Knowledge Goals Homework Booklet (Spring 1)

Year 9 and 10

Name: _____

Settlebeck SCHOOL

Respect | Responsibility | Aspiration

Subject Index

Suggested Homework Schedule
(30 minutes of independent study per subject each week)

	Subjects to Revise	
Monday	Science	Option 2
Tuesday	Mathematics	Option 2
Wednesday	Science	PSHE
Thursday	English	Option 3
Friday	Option 3	Mathematics
Saturday	Option 1	English
Sunday	Option 1	Mathematics

To help you get organised, we have planned out your weekly homework slot for each subject.

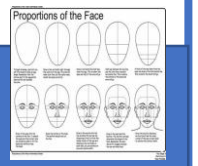
Subject Homework Frequency Information

Subject	Homework
Art	Fortnightly
Computer Science	Fortnightly
Design and Technology	Fortnightly
Drama	One per half term
English	Weekly
Food Technology	Weekly
French	Weekly
Geography	Fortnightly
History	Fortnightly
Mathematics	Weekly
Music	Once per half term
PSHE	Once per half term
Physical Education	One per half term
Religious Studies	Weekly
Science	Weekly

HOW TO SELF TEST

Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your Knowledge Goals booklet to create mind maps, make sure to use colour and images and keep writing to the bare minimum.



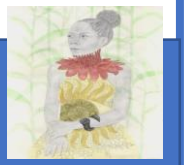
HOW TO MIND MAP VIDEO

Parent information on knowledge retrieval:

Flash cards

Use your Knowledge Goals booklet to make flash cards. Write the questions on one side and on the other record the answer.

Test yourself or work with a friend to make sure you know all of the key information for each topic.



HOW TO FLASH CARD VIDEO

How should students use the Knowledge Goals booklets?

Your **Knowledge Goals** booklet provide the essential knowledge that you need to learn in each subject this half term.

You are expected to spend **30 minutes per subject per week** 'learning' the content.

You will be assessed during lessons using 'low stake' quizzing.

Your teacher may choose to set you additional homework.

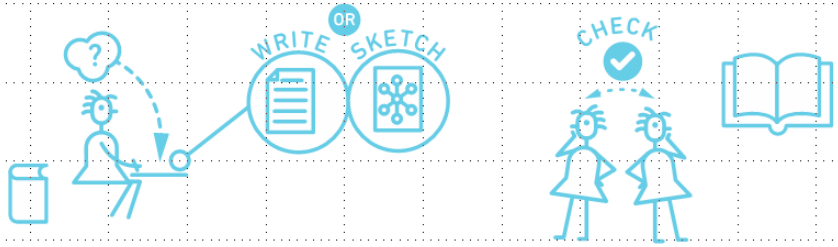
How can parents support?

- Read through the booklet with your child – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

Retrieval Practice

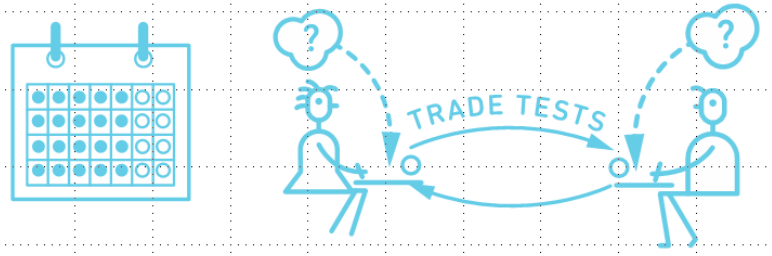
HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.



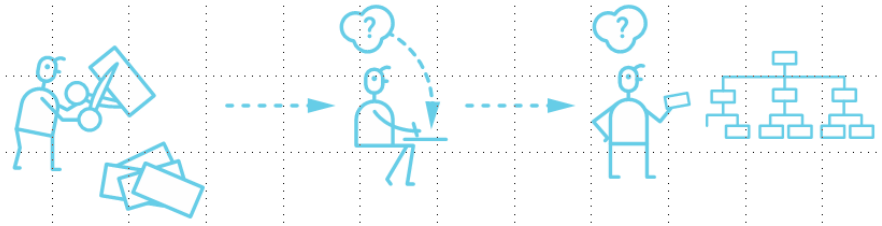
HOW TO DO IT

Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.



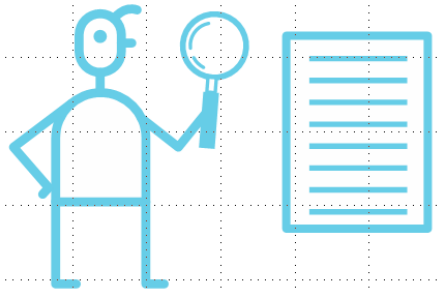
HOW TO DO IT

You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.



HOLD ON!

Retrieval practice works best when you go back to check your class materials for accuracy afterward.

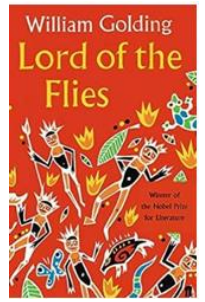
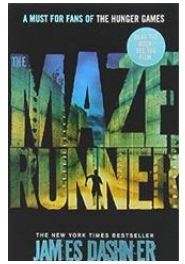


Literacy: Tier 2 Vocabulary

Tier 2 Vocabulary		
	Key word	Definition
1	access	Means of entry, approach.
2	complex	Involving a lot of different but related parts.
3	deteriorate	Decay, degenerate.
4	grapple	Grab, wrestle.
5	intense	Forceful, severe, passionate.
6	opponent	A person who is on an opposing side in a game, contest, controversy, or the like; adversary.

These words are all tier 2 words; in other words, they are seen as ‘academic vocabulary’ and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

DEAL Year 9 (Spring Term)

Book Title	Author	Genre	Overview	Image
Lord of the Flies	William Golding	Classic	Lord of the Flies is set on a remote island and shows how a group of stranded schoolboys go from civilisation to savagery in a very short space of time. Although their situation at first seems to have the makings of a fun adventure, their fight to survive in their environment and their struggle with each other for power reveals the wickedness which lives inside all of us. Before they are finally rescued there is savagery, destruction, terror and even death.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect
Maze Runner	James Dashner	Science Fiction (Dystopian Adventure)	The first three books in the pulse pounding Maze Runner series! When the doors of the lift crank open, the only thing Thomas remembers is his first name. But he's not alone. He's surrounded by boys who welcome him to the Glade - a walled encampment at the centre of a bizarre and terrible stone maze. But the maze is just the beginning ...	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect

DEAL Year 10 (Spring Term)

Book Title	Author	Genre	Overview	Image
Hunger Games	Suzanne Collins	Science Fiction (Dystopian Adventure)	The Hunger Games universe is a dystopia set in Panem, a North American country consisting of the wealthy Capitol and 13 districts in varying states of poverty. Every year, children from the first 12 districts are selected via lottery to participate in a compulsory televised battle royale death match called The Hunger Games. The Hunger Games follows 16-year-old Katniss Everdeen, a girl from District 12 who volunteers for the 74th Hunger Games in place of her younger sister Primrose Everdeen. Also selected from District 12 is Peeta Mellark, who once saved Katniss from starvation when they were children. They are mentored by their district's only living victor, Haymitch Abernathy, who won 24 years earlier and has since led a solitary life of alcoholism.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect
All Quiet on the Western Front	Erich Maria Remarque	War Novel	In 1914 a room full of German schoolboys, fresh-faced and idealistic, are goaded by their schoolmaster to troop off to the 'glorious war'. With the fire and patriotism of youth they sign up. What follows is the moving story of a young 'unknown soldier' experiencing the horror and disillusionment of life in the trenches.	
British Values	Tolerance	Individual Liberty	Rule of Law	Democracy	Mutual respect

British Values

British Values: What They Mean for Us

British values are the important ideas that help make the UK a fair, safe, and respectful place for everyone. These values shape how we live together and treat each other. Here's a simple breakdown of the key British values:

Democracy

- Democracy is all about having a voice. In the UK, we get to vote in elections to choose our leaders and decide on important issues. Everyone's opinion matters!
- At school, this means having the chance to express your views, take part in decisions, and have your voice heard.

The Rule of Law

- The rule of law means that everyone must follow the law, no matter who they are. Laws help keep us safe and ensure that everyone is treated fairly.
- At school, we follow rules that help keep our environment respectful and safe for everyone.

Individual Liberty

- Individual liberty is about having the freedom to make your own choices, as long as they don't harm others. It's about having the freedom to think for yourself, express your opinions, and be who you are.
- At school, you can express yourself, pursue your interests, and have the freedom to make choices about your learning.

Mutual Respect and Tolerance

- Mutual respect means valuing other people's opinions, feelings, and beliefs, even if they're different from your own. Tolerance is about accepting people for who they are and being open to different cultures, ideas, and traditions.
- At school, we show respect by listening to each other, understanding differences, and creating a welcoming and friendly environment for everyone.

Equality

- Equality means treating everyone fairly, no matter their background, gender, race, or beliefs. Everyone should have the same opportunities to succeed.
- At school, we support equality by making sure everyone has the same chances and is treated with respect, regardless of who they are.

How British Values Apply to Us at Settlebeck

At Settlebeck, we bring British values to life by encouraging respect for each other, celebrating diversity, and working together to create a positive school community. These values help us create a safe and supportive space where we can all learn and grow, respecting each other's differences and making sure everyone feels included. By living these values, we can all contribute to making Settlebeck a great place to learn, where everyone has the chance to thrive!

Year 9 and 10 Knowledge Goals: Art - CULTURES

African art is a diverse and rich subject that encompasses a wide range of styles, materials, and cultural significance across the continent.

1.Traditional Art Forms:

1. **Masks**: Often used in ceremonies and rituals, masks can represent ancestors, spirits, or animals. Different cultures, such as the Yoruba, Dogon, and Fang, have unique styles and purposes for their masks.
2. **Sculpture**: Wood, stone, and metal sculptures are common. The art often reflects social status, spirituality, and community beliefs.
3. **Textiles**: Fabrics like kente cloth from Ghana or mud cloth from Mali are integral to African culture, often featuring vibrant colours and patterns that convey stories or status.

2.Contemporary African Art:

1. Explore artists who are redefining African art today, such as El Anatsui, Yinka Shonibare, and Kehinde Wiley. Their works often address themes of identity, colonialism, and globalization.

3.Cultural Significance:

1. Art is used in various African cultures for storytelling, preserving history, and community cohesion.

4.Techniques and Materials:

1. Different materials used in African art, such as clay, wood, beads, and textiles.

The Day of the Dead, or Día de los Muertos, is a traditional Mexican holiday celebrated on November 1st and 2nd. It is a time to honour and remember deceased loved ones, blending indigenous traditions with Spanish influences. Families create altars, known as ofrendas, decorated with photographs, personal items, and offerings such as food, flowers (especially marigolds), and candles to invite the spirits of the deceased to return and celebrate with them. The holiday is characterized by colourful decorations, parades, and various cultural activities. It emphasizes the belief that death is a part of life, and it encourages a joyful remembrance rather than mourning.

[Egyptian sculpture | British Museum]

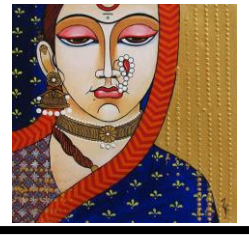
[National Museum of Mexican Art, Pilsen, Chicago]

<u>Possible Cultures to research and explore through your art</u>.

African Art
Chinese Art
Japanese Art
Australian art/Aboriginal
Mexican Art
Indian Art
North American Art
Egyptian Art

[Ancestors, artefacts, empire – mobilising Aboriginal objects | British Museum]

[Collections: Chinese - National Museum of Asian Art]



[Africa | British Museum]

[National Museum of African Art – Smithsonian Institution]

Year 9 and 10 Knowledge Goals: Art - CULTURES

VOCABULARY

- Culture
- Artist
- Observation
- Composition
- Tone
- Blend
- Cross hatch
- Collage
- Value
- Contrast
- Perspective
- Weight of line
- Layer
- Textile
- Blend
- Paint
- Printing
- Etching
- Mono print

Festivals are significant cultural events celebrated in various forms around the world, often reflecting the traditions, beliefs, and values of a community. Here are a few examples of festivals from different cultures:

1.Diwali (India): Known as the Festival of Lights, Diwali is celebrated by Hindus, Sikhs, and Jains. It symbolizes the victory of light over darkness and good over evil, featuring fireworks, lamps, and festive meals.

2.Holi (India): The Festival of Colours, Holi celebrates the arrival of spring. Participants throw coloured powders and water at each other, dance, and enjoy traditional sweets.

3.Carnival (Brazil): This vibrant festival occurs before Lent, characterized by parades, samba music, dancing, and elaborate costumes, showcasing Brazil's rich cultural heritage.

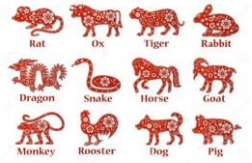
4.Chinese New Year (China): Also known as Spring Festival, it marks the beginning of the lunar new year. Celebrations include family reunions, feasts, dragon dances, and fireworks.

5.Day of the Dead (Mexico): This festival honours deceased loved ones with colourful altars, offerings, and celebrations, blending indigenous traditions with Catholic elements.

Hieroglyphics are a writing system used in ancient Egypt, characterized by a combination of logographic and alphabetic elements. This system utilized symbols and pictures to represent sounds, words, or ideas. Hieroglyphs were often inscribed on monuments, tombs, and papyrus scrolls, serving both ceremonial and administrative purposes.

The script consists of over 700 symbols, including representations of objects, animals, and human figures. Hieroglyphics were used primarily for religious texts, official inscriptions, and monumental art, and they played a significant role in the recording of Egyptian history and culture.

Chinese New Year, also known as Lunar New Year or Spring Festival, is celebrated on a date that varies each year, as it is based on the lunar calendar. It typically falls between January 21 and February 20. The festivities last for about 15 days, culminating in the Lantern Festival. Each year is associated with one of the 12 animals in the Chinese zodiac, and the celebrations often include family reunions, feasting, fireworks, and various cultural traditions intended to bring good luck for the year ahead.

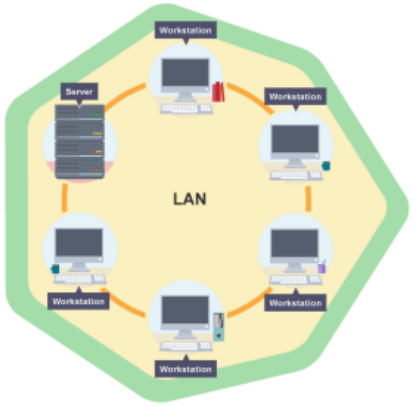


Indigenous Art: This includes a variety of styles and mediums, such as pottery, weaving, painting, and sculpture, created by Native American, Inuit, and First Nations artists. These works often reflect spiritual beliefs, cultural stories, and a deep connection to nature.

Colonial Art: During the colonial period, European settlers brought their artistic traditions, which influenced the development of American art. This includes portraiture, landscape painting, and decorative arts.

Year 9 and 10 Knowledge Goals: Computer Science

Types of network

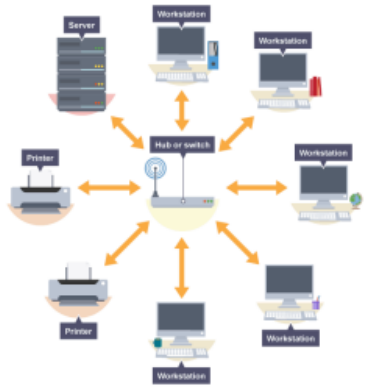
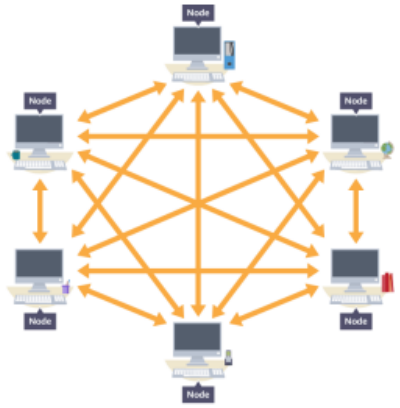
LAN	WAN
	

Layers

Layering means to break up the sending of messages into separate components and activities. Each component handles a different part of the communication. This can be referred to as the Transmission Control Protocol/Internet Protocol (TCP/IP) model.

Layering allows **standards** to be developed, but also to be adapted to new hardware and software over time. For example, different software packages (applications) may use the same transport, network and link layers but have their own application layer. The way the program encodes the message changes - the rest of communication method remains the same.

Topologies

Star	Mesh
	

Encryption

A simple method of encryption requires the use of a technique known as the Caesar cipher. The cipher works by giving a number value to a key. Each plaintext letter is replaced by a new letter, the one found at the original letter's position in the alphabet plus the value of the key. The example uses a key value of 3.

Plaintext	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
Ciphertext	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c

Year 9 and 10 Knowledge Goals: Computer Science

Protecting networks

Form of attack	Prevention
Malware	Anti-Malware software.
Phishing	Training of user to detect scams as well as the filtering of emails.
Brute-force attacks	Use of different strong passwords. A limit on the number of incorrect attempts.
Denial of service attacks	Block IP addresses which send too many requests. Increase capacity.
Data interception and theft	Encryption of data.
SQL injection	Ensuring that all data input is sanitized. (Forcing data to be in the format you want it such as a date, text or integer.)

Common protocols

TCP/IP	**Transmission Control Protocol/Internet Protocol** - enables communication over the internet.
HTTP	**Hypertext Transfer Protocol** - governs communication between a webserver and a client.
HTTPS	HTTPS **(secure)** includes secure encryption to allow transactions to be made over the internet.
FTP	**File Transfer Protocol** - governs the transmission of files across a network and the internet.
POP	**Post Office Protocol** – governs the transmission of emails to devices. Once downloaded to the device is deleted from the server.
IMAP	**Internet Message Access Protocol** – governs the transmission of emails. Stored on server and accessed by devices.
SMTP	**Simple Mail Transfer Protocol** - governs the sending of email over a network to a mail server.
Layering	In networking, the concept of breaking up communication into separate components or activities.

Year 9 and 10 Knowledge Goals: Computer Science

Tier 3 Vocabulary		
	Key word	Definition
1	network	A group of interconnected computers/devices.
2	lAN	Local area network. A network of computers that covers a small area, eg a school or college.
3	WAN	Wide area network. A network that spans across a building, buildings or even countries, eg the internet.
4	client-server	A relationship in which data or web application is hosted on a server and accessed by client computers.
5	peer to peer	A relationship where all computers on the network share responsibility and there is no one central server.
6	WAP	A device that connects computers to a network using Wi-Fi
7	switch	A device for connecting computers and other network capable devices together to form a network.
8	NIC	Network Interface Controller -A circuit board that is installed in a computer so it can be connected to a network.
9	transmission media	How data is carried from point A to point B physically, either by cable or wirelessly.
10	ethernet	A set of protocols used in a wired local area network that describes how data is transmitted within it.
11	Wi-Fi	A method of connecting to the internet wirelessly using radio waves.
12	bluetooth	Wireless technology used for transmitting data over short distances.

Notes

Year 9 and 10 Knowledge Goals: Design and Technology

Types of plastic

1 PET	2 HDPE	3 PVC	4 LDPE	5 PP	6 PS	7 OTHER
POLYETHYLENE TEREPHTHALATE	HIGH-DENSITY POLYETHYLENE	POLYVINYL CHLORIDE	LOW-DENSITY POLYETHYLENE	POLYPROPYLENE	POLYSTYRENE	OTHER
WATER BOTTLES; JARS; CAPS	SHAMPOO BOTTLES; GROCEY BAGS	CLEANING PRODUCTS; SHEETINGS	BREAD BAGS; PLASTIC FILMS	YOGURT CUPS; STRAWS; HANGERS	TAKE-AWAY AND HARD PACKAGING; TOYS	BABY BOTTLES; NYLON; CDS

Acrylic is a group 7 plastic. This group is often referred to as 'other', as it is comprised of a number of difficult to recycle plastics.

Acrylic can be laser cut but HIPS has a low melting point so cannot be cut with a laser.

High Impact Polystyrene (HIPS) Vacuum Forming Sheets and can be recycled.

On the bottom of each object, there is a resin identification code which tells you what plastic the product is made from.

Wet and dry is used to buff a smooth and shiny finish onto the edges of plastic

Chicago bolts give a neat, flush way of joining materials

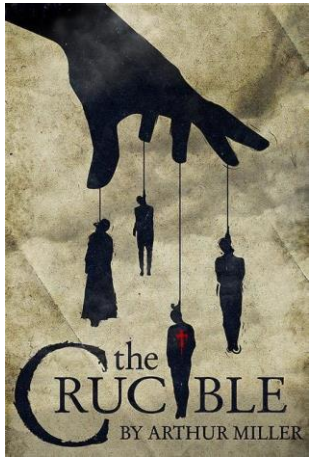
Year 9 and 10 Knowledge Goals: Design and Technology

Tier 3 Vocabulary		
	Key word	Definition
1	acrylic	A group 7 plastic used for rigid glossy plastic projects
2	vacuum former	Machine used for forming shapes by sucking them over a mould
3	HIPS	High Impact Polystyrene
4	vacuum forming sheet	HIPS which has a low melting point for use on a vacuum former
5	laser cutter	A CAM machine which uses a laser to cut wood and plastic
6	resin identification code	The number used to identify different types of plastic
7	Chicago bolt	A 2 part bolt which gives a neat, flush way of joining materials
8	wet and dry	An abrasive which can be used to polish plastic
9	Computed Aided Design (CAD)	Design programs which draw items on the computer
10	Computer Aided Manufacturing (CAM)	Machines which can use CAD drawings to create an item eg laser cutter, 3d printer.
11	heat	The quality of being hot; high temperature
12	vacuum	a space from which the air has been completely or partly removed

Notes

Year 9 and 10 Knowledge Goals: Drama (Play Studies – The Crucible)

Play Studies



During this unit, you will develop your ability to:

- Interpret texts
- Create and communicate meaning
- Realise artistic intention in text-based drama.

The Crucible – About The Play

This exciting drama about the Puritan purge of witchcraft in old Salem is both a gripping historical play and a timely parable of our contemporary society. The story tells how small lies – children's lies – build and build until the suspicions of a whole town is aroused. Set in a small tight-knit community, personal grievances collide with lust and superstition, fuelling widespread hysteria. Arthur Miller's timeless parable attacks the evils of mindless persecution and the terrifying power of false accusations.

Synopsis

Salem, Massachusetts, 1692. A small group of girls 'cry out' against other people in the town, accusing them of witchcraft, in an attempt to cover up their own dabblings in the occult. Led by Abigail Williams, the girls' accusations cause a court to be formed to investigate the alleged crimes. Caught up in the trials are John and Elizabeth Proctor, a farming couple whose marriage is hanging by a thread. John Proctor, following an illicit affair with Abigail, finds himself and his wife caught up in the proceedings when Abigail accuses Elizabeth of witchcraft, hoping to take her place at John's side. Desperate to clear his wife's name, John attempts to convince the court of her innocence, but instead finds himself in deep water when Abigail turns on him. The end of this tale, based on true events, is both tragic and deeply affecting as John is arrested for witchcraft himself. When faced with the choice between confessing to witchcraft, thus saving himself or professing his innocence, and destroying his good name, John finds it is an impossible choice to make…

Year 9 and 10 Knowledge Goals: Drama (Play Studies – The Crucible)

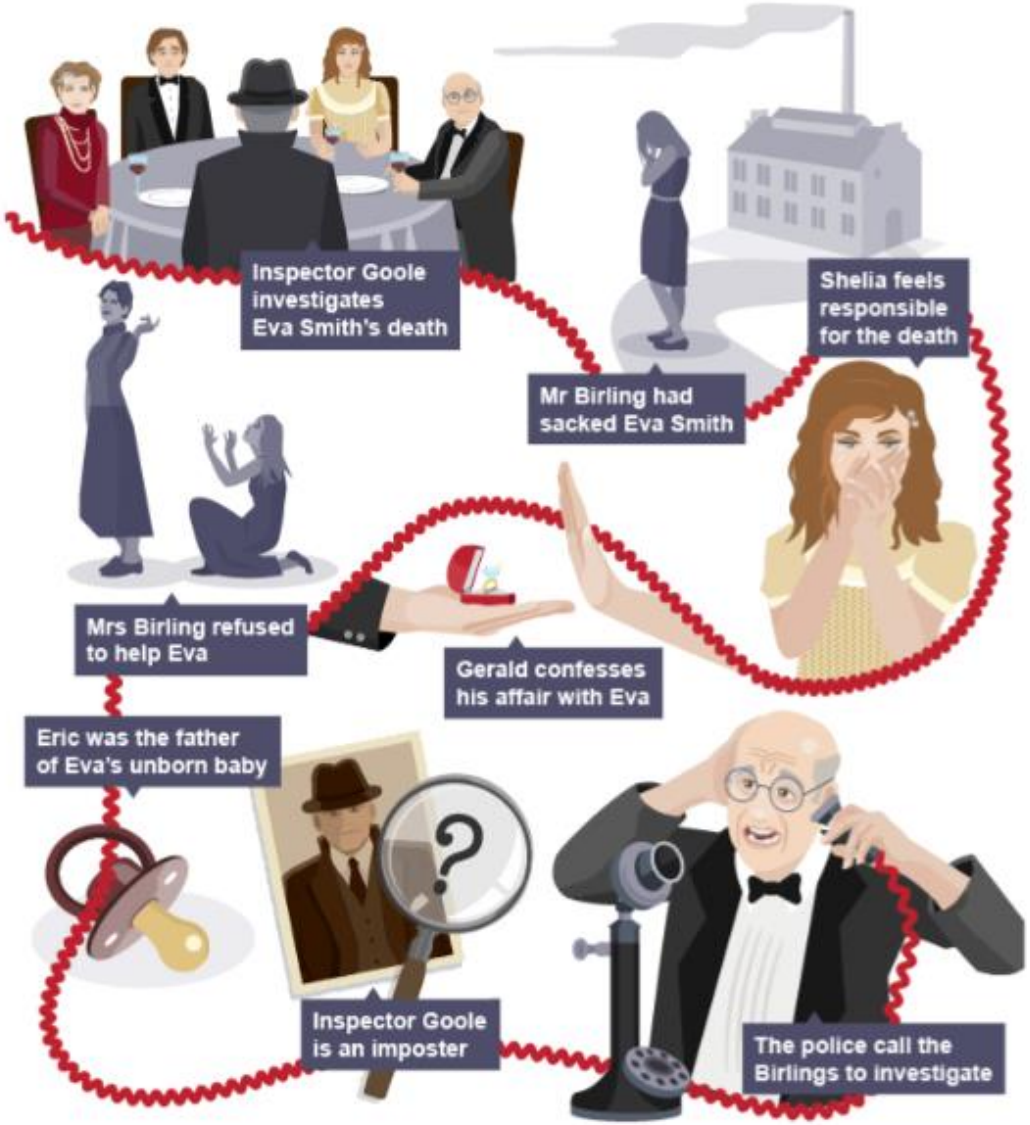
Settlebeck School

Tier 3 Vocabulary		
Key word		Definition
1	crosscutting	Switching between two scenes which are both on stage at the same time.
2	tension	A growing sense of expectation within the drama, a feeling that the story is building up towards something exciting happening.
3	naturalism	A style of drama coined by Stanislavsky, designed to represent real life.
4	levels	Using height to show authority or vulnerability in a scenario.
5	stage directions	An instruction in the text of a play indicating the movement, position, or tone of an actor, or the sound effects and lighting.
6	intention	The decisions, made by theatre makers, to communicate deeper meaning through their work
7	genre	The type of story which is performed.
8	style	How the work is presented on stage.
9	dialogue	The speech within the script.
10	characterisation	To become a character.

Notes:

Quiz QR Code	Quiz Link
	QUIZ LINK

Year 9 and 10 Knowledge Goals: English – An Inspector Calls – The Plot



The Chain of Events in An Inspector Calls

The Birlings celebrate the engagement of Sheila to Gerald Croft
An Inspector arrives to question them about the death of a young working class woman, Eva Smith.
Mr Birling fired her from his factory for being one of the organisers of a strike for more money
Sheila Birling insisted she was sacked from her job at Milward's shop when she believed Eva was laughing at how she didn't suit a dress she had chosen.
Gerald saw her at the Palace bar and, on learning she was destitute. gave her a meal and temporary accommodation then started an affair with her which he soon ended.
Eric met her at the same bar soliciting. He forced himself on her and got her pregnant.
Mrs Birling refused to help Eva when she went to the women in need charity that Sybil did voluntary work at.
The family argue. Sheila and Eric are ashamed at what they did, the others are more worried about being publicly shamed.
They are relieved when they believe it's all a hoax.
Then the phone rings.. an inspector is coming round.

What happened to Eva in September 1910, January 1911, March 1911. September 1911. early 1912, and March 1912?

Year 9 and 10 Knowledge Goals:– An Inspector Calls

Vocabulary to find the meanings of and learn

	Key word	Definition
1	portentous	
2	opinionated	
3	arrogant	
4	supercilious	
5	judgemental	
6	patronising	
7	frivolous	
8	immature	
9	shy	
10	assertive	

Vocabulary find the meanings of and learn

	Key word	Definition
12	privileged	
13	a sense of entitlement	
14	respectable	
15	self-serving	
16	morally complacent	
17	hypocritical	
18	remorse	
19	capitalist	
20	socialist	

Find the meanings of all these words .
Think about which of these words toy would use to describe which characters

Year 9 and 10 Knowledge Goals: English – An Inspector Calls The Main Characters

				
Mr. Arthur Birling A business man who's made money and married above himself. He is driven by profit and believes everyone should just look after themselves and make their own way in the world. If they fail to then it's their own fault	**Mrs. Sybil Birling** Born into the upper class, she is socially superior to her husband. She is particular about manners and people behaving correctly, She believes the working class do not have the "fine feelings and scruples" of the higher classes.	**Eric Birling** Having gone to a private school then university, he now helps in his father's business but has not been given much responsibility as his father doesn't think he is capable of doing a management role.. Bored and frustrated he has started drinking a lot.	**Shelia Birling** Sheila as the daughter of a wealthy family has led a life of luxury and been sheltered from the harsh realities of life. She has been courting Gerald Croft, the son of another business man, a competitor of Birling's and is now getting engaged to him..	**Gerald Birling** Gerald is particularly privileged, born into the upper class with a father who owns a successful business and has established him as a manager. In Mr. Birling's mind, he is the ideal husband for Shelia to unite the two rival businesses of Croft's and Birling's

Year 9 and 10 Knowledge Goals: English – An Inspector Calls - Context

What inspired Priestley to write this play?

Priestley was strongly influenced by
1. his upbringing in a northern industrial town
2. working in a factory and
3. by his experiences in World War 1.

Born in 1894 in Bradford, he went to work in a woollen mill at 16, and was disgusted by the conditions and pay.

He fought in World War 1 and was disgusted at how wrong decisions were made by those in charge resulting in sending lots of young men to their deaths.

What did Priestley say about World War 1 after the war ?

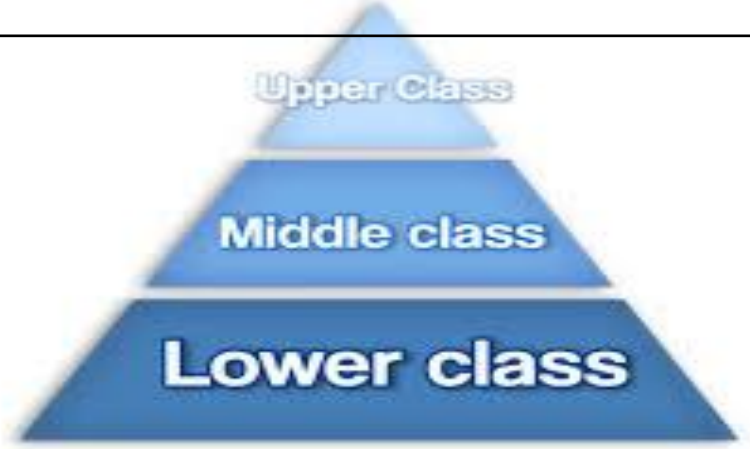
He became increasingly interested in socialism which challenged capitalism and its exploitation of and disregard for working people. It led him to support the Labour Party.

During World War 2 he was responsible for a radio programme – Priestley's Postscripts – which aimed to raise the morale of people bur also was used to raise ideas about there being greater equality and a better standard of living for the working class, As a result it stopped being broadcast.

in 1945 he wrote, "An Inspector Calls" whose message is that we are all responsible for each other.

The Class System

Priestley was critical of the class system which allowed some people lots of wealth whilst other were in poverty



Which characters in the play are:

1. upper class? 2.middle class? 3.working class?

How are each of these classes portrayed?

Watch An Introduction to the Context of JB Priestley's An Inspector Calls

Year 9 and 10 Knowledge Goals: English – An Inspector Calls The Main Characters

A mystery, whodunit, detective, crime drama?

Inspector Goole (ghoul?)

Who is he?
Note down your ideas
Watch Who is Inspector Goole? (Animated Character Analysis) 2023

The Inspector's Final Speech

"But just remember this. One Eva Smith has gone – but there are millions and millions of Eva Smiths and John Smiths still left with us with their lives, their hopes and fears, their suffering and chance of happiness, all intertwined with our lives, with what we think and say and do. We don't live alone. We are members of one body. We are responsible for each other. And I tell you that the time will soon come when, if men will not learn that lesson, then they will be taught it in fire and blood and anguish."

1. **Learn this speech.**
2. **Watch Inspector Goole's Final Speech; Analysis by Mr Bruff**
3. **Write an analysis of how language and structural techniques are used to engage us.**

A morality play?

The 7 Deadly Sins

1. **Check what each of the words above means.**
2. **Each of the Birlings and Gerald are guilty of one of more of these sins.**
   Who is guilty of which?

Year 9 and 10 Knowledge Goals: Non Fiction - Remarkable People

P	The character is presented as … Another aspect of this …… is…. The structure of the text is used to…. The language of the text is…….. The writer makes us think/conveys that…… Using…., the writer shows…. One aspect of the relationship is….	A further aspect of this text is…….. Similarly/on the other hand, the writer suggests that…. The technique of…..is used to …….. Another feature used is…… The writer shows us that…. One way in which the (use key words from the question) is….
E	For example,….. One quote that shows this is…. One example of this is……. In the line…….. In the text, it…. This is indicated in the….	such as…… For instance…….. is shown in the quotation……..
T	This is an example of a…….. The technique……. is used to…. The use of the technique…… By using the technique……. This is a …….. The use of the feature……. is…. an example of a…….. By using……..the writer show….	EXAMPLES: simile, metaphor, alliteration, question, assonance, simple sentence, compound sentence, complex sentence, paragraph, imagery, symbolism, structure, caesura, enjambement, end-stopped lines, stanza, personification, dehumanisation, noun, verb, adjective, adverb, pronoun, rhyme, rhyming couplets, alternate rhyme, half rhyme etc….
E	This suggests/shows/implies/connotes/indicates/evokes to the reader….. From this, the reader can see that…. By using the word…. the writer shows…. The use of diction such as ….. This presents…. This is similar to…. This is used to show that…. The connotations of this are… Some people may interpret it as…. Conversely, this could be seen to show… Another idea suggested by this quotation is….	
R	(Use key words from the question) Therefore, it can be seen that….. (Relate back to the question and your ideas on this) Overall, the writer is …. (Link to WHY he wrote the text, what was he trying to convey) The author's intention was to….. (Link to the next point you are going to make) (Link to your overall argument and answer)	

Wider Reading

'The most inspiring story I've ever heard': Klopp cheers on friend Czyz at Paralympics | Paris Paralympic Games 2024 | The Guardian

The 10 most inspirational people of all time | The Gentleman's Journal | The Gentleman's Journal

10 inspirational women who are changing the world | Hugh Baird College

Is this Britain's greatest cyclist no one's heard of? | Cycling UK

Word	Definition	In a sentence	Synonyms
1. **Advocate**	Noun: a person who publicly supports someone or something.	*For years, he had been an **advocate** for the vulnerable members of society.*	Supporter Champion
2. **Defeatist**	Noun: a person (or tone) who expects or is excessively ready to accept failure.	*They will never be beaten if every one of their opponents adopts such a **defeatist** attitude.*	Fatalistic Resigned
3. **Demeaning**	Adjective: to damage or lower the character, status of reputation of someone or something.	*It was **demeaning** to be criticised in front of my peers.*	Degrading Mortifying
4. **Derisive**	Adjective: expressing contempt or ridicule.	*The politician's attempt to answer the question drew **derisive** laughter.*	Mocking Jeering
5. **Desensitised**	Adjective: to cause someone to experience something, usually an emotion or a pain, less strongly than before.	*Having been surrounded by insensitive people for so long, he had become **desensitised** to unfeeling comments.*	Immune Numb
6. **Despondent**	Adjective: in low spirits from loss of hope or courage.	*She grew more and more **despondent** about her ability to pass her Chemistry exam.*	Dispirited Disconsolate
7. **Detrimental**	Adjective: to cause harm or damage.	*A lack of sleep can be **detrimental** to your wellbeing.*	Damaging Lethal
8. **Divisive**	Adjective: something that tends to cause a disagreement between people.	*Who you vote for can often be a very **divisive** issue.*	Contentious Fraught
9. **Facetious**	Adjective: treating serious issues with deliberately inappropriate humour; flippant.	*She kept interrupting the teacher with **facetious** remarks.*	Flippant Glib
10. **Farcical**	Adjective: very silly, unlikely, or unreasonable, often in a way that is humorous.	*The public refused to believe the politician's farcical excuses.*	Ridiculous Absurd
11. **Futile**	Adjective: something that produces no end result; useless and pointless.	*All my attempts to cheer her up proved **futile**.*	Pointless Hopeless
12. **Idealistic**	Adjective: characterised by idealism; unrealistically aiming for perfection; someone who believes that very good things	*Perhaps he was being **idealistic**, but his dream was to build a better future for all concerned.*	Utopian Romantic

Exam Key Words:

Interpret	This is to read, comprehend and then explain what you understand.
Explicit	These are elements within the text which are *clearly stated* and should be fairly obvious and easy to pick out.
Implicit	These are elements within the text which may be *hidden* or need you to *'read between the lines'* so are less obvious.
Evidence	This is when you refer to the text and use quotations to support your ideas.
Synthesise	A synthesis combines information from different sources to form a summary or an overview of the main ideas.
Analyse	To analyse is to explore something deeply. We use MQE squish to really consider the effect of a method.
Compare	This is to look for similarities and differences between texts. You need to make links between what, how and why writers make certain choices.
Evaluate	Evaluation is the skill of looking at a text and forming an opinion or judgement about it. The root 'value' is in the middle of evaluate, therefore you have to weigh up the value of the idea.
Communicate	This is to write your response in a way that is clear and engaging. It should be detailed and convincing.
Organise	You always plan your writing before you start so that you can organise your ideas. You need a logical and ordered final piece.

Year 9 and 10 Knowledge Goals: Non Fiction - Remarkable People

Tier 3 Vocabulary		
	Key word	Definition
1	adjective	A word that describes a noun or pronoun:
2	adverbs	A word that describes or gives more information about a verb, adjective, adverb, or phrase:
3	connotation	A feeling or idea that is suggested by a particular word although it need not be a part of the word's meaning, or something suggested by an object or situation:
4	narrator	The character who tells you what is happening in a book or film
5	symbolism	The use of symbols in art, literature, films, etc. to represent ideas:
6	triadic structure	A list of three words to create emphasis
7	hyperbole	A way of speaking or writing that makes someone or something sound bigger, better, more, etc. than they are:
8	semantic field	A lexical set of semantically related items, for example verbs of perception.
9	imperative	An imperative verb is one that tells someone to do something, so that the sentence it is in becomes an order or command.

Useful Websites

Classroom resources - The Day

Grammar and punctuation | Punctuation marks

GCSE English Language - BBC Bitesize

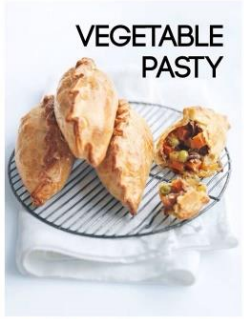
Englishbiz - GCSE English and English Literature Revision Guides

Grammar Girl

Paper-2-Summer-2017.pdf

Paper-2-Edexcel-sample-paper.pdf

Year 9 and 10 Knowledge Goals: Food Nutrition and Preparation

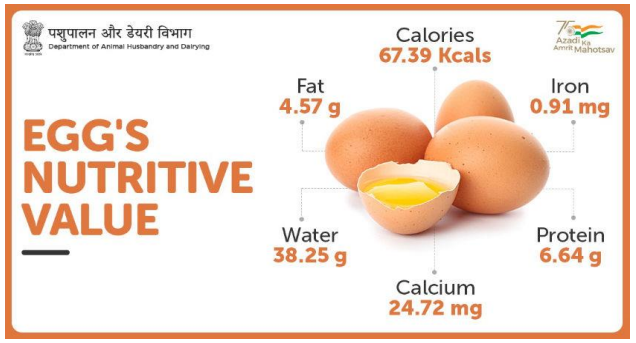


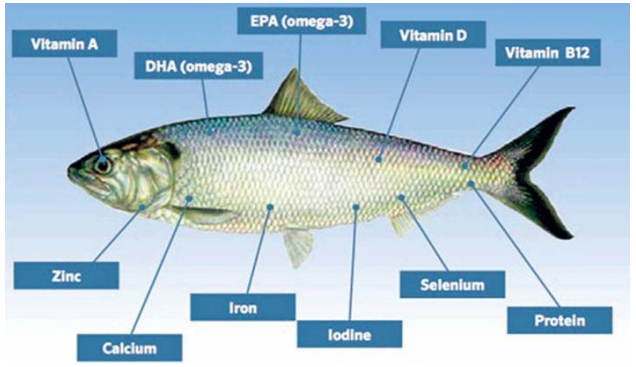
EGG FUNCTION	DESCRIPTION
GLAZING	BRUSHING BEATEN EGG OVER THE SURFACE OF PASTRY. THIS WILL SEAL THE SURFACE AND GIVE A BROWN COLOUR DURING COOKING. WILL ALSO GIVE A SHINY, GOLDEN FINISH.

ADDS VOLUME & AERATION	MERINGUE WHISKING TRAPS AIR AND CREATES A FOAM, THE MIXTURE EXPANDS. MERINGUE BECOMES SOLID FOAM ONCE BAKED. WHISKING DENATURES PROTEINS IN EGG WHITES, THIS TRAPS AIR WHICH EXPANDS THE EGG WHITE.
COAGULATION & SETTING	LEMON FILLING THICKENING OF FILLING, EGG SETS WHEN HEATED AND DENATURES PROTEIN.

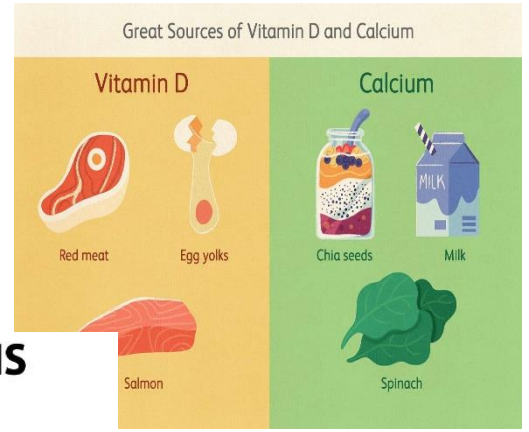
COATING & BINDING	FORMS PROTECTIVE LAYER AGAINST HEAT, WITH HEAT EGGS SET AND HOLDS DRY INGREDIENTS BREADCRUMBS OR BATTER IN PLACE.
BREADCRUMBS OR BATTER COATING	

Watch the video on how to fillet a fish





Lack of vitamin D and calcium can result in Osteoporosis or brittle bones and rickets



STAGES OF OSTEOPOROSIS

Essential amino acids

These cannot be synthesized within the body

- Threonine
- Methionine
- Histidine
- Phenylalanine
- Tryptophan
- Lysine
- Valine
- Leucine
- Isoleucine

These are included in protein that forms muscles. They account for 30-40% of essential amino acids.

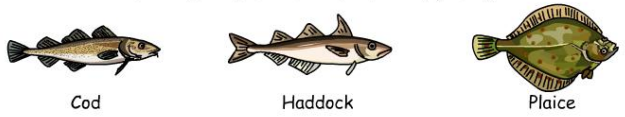
Non-essential amino acids

These can be synthesized within the body

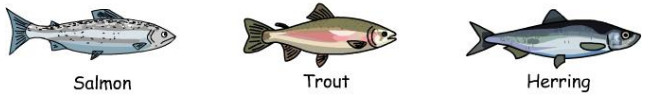
- Alanine
- Glutamic acid
- Aspartic acid
- Arginine
- Glycine
- Glutamine
- Asparagine
- Cysteine
- Serine
- Tyrosine
- Proline

All amino acids are required for body growth. Since "essential amino acids" cannot be synthesized within the body, they have to be consumed in the form of food.

White fish (such as cod, haddock, plaice)



Oily Fish (such as salmon, trout herring, eels)



Shellfish (such as lobsters, prawns and crabs)

Year 9 and 10 Knowledge Goals: Food Nutrition and Preparation

Tier 3 Vocabulary		
	Key word	Definition
1	coagulation	The action or process of a liquid changing into a solid (seen with proteins in eggs when they set)
2	aeration	The process of adding very tiny pockets of air to something. Seen when making meringues.
3	osteoporosis	A health condition that weakens bones, making them fragile and more likely to break. Can be down to a lack of calcium and vitamin D
4	amino acids	Amino acids are the building blocks of proteins. Proteins are long chains of amino acids.
5	essential amino acids	There are 9 essential amino acids which you must get through your diet.
6	non-essential amino acids	These amino acids are made by the body.
7	coating	Coating is a process of applying a liquid or a powder onto the surface of an edible products to convey new properties. For example fish cake.
8	binding	In baked goods, eggs bind other ingredients together naturally, aiding with products structure, texture, form and appearance.
9	emulsifying	In baked goods, eggs bind other ingredients together naturally, aiding with products structure, texture, form and appearance.

Notes

Year 9 and 10 Knowledge Goals: French

- le coca-lite _____
- le coca _____
- la limonade_____
- le Fanta _____
- le milkshake_____
- le chocolat chaud_____
- le jus d'orange_____
- le jus de pomme_____
- le thé_____
- le café_____
- l'eau minéral_____
- les frites_____
- les hamburgers_____
- les sandwichs au jambon_____
- les sandwichs au fromage_____
- les pizzas_____
- les gâteaux_____
- les glaces_____
- les bonbons_____
- la salade_____
- le chocolat_____

What are these food and drink items?

Remember

Language Nut

All students should have their username and password and can go on this at home.

Relevant adjectives

délicieux = delicious
dégoûtant = disgusting
découlasse = disgusting
froid = cold
trop chaud = too hot
salé = salty
piquant = spicy
insipide = tasteless
amer = bitter
trop sucré = too sugary

Year 9 and 10 Knowledge Goals: French

Tier 3 Vocabulary		
	Key word	Definition
1	perfect Tense	The past tense using avoir and être
2	past participle	The past tense verb e.g. joué regardé
3	personal pronouns	The person who is doing an action
4	faux ami	A word that sounds similar to English but has a different meaning.
5	stem	A word that has taken the verb ending off before you add an ending

Notes

Spring 1 Year 9 and 10

Year 9 and 10 Knowledge Goals: Geography

Changing Urban Environments: *Rio De Janeiro – A Case study in an NEE*

Location and Background

Rio is a coastal city situated in the South East region of Brazil within the continent of South America. It is the second most populated city in the country (20 million) after Sao Paulo.

City's importance:

- Has the second largest GDP in Brazil It is headquarters to many of Brazil's main companies, particularly with Oil and Gas.
- Sugar Loaf mountain is one of the seven wonders of the world.
- One of the most visited places in the Southern Hemisphere.
- Hosted the 2014 World Cup and 2016 Summer Olympics.

Opportunities:

Social: Standards of living are gradually improving. The Rio Carnival is an important cultural event for traditional dancing and music.
Economic: Rio has one of the highest incomes per person in the country. The city has various types of employment including oil, retail and manufacturing.
Environmental: The hosting of the major sporting events encouraged more investment in sewage works and public transport systems.

Challenges:

Social: There is a severe shortage of housing, schools and healthcare centres available. Large scale social inequality, is creating tensions between the rich and poor.
Economic: The rise of informal jobs with low pay and no tax contributions. There is high employment in shanty towns called Favelas
Environmental: Shanty towns called Favelas are established around the city, typically on unfavourable land, such as hills.

Changing Urban Environments – Rio de Janeiro Revision videos including key word definitions (Geography Hawkes - YouTube)

Changing Urban Environments – Rio de Janeiro BBC bitesize revision

Self Help Scheme – Rochina, Bairro Project

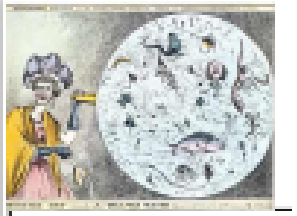
- The authorities have provided basic materials to improve peoples homes with safe electricity and sewage pipes.
- Government has demolished houses and created new estates.
- Community policing has been established, along with a tougher stance on gangs with military backed police.
- Greater investment in new road and rail network to reduce pollution and increase connections between rich and poor areas.

Year 9 and 10 Knowledge Goals: Geography

Tier 3 Vocabulary		
	Key word	Definition
1	urbanisation	When increasing proportion of the population live in towns or cities.
2	push factors	Reasons for people to move to an area such as a town.
3	pull factor	Reasons for people to move to an area such as a town.
4	central business district	The main shopping and service area in the city, usually found in the middle of the city.
5	brownfield site	Land that has been built on before, often found in the inner city.
6	greenfield site	Land that has not been built on before, often found towards the edge of a built-up area or in the countryside.
7	multiculturalism	Trying to create unity through difference where people of different ethnic groups living together without conflict.
8	squatter settlement - Favella	Areas of cities that are built by people usually using any materials they can find, land does not belong to squatters.
9	sustainable city	An urban area where residents have a way of life that will last a long time. The environment, economy and social fabric are able to continue.
10	rural to urban migration	A process in which people move from the countryside to towns.
11	informal sector	Part of the economy where jobs are created by people trying to get an income e.g., recycling, ragpickers, the figures are not counted in official statistics, and it is often not taxed.
12	self-help scheme	When local people try to improve their lives often working with authorities or charities, people can tell them what they need and are involved in the improvements.

Notes

Year 9 and 10 Knowledge Goals: History



Ideas about CAUSE of disease

C18th Age of "Enlightenment" – people thinking for themselves, not just following ideas of church

1861, **Louis Pasteur** published **Germ Theory**. Observed that "microbes" present in the air, these made liquids rot (he was investigating rotting beer).
Proved microbes could be killed by heat (pasteurisation).
1878 published Germ Theory of infection, proving microbes caused disease in humans.

Robert Koch identified that different microbes caused different diseases.
First discovered cholera 1883.
Came up with methods to study bacteria (grow in petri dish, stain with dye to make easier to see) – these methods made it possible for other scientists to make further discoveries.
Koch's work meant that scientists studied diseases, not symptoms.

Impact in Britain
GB doctors – led by Henry Bastian – did not believe in Germ Theory. They still believed in Spontaneous Generation (microbes spread from rotting matter by miasma).
GB government rejected germ theory until end of C19th.

Approaches to TREATMENT and PREVENTION

Hospitals
Florence Nightingale: nurse in Crimean War 1854; hospitals appalling
Made changes to way wounded soldiers treated
- Sanitation (clean hospital, bedding)
- Nurses to provide care
- Good meals provided

Mortality rate (% of wounded dying) fell from 40% to 2%
Nightingale returned to GB
- Set up nursing college; designed hospitals with wards to stop disease spreading; wrote "Notes on Nursing"

Surgery: 3 major problems: pain, infection, blood loss (this was not "solved" until C20th)
Anaesthetic developed to deal with pain.
Other drugs had been used (eg ether), but problems.
James Simpson discovered chloroform.
Some opposed as though pain was sent by God, but when Queen Victoria used chloroform, it became popular
Antiseptic developed to deal with infection. After reading Pasteur's Germ Theory Joseph Lister used carbolic acid during operations to keep wound clean. Many doctors opposed at first, as carbolic was unpleasant

Prevention
Edward Jenner develop **vaccination** to protect against smallpox.
Previously people had been inoculated (given small dose of disease to develop immunity.
1776 Jenner worked out you could make someone immune to smallpox by injecting a small amount of cowpox.
Lots of opposition from church, inoculators and scientists

Public Health
1848 Public Health Act encouraged cities to provide clean water, but not compulsory.
1852 government makes smallpox vaccinations compulsory
1875 Public Health Act. Realisation government should intervene to improve living conditions in cities. City authorities forced to: provide clean water, dispose of sewage properly, public health officer to monitor outbreak of disease, ensure good new housing.

C18th - 19th (1700-1900)

Case Study: Cholera (1854)

Disease first arrived London 1831.
Particularly affected the poor – those living in slums and workhouses.
Three "epidemics" (major outbreaks, killing thousands).
Government tried to prevent by cleaning slums to reduce miasma – did not work.
1854 outbreak studied by **John Snow**.
Snow plotted where all deaths had occurred on a map.
Identified that they were centred around Broad St water Pump.
Took handle off pump, no more victims
Discovered Broad St well was next to a cesspit (toilet pit).
Proved that cholera was spread by dirty water.

Key Individuals

Louis Pasteur developed germ theory
Robert Koch identified specific microbes, developed methods to study them better
Henry Bastian British doctor, did not believe in Germ Theory
Florence Nightingale came up ideas of modern nursing / hospital design
James Simpson discovered chloroform
Joseph Lister develop use of carbolic acid to tackle infection in surgery
John Snow worked out that cholera caused by dirty water
Edward Jenner came up with the concept of using vaccination

Key Vocabulary

Anaesthetic a drug which makes a patient unconscious during surgery
Germ a small organism which can cause disease
Antiseptic germ-free
Microbe germ that can cause disease
Spontaneous generation idea about cause of decay
Epidemic rapid spread of a disease

Examples of Change

- Germ Theory – understanding that germs cause disease
- Surgery became safer
- Hospitals more clean
- Government became involved more involved in health / medicine
- Vaccines developed to prevent disease

Examples of Continuity

- Many people still believed in miasma
- Still major public health issues in cities. Widespread poverty
- No cure for blood loss in surgery
- There was better understanding of cause of disease, but still few cures

Year 9 and 10 Knowledge Goals: History

Key terminology	
Amputation	The **removal of a limb** by surgery.
Anaesthetic	A drug or drugs given to produce **unconsciousness** before and during surgery.
Antiseptics	Chemicals used to **destroy bacteria** and prevent infection.
Chloroform	A liquid whose vapour acts as an **anaesthetic** and produces unconsciousness.
Diarrhoea	A symptom of a disease (such as cholera); frequent, **fluid bowel movements**.
The Enlightenment	A European intellectual movement of the 18th century emphasising **reason** and **science** over religion and tradition; also known as the "Age of Reason".
Germ theory	The theory that **germs cause disease**, often by infection through the air.
Inoculation	Putting a **low dose** of a disease into the body to help it fight against a more serious one.
Laissez-faire	Belief that **governments** should **not interfere** in people's lives.
Microbe	A **living organism** that is too small to see without a microscope.
Pasteurisation	A way of **preserving** food or drink by **heating** to 55 degrees C and thus killing the bacteria.
Public Health Act (1875)	Government **legislation** that made it compulsory for city authorities to dispose of **sewage**, build public toilets and provide **clean water**. New houses had to be built to better quality and food sold in shops had to be checked for safety.
Spontaneous generation	The theory that **decaying matter** turns into germs.
Vaccination	**Injection** into the body of **weakened organisms** to give the body **resistance**. Comes from the word *vacca* which means cow in Latin. This was because the first vaccination involved injecting cow pox samples into people to develop immunity against small pox.

SUMMARY OF THE PERIOD
Significant changes in medicine occur in this period. By 1900, there was a better understanding of how germs cause disease and work was being done to develop new vaccines and treatments. The government, which started out with a laissez-faire attitude to public health, began to become more involved, with compulsory small pox vaccination and the Public Health Act of 1875. Hospitals developed into clean, modern institutions thanks to the work of Florence Nightingale and more surgery became possible through the use of anaesthetics. Fewer people died as a result of surgery because of Joseph Lister's pioneering work with antiseptics.

Notes:

Use the information on the other side of this sheet to focus your home learning. This is a guide to the unit that we are currently studying in school. If you miss any lessons, or feel that you didn't understand any of the topics on here, then you can see more for more guidance, or use this as a basis for more independent learning.

Quiz QR Code	Quiz Link
	https://forms.office.com/e/QiM1tqw6Lj

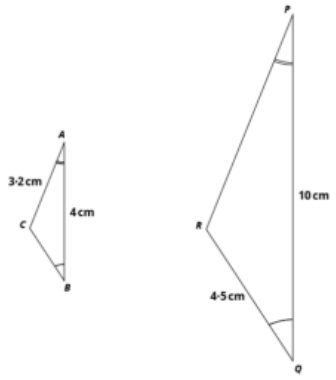
Year 9 and 10 Knowledge Goals: Mathematics (Higher)

Calculating unknown measurements for similar shapes

Lengths

Using the scale factor for the enlargement gives a method for calculating missing lengths.

Example
Triangles ABC and PQR are similar.
Calculate the lengths of PR and BC.



Answer
We are given the lengths of the **corresponding sides** AB and PQ. This means that the scale factor for the enlargement is $\frac{10}{4} = 2{\cdot}5$.

To calculate the length PR, we need to multiply the corresponding side by 2·5, as triangle PQR is the larger triangle.

Length of $PR = 3{\cdot}2 \times 2{\cdot}5 = 8\,\text{cm}$.

To calculate the length BC, we need to divide the corresponding side by 2·5, as triangle ABC is the smaller triangle.

Length of $BC = 4{\cdot}5 \div 2{\cdot}5 = 1{\cdot}8\,\text{cm}$

Another method is to use the **ratios** between the corresponding sides.

This can be written as:

$$\frac{PQ}{AB} = \frac{PR}{AC} = \frac{QR}{BC} \text{ or } \frac{AB}{PQ} = \frac{AC}{PR} = \frac{BC}{QR}$$

In this example, we have:

$$\frac{10}{4} = \frac{PR}{3{\cdot}2} \text{ and } \frac{4}{10} = \frac{BC}{4{\cdot}5}$$

Length of $PR = \frac{10}{4} \times 3{\cdot}2$

$= 8\,\text{cm}$

Length of $BC = 4{\cdot}5 \times \frac{4}{10}$

$= 1{\cdot}8\,\text{cm}$

We can also use ratios to find the unknown areas and volumes of similar shapes.

Areas

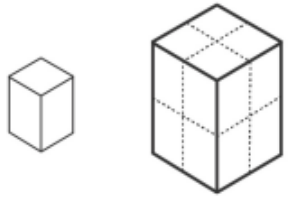
Example
A small rectangle has been enlarged by scale factor of three to create a large rectangle. What is the ratio of their areas?

Answer
Although the lengths have been increased by a ***linear*** scale factor of 3, it is obvious that the large rectangle has an area more than three times the area of the small rectangle. Since both the length and width of the rectangle have enlarged by a linear scale factor of 3, the area has been increased by a factor of 3×3 or 3^2, which is 9, as illustrated in this diagram.

Volumes
A small cuboid has been enlarged by a scale factor of 2 to create a large cuboid. What is the ratio of their volumes?

Answer
This diagram illustrates that, as each of the length, width and height have been increased by a linear scale factor of 2, the volume has been increased by a scale factor of $2 \times 2 \times 2$ or 2^3, which is 8.

Using these two examples, we can obtain some general rules for similar shapes.



If the length scale factor is k, then:

- **the area scale factor is k^2**
- **the volume scale factor is k^3.**

Congruent triangles

For triangles to be congruent, they must satisfy one of four different conditions. These conditions for congruent triangles can then be used in proofs. In these conditions, the following notation is usually used:

S ≡ side, A ≡ angle, R ≡ right angle, H ≡ hypotenuse.

SSS: All three corresponding sides are equal.
SAS: Two sides and the included angle (the angle between the two given sides) are equal.
ASA: Two angles and one corresponding side are equal. Note that the corresponding side doesn't need to be the side included between the two angles.
RHS: Right angle, hypotenuse and side are equal on the corresponding triangle.

Conditions that do not guarantee congruent triangles

AAA: Three angles matching across triangles does not guarantee congruent triangles, only similar triangles.
SSA: Two sides and one angle that match across triangles does not guarantee they are congruent, as two different triangles are often possible.

You may come across examples stating that two angles and a side matching across triangles (AAS) is a condition for congruent triangles. However, although often correct, this is not correct as a general rule

REMEMBER!
For two shapes to be congruent, they must be exactly the same shape and size.

Year 9 and 10 Knowledge Goals: Mathematics (Higher)

What you need to know:

Pie Charts

Use the data in the following table to draw a pie chart

House Type	Frequency	Angle
Detached	18	18 x 5° = 90°
Semi-detached	30	30 x 5° = 150°
Terraced	6	6 x 5° = 30°
Flat	14	14 x 5° = 70°
Other	4	4 x 5° = 20°

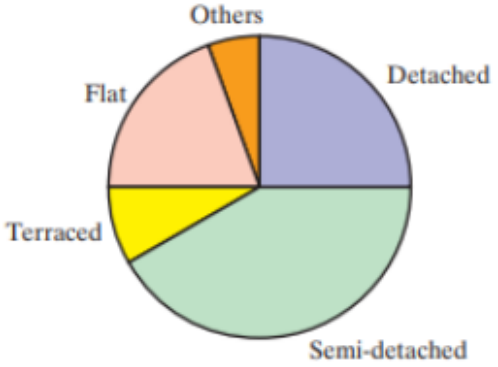
Total = 72

Finding angles:
Step 1 – Divide 360° by your total frequency to find how many ° represents one house
= 360 ÷ 72 = 5°

Step 2 – Multiply the frequency for each house type by the ° per house

Drawing the pie chart:
Step 1 – Draw a circle using a compass, and draw a vertical line from the centre to the top
Step 2 – Using a protractor, measure and draw each angle
Step 3 – Label each section of the pie chart
Step 4 – Give your pie chart a suitable title

Types of housing in Showtown

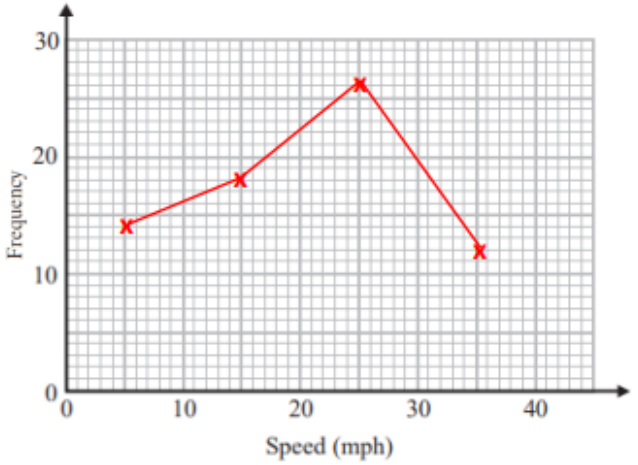


Drawing Frequency Polygons

This table gives information about the speeds of 70 cars.

Speed (s mph)	Frequency (f)	Midpoint
$0 < L \leq 10$	14	5
$10 < L \leq 20$	18	15
$20 < L \leq 30$	26	25
$30 < L \leq 40$	12	35

a) Draw a frequency polygon for this information.



Step 1 – Find the midpoint of each class interval
Step 2 – Label your axes and choose an appropriate scale
Step 3 – Plot each point at the midpoint for that interval
Step 4 – Connect each point with a straight line

Do not extend the line beyond the points you have

b) Identify the interval with the median speed

Step 1 – Identify the median car
Median car = 71 ÷ 2
= 35.5

Median = $\frac{Total\ Frequency+1}{2}$

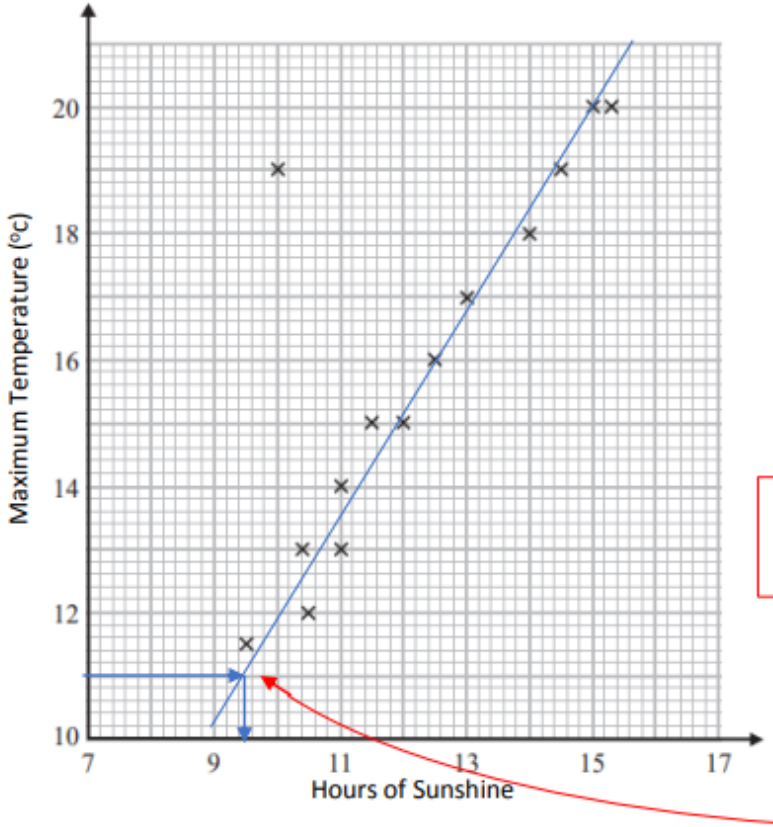
Step 2 – Which bracket does this car fall into?
35.5 occurs in the $20<L\leq30$ bracket

Year 9 and 10 Knowledge Goals: Mathematics (Higher)

What you need to know:

Scatter Graphs

This scatter graph shows the maximum temperature and the number of hours of sunshine in 14 British towns in one day.



Scatter Graphs - Outliers and Correlation

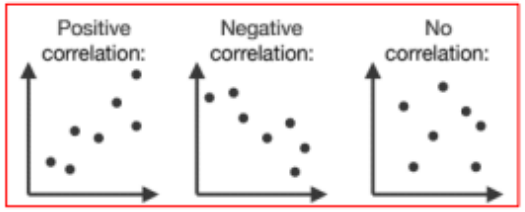
Identify the coordinates of the outlier.

= (10, 19)

An outlier is a value that doesn't fit the pattern of the data

What type of correlation does the remaining data show?

= Positive correlation



Scatter Graphs – Correlation and Causation

A student looks at the graph and says "This graph shows that sunshine causes higher temperatures". Is this true? Give a reason.

Correlation does not imply causation. While it may look like variables are related, there may be something else responsible for the data points.

= No, although the graph shows a positive correlation, this does not mean there is a causal link between hours of sunshine and maximum temperature

Scatter Graphs – Explaining Patterns

A weatherman says "Temperatures are higher in towns that have more sunshine". Is this supported by the scatter graph?

= Yes, the majority of points for high temperature appear when there are more hours of sunshine.

Interpolation and Extrapolation

Interpolation – making a prediction of a value that falls within the range of your data. This is more accurate.

Extrapolation – making a prediction of a value that falls outside the range of your data. This is less accurate.

Another town had a maximum temperature of 11°c that day. Use a line of best fit to estimate the hours of sunshine at this town.

Step 1 – Draw a line of best fit
Step 2 – Draw a line along from 11°c and down from the line of best fit

= 9.5 hours

Comment on the reliability of your prediction.

= This is not a reliable estimate because it is extrapolation

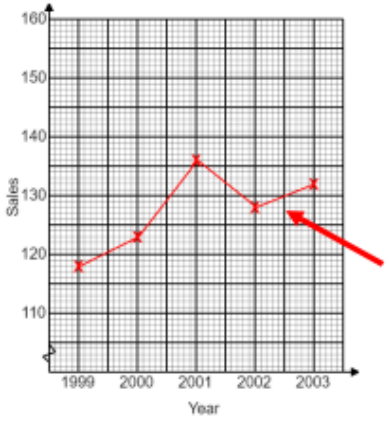
Year 9 and 10 Knowledge Goals: Mathematics (Higher)

What you need to know:

Time-series Graphs

Plot the following sales information on the graph below and describe the overall trend:

Year	1999	2000	2001	2002	2003
Sales	118	123	136	128	132



Step 1 – Label the x and y axes, and use an appropriate scale

Try to fill the graph paper

Step 2 – Plot each point onto the graph

Double check what one square represents

Step 3 – Join up each point with a straight line

Step 4 – Identify the overall pattern shown = generally increasing

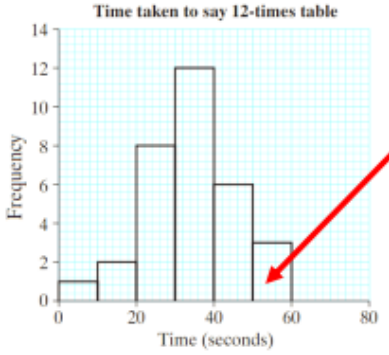
Visualising a line of best fit through the plotted points can help you to see the overall trend

Histograms with Equal Class Intervals

A group of 32 students were asked to say the 12-times table as fast as possible.

a) Draw a histogram for the following data:

Time, t (s)	Frequency
$0 < t \leq 10$	1
$10 < t \leq 20$	2
$20 < t \leq 30$	8
$30 < t \leq 40$	12
$40 < t \leq 50$	6
$50 < t \leq 60$	3



See *Cumulative Frequency, Box Plots, and Histograms* for more on drawing histograms

No gaps between bars

$$\text{Frequency Density} = \frac{\text{Frequency}}{\text{Class Width}}$$

Writing a Ratio

Ratio: The is the relationship between two or more numbers and each number is separate by a colon.

The ratio of footballs to rugby balls: 1:4

The ratio of rugby balls to footballs: 4:1

Football is mentioned first so that is why the 1 comes before 4.

Rugby is mentioned first so that is why the 4 comes before 1.

As fractions: If we wanted to represent the ratio as fractions then:

1 : 4

$= \frac{1}{5} : \frac{4}{5}$

The denominator comes from adding the two parts of the ratio together.

Writing ratios as 1:n or n:1

This means that the ratio needs to be simplified in a specific way. You may end up with fractions or decimals as part of your answer.

Write 2: 5 in the form 1 : n

2 : 5

÷ 2 ÷ 2

1 : 2.5

You must end up with a 1 in the correct place - read the question carefully!

Write 2: 5 in the form n : 1

2 : 5

÷ 5 ÷5

0.4 : 1

Year 9 and 10 Knowledge Goals: Mathematics (Higher)

What you need to know:

Simplifying a ratio

You must make sure that your ratio has been simplified fully by finding the highest common factor.

Simplify 12 : 20

÷ 4

= 3 : 5

This could have been done in two steps by dividing by 2 and then by 2 again.

Simplify 60 : 40 : 100

÷ 10

= 6 : 4 : 10

÷ 2

= 3 : 2 : 5

This could have been done in one step by dividing by 20.

Sharing in a ratio

Sharing in a ratio: To share in a ratio we can use bar modelling to visualise the steps.

Share £45 in the ratio 2:7.

Add the parts of the ratio together.

2 + 7 = 9 parts

Divide the total by the number of parts.

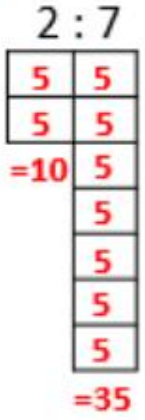
45 ÷ 9 = 5

x

2 : 7

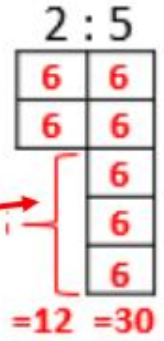
Multiply each part of the ratio by the value of one part,

= £10:£35



Sharing ratio when given one part:

Joy and Martin share money in the ratio 2:5. Martin gets £18 more than Joy. How much do they each get?



5 -2 = 3 parts difference

Find how many parts difference there are and then divide.

18 ÷ 3 = 6

x

2: 5

= £12: £30

Year 9 and 10 Knowledge Goals: Mathematics (Higher)

Tier 3 Vocabulary		
	Key word	Definition
1	congruence	Two shapes are congruent if they have exactly the same size and shape. They can be rotated, reflected, or translated, but their corresponding sides and angles must be equal.
2	similarity	Two shapes are similar if they have the same shape but different sizes.
3	corresponding sides	Sides that are in the same position in two similar or congruent shapes.
4	scale factor	The ratio of the lengths of corresponding sides in two similar shapes.
5	frequency distribution	A table that shows how often different values or ranges of values occur in a dataset.
6	cumulative frequency	The running total of frequencies, showing the number of data points that fall below a certain value.
7	box plot	A graphical representation of data that shows the median, quartiles, and minimum and maximum values.
8	histogram	A bar graph where the area of each bar represents the frequency of the data within that interval.
9	ratio	A part, share, or amount considered in relation to the whole.
10	percentage	A comparison of two or more quantities.
11	reciprocal	A proportion or rate per hundred.
12	proportion	The multiplicative inverse of a number. For example, the reciprocal of 2 is 1/2.

Notes

Year 9 and 10 Knowledge Goals: Mathematics (Higher & Foundation)

What you need to know:

Solving two step equations/inequalities

To solve a two step equation or inequality we need to complete 2 inverse calculations in a specific order.

$6y + 2 = 32$
$-2 \quad -2$
$6y = 30$

Subtract first because the 2 is separate from the y.

$\div 6 \quad \div 6$
$y = 5$

Divide because it is the inverse of multiplying.

$\frac{w-5}{3} \geq 4$
$\times 3 \quad \times 3$
$w - 5 \geq 12$

Multiply first because the entire expression is divided by 3.

$+5 \quad +5$
$w \geq 17$

Add because it is the inverse of subtracting.

Solving equations with brackets

We must expand the bracket first and then solve by doing the inverse of the operations. We use the same method for inequalities.

$3(2x + 5) = 39$

Expand brackets first.

$6x + 15 = 39$
$-15 \quad -15$

The inverse of +15 is -15.

$6x = 24$
$\div 6 \quad \div 6$
$x = 4$

The inverse of x 6 is ÷6.

Solving with unknowns on both sides

To solve an equation or inequality with unknowns on both sides we need to collect all of the same terms together, still by looking at the inverse.

$5x - 20 \leq 3x + 4$
$-3x \quad -3x$
$2x - 20 \leq 4$

We subtract 3x from both sides because it is the smaller term of x.

$+20 \quad +20$
$2x \leq 24$
$\div 2 \quad \div 2$
$x \leq 12$

Then solve like a normal two step equation.

$2x - 10 = 5x + 2$
$-2x \quad -2x$
$-10 = 3x + 2$

We subtract 2x from both sides because it is the smaller term of x.

$-2 \quad -2$
$-12 = 3x$
$\div 3 \quad \div 3$
$-4 = x$

Then solve like a normal two step equation.

Top tip: Always subtract/add the smaller number of terms to avoid getting a negative term at the end.

Year 9 and 10 Knowledge Goals: Mathematics (Higher & Foundation)

What you need to know:

Reading and Writing Inequalities

The list of integers for $-2 < x \leq 1$ is -1, 0, 1.

Check the symbols carefully, if they have the line underneath they include the end value.

○ Greater than	$>$	Greater than or equal to	$\geq$ ●
○ Less than	$<$	Less than or equal to	$\leq$ ●
Not equal to	$\neq$		

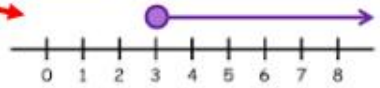
The arrow points in the same direction as the inequality.

An open circle means that the value is not included:

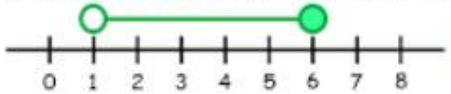
$x > 2$ — x is greater than 2

A filled in circle means that the value is included:

$x \geq 3$ — x is greater than or equal to 2



If x is between two values, use two circles:



$1 < x \leq 6$

x is greater than 1, but less than or equal to 6.

Solving one step equations/inequalities

To solve any equation or inequality we need to do the inverse of the operation that we see.

$t + 4 = 10$
$-4 \quad -4$
$t = 6$

The inverse of add is subtract and vice versa.

$c - 3 > 6$
$+3 \quad +3$
$c > 9$

$6y < 30$
$\div 6 \quad \div 6$
$y < 5$

The inverse of multiply is divide and vice versa.

$\frac{m}{7} = 4$
$\times 7 \quad \times 7$
$m = 28$

You need to be able to:

- Read an inequality.
- Represent an inequality on a number line.
- Solve one step equations and inequalities.
- Solve two step equations and inequalities.
- Solve equations and inequalities with brackets.
- Solve equations and inequalities with unknowns on both sides.

Year 9 and 10 Knowledge Goals: Mathematics (Higher & Foundation)

Tier 3 Vocabulary		
	Key word	Definition
1	simultaneous equations	A set of two or more equations with the same variables, requiring you to find values that satisfy all equations at the same time.
2	linear equation	An equation whose graph is a straight line.
3	quadratic equation	An equation where the highest power of the variable is 2
4	inequality	that compares two expressions using symbols like < (less than), > (greater than), ≤ (less than or equal to), or ≥ (greater than or equal to)
5	solution	The value(s) of the variable(s) that make an equation or inequality true.
6	coefficient	The number that multiplies a variable (e.g., the '2' in 2x).
7	constant	A value that does not change.
8	variable	A symbol (usually a letter) that represents an unknown quantity.
9	substitution	Replacing a variable with its equivalent expression.
10	elimination	A method for solving simultaneous equations by adding or subtracting the equations to eliminate one of the variables.
11	factorisation	Expressing a number or algebraic expression as a product of its factors.
12	quadratic formula	A formula used to find the solutions of any quadratic equation.

Notes

Year 9 and 10 Knowledge Goals: Mathematics (Foundation)

What you need to know:

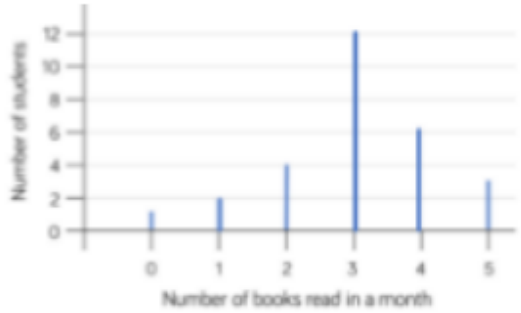
Frequency Table

Tally marks are used to help count things. Each vertical line represents one unit. The fifth tally mark goes down across the first four to make it easier to count. The frequency column is completed after all the data has been collected.

You must represent 5 like this.

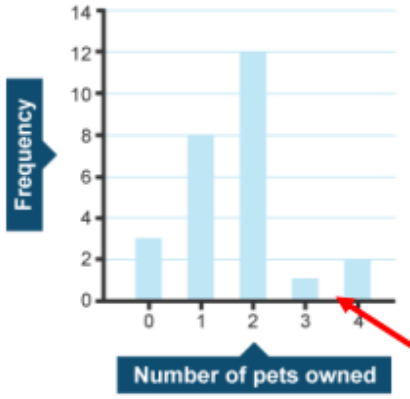
Eye Colour	Tally	Frequency
brown	𝍸 |	6
blue	𝍸 |||	8
green	|||	3
grey	||||	4
hazel	𝍸	5

Vertical Line Chart



- Gaps between the lines.
- Clearly labelled axes.
- Scale for the axes.
- Discrete data only.

Bar Charts

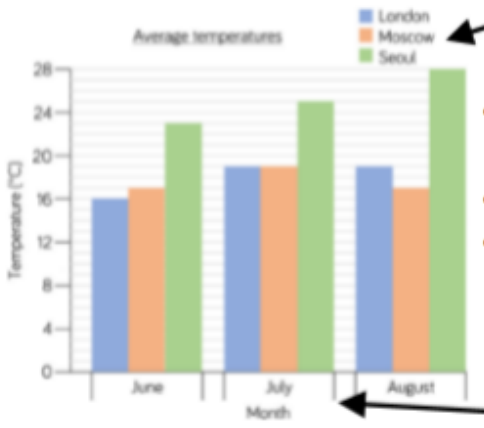


A bar chart has a horizontal axis and a vertical axis. The x axis is for the type of data and the y axis shows the frequency. The bars show the data value of each category. There must be a gap between each bar and the scale must increase in the same sized intervals and the axes must be labelled.

You must include gaps and labels.

Dual Bar Charts

Compares multiple groups of data.



Key/Colour code for separate groups.

- Clearly labelled axes.
- Scale for axes.
- Comparable data bars drawn next to each other.

Gaps between different categories.

Year 9 and 10 Knowledge Goals: Mathematics (Foundation)

What you need to know:

Pictograms

Pictograms are similar to bar charts, but the data is shown in pictures. A pictogram **must have a key** so that you know what a full image represents.

Looking at this diagram:

Black = 4 + 4 + 2 = 10 cars

Red = 4 + 4 + 4 = 12 cars

Green = 2 cars

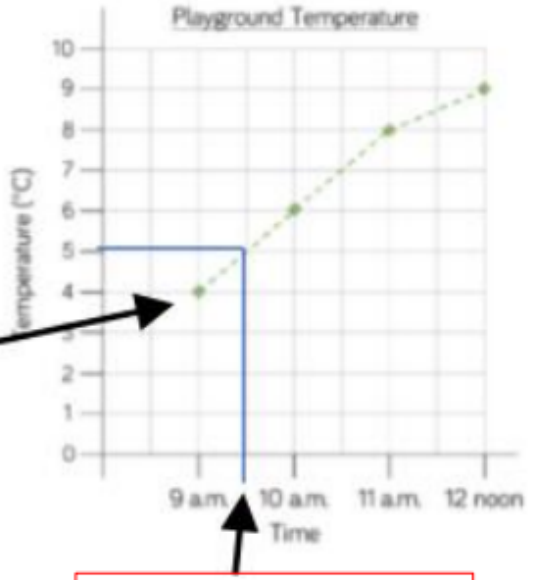
Others = 4 + 4 + 4 + 4 = 16 cars

This represents 2 cars because it is half of the diagram in the key.

Line Graphs/Time Series

- Commonly used to show changing over time.
- The points are the recorded information and the lines join the points.

Line graphs do NOT ned to start from 0.



More than one piece of data can be plotted on the same graph to compare data.

It is possible to make estimates from the line e.g. temperature at 9.30am is 5 degrees Celsius.

Stem and leaf diagrams

Here is a list of numbers and the stem and leaf diagram:

68, 75, 77, 79, 80, 82, 92, 96, 96, 97

Stem	Leaf
6	8
7	5 7 9
8	0 2
9	2 6 6 7

The 'leaves' must be from smallest to biggest in each row.

Key 6|8= 68

You must include a key to explain what the stem and leaf shows.

Mode = 96 because 96 appears twice.

Median = 81 because 81 is in the middle of 80 and 82.

Range = 97 – 68 = 29.

Mean = $\frac{68+75+77+79+80+82+92+96+96+97}{10}$ = 84.2

We calculate these in the same way we would from a list.

Two Way Tables

A table that organises data around two categories.

Fill out the information step by step using the information given:

Question: Complete the 2 way table below.

	Left Handed	Right Handed	Total
Boys	10		58
Girls			
Total		84	100

Both need to add to make 100 so the missing number is 16.

Answer: Step 1, fill out the easy parts (the totals)

	Left Handed	Right Handed	Total
Boys	10	*48*	58
Girls			*42*
Total	*16*	84	100

Both need to add to make 100 so the missing number is 42.

Answer: Step 2, fill out the remaining parts

	Left Handed	Right Handed	Total
Boys	10	*48*	58
Girls	*6*	*36*	*42*
Total	*16*	84	100

Both need to add to make 16 so the missing number is 6.

Both need to add to make 42 so the missing number is 36.

Year 9 and 10 Knowledge Goals: Mathematics (Foundation)

Key Concepts

Equivalent fractions have the same value as one another.
Eg. $\frac{1}{4} = \frac{2}{8} = \frac{3}{12}$

A number multiplied by it's **reciprocal** gives the answer of 1. Or the reciprocal of a number is 1 over the number.
Eg. $\frac{1}{8}$ is the reciprocal of 8.
$\frac{2}{5}$ is the reciprocal of $\frac{5}{2}$

Examples

$1\frac{2}{3} + 2\frac{1}{4}$

$= \frac{5}{3} + \frac{9}{4}$ — Convert into an improper fraction

$= \frac{20}{12} + \frac{27}{12}$ — Find a common denominator

$= \frac{47}{12}$

$= 3\frac{11}{12}$ — Convert back into a mixed number

$2\frac{2}{3} - 1\frac{1}{4}$

$= \frac{8}{3} - \frac{5}{4}$ — Convert into an improper fraction

$= \frac{32}{12} - \frac{15}{12}$ — Find a common denominator

$= \frac{17}{12}$

$= 1\frac{5}{12}$ — Convert back into a mixed number

$1\frac{1}{3} \times 2\frac{3}{4}$

$= \frac{4}{3} \times \frac{11}{4}$ — ×, ×

$= \frac{44}{12}$

$= 3\frac{8}{12}$

$2\frac{1}{3} \div 1\frac{3}{5}$

$= \frac{7}{3} \div \frac{8}{5}$ — Find the reciprocal of the second fraction....

$= \frac{7}{3} \times \frac{5}{8}$ — ...and multiply

$= \frac{35}{24}$

$= 1\frac{11}{24}$

Key Concepts

Calculating percentages of an amount without a calculator:

10% = divide the value by 10
1% = divide the value by 100

Calculating percentages of an amount with a calculator:

Amount × percentage as a decimal

Calculating percentage increase/decrease:

Amount × (1 ± percentage as a decimal)

Percentage change:

A dress is reduced in price by 35% from £80. What is it's **new price**?

$Value \times (1 - percentage\ as\ a\ decimal)$
$= 80 \times (1 - 0.35)$
$= £52$

A house price appreciates by 8% in a year. It originally costs £120,000, what is the **new value** of the house?

$Value \times (1 + percentage\ as\ a\ decimal)$
$= 120{,}000 \times (1 + 0.08)$
$= £129{,}600$

Reverse percentages: This is when we are trying to find out the original amount.

A pair of trainers cost £35 in a sale. If there was 20% off, what was the **original price** of the trainers?

$Value \div (1 - 0.20)$
$= 35 \div 0.8$
$= £43.75$

A vintage car has increased in value by 5%, it is now worth £55,000. What was it worth **originally**?

$Value \div (1 + 0.05)$
$= 55{,}000 \div 1.05$
$= £52{,}380.95$

Examples

Year 9 and 10 Knowledge Goals: Mathematics (Foundation)

Key Concepts

We use **multipliers** to increase and decrease an amount by a particular percentage.

Percentage increase:

$$Value \times (1 + percentage\ as\ a\ decimal)$$

Percentage decrease:

$$Value \times (1 - percentage\ as\ a\ decimal)$$

Appreciation means that the value of something is going up or increasing.

Depreciation means that the value of something is going down or reducing.

Per annum is often used in monetary questions meaning **per year.**

Examples

Compound interest:

Joe invest £400 into a bank account that pays 3% **compound interest** per annum. Calculate how much money will be in the bank account after 4 years.

$Value \times (1 + percentage\ as\ a\ decimal)^{years}$
$= 400 \times (1 + 0.03)^4$
$= 400 \times (1.03)^4$
$=$ £450.20

Compound depreciation:

The original value of a car is £5000. The value of the car **depreciates** at a rate of 7.5% per annum. Calculate the value of the car after 3 years.

$Value \times (1 - percentage\ as\ a\ decimal)^{years}$
$= 5000 \times (1 - 0.075)^3$
$= 5000 \times (0.925)^3$
$=$ £3957.27

1) Jane invests £670 into a bank account that pays out 4% compound interest per annum. How much will be in the bank account after 2 years?
2) A house has decreased in value by 3% for the past 4 years. If originally it was worth £180,000, how much is it worth now?

ANSWERS A 1) £724.67 2) £159352.71

Year 9 and 10 Knowledge Goals: Mathematics (Foundation)

Tier 3 Vocabulary		
	Key word	Definition
1	percent	A proportion or ratio expressed as a fraction of 100.
2	appreciate	To increase in value or worth over time.
3	depreciate	To decrease in value or worth over time.
4	interest	The cost of borrowing money, expressed as a percentage of the principal amount.
5	annum	A Latin word meaning "year." Used in various contexts to denote an annual rate, frequency, or period.
6	compound	To grow exponentially by reinvesting earnings or interest.
7	multiplier	A factor that amplifies or magnifies the effect of a change in a variable.
8	gradient	This describes the steepness of a line, crucial for understanding how quickly a quantity changes.
9	intercept	The point where a line crosses an axis (x-axis or y-axis), providing key information about the starting point or initial value.
10	correlation	This measures the strength and direction of the relationship between two variables, helping to understand if they tend to change together and how closely.
11	extrapolation	Estimating values beyond the known data points, allowing for predictions and forecasts.
12	interpolation	Estimating values within the range of known data points, useful for filling in missing information or making more precise readings.

Notes

Year 9 and 10 Knowledge Goals: Media (Film Marketing – Bond)

The Man with the Golden Gun (1974)

- starring Roger Moore as 007
- 7 million budget and grossed 97 million
- illustrations commonly used on film posters in the 1970s
- filmed in Asia and the poster reflects the popularity of martial arts films at the time
- set during the 1973 oil crisis when Arab nations set an oil embargo and stopped exporting oil to USA
- Bond is presented as the masculine hero.
- Women are sexualised seen through 'the male gaze'
- Ethnic minorities presented as dangerous.

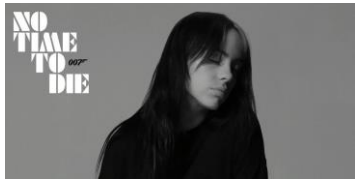
No Time to Die (2021)

- starring Daniel Craig in his final appearance as 007
- delayed release due to Covid in April 2020
- 301 million budget and grossed over 774 million
- filmed in Italy, Jamaica and Norway
- soundtrack by Billie Eilish
- montage design
- Bond not represented holding a gun which is unconventional.
- women represented with more equality but men still dominate the poster
- a black woman takes the role of 007
- The villain, Safin, is of Egyptian origin and has a facial disfigurement.

Year 9 and 10 Knowledge Goals: Media (Film Marketing – Bond)

The James Bond series is produced by **EON productions**, a British film production company based in London. It is the first Bond film to be distributed by **Universal Pictures**, which acquired the international distribution rights following the expiration of Sony Pictures' contract after the release of Spectre in 2015. Universal also holds the worldwide rights for physical home media (DVD/Blu-Ray). **United Artists Releasing (owned by MGM)** holds the rights for North America, as well as worldwide digital and television rights. **Amazon bought MGM in 2022** and with it the rights to stream the whole James Bond catalogue on Amazon Prime, a video on demand subscription service.

Soundtrack by **Billie Eilish** on Interscope **(owned by Universal)** – 'star appeal', synergy and convergence of different platforms to promote the film.



What 12A and 12 mean

What you can expect of a 12A or 12 film?

Dangerous behaviour
Dangerous behaviour that children could copy might be included but should not be shown as attractive. Easy to get hold of weapons, such as knives, also might be included but shouldn't be focused on or glamorised. If there is anti-social behaviour, it should not be encouraged or shown as acceptable.

Discrimination
The film overall shouldn't approve of or encourage discriminatory language or behaviour. Aggressive use of this type of language or behaviour should only be included at 12A and 12 if it is clearly disapproved of.

Drugs
Use of illegal drugs might be shown occasionally, but it must not be glamorised and will not give children novel information on how to take drugs.

Language
Moderate bad language may be used. Strong language may also be included, depending on how it's used, who's using it, how often it's used and how it fits into the film overall.

Nudity and sex
Sex scenes might be included but they should be short and discrete. Nudity may also be included, but if it's in a sexual context it should also be brief and discreet. Some jokes and references to sex may appear, but not frequent crude remarks.

Sexual violence and sexual threat
Sexual violence may be implied although it will not be shown. Sexual threat or abusive behaviour should be brief and negatively presented. There may be verbal references to sexual violence, though these should not be graphic.

Threat and horror
The overall tone of the film should not be disturbing, but some individual scenes might be. The film might include some horror, physical threat and psychological threat, but they should not last a long time or appear too often.

Violence
Moderate violence might be included but shouldn't dwell on detail like blood and injuries.

The **British Board of Film Classification** (BBFC) is an independent, non-government body, which classifies movies, videos and computer games. The *BBFC* is funded through the fees it charges media institutions who submit films for classification.

Test yourself:

KS4 Media Bond - Film Marketing and Industry

MEDIA PRODUCTION PROCESS

PRODUCTION → The stage where a media product is made e.g. filmed, recorded, written, designed.

DISTRIBUTION → The stage where a media product marketed and distributed to the target audience.

EXHIBITION → The stage where a media product is displayed e.g. broadcast, sold available to the audience.

There are businesses that solely exist to make media product e.g. film production companies. There are also companies that exist to market and distribute media and exhibit media.
Media conglomerates often own companies that fit in to all three areas. This is explained in more depth under **'Media Ownership'**

Power and Media Industry Theory
By Curran & Seaton

Curran and Seaton says that:

- media is **controlled** by a small number of companies primarily driven by the logic of profit and power.
- media concentration generally **limits** or inhibits **variety**, **creativity** and **quality**.
- more socially diverse patterns of ownership help to create the conditions for more varied and adventurous media productions

Year 9 and 10 Knowledge Goals: Media (Film Marketing – Bond)

Tier 3 Vocabulary (Film Industry)		
	Key word	Definition
1	media conglomerate	A large and powerful organisation that owns different types of media companies.
2	convergence	The way in which products or brands are made available to audiences on a number of different platforms.
3	horizontal integration	The structure of a large media organisation which owns companies that produce the same type of media product.
4	vertical integration	Owning different stages pf the film process: production, distribution, exhibition.
5	synergy	Where different parts of the same media conglomerate work together.
6	sponsorship	Paying for a product to be featured in a film
7	avid fans	Audiences who are dedicated supporters of film franchises.
8	BBFC	British Board of Film Classification which regulates the film industry and sets age classifications.
9	diversification	Where a media company moves from producing one type of product to creating different media forms.
10	exhibition	The way a film is shown to the public - cinema/DVD.

Tier 3 Vocabulary (Film Marketing and Posters)		
	Key word	Definition
1	franchise	A series of films based on an original idea or book.
2	teaser	A poster or web advert that initiates interest in a film.
3	tagline	A short phrase or slogan that captures the key themes of the film.
4	billing block	The list of credits at the bottom of a film poster.
5	logo	A film franchise might have an easily identifiable logo.
6	tentpole film	A very high budget film expecting large audiences.
7	high-concept film	A film with a striking but easily communicable central premise designed to have wide audience appeal.
8	rule of thirds	A framing technique where objects along vertical or horizontal lines or intersections have dominance.
9	release date	The date for first screenings.
10	star billing	The names of main stars.
11	distributor	The company that markets the film.
12	blockbuster	A major film release that achieves box office success.

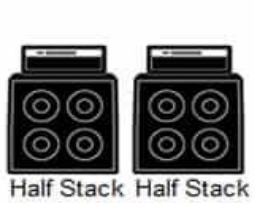
Year 9 and 10 Knowledge Goals: Music

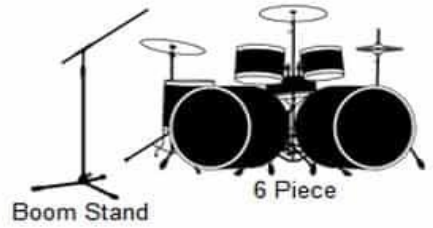
Creating a Live Performance:

Checklist of what is involved:

- Choose repertoire
- Research detailed information about the repertoire including music and lyrics.
- Rehearse repertoire: learn to perform the music, change and improve, both as an ensemble and individually as required.
- Develop stage presence and audience interaction.
- Learn to set up your equipment ready for a performance, including any tuning of instrument, space used, setting up of amplifiers, microphones and any other electronics.
- Be mindful of the health and safety or your equipment within rehearsal and performance space.
- Promote the event, sell tickets if required.
- Set up, sound check and rehearse on the day of performance.
- Perform event.
- Analyse and evaluate performance.

Band Set-up





Tips for a great performance:

- Don't worry about mistakes, and don't stop in the middle of the song if you make a mistake.
- Engage with the audience.
- Be unique with your music, arrangements and the performance, don't just play the same as everyone else.
- Listen to each other.
- Have fun - if you have fun so will the audience.

Year 9 and 10 Knowledge Goals: Music

Tier 3 Vocabulary		
	Key word	Definition
1	tempo	The speed of the music.
2	dynamics	The volume of the music.
3	major/minor chord	Notes I, III & V played together.
4	progression	Chord changes in a piece of music.
5	root note/chord	Chord or note I (1) in a piece of music.
6	tonic	Another term for chord/note I.
7	the circle of 5ths	The order of key signatures, all a 5^{th} apart.
8	relative minor	A minor key with the same key signature as it's relative major.
9	root position	A chord with notes in the order I III V.
10	1^{st} inversion	A chord with notes in the order III V I.
11	2^{nd} inversion	A chord with notes in the order V I III.
12	octave	The same note played an interval of 8 notes apart.

Notes

Year 9 and 10 Knowledge Goals - Physical Education - Handball

Rules of Handballl

- Pushing, holding, tripping and hitting are violations. You cannot push a player out of the way – it is a non- contact sport. You cannot trip a player over accidently or deliberately. Free throws will be given from where ever the violation took place.
- Players are not allowed to play the ball with their legs below the knee or to dive on the floor to play a ball, this will also result in a free throw.
- Players are not allowed to take more than 3 steps with the ball. If a handball player takes more than three steps without dribbling (bouncing the ball) or holds the ball for more than 3 seconds without bouncing it, shooting or passing, then that is deemed 'walking' and possession is lost.
- To score a goal you must throw the ball into the goal when you are outside the goal area.
- Defensive players are allowed to use their body, arms and hands to obstruct an opponent. The game is quite fast and includes quite a lot of contact as the defenders try to bodily stop the attackers from approaching the goal. Only frontal contact by the defenders is allowed; when a defender stops an attacker with their arms from the side, the play is stopped and a free throw is given.

Positions in Handball

The goalkeeper- responsible for defending the goal.
•**Left wing-** this attacking player is usually right, handed and covers the left, hand side of the court. In defence, they stand on the far left side touch
line and in attack they provide counter, attacks down the left and hand side of the court.
•**Right wing-** has the same responsibilities as the left wing down the opposite side.
•**Left back -** the left back stands to the left of the centre back and tries to prevent the opposition from shooting. In possession of the ball they
should initiate counter. Attacks and often shoot from distance.
•**Right back** - has the same responsibilities as the left back down the opposite side.
•**Centre back –** the centre back stands in the middle of the court and provides both defending and attacking options.
•**Pivot** - the pivot is an attacking player who travels along the opponent's six
-metre line. They must work well with
their team's centre back to initiate
attacking strategies and are required
to shoot in a range of positions.

Attacking and defensive play

ATTACKING PLAY

Attacking players aim to score by throwing the ball into the opposing goal. In possession of the ball....

1. ... a player may take a maximum of 3 consecutive steps and may bounce the ball as much as desired. If the player catches the ball, they can not bounce it again and must take a maximum 3 further steps, pass or shoot.
2. ... is not permitted to enter the goal area. Players may jump towards it (e.g. to shoot) providing the ball is released prior to landing inside the 6-metre line.

DEFENSIVE PLAY

3. Defending players attempt to stop the opposing team shooting at their goal. They are permitted to make body contact, but they should not....
4. ... hold or restrain attacking players
5. ... must not hit another player
6. ... strike or pull back the opponent's throwing arm
7. ... spoil a clear chance of scoring by illegal means. This always leads to a seven metre (penalty) throw.

Year 9 and 10 Knowledge Goals: Physical Education - Handball

Tier 3 Vocabulary		
	Key word	Definition
1	pivot	A player who stands close to the opponent's goal, looking to score.
2	2-minute suspension	A penalty that sends a player off the court for two minutes for certain fouls.
3	throw-off	The method of restarting play after a goal is scored.
4	wing	Players positioned near the outer edges of the court, focusing on fast breaks and scoring from the sides.
5	free throw	A throw awarded after certain fouls, taken from the spot of the foul.
6	breakthrough	A move to get past an opposing defender, usually in an attempt to score.
7	fast break	A quick counterattack, often following a turnover.
8	centre back	A key attacking player who often directs the play from the back.
9	line player	A player who stays near the opponent's goal line, often looking to set up plays or score.

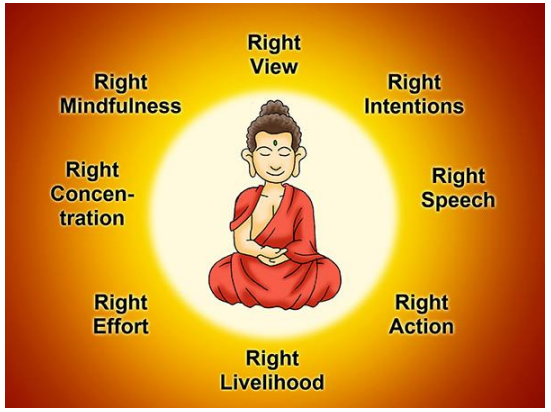
Notes

Year 9 and 10 Knowledge Goals: Religious Studies

The Four Noble Truths

Noble Truth	Term	Definition
First	Dukkha	Suffering exists
Second	Samudaya	The causes of suffering
Third	Nirodha	Suffering can end
Fourth	Magga	The way to end suffering

The Fourth Noble Truth is also known as **The Eightfold Path, middle way** and **The Threefold Way.** It gives Buddhists as set of guiding principles to live by to end suffering and attain enlightenment



The Eightfold Path and Threefold Way

The Threefold Way	The Eightfold Path
Ethics (sila)	Right action
	Right speech
	Right livelihood
Meditation (samadhi)	Right mindfulness
	Right effort
	Right concentration
Wisdom (panna)	Right view/understanding
	Right intention

The Three Poisons

Buddhist believe that the three main causes of suffering are greed, ignorance and hatred. They are represented by:

- A pig – ignorance
- A cockerel – greed
- A snake - hatred

Year 9 and 10 Knowledge Goals: Religious Studies

Tier 3 Vocabulary		
	Key word	Definition
1	anicca	Impermanence. The idea that all things change.
	anatta	No fixed self or soul.
2	dependent arising	All things are dependent on other things to exist.
3	mahayana buddhism	An umbrella term to describe Buddhist traditions including Tibetan, Zen and Pure Land Buddhism.
4	samadhi	A section of the threefold way that emphasises the role of meditation in spiritual development.
5	nirvarna	A state of complete enlightenment, happiness and peace.
6	panna	A section of the threefold way that deals with Buddhist approaches to understanding the nature of reality.
7	sila	Ethics.
8	tanha	Craving, desiring or wanting something.
9	The Three Poisons	The main causes of suffering: greed, ignorance and hatred.
10	Theravada buddhism	The oldest Buddhist tradition found in Southern Asia.
11	The Eightfold Path	Eight aspects that Buddhists practice and live by in order to achieve enlightenment.
12	The Threefold Way	The Eightfold Path grouped into 3 sections.

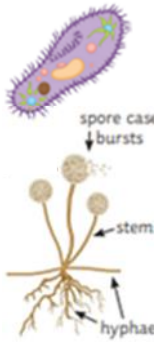
Notes

Year 9 and 10 Knowledge Goals: Science (Infection and Response)

Communicable disease:
Microorganisms which cause disease (Pathogens), enter plants and animals and cause disease.

Bacteria- Small prokaryotic cells which reproduce quickly producing toxins which damage your cells and tissues.

Viruses: Much smaller than bacteria. Viruses take control over parts of your cells so they can replicate. They burst our of your cells releasing many new viruses in one go



Protists: Eukaryotic organisms. Some are parasites which live in side of other larger organisms. They are transported to new hosts via vectors.

Fungi: can be single or multi –cellular, that can penetrate the skin or plants to cause infection.

Methods of Preventing transmission (spread)

- Being hygienic (washing hands thoroughly etc.)
- Destroying vectors
- Isolating when infected
- Vaccination

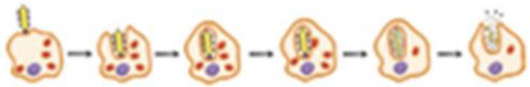
Bacterial diseases - (YOUNEED TO KNOW!)
Salmonella-causes food poising due to toxins made by the bacteria
Symptoms; stomach cramps, vomiting and diarrhoea
Transmission : contaminated food, common in poultry and eggs
Gonorrhoea-
Symptoms: yellow green thick discharge, pain when urinating
Transmission: sexual contact
Treatment: antibiotics

Fungal and protist diseases:
Fungal -Rose black spot: black spots on leaves reduce photosynthesis so reduces plant grow.
Transmission: wind and water
Treatment: Fungicides
Protist: Malaria
Symptoms: fever , can be fatal
Transmission: Spread by mosquito as a vector feeding on infected blood

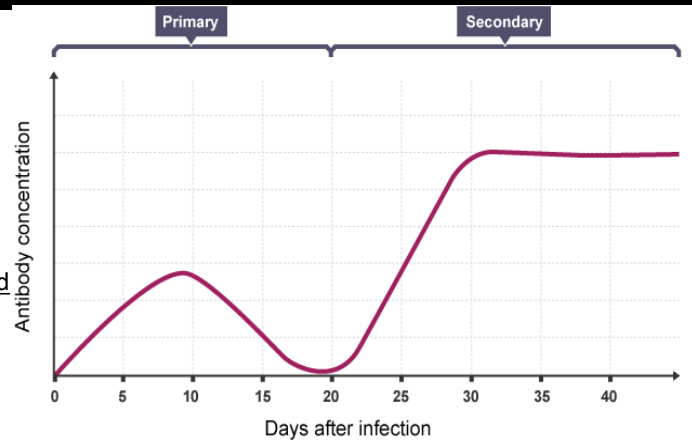
Viral Disease:
Measles:
Symptoms: red skin rash, fever, can cause meningitis, pneumonia or even be fatal
Transmission: Droplets in the air from coughing and sneezing
Most people are vaccinated as infants against it
HIV: Immune cells are infected and damaged, reducing the body's ability to fight off disease.
Transmission: STD, needle stick, exchange of blood and some other bodily fluid.
Treatment: antiviral drugs can slow down the progression to AIDs.
Tobacco Mosaic Virus:
Symptom: Parts of the leaves become yellow and discoloured meaning plants can not photosynthesis and grow fully.

Primary defences **prevent** entry to the organism:
Animals, Skin acts as a Barrier, Mucus in nose, trachea and bronchi traps pathogens, HCl in stomach kills pathogens .
Plants: physical barriers include waxy cuticles, layers of dead cells and cell walls. Mechanical barriers include: thorns, leaves that droop or curl.

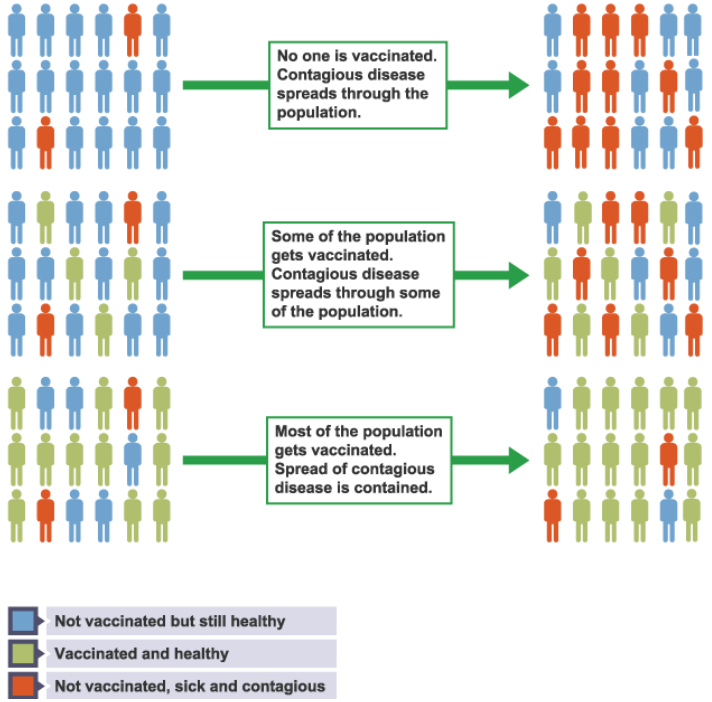
Secondary defences kill pathogens which have entered the body:
White blood cells
Phagocytes – Engulf and digest pathogens



Lymphocytes- produce antitoxins which neutralise toxins and antibodies which bind to antigens on the cell surface.
Lymphocytes can turn into memory cells which will remain in the body ready for future infections. (see graph)



Vaccination programmes can cause herd immunity and help protect our most vulnerable members of society.



Drug development:
There are three stages:
Preclinical
1. Drugs are tested on human cells and tissue
2. Drugs are tested on living animals
Clinical
3. Drugs are tested on healthy volunteers

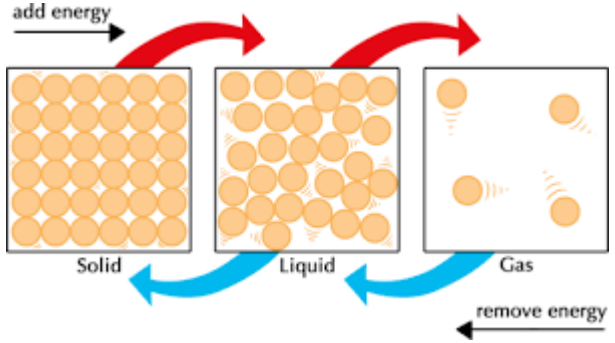
Year 9 and 10 Knowledge Goals: Science (Infection and Response)

Tier 3 Vocabulary		
	Key word	Definition
1	antibodies	A protein made by lymphocytes which attaches to the antigens on pathogens.
2	antitoxins	A protein made by lymphocytes which attaches to toxins produced by pathogens and neutralises them.
3	antigens	A marker molecule in cells which is used to identify what the cell is and where it came from.
4	blind trial	In drugs trials when the patients are not aware if they are taking a new drug or the existing one.
5	double blind trial	In drugs trials when neither the Drs or patients are aware which drugs (new v existing) groups are given to eliminate bias.
6	vector	An organism which spreads a pathogen.
7	bacteria	A small prokaryotic organism which can release toxins and reproduce rapidly.
8	protist	A eukaryotic organism which can be spread by means of a vector. E.g. Malaria.
9	efficacy	The success or effectiveness of a treatment.
10	Toxicity	The degree to which a substance can harm humans or animals.
11	phagocytosis	A process where a white blood cell surrounds (engulfs) and digests and kills a pathogen.
12	herd immunity	When a high level of the population has immunity to a disease it slows the spread of infection. This provides some protection to more vulnerable individuals.

Notes

Year 9 and 10 Knowledge Goals: Science (Particle Model of Matter)

Matter – is a tiny portion of matter or "stuff" – often in models seen as being the smallest 'thing' a substance is made up.
It is arranged into three main states:



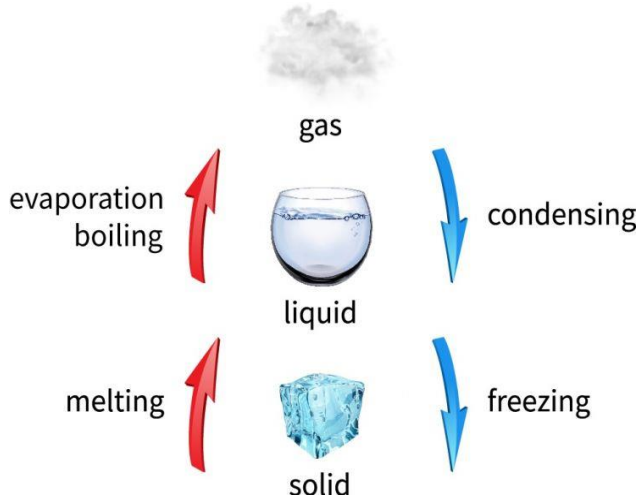
Solids:
- Have a regular fixed arrangement
- Vibrate in their fixed position
- Have strong forces between the particles
- Store the least energy

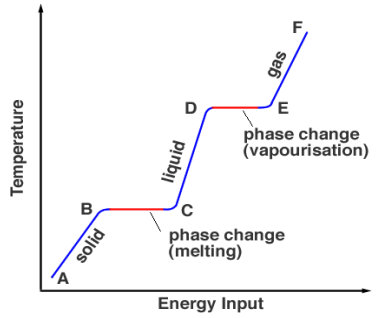
Liquids:
- Have an irregular arrangement
- Move around each other, whilst still touching
- Have moderate forces between the particles
- Store a moderate amount of energy

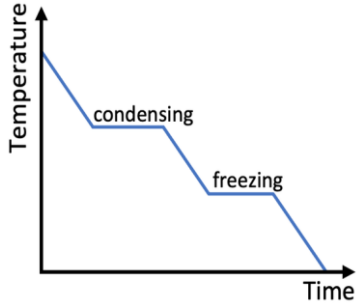
Gases:
- Have no fixed pattern to their arrangement
- Move randomly, in straight lines at a range of speeds
- Have the weakest forces between the particles
- Store the most energy

Matter moves between these states when energy is added to, or removed from it. A change of state is a **physical change** as it is easily reversible and no new products are formed.

The names given to the process of changing between two states is shown below.







Typically when you add more energy to matter (by heating it up) you increase its temperature. When the matter is changing state there is **no change in temperature**. This is called **specific latent heat.** The energy is going into breaking the bonds between particles.

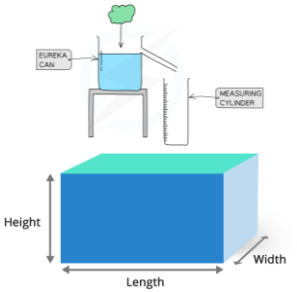
The same happens when energy is removed from matter and it cools down. This time, the energy goes into forming new bonds between the particles.
This happens at an elements **boiling point** or **melting point.**
Changes between liquid and gas states are called **vaporisation.**
Changes between solid and liquid states are called **fusion.**

Density is a measure of how many particles are in a particular volume. Solid particles have the highest density whereas gas particles have the lowest. Density is different for different materials.

Scan the top QR code opposite to watch a video into how to investigate the density of different types of matter.
The bottom QR code will take you to a quiz to test your knowledge.

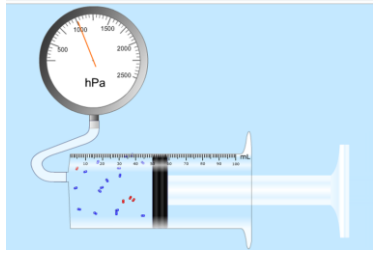
$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} = \frac{\text{g}}{\text{cm}^3} = \frac{\text{g}}{\text{mL}}$$

solids liquids



	How to calculate mass	How to calculate volume
Regular object	On an electric balance	H x L x W
Irregular object	On an electric balance	Eureka can and measuring cylinder
Liquid	Mass of liquid and measuring cylinder – mass of measuring cylinder	With a measuring cylinder

Gas pressure
Gas particles move around in different directions, colliding with the surface of the container containing them. The pressure of a gas can change due to two factors:
Temperature: an increase in temperature causes and increase in pressure as the particles move with more energy and collide with more force.
Volume: a decrease in volume will cause an increase in pressure as the particles collide more often with the surface of the container.



Scan the QR code below to use the animation opposite to investigate this further.

There is loads of extra resources on the QR code here.

Year 9 and 10 Knowledge Goals: Science (Particle Model of Matter)

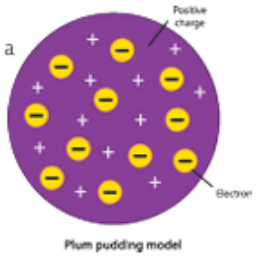
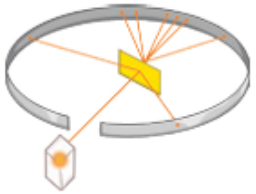
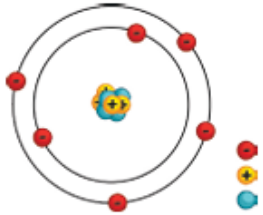
Tier 3 Vocabulary		
	Key word	Definition
1	boiling	Change of state from liquid to gas that happens at a substances boiling point.
2	condensing	Change of state from gas to liquid that happens at a substances boiling point.
3	density	How tightly packed the particles are. Calculated with the equation mass / volume.
4	deposition/reverse sublimation	Change of state from gas straight to solid.
5	evaporation	Change of state from liquid to gas that happens at any temperature (as long as the matter is in a liquid state).
6	gas pressure	Pressure exerted by gas particles as they move around and collide with surfaces.
7	melting	Change of state from solid to liquid that happens at a substances melting point.
8	specific latent heat	The amount of energy required to change the state of 1 kilogram (kg) of a material without changing its temperature.
9	sublimation	Change of state from solid straight to gas.
10	volume	A measure of how much space the particles take up.

Notes

Year 9 and 10 Knowledge Goals: Science (Atomic Structure)

Atomic Structure Knowledge Organiser – Foundation and Higher

Developing the Model of the Atom

Scientist	Time	Contribution
John Dalton	Start of 19th century	Atoms were first described as solid spheres.
JJ Thomson	1897	Thomson suggested the plum pudding model – the atom is a ball of charge with electrons scattered within it. 
Ernest Rutherford	1909	Alpha Scattering experiment – Rutherford discovered that the mass is concentrated at the centre and the nucleus is charged. Most of the mass is in the nucleus. Most atoms are empty space. 
Niels Bohr	Around 1911	Bohr theorised that the electrons were in shells orbiting the nucleus. 
James Chadwick	Around 1940	Chadwick discovered neutrons in the nucleus.

Isotopes

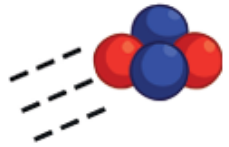
An isotope is an element with the same number of protons but a different number of neutrons. They have the same atomic number, but different mass numbers.

Isotope	Protons	Electrons	Neutrons
$^{1}_{1}H$	1	1	0
$^{2}_{1}H$	1	1	1
$^{3}_{1}H$	1	1	2

Some isotopes are unstable and, as a result, decay and give out radiation. Ionising radiation is radiation that can knock electrons off atoms. Just how ionising this radiation is, depends on how readily it can do that.

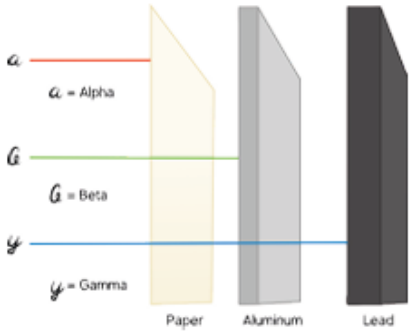
Alpha

Alpha radiation is an alpha particle emitted from the nucleus of a radioactive nuclei. It is made from two protons and two neutrons. They can't travel too far in the air and are the least penetrating – stopped by skin and paper. However, they are highly ionising because of their size.



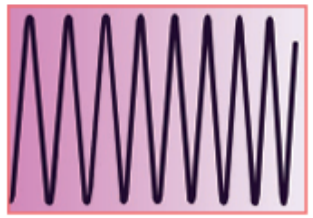
Beta

Beta radiation is a fast moving electron that can be stopped by a piece of aluminium. Beta radiation is emitted by an atom when a neutron splits into a proton and an electron.



Gamma

A gamma wave is a wave of radiation and is the most penetrating – stopped by thick lead and concrete.



Year 9 and 10 Knowledge Goals: Science (Atomic Structure)

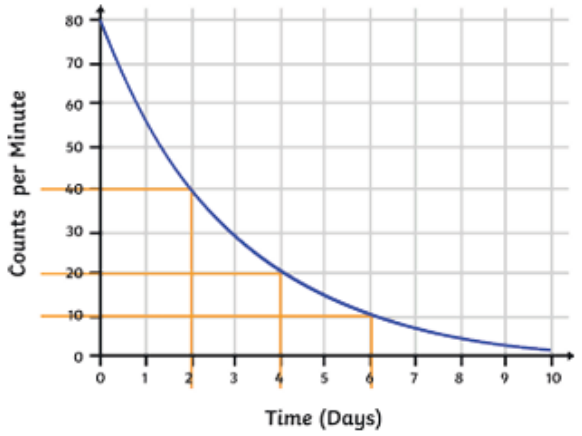
Half-life

The half-life is the time taken for the number of radioactive nuclei in an isotope to halve.

Radioactivity is a random process – you will not know which nuclei will decay. Radioactive decay is measured in becquerels Bq. 1 Bq is one decay per second.

Radioactive substances give out radiation from their nucleus.

A graph of half-life can be used to calculate the half-life of a material and will always have this shape:



Judging from the graph, the radioactive material has a half-life of two days.

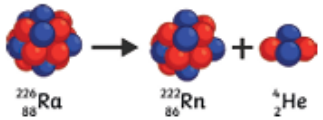
Irradiation

Irradiation occurs when materials are near a radioactive source. The source is sometimes placed inside a lead-lined box to avoid this.

People who work with radioactive sources will sometimes stand behind a lead barrier, be in a different room or use a remote-controlled arm when handling radioactive substances.

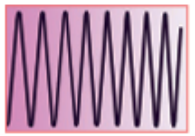
Alpha Decay Equations

An alpha particle is made of two protons and two neutrons. The atomic number goes down by two and its mass number decreases by four.



Gamma rays

There is no change to the nucleus when a radioactive source emits gamma radiation. It is the nucleus getting rid of excess energy.



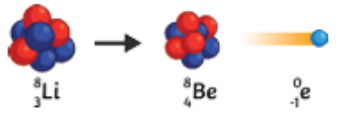
Contamination

When unwanted radioactive atoms get onto an object, it is possible for the radioactive particles to get inside the body.

Protective clothing should be worn when handling radioactive material.

Beta Decay Equations

A neutron turns into a proton and releases a an electron. The mass of the nucleus does not change but the number of protons increases.



Alpha radiation is more dangerous inside the body. It is highly ionising and able to cause a lot of damage. Outside the body it is less dangerous because it cannot penetrate the skin.

Beta radiation is less dangerous inside the body as some of the radiation is able to escape. Outside the body it is more dangerous as it can penetrate the skin.

Gamma radiation is the least dangerous inside the body as most will pass out and it is the least ionising. Gamma is more dangerous outside the body as it can penetrate the skin.

Year 9 and 10 Knowledge Goals: Science (Atomic Structure)

7. Background radiation (TRIPLE ONLY)	
Background radiation is the radiation all around us all the time	
Natural sources:	Man-made sources:
•Rocks	•Fallout from weapons testing
•Cosmic rays	•Fallout from nuclear incidents

8. Uses of nuclear radiation (TRIPLE ONLY)				
Use	Half life	Penetration power	Ionising power	Preferred emitter
Exploring internal organs	A few hours	Med-high	Low	Gamma
Radiotherapy	A few years	High	Med/Low	Gamma (or Beta)

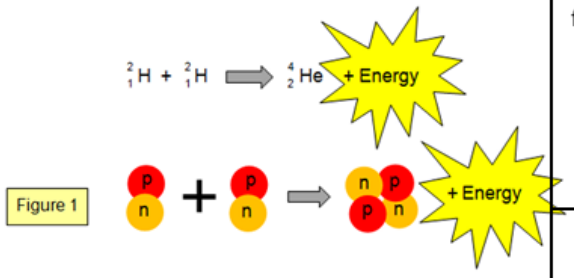
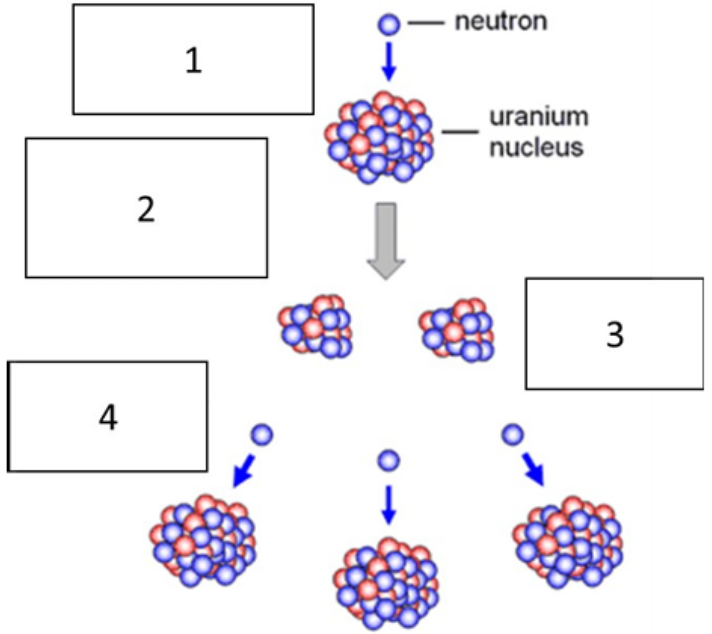


Figure 1

9. Nuclear Fission vs Fusion (TRIPLE ONLY)		
Nuclear fission	When a large nuclei breaks into smaller nuclei releasing energy	E.g: •Nuclear power stations •Atomic bombs •The core of the Earth
Nuclear fusion	When small nuclei join together to form larger nuclei. Some mass in converted into energy	E.g: •The Sun •Hydrogen bombs

10. Nuclear fission (TRIPLE ONLY)	
1	A slow neutron hits the nucleus
2	The nucleus becomes unstable and splits roughly in half
3	3 neutrons and gamma rays are released
4	These neutrons hit other nuclei causing a chain reaction
5	If this is uncontrolled then it will result in an explosion



Year 9 and 10 Knowledge Goals: Science (Atomic Structure)

Tier 3 Vocabulary		
	Key word	Definition
	atom	The smallest possible piece of an element.
1	element	A substance in which all the atoms have the same atomic number.
2	isotope	Atoms with the same number of protons but a different number of neutrons.
3	nucleus	The centre of an atom. Contains protons and neutrons.
4	unstable	The ability for a nucleus decay.
5	radioactive decay	The random process of radiation being released by a nucleus. A different element is formed.
6	nuclear radiation	The energy and particles released when an unstable nucleus decays.
7	activity	How quickly a radioactive sample decays.
8	Becquerel	The unit of activity.
9	Geiger-Muller tube	A device to measure the count rate of a radioactive source.
10	count rate	The number of radioactive decays per second.
11	ionising power	How well it knocks off electrons and damages cells.
12	half life	The time it takes half of a group of radioactive nuclei to decay.

Notes

Year 9 and 10 Knowledge Goals: Nutrition and Sports performance

Key information

Topic area 3: Developing a balanced nutrition plan for a selected sporting activity.

Factors that can impact a nutrition plan:
- Allergies
- Cultural Beliefs
- Age Range
- Food Budget
- Cooking Skill
- Activity Levels

Adaptations to diet to suit a specific sporting activity:
- Add or remove nutrients
- Change portion sizes
- Change timings of mealtimes
- Alter the number of meals

TOPIC AREA 3

SPORT SCIENCE R183 PART 2

- Increased carbohydrate intake = Increased Energy
- Reduced fat intake = Weight Loss
- Increased protein intake = Quicker Muscle Repair

Evaluating a nutritional plan

E.g. after several months of training with an increased protein intake, a weightlifter should find that they are now lifting heavier weights, are able to train at a greater intensity and recover quicker.

Topic area 4: How nutritional behaviours can be managed to improve sports performance

The Negative Effects of Undereating Include:

- Drop in weight
- Reduced energy levels
- Reduced concentration

Effects of Overeating:

- Speed
- Flexibility
- Agility
- Stamina

These components of fitness will all decrease/worsen as a result of additional fat intake (resulting in weight gain)

TOPIC AREA 4

Dehydration can result in...
- Headaches
- Nausea
- Cramp
- Heat stroke
- Decision Making
- Concentration

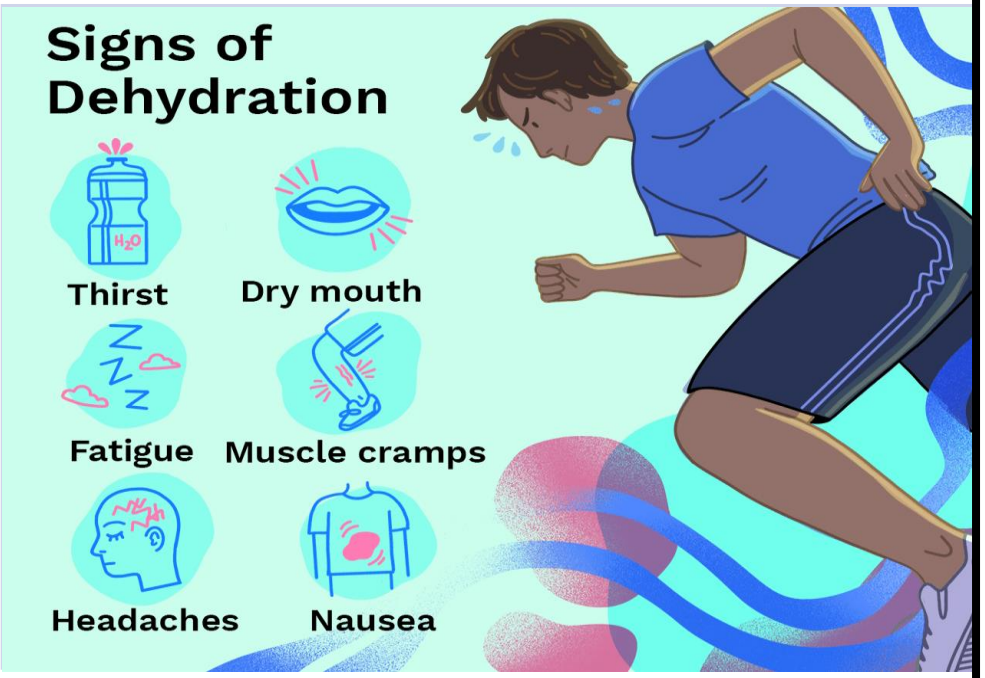
In some sports dehydration is sometimes used as a tool to lose weight very quickly.

A boxer may reduce their water intake before a weigh-in ensure they meet their weight requirements.

This is dangerous as dehydration can lead to headaches, nausea or even life-threatening conditions.

Topic area 3: Factors to consider when developing a balanced nutrition plan for a selected athlete.

Topic area 3 & 4: The effects of dehydration.



Year 9 and 10 Knowledge Goals: Nutrition and Sports performance

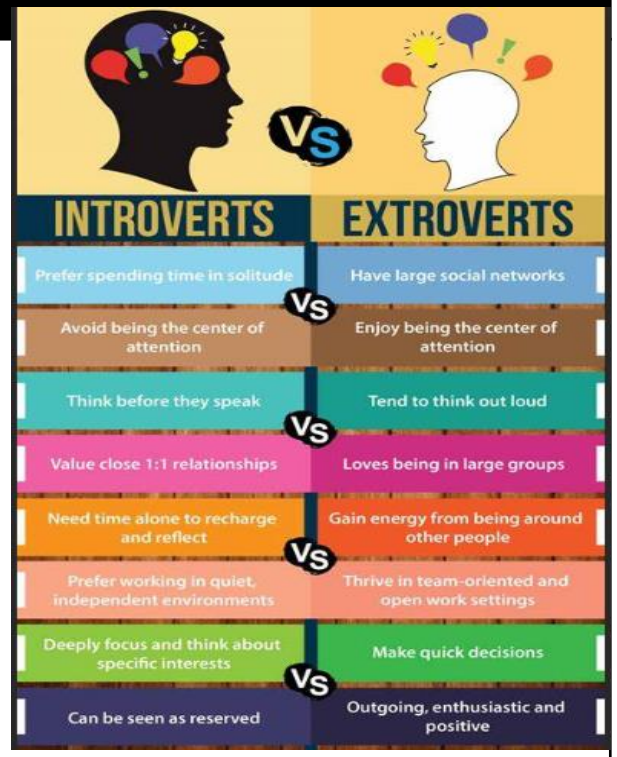
Tier 3 Vocabulary		
	Key word	Definition
1	calories	Unit of energy in food.
2	balance energy	When the amount of energy consumed equals the amount needed.
3	positive energy balance	When the amount of energy consumed is greater than needed.
4	negative energy balance	When the amount of energy consumed is less than needed.
5	BMR	-Basal metabolic rate- How quickly the body is using energy.
6	macronutrients	The foods which you need in large amounts – Carbohydrates, Protein and Fat.
7	nutrients	The substances in food needed for the body to function.
8	rehydration	Replacing lose fluids.
9	eat well guide	A guidance to a balance, healthier diet showing the different food groups.
10	glycogen	Storage from glucose found in the muscle and liver.
11	nutrition plan	A plan which obtained the correct quantities of nutrition's to need the individual needs of the performer.

Notes

Year 10 Knowledge Goals: Sport Science (Psychology)

Key information

LO1-Understand the relationship between personality and sports performance.



LO2- Know how motivation can affect sports performance.

LO1-Understand the relationship between personality and sports performance.

The difference between introverts and extroverts.	Personality types and links to sports.	Personalities in sport.

LO2- Know how motivation can affect sports performance.

Motivation in sports.	Motivational sports speech.	Motivation and sports psychology.

Year 9 Knowledge Goals: Sport Science (Psychology)

Tier 3 Vocabulary		
	Key word	Definition
1	sports psychology	Is the study of how psychological factors influence sports, athletic performance, exercise, and physical activity.
2	personality	The unique characteristics of a person that distinguish them from other people.
3	introverts	Personality types of shyness and require low arousal levels.
4	extroverts	Personality types of talkative, prone too boredom and sociable.
5	social learning theory	Suggest we develop our personalities by watching and copying others.
6	the trait approach	Theory that suggests we inherit are personalities from our parents.
7	motivation	The drive and desire to take part in physical activity.
8	intrinsic motivation	Comes from within a performer; EG the pride gained from beating your personal bests.
9	extrinsic motivation	The drive for the performer to gain an award; EG winning a medal in a football tournament,.
10	achievement motivation	Refers to a performers approach to sporting situations and competitions.
11	NACH (Need to achieve)-	Personality type that wants to win, accept challenges and competition.
12	NAF (Need to avoid failure)	Personality that is afraid of losing, failing and often avoids competitive.

Notes

Tier 2 Vocabulary

Tier 2 words are powerful words that help you understand what you're reading and make your writing even stronger. They're not as simple as everyday words like *big* or *cat*, but they're also not as tricky or technical as words like *photosynthesis* or *hypothesis*. Instead, Tier 2 words are words like *analyse*, *compare*, *evaluate*, and *complex*—words that pop up in lots of subjects, from reading and writing to science and history.

These words are important because they give you a better understanding of what's being asked in questions, books, and even instructions from your teachers. Knowing what a word like *analyse* means can help you break down a problem or figure out exactly what to do when you're given a task.

Think of Tier 2 words as "power words" that make it easier for you to understand and explain things. When you know more Tier 2 words, you can think more clearly, talk more confidently, and express yourself better in your schoolwork and beyond. Plus, they'll come in handy throughout your life as you keep learning and working toward your goals. So, the more Tier 2 words you learn and use, the stronger your language and learning skills become!

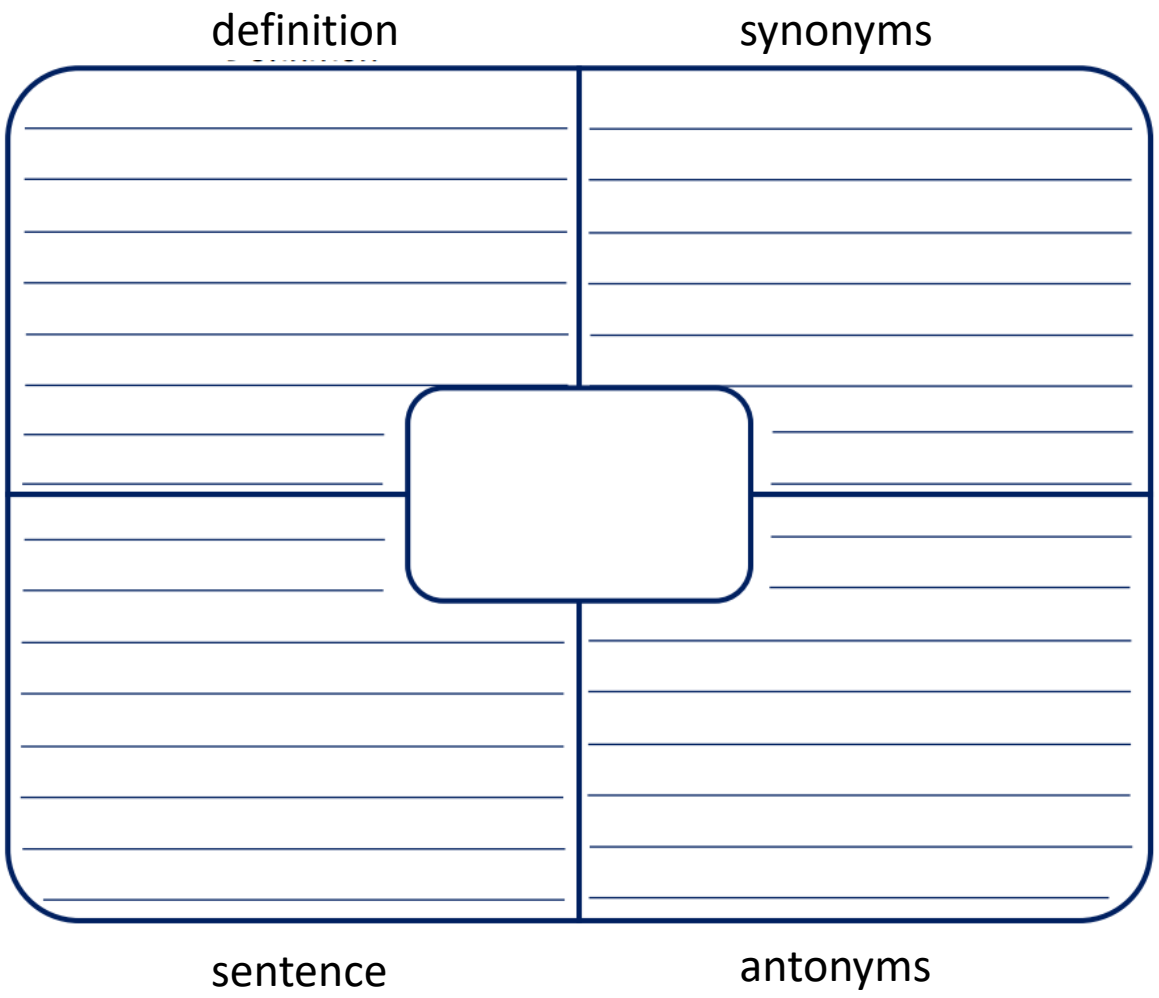
Tier 2 Vocabulary

ablution	abrasion	access
acquire	adapt	adequate
advocate	aggressive	albeit
alleviate	alter	altitude
ameliorate	analogous	analyse
behind	benign	beverage
bewitch	brawl	budge
calamity	calculate	callous
capacity	cause	central
challenge	chant	chirp
chore	circulate	claim
clear	collaborate	collude
command	committee	companion
compare	complex	confer
debate	decisive	decompose
define	delineate	deny
deteriorate	detrimental	dimension
disagree	discover	direct
eccentric	ecstasy	eloquent
emerge	emphasis	employ
encounter	epic	epitome
era	escalate	establish
evaluate	excavate	explore
farce	ferocious	flaw
flighty	formidable	function
ginormous	grapple	grizzly
hamper	harmful	harness
hierarchy	hitch	honour
hybrid	hypothesis	hysteria
identical	identify	ignorance
illusion	illustrate	immense

impeccable	imperative	impression
inevitable	innate	intense
interact	intercept	irreversible
jaunt	jubilant	justify
legacy	liberal	liberate
malicious	manipulate	match
measure	menace	meteoric
migrate	misconstrue	mitigate
native	network	notation
notice	notion	numeral
objective	observe	occupy
ointment	opaque	opponent
overall	overstate	overthrow
pallid	parallel	partition
persevere	persuade	pigment
pivot	pledge	ponder
pose	precedent	prepare
presume	previous	principal
radiant	raucous	ravage
rearrange	reckless	recline
refine	reflect	region
rejoice	relate	remote
replace	request	require
revise	rewrite	rhythm
salvation	scheme	sculpt
shift	shrewd	significant
slither	solar	sparse
specify	stability	state
supreme	surge	synonymous
tamper	technique	teeming
tentative	testament	transform

treaty	trivial	troublesome
underestimate	unscathed	update
validity	vanquish	verbose
verify	versatile	version
vibrant	victor	victory
virtuous	welfare	zealous

Literacy: Tier 2 Vocabulary – Frayer Model



Synonyms are words with the same or similar meaning:

- words such as happy, cheerful and merry.
- words such as sad, miserable and heartbroken.

Antonyms are words with opposite meanings:

- words such as angry and peaceful.
- words such as funny and serious.

You can use a **thesaurus** to find **synonyms** and **antonyms** for words.

Scan to view thesaurus

click to view thesaurus

Have a go at creating a Frayer Model for each of the 6 tier 2 words from this term (blank templates are at the back of the booklet for you to complete this activity).

Frayer Model: Access

definition

synonyms

access

sentence

antonyms

Complete a Frayer Model for the word **access**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Complex

definition

synonyms

complex

sentence

antonyms

Complete a Frayer Model for the word **complex**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Deteriorate

definition

synonyms

deteriorate

sentence

antonyms

Complete a Frayer Model for the word **deteriorate**.

Scan to view thesaurus

click to view thesaurus

Frayer Model: Grapple

definition

synonyms

grapple

sentence

antonyms

Complete a Frayer Model for the word **grapple**.

Scan to view thesaurus

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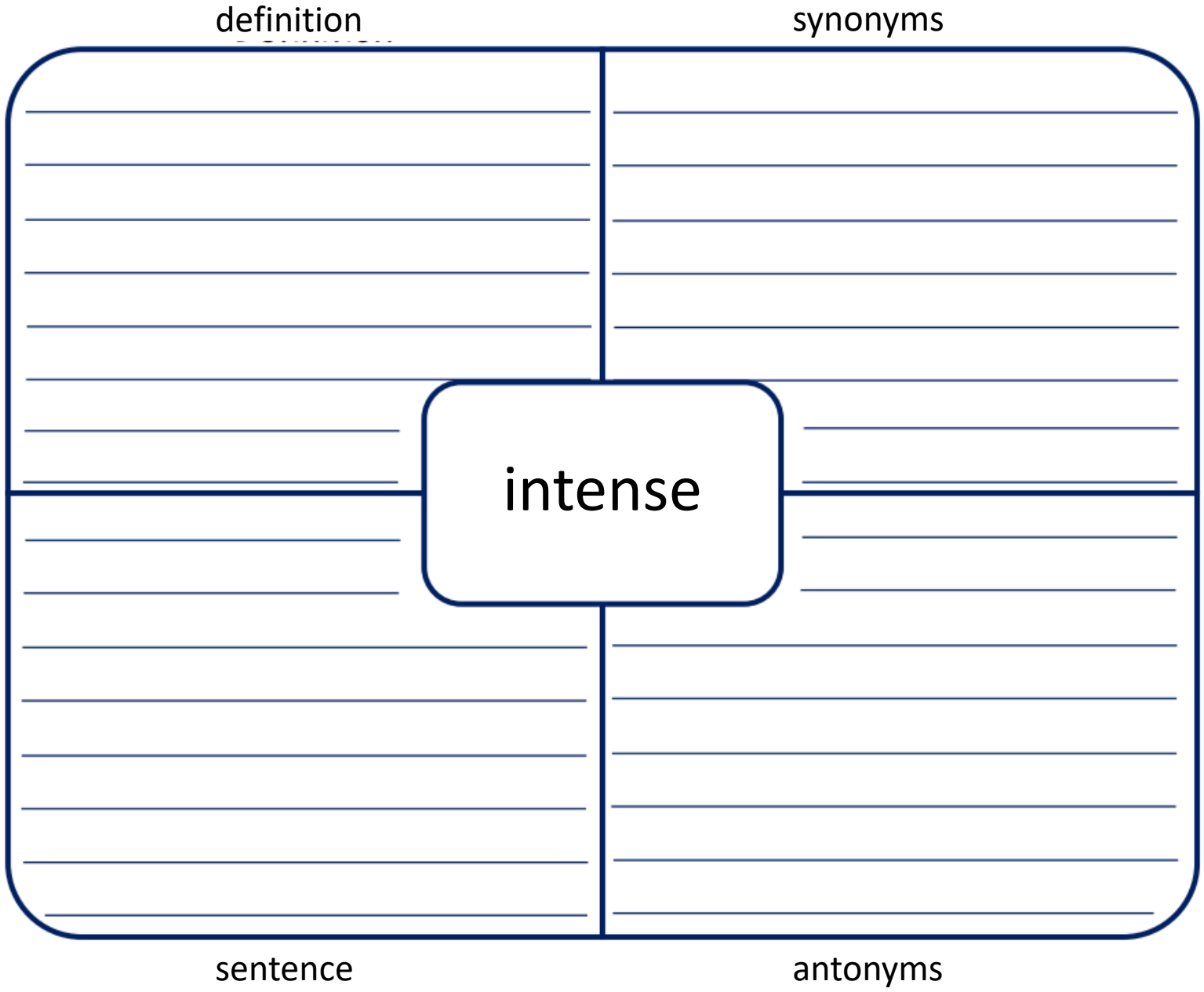
Frayer Model: Intense



Complete a Frayer Model for the word **intense**.

Scan to view thesaurus

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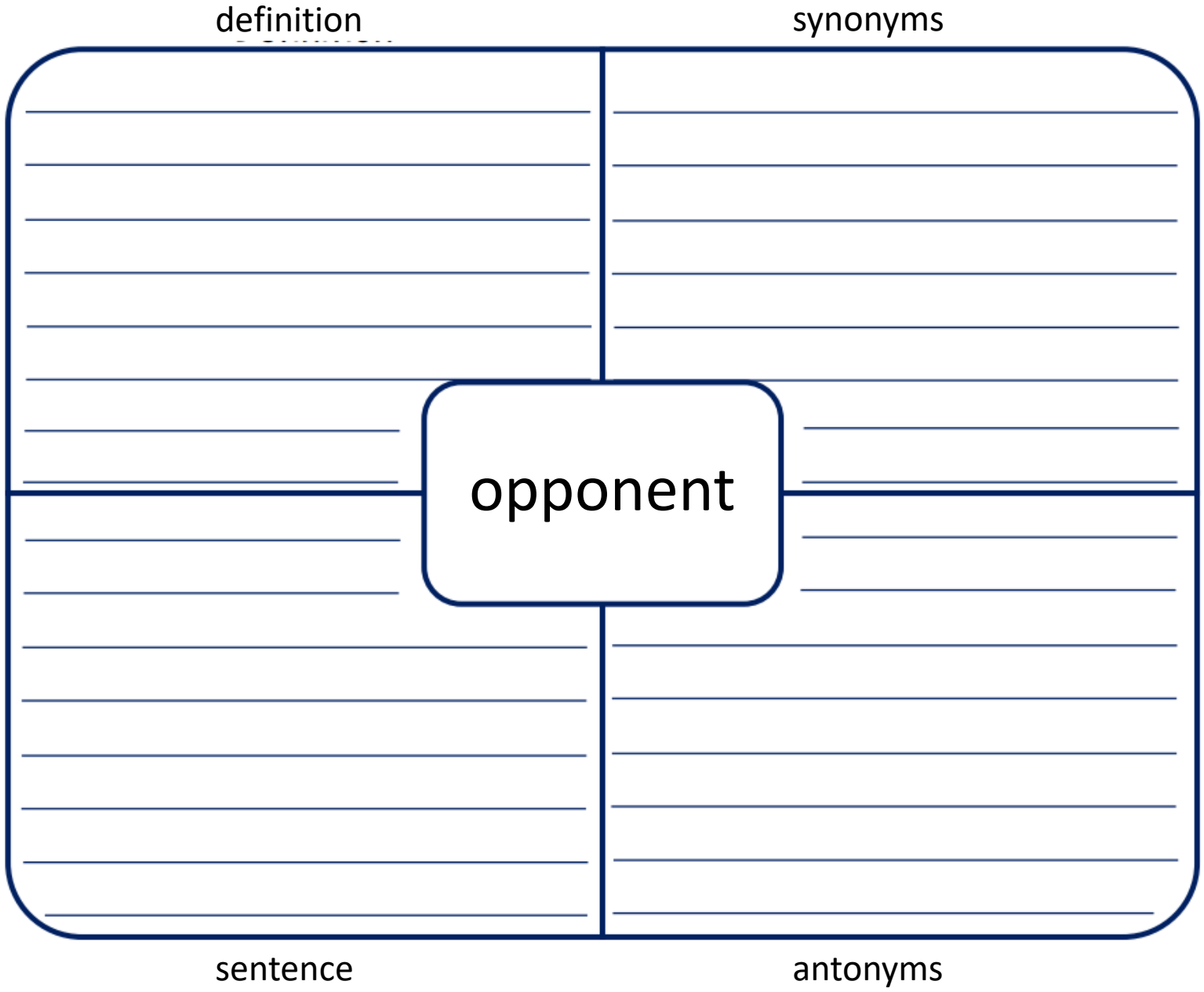
Frayer Model: Opponent



Complete a Frayer Model for the word **opponent**.

Scan to view thesaurus

click to view thesaurus