pain
12	**IVF: In Vitro Fertilisation**	Sperm & egg combined outside of the womb to begin pregnancy
13	**Designer Babies**	IVF used to create children with certain genetic characteristics
14	**Artificial Intelligence**	Computer generated intelligence, ability to read and speak

Topic 4: Social Science

1	**Sociology**	Study of Society and human behaviour
	Society	Groups of Humans loving together
2	**Socialisation**	Learning behaviour through the influence of those around us
3	**Ritual**	An act or symbol performed regularly
4	**Norms**	Expected behaviour and beliefs
5	**Psychology**	Study of the mind and behaviour
6	**Cognition**	Process of thinking and understanding
8	**Fowlers Stages**	Psychological explanation fo how faith develops
9	**2 – Mythical Literal**	Faith is understood in a literal way; religious stories are seen as true in a concrete sense.
10	**4 – Individual Reflective**	(Young Adulthood) – People critically examine their beliefs and develop a more personal faith.
11	**6 - Universalizing Faith**	Deep, selfless faith, focusing on justice, love, and others needs
12	**Census**	Collection of data bout population, ethnicity, religion etc.
13	**Secularisation**	Process of society becoming less religious



What is Cyber Security

Is protecting networks, computers, programs and data from attack, damage or unauthorised access through the use of technologies, processes and practices.

The difference between Data and Information

Data is raw facts and figures. For example, a lists of test results for a class. Without any context or analysis, the data may be of limited use on its own.

Information is created when that data has been processed and becomes meaningful: For example, these are scores from a test where the pass mark was 35.

Protection methods

Measures can used to make it more difficult for attackers.

Firewalls
A firewall checks incoming and outgoing network traffic. It scans the data to make sure it doesn't contain anything malicious and that it follows the rules set by the network.

Anti-malware
The anti-malware will have a list of **definitions** of sequences of code that they are aware are malicious. If the code in your files matches the definitions, the files are quarantined.

Auto-Updates
Software that automatically checks for available updates

Social Engineering

Manipulating individuals so they give away personal information (e.g. bank account).

Blagging - inventing a scenario to target someone into divulging info. Companies can give employees security training.

Phishing - fraudulently obtaining personal info (using e.g. email or SMS). Beware of links in emails!

Pharming - Cyber-attack to redirect a website's traffic to another, fake site. Check the http address has http's'

Shouldering - observing a person's private info over their shoulder (e.g. ATM)

Name Generator Attacks
These are attacks in which the victim is asked in an app or a social media post to combine a few pieces of information or complete a short quiz to ***produce a name.*** Attackers do this to find out key pieces of information that can help them to answer the security questions that protect people's accounts.

Malicious code and attacks

Malware - umbrella term to describe a variety of hostile or intrusive software. **Six categories: Virus, Trojans, Worms, Adware, Spyware and Ransomware.**

- **Computer virus** - installed on your computer without your permission with the intention to do harm. Viruses spread through email attachments or IM services OR through files/programs downloaded
- **Trojan** - pretends to have a legitimate purpose. Spread by email
- **Spyware** - gathers info without user knowing (e.g. bank account details).
- **Adware** - internet usage analysed and then advertising targeted.
- **Hacking** – Gaining unauthorised access of a computer.
- **Script kiddie –** Are hackers who use tools downloaded from the internet that allow them to hack with little technical knowledge.
- **Denial of Service Attack (Dos)** – Floods a targeted computer or website with lots of requests and internet traffic in an attempt to overload the system.
- **Distributed Denial of Serve Attack. (DDos)–** This uses the same concept as a DoS attack but this time it is multiple computers making the attack at the same time.
- **Brute Force Attack** – This makes multiple attempts to discover something, for example a password.

Legislation

Data Protection Act 2018

All organisations and people using and storing personal data must abide by the following principles.

Your rights

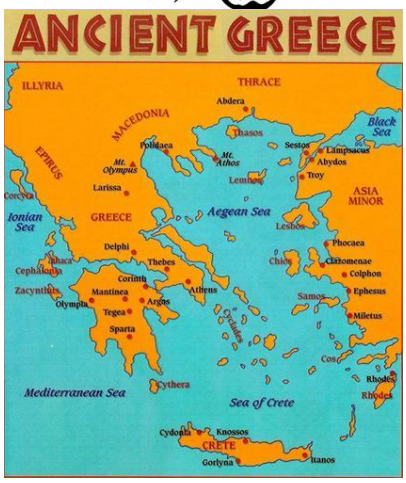
As a **data subject**, you have the right to find out what information the government and other organisations store about you.

Computer Misuse Act 1990

Designed to make hacking into computer systems a criminal offence with a potential jail sentence of up to 10 years and an unlimited fine.

	Keyword	Core Knowledge
1	Design Brief	A statement that outlines the expectations of a project.
2	Paper	Measured in grams per square metre (gsm). Common weights range from 60-170gsm
3	Card and Board	Card weights range from 200gsm – 350gsm. Board is selected by thickness and measured in microns.
4	Foam Core	An inner foam core with a paper face. Rigid and Stiff. Commonly used for model making and mounting artworks.
5	Corrugated Card	Two layers of lightweight card containing a fluted layer for strength. Used for impact protection. Fully degradable and recyclable.
6	User Centred Design (UCD)	At each stage of a design process, designers need to focus on the user and their needs. UCD involves the user through a series of research and investigative steps to make a useable product.
7	Design Specification	A design specification is a detailed document that contains all the information a designer needs to design a product. This may include who the product is for, what the product must do, why the product is needed, how much the client is willing to spend, the materials, aesthetics and sizing.
8	Manufacturing Specification	Is a detailed document containing all the information required to make the product. This will include technical drawings/diagrams/process flowcharts/timing plans which explain the assembly of the item.
9	Market Research	Before a product is made, market research helps a designer to understand the target market.
10	3D Printer	A machine that creates 3D objects by building them up layer by layer from melted plastic, based on a digital design.
11	Laser Cutter	A machine that uses a focused laser beam to cut or engrave materials like wood, plastic, or card with high precision.
12	Automation	The use of machines or computers to carry out tasks automatically, often to save time, improve accuracy, or reduce human effort.

Drama – Greek Theatre



Performance Techniques	
Choral Speaking	Ensemble speaking by a group often using various voice combinations
Choral Movement	Movement that is performed in unison.
Comedy	A play characterized by its humorous or satirical tone and its depiction of amusing people or incidents
Tragedy	A play dealing with tragic events and having an unhappy ending
Tableau	A frozen image or snapshot of real action.
Canon	Movement that is performed one after another to form a pattern.
Amphitheatre	Large outdoor theatre
Greek Chorus	A group who comment on the action
Narration	Spoken storytelling
Gesture	A meaning that shows movement

Greek Chorus
A Greek Chorus is a group of performers who comment on the action and provide insight into a play. Typically they are a group of 12 or more who sing, dance, move and speak in unison, sometimes wearing masks to convey different emotions.

Greek Myths & Characters
Myths were used to **teach lessons**
Characters are **types**, not realistic people:
- **Gods** – powerful, confident, slow, controlled
- **Heroes** – brave, strong, determined
- **Mortals** – fearful, weak, emotional

Common themes:
- **Fate**
- **Punishment**
- **Power**
- **Pride (hubris)**

Key Knowledge – Greek Theatre
Greek Theatre began in **Ancient Greece over 2,500 years ago**
Performances were part of **religious festivals** honouring the gods
Plays told **Greek myths** about gods, heroes and fate
Theatres were:
- **Outdoors**
- Built into hillsides
- Held **thousands of people**

Because theatres were large, actors used:
- **Loud voices**
- **Big gestures**
- **Exaggerated facial expressions**

Plays were not realistic – they were **bold, symbolic and dramatic**

What Did Greek Theatre Look Like?
Amphitheatre – a large, open-air theatre
Stage area – where actors performed
Audience sat in curved rows so sound could travel
Actors often played **more than one role**
Masks were used to show character and emotion

English

ANALYSIS	
Argument	The writer presents [topic] to…
Neat evidence	The phrase '…' shows…
Additional	Additionally, the phrase '…' adds to…
Language	The imagery suggests…
Your evaluation	A reader may also understand...
Structure and form	Structurally, the... tone emphasises...
Intentions of writer	The writer's intentions may have been to…
Society and context	Contextually, the writer may be reflecting…

POETIC POEMS	Definition
Personification	Giving something human characteristics
Oxymoron	Contradictory phrase
Enjambment	Continuing a line of poetry
Tone	Mood or atmosphere
Imagery	Descriptive language
Contrast	Very different things put together
Perspective	Viewpoint
Onomatopoeia	Words that sound like the thing
Extended	Carrying on
Metaphor	Saying something is something else
Simile	Saying something is like something else

A PERSUADER	Definition
Alliteration	Repeating same sound at starts of words
Points	Clear reasons to add to your argument
Exaggeration	Overstating
Repetition	Saying the same thing over and over
Statistics	Using numbers to represent facts
Unique ideas	Unusual or ways of approaching an issue
Anecdote	A short story used to make a point
Direct address	Talking to the audience
Emotive language	Appealing to people's feelings
Rhetorical questions	Questions not intended to be answered.

Shakespeare

Key words	Definition
Conflict	An argument, disagreement, violence or war.
Symbolism	When something represents something else.
Patriarchy	.A male-dominated society.
Oxymoron	Two opposite words together
Sonnet	A poem of 14 lines with regular structure
Protagonist	Main character
Antagonist	Villain or opposing character
Criticise	To judge something
Soliloquy	A speech delivered just for the audience to hear.
Unrequited love	Loving someone who does not love you back.
Villainy	Actions associated with a bad character.

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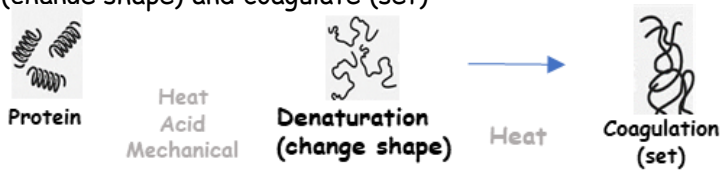
Rhetoric

Key words	Definition
Civilisation	An ordered society that abides by rules or laws
Savagery	Wild, primitive behaviour
Hierarchy	A system of ranking
Symbolism	When something represents something else
Metaphor	When something is described as something else
Patriarchy	A male dominated society.
Oppression	A cruel use of authority
Rhetoric	The art of public speaking
Dialogue	A conversation.
Prosody	How something is spoken or communicated.
Microcosm	A smaller version of a larger society, i.e. the island in LOTF
Ethos	Credibility & trust (in speech/writing)
Logos	Logic & reason (in speech/writing)
Pathos	Emotion & values (in speech/writing)

Food

1	**Functional and chemical properties of ingredients**	Carbohydrate, protein and fat all have a range of properties that make them useful in a variety of food products. **Fat (butter, oil, fat spread)** have two different functions in cooking: **shortening** and **aeration** **Fats performs different functions in food**. They help to: · add 'shortness' or 'flakiness' to foods, e.g. shortbread, pastry; · provide a range of textures and cooking mediums; · glaze foods, e.g. butter on carrots; · aerate mixtures, e.g. a creamed cake mix; · add a range of flavours.
	Shortening	When fat is rubbed into flour. The fat coats the flour particles, waterproofing them, and preventing gluten forming a structure, so creating a crumbly texture Used in **shortcrust pastry** (quiche; use twice as much flour as fat: 2:1 ratio) scones and shortbread Fats best used for shortening: solid Vegetable fats, butter, lard, white vegetable fat (Trex), baking margarine (they have a lower water content). **Rubbing in**: mixing flour and chilled fat by gently rubbing the two together between the fingertips and thumbs.
	Plasticity	Fats soften and become liquid over a range of temperatures, which affects their suitability for a variety of uses, e.g., spreading
	Aeration	Provides the cake's structure and volume. air is trapped in a mixture to make it lighter. Air needs to be added to a mixtures to give a springy texture. Eg cake making: **Creaming** a fat (butter) with sugar. Small bubbles of air are incorporated and form a stable foam. Eggs are beaten and added gradually Sieved flour is gently **folded in** with a metal spoon The trapped air bubbles expand when baked – giving it a springy texture
	Denaturation and coagulation	**Denaturation:** the chemical bonds have broken and the protein and protein molecule has unfolded and changed shape. Can change when you add **heat, acid or mechanical action** **Acid:** marinating meat – marinade contains acid/herbs/spice **Mechanical:** mixing or whisking (e.g. egg whites). The proteins change shape and stretch allowing the air to be trapped in the structure **Coagulation:** the joining together of lots of denatured protein molecules – which changes the appearance and texture of the food **Gas-in-liquid foam**– liquid forms a thin film around each air bubble **Eggs** are a good source of protein, in certain conditions the protein in the eggs can denature (change shape) and coagulate (set) 
2	Why do we cook food	Food is prepared and cooked to: destroy harmful bacteria; make the food more palatable – improves flavour, texture and appearance; reduce the bulk of the food; provide variety and interest to meals.
		Heat transfer: Transference of heat energy between objects **Conduction**: transferring heat through solid materials (metals) and food (stir-frying vegetables in a wok;) **Convection**: transferring heat through or liquid or air into food (starch-based sauce) **Radiation:** transferring heat by infra-red waves that heat up what they come into contact with (grilling toast)

3	**Raising agents**	**Raising agents** are used in baked products like scones, cakes and bread. They include anything that causes **rising within foods**. Raising agents create gas, air or steam which expands when heated and causes the food to rise. Different types of raising agents: **mechanical; chemical; biological**.
	Chemical	**Chemical**: these require a chemical reaction in order to function. **Baking soda** (alkali) - reacts with acid (in the presence of water) to produce carbon dioxide, which causes rising (e.g. lemon cake). **Baking powder** is baking soda with an acid (e.g. cream of tartar) already present, so only water need be added. **Self-raising flour** is flour that already contains baking powder, and therefore only requires water to be activated.
	Bioloical	**Biological – yeast**. Yeast is used to make bread and bread products. The yeast needs warmth, flour and sugar (food supply) liquid (water or milk) to ferment, and to produce carbon dioxide and alcohol. The carbon dioxide in the bread dough will expand when placed in a hot oven; steam is also produced to help raise the dough. When the dough is baked in the oven, the yeast is killed, the alcohol escapes and the dough sets
	Mechanical raising agent: Air and Steam	**Air** is a commonly used and effective raising agent. It can be added to a mixture in a variety of ways: **Sieving** flour or lifting flour when rubbing in fat, **Creaming** fat and sugar to incorporate air, **Whisking** to trap air, **Beating** ingredients together helps to trap air, **Rolling and folding pastry** (creating laminations) traps air, e.g. flaky pastry
		Steam is a common physical raising agent. Produced from the liquids (e.g. water, milk, eggs) that are added to mixtures, or from water contained in a solid component (e.g. butter). **Yorkshire pudding) / choux pastry** require a high oven temperature to produce the steam to raise the mixture producing a light, open texture with large pockets of air left after the steam has escaped. Steam also works with air and carbon dioxide in cakes and bread, as well as with air in pastry, to help increase their volume.
4	**Festival feast meal planning task**	**Factors that need to be considered when planning, preparing, cooking and serving food at the festival**: food preparation and cooking facilities at the festival; number and age profile of expected visitors; special focus, e.g. local specialities, religious considerations; popular dishes, which may be influenced by festival type, theme or cuisine; cost; food hygiene and health and safety **The 4 C's**: Cleaning, Cooking, Chilling, Cross-contamination.
5	**Food choice, meal options and recipe-kits**	Recipe kits are available in supermarkets and for home delivery. **Advantages:** convenient; less time needed for shopping; quick to prepare; variety of recipes; clear instructions provided; ingredients provided in specific quantities' good for portion control. **Disadvantages:** can be an expensive, smaller shops or discounters; meals are set for a week removing spontaneity; kits sometimes come with excessive packaging which may not be able to be recycled.

Year 9 French Term 5: La santé!

Le petit-déjeuner	*Breakfast*
1. Je mange/J'ai mangé…	*I eat/I ate…*
2. Je ne mange jamais…	*I never eat…*
3. Je ne mange rien.	*I don't eat anything.*
4. Je bois/J'ai bu…	*I drink/I drank*
5. Je ne bois jamais…	*I never drink…*
6. un croissant	*a croissant*
7. un fruit	*a piece of fruit*
8. du pain grillé	*toast*
9. du bacon	*bacon*
10. une tartine	*a slice of bread with jam*
11. des céréales	*cereal*
12. des oeufs	*eggs*
13. du jus de fruits	*fruit juice*
14. du chocolat chaud	*hot chocolate*
15. du lait	*milk*
16. du café	*coffee*
17. du thé	*tea*
18. de l'eau	*water*

C'est comment?	*What's it like?*
19. sain	*healthy*
20. savoureux/délicieux	*tasty/delicious*
21. sucré/salé	*sugary/salty*
22. gras	*fatty*
23. épicé/acide	*spicy/sour*
24. dégoûtant	*disgusting*
25. Il y a beaucoup de vitamines.	*There are lots of vitamins.*

Phonics Focus:	
silent final consonant ***trois***	[ui] = /we/ ***fruits***
[é] = 'ay' ***fêté***	[h] = silent ***hier***
[aine] = /ayn/ ***prochaine***	[ou] = /ooh/ ***douze***

Le corp	*The body*
26. le bras	*arm*
27. le dos	*back*
28. le pied	*foot*
29. le ventre	*stomach*
30. la jambe	*leg*
31. la tête	*head*
32. l'oreille	*ear*
33. l'oeil/les yeux	*eye/eyes*

Vous allez bien?	*Are you well?*
34. J'ai mal…	*I have a sore…*
35. J'ai un rhume.	*I have a cold.*
36. J'ai de la fièvre.	*I have a temperature.*
37. Il faut rester au lit.	*You must stay in bed.*
38. Il faut utiliser une crème.	*You must use a cream.*
39. Il faut prendre des antidouleurs.	*You must take painkillers.*
40. Il faut boire beaucoup d'eau.	*You must drink lots of water.*

Ça ne va pas!	*It's not going well!*
41. Je suis tombé(e).	*I fell.*
42. Je me suis cassé la jambe.	*I broke my leg.*
43. Je me suis coupé le doigt.	*I cut my finger.*
44. Je me suis fait mal au bras.	*I hurt my arm.*
45. Je me suis fait piquer.	*I got stung.*
46. J'ai pris un coup de soleil.	*I got sunburnt.*
40. Je suis allé(e) à l'hôpital.	*I went to the hospital.*
41. Je suis allé(e) chez le médecin.	*I went to the GP surgery.*

Vital verb: ***manger (to eat)***		
Present:	**Near future:**	**Past perfect:**
*Je mang**e***	*Je **vais** manger*	*J'**ai** mang**é***
*Tu mang**es***	*Tu **vas** manger*	*Tu **as** mang**é***
*Il/elle/on mang**e***	*Il/elle/on **va** manger*	*Il/elle/on **a** mang**é***
*Nous mange**ons***	*Nous **allons** manger*	*Nous **avons** mang**é***
*Vous mang**ez***	*Vous **allez** manger*	*Vous **avez** mang**é***
*Ils/elles mang**ent***	*Ils/elles **vont** manger*	*Ils/elles **ont** mang**é***

Rivers

HYDROLOGICAL CYCLE

RIVER PROCESSES

EROSION where rocks are worn away and the land changes shape.

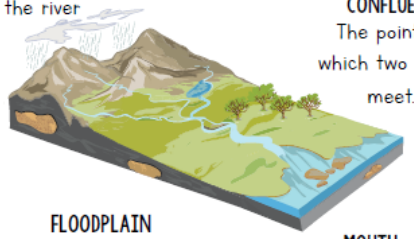
TRANSPORTATION where eroded material is carried by the river downstream.

DEPOSITION where transported material is dropped when the river loses energy, such as when it enters the sea.

DRAINAGE BASIN

SOURCE
The origin of the river

CONFLUENCE
The point at which two rivers meet.

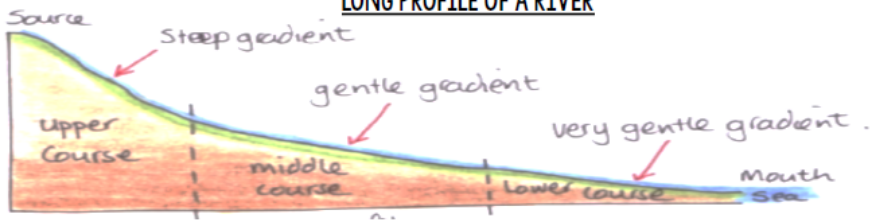


TRIBUTARY
Smaller streams/rivers that flow into a larger one.

FLOODPLAIN
Flat land along the river that is prone to flooding.

MOUTH
The end where the river meets the sea.

LONG PROFILE OF A RIVER

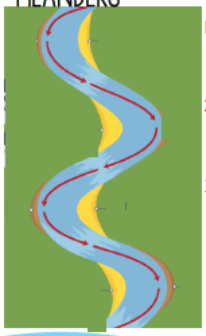


THE MIDDLE COURSE

FEATURES

Wider, shallower valleys, meanders, and oxbow lakes

MEANDERS



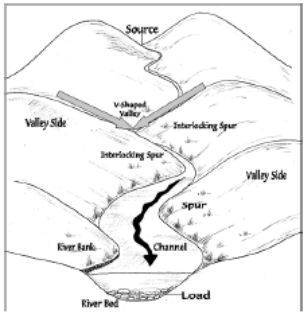
1. The formation of meanders is due to both **deposition** and erosion and meanders gradually move downstream.
2. The force of the water **erodes** and undercuts the river bank on the outside of the bend where water flow has most energy.
3. On the inside of the bend, where the river flow is slower, material 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**.

OXBOW LAKE

THE UPPER COURSE

FEATURES

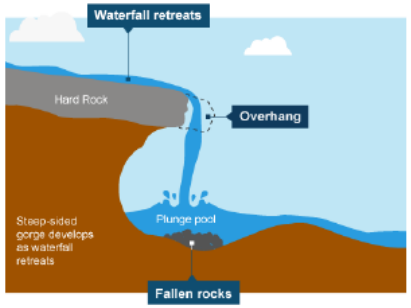
Steep-sided V-shaped valleys, interlocking spurs, rapids, waterfalls and gorges.



When a river is near its source, it often develops a V-shaped valley as the river erodes down (this is called **vertical erosion**).

At the same time, weathering breaks up material on the valley slopes. Weathered material from the valley sides gets deposited in the river.

1. The soft rock erodes more quickly, **undercutting** the hard rock.
2. The hard rock is left **overhanging** and 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.



Geography

THE LOWER COURSE

FEATURES

Wide flat-bottomed valleys, floodplains and deltas

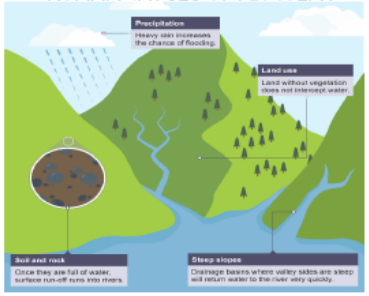
A floodplain is the area around a river that is covered in times of flood. It is a very fertile area. This makes floodplains a good place for agriculture. A build-up of alluvium on the banks of a river can create levees, which raise the riverbank.

FLOODING

A flood occurs whenever a river overflows its banks (exceeds its 'bankfull' discharge) However, a flood becomes a problem when the water rises to a level where it threatens property and/or life. Rivers usually flood due to a range of physical factors

These physical factors can be divided into **climatic factors** and **drainage basin** characteristics. **Human intervention** can also make flooding worse

HUMAN CAUSES OF FLOODING



PHYSICAL CAUSES OF FLOODING

KEYWORDS

CAUSE	SOURCE	CONFLUENCE	DEPOSITION	WATERSHED
EFFECT	MOUTH	MEANDER		V=SHAPED VALLEY
RESPONSE	LONG PROFILE	WATERFALL	OXBOW LAKE	
DRAINAGE	FLOODPLAIN	EROSION	DELTA	HYDROLOGICAL CYCLE

BOSCASTLE

CAUSES

There was a spell of heavy localised rainfall - 89 mm of rain fell in an hour on saturated ground from previous rainfall. Topography of the land. The landscape upstream of Boscastle, a steep-sided valley, acted as a funnel directing vast volumes of water into the village.

WHAT HAS BEEN DONE?

- £4.5 million has been spent on a flood defence scheme.
- The scheme incorporates drainage, sewerage systems and land re-grading.
- Boscastle car park has been raised in height, which will stop the river from bursting its banks so easily.
- New drains allow water to run into the lower section of the river quickly.
- The river channel has been made deeper and wider so that it can accommodate more water.

BANGLADESH

CAUSES

Much of Bangladesh lies on a floodplain. Over half of the country lies 6m below sea level. There are 3 major rivers: The Ganges, Brahmaputra and Meghna. Meltwater from the Himalayas.

RESPONSES - SHORT TERM

- Food aid from the Government and other countries.
- Water purification tablets.
- People repaired embankments and helped to rescue people.
- Free seed given to farmers

RESPONSES - LONG TERM

- Introducing flood warning systems.
- Emergency planning.
- Dams planned.
- Reducing deforestation.
- Building embankments.
- Building raised flood shelters.

Year 9 German Term 5: Bleib Gesund!

Das Frühstück	*Breakfast*
1. Ich esse/Ich habe…gegessen.	*I eat/I ate…*
2. Ich trinke/Ich habe… getrunken.	*I drink/I drank….*
3. Ich esse kein Früstück.	*I don't eat any breakfast.*
4. der/das Joghurt	*yoghurt*
5. der Käse	*cheese*
6. der Schinken	*ham*
7. der Speck	*bacon*
8. der Toast	*toast*
9. das Brötchen	*roll*
10. das Obst	*fruit*
11. das Ei	*egg*
12. die Frühstücksflocken	*cereal*
13. der Kaffee/der Tee	*coffee/tea*
14. der Orangensaft	*orange juice*
15. die Milch	*milk*
16. die heiße Schokolade	*hot chocolate*

Wie ist/war das?	*What is/was it like?*
17. gesund	*healthy*
18. ungesund	*unhealthy*
19. lecker	*delicious*
20. furtchbar	*awful*
21. ekelhaft	*disgusting*
22. süß/sauer	*sweet/sour*
23. salzig/scharf	*salty/spciy*
24. vegetarisch	*vegetarian*

Phonics Focus:	
[d] = /t/ ***hund***	**[w] = /v/** ***wie***
[z] = 'ts' ***Zug***	**[ö] = /urgh/** ***höre***
[ß] = /ss/ ***groß***	**[ö] = /err/** ***hören***

Der Körper	*The body*
25. der Kopf	*head*
26. die Schulter	*shoulder*
27. der Arm	*arm*
28. die Hand	*hand*
29. der Rücken	*back*
30. der Bauch	*stomach*
31. der Po	*bottom*
32. das Bein	*leg*
32. Das Knie	*knee*
33. der Fuß	*foot*

Was ist passiert?	*What happened?*
34. Ich habe mir das Bein verlezt.	*I injured my leg.*
35. Ich habe mir den Arb gebrocken.	*I broke my arm.*
36. Ich habe einen Unfall gehabt.	*I had an accident.*
37. Ich bin vom Rad gefallen.	*I fell off my bike.*
38. Ich bin ins Krankenhaus gekommen.	*I went to hospital.*

Der Arzt sagt…	*The doctor says…*
39. Trink viel Wasser.	*Drink lots of water.*
40. Nimm dieses Medikament.	*Take this medicine.*
41. Bleib zwei Tage im Bett.	*Spend 2 days in bed.*
42. Spiel kein Fußball.	*Don't play football.*
43. Nimm diese Salbe.	*Use this cream.*
44. Geh nicht in die Schule.	*Don't go to school.*

Vital verb: ***essen (to eat)***		
Present:	**Near future:**	**Past perfect:**
Ich esse	*Ich werde…essen.*	*Ich habe…gegessen.*
Du isst	*Du wirst…essen.*	*Du hast…gegessen.*
Er/sie isst	*Er/sie wird…essen.*	*Er/sie hat…gegessen.*
Wir essen	*Wir werden…essen.*	*Wir haben…gegessen.*
Ihr esst	*Ihr werdet…essen.*	*Ihr habt…gegessen.*
Sie/sie essen	*Sie/sie werden…essen.*	*Sie/sie haben…gegessen.*

History

Acute Radiation Sickness	❖ An acute illness caused by irradiation of the entire body (or most of the body) by a high dose of radiation in a very short period of time (usually a matter of minutes). Can be fatal.
Chernobyl disaster	❖ This was a nuclear accident was a series of explosions on 26 April 1986. It happened at the Number. 4 reactor in the Chernobyl Nuclear Power Plant, near the city of Pripyat in the north of the Ukrainian SSR in the Soviet Union.
Cold War	❖ Between 1946 AND 1991 the United States, the Soviet Union, and their allies were locked in a long, tense conflict known as the Cold War. Though the parties were technically at peace, the period was characterized by an aggressive arms race and bids for world dominance by influence.
Communism	❖ Communism is a political and economic idea which believes in a classless system in which there is no private ownership and government has full control.
Dictatorship	❖ A dictatorship is a form of government in which one person or a small group possesses absolute power without effective limitations.
Dosimeter	❖ An instrument that measures exposure to ionizing radiation over a given period.
Exclusion Zone	❖ The 30-km area around the Chernobyl power plant that was evacuated in the wake of the disaster. The zone remains in place today and is largely uninhabited.
Gamma Rays	❖ Gamma rays are a form of radiation. They can pass completely through the human body and cause damage to tissue and DNA.
Graphite	❖ A material found in the reactors used at Chernobyl.
Iodine tablets	❖ Iodine tablets only provide protection against radioactive iodine and make the
Liquidators	❖ The term “liquidators” refers to a specific group of people who were sent to Chernobyl to deal with, and clean up, the consequence of the nuclear disaster. Most suffered some form of radiation damage
Nuclear fallout	❖ Radioactive material from a nuclear device mixes with the material in the atmosphere mushroom cloud. As this radioactive material cools, it becomes condensed and forms particles, such as dust. The condensed radioactive material then falls back to the earth; this is what is known as fallout.
Nuclear reactor	❖ Nuclear reactors are the heart of a nuclear power plant. They contain and control nuclear chain reactions that produce heat through a physical process called fission. That heat is used to make steam that spins a turbine to create electricity.
Pripyat	❖ The town close to the Chernobyl Nuclear Power Plant. It was once reserved solely for workers at the Chernobyl plant. Before the disaster, it was home to an estimated 14,000 people.
Radiation shielding	❖ Various things can be used to shield or protect you from radiation exposure. Barriers of lead, concrete, or water provide protection from penetrating gamma rays.
Roentgen	❖ A unit of measurement for the exposure of radiation – the higher the number the more radiation is present.
Soviet Union	❖ A group of nations otherwise known as the ‘USSR’ or ‘Union of Soviet Socialist Republics. It existed for 69 years, from 1922 until 1991.
Ukraine	❖ A republic which was part of the USSR in 1986. Now an independent country

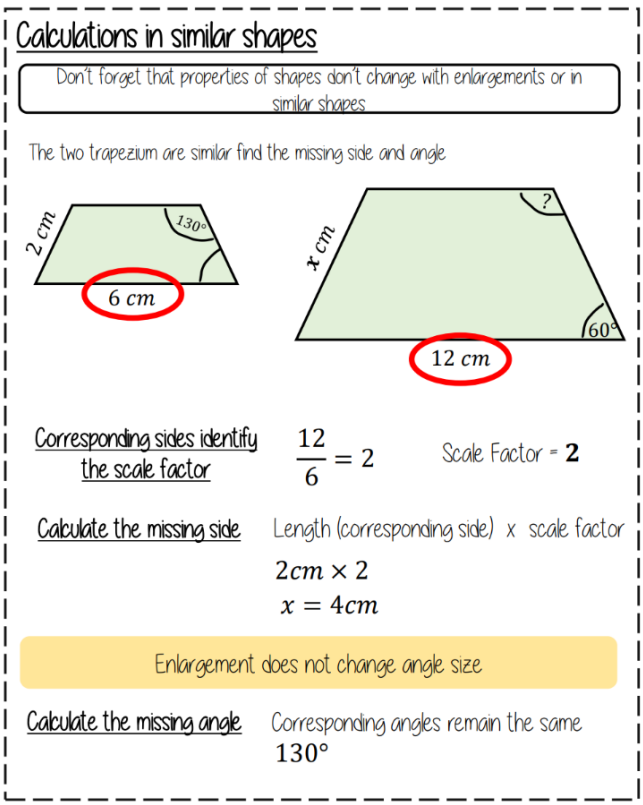
History

Key figure	Who were they?
Anatoly Stepanovich Dyatlov	➢ A Soviet engineer who was the deputy chief engineer for the Chernobyl Nuclear Power Plant. He supervised the safety test which resulted in the 1986 Chernobyl disaster For this he served time in prison as he was blamed for not following the safety protocols.
Boris Yevdokimovic h Shcherbina	➢ A Ukrainian Soviet politician who served as a Deputy Chairman of the Council of Ministers of the Soviet Union from 1984 to 1989. During this period he supervised Soviet crisis management of two major catastrophes: the 1986 Chernobyl disaster and the 1988 Armenian earthquake
Mikhail Gorbachev	➢ A Soviet and Russian politician who served as the eighth and final leader of the Soviet Union from 1985 to the country's dissolution in 1991. He was in charge of the country during the Chernobyl crisis
Nikolai Maximovich Fomin	➢ A Ukrainian engineer. He was the chief engineer of the Chernobyl Nuclear Power Plant from 1981 until the Chernobyl nuclear disaster in 1986. Eventually, like Bryukhanov, he was found guilty of causing the accident and was sentenced to 10 years in prison. While in prison, Fomin received psychiatric treatment several times. For health reasons, he was released from prison early and transferred to a psychiatric hospital.
Nikolai Tarakanov	➢ A former Soviet military leader, as well as other positions in the Soviet Government. Tarakanov led a three-month operation to remove radioactive debris from the dangerous zones of the Chernobyl Nuclear Power Plant. In his later life, he has become disabled due to consequences of his exposure to radiation in Chernobyl, and currently takes eight different medications to treat his radiation-related symptoms.
Valery Alekseyevich Legasov	➢ A Soviet inorganic chemist and a member of the Academy of Sciences of the Soviet Union. He is primarily known for his efforts to contain the 1986 Chernobyl disaster.
Vasily Ignatenko	➢ A Soviet firefighter who was among the first responders to the Chernobyl disaster. On 26 April 1986, Ignatenko's fire brigade was involved in mitigating the immediate aftermath of the Chernobyl disaster; fighting the fires that broke out following the initial explosion of Reactor 4 at the Chernobyl Nuclear Power Plant. While on site, Ignatenko received a high dose of radiation, leading to his death at a radiological hospital in Moscow eighteen days later.
Viktor Bryukhanov	➢ Was the manager of construction of the Chernobyl Nuclear Power Plant and the director of the plant from 1970 to 1986. Officials blamed the disaster on the operators and their managers, including Bryukhanov. He was charged on 12 August with violation of safety regulations, creating conditions that led to an explosion, understating the radiation levels after the disaster and sending people into known contaminated areas. Bryukhanov was found guilty of causing the accident and given the maximum sentence of ten years. He was sent to a penal colony in Donetsk to serve his sentence.

Maths: 9.12 Enlargement & similarity…..

Keywords	
Similar Shapes	shapes of different sizes that have corresponding sides in equal proportion and identical corresponding angles
Scale Factor	the multiple describing how much a shape has been enlarged
Enlarge	to change the size of a shape (enlargement is not always making a shape bigger)
Corresponding	objects (or sides) that appear in the same place in two similar situations
Image	the picture or visual representation of the shape

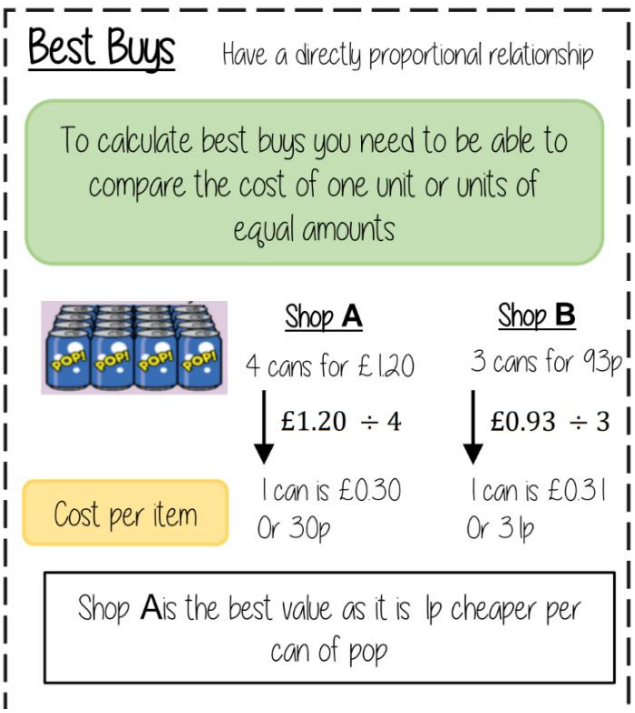
Sparx codes for this topic	
M178	Enlargements
M324	Calculations in similar shapes

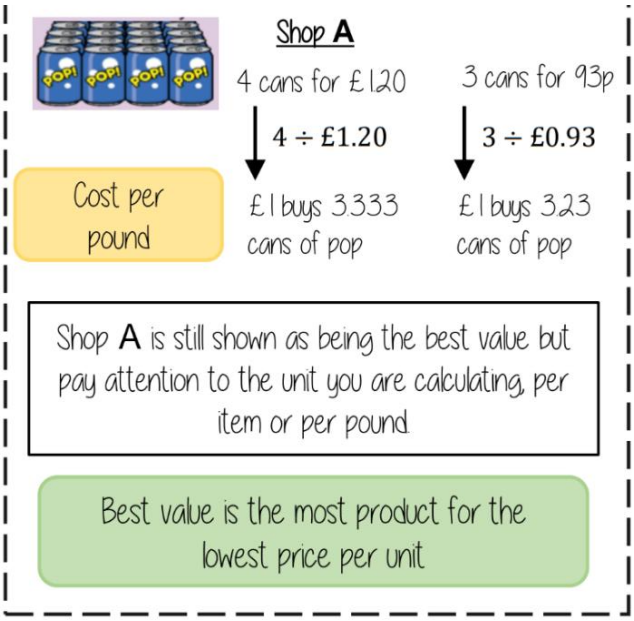


Maths: 9.13 Solving ration & proportion problems…..

Keywords	
Proportion	a comparison between two numbers
Ratio	a ratio shows the relative size of two variables
Direct proportion	as one variable is multiplied by a scale factor the other variable is multiplied by the same scale factor
Inverse proportion	as one variable is multiplied by a scale factor the other is divided by the same scale factor

Sparx codes for this topic	
M478, M472	Direct proportion
U357	Inverse proportion
M681	Best buys
M525	Sharing a whole into a given ratio
M543	Finding a value given 1:n

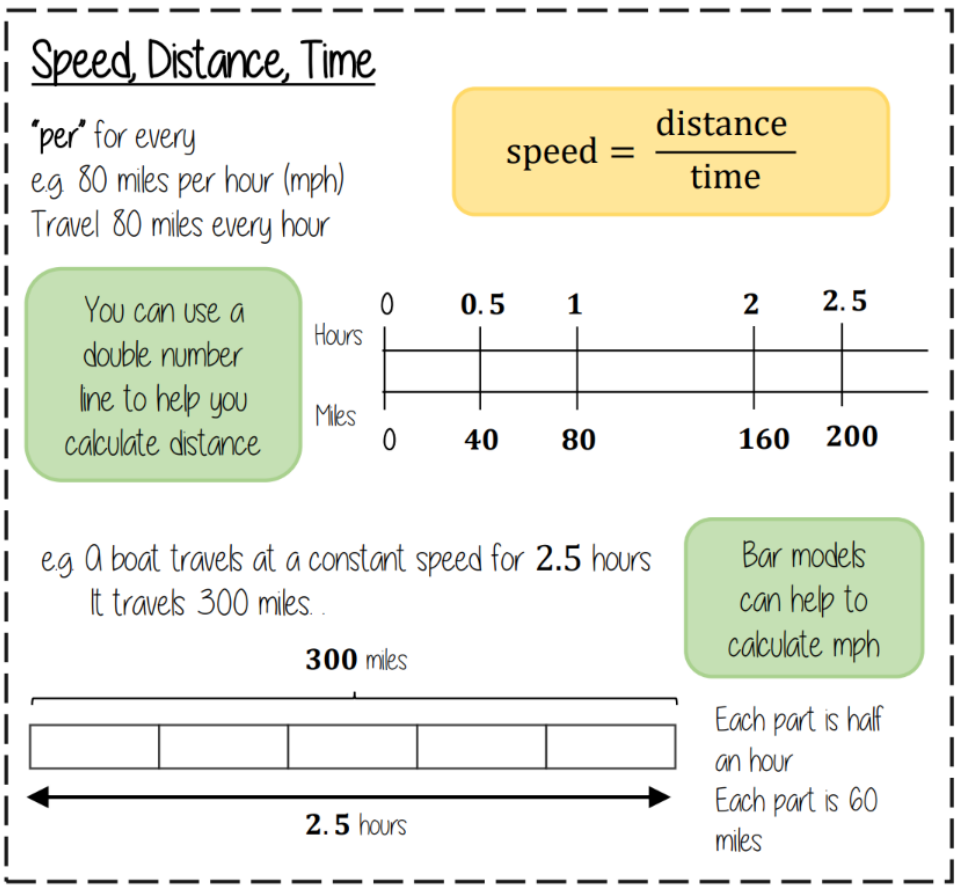




Maths: 9.14 Rates…..

Keywords	
Convert	change
Mass	a measure of how much matter is in an object. Commonly measured by weight
Origin	the coordinate (0, 0)
Volume	the amount of 3D space a shape takes up
Substitute	putting numbers where letters are — replacing numbers into a formula

Sparx codes for this topic	
M487, M865	Rates of change & units
U151	Speed, Distance, Time
M247, M221	Distance-time graphs
U910	Density, Mass, Volume



Maths: 9.15 Probability …..

Keywords	
Probability	the chance that something will happen
Relative Frequency	how often something happens divided by the outcomes
Independent	an event that is not affected by any other events
Chance	the likelihood of a particular outcome
Event	the outcome of a probability — a set of possible outcomes
Biased	a built-in error that makes all values wrong by a certain amount

Sparx codes for this topic	
M655	The probability scale
M206	Expected outcomes & Relative frequency
M299	Independent events
M829, M834	Using diagrams

Expected outcomes

Expected outcomes are estimations. It is a long term average rather than a prediction.

Dark	Milk	White
0.15	0.35	0.5

The sum of the probabilities is 1

On experiment is carried out 400 times.
Show that dark chocolate is expected to be selected 60 times

$$0.15 \times 400 = 60$$

Maths: 9.16 Algebraic representation…..

Keywords	
Quadratic	a curved graph with the highest power being 2. Square power
Inequality	makes a non-equal comparison between two numbers
Reciprocal	a reciprocal is 1 divided by the number
Cubic	a curved graph with the highest power being 3. Cubic power
Origin	the coordinate (0, 0)
Parabola	a 'u' shaped curve that has mirror symmetry

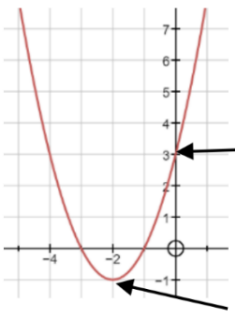
Sparx codes for this topic	
U989	Quadratic graphs
U980, U593, U229	Other graphs
U509, U747	Represent inequalities

Quadratic Graphs

$y = x^2 + 4x + 3$

If x^2 is the highest power in your equation then you have a quadratic graph

It will have a parabola shape



Substitute the x values into the equation of your line to find the y coordinates

x	-4	-3	-2	-1	0	1
y	3	0	-1	0	3	8

Intersection with the y axis

Coordinate pairs for plotting $(-3, 0)$

Plot all of the coordinate pairs and join the points with a curve (freehand)

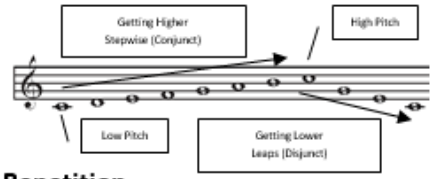
Quadratic graphs are always symmetrical with the turning point in the middle

Building Bricks

Exploring the Elements of Music MAD T SHIRT

Melody - Pitch

The **highness** or **lowness** of a sound.



Repetition

Sequence (a pattern that is repeated at a slightly higher pitch)

Articulation

How individual notes or sounds are **played/techniques**.

LEGATO – playing notes in a long, smooth way shown by a **SLUR**.

STACCATO – playing notes in a short, detached, spiky way shown by a **DOT**.

Dynamics

The **volume** of a sound or piece of music.

VERY LOUD: *Fortissimo (ff)*
LOUD: *Forte (f)*
QUITE LOUD: *Mezzo Forte (mf)*
QUITE SOFT: *Mezzo Piano (mp)*
SOFT: *Piano (p)*
VERY SOFT: *Pianissimo (pp)*
GETTING LOUDER: *Crescendo (cre*
GETTING SOFTER: *Diminuendo (dim.)*

Texture

How much sound we hear.

THIN TEXTURE: *(sparse/solo)* – small amount of instruments or melodies.

THICK TEXTURE: *(dense/layered)* – lots of instruments or melodies.

Structure

Mow the music is put together in sections and how often they are repeated

Harmony and Tonality

Harmony refers to the sound that is made when more than one pitch is sounded at the same time, often these are **chords**

Tonality is the key or scale used for a piece of music that gives it colour or character usually **Major or Minor**

Instruments (Timbre/Sonority)

Describes the **unique sound or tone quality** of different instruments voices or sounds.

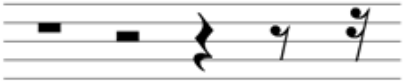
Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.

Rhythm (Duration)

The **length** of a sound.

SHORT ⟶ **LONG**

The opposite or absence of sound, **no sound**. In music these are **RESTS.**



Tempo (speed)

The **speed** of a sound or piece of music.

FAST: *Allegro, Vivace, Presto* **SLOW:** *Andante, Adagio, Lento*
GETTING FASTER – *Accelerando (accel.)*
GETTING SLOWER – *Ritardando (rit.) or Rallentando (rall.)*

Music can create an **atmosphere**
Music can create an **image** *e.g., in response to art or, a story*– this is called **PROGRAMME MUSIC.**

Families of Instruments

Strings – Violin, Viola, 'Cello, Double Bass, Guitar, Bass Guitar, Ukulele
Woodwind – Flute, Oboe, Clarinet, Bassoon, Recorder, Saxophone
Brass – Trumpet, trombone, tuba, french Horn
Percussion – Drum Kit, Timpani, Xylophone, Glockenspiel, Djembe, wood block
Keyboard – Piano, Organ, Harpsichord

SOUNDTRACKS

Exploring Film Music

A. The Purpose of Music in Film

Film Music is a type of **DESCRIPTIVE MUSIC** that represents a **MOOD, STORY, SCENE** or **CHARACTER** through music, it is designed to **SUPPORT THE ACTION AND EMOTIONS OF THE FILM ON SCREEN.** Film Music can be used to:

- Create or enhance a mood (though the **ELEMENTS OF MUSIC**)
- Function as a **LEITMOTIF** (see D)
- To emphasise a gesture (**MICKEY-MOUSING** – when the music fits precisely with a specific part of the action in a film e.g. cartoons)
- Provide unexpected juxtaposition/irony (using music the listener wouldn't expect to hear giving a sense of uneasiness or humour!)
- Link one scene to another providing continuity
- Influence the pacing of a scene making it appear faster/slower
- Illustrate the geographic location (using instruments associated with a particular country) or historical period (using music 'of the time').

D. Leitmotifs

LEITMOTIF – A frequently recurring short melodic or harmonic idea which is associated with a character, event, concept, idea, object or situation.

Leitmotifs can be changed through **SEQUENCING, REPETITION** or **MODULATION** giving a hint as to what may happen later in the film or may be heard in the background giving a "subtle hint" to the listener *e.g. the "Jaws" Leitmotif*

B. Composing using musical elements

PITCH AND MELODY – **RISING MELODIES** are often used for increasing tension, **FALLING MELODIES** for defeat.

DYNAMICS – **FORTE (LOUD)** dynamics to represent power; **PIANO (SOFT)** dynamics to represent weakness/calm/resolve. **CRESCENDOS** used for increasing threat, triumph or proximity and **DECRESCENDOS** or **DIMINUENDOS** used for things going away into the distance. Horror Film soundtracks often use **EXTREME DYNAMICS** or **SUDDEN DYNAMIC CHANGES** to 'shock the listener'.

HARMONY – **MAJOR** – happy; **MINOR** – sad. **CONSONANT HARMONY OR CHORDS** for "good" and **DISSONANT HARMONY OR CHARDS** for "evil"

DURATION – **LONG** notes often used to describe vast open spaces or outer space; **SHORT** notes often used to depict busy, chaotic or hectic scenes. **PEDAL NOTES** – long held notes in the **BASS LINE** used to create tension and suspense.

TEXTURE – **THIN/SPARE** textures used for bleak or lonely scenes; **THICK/FULL** textures used for active scenes or battles.

ARTICULATION – **LEGATO** for flowing or happy scenes, **STACCATO** for 'frozen' or 'icy' wintery scenes.

OSTINATO rhythms for repeated sounds *e.g. horses.*

C. Film Music Key Words

SOUNDTRACK – The music and sound recorded on a motion-picture film.

STORYBOARD – A graphic organiser using illustrations and images in sequence to help the composer plan their soundtrack.

CUESHEET – A detailed listing of **MUSICAL CUES** matching the visuals of a film so that composers can time their music accurately.

CLICK TRACKS – An electronic **METRONOME** which helps film composers accurately time their music to on-screen action through a series of 'clicks'

DIEGETIC FILM MUSIC – Music within the film for both the characters and audience to hear *e.g. a car radio, a band in a nightclub or sound effects.*

NON-DIEGETIC FILM MUSIC – Music which is put "over the top" of the action of a film for the audience's benefit and which the characters within a film can't hear – also known as **UNDERSCORE**

E. Film Music Composers and their Soundtracks

Jerry Goldsmith
Planet of the Apes
Star Trek: The Motion Picture
The Omen
Alien

John Williams
Star Wars
Jaws
Harry Potter
Indiana Jones
Superman, E.T.

James Horner
Titanic
Apollo 13
Braveheart
Star Trek II
Aliens

Ennio Morricone
The Good, The Bad and The Ugly
For a Few Dollars More
The Mission

Danny Elfman
Mission Impossible
Batman Returns
Men in Black
Spider Man

Hans Zimmer
The Lion King
Gladiator
Dunkirk
Blade Runner 2049
No Time to Die

Bernard Hermann
Psycho
Vertigo
Taxi Driver

Personal Development

Intimate Relationships – KS3

Consent	Freely given, clear permission to take part in something.
Capacity	Being able to understand and make a decision.
Legal age of consent	The minimum age at which someone can legally agree to sexual activity (16).
Sexual health	Physical, emotional and mental wellbeing related to sexuality.
Contraception	Methods used to prevent pregnancy and STI transmission.
STI (Sexually Transmitted Infection)	An infection passed through sexual contact.
Protection	Ways to reduce risks, such as using condoms.
Testing	Medical checks for STIs.
Healthy relationship	A relationship based on respect, trust and communication.
Sexual harassment	Unwanted sexual comments, behaviour or contact.
Unwanted	Not asked for or agreed to.
Verbal harassment	Sexual comments, jokes or remarks.
Online harassment	Sexual messages or images sent digitally without consent.
Boundary	A personal limit that should be respected.
Gender-based violence	Harmful behaviour directed at someone because of their gender.
Sexual violence	Any sexual act without consent.
Domestic abuse	Abuse within a family or intimate relationship.
Power and control	Using fear or authority to dominate someone.
Victim	A person who has experienced harm or abuse.
Perpetrator	A person who carries out harm or abuse.

Personal Development

Sexual Harassment and Gender-based Violence

Examples

- Sexual harassment: catcalling, inappropriate jokes, unwanted touching, sending sexual messages.
- GBV: Physical assault, coercion, controlling behaviour, online abuse related to gender.

Impact

- Emotional: Anxiety, fear, low self-esteem etc.
- Physical: Injuries, sleep problems, stress etc.
- Social: Isolation, difficulty trusting others etc.

What to do

- Tell someone you trust
- Keep records if safe (texts, messages, incidents)
- Remove yourself from unsafe situations

Support services

- Childline: 0800 1111 – Free, confidential advice for young people
- NSPCC: 0808 800 5000 – Help with abuse and safety
- Respect (for GBV advice): 0808 802 4040
- Police: Emergency 999 / Non-emergency 101 – For immediate danger or reporting crimes.

Careers – KS3

Apprenticeship	A person who is learning a trade from a skilled employer, having agreed to work for a fixed period at low wages.
Candidate	A person who applies for a job.
Contractor	A person or firm that undertakes a contract to provide materials or labour to perform a service or do a job.
Enterprise	A project or undertaking, especially a bold or complex one.
Entrepreneur	A person who sets up a business or businesses, taking on financial risks in the hope of profit.
Flexible working	A way of working that suits and employee's needs e.g. having a flexible start and finish time or the option to work from home.
Freelancer	Someone who is not employed by one organisation but does pieces of work for different companies.
Gig economy	A labour market characterised by short-term, flexible jobs.
Impression	An idea, feeling or opinion about something or someone.
Income	Money received, especially on a regular basis for work or through investments.
Online footprint	The trail of data generated by your online activities.
Online presence	The collective existence of an individual, business or brand across the internet.
Pension	A regular payment made by the state to the people of or above the retirement age.
Personal qualities	Characteristics, attributes or personality traits that reflect an individual's identity.

Personal Development

Private sector	Part of the economy that is owned, controlled and operated by private individuals or businesses for profit.
Public sector	The part of the economy that is controlled by the state.
Qualification	A pass of examination or official completion of a course.
Reputation	The beliefs or opinions that are generally held about someone or something.
Short-listed	If someone is short-listed for a job, they have made it to the final selection of candidates.
Side-hustle	A part-time job or occupation undertaken in addition to one's regular employment.
Statutory	Required, permitted or enacted by statute e.g. rules or laws that have been formally written down.
Traineeship	A period when someone is trained in the skills needed for a particular job.
Volunteering	Working for an organisation without being paid.

Minimum wage (from April 2025)

Wage band	Rate (from April 2025)
Age 21 or over	£12.21
Age 18 to 20	£10
Under 18	£7.55
Apprentice	£7.55

Further support

National Careers Service

- Nationalcareers.service.gov.uk / 0800 100 900

PROSPECTS

- Information on degrees, apprenticeships and careers
- www.prospects.ac.uk

UCAS

- Information on further education and higher education
- www.ucas.com

V-inspired

- UK-wide youth volunteering programme

National Citizens Service

- Events and experiences that grow young people's strengths to become world-ready and work-ready

WADHAM KS3 PE KNOWLEDGE ORGANISER: Rounders

Skills and Techniques:

Bowling:

The underarm action to deliver the ball.

Batting:

The action of hitting the ball.

Fielding:

The stopping and collecting of the ball.

Overarm Throwing

A throwing technique used to throw the ball long distances.

Underarm Throwing

A throwing technique used to throw the ball shorter distances/used for bowling.

Catching

The action of collecting the ball in your hands whilst it's in the air.

Long Barrier

A fielding technique used to stop the ball safely and effectively by getting your body behind the ball.

Rules:

- Ball must be bowled underarm.
- Batter must run around the outside of the bases.
- Fielders must make contact with the post with the ball in their hand in order to stump the base.
- Ball must be bowled between the batters head and knee. It must also be within reach of the batter and not directly at the batters body.
- 2 no balls in a row = ½ rounder
- Batters can be out by being caught, stumped, run in the inside of the post, drop the bat.

Positions:

Fielding team:
-Bowler
-Backstop
-Base fielders
-Deep fielders

Batting team:
-Batter

Scoring System:

The team with the most rounders at the end of the match is the winner.

½ rounder is scored by hitting the ball and reaching 2nd base.

1 rounder is scored by hitting the ball and reaching 4th base.

Tactics:

-Hitting the ball to certain directions in the field.

-Changing the placement of fielders depending on the strengths of the batter.

Key Words:

Post
Base (1st, 2nd, 3rd, 4th)
No ball
Bowler
Batter
Backstop
Obstruction

Key Words:

Backward Hit
Umpire
Long barrier
Catching
Underarm
Overarm
Donkey drop
Rounder

WADHAM KS3 PE KNOWLEDGE ORGANISER: Cricket

Skills and Techniques:

Bowling: The overarm action used to deliver the ball to the batter. Can be varied - spin, seam or swing.

Batting: The action of hitting the ball to score runs and avoid getting out.

Catching: The action of catching a ball that has been hit/thrown.

Long Barrier: This can be used when fielding to stop the ball safely and effectively.

Forward defence – This shot is used to stop the ball from hitting the stumps and getting the batter out.

Straight Drive - This shot is used to hit the ball straight back towards the bowler in an attempt to score runs.

Rules:

- A game consists of two teams. The time of the game is dependent on the number of overs being played (e.g. 20 overs, 50 overs, etc.)
- The game is started with a coin toss to decide who is batting and who is bowling. The winning captain of the coin toss makes the decision.
- Two umpires officiate the game, one at the bowling end and one at square leg.
- Players are not allowed bowl the ball with a bent arm, it must be straight.
- If a player hits the ball over the boundary without bouncing they score 6 runs, if it bounces first they score 4 runs.

Positions:

11 players on a team, made up of:

Batters
Bowlers (spin, seam, swing)
Wicket keepers
All Rounders (can bat and bowl)

Scoring System:

A player can score a run by hitting the ball and completing one length of the wicket.

The ball must completely cross the boundary to score 4 or 6.

The team with the most runs at the end of the game wins.

Tactics:

Bowling or batting first depending on the pitch and or the weather conditions. When to change bowlers and when to change the batting order.

Key Words:

Bowling
Batting
Crease
Wicket
Wicket Keeper
Line & length/pitch
Wide

Key Words:

Stumps
Bails
Long Barrier
Fielder
LBW
Forward defensive
Cover drive

WADHAM KS3 PE KNOWLEDGE ORGANISER: ATHLETICS

Events:

Sprints: 100m, 200m, 300m and 400m. The fastest time over the distance.

Middle distance: 800m, 1500m. The fastest time over the distance.

Shot put: The furthest distance a weighted ball can be pushed

Javelin: The furthest distance a spear can be thrown

Discus: The furthest distance a round weight can be thrown

Long jump: The furthest distance an athlete can jump into the sand pitt

High Jump: The highest an athlete can jump over a bar

Relay: An event where four athletes have to pass the baton as quickly as possible around the 400m track

Technique/tactics:

Sprints: Arm drive and knee lift. Accelerate out of the blocks/start.

Middle distance: Pace and positioning during the race

Shot putt: Chin, Knee, toe, get down low, push up. Clean palm, dirty fingers.

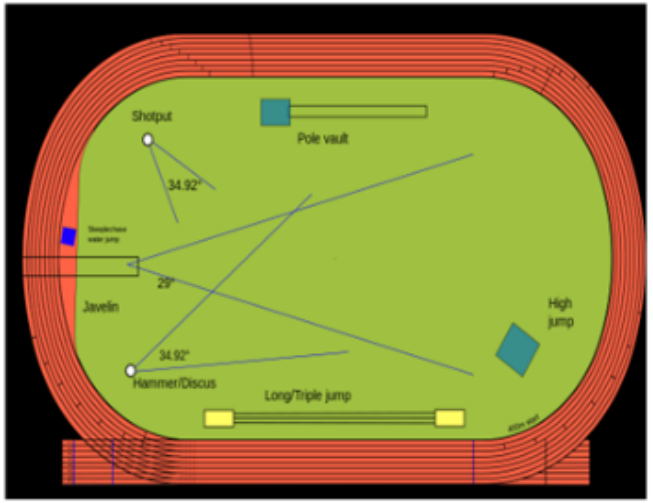
Javelin: Warrior pose. Pull at the elbow.

Discus: Palm down, release off index fingers, sling action

Long jump: Accelerate towards the take-off board, drive hips up, hang in the air

High jump: Arc run up, Hips up, arch the back

Relay: Fastest runner on 4th leg. Accelerate before receiving the baton. Palm up and open.



Key Words:
Distance
Time
Speed
Strength
Pace/endurance
Changeover zone
Baton
Start Line
Finish line

Key Words:
Sprint start
Run up
Take off
Personal best
Track event
Field event

Science

P1 – Motion (combined and separate)

Word	Meaning
acceleration	A measure of how quickly the velocity of something is changing. It can be positive if the object is speeding up or negative if it is slowing down. Acceleration is a vector quantity.
average speed	The speed worked out from the total distance travelled divided by the total time taken for a journey. speed = distance travelled /time
deceleration	When an object is slowing down.
displacement	The distance travelled in a particular direction. Displacement is a vector, distance is not.
distance	How far something has travelled. Distance is a scalar, and has no direction.
distance/time graph	A graph of the distance travelled against time for a moving object. The gradient of a line on a distance/time graph gives the speed.
force	At the simplest level a force is a push, pull or twist. Forces acting on an object can cause it to accelerate. Force is a vector quantity.
gradient	A way of describing the steepness of a line on a graph in numbers. It is calculated by taking the vertical distance between two points and dividing by the horizontal distance between the same two points.
instantaneous speed	The speed at one particular moment in a journey.
magnitude	The size of something, such as the size of a force or the measurement of a distance.
mass	A measure of the amount of material that there is in an object. Mass is a scalar quantity.
momentum	A measure of motion, mass multiplied by velocity. Momentum is a vector quantity.
scalar quantity	A quantity that has a magnitude (size) but not a direction. Examples include mass, distance, energy and speed.
speed	A measure of the distance an object travels in a given time. Usually measured in metres per second (m/s). It is a scalar quantity.
vector quantity	A quantity that has both a size and a direction. Examples include force, velocity, displacement, momentum and acceleration.
velocity	The speed of an object in a particular direction. Usually measured in metres per second (m/s). Velocity is a vector, speed is not.
velocity/time graph	A graph of velocity against time for a moving object. The gradient of a line on the graph gives the acceleration and the area under the graph gives the distance travelled.
weight	The force pulling an object downwards, it depends upon the mass of the object and the gravitational field strength. Weight is a vector.

Vectors and scalars

Vector Quantities	Scalar Quantities
Force	Mass
Weight	Distance
Displacement	Speed
	Energy

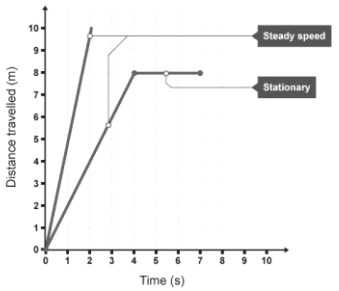
Distance time graphs

For a moving object, the distance travelled can be represented by a distance-time graph.

A horizontal line on a distance-time graph shows that the object is stationary (not moving), while a sloping line on a distance-time graph shows that the object is moving.

The *speed* of an object can be calculated from the *gradient* of a distance-time graph.

The greater the gradient (and the steeper the line) the faster the object is moving.



Acceleration

- Acceleration is calculated using the following equation:
  acceleration (m/s²) = *change in velocity (m/s)* / *time taken (s)*

This can also be written as:

$$a = \frac{v - u}{t}$$

a *is the acceleration*
v *is the final velocity*
u *is the initial velocity*
t *is the time taken for the change in velocity.*

- Acceleration can also be related to initial velocity, final velocity and distance travelled by this equation:

(final velocity)² – (initial velocity)² = 2 × acceleration × distance
(m/s)² (m/s)² (m/s²) (m)

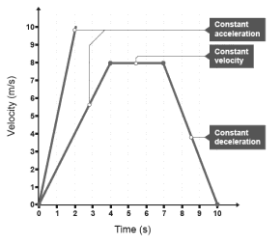
This can also be written as **$v^2 - u^2 = 2 \times a \times x$**, where *x* represents distance.

Velocity time graphs

For a moving object, the velocity can be represented by a velocity-time graph.

A horizontal line on a velocity-time graph, shows that the object is at constant velocity, but a sloping line on a velocity-time graph, shows that the object is accelerating.

The gradient of the line is equal to the *acceleration* of the object



Science

B2 – Cells and Control (9RS1 only)

Mitosis

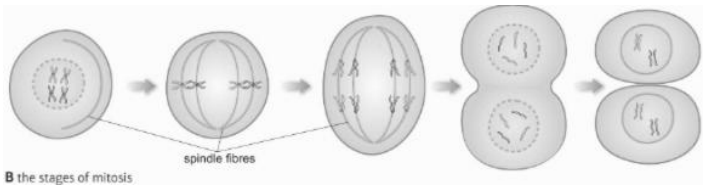
Mitosis is part of the cell cycle which includes interphase, **prophase, metaphase, anaphase, telophase** and cytokinesis.

Mitosis is important in growth and repair of body cells and asexual reproduction.

It produces two genetically identical, diploid, daughter cells.

Cancer is the result of uncontrolled cell division.

Stage	What happens
Interphase	The cell spends most of its life in this phase. The DNA in chromosomes is copied.
Prophase	Chromosomes condense and the membrane around the nucleus disappears.
Metaphase	Chromosomes line up in the middle of the cell.
Anaphase	Chromosomes are pulled to different ends of the cell.
Telophase	New (nuclear) membranes form.
Cytokinesis	The cell divides into two daughter cells.



B the stages of mitosis

Growth in animals

Growth involves **cell division and differentiation**

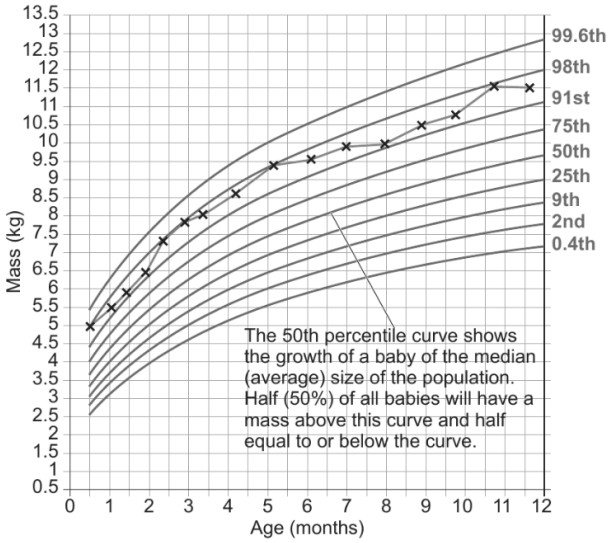
Cell differentiation is important in the development of **specialised cells.**

Percentile charts can be used to monitor growth.

Growth in plants

Growth in plants involves cell division, **elongation** and differentiation.

Cell differentiation is important in the development of specialised cells.



B Percentile growth curves for UK baby boys from 2 weeks to 1 year, for mass. The red line that has been plotted on the curves shows the growth of one baby.

Stem cells

A stem cell is an unspecialised cell that continues to divide by mitosis to produce more stem cells and other cells that differentiate into specialised cells.

In **plants** stem cells are found in **meristems** and can form any type of cell.

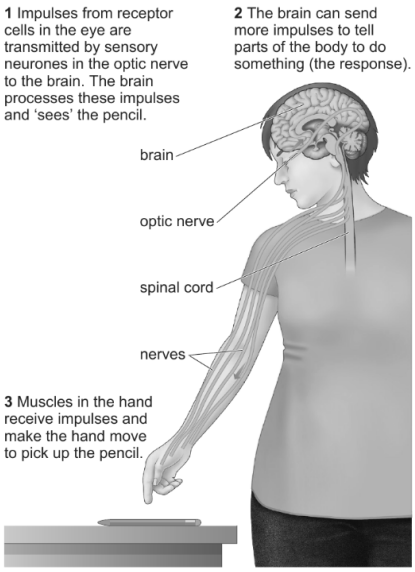
In **animals**, **adult stem cells** are found in specialised tissue and can produce more of the cells in that tissue.

Embryonic stem cells come from an early embryo and can produce specialised cells of many different types.

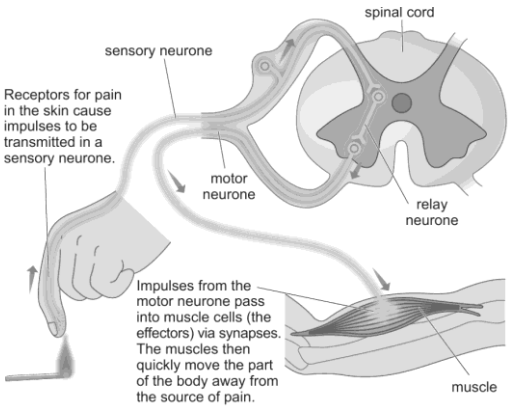
Science

The nervous system

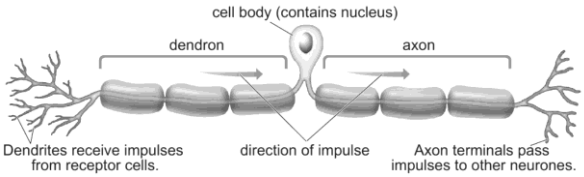
Sensory neurones are important in the transmission of electrical impulses. They are made up of the axon, dendrons and a myelin sheath.



C This is what happens in the nervous system when someone picks up a pencil.



E a reflex arc



D a sensory neurone

Neurotransmission speeds

When two neurones meet there is a tiny gap called a **synapse.**

Neurotransmitters diffuse across synapses.

The **reflex arc** helps to protect us from harm it includes sensory, relay and motor neurones.

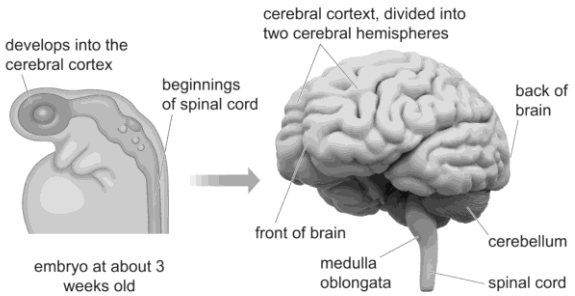
The pathway in the **reflex arc** is:

Stimulus → sensory neurone → relay neurone → motor neurone → effector (muscle)

Separate science only

The brain

Key structure in the brain include the **cerebellum** (controls balance, posture and fine muscle movements.), **cerebral cortex** - made up of two hemispheres (main part of the brain, used for most of our senses, language, memory, behaviour and consciousness) **and medulla oblongata** (controls breathing and heart rate).



A brain development and some of the major structures of the brain

Brain and spinal cord problems (higher only)

The difficulties of accessing brain tissue inside the skull can be overcome by **using CT scanning and PET scanning** to investigate brain function.

Problems with the brain and spinal cord can include **brain tumours and spinal cord injuries.**

The eye

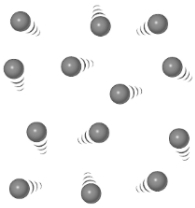
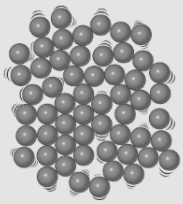
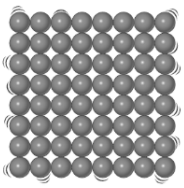
The eye is a sensory receptor key parts include**: the cornea and lens** (focuses light), **the iris** (controls diameter of the pupil**), rod** (detects low levels of light) and **cone** (detects colours) cells in the retina.

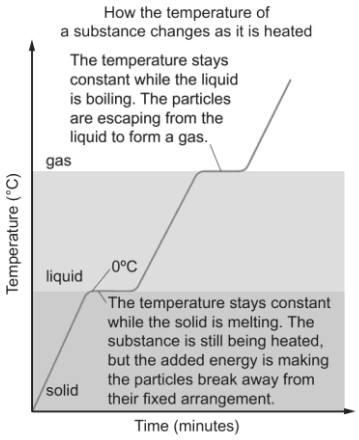
Defects of the eye include **cataracts, long-sightedness, short-sightedness and colour blindness.**

Science

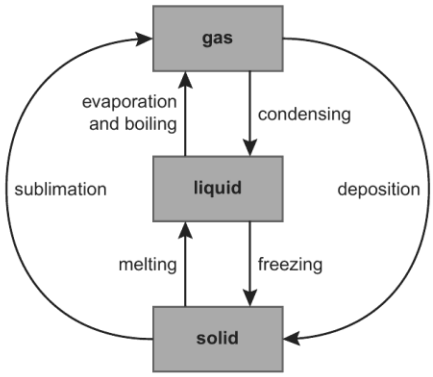
C1 states of matter and mixtures

The particle model

State	Particle diagram	Arrangement of particles	Movement of particles
Gas		random far apart	fast in all directions
Liquid		random close together	move around each other
Solid		regular close together	vibrate about fixed positions

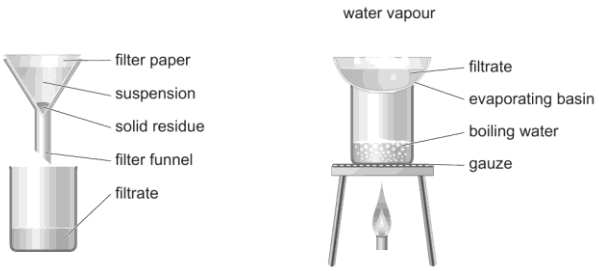


D a heating curve for water



Mixtures and pure

- a pure substance consists only of one element or one compound e.g. carbon dioxide
- a mixture consists of two or more different substances, not chemically joined together e.g. the air.
- Pure substance have fixed, sharp, melting points but mixtures melt over a range of temperatures.



D Laboratory apparatus for (i) filtration and (ii) crystallisation.

Filtration and crystallisation

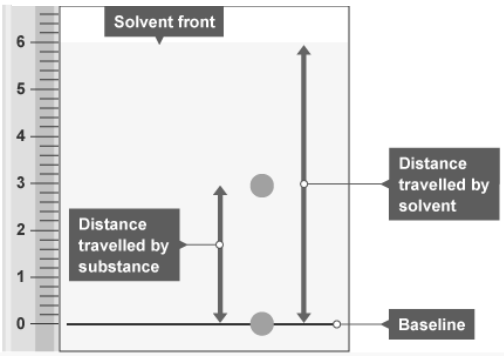
Crystallisation is separating the solute from a solution by evaporating the solvent.

Filtration is using a filter to separate insoluble substances from a liquid.

Paper chromatography

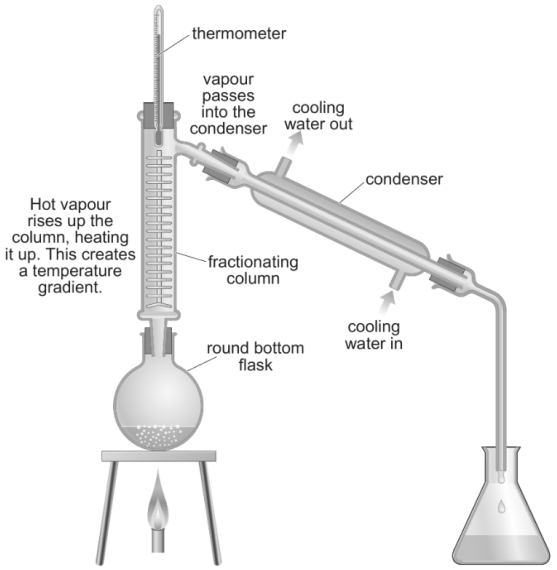
- Paper chromatography separates mixtures because substances have different attractions to the stationary phase (paper) and mobile phase (solvent).
- Pure substances produce one spot; impure substances produce multiple spots on a chromatogram.
- Substances can be identified by matching spot colours, distances travelled, and their Rf values.
- Rf values (between 0 and 1) show how far a substance moves relative to the solvent front and are characteristic for each substance.

$$R_f = \frac{\textit{distance travelled by substance}}{\textit{distance travelled by solvent}}$$

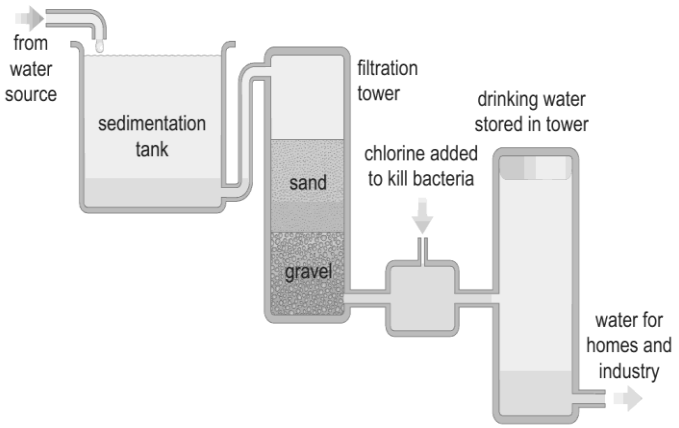


Distillation

· **Simple distillation** separates a solvent from a solution because the solvent boils and evaporates while the solute does not.
· The solvent vapour is cooled in a condenser, where it **condenses back into liquid** and is collected separately.
· The remaining solution becomes **more concentrated** as the solvent is removed.
· **Fractional distillation** separates liquids in a mixture based on their **different boiling points**.
· Vapours rise through a temperature-graded column, condense at different heights, and are collected separately, with the **lowest-boiling liquid collected first**.



D distillation apparatus with a fractionating column



D These are the main stages in treating fresh water to make it safe to drink.

Drinking water

- Raw water comes from rivers, lakes, and underground aquifers, but it contains impurities such as leaves, grit, dissolved substances, and microorganisms.
- Water is **screened** to remove large objects, then undergoes **sedimentation**, where heavier particles settle out.
- The water is then **filtered** through beds of sand and gravel to remove smaller particles.
- Finally, **chlorination** is used to kill bacteria and other microorganisms, making the water safe to drink.

Core practical method

Method

Simple distillation

Wear eye protection.

A Set up your apparatus so that the ink is in a flask, and its vapours can be led away to be condensed. Diagram B shows some typical apparatus but yours may be different.

B Heat the flask of ink using a Bunsen burner, making sure the ink simmers gently and does not boil over into the delivery tube.

C Continue heating until you have collected a few cm^3 of distillate (distilled solvent).

D Note the maximum temperature obtained.

Paper chromatography

E Draw a pencil line on a piece of chromatography paper, about 2 cm from the bottom.

F Add a small spot of ink to the pencil line.

G Add water to a container to a depth of about 1 cm.

H Place the paper into the container. Make sure the paper is supported so that it does not slump into the water when it becomes damp. Allow the water to travel through the paper.

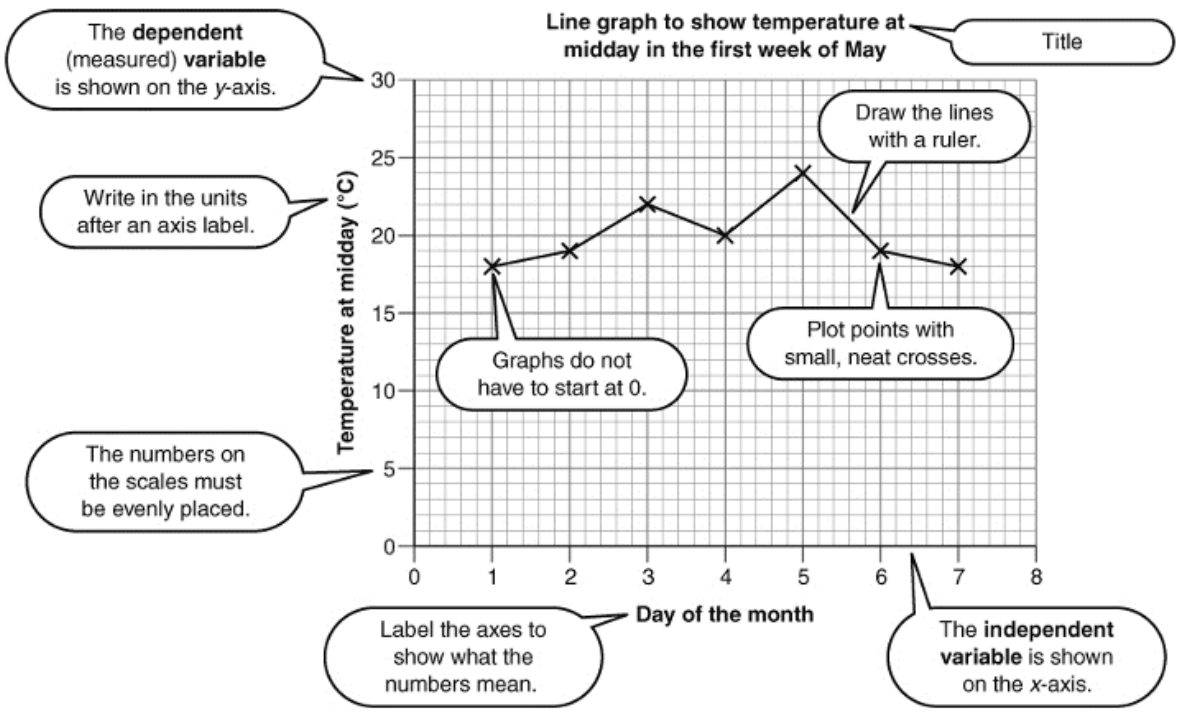
I Take the paper out before the water reaches the top. Immediately mark the position of the solvent front using a pencil, then leave the paper to dry.

J Measure the distance travelled by the water from the pencil line, and the distances travelled by each coloured substance.

K Calculate the R_f value for each coloured substance.

Science – data handling

Method of presentation	When used …
table	• to show items in a certain order (e.g. numerical order, alphabetical order). This is useful if you want to show the best or worst thing in a list. The best thing appears at the top of the table and the worst appears at the bottom.
bar charts	• to show how things compare • normally the independent variable is discontinuous and the dependent variable is quantitative
frequency diagrams	• to compare numbers of things
histograms	• a frequency diagram where the values for the independent variable are continuous but have been grouped into ranges
line graphs	• to show how one variable changes as another (usually time) changes • used when you know that the two variables are linked
scatter graphs	• to look for a link (relationship) between two variables • both variables are quantitative
pie charts	• to show proportions of a total contributed by different items (e.g. the proportions of students who come to school by bus, car …)
Venn diagrams	• to show the amount by which groups of items are the same or different
flow diagrams	• to show a sequence of information
labelled drawings	• to describe objects and processes



Academic Vocabulary

Sequencing	Comparing
First (ly) Second (ly) Third (ly) Subsequently Finally In conclusion	Similarly Likewise Like In the same way Equally Akin to
Contrasting	**Qualifying**
Alternatively Conversely On the other hand In contrast Instead Besides	However Although But Except Notwithstanding Nonetheless
Supporting	**Emphasising**
Moreover Furthermore Also Additionally	Significantly Indeed Notably Significantly
Exemplification	**Time**
For example Such as Illustrated by For instance	Meanwhile Since Before After

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Projection

Project your voice so all that should hear can hear

Body Language

Use of gesture and position

Listen

Show you are actively listening

Good Talk

If you disagree, use respectful language

Eye Contact

Eye contact shows Belonging

SAYING OR STATING AN IDEA

I think ...

I strongly believe ...

It is my opinion that...

CLARIFYING OR CHECKING

Please could you clarify that?

Please could you explain what you mean?

SEEING THINGS FROM A DIFFERENT PERSPECTIVE OR VIEWPOINT

What if ...

Some people think ...

SUPPORTING OR AGREEING

I agree ...

I agree with Sarah because ...

CHALLENGING OR DISAGREEING

I have a different idea ...

I disagree ...

I would like to challenge something that Samia said ...

I would like to respectfully challenge ...

EXPANDING OR BUILDING ON

Adding to what Zack said ...

Building on what Ella said ...

I have been listening carefully, and I would like to add a new point ...

PARAPHRASING OR REWORDING

I think Mo is saying that ...

In other words, Matt is saying ...

THINKING ALOUD OR SHARING PARTIAL THINKING

Why is it that ...?

I am wondering if ...

I'm not certain but ...

I'm not completely sure but what I'm thinking is ...

JUSTIFYING OR GIVING REASONS

Because ...

If ... then ...

I know ... because ...

ASKING FOR THINKING TIME OR HELP

I'm not sure yet. Please can I have some time to think?

I'm a bit confused about ...

Please can I talk to a partner?

I'm stuck because ...

Please could you speak a bit louder?

Please could you repeat the question?

PASSING ON THE DIALOGUE

Ali, what do you think?

Ben, what do you think about what I said?

Jo, do you agree or disagree?

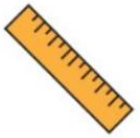
CONCLUDING OR END WORDS

My final thoughts are ...

There are lots of powerful arguments, but my own opinions is ...

For me, the strongest argument is ...

The Learning Eight

Pen (Blue or Black)		Ruler	
Pencil		Purple Pen	
Calculator		Knowledge Organiser	
Mini-Whiteboard		Whiteboard Pen