ALL SAINTS'
CATHOLIC VOLUNTARY ACADEMY

Year 9 Absolutes

Opportunity . Achievement . Success

Industria House

Term 2 2025-26

NAME:
FORM:

GCSE History Paper 2: Early Elizabethan England KT1: Queen, government and religion 1558-69

Key Terms

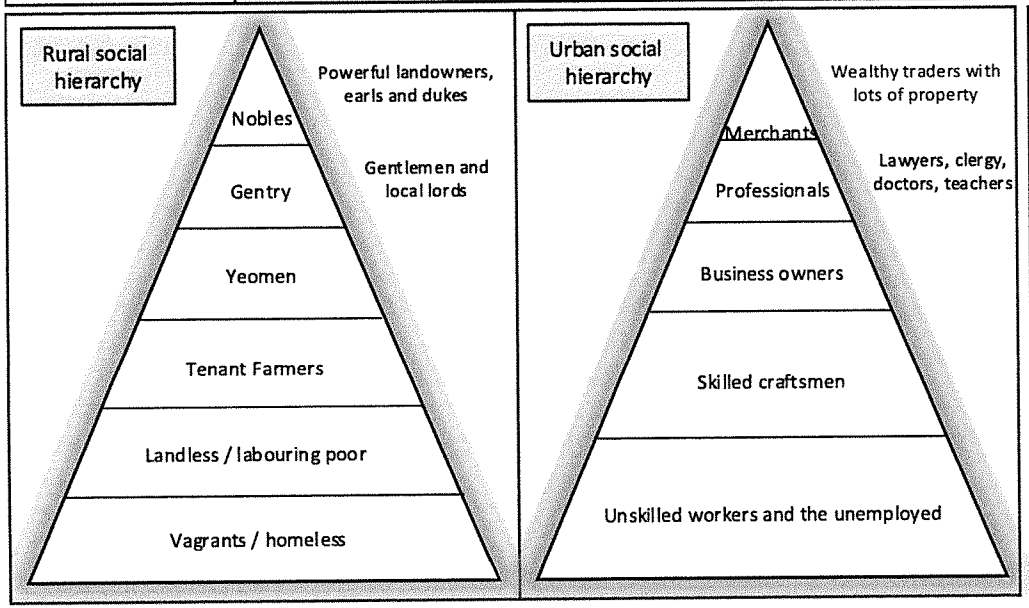
Elizabethan Society	
Social hierarchy	See table below
Yeomen	Men who held a small amount of land
Craftsmen	Skilled employees including apprentices
The Government	
Monarch	A king or queen – had the right to rule by the 'grace of God'
Secretary of State	Head of the Privy Council, monarch's closest advisor
Privy Council	Leading courtiers and advisers, who advised the monarch
Court	The inner social circle of the queen, based in her palaces
Parliament	Senior political figures whose duty was to advise queen
Lord Lieutenants	Maintained monarch's power and England's defences
JPs	Justices of the Peace kept law and order
Courtiers	Members of the nobility who attended court (see above)
Militia	A military force of ordinary people, rather than soldiers
The Monarch	
Divine Right	Belief that the monarch's right to rule came from God
Patron	Someone who provides encouragement or financial support
Crown	With a capital 'C' – the monarch and government
Roman Catholic Church	
Papacy	The system of Church government ruled by the pope
Heretics	Held religious beliefs different to those accepted by society
Martyr	Someone killed for his/her beliefs
Religion	
Mass	Catholic service involving the miracle of the bread and wine
Reformation	Challenge to the teachings and power of the Catholic church
Sacraments	Special Church ceremonies
Holy Communion	Another name for mass, often used in Protestant churches
Clergy	Religious leaders, such as bishops and priests
Diocese	An area looked after by a bishop
Ecclesiastical	Things to do with the Church
Royal Supremacy	When the monarch is head of the Church
Recusants	Catholics who were unwilling to attend church services

Question types

'Describe two features of...' [4]
(2 x 2 = 4 marks total)
Identify 2 features and support with evidence.
Useful phrases: "One feature was..."
"For example ...."

'Explain why...' [12]
3 PEE paragraphs about the reasons for an event/change/threat. The paragraphs must show a link to the question.
Useful phrases: "This shows that... because..."
"Another reason is... this is because..."

'How far do you agree..' [16]
A balanced answer discussing both sides of the argument with an overall conclusion.
Useful phrases: "It is debatable whether..."
"Some might agree that..."
"This is shown by..."



Sample exam questions

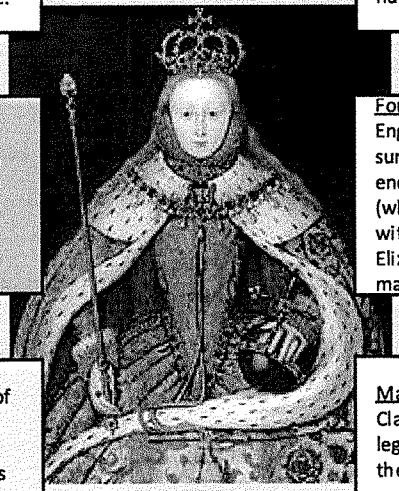
'Describe two features of Elizabethan society in 1558'. [4]
'Describe two features of the Elizabethan social hierarchy'. [4]
'Describe two features of the Privy Council'. [4]
'Describe two features of Catholic beliefs about the organisation of the Church'. [4]
'Describe two features of the Religious Settlement of 1559'. [4]
'Describe two features of Puritan challenges to the Religious Settlement of 1569'. [4]

'Explain why religion was a problem for Elizabeth when she became queen in 1558'. [12]
'Explain why Catholics abroad were a problem for Elizabeth 1558-1569'. [12]
'Explain why Catholics challenged the Religious Settlement of 1569'. [12]
'Explain why Mary Queen of Scots created a problem for Elizabeth upon her arrival in 1568'. [12]

"Financial issues were the main cause of Elizabeth's domestic challenges between 1558-69". How far do you agree? [16]
"The threat of invasion was the main problem Elizabeth faced when she became queen in 1558". How far do you agree? [16]
"Elizabeth was successful in dealing with the problems she faced between 1558-69". How far do you agree? [16]
"English Catholics represented the most significant threat to Elizabeth's Religious Settlement". How far do you agree? [16]

GCSE History Paper 2: Early Elizabethan England KT1: Queen, government and religion 1558-69

Elizabeth's problems in 1558



Legitimacy:
In the view of the Catholics, Elizabeth was illegitimate as Henry VIII's divorce from Catherine of Aragon was never agreed by the pope.

Financial weakness:
The Crown was £300,000 in debt due to the expensive war with France that Mary I had fought. This was a huge sum in 1558.

Gender & marriage:
Most people thought women were not capable of ruling alone. Women were seen as the weaker sex. Elizabeth was being pushed to marry by her advisers.

Foreign threat:
England was isolated, surrounded by Catholic enemies in both France (who they had been at war with) and Spain (who Elizabeth had refused a marriage proposal from).

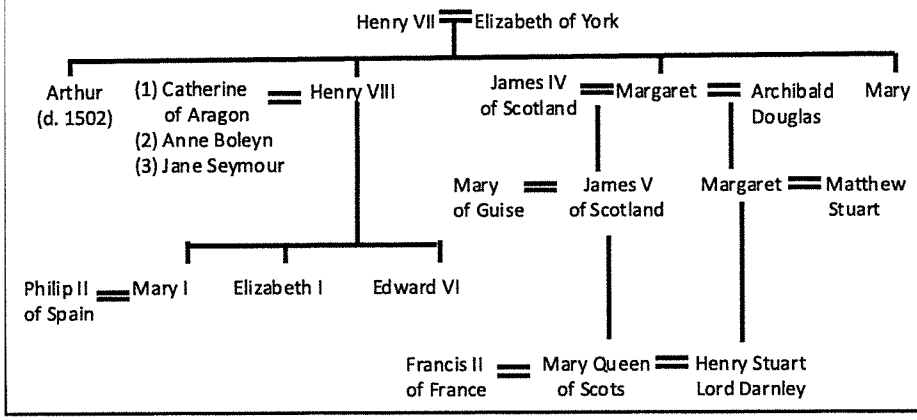
Religion
England was in a period of religious instability since Henry VIII's break with Rome. Mary I, Elizabeth's sister had been Catholic and had heavily persecuted Protestants.

Mary Queen of Scots:
Claimed that she was the legitimate Catholic heir to the throne and was married to the Catholic king of France.

Comparison between Catholicism and Protestantism	
Roman Catholic	**Protestant**
The pope is the head of the Church	There should be no pope
The Bible and church services should be in Latin	The Bible and church services should be in your own language
The Church can forgive sins	Sins can only be forgiven by God
During mass a miracle occurs when the bread and wine become the body and blood of Christ	The bread and wine simply represent the Last Supper in the Bible. There is no miracle
Priests are special and should wear special clothing (vestments)	Priests are not special and should not wear special clothing
Churches should be highly decorated in honour and glory of God	Churches should be plain and simple so as not to distract from worshipping God
Priests are forbidden to marry	Priests are permitted to marry if they wished

The Religious Settlement	
The Act of Uniformity	Established what churches should look like. Moderate decoration was allowed. Hymns could be sung. All services, bibles and prayers books were in English. Miracle at Communion left ambiguous. Priests still wore vestments.
The Act of Supremacy	Elizabeth was named Supreme Governor of the Church of England. All clergy members swore an oath of allegiance to her.
Royal Injunctions	Set of instructions on how to reinforce the acts of Uniformity and Supremacy. Included instructions on how people should worship God.

Mary Queen of Scots' claim to the throne



Challenges to the Religious Settlement

Puritan challenge:
Fell into two categories 1. The crucifix controversy (as Puritans did not believe the image of Christ dying on the cross should be present in churches). 2. The vestment controversy (as Puritans did not believe that priests should wear any special clothing.

Foreign challenge:
Both France and Spain were Catholic powers abroad and were not supportive of Elizabeth's Protestant rule.

The Catholic challenge:
Although the papacy did not offer direct leadership to England's Catholics, the pope did issue instructions forbidding Catholics from attending Church of England services. Many of the ancient families in England were Catholic, most notably the Dukes of Norfolk and a number continued to worship in their own homes.

GCSE History Paper 2: Early Elizabethan England KT2: Challenges at Home and Abroad

Key Terms

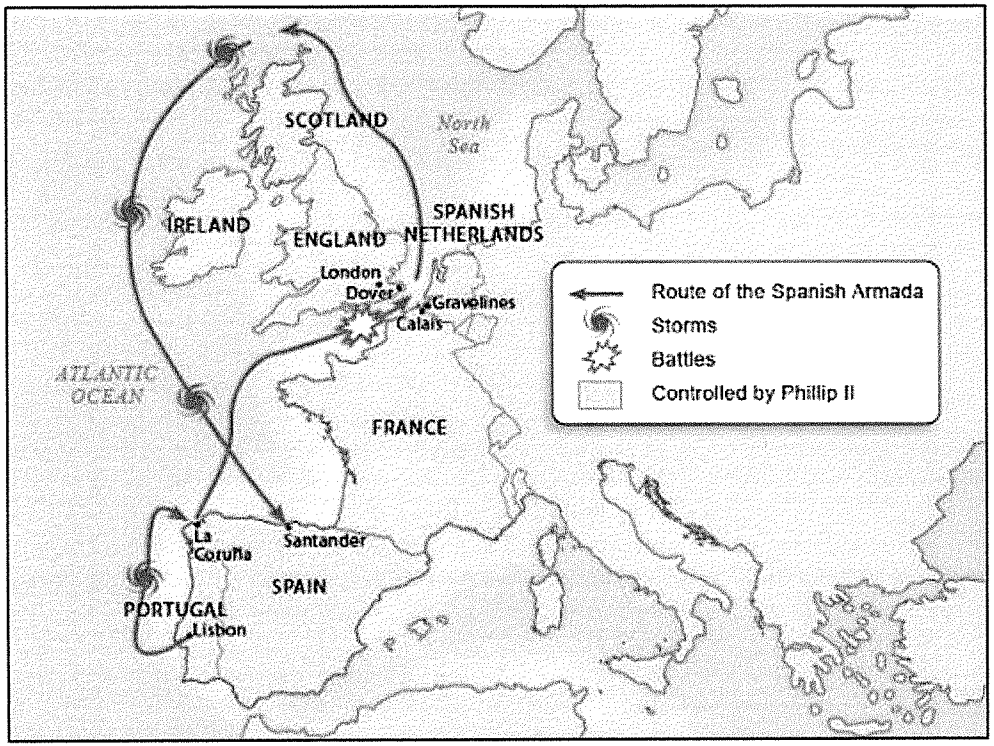
Revolt of the Northern Earls		Privateers	Pirates whose activities are legal and in service of the Crown
Revolt	An uprising or rebellion against the monarch	**The Spanish Armada**	
Earl	A senior noble who played an important role in governing England	Gravelines	A town on the border of France and the Spanish Netherlands
Mass	A Catholic church service	Galleon	Large but slow fighting ships used by the Spanish
The Catholic Plots		Fleet	The group of ships
Plot	A planned rebellion or attack – normally one which is not carried out	Fire Ships	Unmanned ships loaded with explosives and sent into the Spanish fleet
Double Agent	Someone who pretends to be on one side but is actually on the other	**Reasons for the Failure of the Armada**	
Spymaster	Francis Walsingham, Elizabeth's chief spy responsible for her security	Cadiz	Spain's main western port – the site of much of the Armada preparations
Jesuits	Extreme Catholics carrying out the wishes of the Pope	Tilbury	The south-eastern port from where Elizabeth spoke and inspired her fleet
Incriminate	To find evidence of someone's involvement in a crime	Admiral	The most senior commander of a fleet
Reasons for the Spanish Armada		Comptroller	Someone who supervises the financing and organisation of a project
New World	The continents of North and South America – dominated by Spain	Gloriana	The image of Elizabeth as divine, powerful and in control

Question types

'Describe two features of…' [4]
(2 x 2 = 4 marks total)
Identify 2 features and support with evidence.
Useful phrases: "One feature was…"
"For example …."

'Explain why…' [12]
3 PEE paragraphs about the reasons for an event/change/threat. The paragraphs must show a link to the question.
Useful phrases: "This shows that…because…"
"Another reason is…this is because…"

'How far do you agree..' [16]
A balanced answer discussing both sides of the argument with an overall conclusion.
Useful phrases: "It is debatable whether…"
"Some might agree that…"
"This is shown by…"



Sample exam questions

'Describe two features of the Revolt of the Northern Earls in 1567'. [4]
'Describe two features of the Ridolfi Plot of 1571'. [4]
'Describe two features of the Throckmorton Plot of 1583'. [4]
'Describe two features of the Babington Plot of 1586'. [4]
'Describe two features of the Walsingham's methods of catching Catholic plotters'. [4]
'Describe two features of the execution of Mary, Queen of Scots in 1587'. [4]
'Describe two features of English involvement in the Spanish Netherlands'. [4]
'Describe two features of Spanish preparations for the Armada'. [4]
'Describe two features of Drake's raid on Cadiz'. [4]
'Describe two features of the Spanish plan to invade England in 1588'. [4]
'Describe two features of the English defence against the Armada in 1588'. [4]
'Describe two features of the leadership of the English fleet in 1588'. [4]
'Describe two features of the Spanish fleet in 1588'. [4]

'Explain why the Revolt of the Northern Earls took place in 1567'. [12]
'Explain why the Ridolfi Plot of 1571 increased tension between Protestants and Catholics.' [12]
'Explain why the Throckmorton Plot of 1583 was a threat to Elizabeth'. [12]
'Explain why Sir Francis Walsingham was effective at dealing with Catholic plots between 1573 and 1586'. [12]
'Explain why Philip II ordered the invasion of England in 1588'. [12]
'Explain why Elizabeth authorised intervention in the Netherlands between 1578 and 1588'. [12]
'Explain why the Spanish Armada was defeated in 1588'. [12]

'"Political grievances were the main cause of the Revolt of the Northern Earls in 1567". How far do you agree? [16]
"The Babington Plot was the greatest threat to Elizabeth's rule in the period 1567-86". How far do you agree? [16]
"The execution of Mary, Queen of Scots was the main reason for the Spanish Armada in 1588". How far do you agree? [16]
"Effective leadership was the main reason for English victory over the Spanish Armada in 1588". How far you do you agree? [16]

GCSE History Paper 2: Early Elizabethan England KT2: Challenges at Home and Abroad

Lord Charles Howard

Lord Howard was a cousin of Queen Elizabeth and Earl of Nottingham. Through his family connections he achieved the rank of Lord High Admiral of the English fleet. However, he was a natural born leader with an excellent tactical mind, and was a deserving leader of the English defence. His most notable contribution to the defeat of the Armada was the decision to send fire ships towards the Spanish fleet. He was responsible for the larger part of England's fleet.

Sir Francis Drake

Sir Francis Drake was the greatest sailor alive. He was the first captain to successfully circumnavigate the globe in 1580, and inspired such terror in the Spanish that they nicknamed him 'El Draque' – the Dragon. He had been very successful in stealing Spanish treasure and had made Elizabeth lots of money – one notable capture paid off England's entire national debt. He was born to humble origins but rose up the ranks through his talent. His men adored him. He was second in command of England's forces.

Duke of Medina Sidonia

Medina Sidonia was not a natural choice to lead an invasion fleet. He had never fought at sea before and complained of seasickness and colds. His own mother wrote a letter to the king complaining of the appointment. However, he was very wealthy and powerful, and proved to be an excellent planner – his preparations for the Armada were superb. Ultimately, his inexperience in battle proved to be costly as a number of mistakes and missed opportunities helped contribute to the Spanish defeat.

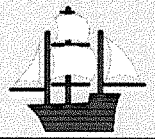
Factors leading to the Armada

Trade and Piracy

Execution of Mary Queen of Scots in 1587

Religious Factors

Political and diplomatic rivalry



English interference in the Netherlands

Reasons for defeat of the Spanish Armada

English

- Excellent leadership
- Drake's actions in Cadiz causing disruption and delay
- Innovative English tactics such as fire ships
- Home advantage – knowledge of the local area
- More effective weapons

Spanish

- Poor leadership – lack of experience and lack of flexibility
- Complicated plan
- Lack of communication
- Impractical tactics and weapons

Neither

- The wind and stormy seas

Reasons for the Revolt of the Northern Earls

Political

Elizabeth had weakened many northern nobles by removing land and power. The Council of the North, not traditional nobility, had taken over government of the north. They also demanded Elizabeth remove her 'evil councillors'.

Religious

The Catholic Northern Earls began the rebellion with a mass. They wore Catholic emblems and demanded a return to Catholicism and an end to Mary, Queen of Scots' imprisonment, planning to marry her to the Catholic Duke of Norfolk.

Personal

Many nobles were facing financial hardship as a result of their loss of land. They also feared punishment for planning the Norfolk wedding so rebelled out of desperation. Many of the rebels acted rashly and without thinking.

Reasons for the failure of the Revolt of the Northern Earls

Lack of strong leadership	The Earls of Northumberland and Westmorland were not capable leaders, and panicked.
Lack of clear plan	The earls couldn't decide if they wanted Mary to immediately replace Elizabeth, or just be named as her heir.
Lack of domestic support	The leaders' appeal to other Catholic nobles was ineffective.
Lack of foreign support	The three key Catholic powers – Spain, France, and the Pope, failed to offer their support for the revolt.
Decisive response	Elizabeth raised a large army commanded by Sussex.

The Catholic Plots against Elizabeth 1571-1586

The Ridolfi Plot 1571

Plan:
Mary, Queen of Scots used an Italian banker called Roberto Ridolfi to attempt to coordinate an invasion of England by the Pope and Philip II of Spain. An invasion from the Netherlands led by the Spanish Duke of Alva would restore Catholicism, and the Catholic Duke of Norfolk would marry Mary, who would become queen.

What happened?
Ridolfi met with Alva but Spain wouldn't commit to supporting the plan until Elizabeth had already been overthrown. Elizabeth's spies found details of the plot and arrested the Duke of Norfolk. The plot fell apart.

Outcome:
The Duke of Norfolk was executed. The plot increased fears of Catholic interference in Elizabeth's reign and she came under pressure to take a tougher stance.

The Throckmorton Plot 1583

Plan:
The plan, probably concocted by an English Catholic called Francis Throckmorton, was for a simultaneous Catholic uprising in England and an invasion by the French Duke of Guise, all financed with Spanish money. The plot would put Mary on the throne, restore Catholicism and potentially kill Elizabeth.

What happened?
Throckmorton's house was searched by Elizabeth's spies. A list of English Catholic sympathisers was found, including some in Elizabeth's court. The plot never got anywhere as expected Spanish funding never arrived.

Outcome:
Elizabeth's advisors began to actively search for Mary's involvement in plots, as they felt that they would never stop while she lived. Spanish ambassador was expelled.

The Babington Plot 1586

Plot:
Sir Anthony Babington wrote to Mary, who was unaware she was under surveillance, with a plan for a foreign Catholic invasion of England, the installation of Mary on the throne, and crucially, the murder of Elizabeth.

What happened?
Mary responded to the letters, and Elizabeth's spies allowed the correspondence to continue. Eventually, Mary wrote in a letter details of Elizabeth's assassination. Satisfied she could no longer deny her guilt, Elizabeth's spies arrested Mary for treason.

Outcome:
Most of the plotters were rounded up and immediately executed. After months of delay, Elizabeth signed Mary's death warrant and she too was executed.

History Year : 9 Topic : Modern Medicine 1900 to present.

Timeline		
1	1896	First medical use of X-rays.
2	1909	Japanese scientist, Hata created the first 'magic bullet' named Salvarsan 606.
3	1911	National Insurance Act introduced.
4	1928	Alexander Fleming identified penicillin in his laboratory.
5	1929	Fleming published his findings
6	1932	Gerhard Domagk discovered prontosil.
7	1939	Florey & Chain revived Fleming's research into penicillin.
8	1941	Florey & Chain trialled penicillin on a human with some success.
9	1942	US pharmaceutical companies began to mass produce penicillin.
10	1942	Government introduced the diphtheria vaccination.
11	1948	The National Health Service was established.
12	1950	Government introduced the poliomyelitis & whooping cough vaccinations.
13	1950	British Medical Research Council prove there is a link between smoking and lung cancer.
14	1951	Franklin & Wilkins created images of DNA using x-rays.
15	1953	Crick & Watson discovered the double helix structure of DNA.
16	1956	Jonas Salk's polio vaccination was introduced in the UK.
17	1956	Clean Air Act introduced following London's Great Smog of 1952.
18	1956	First successful kidney transplant in the USA, between identical twins.
19	1957	John C. Sheehan creates a chemical copy of penicillin, this drug could now target different diseases.
20	1961	Government introduced tetanus vaccination.
21	1962	A more effective polio vaccination was introduced.
22	1963	First successful lung transplant.
23	1967	First successful liver and heart transplants.
24	1968	Government introduced measles vaccination.
25	1968	Another Clean Air Act was introduced.
26	1970	Government introduced rubella vaccination.
27	1984	The last case of someone contracting polio in the UK.
28	1990	Human Genome Project was launched.

Key words		
1	Hereditary	A disease caused by genetic factors—it can be passed from parents to their children.
2	DNA	Deoxyribonucleic acid—carries genetic information, this information determines characteristics such as hair and eye colour.
3	Antibiotic	Any treatment that destroys or limits the growth of bacteria in the human body.
4	NHS	The National Health Service—launched by the government in 1948. Provided medical care for the whole population of Britain and was funded by National Insurance contributions.

Key people		
1	Francis Crick & James Watson	Discovered the DNA had a double helix structure.
2	Franklin & Wilkins	X-ray photos of DNA .
3	Jonas Salk	Developed and discovered one of the first polio vaccinations.
4	Howard Florey & Ernst Chain	Worked together at Oxford University, and were pioneers in the mass production of penicillin.
5	Aneurin Bevan	The Labour Minister of Health between 1945-51. He oversaw the creation and implementation of the National Health Service in 1948.
6	Alexander Fleming	Discovered the bacteria 'penicillin'.
7	Paul Ehrlich	His laboratory discovered arsphenamine (Salvarsan), the first effective medicinal treatment for syphilis. He popularized the concept of a magic bullet.

Common technologies used to make a diagnosis.		
Blood tests (since 1930s)	Blood pressure monitoring (since 1880s)	Endoscopes (since 1900s)
ECGs (since 1900s)	Blood sugar monitoring (since 1960s)	MRI scans (since 1970s)
X-rays (since 1890s)	Ultrasound scans (since 1940s)	CT scans (since 1970s)

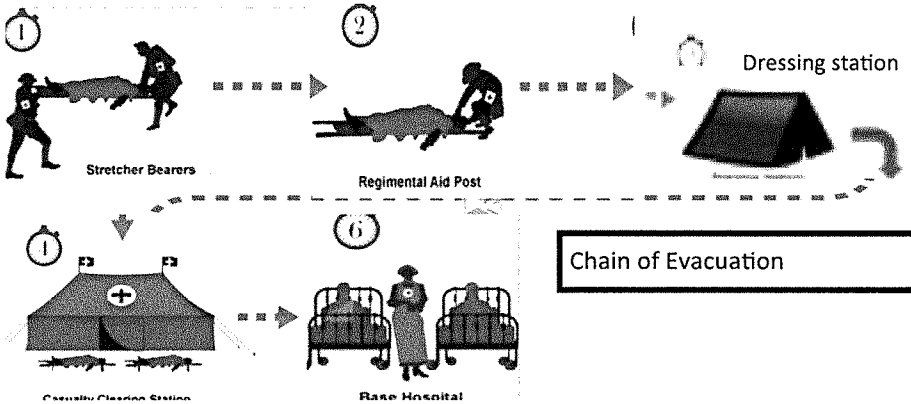
	New technology	Treatment made possible
Medical treatments	Advanced x-rays	Can target and shrink tumours (radiotherapy).
	Smaller, cheaper machines	Dialysis and heart bypasses.
	Robotics	Better prosthetic limbs.
Surgical treatments	Microsurgery	Organ transplants.
	Laparoscopic (key hole) surgery	Can operate inside the body through a tiny cut = quicker healing.
	Robotic surgery	More precise operations such as brain surgery

History Year 9

Topic Western Front

Timeline		
1.	1914-1915	Gunshot to the leg = 20% chance of survival
2.	1915	Lawrence Bruce Robertson pioneered blood transfusion in the British sector
3.	1915	Richard Lewisohn added sodium citrate to blood
4.	July 1915	Gas masks supplied to British troops
5.	January 1916	FANY allowed to drive ambulances for the British
6.	1916	Thomas splint came in to use. Improved survival rate of broken legs (Femur) to 82%
7.	1916	Francis Rous and James Turner add glucose citrate to blood=stored for up to 4 weeks.
8.	1917	Blood bank at Cambrai begins to save many lives
9.	1917	Harvey Cushing's new brain surgery techniques improve the survival rate from 50% to71%
10.	1918	240,000 men had lost limbs

Key Battles		
1.	1914	First battle of **Ypres,** prevent Germans reaching the sea
2.	1915 April – May	Second battle of **Ypres** Chlorine gas used for the first time
3.	1916 July-Nov	Battle of the **Somme** over 400,000 British casualties
4.	1917 April	**Arras**– saw use of underground hospital
5.	1917 July	Third battle of **Ypres**, 245,000 British casualties
6.	1917 Oct	Battle of **Cambrai,** 500 tanks used



Chain of Evacuation

Key words		
1.	Blood Transfusion	Blood taken from a healthy person and given to another person
2.	Universal Blood group (o)	The blood group that can be given to anyone
3.	Trench Foot	Painful swelling of the feet caused by standing in cold muddy water
4.	Gangrene	Decomposition of body tissue due to loss of blood supply
5.	Trench Fever	Flu like symptoms often spread by lice.
6.	Shell Shock	Mental health issue related to the stresses of the battlefield
7.	RAMC	Royal Army Medical Corps responsible for medical care of the troops
8.	Chlorine gas	First used by the Germans in 1915 at the second battle of Ypres
9.	FANY	First Aid Nursing Yeomanry founded in 1907, provided frontline support e.g. driving ambulances.
10.	Phosgene gas	Used in 1915 near the end of Ypres
11.	Neurosurgery	Surgery carried out on the nervous system especially the brain
12.	Chain of evacuation	System for removing wounded from the frontline to a suitable place for treatment.

Key Individuals		
1.	Harold Gillies	Developed plastic surgery techniques mainly at Queens Hospital, Sidcup.
2.	Harvey Cushing	Developed new techniques for brain surgery , using magnets to locate shrapnel and local anaesthetic.
3.	Geoffrey Keynes	Designed a portable blood transfusion kit.
4.	Lawrence Bruce Robertson	Pioneered blood transfusion in British Sector
5.	Alexis Carrel and Henry Dakin	Together developed a new way to prevent infection, where antiseptic was flushed in to a wound using rubber tubes before the wound was closed up. Carrel Dakin method.

Year 9 French Half-Term 3 – Free Time Activities

Quiz 3.1 – hobbies and time phrases

I go into town / to the cinema / to the pool	Je vais en ville / au cinéma / à la piscine
I play football in the park **at the weekend**	Je joue au foot dans le parc **le weekend**
I sing in a choir **from time to time**	Je chante dans une chorale **de temps en temps**
I watch films / the TV **after school**	Je regarde des films / la télé **après le collège**
I walk the dog **every day**	Je promène le chien **tous les jours**
I stay at home / at mine **in the evening**	Je reste à la maison / chez moi **le soir**

Quiz 3.2 – past tense hobbies with avoir

I **(have)** watched a film	J'**ai** regardé un film
He **(has)** listened to music	Il **a** écouté de la musique
She **(has)** sung in a choir	Elle **a** chanté dans une chorale
We **(have)** done swimming	Nous **avons** fait de la natation
They **(have)** downloaded a game	Ils **ont** téléchargé un jeu
They **(have)** read a book	Elles **ont** lu un livre

Quiz 3.3 – past tense hobbies with être

I **(am)** went into town	Je **suis** allée en ville
He **(is)** went to the cinema	Il **est** allé au cinéma
She **(is)** stayed at home	Elle **est** restée à la maison
We **(are)** went to the shops	Nous **sommes** allés aux magasins
They **(are)** gone out into town	Ils **sont** sortis en ville
They **(are)** climbed the mountain **(girls)**	Elles **sont** montées la montagne

Quiz 3.4 – future tense with hobbies

I will play football ***	je vais jouer au foot
I will listen to music	je vais écouter de la musique
I would like to buy a phone	je voudrais acheter un portable
I would like to sing a song	je voudrais chanter une chanson
I hope to go into town	j'espère aller en ville
I will download a game	je vais télécharger un jeu

****we know the "**er**" means "**to**" in English, but when we use "**I will**" it's still indicating future tense so we still have to use it. (like I will = I'm going TO...)*

Past tense with avoir & être

AVOIR IN PAST		
person	**avoir (have)**	**past tense activity**
j'	ai	mangé
il	a	regardé
elle	a	écouté
nous	avons	dansé
ils	ont	pris – took
elles	ont	vu - saw
NO extra 'e' or 's' added to end		

ÊTRE IN PAST (showing you moved somewhere)		
je	suis	allée
tu	es	allée
il / elle / on	est	allée
nous	sommes	allées
vous	êtes	allées
ils /elles	sont	allées
Only add e if girls involved s for plural people		
Remember not all will have é in them as they're not all ER verbs, but the feminine and plural rules still apply!		
e.g. nous sommes sorties IR verb, ends in -i in the past, then add fem and plural rules where needed		

Parallel texts

Normally I go to the park with my friends where I play football. I watch **sometimes** films at the cinema because it's really fun I love to listen to music **when it rains** and I like to do bike riding **in summer, however** I don't like to do skiing because it's too difficult. Last weekend I went to the cinema with my friends **in order to** watch a new film. **It was** a film of war. **I think that** the film was interesting **because** it was historical. This weekend, I will go to the park of theme with family because it's **really** fun. **In addition**, I would like to do **ice skating** in order to **relax** and to **have fun**. I would say that **it will be** great.	**Normalement**, je vais au parc avec mes copains où je joue au foot. Je regarde **quelquefois** des films au cinema car c'est vraiment intéressant. J'adore écouter de la musique **quand il pleut** et j'aime faire du vélo **en été, pourtant** je n'aime pas faire du ski car c'est trop difficile. Le weekend dernier, je suis allée au cinéma avec mes copains **pour** regarder un nouveau film. **C'était** un film de guerre. **Je pense que** le film était intéressant **vu que** c'était historique. Ce weekend, **je vais** aller au parc d'attractions en famille car c'est **vraiment** amusant. **En plus,** je voudrais faire du **patin à glace** pour **me relaxer** et pour **m'amuser**. Je dirais que **ça sera** formidable.
Normally I go to the park with my friends where I play football. I watch **sometimes** films at the cinema because it's really fun I love to listen to music **when it rains** and I like to do bike riding **in summer, however** I don't like to do skiing because it's too difficult. Last weekend I went to the cinema with my friends **in order to** watch a new film. **It was** a film of war. **I think that** the film was interesting **because** it was historical. This weekend, I will go to the park of theme with family because it's **really** fun. **In addition**, I would like to do **ice skating** in order to **relax** and to **have fun**. I would say that **it will be** great.	**Normalement**, je vais au parc avec mes copains où je joue au foot. Je regarde **quelquefois** des films au cinema car c'est vraiment intéressant. J'adore écouter de la musique **quand il pleut** et j'aime faire du vélo **en été, pourtant** je n'aime pas faire du ski car c'est trop difficile. Le weekend dernier, je suis allée au cinéma avec mes copains **pour** regarder un nouveau film. **C'était** un film de guerre. **Je pense que** le film était intéressant **vu que** c'était historique. Ce weekend, **je vais** aller au parc d'attractions en famille car c'est **vraiment** amusant. **En plus,** je voudrais faire du **patin à glace** pour **me relaxer** et pour **m'amuser**. Je dirais que **ça sera** formidable.

Key skills

1. Using ER verbs in the present tense with hobbies.
2. Using steps to success to write complex sentences
3. Using avoir in the past (free time)
4. Using être verbs in the past (free time)
5. Using higher-level opinions

Year 9 French Half-Term 4 – Healthy lifestyle (la vie saine)

Quiz 4.1 – food and drink

I eat some bread	Je mange **du** pain
I eat some jam	Je mange **de la** confiture
I drink some water	Je bois **de l'**eau
I eat vegetables	Je mange **des** légumes
I **don't** eat	Je **ne** mange **pas**
I **don't** drink	Je **ne** bois **pas**

Quiz 4.2 – opinions on food and drink

I love **to** eat / eat**ing**	j'adore mang**er**
It's delicious	c'est délicieux
It's disgusting	c'est dégoûtant
Salty / sweet	salé / sucré
I am a fan of..	Je suis fana de...
I am a vegetarian	Je suis végétarien(ne)

Quiz 4.3 – healthy lifestyle key phrases

I eat **a balanced diet**	Je mange **un régime équilibré**
I eat **healthily** every day	Je mange **sainement** tous les jours
I do exercise **once a week**	Je fais de l'exercice **une fois par semaine**
It's **healthy** / it's **unhealthy**	C'est **sain** / it's **malsain**
It's good for (your) **health**	C'est bon pour **la santé**
It's bad for (your) **health**	C'est mauvais pour **la santé**

Quiz 4.4 – healthy lifestyle key verbs

I eat **five portions** of fruit and vegetables	Je mange **cinq portions** de fruits et de légumes
I try to eat less sugar	**J'essaie de** manger **moins de** sucre
I never **smoke**	**Je** ne **fume** jamais
I avoid fatty foods	**J'évite** les matières grasses
To keep in shape **/ to stay in good health**	Pour garder la forme **/ pour rester en bonne santé**
A good source of **proteins / vitamins**	Une bonne source de **protéïnes / vitamines**

Quiz 4.5 – giving advice

You must eat a balanced diet	**Il faut** manger un régime équilibré
You must do exercise	**Il faut** faire de l'exercice
You must avoid too much sugar	**On doit** éviter de manger trop de sucreries
You must try to eat fruit and vegetables	**On doit** essayer de manger du fruit et des légumes
You must not take drugs **or** smoke	**Il ne faut pas** prendre les drogues **ou** fumer

Parallel texts

In order to stay in good health, I eat a diet balanced every day and I avoid eating **too much** sugar because it's extremely unhealthy. **I would say that** cigarettes are disgusting and I have never smoked. Also, I don't take drugs because drugs cause **lots of** problems of health. **Recently** to stay in shape, **I tried to** eat five portions of fruit and vegetables and I drank **plenty of** water. **After having done that,** I went to the sports centre **where** I played badminton with my friends. Next weekend, in order to **improve** my health, **I hope** to avoid eating fast food and drink alcohol. In addition, **I would like** to drink more water and do more sport. In my opinion, **that would be** practical and healthy.	**Pour rester en bonne santé,** je mange un régime équilibré tous les jours et j'évite de manger **trop de** sucre car c'est **extrêmement** malsain. **Je dirais que** les cigarettes sont dégoûtantes et je n'ai jamais fumé. Aussi, je ne prends pas de drogues car les drogues causent **beaucoup de** problèmes de santé. **Récemment** pour garder la forme, **j'ai essayé de** manger cinq portions de fruit et de légumes et j'ai bu **plein d'**eau. Après avoir fait cela, je suis allé au centre sportif **où** j'ai joué au badminton avec mes copains. Le weekend prochain, pour **améliorer** ma santé, **j'espère** éviter de manger le fastfood et boire de l'alcool. En plus, **j'aimerais** boire beaucoup d'eau et faire plus de sport. A mon avis, **ça serait** pratique et sain.
In order to stay in good health, I eat a diet balanced every day and I avoid eating **too much** sugar because it's extremely unhealthy. **I would say that** cigarettes are disgusting and I have never smoked. Also, I don't take drugs because drugs cause **lots of** problems of health. **Recently** to stay in shape, **I tried to** eat five portions of fruit and vegetables and I drank **plenty of** water. **After having done that,** I went to the sports centre **where** I played badminton with my friends. Next weekend, in order to **improve** my health, **I hope** to avoid eating fast food and drink alcohol. In addition, **I would like** to drink more water and do more sport. In my opinion, **that would be** practical and healthy.	**Pour rester en bonne santé,** je mange un régime équilibré tous les jours et j'évite de manger **trop de** sucre car c'est **extrêmement** malsain. **Je dirais que** les cigarettes sont dégoûtantes et je n'ai jamais fumé. Aussi, je ne prends pas de drogues car les drogues causent **beaucoup de** problèmes de santé. **Récemment** pour garder la forme, **j'ai essayé de** manger cinq portions de fruit et de légumes et j'ai bu **plein d'**eau. Après avoir fait cela, je suis allé au centre sportif **où** j'ai joué au badminton avec mes copains. Le weekend prochain, pour **améliorer** ma santé, **j'espère** éviter de manger le fastfood et boire de l'alcool. En plus, **j'aimerais** boire beaucoup d'eau et faire plus de sport. A mon avis, **ça serait** pratique et sain.

Key skills

1. Listening for patterns and identifying differences in sounds of words in context
2. Using du / de la / des correctly to identify genders of food items
3. Giving and explaining opinions on food and drink
4. giving advice for a healthy lifestyle using two verbs together
5. Learning and retrieving vocabulary

All Saints Absolutes Year 9 German / Term 2a – Freetime

Quiz 3.1 – using gern/nicht gern accurately

I like playing football because I am sporty	Ich spiele **gern** Fußball, weil ich sportlich **bin**
I don't like eating pizza because it's terrible	Ich esse **nicht gern** Pizza denn es ist furchtbar
I don't like to visit my grandparents	Ich besuche **nicht gern** meine Großeltern
We like walking when the weather is nice	Wir wandern **gern,** wenn das Wetter schön ist
I like my mobile phone	Ich **mag** mein Handy
I don't like the beach	Ich **mag** den Strand nicht

Quiz 3.2 – freetime activities in the present tense using time phrases

I go shopping in town	Ich **gehe** in die Stadt einkaufen	**EXTRA – use STEPS to SUCCESS to improve your range of language**
We do lots of sport	Wir **treiben** viel Sport	, um fit zu bleiben
I relax at home	Ich **entspanne *mich*** zu Hause	, wenn ich müde bin
In the evening I meet my friends	Am Abend **treffe** ich meine Freunde	, da es empfehlenswert ist
If I have time I go out with friends	Wenn ich Zeit habe, **gehe** ich mit Freunden ***aus***	, um frische Luft zu schnappen
My siblings paint and draw	Meine Geschwister **malen** und **zeichnen**	, obwohl es langweilig ist
She / he she uses the internet	Er/sie benutzt das Internet	jedoch ist es eine Zeitverschwendung

Quiz 3.3 – past tense using "haben"with the 4-part rule

I have eaten cake	Ich **habe** Kuchen **ge**gessen	**EXTRA – use STEPS to SUCCESS to improve your range of language**
I have played football	Ich **habe** Fußball **ge**spielt	Als es sonnig war, habe ich.....
I bought new clothes	Ich **habe** neue Klamotten **ge**kauft	, obwohl es teuer war.
We watched television	Wir **haben** fern**ge**sehen	Ich fand es unvergesslich.
They visited family	Sie **haben** Familie **be**sucht	Als das Wetter schön war, haben wir.....
He/she saved money	Er / sie **hat** Geld **ge**spart	

Quiz 3.4 – giving information about your hobbies

I go into town to meet my friends	Ich gehe in die Stadt, um meine Freunde zu treffen
I laze around and watch Netflix	Ich faulenze und ich sehe Netflix
I like watching TV because it's interesting	Ich sehe **gern** fern, da es interessant **ist**
I go shopping, mainly for clothes	Ich gehe einkaufen, hauptsächlich für Klamotten
I go on my phone for hours	Ich gehe an mein Handy stundenlang
I like playing computer games	Ich spiele gern Computerspiele

Quiz 3.5 How to talk about a photograph

P	On the photo there is a family	Auf dem Foto gibt es eine Familie
A	They are going to the cinema	Sie gehen ins Kino
L	They are in a town, maybe it's Germany	Sie sind in einer Stadt vielleicht ist es Deutschland
M	In my opinion they are happy	Meiner Meinung nach sind sie glücklich
C	They are wearing fashionable clothes	Sie tragen modische Kleidung

O	I think that the photo is interesting because I also love films	Ich denke, dass das Foto interessant ist denn ich liebe auch Filme
W	The weather is probably cold because they are wearing a coat	Das Wetter ist warscheinlich kalt denn sie tragen einen Mantel

Parallel texts

For me is freetime very important. **therefore** meet I like my friends at the weekend **in order** fun to have. I like doing sport very much **because** I fit to stay want. **I think also** that sport relaxing is. With my family go we Saturdays into town **for example** go we shopping, in order clothes to buy. Sometimes go we to the cinema, **although** it expensive is, **however** is the popcorn really delicious. Next week will I **perhaps** with friends computer games to play. **In my opinion** will it extremely funny be. **Nevertheless, must** I homework to **do** and that is **never** interesting.	Für mich ist Freizeit sehr wichtig **daher** treffe ich gern meine Freunde am Wochenende. **um** Spaß **zu** haben Ich treibe sehr gern Sport, **weil** ich fit bleiben **will.** **Ich denke auch,** daß Sport entspannend ist. Mit meiner Famile gehen wir samstags in die Stadt **zum Beispiel** gehen wir einkaufen, um Klamotten zu kaufen. Manchmal gehen wir ins Kino, **obwohl** es teuer ist, **jedoch** ist das Popcorn ganz lecker! Nächste Woche werde ich **vielleicht** mit Freunden Computerspiele spielen. **Meiner Meinung nach** wird es ganz lustig sein. **Trotzdem muss** ich Hausaufgaben **machen** und das ist **nie** interessant.

For me is freetime very important. **therefore** meet I like my friends at the weekend **in order** fun to have. I like doing sport very much **because** I fit to stay want. **I think also** that sport relaxing is. With my family go we Saturdays into town **for example** go we shopping, in order clothes to buy. Sometimes go we to the cinema, **although** it expensive is, **however** is the popcorn really delicious. Next week will I **perhaps** with friends computer games to play. **In my opinion** will it extremely funny be. **Nevertheless, must** I homework to **do** and that is **never** interesting.	Für mich ist Freizeit sehr wichtig **daher** treffe ich gern meine Freunde am Wochenende. **um** Spaß **zu** haben Ich treibe sehr gern Sport, **weil** ich fit bleiben **will.** **Ich denke auch,** daß Sport entspanned ist. Mit meiner Famile gehen wir samstags in die Stadt **zum Beispiel** gehen wir einkaufen, um Klamotten zu kaufen. Manchmal gehen wir ins Kino, **obwohl** es teuer ist, **jedoch** ist das Popcorn ganz lecker! Nächste Woche werde ich **vielleicht** mit Freunden Computerspiele spielen. **Meiner Meinung nach** wird es ganz lustig sein. **Trotzdem muss** ich Hausaufgaben **machen** und das ist **nie** interessant.

Don't forget your vocab book pages 8 - 15

Key skills

1.Learn speaking questions
2.gern/nicht gern with a verb
3.um fit zu bleiben
4. Use a conditional tense
5. Accurate use of modal verbs

All Saints Absolutes Year 9 German / Term 2b – Past tense consolidation / Healthy living topic

Quiz 4.1 – Saying which foods you like and dislike

I like eating fruit and ice cream because they are delicious	Ich esse gern Obst und Eis, **weil** sie lecker **sind**
I don't like eating chicken because it's disgusting	Ich esse nicht gern Hähnchen, **weil** es ekelhaft **ist**
I eat vegetables because they are healthy	Ich esse Gemüse, **da** sie gesund **sind**
I drink lots of water because it's good for the skin	Ich trinke viel Wasser, **weil** es gut für die Haut **ist**
I **rarely** eat cake because it's a "bomb of calories"	Ich esse **selten** Kuchen, **weil** es eine Kalorienbombe **ist**
My breakfast **tastes** good / not good	Mein Frühstück **schmeckt** gut / nicht gut

Quiz 4.2 – How to talk and write about health

I am **strong** but he is **weak**	Ich bin **stark** aber er ist **schwach**
I don't smoke because it's disgusting	Ich rauche nicht denn es ist ekelhaft
I **would** never take **drugs**	Ich **würde** nie Drogen **nehmen**
Lots of people **suffer from** illnesses	Viele Personen **leiden an** Krankheiten
A good diet and exercise are important	Eine gute Ernährung und Bewegung sind wichtig
She is **addicted** to drugs and overweight	Sie ist drogen**süchtig** und **übergewichtig**

Quiz 4.3 – Body parts

I have two legs and two arms	Ich habe zwei Beine und zwei Ärme
My stomach hurts	Mein Bauch tut weh!
My back is broken/ruined	Mein Rücken ist kaputt
Head, shoulder, knee and toes!	Kopf, Schulter, Knie und Fuss!
My face is beautiful	Mein Gesicht ist schön
I have injured my nose	Ich habe meine Nase verletzt
My muscles are enormous!	Meine Muskeln sind riesig!

Quiz 4.4 – Modal verbs and health

You should eat healthily	Man soll gesund essen
You must eat 5 portions of fruit and veg	Man muss 5 Portionen Obst und Gemüse essen
You must do sport every day	Man muss jeden Tag Sport treiben
Teenagers **should** avoid /give up drugs	Jugendliche **sollen** Drogen vermeiden / aufgeben
He must lose / gain weight	**Er muss** abnehmen / zunehmen
You must not smoke, **in order** the health **to improve**	Man muss nicht rauchen, **um** die Gesundheit **zu verbessern**

Vocab book pages 5-11

Key Skills

1.Accuracy in past tense
2.Giving opinions on food
3.Talking about a healthy lifestyle
4. Can you remember PALM COW?
5. Writing in 3 tenses

Parallel texts

I want a healthy body. I have a healthy diet **For example** eat I 5 portions of fruit and vegetables and I **cook** no fatty food which contain lots of **calories** **In addition** I run every day **therefore** am I also fit. Last weekend **I have** my leg **broken.** On Saturday **have** we in the town **travelled** **where** we a film in the cinema **seen have** Then on Sunday **have** I at home **stayed** in order to relax, because I had a headache. I wanted **to sleep**. I **have** homework in the internet **googled** **although** it boring was **In addition**, have I with my friends chatted and funny photos shared **All in all** was the weekend great	Ich will einen gesunden Körper. Ich habe eine gesunde Ernährung **Zum Beispiel** esse ich 5 Portionen Obst und Gemüse und ich **koche** kein fettiges Essen, die viele Kalorien **enthalten** **Außerdem** laufe ich jeden Tag, **daher** bin ich auch fit. Letztes Wochenende **habe** ich mein Bein **gebrochen** Am Samstag **sind** wir in die Stadt **gefahren,** **wo** wir einen Film im Kino **gesehen haben.** Dann am Sonntag **bin** ich zu Hause **geblieben,** um mich zu entspannen, denn ich hatte Kopfschmerzen ich wollte **schlafen.** Ich **habe** Hausaufgaben im Internet **gegoogelt,** **obwohl** es langweilig war. **Außerdem** habe ich mit meinen Freunden gechattet und lustige Fotos geteilt. **Im Großen und Ganzen** war das Wochenende toll.

I want a healthy body. I have a healthy diet **For example** eat I 5 portions of fruit and vegetables and I **cook** no fatty food which contain lots of **calories** **In addition** I run every day **therefore** am I also fit. Last weekend **I have** my leg **broken.** On Saturday **have** we in the town **travelled** **where** we a film in the cinema **seen have** Then on Sunday **have** I at home **stayed** in order to relax, because I had a headache. I wanted **to sleep** I **have** homework in the internet **googled** **although** it boring was **In addition**, have I with my friends chatted and funny photos shared **All in all** was the weekend great	Ich will einen gesunden Körper. Ich habe eine gesunde Ernährung **Zum Beispiel** esse ich 5 Portionen Obst und Gemüse und ich **koche** kein fettiges Essen, die viele Kalorien **enthalten** **Außerdem** laufe ich jeden Tag, **daher** bin ich auch fit. Letztes Wochenende **habe** ich mein Bein **gebrochen** Am Samstag **sind** wir in die Stadt **gefahren,** **wo** wir einen Film im Kino **gesehen haben.** Dann am Sonntag **bin** ich zu Hause **geblieben,** um mich zu entspannen, denn ich hatte Kopfschmerzen. Ich wollte **schlafen**. Ich **habe** Hausaufgaben im Internet **gegoogelt,** **obwohl** es langweilig war. **Außerdem** habe ich mit meinen Freunden gechattet und lustige Fotos geteilt. **Im Großen und Ganzen** war das Wochenende toll.

1.2.4 Data Storage

Characters

- ❑ The use of binary codes to represent characters
- ❑ The term 'character set'
- ❑ The relationship between the number of bits per character in a character set, and the number of characters which can be represented , e.g.:
  - ASCII
  - Unicode

Every character (letters, numbers, symbols) sent to the computer or typed in, is stored as a 7-bit binary code. For example, if the user types in the message below, **H** is represented by the number '072'. This character set is called **ASCII**

```
Hello, world
>_
```

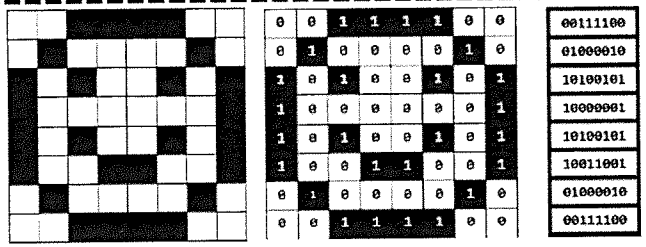
```
你好，世界
>_
```

UNICODE uses 16 bits to allow for an even wider range of characters to be stored, including ones for foreign languages.

Images

- ❑ How an image is represented as a series of pixels, is represented in binary
- ❑ Metadata
- ❑ The effect of colour depth and resolution on:
  - The quality of the image
  - The size of a image file

METADATA = 'Data about data'
i.e. additional information stored when the image files are saved



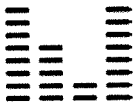
Bitmap images are made up of individual **pixels.** The more pixels stored in an image, the higher the detail (**resolution**) will be.
Each pixel will be represented in binary as a 1 (on) or a 0 (off).
These binary digits are combined into binary numbers that can be stored by a computer.
Colour images need additional binary code to store the colour. The more bits available to store the colour, the wider the possible colour range. This binary value is called **colour depth.**

Sound

- ❑ How sound can be sampled and stored in binary form
- ❑ The effect of sample rate, duration and bit depth on;
  - The playback quality
  - The size of a sound file

Sound waves are **ANALOGUE** and must be converted into **DIGITAL** (o's and 1's) in order to be stored/processed by computers.

- The height of a sound wave it its **Amplitude.**
- The **SAMPLE RATE** is the number of samples captured per second.
- **SAMPLE RESOLUTION** is the number of bits used to capture the sound



Working out the size of a sound file that needs to be stored on a computer system the following calculation is needed:

File size (in bits) = Sample rate (in Hz) x Bit depth x duration (in seconds)

1.2.5 Compression

The need for compression

- ❑ The need for compression
- ❑ Types of compression;
  - Lossy
  - Lossless

Compression can be applied to any file type and used to reduce the size of the file, this is useful when files need to be uploaded/downloaded to/form the internet or sent via email.

LOSSY	LOSSLESS
File size is reduced at the expense of quality	File size is reduced with no loss of quality

1.3.1 Networks and Topologies

Types of network:

- ❑ LAN (Local Area Network)
- ❑ WAN (Wide Area Network)

Factors that affect the performance of networks

The different computers in a client server and peer-to-peer network

The hardware needed to connect stand-alone computers into a Local Area Network:

- ❑ Wireless access points
  - Routers
- ❑ Switches
- ❑ NIC (Network Interface Card)
- ❑ Transmission media

Star and Mesh network topologies

There are a few factors that could effect the performance of a network they are:

- **Bandwidth** – the amount of data that can be transferred in a given time.
- **Transmission media – fibre optic** cabling uses light so transfer quicker than **copper** which uses electricity.
- **Wireless** - the performance depends **on signal quality, distance** from the access point they are, **interference** from other wireless networks and **physical obstructions** such as walls

LAN - Computers and devices connected over a single site or small geographical area.

- The hardware for a LAN is owned by the organisation that uses it
- They are often used in businesses, schools and universities.

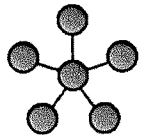
WAN – Computers and devices connected over a wider area.

- Wans connect LANs that are in different geographical areas i.e. different countries.
- Organisations will normally need to hire infrastructure 9i.e. communication lines) from telecommunication companies.
- The internet is one big WAN

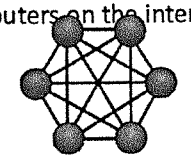
All devices need a **NETWORK INTERFACE CARD** in order to connect to a network
This contains a **MAC ADDRESS** – a code which uniquely identifies a device.
ROUTERS connect devices across a WAN 9including the internet)
A **SWITCH** allows devices to connect on a LAN
Physical networks use wired **TRANSMISSION MEDIA** (cables such as twisted-pair copper , coaxial or fibre optic)

Network topologies are the way the network is laid out, there are many types of topologies but the most common are:

STAR – all the computers are connected to a central hub/switch/server.



MESH – this is where all the devices or nodes are directly connected to each other (i.e. routers connected to routers on the internet)



Peer-to-peer: Devices connected directly (with no server)

- ❑ Pros – easy to maintain, no dependence on server systems
- ❑ Cons – no centralised management, backups need to be done individually, coping file between devices means duplicate files, less reliable.

Client-server: computers(clients) connected to a central server which could provide services like:

- Sharing files
- Internet access
- Shared programs
- Shared peripherals (i.e. printers)

❑ Pros – files are stored and accessed centrally, easier to back up, software updates are sent out in one go, security is managed centrally and servers are always on.

❑ Cons – expensive to set up, requires specialist to maintain, dependant on the server working, server can become over loaded if to many clients access it at once.

1.3.1 Networks and Topologies

The internet as a worldwide collection of computer networks:

- ❑ DNS (Domain Name Server)
- ❑ Hosting
- ❑ The Cloud
- ❑ Web servers and clients

The internet is basically a giant **WAN** – it is a network of networks.
Any computer or device that is connected to the internet has a **IP** address which acts as its 'address' on the internet.

A web server holds the data needed for the website (both the content of the website and the layout).
When someone wants to view a web page their web browser sends a request to the web server.
The web server processes that request and prepares the data that has been requested, before sending it back.
The web browser then receives that data and displays the web page to the viewer.
The web host is acting as a server (controlling access to a centralised resource)
The web browser is acting as a client (requesting access to that resource).

URLs are made up of different sections
http://www.ocr.org.uk
http - tells the computer to use the hypertext transfer protocol which puts the packets together to be used in a web browser
www - tells us that this is a webpage and that it is located on the world wide web
ocr.org.uk - is the domain name

A **DNS** is the server that translates the domain name (the website name) into its IP address
This makes accessing the internet easier as we only have to remember website names instead of the IP address
When a user types in the URL, the DNS looks up the URL and matches its IP address

The cloud uses the internet to store files and applications
The cloud is a network of servers:
- Some servers will run applications
- Some servers will store data.

The benefits of the cloud are that you can:
- Increase storage e.g. from mobile phones
- Access files from anywhere in the world
- Collaborate with others from around the world.

The drawbacks of cloud are:
- No internet no access
- If the cloud fail data is lost
- Can be quite expansive

1.3.2 Wired and wireless Networks, protocols and layers

Modes of connection:

- ❑ Wired
  - Ethernet
- ❑ Wireless
  - Wi-Fi
  - Bluetooth

Ethernet networks require physical cables to be connected
Cons
- This makes it much harder to change or move around .
- Cables can also be trip hazards so are routed along walls and under floors

Pros
- Ethernet networks are more secure because you need physical access to the cables
- The connections are more stable, faster and less susceptible to interference.

wireless networks require physical cables to be connected
Cons
- Wi-Fi networks are vulnerable to hacking because the connection can be intercepted by anyone in range.
- Wall or obstructions will reduce the signal strength
- Electrical objects can cause interference
- Transfer speeds are slower than Ethernet

Pros
- Wi-Fi allows movement of devices without moving cabling
- You don't need to purchase extra cables to connect devices
- Adding clients is easier

Wireless	Up to 100m range	Ideal for connecting personal devices	Does not need a router
Wireless	150-350 ft range	Slower than wired **ETHERNET** connections	Needs a wireless router and uses 2.4 & 5ghz frequencies

1.3.2 Wired and wireless Networks, protocols and layers

- ❑ **Encryption**
- ❑ **IP addressing and MAC addressing**
- ❑ **Standards**
- ❑ **Common protocols including:**
  - TCP/IP (Transmission Control Protocol/Internet Protocol)
  - HTTP (Hyper Text Transfer Protocol)
  - HTTPS (Hyper Text Transfer Protocol Secure)
  - FTP (File Transfer Protocol)
  - POP (Post Office Protocol)
  - IMAP (Internet Message Access Protocol)
  - SMTP (Simple Mail Transfer Protocol)
- ❑ **The concept of layers**

Addressing

There are two main types of addressing used in networks

IP addressing

- IP addressing is used when sending data between TCIP/IP networks i.e. over the internet.
- IP address are assigned by the ISP or network manager.
- There are 2 versions **IPv4** (uses 32 bits) & **IPv6** (uses 128 bits).

MAC Addressing

- Every device needs a **unique** identifier so it can be found on the network.
- MAC addresses are **assigned** to all network-enabled devices by the **manufacturer**.
- They are Unique and **cannot be changed**
- MAC addresses are **48 or 64-bit** binary numbers, these converted into hexadecimal to make it easier to understand.

Encryption

Encryption software **SCRAMBLES** (encrypts) data to stop third-parties from accessing it.

To decrypt the data, a special '**KEY**' is needed. The computer uses the key and a set of instructions to turn the data back into it original form.

SYMMETRIC	**ASYMMETRIC**
Risky – single key to both encrypt & decrypt the message.	Safer – uses two keys **PUBLIC & PRIVATE** key to decrypt the message

Standards and Protocols

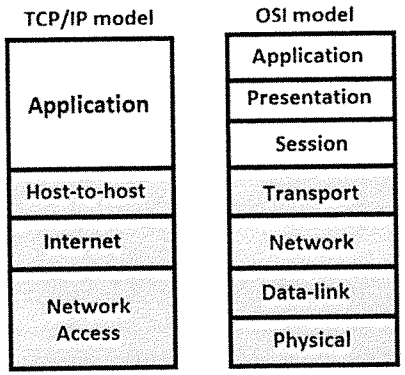
- A network standard is a set of **agreed requirements** for hardware and software.
- Standards are important as they allow **manufactures** to create products that are **compatible** with other manufactures.
- A network protocol is a **set of rules** for how **devices communicate** and how data is transmitted across a network.
- Communication protocols specify how communication between two devices is carried out.

Common protocols

- **TCP/IP** – this is the protocol that dictates how data is sent across networks.
  - TCP (Transmission Control Protocol) rules for how devices connect on a network
  - IP (Internet Protocol) for directing packets to their destination
- **HTTP** (Hyper Text Transfer Protocol) – Used by web browsers to access websites and communicate with web servers
- **HTTPS** (Hyper Text Transfer Protocol Secure) More secure version of HTTP used on websites that have sensitive data.
- **FTP** (File Transfer Protocol) – Used to access, edit and move files between devices on a network.
- **POP3** (Post Office Protocol) – Used to receive emails from a server, after which it is deleted from the server.
- **IMAP** (Internet Message Access Protocol) - Used to receive emails from a server, remains on the server after downloading.
- **SMTP** (Simple Mail Transfer Protocol) – Used to send emails

The concept of Layers

- Layers are groups are protocols which have similar functions
- Layers are self contained, the protocols in each layer don't need to know what is happening in the other layers
- Each layer severs the layer above



2.2.1 Programming Fundamentals

The use of variables, constants, operators, inputs, outputs and assignments
The use of the three basic programming constructs used to control the flow of a program:

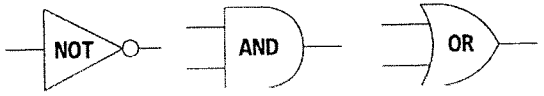
- Sequence
- Selection
- Iteration (count- and condition-controlled loops)

The common arithmetic operators
The common Boolean operators AND, OR and NOT

Variable – A value which may change while the program is running.
Variables can be local or global.

- **Local Variable** – a variable which can only be used within the structure they are declared in.
- **Global Variable** – a variable which can be used in any part of the code after they are declared

Constant – A value which cannot be altered as the program is running.
Operator – A character that represents an action. E.g. '+' is a mathematical operator
Assignment – Giving a variable or constant and value.
Input – This is a value that is entered into the program while it is running
Output – A result that is displayed when the program is run or has completed.



A Sequence is when there are programming steps that are carried out one after another.

Selection is where there are different paths in your code eg: IF, ELIF, ELSE

Iteration is when there is repetition (loops) in code.
This could be a WHILE loop (do something WHILE a condition is met) or a FOR loop (do something for a set number of times)

This count-controlled loop would print "Hello World" 8 times.:

```
for i=0 to 7
  print ("Hello")
next i
```

These condition controlled loops would check if a password's correct:

```
while answer != "letmein123"
  answer=input("Enter password")
Endwhile

do
  answer=input("Enter password")
until answer=="letmein123"
```

Common Boolean Operators:
AND – takes two inputs, gives one output, both inputs need 1s to get an output of 1 otherwise its 0
OR – Takes two inputs, gives one output, if one or more input is 1 then it outputs 1 otherwise it outputs 0
NOT – Takes 1 input, give one out, the output is the opposite of the input.

Operators
Arithmetic Operators

+	Addition
-	Subtraction
*	Multiplication
/	Division
^ or **	Exponentiation
DIV	Quotient
MOD or %	Remainder (Modulus)

Comparison Operators

==	Equal To
!=	Not Equal To
<	Less Than
<=	Less Than or Equal To
>	Greater Than
>=	Greater Than or Equal to

2.2.2 Data Types

The use of data types:

- Integer
- Real
- Boolean
- Character and string
- Casting

Its important to ensure that the correct data type is used when assigning them to a variable or constant.
By choosing the wrong data type it could cause an error in you program

Integer	Int	Whole numbers e.g. 1 or -1
Real/Float	Float	Numbers with decimal points e.g. 12.99
Character	Char	A single character e.g. a or A
String	Str	A group of characters together e.g. a full sentence
Boolean	bool	True or False

Casting is a process of converting data types.
Some languages do not allow you to multiply different data types together.
Some may allow it, but automatically 'cast' your type for you.

Example of casting:

```
if bool(valid) == True then
    result = int(num1) + float(num2) - int(num3)
else
    result = int(num1) - float(num2) + int(num3)
endif
print("Region " + "achieved " + str(result))
```

2.2.3 Additional Programming Techniques

The use of basic string manipulation
The use of basic file handling operations:

- Open
- Read
- Write
- Close

Strings (or text) are used a great deal in computer programs It is important to be able to **manipulate strings** e.g.

- find out how long a string is
- work with part of a string (a substring)
- change a string to all UPPER or LOWER case

Basic String Manipulation	
String.length	Obtains the length of the string in character
String.upper	Converts the string to all upper case
String.lower	Converts the string to all lower case
String.left[n]	Gets the left-most [n] characters of the string
String.right[n]	Gets the right-most [n] characters of the string

Text files are used to store a variety of data:

- books and business documents
- logs of events
- lists of names
- tables of data with various numbers of columns and rows.

These text files can be manipulated using the programming techniques in the table below.

Basic File Handling Operations	
myFile=open("....")	Opens the file
myFile.close()	Closes the file that is open
myFile.readLine()	Read a line from the file
myFile.writeLine()	Write a line to a file
myFile=("....")	Create a new file

It is often necessary to join text strings together in a program to make a new text string. This is called **concatenation**.

```
fname = 'walter'
sname = 'white'
name = fname + ' ' + sname
```

Python provides the ability to slice strings.
Slicing characters from a string allows programmers to select any characters that they want from a string. You can set the element you want to start the slice at, which element you want to finish at, and the increments or decrements you want. For example:

```
fname[0:5:2] = wle
```

R093: Creative iMedia in the media industry

3.1 Work Plans

Description:
Work plans are used to plan out the different elements that need to be completed within a project.

Components of a work plan

Work plans will have lists of tasks to be completed along with other components.

Resources

Resources include the hardware, software and people required to complete the project.

Workflow

This is the order in which activities are completed. Sometimes activities many have dependencies. This means that other activities need to be complete first.

Phases

There are three phases when creating a media product and they need to be covered in the work plan

- Pre-production (planning)
- Production (creating)
- Post-production (editing and reviewing

Contingencies

Contingencies are a back up plan for when problems occur. This is spare time allocated in the plan to allow for the unexpected

Tasks

Tasks are the main phases of the project such as pre-production, production and post-production in a film. In other media projects they may include planning creation and review.

Activities

Tasks are broken down into activities. These and the smaller components that need to be carried out to complete the task. They are also known as sub-tasks.

Example of a work plan

						Jan				Feb			
re-production						Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4
ask	Activity	Hardware	Software	People	Contingencies								
1	Read client brief	Monitor, Laptop	Word Processing Software	Production manager	Print out a hard copy								
2	Generating ideas	Laptop	Desktop publishing software	Creative director, Production manager.	Draw mind map on flipchart paper								
3	Visualisation diagram	Laptop	Desktop publishing software	Illustrator, Graphics artist	Draw visualisation diagram on paper								
4	Source assets	Laptop	Web browser software	Content creator	Books, Magazines, Television								
	Milestone: Pre-production phase complete												
Production													
5	Repurpose assets	Laptop/Graphics tablet	Graphics software	Graphics designer	Use web-based graphics software								
6	Create the digital graphic	Laptop/Graphics tablet	Graphics software	Graphics designer	Use web-based graphics software								
	Milestone: Production complete												
Post-production													
7	Export digital graphic	Laptop/Graphics tablet	Graphics software	Graphics designer	Use web-based graphics software								
	Milestone: Project complete												

Milestones

Milestones are the dates when key parts of the project are complete

Timescales

The time given to each activity and task in the project

Uses and Benefits

A work plan helps manage tasks, activities, time and resources in any type of media product.

The benefits of a work plan include:

- It can provide clear timescales for each task.
- To better understand the hardware, software and people require for each activity.
- To factor in unexpected event and putting contingencies in place.
- Increased the chance of the production meeting a deadline.

R093: Creative iMedia in the media industry

3.2 Mind Maps

The purpose of a mind map is to outline ideas quickly. They can show the connections between different ideas.

Uses for mind maps

Mind maps are used at the beginning of a project. At this stage it allows an overview of all the components of the project to be considered

Mind maps are used by many of the members of the time, they would share their ideas and all contribute to the creation

Content of mind maps

Mind maps consist of;

- Main or central theme – this is normally in the centre of the mind map
- Nodes – these are connected to the central theme and contain information that relate to the central theme
- Sub nodes – these are connected to the nodes and contain information related to the node
- Branches – these are the connection between the nodes, sub-nodes and main theme

3.2 Mood Board

The purpose of a mood board is to develop the feeling and style of a product.

Uses of Mood Boards

Mood board assist with the development of ideas for the later planning stages,

They can be used to get feedback from a client or the rest of the design team on a particular style.

Content of a mood board

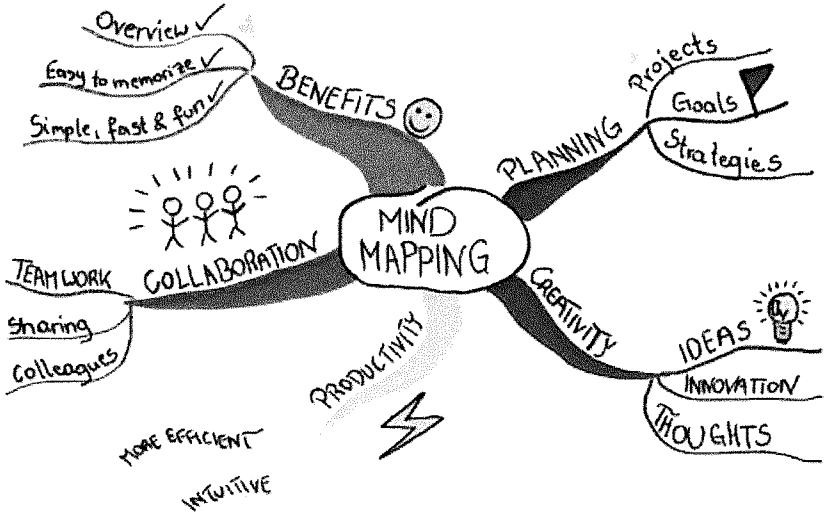
The content of a mood board will differ depending on whether it is physical or digital

A **physical mood board** is produced on large pieces of paper or card and contain;

- Cut out of magazines
- Fabrics
- Example of text
- Colour swatches

Digital mood boards contain some of the same things as a physical mood board but also;

- Video
- Sound clips
- Digital images
- graphics



REVIEWS

What IS a review?

A review is an evaluation of a given topic. If you are asked to write a review, you must give a range of personal opinions on the given subject and evaluate the positives/negatives of the thing you are reviewing. The reader should then have a clear idea of whether they would enjoy the thing you have reviewed, or not.

Reviews are often on books/films/restaurants or places.

A review can be positive, negative or mixed.

What is being tested?

- How you engage a reader, the quality of your ideas and how well you present them.
- Your ability to be evaluative when writing.
- Your ability to use sentencing, grammar and vocabulary.
- Your ability to develop ideas and write about two sides.

.

Choosing what to review

If you are given a choice of what to review, e.g – a film of your choice, choose something you can say a lot about. Think about films that accompany novels you've studied in school if you can't think of anything else. By reviewing the film or book of a GCSE Literature text, you are also giving yourself the chance to use all the wonderful vocabulary you've learned to describe those characters/events etc.

Structuring a review:

You will need:

- **A catchy title. If you can't think of one straight away, write a boring title ('A review of....') and come back to it!**
- An **introduction** which makes your opinion clear from the start.
- An **overview of the plot or the subject matter** (e.g, if reviewing a place, details about what there is to see/do etc), not giving away any endings for films/books.
- A summary of the **high and low points** for you.
- **Who would enjoy** the thing you are reviewing.
- Whether you would **recommend** it.

Top Tips:

A review should allow the reader to understand what you are reviewing in detail – so a book review needs to give **details** about the plot, and a place review needs to tell them all about the place. If not, you'll lose marks as the review won't be hitting its purpose.

You can make up details. The examiner won't know or care if you do as it's about your writing skills at the end of the day. Obviously just don't be silly!

Reviews should be entertaining, so:

- Use a **pun** in your title: E.g – when reviewing A Christmas Carol: *High Spirits in A Christmas Carol.*
- Use **parenthesis** to give asides to your reader and build a relationship. Do this through **embedded clauses, brackets or dashes:**

The plot (which I'm sure you are vaguely familiar with) centers around a miserly misanthropist called Scrooge.
On meeting Marley's ghost – a grim prediction of Scrooge's future – the plot really gets exciting.
The Cratchits, who are symbols of the hardworking poor, are overlooked by Scrooge.

Example questions for practice:

Write a review for a teenage magazine of a book, film or TV programme/series that you have enjoyed in the last year and why it might appeal to others of your age. [20]
Write a review of your school or college based on your experiences there. [20]

Y8 Rhetoric Absolute

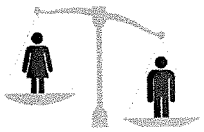
Concepts

Rhetoric

The art of persuasion, getting people to believe what you want them to.

Patriarchy

A society in which men hold power over women..



Injustice

When a result is viewed as being unfair. It may be based in bias and prejudice.

Democracy

A system of government where people vote their elected representatives into parliament.

Propaganda

Exaggerated ideas spread by the government or a political party to promote their ideas in a heavily biased way.

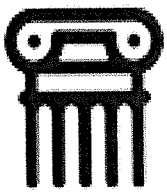
Vocabulary

Room 101 speech			**Marc Anthony Speech**		
1	**Riddled**	Full of	16	**Interred**	buried
2	**Obsolete**	Outdated; not used anymore.	17	**Ambitious**	showing a strong desire to succeed
3	**Arrogant**	Big-headed/someone who thinks they're better than others	18	**Grievous**	Bad and serious
Alexander the Great Speech			19	**Coffers**	money chests
4	**Venture**	A risky journey	20	**Thrice**	three times
5	**Endurance**	The act of suffering something painful or difficult	21	**Disprove**	Prove something is false
6	**Hesitate**	Pause over a decision	22	**Mourn**	Show sorrow for death.
Elizabeth 1st's speech			23	**Brutish:**	Cruel and violent
7	**Multitudes**	Many people			
8	**Treachery**	Betrayal of trust			
9	**Tyrant**	A cruel and harsh ruler			
10	**Feeble**	Weak/ dellicate			
11	**Scom**	Hatred			
12	**Virtues**	Good qualities/high moral standards.			
13	**Obedience**	Following orders			
14	**Concord**	Peaceful behaviour			
15	**Valour**	Bravery			

Key word	Definition
Alliteration	Repeating the same sound at the start of consecutive words. *Today is a terrible tragedy.*
Anecdote	A short amusing or interesting story about a real incident or person. *Let me tell you a story….*
Antithesis	Putting two opposites together in clauses that mirror each other grammatically: *"One small step for man, one giant leap for mankind".*
Direct address	Use of a pronoun (you) to address the audience. *You need to listen.*
Emotive language	Words or phrases that encourage the reader or audience to feel a particular emotion. *Innocent, vulnerable children suffer cruel deaths in war.*
Epiphora	Ending each sentence with the same words. *I want change, you want change, we all want change!*
Ethos	Credibility. *"I have thirteen years experience as a teacher, so I know what I'm talking about."*
Hyperbole	Exaggeration to emphasise a point or idea. *This is the worst idea in the world.*
Hypophora	A question followed by the answer: *Should we do it? Of course we should!*
Logos	Using logic and reasoning as your appeal: facts and figures. *70% of students I surveyed agreed with me.*
Pathos	Pathos is the emotional influence of the speaker on the audience. Its goal is to make the audience feel something. *Can be created through emotive language (see above)*
Purpose	The reason the writer is writing. *E.g – to argue, to entertain or to persuade.*
Rhetorical question	A question that doesn't require an answer, but is instead used to make a point. *What do you think you're doing?*
Tricolon	Use of a list of three, or repetition of something three times, to emphasise a point. *It's unneccessary, cruel and wrong.*
Verbal irony	Saying the opposite of what you mean. It can be used to bring humour or express frustration: *"Lovely weather we're having!" (when it's raining).*

Further Knowledge

The study of rhetoric began in Ancient Greece and has continued to be important around the world today with political leaders, civil rights activists and those trying to get out of doing homework.



There are many devices used to strengthen different aspects of your rhetoric which can be identified in many different speakers work. Aristotle, Hitler and Malala all use the same aspects of rhetoric in their writings!

Rhetoric is everywhere: in the news, on the radio, in adverts. Be aware that every thing you hear may contain rhetoric. Keep a critical ear and be aware of how you're unknowingly being persuaded.

SPEECHES/TALKS

What IS a speech/talk?

A talk (or speech) is exactly what you would say if you were delivering a speech. You need to write as though your content will be listened to, so addressing the audience is crucial. Make sure you hit the right tone depending on who they are.

What is being tested?

- How you engage an audience, the quality of your ideas and how well you present them.
- Your ability to hit the right **TONE** for your audience/purpose.
- Your ability to use sentencing, grammar and vocabulary .
- Your ability to develop ideas and write about two sides.

Structuring a talk

Start with something to interest your listener and address them directly (direct address):

- *How many of you would ….. (rather/wish/believe that/dislike...) ?*
- *Imagine a world where...*
- *Did you know that...?*
- *How many of us can honestly say that...*
- *I'm sure you agree it's a fact that...*
- *How important is your future? Do you care about it? Then care about it enough to...*

In the middle:

- *And we all know that – especially you _____!*

At the end:

- *Thank you for listening. Are there any questions?*
- *Ladies and gentlemen, thank you for your time today.*

Some additional techniques you could include:

- *Including the audience – using personal pronouns (I, you, we)*
- *Assumption of agreement – "we all know", "everyone thinks"*
- *Ridicule – "only an idiot could possibly think"*
- *Strong opinionated statement – "this needs to happen. End of"*

You could use the Seven Part Structure to develop your ideas:

First (topic) sentence:

A brilliant way to banish boredom in the holidays is to volunteer.

Second sentence (use a statistic): *Charity shops up and down the country are crying out for enthusiastic, philanthropic individuals to staff their stores.*

Third/fourth sentence (develop the `stats sentence`):

Most charities absolutely depend on these shops to make money for their causes, and therefore it is crucial that people like you and I give up our time to give back to the community and raise these vital funds.

Fifth sentence: (personal anecdote):

Last summer, I spent many worthwhile weekends helping in my local Cancer Research shop, and the skills I learned there will help me for the rest of my life. From serving customers to dressing displays and taking stock, the job prepared me brilliantly for the world of work and I had a brilliant experience. Not only that – I made friends who I probably never would have met had I not volunteered.

Sixth sentence (rhetorical question):

What do you have to lose by giving just a few hours of your time for a brilliant cause?

Seventh sentence (offer a suggestion):

Simply call in at your local charity shop and ask if they need help, or pick up the phone. They will be absolutely delighted to hear from you!

Example questions for practice:

You are asked to give a talk to people in your class about your ambitions and what you hope to achieve in the next 10 years. **Write what you would say in your talk.** [20]

Students often complain about being bored and having nothing to do through the long school summer holidays. You have been asked to give a talk to you class giving your views, with suggestions and recommendations for making the most of school holidays. **Write what you would say.** [20]

GCSE

English Literature

'Disabled' (Wilfred Owen)

eduqas

The poet – Contextual information about the poet relevant to the poem (AO3)

- Wilfred Owen was born in Shropshire, England in 1893 and is considered to be one of the greatest World War I poets.
- World War I began in 1914, and in 1915 Owen enlisted in the Artists Rifles, before becoming a second lieutenant in the Manchester Regiment.
- After being blasted by a mortar shell attack, Owen was diagnosed with neurasthenia (shell shock) and sent to Craiglockhart War Hospital in Edinburgh to recover.
- At Craiglockhart, Owen met fellow war poet and soldier Siegfried Sassoon, who helped to inspire his war poetry.
- Owen returned to active service in France on the front line in 1918 as he believed it was his duty.
- Owen was killed whilst leading his regiment to take an enemy stronghold on 4 November 1918, just one week before the war ended.

Connections and contrasts (AO3)

- **'Cousin Kate' by Christina Rossetti**
  Both poems depict characters who are isolated and marginalised by society.
- **'Drummer Hodge' by Thomas Hardy**
  Both poems explore ideas about the grim reality of war. They depict the suffering and dehumanisation caused by warfare.
- **'Decomposition' by Zulfikar Ghose**
  Both poems focus on the indifference of society towards marginalised individuals. These poems consider the characters' loss of identity.
- **'Catrin' by Gillian Clarke**
  Both poems focus on the presentation of conflict – either physical or emotional.
- **'Kamikaze' by Beatrice Garland**
  Both poems detail the effects of war on an individual and the sacrifices they make. Ideas of loss and nostalgia are depicted, as is the treatment of soldiers on their return home.
- **'War Photographer' by Carol Ann Duffy**
  Both poems consider the themes of war, death, trauma and memories. They also both illustrate the indifference of society.
- **'Remains' by Simon Armitage**
  Both poems depict the themes of war and the trauma caused by it. Both poems present the ideas of lack of power and memories.

The poem

Content (AO1)

The poem is about the experiences of a young man who enlists to fight as a soldier in World War I without thinking about the consequences.

The poem moves between the past and present, and we see how enjoyable, carefree, energetic and good his life used to be. The boy had never given much thought to the details of the war, but he had been playing football, was a bit drunk and had been told that he would look good in the uniform and so decided to enlist.

He is severely injured in the war, losing limbs, and on his return home, he realises how much his life has changed. He will have to spend time in institutes, following rules and having little control over his life and future.

Deeper meaning

The poem explores the true horrors of war and the harsh, brutal realities of the battlefields, in sharp contrast to the propaganda and jingoism used to persuade young men to enlist. The poem considers ideas about loss, sacrifice and trauma (physical and emotional) as the soldier realises he has lost his identity as well as his limbs.

Context (AO3)

Wilfred Owen wrote 'Disabled' as an anti-war poem in 1917 while convalescing at Craiglockhart. He wrote several poems, such as 'Dulce et Decorum Est' and 'Anthem for Doomed Youth' depicting the horrors of trench warfare and gas attacks.

Owen felt it was his duty to inform people back home about what war was really like and to redress the balance because of the jingoistic, motivational war poems from the poet Jesse Pope. Pope's poem 'Who's for the Game' showed the excitement and glory of war, while Owen, as a soldier, wanted to present an honest picture of the agony and suffering that the soldiers experienced in dreadful conditions.

Structure and form (AO2)

- 'Disabled' has five stanzas of different lengths.
- Time moves from past to present so we can contrast the soldier's life before he enlisted with his current situation after returning home.
- There is a cyclical structure, as the poem begins and ends with the soldier alone in hospital.
- The poem is written in iambic pentameter, which creates a feeling of repetitiveness and monotony to reflect the soldier's current life.
- The rhyme scheme is inconsistent which suggests the lack of certainty surrounding the soldier's future.

GCSE

English Literature

'Disabled' (Wilfred Owen)

eduqas

Language and imagery (AO2)

- Owen deliberately leaves the soldier unnamed, referring to him as *'he'* or *'him'* to create a sense of universal significance and how the soldier could be representative of any soldier who has fought in any conflict.
- The verbs 'sat' and 'waiting' suggest how passive the soldier has become because of his injuries as now he is dependent on other people. These verbs also slow the pace of the stanza and create the feeling that his life is now monotonous and lifeless.
- Owen uses more active, energetic verbs when he is describing the soldier's life before the army. Verbs such as 'swing' suggest excitement, pleasure and the fun-filled life he once had. The word 'budded' compares the lamps to flowers bursting into life and creates the potential of new life and hope. The adjective 'light-blue' creates an atmosphere that is full of energy and colour – a contrast with his present situation.
- The simile *'saddening like a hymn'* is associated with funerals and mourning and suggests that even sounds that should sound happy now sound morbid and depressing to the soldier as his life is one of gloom and despondency.
- The repetition of the rhetorical question *'Why don't they come'* at the end of the poem creates a desperate tone as if the soldier is almost pleading for help.

Key questions

1. What mood is created in the first stanza by the use of colour? (AO1)
2. Why does the poet set some stanzas in the present and some in the past? (AO1)
3. What is the significance of the words 'he' and 'him' and the fact the soldier is left unnamed? (AO2)
4. What does the line *'There was an artist silly for his face'* suggest? (AO1)
5. What is the effect of the contrast between the lines
   Line 1: *"And leap of purple spurted from his thigh."*
   Line 2: *"One time he liked a bloodsmear down his leg,"*? (AO2)
6. What impression of the war does the soldier have before he goes to fight? How do you know? (AO1)
7. What is the difference between the way people treat the soldier when he leaves for war and when he returns home? Justify your answer. (AO1/AO2)
8. Who do you think the 'solemn man' is? (AO1)
9. Why does the poem end with the repetition of questions? (AO2)
10. Does the poem present being a soldier in a positive or negative way? Give reasons for your opinion. (AO3)

Key quotations (AO1)

- *'He sat in a wheeled chair, waiting for dark,'*
- *'Till gathering sleep had mothered them from him.'*
- *'When glow-lamps budded in the light-blue trees'*
- *'All of them touch him like some queer disease.'*
- *'Now he is old; his back will never brace;'*
- *'Poured it down shell-holes till the veins ran dry,'*
- *'One time he liked a bloodsmear down his leg,'*
- *'Germans he scarcely thought of;'*
- *'Some cheered him home, but not as crowds cheer Goal.'*
- *'And take whatever pity they may dole.'*
- *'How cold and late it is! Why don't they come'*

Links for further research

- A short video about how soldiers who returned from WW1 were treated: https://www.youtube.com/watch?v=iZ-OgzIRG9c
- An article about Wilfred Owen's life and other poems: https://www.poetryfoundation.org/poets/wilfred-owen
- A BBC documentary presented by Jeremy Paxman about Wilfred Owen, titled *Wilfred Owen: A Remembrance Tale*: www.youtube.com/watch?v=zsPdEgC0wdk

GCSE

English Literature

'Drummer Hodge' (*Thomas Hardy*)

eduqas

The poet – Contextual information about the poet relevant to the poem (AO3)

Thomas Hardy (1840–1928) was born in Higher Brockhampton in rural Dorset to a working-class family. While training as an architect, he began to write poetry, before achieving success as a novelist. His novels were set in the south-west of England he knew so well that included Dorset; he used the old Anglo-Saxon name for this region, Wessex.

Though more famous for novels such as *Far From The Madding Crowd* and *Tess of the D'Urbervilles*, Hardy wrote a series of notable poems about the Boer War and World War One, often from the viewpoint of ordinary soldiers, influencing a younger generation of war poets.

Connections and contrast

This list is not exhaustive and other comparisons are valid.

'Drummer Hodge' could be compared and/or contrasted with these poems from the Anthology as they explore similar themes:

- 'The Schoolboy' – nature and childhood
- 'Blackberry-Picking' – nature, childhood and place
- 'I Shall Return' – nature, childhood and place
- 'I Wandered Lonely as a Cloud' – nature and place
- 'Disabled' – war and loss
- 'Kamikaze' – war and isolation
- 'Remains' – war and place

The poem

Content (AO1)

'Drummer Hodge' describes the hasty burial of a drummer boy killed in the Boer war, in a landscape that was utterly alien to him. Hardy reflects on the fact that Hodge will never see England again, but instead will become part of the soil and vegetation of a foreign land on the other side of the world, far from his home.

Context (AO3)

'Drummer Hodge', originally titled 'The Dead Drummer', was published in 1899, during the Second Boer War in what became South Africa. This was a conflict between the Boers, the descendants of Dutch settlers ('Boer' is Dutch for 'farmer') and the British Empire.

Hardy was inspired to write the poem after reading about a local boy who was killed at the start of the war. Drummer boys were sometimes as young as thirteen or fourteen years old. They served in the armed forces, often playing in military bands, but also using their drums for communication on the battlefield. There was a stereotype in Victorian war literature of boys becoming men through war; Hardy, who was anti-war, deliberately challenges this stereotype in the poem.

Form and structure (AO2)

The poem's ABAB rhyme scheme creates a regular rhythm, appropriate for a poem about a drummer boy. The first stanza describes Hodge's present, the second his past and the third his future. Each stanza starts with a pair of lines describing Hodge, followed by a pair describing the landscape in which he is buried and ending with a pair describing the night sky above his grave.

Key quotations (AO1)

- *'They throw in Drummer Hodge, to rest Uncoffined'*
- *'His landmark is a kopje-crest'*
- *'And foreign constellations west Each night above his mound.'*
- *'Young Hodge the drummer never knew'*
- *'Fresh from his Wessex home'*
- *'strange stars'*
- *'Yet portion of that unknown plain Will Hodge forever be'*
- *'His homely Northern breast and brain Grow up some Southern tree'*
- *'strange-eyed constellations'*
- *'His stars eternally.'*

GCSE

English Literature

'Drummer Hodge' (*Thomas Hardy*)

eduqas

Language and imagery (AO2)

The poem uses word choices that show that the African landscape and the stars above were unfamiliar to Hodge, such as 'unknown', 'strange' and 'foreign'. Hardy amplifies this sense of unfamiliarity by using Afrikaans words like 'kopje' (meaning 'hill'), 'veldt' (meaning 'open grassland') and 'Karoo' (a southern African plain).

Example of analysing a quotation:

Hardy describes Hodge's final resting place as a 'kopje-crest / That breaks the veldt around', using the Afrikaans words 'kopje' and 'veldt' to emphasise how strange the African landscape would have seemed to a young British lad. This is ironic, as he will 'for ever' be a part of this 'unknown plain'.

Links for further research

- The Thomas Hardy Society Website
- BBC - Poetry Season - Poets - Thomas Hardy
- Drummer Hodge

Key questions to ask about 'Drummer Hodge'

1. Who might 'they' be in the first line? (AO1)
2. What do the words 'throw' and 'uncoffined' suggest about how Hodge was buried? (AO2)
3. In Victorian times, the name 'Hodge' was a stereotypical name for an ordinary country boy. Why might Hardy have used this name for the dead drummer? (AO1 / AO3)
4. How do we know that Hodge would have been a teenager? (AO1 / AO3)
5. Why is it significant to Hardy that Hodge came from 'Wessex'? (AO3)
6. What is the effect of Hardy using Afrikaans words such as 'kopje-crest', 'veldt' and 'Karoo'? (AO2 / AO3)
7. Why are the stars above Hodge's grave described as 'foreign', and 'strange'? (AO1 / AO2)
8. What is ironic about Hodge's final resting place? (AO1)
9. What does the adjective 'homely' suggest about Hodge? (AO2)
10. What is the effect of the juxtaposition of Hodge's 'Northern breast and brain' with 'some Southern tree'? (AO2)
11. What structural similarities do the three stanzas share, and what effect might these have? (AO2)
12. How might nature seem more sympathetic than mankind in the poem? (AO1)

GCSE

English Literature

'Kamikaze' (Beatrice Garland)

eduqas

The poet (contextual information about the poet relevant to the poem) (AO3)

- Beatrice Garland is an English poet born in Surrey in 1938.
- She won the National Poetry Prize in 2001.
- The poem was written in 2013 and is part of the poetry collection 'The Invention of Fireworks'.
- In her poetry, Garland often explores the themes of life and death in the natural world.
- Beatrice Garland has said: "I spend a lot of the day listening to other people's worlds". In this poem she tells a story, told by someone else about an event and culture that is outside her own experience as a teacher and clinician.

Structure and form (AO2)

- 'Kamikaze' is a narrative poem mostly told in the third person through the reported speech of the pilot's daughter.
- Stanzas 1 to 5 are narrative stanzas about the father's journey and are written in the third person.
- Stanza 6, where sentence 2 begins, shifts in time and focus and is told directly from the point of view of the pilot's daughter – speaking in her own words.
- The final two stanzas are about the aftermath of the pilot's decision to return home. It reverts back to the third person.
- There is no set rhythm or rhyme.
- There are only three sentences in the poem with each one marking a significant moment in the action and time.

The poem (content and context)

What is the poem about? (AO1)

The poem is about a kamikaze pilot failing to complete a suicide bombing mission during WW2.

When flying, the pilot looks out of his plane and remembers the beauty and power of nature. This sight helps him make the decision to return home.

On his return, he is shunned and rejected by his family and society. They believe his actions are cowardly and shameful because he has broken the Japanese code of honour, bravery and patriotism.

At the end, the pilot wonders if it would have been better to commit suicide by carrying out his kamikaze mission.

Deeper meaning (AO1)

The poem explores the power of honour, shame and family relationships. It deals with the ideas of external and internal conflict. External conflict focuses on the physical conflict of WW2 wheras the internal conflict deals with the thought process of the pilot as he debates whether or not to abort the mission and return home.

Context of the poem (AO3)

Kamikazes were Japanese fighter pilots who were expected to complete suicide bombing missions in WW2 (1939–1945).

It was considered to be an honourable and patriotic way to die and over 3,000 kamikaze pilots died doing this in WW2.

Kamikaze pilots were responsible for the attack on Pearl Harbour in 1941 where the USA suffered one of its heaviest losses.

Section 3 (connections and contrasts) (AO3)

- **'Sonnet 29' by Elizabeth Barratt Browning:** Both poems are about love, relationships, resilience and strength.
- **'Cousin Kate' by Christina Rossetti:** Both poems deal with love and family relationships. They both focus on ideas of shame and honour because of the breaking of society's expectations. Characters in both poems face isolation.
- **'Catrin' by Gillian Clarke:** Both poems explore themes of love and family relationships. Both deal with different types of conflict and identity. Both poems focus on memories.
- **'Dusting the Phone' by Jackie Kay:** Both poems deal with different types of relationships.
- **'The Schoolboy' by William Blake:** Both poems look at the effects of nature.
- **'I Wandered Lonely as a Cloud' by William Wordsworth:** Both poems focus on the presentation of nature and the power of memories.
- **'Drummer Hodge' by Thomas Hardy:** Both poems look at the themes of war and death.
- **'Disabled' by Wilfred Owen:** Both poems consider ideas about war and death. They both consider the notion of sacrifice and patriotism whilst exploring the issues of isolation and identity. Both poems deal with the power and effect of memories.
- **'Decomposition' by Zlfikar Ghose:** Both poems consider the themes of identity and isolation.
- **'War Photographer' by Carol Ann Duffy:** Both poems consider ideas about war, death and trauma. Both deal with themes of identity and the attitudes of society.

GCSE

English Literature

'Kamikaze' (Beatrice Garland)

eduqas

Section 2c: Key quotations (AO1)

1. 'Her father embarked at sunrise'
2. 'a shaven head/full of powerful incantations'
3. 'a one-way/journey into history'
4. 'little fishing boats/strung out like bunting'
5. 'the dark shoals of fishes/flashing silver'
6. 'a tuna, the dark prince, muscular, dangerous'
7. 'my mother never spoke again/in his presence'
8. 'they treated him/as though he no longer existed'
9. 'til gradually we too learned/to be silent'
10. 'he must have wondered/which had been the better way to die'

Section 2a: Language and imagery (AO2)

- The reference to 'sunrise' is directly linking the events to the pilot's culture as Japan is referred to as Land of the Rising Sun.
- The metaphor 'journey into history' implies the pilot is part of an important historical event but he is also literally going to be history himself by dying.
- The simile 'little fishing boats/strung out like bunting' implies how lively and tempting the life he has left behind seems in contrast with his deathly mission.
- The peaceful image of the 'dark shoals of fishes' in the sea contrasts with the violence and danger of the war in the skies.
- The 'fishes/flashing silver' could refer to the planes and be a metaphor for glory and honour.
- The parenthesis and aside in '– yes, grandfather's boat – ' suggests how the daughter is speaking to her children which makes the event seem more personal.
- The alliteration and sibilance of 'safe/to the shore, salt-sodden, awash' could be reflecting the movement and sound of the waves.
- The metaphor, 'once/a tuna, the dark prince, muscular dangerous' suggests the power of nature and perhaps its ability to transform.
- The adjectives 'dark' and 'dangerous' also have connotations of something mysterious and sinister. The word 'prince' suggests the natural superiority of the tuna and the system of hierarchy within the sea.
- The onomatopoeic 'chattered and laughed' contrasts with the silence that the kamikaze pilot must now endure.

Section 1–10: Key questions to ask about the poem

1. There is more than one speaker in the poem. Who are the different speakers and what is the effect of this? (AO1)
2. Why does Garland use 'Kamikaze' as the title? (AO1)
3. What is the significance of the 'samurai sword' and 'powerful incantations' in the poem? (AO2)
4. What is the significance of the 'cairns of pearl grey pebbles'? How do you think the 'cairns' affect the pilot? (AO1)
5. What is the effect of the listing in stanza 5 of the poem? (AO2)
6. Why do you think the poet has included the infinity symbol, the 'figure of eight' in stanza 3? (AO2)
7. Do you think the reaction of the pilot's wife is fair? Justify your answer. (AO1/AO2)
8. The pilot is referred to as 'Her father' or 'he' but never by name. Why do you think this is and what is the effect? (AO2)
9. What is the effect of the last two lines? (AO2)
10. How might the poem reflect attitudes of Japanese society at the time? (AO3)

Section 2 links for further research

- A newspaper article about kamikaze pilots
- Mr Bruff meets Beatrice Garland to talk about 'Kamikaze'
- The story of a kamikaze pilot – BBC news

GCSE

English Literature

'Remains' (Simon Armitage)

eduqas

The poet (contextual information about the poet relevant to the poem) (AO3)

- Simon Armitage is an English poet, born in 1963.
- He became Poet Laureate in 2019 and took over the position from Carol Ann Duffy.
- Armitage wrote the poetry collection *The Not Dead* to make people aware of the moral dilemma ordinary soldiers faced as part of their day-to-day life when on duty.
- He helped to raise the public's awareness and appreciation of PTSD and the last effects of war on the servicemen and women.

Structure and form (AO2)

- The poem is a dramatic monologue from the point of view of a soldier on active duty. He is telling his experiences directly to the reader.
- The poem begins *in media res* and plunges the reader immediately into the action.
- There are 7 stanzas of 4 lines and a final stanza of 2 lines to perhaps suggest the continuous suffering of the soldier.
- The lack of rhyme and rhythm emphasise the seriousness of the situation and the soldier's suffering.
- The poem moves from a feeling of collective responsibility in the first half to the narrator's individual feeling of guilt in the second half.

The poem (content and context)

What is the poem about? (AO1)

The poem tells the story of a group of British soldiers on a routine patrol in Iraq. They spot a man who could possibly be an armed looter, and the three soldiers open fire, killing him. The man dies painfully, and his body is carelessly thrown into the back of a lorry and taken away without respect.

The poem is narrated by Guardsman Tromans, one of the soldiers involved. He is deeply affected by what happened and feels overwhelmed with guilt and regret. Even after returning home, he can't forget what he did. The memory haunts him, and he relives the moment again and again. In an attempt to cope, he returns to alcohol and drugs, but nothing helps — he remains tomented by his actions.

Deeper meaning (AO1)

The poem is about war and death, but it also deals with the repercussions and consequences of conflict and the psychological and damaging effects it can have on those involved.

The poem also describes the long-lasting effects of trauma and guilt and makes the reader understand that Post Traumatic Stress Disorder (PTSD) is not a condition that is easily treated. The poem also exposes the reader to consider the moral ambiguity of warfare.

Context of the poem (AO3)

Simon Armitage was involved with a documentary on Channel 4 *(The Not Dead)* exploring how soldiers were affected by war, even after returning home. He wanted to increase awareness of PTSD and create sympathy and understanding for soldiers suffering from such trauma.

Armitage wrote a collection of poems (also called *The Not Dead*), one of which is 'Remains'.

The poem is based on the experiences of Guardsman Tromans, who was a soldier in Iraq in 2023 and who consequently suffered from PTSD.

Connections and contrasts (AO3)

- **'Drummer Hodge' by Thomas Hardy:** Both poems are about death and the dehumanisation of people in war and conflict.
- **'Disabled' by Wilfred Owen:** Both poems deal with death and the idea of loss and sacrifice in war. The theme of memories and flashbacks are used in both poems.
- **'Decomposition' by Zulfikar Ghose:** Both poems explore ideas about lack of identity and desensitisation.
- **'Catrin' by Gillian Clarke:** Both poems look at different types of conflict.
- **'Kamikaze' by Beatrice Garland:** Both poems focus on the themes of war, death and duty. Both poems deal with the effects of memories.
- **'War Photographer' by Carol Ann Duffy:** Both poems focus on the themes of the brutality of war, desensitisation, trauma and memories.

GCSE

English Literature

'Remains' by Simon Armitage

eduqas

Key quotations (AO1)

1. "we got sent out/to tackle looters raiding a bank."
2. "probably armed, possibly not."
3. "Well myself and somebody else and somebody else"
4. "I see every round as it rips through his life"
5. "and he's there on the ground, sort of inside out"
6. "and tosses his guts back into his body"
7. "End of story, except not really."
8. 'His blood-shadow stays on the street"
9. "But I blink/and he bursts again through the doors of the bank"
10. "And the drink and the drugs won't flush him out"
11. "he's here in my head when I close my eyes"
12. "his bloody life in my bloody hands."

10 key questions to ask about the poem

1. Who is the speaker in the poem, and what is their emotional state? (AO1)
2. Why does Armitage include colloquial language? (AO1)
3. Why do you think the first half of the poem uses the plural pronoun 'we' but the second half uses the singular pronoun 'I'? (AO2)
4. What does the line 'I see broad daylight on the other side' suggest? (AO1)
5. What is the effect of the line 'tosses his guts back into his body'? (AO2)
6. What is the effect of the enjambment in the poem? (AO2)
7. Why is the line 'probably armed, possibly not' repeated? Justify your answer. (AO1/AO2)
8. What is the effect of the image 'the drink and drugs won't flush him out'? (AO2)
9. What does the line 'his bloody life in my bloody hands' mean? Could there be more than one possible meaning? (AO2)
10. Does the poem present being a soldier in a positive or negative war? Give reasons for your opinion. (AO3)

Language and imagery (AO2)

- Armitage uses colloquial phrases such as 'legs it', 'Well', 'So we've hit', 'tosses his guts' to create an informal tone as if we are part of a direct conversation with the narrator. The colloquial language also reflects the tough, no-nonsense approach of army life.
- The uncertainty and ambiguity in the repeated line 'probably armed possibly not' suggests there is a chance that the man was innocent. However, by placing 'probably' first, it suggests to the reader that this is what the soldier is desperate to believe – otherwise he has killed an innocent man.
- The verb 'tosses' implies a careless, casual action which shows a total lack of respect for the victim. Armitage is suggesting how soldiers can become desensitised to death and have to distance themselves from it in order to cope. The word also suggests how the victim is dehumanized and treated as if he is worthless.
- The 'blood-stained shadow' suggests how the soldier's conscience will always be marked or 'stained' by the memory, in the same way that a stain can be difficult to remove from the ground. It is impossible to detach yourself from your shadow and in the same way, the soldier will never be able to detach himself from what he has done.
- The last line has both a literal and metaphorical meaning. Armitage writes 'his bloody life in my bloody hands' to suggest the literal blood from the victim's body. The word 'bloody' could also suggest a swear-word or curse which could reflect the soldier's suffering and regret. The line also has overtones of Lady Macbeth's actions in Shakespeare's play, where she is desperately trying to rub an imaginary spot of blood off her hands. In both cases, the blood is used as a metaphor for the guilt which cannot be removed.

Links for further research

An interview from 'The Not Dead' documentary with Guardsman Tromans

Please note – there is some bad language in this clip and some difficult ideas and themes are discussed including violence and death.

An interview with Simon Armitage

GCSE

English Literature

'War Photographer' (Carol Ann Duffy)

eduqas

The poet – Contextual information about the poet relevant to the poem (AO3)

- Carol Ann Duffy was born in Glasgow in 1955. She is of Scottish and Irish descent and moved to England as a child.
- She is considered one of the most important and widely read poets in Britain today.
- Duffy had been inspired to write the poem as a result of her friendships with the war photographers Don McCullin and Phillip Jones Griffiths (who photographed the Vietnam war).
- She was interested in how war photographers had to record horrifying events without being able to help the people involved.

Connections and contrasts (AO3)

This list is not exhaustive and other comparisons are valid. 'War Photographer' could be compared and/or contrasted with these poems from the Anthology:

- 'Drummer Hodge' by Thomas Hardy
  Both poems are about war and death and the dehumanisation of the victims.
- 'Disabled' by Wilfred Owen
  Both poems deal with aspects of war, conflict and memories.
- 'Decomposition' by Zulfikar Ghose
  Both poems explore ideas about identity and dehumanisation.
- 'Kamikaze' by Beatrice Garland
  Both poems consider ideas about war, conflict and the expectations of society to do a job. Ideas about guilt, trauma and memories are also covered in both poems.
- 'Remains' by Simon Armitage
  Both poems focus on war, conflicting feelings, trauma, guilt, memories and desensitivity.
- 'Catrin' by Gillian Clarke
  Both poems deal with different types of conflict.

The poem

Content (AO1)

Stanza 1 describes the photographer developing his photographs in his dark room as he remembers the different locations he has visited to photograph wars. Stanza 2 shows the contrast between 'rural England' and normal life with the atrocities he has seen. In stanza 3, as the picture develops and features begin to form, he remembers the suffering of the man in the picture. Stanza 4 describes how readers will only respond to pictures of suffering for a split second before returning to their daily lives.

The poem is really about the horrors of war and how people often become desensitised by what they see in newspapers or on television. The poem also shows the true horror of war and the suffering of innocent victims. It deals with the trauma of those who see such suffering and are unable to help.

Context (AO3)

The poem was published in 1985 in the collection of poems titled *Standing Female Nude*. War photographers are civilians, not soldiers, who risk their lives to take photographs of armed conflicts and their consequences, so people at home can be made aware of these situations. War photographers have often been injured and sometimes killed while doing their job.

The poem refers to real-life conflicts. 'Belfast' refers to the Northern Ireland Troubles towards the end of the 20th century. 'Beirut' is a reference to The Siege of Beirut, which was caused by a breakdown of ceasefire in the Lebanon War in 1982. 'Phnom Penh' is the capital of Cambodia, where a genocide occurred between 1975 and 1979, which killed almost 3 million Cambodians.

Structure and form (AO2)

The poem is written in third person to reflect the detachment a war photographer must feel when doing the job. There are four stanzas with six lines each, suggesting regularity and the routine nature of his job. Each stanza has a similar and consistent rhyme scheme (ABBCDD), which again creates a feeling of structure and routine to his work. Each stanza focuses on a different aspect of the war photographer's job. The strict, controlled structure contrasts the chaos, confusion and lack of structure in war.

GCSE

English Literature

'War Photographer' (Carol Ann Duffy)

eduqas

Language and imagery (AO2)

The 'dark room' could have both a literal and metaphorical meaning. He is literally developing his photographs in a darkened room, without any light. However, the 'dark room' could also be a metaphor for his heart, which is 'dark' because of the brutality, suffering and death that he has witnessed. It suggests the trauma he experiences.

Duffy uses religious imagery comparing the photographer developing his photographs to a priest delivering a sermon. Words like 'ordered rows', 'Mass' and 'church' add to this semantic field of religion. The imagery is appropriate as a war photographer and a priest witness death, pain and suffering regularly and have to respond sensitively to what they see.

The plosive alliteration of the harsh 'B' sound is used in 'Belfast. Beirut' suggests the pain and brutality of war.

The pronouns 'he' and 'his' are used to refer to the war photographer, instead of him being identified by an actual name. This creates a distancing effect and suggests how he has to feel a detachment from his work and the photographs he takes.

Key quotations (AO1)

- 'In his dark room he is finally alone'
- 'spools of suffering set out in ordered rows'
- 'as though this were a church and he / a priest'
- 'He has a job to do.'
- 'the feet / of running children in a nightmare heat'
- 'He remembers the cries /of this man's wife'
- 'A hundred agonies in black and white / from which his editor will pick five or six'
- 'The reader's eyeballs prick / with tears between the bath and pre-lunch beers'
- 'he stares impassively at where / he earns his living'
- 'and they do not care'

Key questions to ask about 'War Photographer'

1. Why does Duffy use the title 'War Photographer'? (AO1)
2. What are the two possible meanings of 'his dark room'? (AO1)
3. What is the significance of the 'priest' and 'Mass' metaphor in stanza 1? (AO2)
4. Why does Duffy list the locations using full stops in the line 'Belfast. Beirut. Phnom Penh.'? (AO2)
5. How does Duffy contrast what the photographer witnesses through his job with his normal life at home in stanza 2? (AO1)
6. What are the possible meanings of a 'nightmare heat'? (AO2)
7. Do you think the poem depicts the profession of a war photographer as an exciting one? Justify your answer. (AO1/AO2)
8. What do the words 'prick with tears' suggest about the attitude of the general public? (AO2)
9. What does the adverb 'impassively' suggest about the feelings of the war photographer? (AO1/AO2)
10. Has this poem changed the way you think about news reports and photographs from current conflict zones? (AO3)

Links for further research

Interview with Nick Ut, a war photographer in the Vietnam war

Physical Education – Types of training

Continuous training

1. Continuous training

Involves a steady but regular pace at a moderate intensity (aerobic) which should last for at least 20 minutes- 2 hours.

Ensures there is no build up of lactic acid because oxygen is present i.e. running 30 minutes, walking 40 minutes, swimming 20 minutes, rowing 35 minutes.

Used by a **marathon runner**, rower, cyclist, footballers.

Interval training

4. Interval training - Involves **periods of work followed by periods of rest**. *i.e. Sprint for 20 metre + walk back to start.*

Used by a **200m sprinter, Footballer, Handballer, Netball player.**

This can be adapted to improve speed or endurance. E.g. to train for endurance an athlete would perform long interval training. E.g. 400m X8 reps X3 sets.

Continuous training

2. Fartlek training – Referred to as **'speed play'**

This is a form of continuous training, due to having no rests

Improves both aerobic and anaerobic system (endurance and speed)

Involves a variety of changing intensities over different distances, terrains, speeds and gradients

i.e. 1 lap at 50% max, 1 lap walking, 1 lap at 80% (aerobic and anaerobic used)

Used by **games players – Hockey players, Footballers to develop their aerobic and anaerobic performance,**

Interval training

5. Plyometrics training

Involves high-impact exercises that develop **power**. *i.e. bounding/hopping and Jumping.*

e.g. squat jumps, Single leg hops, bounding, box jumps, depth jumps.

Used by **long jumpers, 100 m sprinters basketball players**, High Jumpers.

Interval training

3. Weight/Resistance training – A form of training that uses progressive resistance against a muscle group.

It improves both strength and Muscular endurance

Muscular strength: High weight x low repetitions e.g. Bicep curls 10 reps X 40 kg (80 % 1RM)

Muscular endurance: Low weight x high repetitions e.g. Bicep curls 20 reps x 15 kg (60 % 1RM)

E.g. Rugby players would need weights to improve their strength when tackling.

E.g. Weight lifters, to be able to lift a heavier weight.

E.g. Rowers to improve their endurance to go for longer.

Interval training

6. Circuit training - A series of exercises completed one after another.

Improves most components of fitness e,g, speed, strength, muscular endurance.

Each exercise is called a station. Each station should work a different area of the body to avoid fatigue. It involves repetitions of exercises, the bodyweight is usually the resistance, each station is timed, there is a rest period between each station.

i.e. 10 x press ups, 10 x sit ups, 10 x squats, 10 x shuttle runs, lunges, box jumps.

Interval training

7. HIIT Training

These are High Intensity Interval Training activities where short bursts of speed and recovery are used throughout the session. Involves rest.

Exertion levels are high (7/10)for between 30 secs and 3 mins.

Work output is much shorter than recovery time

Helps burn fat and develop the cardio respiratory system.

Examples might be Body pump, High Impact Aerobics, Spinning

Frequency 	How often training takes place.	*Increase training from once a week to two*
Intensity 	How hard the exercise is.	*Increase resistance from 10kg to 15kg or increase incline on the treadmill.*
Time 	The length of the session.	*Increase training session from 45 minutes to 55 minutes.*
Type	The method of training used.	*Change to from interval training to Fartl ek training.*

Training Zones

1. Calculating Maximum Heart Rate (MHR)
220-age=
e.g. 220-14 = 206

2. Aerobic Zone: When training to improve our cardiovascular endurance you will need to ensure you are working in the aerobic zone. This is 60-80 % of you MHR

3. e.g. If I am 20 years of age my Max HR will be 200. Therefore I will need to ensure my HR does not exceed 160 and must be above the minimum threshold of 60% therefore over 120 bpm.

4: Anaerobic Zone: When training to improve our speed or anaerobic fitness we will need to train in our Anaerobic zone above 85 MHR

5. e.g. if I am 14 years old. My Max HR would be 206. If I need to develop my anaerobic endurance id will need to work above 206 bpm. Therefore above 175 bpm.

4 Principles of training [SPOR]

Principles of training - **Guidelines** that ensure **training is effective** and results in **positive adaptations**. These principles are used when planning an Exercise/ training Programmes

1. Specificity
(Specificity) training should be **relevant / suited / appropriate / targeted** to (**one of**:) performer's sport / performer's needs / energy system used / muscle groups used / area of the body / fitness component / stroke.

- Muscles e.g. Build biceps do bicep curls
- Type of fitness e.g. To improve strength do weights/ To improve power do plyometrics
- Skills e.g. to improve dribbling in Basketball work on your technique

- Developed e.g. *A long jumper would need to perform **plyometrics'**, such as box jumps. ....to develop their power, which will create a larger jump*

2. Progression: training should become **gradually / slowly** more demanding **OR** a **gradual / slow** increase in intensity

Using overload in a progressive way over the course of a programme. Once adaptations have happened overload needs to be applied to make gains again. Training gradually becomes more difficult / challenging, Because body has made adaptations / got stronger, Must be gradual to avoid injury.

e.g. lifting more in week 12 than in week 2 of the programme.
e.g. doing more sessions in a week.
e.g. Gradually progress the sessions by 10 minutes at a time.

3. Overload: Working the body harder than normal
This is required to put the body under stress so that we can improve our component of fitness or skill. Work harder than normal / puts body under stress, So that fitness adaptations / improvements will occur. Links with FITT principle
Increase frequency / intensity / duration or time of training / or change type of training

e.g. bench press 50kg x 10 repetitions and increase to 55kg x5 repetitions.
Links with FITT- Frequency- Lift weights for longer/ Intensity- work harder e.g. 50kg instead of 40kg/ Time- longer training sessions.

4. Reversibility
If training is not regular, adaptations will be reversed. This can happen when:

- Suffering from illness and cannot train
- Injury
- Working too hard (too much overload applied without progression)
- After an off-season.

All Saints' absolute 2.3 Preventing injury in physical activity and training

Warm up: The five components of a warm-up are as follows.

1. Pulse raising. This includes exercises that slowly increase heart rate and gradually increase body temperature, for example jogging, cycling, skipping or gentle running.

2. Mobility. Exercises that take the joints through their full range of movement (ROM), for example arm swings, hip circles, ankle rotations, heel flicks, open/close the gate/lunges/rotations/groin walk.

3. Stretching. This can include developmental stretches, gradually increasing the difficulty of each stretch or dynamic stretches that include more ballistic movements (for example, lunges) or static stretches where the body remains still or static while stretching. Examples of stretches include open and close the gate, groin walk for more dynamic exercises and slowly trying to touch your toes for more static stretches.

TIP: Ensure when providing an example, it must be sport specific. For example a 100m Sprinter will perform jogging around a track twice (800m) gradually increasing the speed to enable more blood/oxygen to be delivered to the working muscles)

4. Dynamic movements. This involves movements that show a change of speed and direction, for example shuttle runs, skipping, running in and out of cones, zig zag running, high knees, heel flicks, agility ladders.

5. Skill rehearsal. This involves practising or rehearsing common movement patterns and skills that will be used in the activity, for example dribbling drills for football or passing drills for netball.

Physical benefits of a warm-up (why we perform a warm up)

1. The warm-up enables the body to prepare for exercise and decreases the likelihood of injury and muscle soreness.
2. Increase heart rate (release of adrenalin). Increased respiratory rate.
3. Increase flexibility of muscles and joints.
4. Increase pliability of ligaments and tendons.
5. There is also a release of adrenaline that will start the process of speeding up the delivery of oxygen to the working muscles.
6. An increase in muscle temperature will help to ensure that there is a ready supply of energy and that the muscle becomes more flexible to prevent injury.
7. Increase speed of muscle contractions.

Cool down

The key components of a cool-down are:

1. **Low - moderate (medium) intensity exercises – gradually** lower the pulse rate and the heart rate and reduce the body's temperature, for example easy movement exercises or light running/jogging.

2. **Stretching** – includes steady and static stretches, for example hamstring stretch, quadriceps stretch.

Physical benefits of a cool-down

The cool-down is crucial in: You must use the word **gradually (HR, Blood pressure, breathing rate and temperature) to gain the mark.**

1. Cool-downs also prevent/**reduce** blood pooling in the veins, which can cause dizziness.
2. Helping the body's transition back to a resting state or speeds up recovery.
3. **Gradually** lowering heart rate or maintains elevated heart rate, returns pulse back to a resting state.

4. Gradually lowering or maintains elevated body/muscle temperature - slowly returns body temperature back to normal.

5. Circulating blood and oxygen, Reducing the risk of blood pooling, Maintains circulation of blood / oxygen flow to muscles that have been working .

6. Gradually reduces blood pressure.

7. Gradually reducing /maintains elevated breathing (respiratory) rate. Number of breaths taken is slowly reduced.

8. Help **reduce** the risk of fainting, nausea and light headedness.

9. Increasing the removal of waste products such as lactic acid. The oxygen can more effectively be flushed through the muscle tissue and will oxidise any lactic acid, which needs to be dispersed.

10. **Reducing** the risk of muscle soreness (or delayed onset of muscle soreness – DOMS) and stiffness. Less likely to feel aches and pains.

11. **Reduces risk of damage to joints.** Aiding recovery by stretching muscles, i.e. lengthening and strengthening muscles for next workout/use. Maintenance stretches to return muscle to normal length. Lengthening and strengthening muscles for next work-out .

Developed points:

For example a Footballer would perform low intensity exercises, to gradually lower HR and get more oxygen to the working muscles to flush out the lactic acid. This will allow them to not be as sore after the competition. Therefore allowing them to train sooner.

Paper 1 All Saints' absolute 2.3 Preventing injury in physical activity and training

1. Personal protective equipment (PPE)

Personal protective equipment (including correct clothing and footwear) is defined by the government's Health and Safety Executive as 'all equipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work and which protects him (or her) against one or more risks to his health or safety'.

The risks arising from some hazards can be limited by using **personal protective equipment (PPE).** *E.g. Wearing protective gloves while handling cleaning equipment./ A rugby player wearing a gum shield/ A squash player wearing goggles/ Scrumcaps in rugby and safety helmets in canoeing/ Gloves as a cricket wicketkeeper or hockey goalkeeper/ Shin pads in football and hockey / Wearing knee/elbow pads, gum shield and ankle supports in volleyball.*

2. Appropriate level of competition

Make sure that you are fit for physical activity and sport. If you are going to undertake an activity requiring stamina, make sure you have good cardiorespiratory fitness. If in basketball, for example, you are required to stretch suddenly, make sure that you have worked on your flexibility to prevent injury.

Each participant must get to a particular skill level and have good technique before performing seriously in physical activity and sport.

Example of appropriate level of competition: *A boxer fighting against someone in the same weight category/ Junior footballers playing in the same age category / Playing teams/players of similar standard.*

3. Correct clothing and footwear

It is important to wear the correct clothing and footwear for the sport to be played.

Examples of correct clothing	Examples of correct footwear
- Warm, waterproof clothing for outdoor adventurous activities. - Breathable clothing to prevent over heating.	- Appropriate studs in football **to** give more grip and reduce slipping. - Sturdy sides of footwear / high tops / lace ups **to** help prevent ankle/foot injuries. - (Gel/cushioned) insoles / bubbles / air pockets / arches **to** cushion feet / knees **OR** act as shock absorbers for the feet/ knees - Correct-fitting shoes **to** reduce risk of blisters

4. Lifting and carrying equipment safely

Incorrect methods of lifting and carrying sports equipment can cause injuries such as back strains and broken limbs.

The correct technique for lifting heavy equipment involves bending the knees rather than the back. E.G. lifting a box

Additional hazards can arise during assembly of equipment. For example, a trampoline should be put up only by people who have been trained to do it properly, otherwise there is a danger of the trampoline's legs springing up and causing injury. 2 people to carry posts/ball trolley's.

5. Completing risk assessments or safety check to assess potential hazards in a range of physical activity and sport settings

Hazard: Something that has the potential to cause harm. **Risk:** The chance that someone will be harmed by the hazard.

Examples of personal hazards:
- No jewellery and hair tied back.

Examples of hazards in a sports hall:
- The floor is hard/uneven
- Litter/objects/equipment left out/not put away/in wrong position
- Equipment is damaged/broken/unsafe
- Inappropriate footwear being worn
- Other participants/overcrowding/other activities taking place.
- Short run off area OR proximity of wall to edge of court or wall surface/fittings
- Open doors/windows OR blocked fire exit.
- Poor/unsuitable lighting

Examples of hazards in a fitness centre:
- Open doors/door handles/windows/blocked fire exit.
- Wall surface/fittings
- Floor is slippery/wet
- Floor is hard/damaged/uneven/dirty
- Litter/bags/clothing in the way/causing and obstruction
- Other people/behaviour of participants
- Overcrowding
- Poor technique/ability/coaching
- Poor/unsuitable lighting
- Inappropriate clothing/footwear/

6. Examples of hazards on a playing field:

- Litter, including broken bottles and dog excrement
- Goal posts and other semi-permanent equipment
- Movable equipment
- Fencing
- Pitch surface
- Other participants

For Example, When playing football on the field and litter, such as bottles are left out. This can cause a player to sprain their ankle, if stood on.

7. Examples of hazards on artificial outdoor areas:

- Hard surface

- - Litter, including broken bottles and dog excrement
  - Goal posts and other semi-permanent equipment
  - Movable and/or damaged equipment
  - Advertising boards, Fencing
  - Other participants/players
  - Weather
  - Poor lighting
  - Inappropriate footwear
  - Lack of supervision

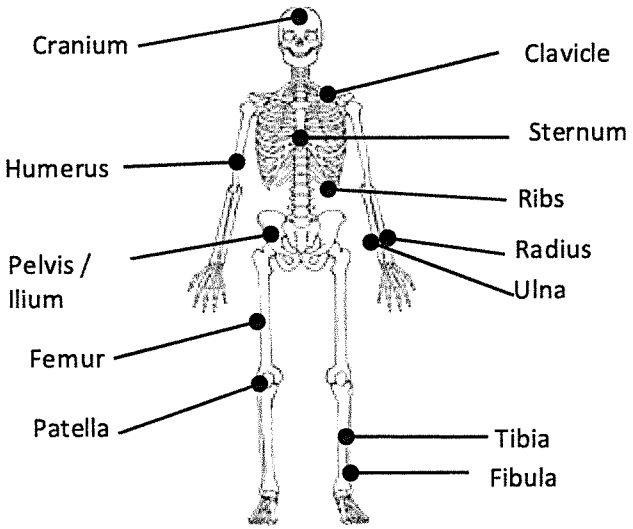
For example, When playing Hockey on the Astro, if the pitch is slippery a player could slip over and hit their head on the floor.

8. Examples of hazards in and around a swimming pool:

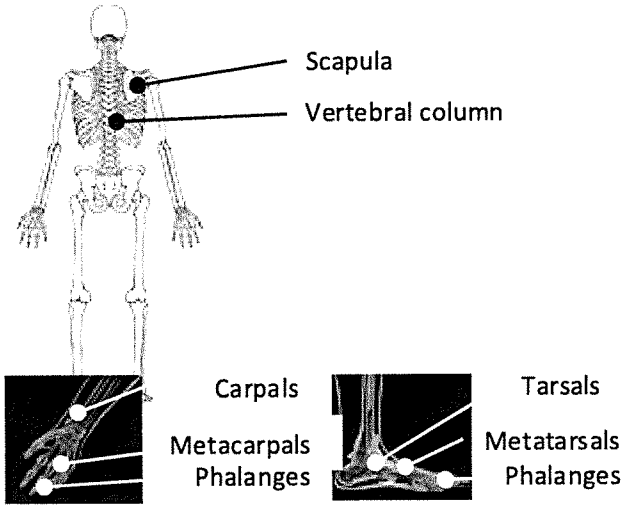
Water
Chemicals in the water
Surface of surrounding area
Equipment
Weather (if outdoors)
Other participants

For example, if there are too many people in the pool (overcrowding) then you could collide with another person and get injured.

1. Structure of the skeletal system



Structure of the skeletal system



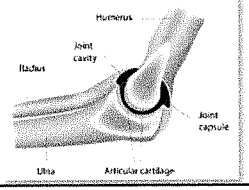
3. Synovial Joints

These are **freely movable** joints where the joint surfaces are covered in **cartilage**, they are connected by a fibrous tissue capsule (joint capsule) and lined with fluid (synovial fluid).

Synovial membrane – secretes the synovial fluid

Synovial fluid– found within the joint capsule to prevent friction between the articulating bones

The Elbow Joint



2. Function of the skeleton

Support - It gives the body **support**, enabling us to stand. The bones of the body are held together by **ligaments**. The skeleton provides a framework for the muscles, which are attached to bones by **tendons**.

Posture- The skeleton acts as a framework. Muscles are firmly attached to bones forming our body shape and holds us upright.

Movement - to allow **movement** of the body – by providing areas or sites for muscle attachment. This also provides for a system of levers that helps us move.

Protection - to give protection to the vital internal organs – such as heart, lungs, spinal cord and the brain. For example, the cranium protects the brain when heading a football.

Blood cell production – The ends of long bones and some other bones eg the ribs, humerus, femur and even vertebrae bones, contain red bone marrow. This is where the red blood cells are produced which carry oxygen.

Storage of minerals – such as phosphorous, calcium, potassium and iron. Iron helps in the transport of oxygen to working muscles and calcium is needed to build and repair bones

4. Key Terms : Cartilage: This is a soft connective tissue. The role of cartilage is to reduce friction and act as a shock absorber for the joint. This is important for athletes, for example a Triple jumper to protect the joint on landing. Another example is *It helps act as a shock absorber when applying a large force when tackling in football. In long distance running, not having fiction will allow the joint to move smoothly.*

Ligaments – attaches bone to bone to add joint stability. When performing a bicep curl they stabilises the joint. (keeps the joint together)

Tendons – attaches muscles to bone and contributes to joint movement as a result of muscle contraction. They help transmit the power needed to move bones. E.g. when extending the knee the quadriceps contract. It also pulls on the bone to create movement. Ligaments and tendons become more pliable meaning they are flexible/elastic or can stretch.

5. Synovial Joint 1: Ball and Socket joint

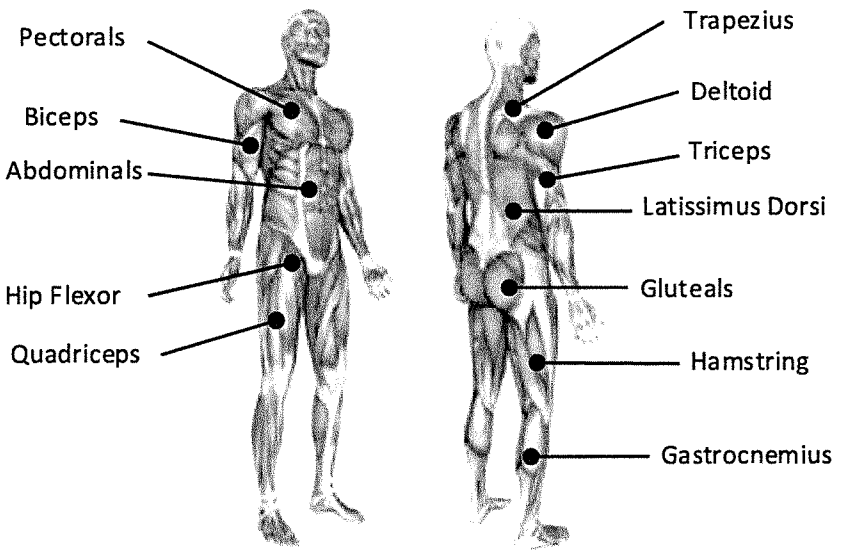
Movement	Practical example at the shoulder/ Hip
Flexion	Shoulder: Lifting the arms out of the water during the backstroke in swimming.
Extension	Hip- A rugby player extends the hip in preparation for kicking through the ball, to get maximum power.
Rotation	Shoulder-A tennis player uses external rotation at the shoulder joint during the backswing of the serve.
Abduction	Hip- A gymnast with her leg lifted to the side of the body shows abduction
Adduction	Shoulder- A rugby player tackling another player will hold on to the player by adducting their arms as they tackle.
Circumduction	Shoulder- A swimmer during the front crawl arm action will take their arm out and round and back into the water. Circumduction is a combination of rotation, adduction, abduction, flexion and extension.

6. Synovial Joint 2: Hinge Joint

Type of movement	At the knee: Femur– Tibia	At the elbow : Humerus– Ulnar/ Radius
Flexion- Reduced angle of a joint.	Bending your leg at the knee when preparing to make a pass in football.	Bending your elbow joint when lifting a dumb bell in a bicep curl.
Extension- Increased angle at a joint.	When a basketball player drives up to the basket from bent legs to straight, extension occurs at the knee joint.	When making a basketball set shot the elbow straightens as you release the ball and extension occurs at the elbow joint.

PAPER 1 – ALL SAINTS ABSOLUTE 1.2 GCSE Physical Education – The structure and functions of the muscular system

1. Structure of the muscular system



Tips: You must know all muscles, including a sporting example for each.
For example the deltoid causes abduction of the shoulder, when performing the outward action of a star jump.
The quadriceps created extension, when striking a football.

Key terms

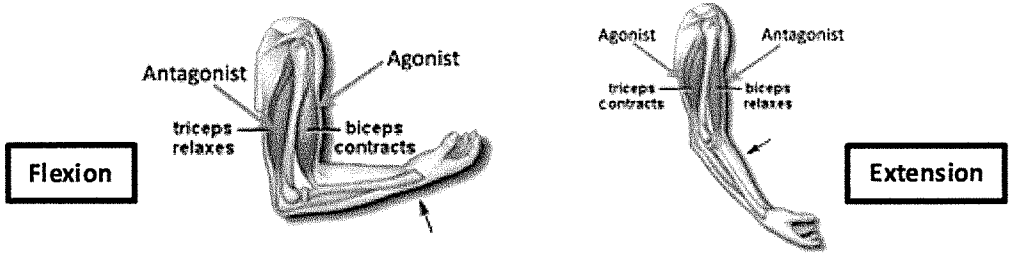
1. **Tendon-** Tough tissue connects muscle to bone. When the muscle contracts it pulls the bone to create movement
2. **Hypertrophy**- Increase in size of skeletal / Cardiac muscle. Develops through strength training.

The **short term effects** of exercise on the muscles:

1. Working muscles produce heat
2. Increased muscle fatigue due to lactic acid accumulation
3. Blood is re-distributed to working muscles (blood shunting)
4. Increase in cross sectional size

2. Antagonistic pairs - Muscles are arranged in antagonistic pairs.

As one muscle contracts (shortens) its partner relaxes (lengthens) *i.e. Biceps and Triceps.*



Agonist = the muscle that contracts to produce movement.
Antagonist = the muscle that relaxes to allow the movement to occur.
Fixator = Stabilises joint / body part / limb **OR** assists agonist to work effectively **OR** prevents unintended movements

Examples in the body:

- Biceps & Triceps
- Quadriceps & Hamstring
- Hip Flexor & Gluteus Maximus

3. The roles of muscles in movement

To produce movement muscles either shorten, lengthen or remain the same length when they contract. Muscles work in pairs: as one muscle contracts, the other relaxes. Muscles that work together like this are called **antagonistic pairs.** This type of action enables the body to move with stability and control.

4. Examples of antagonistic pairs

Example: When a darts player prepares to throw a dart he decreases the angle at his elbow joint (flexion). When his elbow is bent the biceps are the agonist and triceps are the antagonist.
When he releases the dart he increases the angle at his elbow joint (extension). When his arm is straight the triceps are the agonist and the biceps are the antagonist.

Hamstrings and quadriceps – at the knee joint, which is a hinge. The hamstrings contract and the quadriceps relax and the knee joint flexes. As the knee joint extends, the quadriceps (quads) contract and the hamstrings relax. E.g. when performing a free kick in Football.

Link of the muscular and skeletal system – both systems work together to produce movement. *i.e. a contracting muscle pulls on a bone which changes the angle at a joint.*

Geography – Global Cities

Sheffield

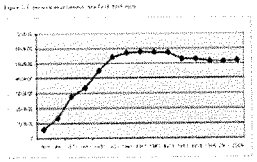
1. Where is Sheffield?

Sheffield has a central location in England, between Leeds and Nottingham. Eastern side of the Pennines. Sheffield is the major city in South Yorkshire, serving Rotherham, Doncaster, Barnsley and Chesterfield.

2. Why is Sheffield a Global City?

- 20% population is ethnic minority
- Had the Doncaster Sheffield airport for UK and European flights
- Famous steel industry that exported globally
- Music influence e.g. Arctic Monkeys

3. How has Sheffield grown over time?



- 1600s. 2000 residents and it was the main centre for cutlery outside of London.
- 1700s. 6,000 residents, new farming techniques in countryside led to a loss of farming jobs and rural>urban migration into Sheffield. The Industrial Revolution led to the growth of steel and cutlery factories.
- 1800s. Population in 1801 was 31,000, but population in 1851 was 135,000.
- 1900s. 400,000 growing due to the steel industry. Migrants from Ireland, Pakistan and the Caribbean migrated to Sheffield to work in the NHS and the steel industry.

4. What are the socio-economic patterns in Sheffield?

Affluence in Sheffield - Dore:

- Large detached houses with gardens
- High employment rate
- Low social problems
- Good services and facilities
- IMD score 26,191

Deprivation in Sheffield - Lowedges:

- Terraced houses in a grid like pattern. These were originally built to house factory workers.
- High Unemployment rate
- Social problems – Crime
- Lack of facilities and services e.g. supermarkets
- IMD score 958

5. What are Sheffield's challenges?

Waste

- 550,000 people spread across 230,000 households are going to create waste!
- Around 200,000 tonnes produced from households and local authority services each year.

Transport

- 550,000 people need to be able to get around the City!
- The challenge is having a range of public transport options which run on green energies.

6. How are Sheffield's challenges being solved?

Mass-transit in Sheffield

Sheffield Supertram:

14 million passengers a year, 4 routes:

- CBD -Meadowhall Shopping Centre
- CBD- North Sheffield & Hillsborough
- CBD -South Sheffield & Crystal Peaks
- CBD -Rotherham Parkgate

Sheffield Tackling Poverty Framework 2020-2030

- Aim: Investing in early years housing and education.
- Aim: Building successful families, public health, health and social care, skills and employment support
- Campaigns include: a great start in life (wellbeing in young people), a secure income, food and necessities (hunger, school holiday hunger), a warm and safe home and local environment (free insulation scheme)

7. How are Sheffield's challenges being solved?

Kelham Island: an area in Sheffield which has been regenerated.

- Kelham was famous for steelmaking as it sits on the River Don. After the decline of steel in Sheffield, Kelham became abandoned factories.
- In 1982 Kelham was given a new lease of life as the Kelham Island museum opened. Since then Kelham has been named 'the trendiest place in Sheffield' as it is now home to restaurants, bars, clubs, flats.
- As well as entertainment in Kelham, sustainable properties have also been created in an area known as 'Little Kelham', developed by Citu.

Mumbai

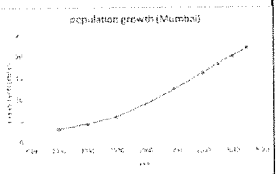
8. Where is Mumbai?

North west coast (Konkan coast) of India. The coastline is on Arabian Sea, leading to the Indian Ocean. Mumbai is in the Maharashtra region and is 1,150km south west of New Delhi.

9. Why is Mumbai a Global City?

- Mumbai International Airport
- Bollywood film industry
- Nheva Sheva – India's largest shipping port
- Headquarters (Tata Steel, Bombay Stock Exchange)

10. How has Mumbai grown over time?



- Natural increase is main reason for Mumbai's growth in 20th Century even though fertility rates are falling.
- Most migrate to Mumbai from within state of Maharashtra – rural or other urban areas.
- Pull factors: Cheap train fares, jobs, training opportunities, education/university, marriage, move to be with family.
- Push factors: poor housing, health care and sanitation.
- 21.7 million in 2024.
- City has grown northwards and inland up Thane Creek, expanding now along railway lines.

11. What are the socio-economic patterns in Mumbai?

Affluence in Mumbai: So-Bo is the middle-class, wealthy area on coast outside CBD, near Bollywood. Apartment blocks, restaurants, 5* hotels, open spaces, cricket clubs, very wealthy Indians.

Deprivation in Mumbai: Dharavi is 7km north of Mumbai's (CBD), it has 60% of Mumbai's population in 7% of the area.

- People live in chawls (flats), shanties, squatters and pavement-dwellers, some electricity, self-built, 1 toilet for every 1,500 people, water from stand pipes, crowded, 1 million people/1 square mile.
- A high informal economy (street vendors, rickshaw drivers and waste recyclers), not regulated by the Government, do not pay tax, no health and safety rights, pensions and sick pay,

12. What are Mumbai's challenges?

Transport

The trains carry 3x the number of passengers they were actually designed for. Due to overcrowding the tracks lie very close to the houses. On average 7 people die per day on Mumbai's rail tracks.

Waste and water

Waste is prevalent in Dharavi, which can smell and attract vermin. Poor access to clean drinking water - 1 tap per 100 people. Stand pipes are turned on between 5:30 and 7:30am, the only time people can collect water.

13. How are Mumbai's challenges being solved?

Mass transit: New underground system to move commuters quickly – Metro.

- Reduce traffic congestion and overcrowded railways to be completed in 2025 with 27 stops.
- Congestion on the road will be substantially reduced because of this corridor, 650,000 vehicle trips could disappear from the roads daily.

Self-help schemes

- Micro-credit scheme: Informal workers take small loans from charities and pay back, e.g. for after school clubs or small machines for businesses.
- SPARC NGO are helping people to build another floor on their house to reduce overcrowding. Building materials have been provided to strengthen the homes.
- Some residents have been given legal rights to land.
- Health centres and toilets have been added.

14. How are Mumbai's challenges being solved?

Waste disposal/recycling: 'Ragpickers' recycle 80% of Mumbai's waste – (only 20% in UK).

Self-help, Micro Credit, Vision Mumbai: Area contributes £700 million to Mumbai's economy every year.

Vision Mumbai: Plan to spend $40 million of private investment to improve roads and rail, demolish slums and build 1.1 million low cost homes, reduce pollution.

Bhendi Bazaar Shanty Improvement: demolish 250 buildings and replace with 17 high rise tower blocks with houses and shops in walking distance. Wide roads and tree-lined pavements, open spaces and parks, public transport. Buildings will have natural light, solar power, sewage, CCTV, rainwater harvesting, electricity, Internet.

Global Cities Practice Questions

1. Explain how global cities have similar challegnes.
2. Explain how global cities have different challenges.
3. Explain how global cities grow over time
4. Explain the socio-economic patterns of one global city you have studied.
5. Explain how challenges in a HIC global city may be solved.
6. Explain how challenges in an NIC global city may be solved.
7. Evaluate the impacts of a self-help scheme in an NIC global city.
8. Evaluate the impacts of a mass clearance scheme in an NIC global city.
9. Evaluate a mass-transit scheme in aglobal city you have studied.

Geography – Trade, Aid and Development

What is development?

1. Development is the process by which countries become wealthier over time.
2. Development also implies that social conditions (e.g. health and education) will improve as an economy develops.
3. Development differences between countries are measured using development indicators.
4. Development indicators are sources of data that allow you to compare development levels between countries.
5. Examples of development indicators include -:
   Life expectancy – how long you are expected to live.
   Literacy rate - % of people in a country that can read or write.
   GNP per capita – Total population / value of goods and services sold by a country.
6. The Brandt Line was created by economist Willy Brandt to divide the world into a 'rich' North and 'poor' South since 1980.
7. The Brandt Line is criticised because some countries below the line (e.g. China) have developed economically so it is comparable with some countries in the North.
8. Also, there is inequalit within countries, so it inaccurate to name countries as simply ricl or poor.

9. A development gap is the difference in development between the most (HIC) and least (LIC) developed countries.
10. The development gap has accelerated because of a number of factors including -:
    Access to natural resources – Some countries have oil and gas reserves that they can export to make money.
    Climate – some countries have an inhospitable climate that makes it difficult to grow food.
    Corrupt governments – Some governments spend their money on things that do not benefit the people in their country (e.g. weapons).
    Landlocked countries – Have no ports to import or export key goods.

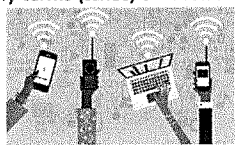
Features of HIC, NIC, LIC's

11. Employment structures relate to the number of people working in different types of jobs.
Primary industries = Jobs related to extracting natural resources (e.g. farming or fishing).
Secondary industries = Jobs linked to manufacturing (car manufacturer).
Tertiary industries = Provide a service (e.g. teacher, doctor).
Quaternary industries = Providing information (e.g. IT specialists, biomedical research).
Public sector jobs are paid for through the government and taxation.
12. LIC's tend to have more people working in primary industries as they lack the skills base and technology to manufacture higher value products.
13. NIC's such as China have managed to transition into a secondary and tertiary sector based economy.
14. HIC's – High income countries – e.g. USA, UK, Japan.
15. HIC's are characterised by high standards of living, excellent public services paid for by taxation and democratic governments that are held accountable by their population.
16. Many people in HIC's work in the public sector and many people have disposable income that drives consumerisr
17. HIC economies are often driven by a strong tertiary secto and research based quaternary industries.

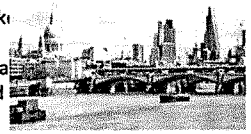
18. NIC's – Newly Industrialised Countries – e.g. China, India and Brazil.
19. NIC's are characterised by a developing secondary sector where a range of goods are manufactured by skilled workers who often have lower pay rates than HIC's.
20. There has been a global shift of manufacturing from HIC's to lower cost locations in NIC's. This has led to deindustrialisation in HIC's and growing levels of wealth in NIC's like China.
21. LIC's – low income countries – e.g. Somalia often have an economy based around primary industries.

Globalisation

22. Globalisation is the process of goods, money, people and ideas moving around the world.
23. Globalisation has been encouraged by a number of factors including -:
Better transport links – container ships and air travel to move goods and people around the world quickly.
Communication technology – internet and social media allow companies to communicate with their manufacturing partners in an instant.
Trade blocs – allow companies to export goods to certain countries without paying any tariffs (taxes) on them.



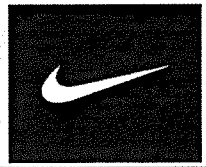
24. Globalisation has had a number of positive impacts on the UK including -:
Consumer goods – Goods are cheaper for UK consumers to buy if they have been manufactured by cheaper labour in NIC's and LIC's.
Knowledge economy and public services – Skilled migrants contribute to the NHS and other key areas lik law and financial services.
Culture – The UK now has a multicultural society based on respect and tolerance.



25. Globalisation has also had some negative impacts on the UK including -:
Deindustrialisation – The loss of steel making and coal mining jobs in the 1970's and 1980's due to competition from NIC's with lower labour and energy costs led to a spiral of decline in many Northern towns in the UK, with unemployment rising, a lack of opportunities and a legacy of pollution and contaminated land.
Public services – The rapi Increase in the number o people migrating to the U has put pressure on publi services such as health, housing and education in the UK.

Multinational Companies (MNC's)

26. Multinational companies have a headquarters in one country but produce and sell goods in many others.
27. Some of the largest MNC's include Walmart (USA), Apple (USA), McDonald's (USA), Volkswagen (Germany) and Sinopec (China).
28. MNC's tend to specialise in high-value goods for which there is a lot of public demand. These are often consumer goods such as cars, energy (oil and gas) and electronics.
29. MNC's tend to locate high-order functions (e.g. research and development, marketing) in HIC's.
30. MNC's often outsource manufacturing to low cost NIC / LIC locations.



31. MNC's can have a number of positive impacts on the host countries where they locate production -:
Jobs – Manufacturing jobs created by MNC's often pay far higher than someone could earn in farming. The money made by people working for MNC's is often sent to relatives in rural areas. This is called remittances.
Skills – MNC's train workers and give them the skills to set up their own companies manufacturing goods.
Export earnings – Some MNC's share some of their profits with the host country through corporation tax. This can then be used by host country governments to improve public services such as health and education.
32. MNC's can also have a number of negative impacts on host countries -:
Sweatshops – MNC's like Nike outsource their production to separate factories. Many of these factories ignore codes of conduct, employ child labour, refuse to work with trade unions and force workers to accept cramped conditions, over long hours with low pay.
Profit repatriation – Some MNC's send their profits back to shareholders in the source country and avoid paying tax in the host country.
Environmental regulations – Many MNC's ignore environmental legislation and pollute and water sources.

Trade, Aid and Development Practice Questions

1. What is the Human Development Index and why are composite development indicators better?
2. Give two reasons why the Brandt Line is criticised.
3. Explain three reasons why there is a development gap between HIC's and LIC's.
4. Why do LIC's find it hard to develop an economy based around secondary and tertiary sectors?
5. Why have NIC's like China been able to develop as a result of MNC investment?
6. Explain three reasons why the process of globalisation has accelerated.
7. What caused deindustrialisation in the UK and what has been the impact of this process?
8. Why are migrant workers important for the smooth running of services and the economy in the UK?
9. Why do many MNC's outsource their production to NIC's?
10. Explain why many NIC's encourage MNC's to produce goods in their country.

Geography – Trade, Aid and Development

Mali – LIC case study of trade and globalisation

33. Mali is a country in the Sahel region of North Africa lying on the Southern edge of the Sahara Desert.
34. Mali is one of the poorest countries in the world and relies on the export of primary products such as cotton.
35. Workers in the cotton industry earn the equivalent of $3 per week in Mali and often lack the money to afford food, schooling for their children and medical care.
36. Mali suffers from civil war and desertification. The government finds it hard to improve public services due to a lack of export earnings and low rates of taxation.

37. Many countries around the world grow cotton, meaning that the price of cotton falls due to it being readily available.
38. Countries like the USA have been criticised for paying their cotton farmers subsidies to allow them to sell their cotton at an artificially low price that Malian farmers cannot compete with.
39. The EU also makes it difficult for cotton farmers in Mali to sell their cotton as they place tariffs (taxes) on Malian cotton imports to make them more expensive.
40. Quotas are also limiting the cotton Mali can export.

41. The FairTrade Foundation is an NGO (non-governmental organisation) that campaigns to give growers of cotton a fair price for the produce they grow.
42. FairTrade cotton is becoming increasingly important with more cotton farmers in Mali working with the organisation.
43. FairTrade gives cotton farmers a guaranteed price for the cotton they grow, so they are safe from price fluctuations and can plan for the future.
44. A social premium is also provided from the profits from FairTrade cotton. This is to be spent on local community projects such as schools or wells.
45. The success of FairTrade cotton will depend on the level of financial support given to cotton producers in HIC's and imports of cheap cotton from NIC's like China.

Vietnam – NIC case study of trade and globalisation

46. Vietnam is an NIC in East Asia, located to the South of China and on the South China Sea coast.
47. The government in Vietnam actively encourages investment from MNC's as it wants to generate employment, export earnings and taxation to help the country develop.
48. MNC's such as Nike and Ford have located production factories in cities like Hanoi, leading to rural-urban migration as people seek to improve their standard of living.
49. Vietnam's economy has shifted to a manufacturing focus since the 1990's.

50. MNC's such as Nike have had many positive impacts on Vietnam such as the provision of jobs, corporation tax and export earnings, giving money to the government and the training of workers to allow them to set up their own companies and inspiration for people to attain higher levels of education to access MNC jobs.

51. However, the MNC's have been criticised for exploiting local workers by paying low wages, ignoring environmental legislation, repatriating profits and paying corporation tax to source country HIC's (to the detriment of NIC governments) and relocating their factories when cheaper locations are found, resulting in unemployment.

52. Vietnam has been affected by globalisation in a number of ways -:

Economically – The influx of MNC's such as Nike, Ford and Samsung has led to an increase in export earnings for Vietnam and encouraging the growth of domestic companies such as Appota (app designer).

Social – HDI scores have improved in Vietnam in recent years as the government has been able to increase spending on health and education due to revenue gained from the profits and corporation tax of MNC's.

Cultural – Migrants from the Vietnamese diaspora in countries like the USA are now returning to a more prosperous Vietnam, fuelling the spread of Western culture and the growth of MNC's such as McDonald's and Starbucks in Vietnam.

UK – HIC case study of trade and globalisation

53. The UK suffered from deindustrialisation in the late 1970's and 1980's as a result of coal mines and steel works closing.
54. The global shift of manufacturing, from HIC's to NIC's such as China and India, has been driven by lower labour and energy costs.
55. Deindustrialisation has led to a negative multiplier effect in industrial heartlands such as Sheffield and Middlesbrough, with unemployment and deprivation rising.
56. Tata is an Indian MNC that bought the Port Talbot steelworks to save it from closure.

57. Tata invested in the Port Talbot steelworks because the workers were skilled in making steel, the EU location meant that steel could be exported without paying tariffs and because Tata could use the steel in its other UK companies including Jaguar Land Rover.
58. Tata's investment was positive for the UK because it safeguarded jobs and slowed down the negative multiplier effect in Port Talbot. The jobs saved and corporation tax paid also contributed to the UK economy.
59. Tata is threatening to close down its operations at Port Talbot because it cannot compete with cheap imports of steel from China. This led to protests from local workers, who fear further job losses.
60. The UK government has refused to put tariffs on Chinese steel imports to protect trade links with China.

61. The UK has gained from the process of globalisation in various ways including -:

- The reduction in prices of consumer goods made in NIC's.
- The development of a multicultural society, driven by migrants who come to work in the UK economy.
- Increased levels of taxation to fund public services from migrant workers.
- Skills shortages addressed in health and financial services.

62. However, some negative impacts such as deindustrialisation and pressure on public services and housing caused by a rise in migration are linked to globalisation.

UNICEF and Water Aid – Short and long-term aid

63. Aid is given by donor countries to help improve conditions in recipient countries.
64. Short-term aid is normally given after emergency situations (e.g. war or natural disasters) to improve living conditions in the immediate future. NGO's like Oxfam and CAFOD may provide water, tents, medicines etc.
65. Long-term aid is seen as more sustainable and focuses on longer-term projects to help a country, such as school building, health centres or provision of technology and expertise to help economic growth.
66. Aid is often criticised as it is not always the country most deserving who receives aid (aid is often given to countries who are allied of the donor) and it can create a sense of dependence if countries regularly receive aid.

67. UNICEF is the United Nations Children's Fund and is an NGO that aims to improve the life chances of young people globally.
68. In Mali, UNICEF played a key role in providing short-term aid after the 2012 Sahel drought.
69. UNICEF provided plumpy nut sachets to provide nutrition to babies, water purification kits to reduce the prevalence of diseases such as cholera and diarrhoea and enough medicines for 40,000 people.
70. UNICEF's work had many positive impacts including allowing a healthier population to work and go to school and contributing to political stability by stopping people from being hungry and unable to support their family. The success of the project saved lives of children in Mali.

71. Water Aid is an NGO that aims to provide clean water and sanitation to those who are in need.
72. In Mali, Water Aid has focused its long-term aid in three areas -:
Rope pumps – Providing mechanisms to access clean water sources below the ground.
Self-composting toilets – Toilets where ash is used to help turn human waste into compost that can be used as fertiliser to support farming communities.
Hygiene education – Charity workers visit schools and villages to educate people about the importance of hand washing and good hygiene.
73. These projects lead to a reduction in diseases such as cholera and help people access work / school more often.

Trade, Aid and Development Practice Questions

1. Explain how the Fair Trade Foundation help cotton growers in Mali.
2. What is the social premium and give examples of how it could be used.
3. Give 3 ways in which MNC investment can benefit host countries.
4. Explain why MNC's such as Nike have been criticised for their actions in countries like Vietnam.
5. How has Vietnam been affected by globalisation.? Give three examples.
6. Explain the concepts of positive and negative multiplier effects.
7. Why did Tata choose the UK as its location to expand their steel production?
8. What are the main advantages that globalisation has had for the UK?
9. What is short-term aid? Give an example of a short-term aid project that has had a positive impact on a named LIC.
10. Explain three ways in which Water Aid have had a positive impact on Mali.

P3 Particles

Box 8: Specific Heat Capacity

Specific heat capacity (SHC), c Units = J/kg/°C
The *amount of energy* (change in thermal energy) required to *raise the temperature* of *1kg* of a *substance by 1°C*. Know this definition.

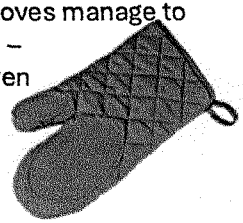
Change in thermal energy = mass x SHC x Temp. change

$$\Delta E = m \times c \times \Delta\theta$$

Where Δ means "change in" and θ means temp.

Different materials can store different amounts of energy in them before they change their temperature.

Insulators can store lots of energy in them without gaining much temperature. This is how oven gloves manage to keep your hands at a safe temperature – they absorb the energy from the hot oven dish and store it without raising the temperature much.

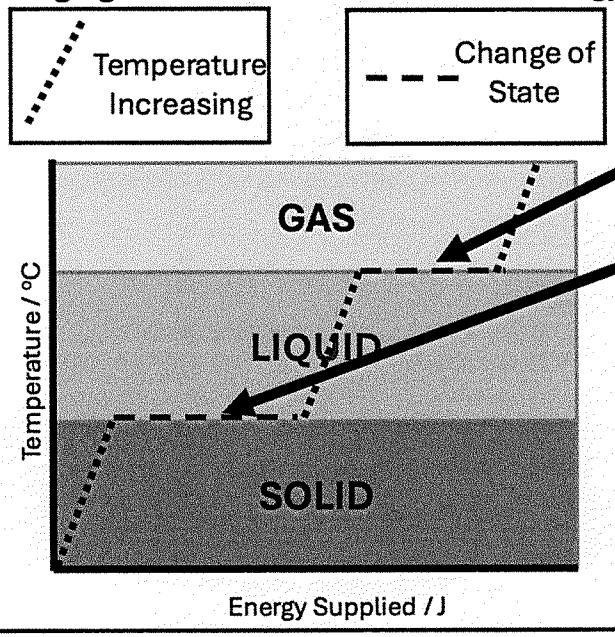


Conductors cannot store a lot of energy and so gain temperature quickly. This is why holding a hot poker in the fire will quickly burn your hand, because the iron metal is a good conductor of thermal energy, so its temperature rises quickly.

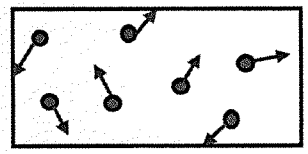
Box 9: Internal Energy & State Changes

Heating increases the energy stored in a system.
Kinetic Energy – Related to the particles' *speed*
Potential Energy – Related to the *distance* between the particles

Heating Curves
Raising temperature = Increase Kinetic Energy
Changing State = Increase in **Potential** Energy



COOL gas – *low* speed particles, *small* collision forces, so *small* gas pressure



Box 10: Specific Latent Heat

The **energy** needed to **change the state** of a material depends upon the:
Mass and *Type of Material*

The energy required is used to **separate the particles** from each other, *rather* than increasing the temperature. This is why it is called "latent" heat, as "latent" means "hidden" - we *don't* see the temperature change. This is why there are two *horizontal* lines on the graph to the left – – – – –

Specific latent heat of *vaporisation*:
liquid to gas

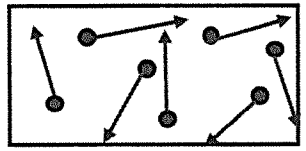
Specific latent heat of *fusion*:
Solid to liquid

Box 11: Pressure in Gases

The *particles* of a *gas* in a container are always in *motion*, moving in *random* directions. When they *collide* with the walls of the container they make a force on the area of the wall. This creates a pressure in the container.

Pressure = Force ÷ Area

If we *increase* the temperature of the gas, we *increase* the *kinetic energy* of the particles. This makes them collide with the walls with *more force*, creating *more pressure* as a result.



HOT gas – *high* speed particles, *large* collision forces, so *large* gas pressure

P3 Particles

Box 1: Definitions to learn

Definitions – Read, Cover, Say, Write, Check

Density: How compact a substance is

Internal Energy: The sum of the kinetic and potential energy of the particles in a substance

Specific Heat Capacity: The amount of energy required to raise the temperature of 1kg of a substance by 1°C

Specific Latent Heat (SLH): The amount of energy required to change the state of 1kg of a substance with no change in temperature

SLH of fusion: The energy required to change from a solid to a liquid

SLH of Vaporisation: The energy required to change from a liquid to a gas

Box 2: Density of a regular shaped object *(required Practical – learn steps!)*

Regular shaped object

1. Measure the length width and height of the object using a ruler
2. Find the volume using length x width x height
3. Measure the mass of the object using a top pan balance
4. Use the equation density = mass/volume to calculate the density of the object

Box 3: Density of an *irregular* shaped object

1. Measure the mass of the object using a top pan balance
2. Fill the displacement with water up to the spout, wait for the water to stop dripping out
3. Place a measuring cylinder underneath the spout
4. Place the object in the displacement can and measure the water displaced
5. This water is equal to the volume of the object
6. Use the equation Density $= \frac{mass}{volume}$

Box 4: Units to learn

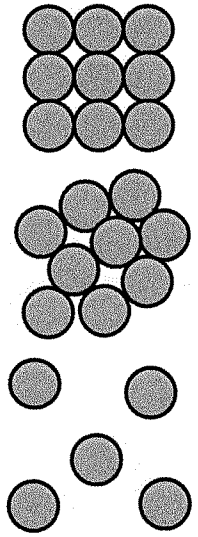
Density: kg/m^3
Mass: kg
Volume: m^3
Thermal Energy: J
Specific Heat Capacity: J/kg°C
Temperature: °C
Specific Latent Heat: J/kg

Box 5: States of matter – particle arrangement

Solid: All **touching**, no gaps, neatly arranged. **Vibrate** around **fixed points**.

Liquid: All **touching**, small gaps, **randomly** arranged. **Move freely**.

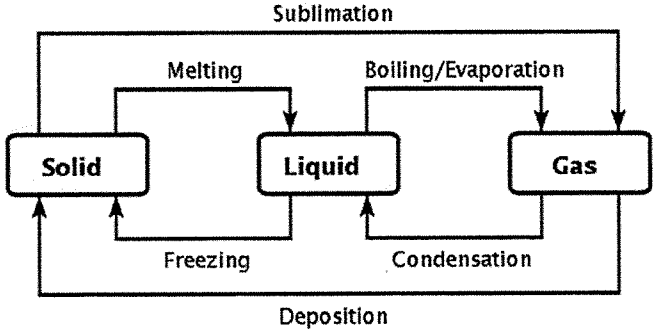
Gas: Spread out, large gaps, randomly arranged. Move freely with a range of speeds in random directions.



Box 6: Changes of state (Solid, liquid, gas)

Melt: Solid → Liquid
Freeze: Liquid → Solid
Boil: Liquid → Gas (When all particles have enough energy)
Evaporate: Liquid → Gas (When some particles have enough energy)
Condense: Gas → Liquid
Sublimate: Solid → Gas (Eg: Iodine and CO_2)

Box 7: Changes of State Diagram



C2 Knowledge Organiser

1. Definitions

onic bond	Electrostatic attraction between oppositely charged ions
onic compound	Metal chemically bonded to a non-metal
Covalent bond	Sharing a pair of electrons
Covalent molecule	2 non-metals chemically combined
Metallic bond	Positive metal ions attracted to a "sea" of delocalised electrons
on	An atom with a positive or negative charge
Delocalised electrons	Electrons which are free to move
Dot and cross diagrams	Diagrams to represent electrons as dots / crosses to show the bonding present
Polymer	A long chain molecule made of repeating monomers
Alloy	A mixture of metals
Empirical formula	Simplest ratio of atoms in a compound

2. Forming ions

Atoms want to get a full outer shell of electrons (become stable)
Atoms in group 1 (eg Na) lose 1 electron from their outer shell to form a +1 ion
Atoms in group 2 (eg Mg) lose 2 electrons to form +2 ions
Atoms in group 6 (eg O) gain 2 electrons to form -2 ions
Atoms in group 7 (eg Cl) gain 1 electron to form -1 ions

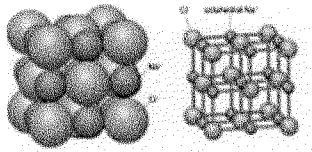
3. Ionic Bonding

When a metal atom reacts with a non-metal atom, electrons in the outer shell of the metal atom are **transferred**. The electron transfer during the formation of an ionic compound can be represented by a dot and cross diagram, eg for sodium chloride

The Sodium **atom** has transferred it's 1 electron in it's outer shell to the Chlorine **atom** so both atoms now have a full outer shell. The ions Na^+ and Cl^- are formed.

4. Ionic Compounds

An ionic compound is a **giant** structure of ions. Ionic compounds are held together by **strong** electrostatic forces of attraction between oppositely charged ions. These forces **act in all directions** in the **lattice**

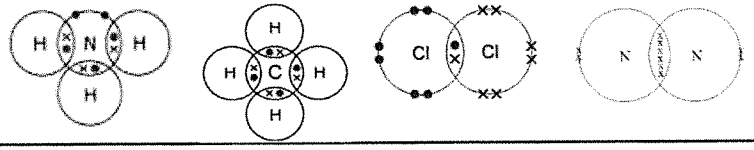


5. Limitations of models

Dot and cross: doesn't show shape / not 3D
Ball and stick: inaccurate representation of atom sizes
2D diagram: doesn't show how ions arranged in layers
3D diagram: not to scale

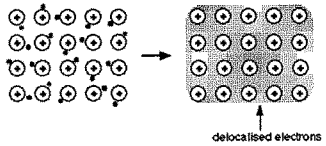
6. Covalent Bonding

When atoms share pairs of electrons, they form covalent bonds. These bonds between atoms are strong. Covalently bonded substances may consist of small or giant molecules
Examples of dot and cross diagrams to show covalent bonding:



7. Metallic bonding

- Happens in metals only
- Metallic bonding is positive metal ions surrounded by sea of delocalised electrons
- Metals have a giant structure with metal ions arranged in rows strongly attracted towards the delocalised electrons



8. States of matter

- Melting and freezing take place at the melting point
- Boiling and condensing take place at the boiling point.
  The amount of energy needed to change state depend on the strength of the forces between the particles of the substance. The stronger the forces, the higher the melting and boiling point

Symbol	Meaning	Example
(s)	Solid	Gold
(l)	Liquid	Water
(g)	Gas	Hydrogen
(aq)	Aqueous (dissolved in water)	Salt solution

(HT only) Limitations of the particle model include that in the model there are no forces, that all particles are represented as spheres and that the spheres are solid.

9. Properties of ionic compounds

Property of ionic compound	Explanation of property
High boiling and melting point	A lot of energy needed to break the **strong** forces of attraction between oppositely charged ions
Cannot conduct electricity as solid	**Ions** cannot move
Can conduct electricity when molten or dissolved	**Ions** can move and carry charge

10. Properties of small (covalent) molecules

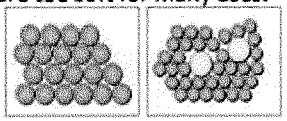
Examples: chlorine, oxygen, water, ammonia, carbon dioxide

Property of small molecule	Explanation of property
Low boiling / melting point	Weak intermolecular forces which only require a small amount of energy to break
Do not conduct electricity	No overall electric charge

12. Properties of metals and alloys

- Can conduct electricity due to having delocalised electrons which can carry charge through the metal
- Have high boiling and melting points due to giant structure with strong forces of attraction between metal ions and delocalised electrons

- **Alloys** = mixture of two or more metal atoms
- Pure metals are too soft for many uses.

Pure Metal  **Alloy**

- Atoms same size
- Layers slide
- Softer
- Different sized atoms
- Layers cannot slide
- Stronger

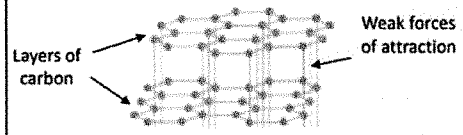
11. Properties of giant (covalent) molecules

Examples: diamond, graphite, silicon dioxide

Property of giant molecule	Explanation of property
High boiling / melting point	Giant molecule with many strong covalent bonds to break requiring a lot of energy to do so
Do not conduct electricity (exception is graphite)	No delocalised electrons to carry charge
Graphite can conduct electricity	Has delocalised electrons which can carry charge through the layers

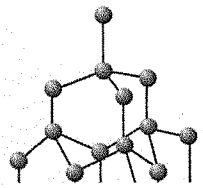
Graphite

- Each Carbon atom is attached to 3 others
- One delocalised electron per Carbon atom
- Layered structure
- Layers can slide due to weak intermolecular forces between layers making graphite soft
- Carbon atoms arranged in hexagons



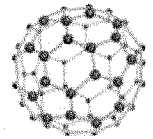
Diamond

- Each Carbon atom is attached to 4 others
- high boiling / melting point
- Giant covalent molecule
- Does not conduct electricity
- Hard

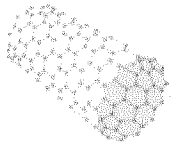


Fullerenes

- Fullerenes are molecules of carbon atoms with hollow shapes.
- The structure of fullerenes is based on hexagonal rings of carbon atoms but they may also contain rings with five or seven carbon atoms.
- The first fullerene to be discovered was Buckminsterfullerene (C 60) which has a spherical shape.



Buckminster fullerene



Carbon nanotube

- Carbon nanotubes are cylindrical fullerenes with very high length to diameter ratios. Their properties make them useful for nanotechnology, electronics and materials.

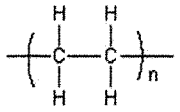
13. Polymers

Polymers have very large molecules.

The atoms in the polymer molecules are linked to other atoms by strong covalent bonds.

The intermolecular forces between polymer molecules are relatively strong and so these substances are solids at room temperature.

Polymers can be represented as:



where n is a large number

14. Summary of properties

Property	Ionic compounds	Small covalent molecules	Giant covalent structures	Metals and alloys
Density	High	Low	High	High
Melting and boiling point	High	Low	High	High
Conduct electricity	Only melted or dissolved in water	No	No (apart from graphite)	Yes
Conduct heat	No	No	No (apart from diamond)	Yes
Brittle or malleable	Brittle	N/A	Brittle	Malleable
Examples	• Salt (sodium chloride) • Magnesium Sulfate	• Chlorine • Oxygen	• Diamond • Graphite • Sand	• Iron • Steel

P1 Energy

Box 1: Energy stores

Energy Store	Example
Kinetic	Energy stored in moving objects
Gravitational	Energy stored in objects at a height
Chemical	Energy stored in fuels, foods and batteries
Electrostatic	Energy stored between charged particles
Magnetic	Energy stored in magnetic fields
Elastic	Energy stored in stretched and squashed objects
Nuclear	Energy stored in the nucleus of an atom
Thermal	Energy stored due to an objects temperature

Box 2: Energy Transfers

Energy Transfer	Example
Mechanically	Energy transferred due to a force
Heating...	Energy transferred due to temperature differences
Radiation	Energy transferred as a wave
Electrically	Charges moving due to a potential difference

Box 3: Units to learn

Energy – Joules (J)
Work Done – Joules (J)
Power – Watts (W)
Distance – Metres (m)
Time – Seconds (s)
Mass – Kilograms (kg)
Spring Constant – N/m
Specific Heat Capacity – J/kg°C
Gravitational Field Strength – N/kg

Box 5: Calculation prefixes

Prefix	How to convert	Standard form
Kilo (k)	x1,000	$x\ 10^{3}$
Mega (M)	x1,000,000	$x\ 10^{6}$
Giga (G)	x1,000,000,000	$x10^{9}$
Centi (c)	/100	$x10^{-2}$
Milli (m)	/1000	$x10^{-3}$
Micro (μ)	/1,000,000	$x10^{-6}$
Nano (n)	/1,000,000,000	$x10^{-9}$

Box 4: Definitions to learn

System – A group of objects
Closed system – The amount of energy in the system is constant
Wasted Energy – Energy that is dissipated (spread out) and stored in less useful ways
Specific Heat Capacity – The amount of energy required to raise the temperature of one kilogram of the substance by one degree Celsius.
Power – Rate of energy Transfer (1W = 1 Joule per second)
Conservation of Energy - Energy cannot be created or destroyed – only transferred usefully, stored or dissipated.
Non-renewable energy resource - These will run out. It is a finite reserve. It cannot be replenished.
Renewable energy resource - Replenish as they are being used

Box 6: How to reduce energy loss

Lubrication – Reduces friction, so less energy dissipated due to heating.
Insulation – Low thermal conductivity – lower rate of energy transfer.
Efficient – Wastes a lower proportion of the energy provided.

Box 7: Describing energy changes

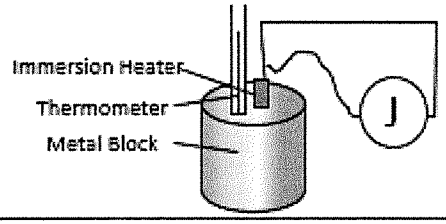
Describing a mass being lifted by a battery powered motor

Before being turned on, a battery has chemical energy. When turned on, the chemical store is decreased by electrical working to turn the motor. This causes the mass to raise by mechanical work and increase its gravitational store.

Box 9: Specific Heat Capacity

Core Practical – Specific Heat Capacity

- Measure mass of sample using a top pan balance
- Plug in an immersion heater and joulemeter
- Measure the temperature before switching on
- Switch immersion heater on for 5 minutes
- Measure the temperature after 5 minutes
- Measure the energy from the joulemeter
- Use the equation: Specific heat capacity = energy/(mass* temperature change) to calculate the
- **Insulate** to reduce energy loss = more accurate result.



Box 8: Energy resources

Energy resource	What is it?	Positive	Negative
Fossil Fuels (coal, oil and gas)	Burnt to release thermal energy used to turn water into steam to turn turbines	Easy to transport, relatively cheap	Extraction can cause problems: fracking can lead to tremors. Carbon Dioxide released → Greenhouse gas → Leads to Global Warming
Nuclear	Uranium fuel undergoes Nuclear Fission	No CO_2 produced. Lots of energy produced from small amounts of fuel.	Non-renewable. Radioactive waste remains dangerous for a long time. Possibility of disaster (Eg Chernobyl)
Biofuel	Fuel from living organisms	As plants grow, they absorb CO_2: 'carbon neutral'.	Land used for fuel crops instead of farming (in developing countries). Habitats destroyed to use land for fuel crops.
Tides	"Tidal Barrage" traps water from tides to use to generate electricity.	Predictable due to consistency of tides. No greenhouse gases produced.	Expensive to set up. A barrage (dam) is built across a river estuary, flooding habitats and causing problems for ships and boats.
Waves	Up and down motion turns turbines	No waste products.	Can be unreliable depends on wave output as large waves can stop the pistons working.
Hydroelectric	Falling water spins a turbine	No waste products. Very reliable.	Habitats, farmland and houses can be flooded when dam is built.
Wind	Movement causes turbine to spin which turns a generator	No waste products.	Unreliable – wind varies. Visual and noise pollution. Dangerous to migrating birds.
Solar	Directly heats objects in solar panels or sunlight captured in photovoltaic cells	No waste products.	Unreliable due to light intensity (Eg: Night time or cloudy days). Making and installing solar panels expensive.
Geothermal	Hot rocks under the ground heats water to produce steam to turn turbine	No greenhouse gases produced.	Limited to a small number of countries. Geothermal power stations can cause earthquake tremors.

R032 Topic 1: The rights of the service users in HSC settings

Topic 1. 1 Types of Care Settings

Health care: *the service of providing medical care, preventative screening and treatment for illness, disease, disability or injury. Examples include:*

- **Hospital** *: an institution providing medical and surgical treatment and nursing care for sick or injured people*
- **GP surgery**: *location where a general practitioner (doctor) will see patients*
- **Dental Practice:** *A type of GP practice but specializes in dental care (teeth)*

Primary Care – *the first point of contact you are likely to have in the NHS, for example when you go to the doctor.*
Secondary Care – *is specialist treatment or care such as psychiatry usually given in hospital or clinic referred from a primary care service provider.*

Social care: *the service of providing a wide range of different types of care. The main areas of social care are: domiciliary care in service users' homes and providing protection or support services for adults and children in need or at risk. Examples include:*

- **Community centre**: *a place where people from a particular neighbourhood can meet for social events, education classes, or recreational activities*
- **Day centre**: *a place providing care and recreation facilities for those who cannot be fully independent.*
- **Residential home**: *a term used to describe the general care and support provided in a standard care home*
- **Retirement home**: *a house or flat in a group or block designed for the needs of old and retired people*

Service user: *A person who accesses health and social care services from service providers. Example: A elderly person attends a appointment at a hospital.*

Care provider: *this is an organisation acting as a direct provider of health care services.*
Domiciliary care: *the range of services put in place to support an individual in their own home. Example: A district nurse helps the service user to cook and clean within their home.*

Topic 1.2 The rights of service users Part A

Choice: *choice gives service users control and options over their lives and promotes independence. It also ensures that they receive care ad treatments that meet their needs.*

Confidentiality: *limits access or places restrictions on sharing certain types of sensitive information, such as medical records, so that it is kept private and available only to those who need to be aware of it.*

Consultation: *the process of discussing an issue with another person in order to receive their thoughts, advice or opinion, so that a decision can be made that is acceptable and appropriate for all involved.*

Equal: *Fairness. Equal treatment means being given the same opportunities and choices as everyone else.*

Fair: *Fair treatment means being able to have full access to those opportunities and choices, as well as receiving the correct type of care that meets service user needs*

Law: *These are passed by Parliament, and state the rights and entitlements of service users. If someone breaks the law, they can be prosecuted by being taken to court. Example: Care providers follow the legislation of the NHS.*

Equality Act (2010): *A law intended to prevent discriminatory practice, to ensure service users are treated fairly.*

Equality Act Protected Characteristics: *nine protected characteristics: age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion or belief; sex*

Topic 1.2 Part B the rights of service users

Abuse: *the intentional harm done to another person through mistreatment or ill-treatment or failing to act to prevent harm. Example: A nurse opens the window on a ward and removes the service users blanket making them cold and their health deteriorating.*

'Need-to-know' basis: *Information is only shared with those directly involved with the care and support of the service user. Example: A care provider only shares information of a service user with another care provider who is involved within the service users care.*

Safeguarding: *Actions taken to protect service users by ensuring a safe and healthy environment where the risks of danger, harm or abuse are reduced. Example: It is important that patients remain confident that their personal information is kept safe and secure.*

Manual Handling: *Using the correct procedures when physically moving any load by lifting, putting down, pushing or pulling. Example: Transferring a client from a chair to a bed.*

R032 Topic 1 and 2

Topic 1.3 The benefits to service users' health and wellbeing when their rights are maintained.

Empowerment: *is when you feel in control of your life. Giving someone the authority or control to do something. The way a health or social care service provider encourages a service user to make decisions and to take control of their own life. Example: They allow the service user to control their care and what care they want to receive.*

Self- reliant: *Able to do or decide things by yourself, rather than depending on other people for help. Example: A service user decides what they treatment they want rather than the care provider.*

Self- esteem: *How much a person values themselves and the life they live. Example: High self-esteem is associated with people who are happy and confident. A service user with low self-esteem experiences feelings of unhappiness and worthlessness.*

Self-respect: *valuing yourself.*

Trust: *Service users must be able to feel that service providers are trustworthy, they thy will not harm them and that they have their best interests at heart. Example: A service user who lacks trust may not continue with the care they are receiving. This could have negative effects on their physical and mental health and well-being.*

Physical health: *physical health describes the condition of your body. This includes whether you have a illness, injury or a health condition. Example: The physical health of n elderly woman has deteriorated due to her falling and breaking her hip.*

Mental health: *The state of health of somebody's mind. Example: Someone who has a lost a close family member mental health may decline due to grief they will go through.*

Respect: *Where you consider other people's feelings and you treat them in a courteous way. Example: A care provider respects the decisions a service user makes about their care.*

Topic 2.1 Part A: Person-centred values and how they are applied by service providers

Person-Centred: *key principles that underpin the work of those providing care and support in health and social care services such as respecting and empowering individuals.*

Equality: *This means treating people fairly and valuing them for who they are. Everyone should be provided with the same rights and opportunities, and this should not be affected by their age, ability, gender, culture or religion.*

Individuality: *This value means recognising that each person has their own identity, needs, wishes, beliefs and values. These individual differences must be considered and taken account of when providing care and support.*

Personalised care: *This means people have choice and control over the way their care is planned and delivered. It is based on 'what matters' to them and their individual strengths and needs.*

Privacy: *the right that someone has to keep their personal life or personal information secret or known only to a small group of people.*

Dignity: *being respected and treated with care. This value involves having regard for the feelings, opinions and wishes of others. By respecting and valuing the service user's rights, views and needs, the service provider supports their self- esteem and makes them feel valued.*

Partnership: *This involves different professionals, services and agencies working together to provide the most effective care for a service user requiring treatment or support.*

Diversity: *appreciating the differences between people and treating people's values, beliefs, cultures and lifestyles with respect.*

Sexuality: *Sexuality includes a person's gender identity, body image and sexual desires.*

Topic 2.1 Part B: Person-centred values and how they are applied by service providers

The six C's: *Key principles which should inform every health and social care service provider's practice and enable them to provide person-centred care.*

Care: *Means a service provider will do all they can to provide appropriate treatment or support that will maintain or improve a service user's health and well-being.*

Compassion: *Providing care and support with kindness, consideration, respect and empathy. It is also having consideration for the service user receiving care or treatment as well as being able to put yourself in the patients situation and show understanding.*

Competence: *refers to the ability of a service provider to provide high quality, effective care through applying their knowledge, skills, understanding and expertise to meet a service user's care needs.*

Communication: *essential to developing good relationships with service users, their families and also with colleagues. It is important to be able to listen carefully and speak in a way that service users receiving care and support can understand.*

Courage: *is being brave: being able to speak up when having concerns, doing the right thing and also trying something new such as a new way of working.*

Commitment: *when a service provider is dedicated to providing care and support to meet the service user's need.*

Topic 2.2 Benefits of applying the person-centred values

Valuing diversity: *Accepting and respecting individual differences such as faith, diet, sexuality, ethnicity and customs. Example: Receiving appropriate care that meets their needs and do not experience discriminatory attitudes.*

Nutrition: *the process of providing or obtaining the food necessary for health and growth. Example: Eating a healthy diet so health and diet is positive.*

Standardisation: *Healthcare standardisation is the specifications of rules, guidelines or characteristics for designing products or carrying out activities. Example: Care providers with follow standardisations to make sure they follow all of the rules when caring for a service user.*

Quality of Care: *degree to which health services for individuals and populations increase the likelihood of desired health outcomes. Example: the quality of care within hospitals should be high as they should improve the health of the service users.*

Quality of life: *a multi-dimensional concept that includes domains related to physical, mental, emotional and social functioning. Example: providing hospital patients with appropriate nutritional meals, providing help to eat and drink and discussing treatment.*

Topic 2.3 Effects on service users' health and wellebeing if person-centred values are not applied

Physical effects: *relate to the service user's body. Example: a nursing home resident suffers with coeliac disease- this causes unpleasant symptoms if gluten is consumed. If they are not given gluten- free food, it will lead to a deterioration of their digestive health.*

Intellectual effects: *Relate to the service user's thought processes such as thinking skills, understanding, learning, reasoning, comprehension and knowledge. Example: If a young adult who has learning difficulties is not given support and learning activities matched to their special needs, their learning will not progress and they will not reach their potential.*

Emotional effects: *Relate to the service user's feelings. Examples: An elderly woman attends a day centre. She is a vegetarian but at lunch is expected to eat the same meal as others, just without the meat. This is unfair treatment and is likely to upset her as she is not being treated as well as the others. She might develop low self-esteem as she feels she is not important enough to be given a proper vegetarian meal. She could also feel embarrassed that she is being a nuisance, expecting a 'special' meal.*

Social effects: *relate to the service user's relationships with others. Example: if staff at a day centre do nothing about other young adults laughing at a girl who has a birthmark on her face, the girl may lack friends, become isolated and withdrawn and refuse to attend.*

Malnutrition: *lack of proper nutrition, caused by not having enough to eat, not eating enough of the right things or being unable to use the food that one does eat.*

Dehydration: *the lack of water or the abnormal loss of water.*

Self- confidence: *a feeling of trust in one's abilities, qualities and judgement.*

Disempowered: *to deprive of power, authority or influence. Example: A service user is too worried to put their own opinions across for their care plan as they feel a lack of power.*

Topic 3.1 The importance of verbal communication skills in health and social care settings

Communication: *exchanging of information by speaking, writing or using some other medium.*

Effective: *successful in producing a desired or intended result.*

Interpersonal skills: *the ability to communicate or interact well with others.*

Verbal communication: *is the exchange of information between people using speech.*

Non-verbal communication: *the ways in which people convey information about their emotions, needs, intentions, attitudes and thoughts without the use of verbal/spoken language.*

Clarity: *This involves service providers being able to share information with other staff or with service users in a clear and accurate way that can be easily understood.*

Empathy: *Ability to understand and share the feelings of another person, understand another person's way of thinking and imagine what it would be like to be in that person's situations.*

Jargon: *Specialist or technical language, or terms and abbreviations that are difficult for non-specialists to understand. Example: Care providers use complex technical words that service users do not understand.*

Patience: *This involves giving a service user the time to say or do what they need to, being supportive, not rushing them and not making them feel pressured.*

Tone: *Is how your voice is heard. Example: the tone of your voice should be calm and not rushed. A varied tone of voice will come across to others as friendly and interested.*

Volume: *How loudly or quietly you need to speak depends on the situation. Example: raising your voice may be appropriate in a noisy environment.*

Pace: *how quickly you are speaking.*

R032 Topic 3: Effective communication in HSC settings

Topic 3.2 the importance of non-verbal communication in HSC

Eye contact: *the state in which two people are aware of looking directly into one another's eyes.*

Facial Expressions: *These can act as positive and negative responses to a situation such as raining eyebrows, frowning and moving your mouth. Example: a service user could use facial expressions to show a service provider they have a question.*

Gestures: *Involve hand movements. Example: drumming fingers on a surface or twiddling thumbs show signals of impatience.*

Position: *To be placed in a particular way. It is better for effective communication if people are at the same level as the service provider speaking to them. Example: it is important when speaking to someone in a wheelchair to lower yourselves to their level so they feel respected.*

Personal space: *the physical space immediately surrounding someone, into which intrusion can feel threatening or uncomfortable. Personal space differs between cultures and between service users. Some people feel uncomfortable if others are close, whereas other people find it acceptable.*

Posture: *the position in which someone holds their body when standing or sitting. Health and social care staff need to be approachable by service users and so it is important that they use open body language.*

Topic 3.3 the importance of active listening in HSC settings

Active listening: *Having an open, relaxed posture, making eye contact and looking interested, nodding agreement, showing empathy, reflecting feelings, clarifying and summarising to show understanding of key point.*

Topic 3.4 the importance of special methods of communication in HSC

Advocate: *is someone who speaks on behalf of a service user who is unable to speak up for themselves. Example: an advocate for a child could be a parent.*

Braille: *method of communication used by visually impaired or blind people. Consists of dots which are read by touch.*

British sign language: *involves using the hands and fingers to make visual signs. This is used by people who have impaired hearing and by other people to communicate with them.*

Interpreter: *An individual who will convert a message from one language to another and speak it. Example: An interpreter may change a language of a service user into English for the care provider to understand.*

Makaton: *a system that uses a combination of speech, gestures and pictures to communicate.*

Voice activated software: *allow users to write text, use the internet, send emails and use applications by using their voice rather than a mouse or a keyboard. Example: someone with cerebral palsy may have difficulties with fine motor skills, which makes handwriting and using a keyboard challenging. They would benefit from using voice-activated software to help with communication.*

Topic 3.5 The importance of effective communication in health and social care settings

Reassurance: *the action of removing someone's doubts or fears. Example: a care provider reassuring a mother before their child goes into an operation.*

Patronise: *treat in a way that is apparently kind or helpful but betrays a feeling of superiority. Example: Repeating words to a service user when they still don't understand.*

R032 Topic 4: Protecting service users and service providers in health and social care settings

Topic 4.1 Safeguarding. Protecting service users and service providers in health and social care settings

Safeguarding: *Refers to the actions taken to protect a service users health and well-being*

Disclosure: *When a service user tells you directly or indirectly through their behaviour, that they are, or have been abused*

Vulnerable: *A word to describe someone who is less able to protect themselves from harm or exploitation due to, for example, mental health problems, learning disability or physical impairment*

Disability: *A physical impairment or weakness that affects an individual's ability to do daily activities*

Physical disability: *A condition that affects and limits the way a person moves and their ability to perform physical activities*

Learning disability: *A reduced ability to think and make decisions, as well as difficulties with everyday activities*

Impairment: *diminishment or loss of function or ability*

Safeguarding policy: *A set of regulations that states a care settings way of working and procedures to follow regarding safeguarding*

Designated safeguarding lead: *The person in an organisation or service that has a responsibility for safeguarding*

Duty: *Legal or moral responsibility*

Disclosure and barring service: *Service that works closely with the police and helps prevent unsuitable people from working with vulnerable service users. Types of DBS checks:*
Standard check: checks for criminal convictions, cautions & reprimands
Enhanced check: additional check of any information held by police that is relevant to the role being applied for

Topic 4.2 Infection prevention

Hygiene: *Practices that keep yourself and your surroundings clean, in order to prevent illness and the spread of disease*

Infection: *What happens when germs (pathogens) invade the body and cause disease or illness*

Anti-bacterial: *Types of items designed to prevent the growth or spread of bacteria*

Disinfect: *To clean something with chemicals to kill bacteria*

Hazardous waste: *Waste with properties that make it dangerous to health or the environment*

Sharps: *Examples include used needles and cannulas; these can cause injury by a needle or sharp edge pricking or cutting skin*

Personal Protective Equipment (PPE): *Clothing or equipment that can prevent the transfer or germs from one person to another*

Disposable: *Items that should only be used once and replaced for each new task*

Surgical: *Items used when carrying out procedures to protect the service provider and the patient from infection*