Wadham School

A Church of England Community School

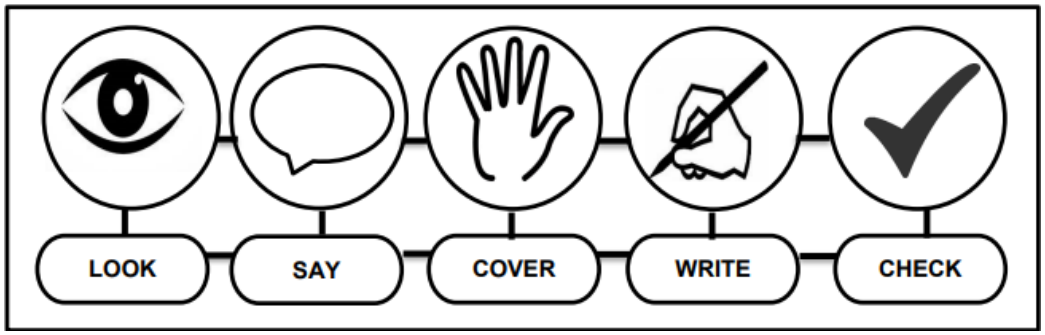
Knowledge Organisers
Year 9
Term 5 & 6
2024-2025

Name.....

Tutor group.....

"Life in all its fullness" John 10:10

Using Your Knowledge Organiser



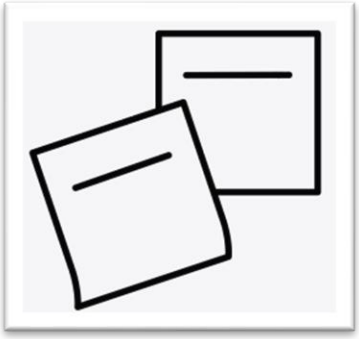
Look-Say-Cover-Write-Check

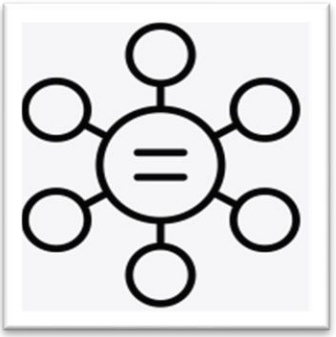
Retrieval practice using the look-say-cover-write-check technique, when done in regular small chunks, is one of the best ways you can learn relevant knowledge over time.

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	**Self Quizing**	**Mind maps**
Make flast cards with the definition on one side and key word on the other.	Write quizzes with answers to test yourself in the future.	Create mind maps linking key information you need to remember.





ART

STREET ART

Shepard Fairey

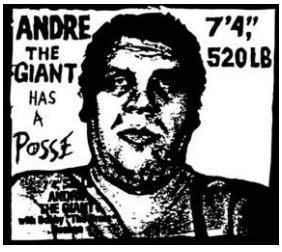
Shepard Fairey is a renowned street artist, graphic designer, activist, and illustrator who has made a significant impact on the world of contemporary art. His iconic works have transitioned from the streets to some of the most prestigious galleries and museums around the globe, influencing a new generation of artists and creatives.

His passion for street art began in the late 1980s when he started creating stickers and posters with political and social messages. Fairey's early works often featured the use of bold colours, geometric shapes, and stylised portraits, which became his signature style.

Fairey started to gain recognition in the underground art scene, becoming known for his distinctive visual aesthetic and thought-provoking imagery. His most famous work, the "Andre the Giant Has a Posse" sticker campaign, became a viral sensation and established Fairey as a pioneer of the street art movement.

Shepard Fairey's influence on modern art extends beyond his innovative visual style and iconic imagery. His work often explores themes of propaganda, consumerism, politics, and environmentalism, challenging viewers to think critically about the world around them.

Fairey's use of bold colours, striking compositions, and powerful messaging has inspired a new generation of artists to push the boundaries of traditional art forms and embrace the power of street art as a potent tool for social change.



In the early 2000s, Shepard Fairey gained widespread acclaim for his "Obey Giant" campaign.

The campaign became a global phenomenon, with Fairey's designs appearing on T-shirts, posters, and street art installations across the world.

Shepard Fairey created this portrait of then Senator Barack Obama in 2008 to support Obama's first presidential campaign.

First used as a street poster, the image was later used to create thousands of stickers and T-shirts and was widely circulated online.

ART

STREET ART

Creating Stencil Art

Stencil art is one of humanity's oldest creative forms. Some of our species' first artists used stencil art techniques when they placed their hands on cave walls and blew ground minerals over them, coating the rock in blooms of red or black pigment and leaving behind their ghostly palmprints.

Fast-forward some 30,000 years and stencil art techniques remain essentially unchanged. Using a sheet of cardboard, plastic, or metal with a pattern or letters cut out is surprisingly versatile, allowing craftspeople to colour cloth, illustrate manuscripts, print t-shirts, and create some fantastic street art.

Create A Stencil Design

First, you'll need an image to work with. You can use something you've drawn, choose a photo or pre-existing artwork to adapt as stencil art, or combine elements of all three.

- Make sure your design can be rendered in two-tone black and white without losing too much detail.
- Typography, icons, bold, comic-style illustrations, and high-contrast photos all work well when you're first learning how to create stencil art.
- Make it pop with bold shadows and crisp lines.

Keep in mind that your stencil can only be so detailed. Even if you're a craft knife wizard, you'll have trouble cutting extremely tiny lines.

Cutting & Spraying Your Stencil

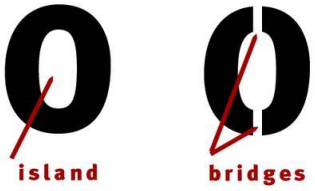
You should cut out the most detailed parts of your stencil first, as your stencil will only get flimsier with each piece of paper that's removed.

Now for the best part: spraying your stencil...

Aim for steady movement and even coverage to avoid dripping (unless that's an effect you'd like to try out). You don't want to follow any funny path or try to trace your stencil. Position your nozzle about 30cm away from your stencil and spray in short strokes in a single direction, without "doubling back" over parts you've already coated.

Leave to dry for at least 10 minutes

As you create your stencil pattern, be sure to plan for any necessary "bridges" in the artwork. You need to make sure there aren't any lonely "islands" of blank stencil material, otherwise you may accidentally cut away important design elements.



If, for example, your piece includes the letter "O", you'll have to leave some blank space in your design to ensure the middle part of the letter doesn't fall out when you cut your stencil.

Think of it like this: if the black part of the "O" was water, and the white background was land, you'd need a bridge on either side to cross.

ART

STREET ART BANKSY

Banksy does not like people to know their identity so they make their art in secret, even though it is often in busy places.
Their work is often about war, politics and other issues that they think are important.
Banksy's work encourages people to think about things that affect their lives and consider whether they think something in society is right or wrong.
One of Banksy's well-known pieces is called Sweep it Under the Carpet and was made in 2006 on a wall in London.
It shows a maid sweeping dirt under the cover of a brick wall. It's thought that Banksy painted it to show how he feels some countries ignore serious issues elsewhere in the world.

Stencilling

Banksy uses a technique called stencilling to make their art . They use spray paints to create the design on walls, trains, street signs and bridges

Stencils are created by cutting out a design from thin plastic or card. Paint is then applied through the stencil onto the surface behind.

Banksy created a stencil beforehand to make spray painting the walls quicker and easier. They were also able to produce several, identical versions of the same image by using this technique.

Did you know?

- Banksy was inspired by the work of French graffiti artist Blek Le Rat.
- The word graffiti comes from the Greek word 'graphein' which means 'to write'.
- Banksy once painted the words we're bored of fish in the penguin enclosure at London Zoo.
- Although Banksy's identity is unknown, we do know they were born in Bristol in England.
- Even though some graffiti is illegal because it is done without permission, some graffiti is commissioned.

ART

STREET ART Swoon

Swoon is a Brooklyn-based street artist known for her large-scale paper cut works and life-size installations. While studying painting, Swoon anonymously pasted her first paper portraits in the streets of Brooklyn. Searching to carve an alternative pathway as an artist, and to make her work more accessible to everyday people, she began pasting her paper portraits to the sides of buildings.

The majority of Swoon's art consists of intricate and delicate paper-cut portraits which are generally based on the people she met throughout her life.

Swoon's paper cuts pieces may only last for a short time as they are not made with spray paint like most street artists. Even though most of them survive for months, some may remain visible for just a couple of minutes.

Purpose of message

The paper-cut portraits she became known for early in her career represented the lives and struggles of people who often went unnoticed on city streets.

The longer she worked, the more focused she became on building compassion, empathy and human connection through her work. Today, she applies that spirit to social and community engaged projects that use art to alleviate suffering.

Her work addresses the immediate needs of communities in crisis due to extreme events, like natural disasters, as well as the longer term crises that persist due to systemic failures, such as the opioid epidemic.

Did you know?

- She is known as one of the first women street artists to gain international recognition in a male dominated field.
- Her work explores art as a catalyst for healing within communities experiencing crisis.

Beliefs and World Views

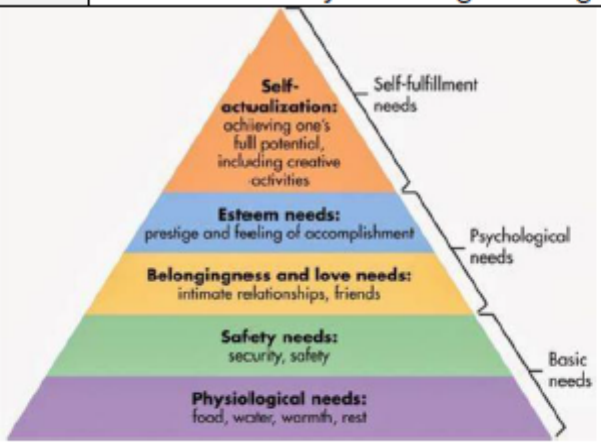
Beliefs and Worldviews – Year 9 Term 5 & 6

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



Computing

1	Data	Individual facts or statistics
2	Information	Processed data with added context so that it is meaningful
3	Cyber Security	Protecting computer systems from cyber criminals
4	Cyber Criminal	A person who uses digital technology to commit crime
5	Profiling	Gathering information about a person in order to make predictions about them
6	User behaviour	How a person interacts with a computer system
7	Privacy policy	A document produced by an organisation which explains how they store and process user data.
8	Data protection act (2018)	UK law which controls how your personal information is stored and processed by organisations
9	Data subject	The person who some personal data stored by an organisation is about.
10	Data portability	The right that a person has to move their personal data from one computer system to another in a safe and secure way
11	Malware	Any software which is designed to do harm to a computer system
12	Social engineering	Tricking other people so that they give up confidential information
13	Phishing	Sending a message to a person which is designed to trick them into giving up confidential information
14	Blagging	Making up a story designed to encourage another person to give up confidential information
15	Shouldering	Stealing confidential information by watching someone enter it into a keypad or other device
16	Name generator attack	Using a quiz (which creates a name, for example, your superhero name) to obtain personal information that can be used to gain access to a person's personal information
17	Scam	A dishonest scheme carried out to gain access to some confidential information
18	Hacking	Gaining unauthorised access to or control of a computer system
19	Ethical hacking	Gaining access to a computer system with the permission of its owner to help them identify vulnerabilities in their computer systems.
20	Penetration testing	A form of ethical hacking, penetration testing involves an organisation hiring an ethical hacker to test the security of their computer systems and report any vulnerabilities back to them

Computing

21	Brute force attack	Trying to gain access to a computer system by trial and error such as by guessing all possible passwords until the correct one is guessed.
22	Script kiddie	A person who uses tools downloaded from the internet to allow them to hack into computer systems with little technical knowledge
23	Denial of service attack (DoS)	Sending a lot of information to a computer system in an attempt to overload the system so that it becomes unavailable to its intended users
24	Distributed denial of service attack (DDoS)	Using multiple computers to perform a DoS attack
25	Computer misuse act (1990)	UK law which introduced a range of offences relating to computer misuse including accessing computer material without permission, using and creating malware and accessing computer material with intent to commit further crime
26	Ransomware	Malware designed to stop a person or organisation accessing their data. The attacker who created the ransomware will demand the person or organisation pays a large amount of money to regain access to their data
27	Virus	Malware in the form of a program which attaches itself to another file and can create copies of itself when the file is opened / run
28	Trojan	Malware that is hidden inside another file. Often done with the purpose of tricking a user into downloading it by disguising the malware as something they want, for example, a free game
29	Worm	Malware that is able to create copies of itself without the use of another file
30	Adware	Unwanted software which is designed to display adverts on a user's computer screen
31	Spyware	Software used to secretly monitor the behaviour of a user
32	Bot	Software which is programed to do certain tasks by itself
33	Botnet	A network of computers which a hacker has infected with malware allowing them to remotely control the computers
34	Anti-malware	Software which is designed to identify malware and remove it from a computer system
35	Firewall	A piece of hardware or software which filters traffic going in and out of an organisation's network based on rules set by the network administrator
36	Biometrics	Physical characteristics that can be used to identify individuals
37	Two factor authentication	An extra layer of security used to make sure an individual is who they say they are

	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

Commedia Dell'Arte – Knowledge Organiser

A - Origins of Commedia Dell' Arte

Pronunciation: co-MAY-dee-ah del AR-tay.

- Formal performances began in Italy in the mid-1500s, soon spreading to France and Spain (where they were very popular) and other parts of Europe.
- Its most popular period was 1550 to 1650.
- Commedia dell'arte is most notable for its mix of masked and unmasked characters, plus the fact that women were acting on the Commedia stage well before they were allowed to act in England.
- The style of Commedia is characterized by its use of masks, improvisation, physical comedy, and recognizable character types.
- Shakespeare got some of his play ideas from Commedia.
- As a child if you were born in an acting family, you were born into whatever role your dad was. So if your dad played the villain you would become the villain.
- These companies would stop in towns and perform to audiences for money, the pieces were adapted to certain audiences.

B- Main features of Commedia dell'Arte:

- Stock characters – the characters were always the same, only the situations changed. Fixed types: the servants, the masters and the lovers.
- Half masks – the masks defined the characters.
- Grammelot - a babel of sounds which, nonetheless, manages to convey the sense of speech.
- Improvisation – actors worked off a scenario and made up their lines. These scenarios mostly revolved around the themes of love, money or food.
- Lazzi – short comedic physical moments were included.
- Lots of humour. Including slapstick moments (slip, trip and collision) and the rule of three.
- Mime, acrobatics and music were featured too.

C – Hierarchy of Characters

D- Stock Characters

Magnifico: Top master. • Leads with his forehead. • Eagle, looks down on everything. • The most powerful character.
Pantalone: Old mean master. • Leads with his forehead. Hunched over. • Scowl on his face. • Bent knees, chin stuck out and leading the movement. • He has lost his teeth. • Very money orientated, constantly holds onto a bag full of money hanging from his belt.
Il Dottore / The doctor: A master. • Large character, leads with his stomach. • Light on his feet. • A man of learning. He waffles about what he knows but never really makes a point.
Zanni: Lowest servant. • Leads with his nose. • Feet come up and arms are involved with this. • Can be compared to a pigeon. • He is a peasant, everything is extraordinary to him, and he is curious and enthusiastic. • He wants to please everyone.
Columbina: Quick witted servant. • Leads with her hips. • She stands with a hip cocked to the side, hands on hips. • She moves with quick, strong steps. • Vain and spiteful.

6th Century BC: Ancient Greek Theatre | 9th Century: Medieval Theatre | **16th Century: Commedia dell'Arte** | 16th Century: Elizabethan Theatre | 19th Century: Melodrama | 19th Century: Naturalism | 20th Century: Epic Theatre

English

Lord of the Flies; 19th Century Fiction & Rhetoric

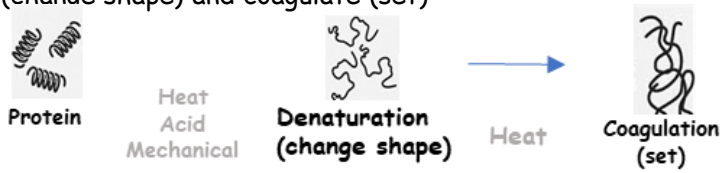
ANALYSIS	
Argument	The writer presents [topic] to…
Neat evidence	The phrase '…' shows…
Additional	Additionally, the phrase '…' adds to…
Language	The imagery suggests…
Your evaluation	A reader may also understand...
Structure and form	Structurally, the... tone emphasises...
Intentions of writer	The writer's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

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)

Food

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 Summer Term: 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

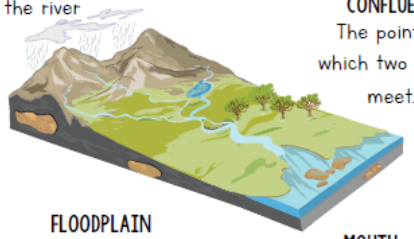
RIVER PROCESSES

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

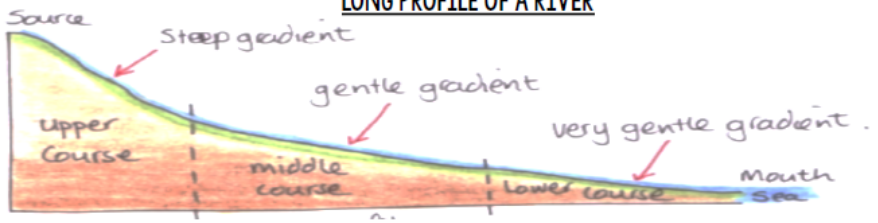
CONFLUENCE
The point at which two rivers meet.

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

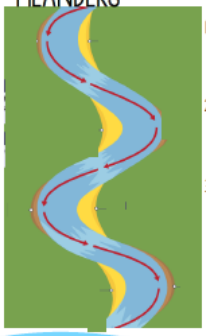


THE MIDDLE COURSE

FEATURES

Wider, shallower valleys, meanders, and oxbow lakes

MEANDERS



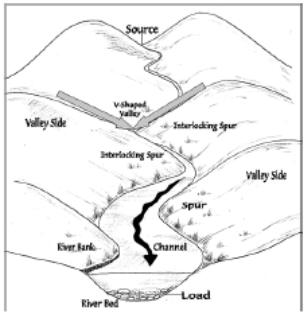
1. The formation of meanders is due to both **deposition** and erosion and meanders gradually move downstream.
2. The force of the water **erodes** and undercuts the river bank on the outside of the bend where water flow has most energy.
3. On the inside of the bend, where the river flow is slower, material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

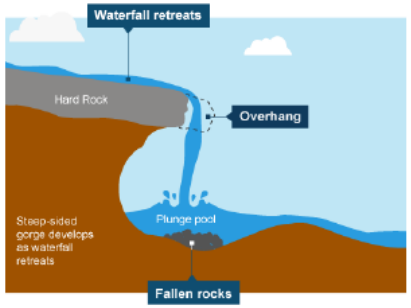
Steep-sided V-shaped valleys, interlocking spurs, rapids, waterfalls and gorges.



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

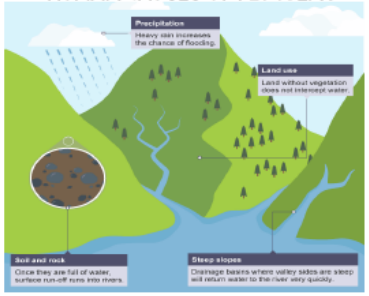
A floodplain is the area around a river that is covered in times of flood. It is a very fertile area. This makes floodplains a good place for agriculture. A build-up of alluvium on the banks of a river can create levees, which raise the riverbank.

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 Summer Term: 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.

Mathematics

9.12 Enlargement & similarity…..

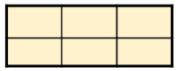
Key words	
Similar Shapes	shapes of different sizes that have corresponding sides in equal proportion and identical corresponding angles
Scale Factor	the multiple describing how much a shape has been enlarged
Enlarge	to change the size of a shape (enlargement is not always making a shape bigger)
Corresponding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

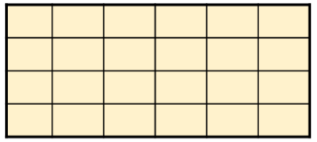
Sparx codes for this topic	
M178	Enlargements
M324	Calculations in similar shapes

Recognise enlargement & similarity

Shapes are similar if all pairs of corresponding sides are in the same ratio

These shapes are similar because all sides are increased by the same ratio

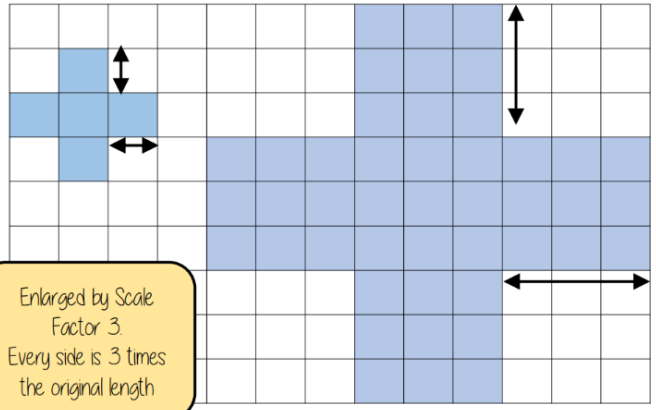




Enlargements are similar shapes with a ratio other than 1

Enlarge by a positive scale factor

With a scale factor larger than 1 it makes the shape **bigger**

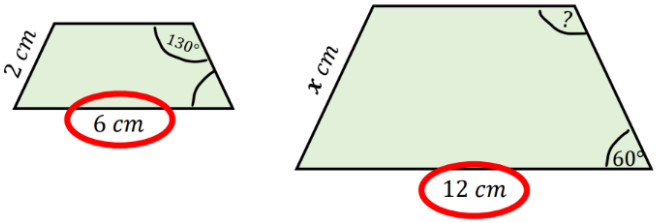


Enlarged by Scale Factor 3.
Every side is 3 times the original length

Calculations in similar shapes

Don't forget that properties of shapes don't change with enlargements or in similar shapes

The two trapezium are similar find the missing side and angle



Corresponding sides identify the scale factor $\frac{12}{6} = 2$ Scale Factor = **2**

Calculate the missing side Length (corresponding side) x scale factor

$2cm \times 2$

$x = 4cm$

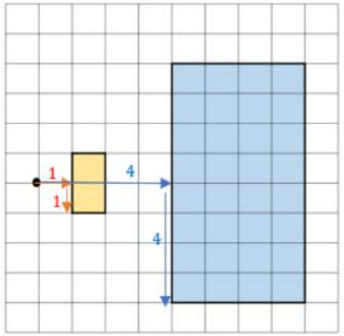
Enlargement does not change angle size

Calculate the missing angle Corresponding angles remain the same

$130°$

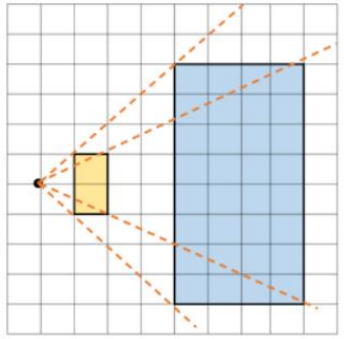
Enlarge a shape from a point

Scaled distances method



Scale the distance between the point of enlargement and each corresponding vertices

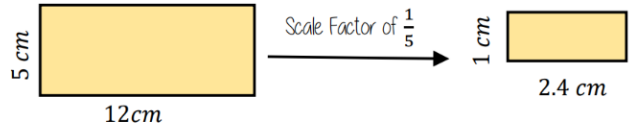
Rays method

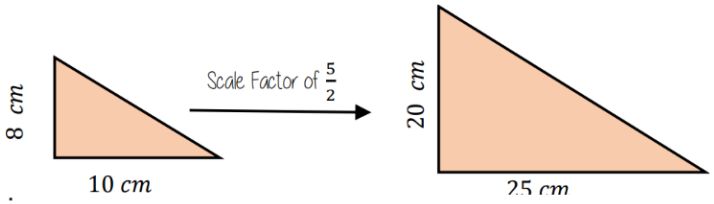


Multiply the distance from the centre of corresponding vertices by the scale factor along the ray

Positive fractional scale factor

With a scale factor between 0 and 1 it makes the shape **smaller**





Mathematics

9.13 Solving ration & proportion problems…..

Key words	
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 I 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

Mathematics

Direct Proportion

As one variable changes the other changes at the same rate

4 cans of pop = £2.40

4 cans of pop = £2.40 → (x 0.5) → 2 cans of pop = £1.20 (x 0.5)

This multiplier is the same in the same way that this would be for ratio

This is a multiplicative change

4 cans of pop = £2.40 → (x 3) → 12 cans of pop = £7.20 (x 3)

Sometimes this is easiest if you work out how much one unit is worth first
e.g. 1 can of pop = £0.60

Conversion Graphs

Compare two variables

This is always a straight line because as one variable increases so does the other at the same rate

To make conversions between units you need to find the point to compare – then find the associated point by using your graph
Using a ruler helps for accuracy
Showing your conversion lines help as a "check" for solutions

Labelling of both axes is vital

Best Buys

Have a directly proportional relationship

To calculate best buys you need to be able to compare the cost of one unit or units of equal amounts

Shop A: 4 cans for £1.20 → £1.20 ÷ 4 → 1 can is £0.30 Or 30p

Shop B: 3 cans for 93p → £0.93 ÷ 3 → 1 can is £0.31 Or 31p

Cost per item

Shop A as the best value as it is 1p cheaper per can of pop

Shop A: 4 cans for £1.20 → 4 ÷ £1.20 → £1 buys 3.333 cans of pop

3 cans for 93p → 3 ÷ £0.93 → £1 buys 3.23 cans of pop

Cost per pound

Shop A is still shown as being the best value but pay attention to the unit you are calculating, per item or per pound

Best value is the most product for the lowest price per unit

Inverse Proportion

As one variable is multiplied by a scale factor the other is divided by the same scale factor

Examples of inversely proportional relationships

Time taken to fill a pool and the number of taps running

Time taken to paint a room and the number of workers

T is inversely proportional to G. When T=2 then G=20

T	1	2	8
G	40	20	5

(÷ 2, × 4 / × 2, ÷ 4)

Finding a value given 1n (or n:1)

Inside a box are blue and red pens in the ratio 5:1
If there are 10 red pens how many blue pens are there?

Model the Question

Blue Red
5 : 1
□ = one part = 10 pens

Put back into the question

Blue Red
5 : 1 (x 10) → 50 : 10

There are 50 Blue Pens

Sharing a whole into a given ratio

James and Lucy share £350 in the ratio 3:4
Work out how much each person earns

Model the Question

James: Lucy
3 : 4

Find the value of one part

Whole £350
7 parts to share between (3 James, 4 Lucy)
£350 ÷ 7 = £50
□ = one part = £50

Put back into the question

James: Lucy
3 : 4 (x 50)
£150 : £200

James = 3 x £50 = £150
Lucy = 4 x £50 = £200

Mathematics

9.14 Rates…..

Key words	
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

Mathematics

Flow problems & graphs

This will fill at a constant rate, then as the space decreases it will speed up and the neck of the bottle fill at a faster constant speed

The cylinder will fill at a constant speed

Units are important
Ensure any volume calculations are the same unit as the rate of flow

Rates of change & units

Common rates of change relationships

Revisit your conversions between units of length and capacity

Speed: miles **per** hour

Exchange rates: euros **per** pounds

Density: mass **per** volume

R

Speed, Distance, Time

Before calculations – make sure you are working in the same units as the speed

Learn or learn how to rearrange the formular for speed, distance and time

$$\text{time} = \frac{\text{distance}}{\text{speed}}$$

$$\text{distance} = \text{speed} \times \text{time}$$

Substitute in the variables given

Distance – Time graphs

Gradient = speed

The steeper a gradient the faster the speed

$\frac{10}{5} = 2$ metres per min

Horizontal lines represent staying still

The distance coming closer to home shows the return journey

Units are important
Meters per minute

Speed, Distance, Time

'per' for every
e.g 80 miles per hour (mph)
Travel 80 miles every hour

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

You can use a double number line to help you calculate distance

e.g A boat travels at a constant speed for **2.5** hours
It travels 300 miles.

Bar models can help to calculate mph

Each part is half an hour
Each part is 60 miles

Density, Mass, Volume

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

$$\text{mass} = \text{volume} \times \text{density}$$

$$\text{volume} = \frac{\text{mass}}{\text{density}}$$

volume of prism = Area of cross section × Depth

R

Mathematics

9.15 Probability …..

Key words	
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
M941	Single event probability
M206	Expected outcomes & Relative frequency
M299	Independent events
M829, M834	Using diagrams:

Mathematics

Independent events

The rolling of one dice has no impact on the rolling of the other. The individual probabilities should be calculated separately

Probability of event 1 × Probability of event 2

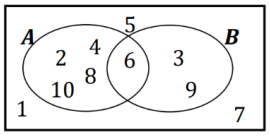
$P(5) = \frac{1}{6}$ $P(R) = \frac{1}{4}$

Find the probability of getting a 5 and a red

$P(5 \text{ and } R) = \frac{1}{6} \times \frac{1}{4} = \frac{1}{24}$

Using diagrams

Recap Venn diagrams, Sample space diagrams and Two-way tables



	Car	Bus	Walk	Total
Boys	15	24	14	53
Girls	6	20	21	47
Total	21	44	35	100

The possible outcomes from rolling a dice

The possible outcomes from tossing a coin	1	2	3	4	5	6
H	1,H	2,H	3,H	4,H	5,H	6,H
T	1,T	2,T	3,T	4,T	5,T	6,T

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

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

$0.15 \times 400 = 60$

Relative Frequency

$$\frac{\text{Frequency of event}}{\text{Total number of outcomes}}$$

Remember to calculate or identify the overall number of outcomes!

Colour	Frequency	Relative Frequency
Green	6	0.3
Yellow	12	0.6
Blue	2	0.1
	20	

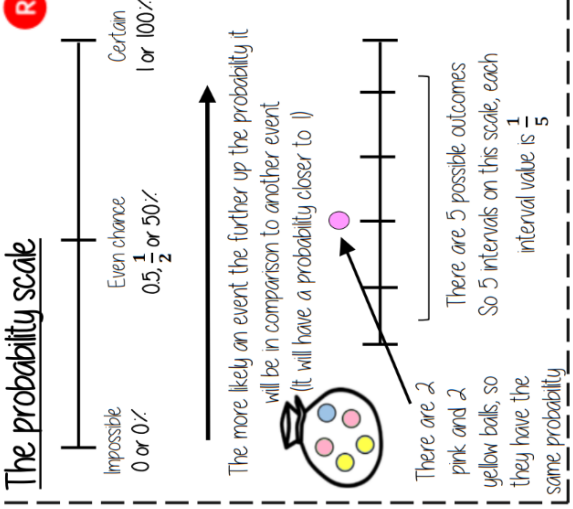
Relative frequency can be used to find expected outcomes

e.g Use the relative probability to find the expected outcome for green if there are 100 selections.

Relative frequency x Number of times

$0.3 \times 100 = 30$

The probability scale



Single event probability

Probability is always a value between 0 and 1

The probability of getting a blue ball is $\frac{1}{5}$
∴The probability of NOT getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.35	

P(white chocolate) = 1 – 0.15 – 0.35
= 0.5

Mathematics

9.16 Algebraic representation …..

Key words	
Quadratic	a curved graph with the highest power being 2
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
Origin	the coordinate (0, 0)
Parabola	a 'u' shaped curve that has mirror symmetry

Sparx codes for this topic	
U989	Quadratic graphs
U980, V593, V229	Other graphs
U509, U747	Represent inequalities

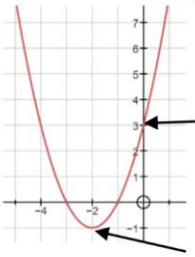
Mathematics

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



Intersection with the y axis

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

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

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

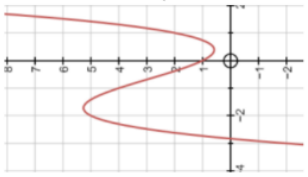
Quadratic graphs are always symmetrical with the turning point in the middle

Interpret other graphs

Cubic Graphs

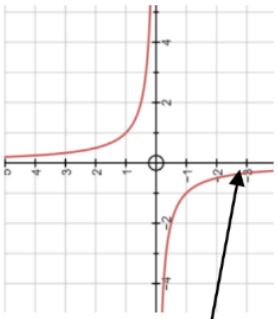
$y = x^3 + 2x^2 - 2x + 1$

If x^3 is the highest power in your equation then you have a cubic graph



Reciprocal Graphs

$y = \frac{1}{x}$



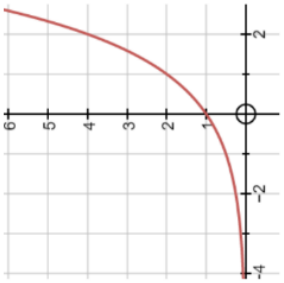
Reciprocal graphs never touch the y axis

This is because x cannot be 0

This is an asymptote

Exponential Graphs

$y = 2^x$



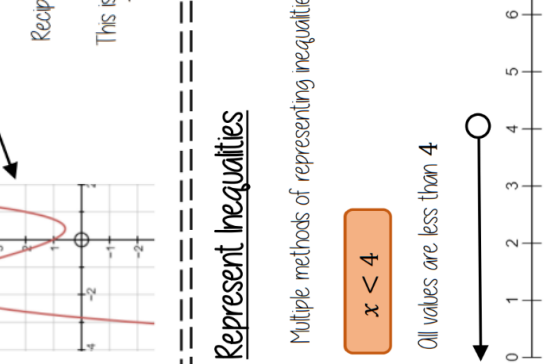
Exponential graphs have a power of x

Represent Inequalities

Multiple methods of representing inequalities

$x < 4$

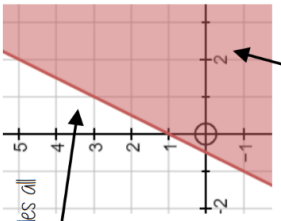
All values are less than 4



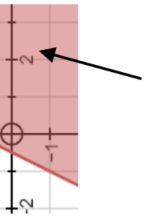
The shaded area indicates all possible values of x

The dotted line shows that the inequality does not include these points

$y \geq 2x + 1$



The solid line shows that the inequality includes all the points on this line



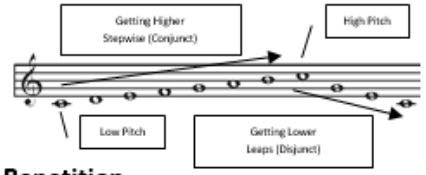
The shaded area indicates all possible solutions to this inequality

Building Bricks

Exploring the Elements of Music MAD T SHIRT

Melody - Pitch

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

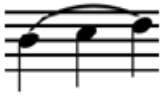


Repetition

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.

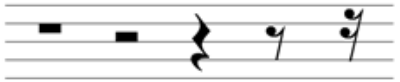
Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.

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

Year 9 Knowledge Organiser – Careers & Economics	
Skill	An ability to do an activity or job well
Attribute	A quality or characteristic that something or someone has
Career	An occupation undertaken for a significant period of a person's life and with opportunities for progress
Enterprise	An organisation, especially a business
Goal	The object of a person's ambition or effort
Ambitious	Having or showing a strong desire and determined to succeed
Communication	The imparting or exchanging of information by speaking, writing or using some other medium
Analyse	Research something carefully in order to form a judgement
Consumer	Someone who buys goods or services. We are all consumers in some way or form
Employee	Someone who works for a person or business
Employer	A person or business who employs people
Income	Money, we earn or receive from working for a wage or salary or from investing in assets e.g. money in a bank, in stocks and shares, in property
Loan	Money borrowed, usually from a bank or building society
Pension	Income received by retired people either from the Government as benefit or from their former employer, to which they will have contributed during their working lives by paying tax or by making payments into a pension fund
Manufacturer	A person or business that makes a product
Tax	Contributions from individuals, consumers and businesses to fund Government policies and services such as schools, hospitals, defence, the Civil Service and other Government spending
Wages	Money paid to an employee for working
Self-employed	When someone is in business on their own account, providing goods or services either as an individual sole trader or in partnership with other individuals
Risk	A situation that could cause harm or loss

Personal Development

Year 9 Knowledge Organiser – Politics	
Houses of Parliament	The UK parliament consisting of the House of Commons and the House of Lords.
House of Commons	The House of Commons is the elected lower house of the UK Parliament, consisting of 650 Members of Parliament (MPs) who represent constituencies. Its primary function is to pass legislation, and it holds significant power, including the ability to levy taxes and allocate expenditures. The House of Commons is where MPs debate and make decisions on proposed laws and policies, making it a crucial part of the UK political system.
House of Lords	The House of Lords is the upper chamber of the UK Parliament, playing a crucial role in revising legislation and scrutinising government actions. It is often referred to as the 'revising chamber' and consists of over 800 appointed members rather than elected ones. The House of Lords examines bills, questions government actions, and investigates public policy, complementing the work of the House of Commons. It meets in the Palace of Westminster in London, alongside the House of Commons.
Politician	A person who is professionally involved in politics, especially as a holder of an elected office.
Election	A formal and organised choice by vote of a person for a political office or other position.
MP	The UK public elects Members of Parliament (MPs) to represent their interests and concerns in the House of Commons. MPs consider and can propose new laws as well as raising issues that matter to you in the House. This includes asking government ministers questions about current issues including those which affect local constituents. MPs split their time between working in Parliament itself, working in the constituency that elected them and working for their political party. Some MPs from the governing party (or parties) become government ministers with specific responsibilities in certain areas, such as Health or Defence. These MPs do not stop working for their constituency and, whatever their role in Government or Parliament, will still hold regular surgeries to help their constituents.
Prime Minister	The head of an elected government; the principal minister of a sovereign or state.
Government	The group of people with the authority to govern a country or state; a particular ministry in office.
Magna Carta	The Magna Carta was written, or 'drawn up' in 1215, in Runnymede on the banks of the river Thames. At the time the king of England, King John, was fighting with other powerful landowners. The landowners, called barons, were unhappy with the way the king was running the country and the amount of money he was taxing them. Magna Carta means 'great treaty', and it was written to make the barons happy and to stop the fighting. It set out a list of basic rules about how the country would be run. One of the most important, was that no one was above the law - including the king. King John signed it (he actually put his seal on it) which meant that the clauses named would apply to everyone. Once the original copy was made, it was then copied about 250 times and taken around the country so it would apply everywhere.
Monarch	A head of state e.g. King or Queen.

Personal Development

Year 9 Knowledge Organiser – Politics	
Political party	An organisation of people who share the same views about the way power should be used in a country or society (through government, policy-making, etc).
Liberal Democrats	The Liberal Democrats (colloquially known as the Lib Dems) are a liberal political party in the United Kingdom, founded in 1988. They are based at Liberal Democrat Headquarters, in Westminster, and the current leader of the party is Ed Davey. They are the third-largest party in the United Kingdom.
Labour	The Labour Party is a political party in the United Kingdom that sits on the centre-left of the political spectrum. The party has been described as an alliance of social democrats, democratic socialists and trade unionists. It is one of the two dominant political parties in the United Kingdom, along with the Conservative Party. The party has been led by Keir Starmer since 2020. Starmer became UK Prime Minister and formed a Labour government following the 2024 general election.
Conservative	The Conservative and Unionist Party, commonly the Conservative Party and colloquially known as the Tories, is one of the two main political parties in the United Kingdom, along with the Labour Party. The party sits on the centre-right to right-wing of the left-right political spectrum. It is currently the second-largest party by the number of votes cast and number of seats in the House of Commons.
The Green Party	A green party is a formally organised political party based on the principles of green politics, such as environmentalism and social justice.
UKIP/Reform UK	Reform UK is a right-wing populist political party in the United Kingdom. Nigel Farage has served as the party's leader since June 2024. It has four members of Parliament (MPs) in the House of Commons and one member of the London Assembly.
Manifesto	A manifesto is a written declaration of the intentions, motives, or views of the issuer, be it an individual, group, political party, or government.

Personal Development

Year 9 Knowledge Organiser – British Values	
Democracy	A system of government where power is vested in the people and exercised by them directly or indirectly through elected representatives e.g. MPs.
Individual liberty	The freedom of individuals to make their own choices and live their lives as they see fit, within the bounds of the law.
The Rule of Law	The principle that everyone, including those in power, is subject to and accountable under the law.
Mutual respect	Treating all individuals with respect, regardless of their background, beliefs or characteristics.
Tolerance	Respecting and valuing the diverse religious and non-religious beliefs and practices of others.
Britishness	The quality of being British or having characteristics regarded as being typically British.
Cultural groups	This includes our families and friends, beliefs and values that we or they may share, art and culture that we may all share an interest in including music, dance, television, film and social media.
Anarchy	A condition of lawlessness brought about by an absence of a government.
Communism	A government which owns things like businesses and farms. It provides it's people's healthcare, education and welfare.
Dictatorship	A country ruled by a single leader. The leader has not been elected and may use force to keep control. In a military dictatorship, the army is in control.
Monarchy	A country governed by a king or queen. In some traditional monarchies, the monarch has absolute power. In a constitutional monarchy (like the UK) the democratically elected government limits the monarch's control.
Socialism	This focuses on serving the working class needs more and is opposed to capitalism.
Capitalism	An economic system characterised by private ownership of the means of production, where resources and businesses are controlled by individuals or companies for profit, and where market forces of supply and demand determine prices and distribution of goods.
Human rights	This term was first created in 1948 after the Second World War. It refers to all the basic rights that every human being should have in order to live their life.
Tolerance	This is the ability or willingness to withstand the existence of opinions or practices that go against one's own personal beliefs.
Mutual respect	This is when two people may not agree completely but they are willing to work together to find a solution.

Personal Development

Year 9 Knowledge Organiser – Equality & The Protected Characteristics	
Equality Act 2010	The Equality Act 2010 is a legislation that protects people from discrimination in the workplace and in wider society. It replaced previous anti-discrimination laws with a single Act, making the law easier to understand and strengthening protection in some situations. The Act consolidates, updates and supplements the numerous prior Acts and Regulations that formed the basis of anti-discrimination law in mostly England, Scotland and Wales, and some sections also apply to Northern Ireland.
Protected Characteristics	Protected characteristics are specific aspects of a person's identity that are protected from discrimination under the Equality Act 2010.
Discrimination	The unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability.
Equality	The state of being equal, especially in status, rights, or opportunities.
Inequality	Difference in size, degree, circumstances, etc.; lack of equality.
Civil laws	Civil law is a branch of law that regulates the non-criminal rights, duties of persons (natural persons and legal persons) and equal legal relations between private individuals.
Criminal laws	Criminal law is a body of law that defines criminal offenses, regulates the apprehension, charging, and trial of suspected persons, and fixes penalties and modes of treatment applicable to convicted offenders. It is a system of laws concerned with crimes and the punishment of individuals who commit crimes.
Prejudice	Preconceived opinion that is not based on reason or actual experience.
Diversity	The state of being diverse; variety.
Disability	A physical or mental condition that limits a person's movements, senses, or activities.
Race	Race is a categorisation of humans based on shared physical or social qualities into groups generally viewed as distinct within a given society.
Religion	The belief in and worship of a superhuman power or powers, especially a God or gods.

Personal Development

Year 9 Knowledge Organiser – Equality & The Protected Characteristics	
Gender	Gender refers to the socially constructed roles, expectations, and behaviours that are often ascribed to the different sexes. Gender identity is a personal, internal perception of oneself and is based on socially constructed roles, behaviours, and customs.
Age	The length of time that a person has lived.
Marriage	The legally or formally recognised union of two people as partners in a personal relationship.
Civil partnership	A legally recognised union with rights similar to those of marriage, created originally for same-sex couples in jurisdictions where they were not legally allowed to marry.
Pregnancy	Pregnancy means having a baby growing inside your body. It generally lasts around 40 weeks in humans.
Maternity	The period of time during pregnancy and shortly after birth. Maternity leave can last up to a year after birth.
Sexuality	A person's identity in relation to the gender or genders to which they are typically attracted; sexual orientation.
Biological sex	In a biological context, “sex” refers to the physical and physiological differences, including chromosomes, hormones and reproductive organs that distinguish individuals as male, female or intersex.

The 9 Protected Characteristics

D – Disability
R – Race

G – Gender
R – Religion
A – Age
M – Marriage and civil partnership
P – Pregnancy and maternity
S – Sexuality
S – Sex (biological)

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.

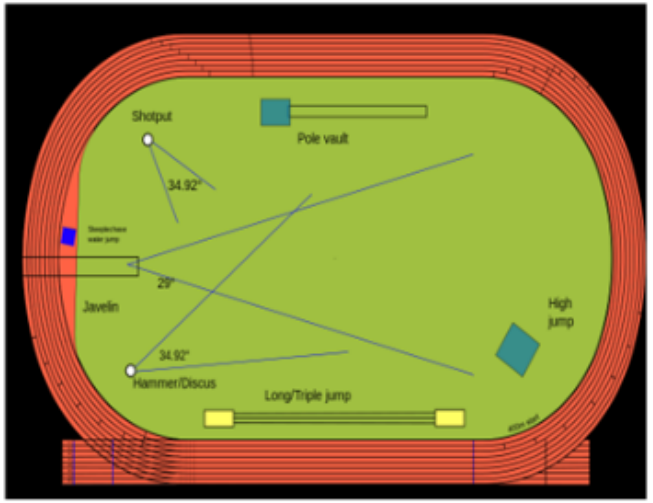
Javelin: Warrior pose. Pull at the elbow.

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.



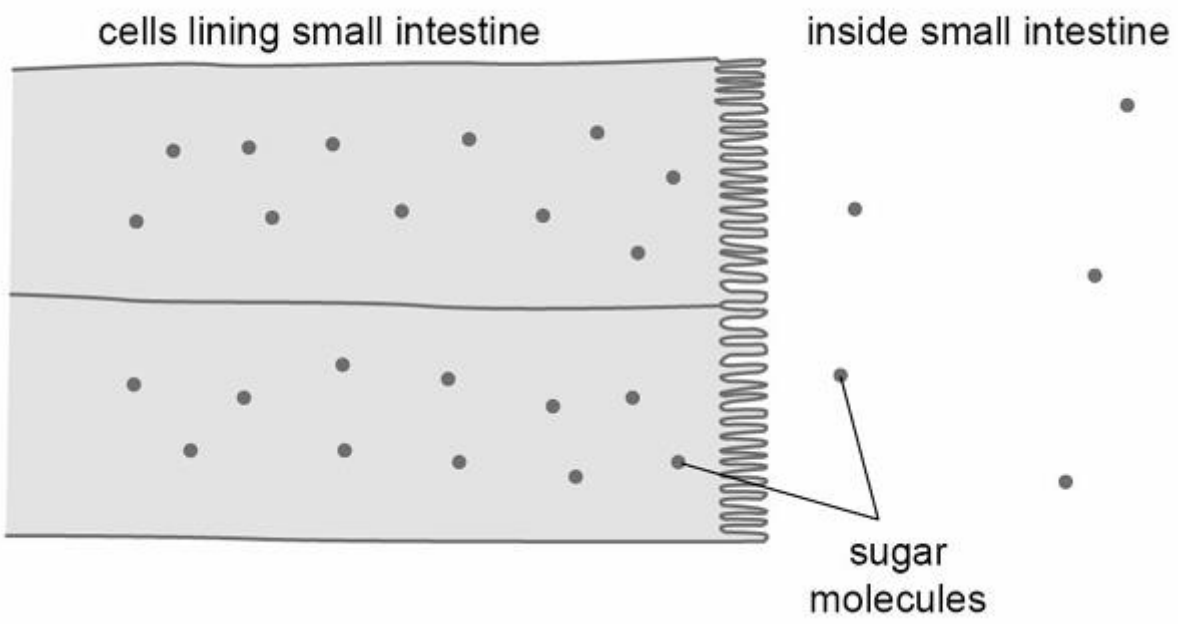
Key Words:
Distance
Time
Speed
Strength
Pace/endurance
Changeover zone
Baton
Start Line
Finish line

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

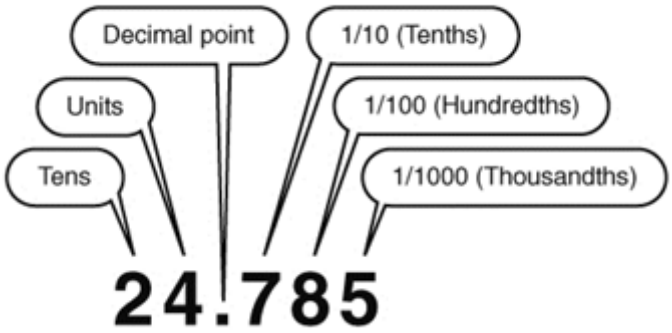
Science – Transport (biology)

CB1h Transporting substances

Word	Pronunciation	Meaning
active transport		The movement of particles across a cell membrane from a region of lower concentration to a region of higher concentration (*against* the concentration gradient). The process requires energy.
diffusion	*diff-**you**-zshun*	When particles spread and mix with each other without anything moving them. Diffusion into and out of cells occurs for particles that are small enough to pass through the cell surface membrane.
concentration	*con-sen-**tray**-shun*	The amount of a solute dissolved in a certain volume of solvent. Measured in units such as g/cm^3.
concentration gradient		The difference between two concentrations. There will be an overall movement of particles *down* a concentration gradient, from higher concentration to lower concentration.
osmosis	*oz-**mO**-sis*	The overall movement of solvent molecules in a solution across a partially permeable membrane, from a dilute solution to a more concentrated one.
passive		A process that does not require energy is passive. A passive process is the opposite of an active process (which requires energy).
semi-permeable		Describes something that will allow certain particles to pass through it but not others. Another term for 'partially permeable'.
solute	***sol**-yoot*	The solid that has dissolved in a liquid to make a solution.
solvent		The liquid in which a substance dissolves to make a solution.



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