



**The Totteridge Academy**

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**Autumn Term**

**2020-2021**



# Knowledge Organiser

**Name:** .....

**Tutor Group:** .....

**Tutor & Room:** .....

*“If you are not willing to learn, no one can help you.  
If you are determined to learn, no one can stop you.”*

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### Key vocab:

1.	<b>Romanticism</b> – Romantics believed in the power and beauty of nature.
2.	<b>Gothic Fiction</b> – Includes supernatural and sublime ideas.
3.	<b>Enlightenment/Industrial age</b> – Romanticism was a reaction to these.
4.	<b>Nature Vs Nurture, Passion over Reason</b> – Key romantic ideas.

When?	Key idea	Key quotes
Prologue. Walton's letters to his sister. His passion is to reach the North Pole.	5. Letter 1 – <b>Captain Robert Walton</b> writes to his sister Margaret to tell her he is ready for his journey. He is <b>passionate about the natural world</b> he will encounter, and excited about <b>gaining new knowledge to benefit all</b> .	Walton: 'My daydreams become more fervent and vivid.' 'I shall satiate my ardent curiosity with the sight of a part of the world never before visited.'
	6. Letter 2 – <b>Walton</b> is lonely and <b>feels nobody understands him</b> .	Walton: 'I desire the company of a man who could sympathise with me.'
	7. Letter 3 – <b>Walton</b> writes that he expects his <b>ambition</b> to be fulfilled.	Walton: 'What can stop the determined heart and resolved will of man?'
	8. Letter 4 – Trapped in the ice he sees a <b>mysterious stranger</b> , then meets <b>Victor Frankenstein</b> who explains how <b>his ambitions led to his downfall</b> .	Frankenstein: 'Do you share my madness? Have you drunk of the intoxicating draught? Hear me... and you will dash the cup from your lips.'
Chapters 1-4. Victor's early life & family, his early interest in science and arrival at University.	9. Ch. 1 – <b>Victor</b> describes his <b>perfect childhood</b> , and how he developed a powerful love for his adopted cousin Elizabeth.	Frankenstein: 'my parents seemed to draw inexhaustible stores of affection from a mine of love to bestow.' Frankenstein: 'Elizabeth was mine – to protect, love and cherish'.
	10. Ch. 2 – <b>Victor</b> develops his <b>love for Science</b> and learning, inspired by obscure scientists like Paracelsus and Cornelius Agrippa.	Frankenstein: 'I studied the wild fancies of these writers with delight.'
	11. Ch. 3 – <b>Victor's mother</b> dies. He goes to Ingolstadt to study. He dislikes <b>Krempe</b> , but admires <b>Professor Waldman</b> , who shares his <b>passion</b> .	Frankenstein: 'I will pioneer a new way, explore unknown powers and unfold to the world the deepest mysteries of creation'.
	12. Ch. 4 – <b>Victor</b> spends two years ignoring his family to <b>research the secret of life</b> . Sometimes he stays up all night and spends time in graveyards and charnel houses.	Frankenstein: 'My application ... became so eager that the stars often disappeared in the light of the morning.'
Chapters 5-10. Victor's creation comes to life, and he must deal with the consequences.	13. Ch. 5 – <b>The creature</b> awakens. <b>Victor</b> realises that <b>he has driven himself to the brink of destruction chasing an impossible dream</b> . He becomes very ill and is nursed back to health by <b>Henry Clerval</b> .	Frankenstein: 'Now that I had finished the beauty of the dream vanished and breathless horror and disgust filled my heart.'
	14. Ch.7 – <b>Victor</b> receives a letter telling him that his brother has been killed. He makes his way back to Geneva. During a <b>violent and impressive storm</b> , he sees <b>the creature</b> and realises that he is responsible for William's death.	Frankenstein: 'I discovered my lovely boy stretched on the grass livid and motionless'. Frankenstein: 'Vivid flashes illuminating the lake making it appear like a vast sheet of fire.' Frankenstein: 'The deformity of its aspect... it was the filthy demon.'
	15. Ch. 8 – <b>Justine</b> is sentenced to death for William's murder. <b>Victor</b> knows that the creature is the murderer and feels <b>terrible guilt</b> .	Frankenstein: 'Torn by remorse, horror and despair, I beheld those I loved spend vain sorrow upon the first hapless victims to my unhallowed arts.'
	16. Ch. 9 – Blaming himself, and <b>enraged</b> by the deaths of William and Justine, <b>Victor</b> goes into the mountains to seek <b>revenge</b> on the creature.	Frankenstein: 'I wished to see him again that I might... avenge the deaths of William and Justine.' Frankenstein: 'I listened with the extremist agony. I... was the true murderer.'
	17. Ch. 10 – <b>Victor and the creature</b> confront each other in the Alps. Victor is furious but he does begin to feel <b>sympathy</b> when the creature describes how he has been <b>mistreated by humanity</b> .	Creature: 'I ought to be thy Adam, but I am rather the fallen angel.' Creature: 'I was benevolent and good; misery made me a fiend.' Frankenstein: 'For the first time I felt the duties of a creator towards his creature'.

## Frankenstein by Mary Shelley (1818)

When?	Key idea	Key quotes
Chapters 11 – 16. The creature begins to tell Victor his story. He describes the events of his life since Victor abandoned him - these include William's murder.	18. Ch. 11 – <b>The creature</b> describes how at first, he was completely unaware of his surroundings. As his journey progressed, he realised that <b>mankind was always going to treat him as an outsider</b> . He found a shelter next to a family dwelling.	Creature: 'I was a poor, helpless, miserable wretch.' Creature: 'I sat down and wept.' Creature: 'Here then I retreated and lay down happy to have found a shelter, however miserable, from the [...] barbarity of man.'
	19. Ch 12 – <b>The creature</b> considers how he might be <b>rejected</b> further by humanity.	Creature: 'I imagined they would be disgusted until by my gentle demeanour, I should win... their love.'
	20. Ch 15 – <b>The creature</b> learns to read and reflects on the nature of his <b>isolation</b> . The creature learns about Frankenstein through the journal and becomes <b>enraged</b> . He introduces himself to the cottagers who react with violence, to the creature's dismay.	Creature: 'My person was hideous and my stature gigantic. What did this mean? Who was I? What was I? Whence did I come?.' Creature: 'Satan had his companions, fellow devils, to admire and encourage him but I am solitary and abhorred.' Creature: 'I could have torn him limb from limb as the lion rends the antelope.'
	21. Ch 16 – <b>The creature, spurned by all humanity</b> , goes to Geneva to seek <b>revenge</b> . He encounters William, Victor's brother, and describes how he killed him.	Creature: 'Cursed, cursed creator. Why did I live?' Creature: 'My daily vows rose for revenge.' Creature: 'I gazed on my victim and my heart swelled with exultation and hellish triumph.'
Chapters 17 – 24. The creature asks Victor to make him a companion. Victor initially agrees but then changes his mind; enraged, the creature kills Elizabeth. Victor dies after telling Walton his story. Walton abandons his own plans.	22. Ch 17 – <b>Victor</b> initially refuses because he is worried about the consequences but feels sympathy for the <b>creature</b> and fear over what might happen if he refuses. He agrees to create a <b>companion for the creature</b> , who tells Victor he will be watching.	Creature: 'If I cannot inspire love I will cause fear.' Frankenstein: 'I concluded that the justice due to him and my fellow creatures demanded that I should comply with his request.'
	23. Ch 20 – <b>Victor</b> is overcome with <b>horror</b> at what he is doing and destroys the companion in front of the creature. <b>The creature</b> swears <b>revenge</b> .	Frankenstein: 'The wretch saw me destroy the creature on whose future existence he depended for happiness ...' Creature: 'Beware, for I am fearless and therefore powerful... I shall be with you on your wedding night.'
	24. Ch 21 – To his horror, Victor learns <b>Cierval has been murdered</b> .	Frankenstein: 'the agonies I endured... I was carried out in strong convulsions.'
	25. Ch 23 – <b>The creature murders Elizabeth</b> on her wedding night; Victor vows <b>revenge</b> .	Frankenstein: 'A grin was on the face of the monster.' Frankenstein: 'My rage is unspeakable...'
	26. Ch 24 – <b>Victor</b> spends the rest of his life chasing the creature. He completes his story to an <b>amazed Walton</b> and then dies. Walton finds <b>the creature</b> crying over Victor's death. The creature tells Walton that he will now kill himself. <b>Walton</b> realises the danger of <b>unchecked ambition</b> and turns his crew home.	Frankenstein: 'I was cursed by some devil and carried about [...] an eternal hell.' Frankenstein: 'I must pursue and destroy the being to whom I gave existence' Creature: 'You hate me; but your abhorrence cannot equal that with which I regard myself.' Creature: 'I shall die. I shall no longer feel the agonies which now consume me.'

## Romeo and Juliet by William Shakespeare (1594-96)

Key terms:		
1.	<b>Fate</b> – Events in life have been pre-determined by a higher (often supernatural) being or force.	
2.	<b>Patriarchy</b> – A society in which men hold the power.	
3.	<b>Family loyalty and revenge</b> – Living life by your family's beliefs and values at any cost.	
4.	<b>Forbidden love and marriage</b> – Falling in love with and marrying someone against social, family or religious expectations.	
5.	<b>Elizabethan era</b> – The time period when the play was written and Queen Elizabeth I was on the throne in England.	
When?	Key idea and theme	Key quotes
Act 1	6. The chorus tells us of the lovers' <b>fate</b> and the <b>family feud</b> between the <b>Montagues</b> and <b>Capulets</b> .	Prologue. Chorus: "From ancient grudge break to new mutiny." Prologue. Chorus: "A pair of star-crossed lovers take their life." Prologue. Chorus: "The fearful passage of their death-marked love."
	7. The <b>family feud</b> between the two families is established and <b>family loyalties</b> made clear.	1.1. Sampson: "I do not bite my thumb at you, sir, but I bite my thumb, sir." 1.1. Tybalt: "What, drawn and talk of peace! I hate the word as I hate hell, all Montagues, and thee." 1.1. Prince Escalus: "If ever you disturb our streets again, your lives shall pay the forfeit."
	8. <b>Romeo</b> explains his conflicting feelings about <b>life and love</b> .	1.1. Romeo: "O brawling love, O loving hate..." 1.1. Benvolio: "Examine other beauties."
	9. The writer establishes <b>Lady Capulet's</b> and <b>Juliet's</b> attitudes towards <b>marriage</b> .	1.3. Juliet: "it is an honour I dream not of," 1.4. Tybalt: "This intrusion shall [...] convert to bitterest gall."
	10. <b>Romeo</b> and <b>Juliet</b> fall madly in <b>love</b> with each other at the <b>Capulet ball</b> .	1.5. Romeo: "O, she doth teach the torches to burn bright." 1.5. Juliet: "If he be married, my grave is like to be my wedding bed."
	11. <b>Romeo</b> and <b>Juliet</b> realise that their <b>love</b> is <b>forbidden</b> and <b>doomed</b> .	1.5. Juliet: "My only love sprung from my only hate."
Act 2	12. <b>Juliet</b> questions the meaning of <b>family loyalty</b> .	2.2. Juliet: "O Romeo, Romeo, wherefore art thou Romeo?" 2.2. Juliet: "That which we call a rose by any other word would smell as sweet." 2.2. Juliet: "Deny thy father and refuse thy name."
	13. <b>Romeo</b> pursues <b>Juliet</b> but she realises that the <b>love</b> she feels for <b>Romeo</b> is too sudden.	2.2. Romeo: "It is the east, and Juliet is the sun." 2.2. Juliet: "It is too rash, too unadvisedly, too sudden." 2.2. Romeo: "With love's light Wing's did I o'erpreach these walls, for stony limits cannot hold love out."
	14. The <b>lovers</b> are enthusiastic – despite knowing that their <b>love</b> is <b>forbidden</b> .	2.2. Romeo: "But love from love, toward school with heavy looks." 2.2. Juliet: "Yet I shall kill thee with much cherishing."
	15. <b>Friar Lawrence</b> agrees to help the <b>lovers</b> <b>marry</b> – although he warns them of rushing into <b>love</b> too soon.	2.3. Friar Lawrence: "The earth that's nature's mother is her tomb." 2.6. Friar Lawrence: "These violent delights have violent ends." 2.6. Friar Lawrence: "Love moderately."

When?		Key idea and theme	Key quotes
Act 3	16.	The <b>feud</b> between the <b>Montagues</b> and <b>Capulets</b> intensifies as the <b>Montagues</b> and <b>Capulets</b> fight - <b>Romeo</b> kills <b>Tybal</b> .	3.1. Mercutio: "A plague o' both your houses." 3.1. Romeo: "My reputation stain'd with Tybal's slander." 3.1. Romeo: "O I am fortune's fool."
	17.	<b>Juliet</b> daydreams about <b>Romeo</b> but then learns that <b>Romeo</b> has killed <b>Tybal</b> in a fight.	3.2. Juliet: "Give me my Romeo, and when he shall die, take him and cut him out in little stars." 3.2. Juliet: "Shall I speak ill of him that is my husband?"
	18.	<b>Romeo</b> and <b>Juliet</b> risk spending one night together before <b>Romeo</b> is banished from Verona.	3.5. Juliet: "O God, I have an ill-divining soul!" 3.5. Juliet: "Methinks I see thee, now thou art below, as one dead in the bottom of a tomb."
Act 4	19.	<b>Friar Lawrence</b> makes a plan to help the <b>lovers</b> and to stop the <b>marriage</b> of <b>Paris</b> and <b>Juliet</b> .	4.1. Juliet: "bid me go into a new made grave." 4.1. Friar Lawrence: "The roses in thy lips and cheeks shall fade." 4.3. Juliet: "Methinks I see my cousin's ghost seeking out Romeo."
	20.	Juliet has taken the Friar's sleeping potion and her body is discovered.	4.5. Capulet: "Death lies on her like an untimely frost." 4.5. Capulet: "Despised, distressed, hated, martyr'd, killed!"
	21.	<b>Friar Lawrence</b> encourages the <b>Capulet</b> family to come to terms with <b>Juliet's</b> 'death'.	4.5. Friar Lawrence: "She's not well married that lives married long, but she's best married that dies married young."
Act 5	22.	The <b>Friar's</b> plan goes wrong and <b>Romeo</b> is told that <b>Juliet</b> is <b>dead</b> .	5.1. Romeo: "The trunk may be discharged of breath, as violently as hasty powder fired." 5.1. Romeo: "Well, Juliet, I will lie with thee tonight."
	23.	The <b>Friar's</b> speech foreshadows the death of <b>Juliet</b> – this is the punishment for forbidden love	5.2. Friar Lawrence: "Poor living corpse, closed in a dead man's tomb!"
	24.	Romeo <b>fight</b> s with Paris in the <b>Capulet</b> tomb and finds <b>Juliet's</b> body.	5.3. Paris: "Can vengeance be pursued further than death?" 5.3. Romeo: "Death, that hath suck'd the honey of thy breath, hath had no power yet upon thy beauty." 5.3. Romeo: "Death's pale flag is not advanced there."
	25.	The <b>doomed lovers</b> die in the <b>Capulet</b> tomb.	5.3. Romeo: "The doors of breath, seal with a righteous kiss a dateless bargain to engrossing death!" 5.3. Juliet: "O happy dagger!" 5.3. Prince: "All are punished."

English  
4 of 4

### Place Value

The decimal point	Never moves	Write in descending order 4.403, 4.3, 4.33, 4.03  U T H TH 4 . 4 0 3 4 . 3 3 0 ← add place holders 4 . 3 0 0 4 . 0 3 0 ← line up the decimal point
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### Decimals

Dividing by a decimal	Equivalent fractions Turn the denominator into an integer	Calculate 0.0642 ÷ 0.03  0.0642 = $\frac{642}{100000}$ = $\frac{642}{30000}$ = $\frac{214}{10000}$ = $\frac{53}{2500}$ Now use long strip
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### Indices

Reciprocal	What you times by to get 1	Reciprocal of 7 is $\frac{1}{7}$ because $7 \times \frac{1}{7} = 1$ Reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$ because $\frac{2}{3} \times \frac{3}{2} = 1$
Base to the power of zero	Equals one	$10,000^0 = 1$
Complicated indices	Root Power Reciprocal	$125^{\frac{1}{3}}$ = 5 ① The root $\sqrt[3]{125} = 5$ ② The power $5^2 = 25$ ③ The reciprocal of 25 = $\frac{1}{25}$

### Factors, Multiples and Primes

Prime factor form	Tree thing tree thing	Express 90 as a product of prime factors:  $90 = 2 \times 3^2 \times 5$
Product of its prime factors	Product means 'x' 2, 3, 5, 7 don't forget your primes	
Find the HCF or LCM of large numbers	Use Venn diagram	$80 = 2^4 \times 5$ $24 = 2^3 \times 3$ HCF: Overlap $2^3 \times 2 = 2^4 = 16$ LCM: All $2^4 \times 3 \times 5 = 240$
HCF	Multiply the overlap	
LCM	Multiply them all	

### Fractions >> Decimals >> Percentages

% to fraction	write it out of 100	Write 48% as a fraction in simplest form $48\% = \frac{48}{100} = \frac{12}{25}$ Always look to simplify
Decimals to fractions	First to %	Convert 0.6 to a fraction in simplest form $0.6 = 60\% = \frac{60}{100} = \frac{3}{5}$ Always look to simplify
Fractions to %	Equivalent fractions Make the denominator 100	Write $\frac{3}{20}$ as a percentage $\frac{3}{20} = \frac{15}{100} = 15\%$
Fractions to decimals	Division using bus stop	Convert $\frac{5}{8}$ to a percentage $5 \div 8 = 0.625 = 62.5\%$

Fractions are my friends!		
Multiplying fractions	Top top bottom bottom	$\frac{2}{3} \times \frac{10}{24} = \frac{14}{25} \times \frac{2}{5} = \frac{4}{15}$
Always make your life simple	Simplify first	
Dividing fractions	Times by the reciprocal	$\frac{3}{8} \div \frac{7}{11} = \frac{3}{8} \times \frac{11}{7} = \frac{33}{56}$
Adding fractions	Find the LCM	$\frac{7}{12} + \frac{2}{9} = \frac{21}{36} + \frac{8}{36} = \frac{29}{36}$
Comparing fractions	Find the LCM	which is bigger $\frac{4}{5}$ or $\frac{5}{6}$ ? $\frac{24}{30}$ vs $\frac{25}{30}$ Bigger

Percentages		
Percentage increase and decrease	Original x Multiplier = Final $O \times M = F$	Increase 70 by 200% $100\% + 200\% = 300\%$ $F = 70 \times 3 = 210$
For the multiplier	Start with 100 Go up or down Turn into a decimal	The multiplier for a decrease of 40% $100\% - 40\% = 60\%$ $60\% = \frac{60}{100} = 0.6$
Reverse percentage	Original x Multiplier = Final $O \times M = F$	A TV is reduced by 15% → M It now costs £255 → F What was the price originally? → O?
Percentage change	Original x Multiplier = Final $O \times M = F$	Jo's wage increases from £6.15 to £7.38 What is the % increase?

Ratio and Proportion		
Connection between two things	Box method	Jay travels 15 miles in 35 minutes. How much will he travel in 1 hour? 
What do we look for	Up down, side to side	
And if that fails?	Middle man, think HCF	
Converting units	Box method	Convert 0.03m into cm 
Currency questions	Box method	
Recipe questions	Box method	
Value for money	Box method with same amounts	Which is better value, 2.25 kg of rye for £15 or 4kg for £27? 
Ratio questions	Box method with a total	To make juice I mix 1 part squash with 4 parts water. How much squash do I need for 2L of juice? 
		Write the ratio 5:4 in the form 1 : n 

Unit B1: Cell Biology – Cells, Tissues and Organs		
1	What are cells?	The basic unit of living things
2	What are the 5 organelles that are present in both animal and plant cells?	Nucleus, cell membrane, cytoplasm, mitochondria and ribosomes
3	What are the 3 organelles that may be present only in plant cells?	Cell wall, permanent vacuole and chloroplasts
4	What is the function of the nucleus?	Controls the activities of the cell
5	What is the function of the cell membrane?	Controls what enters and leaves the cell
6	What is the function of the cytoplasm?	Where the chemical reactions take place
7	What is the function of the mitochondria?	Where respiration takes place
8	What is respiration?	How energy is released from glucose
9	What is the function of the ribosomes?	Where protein synthesis takes place
10	What is the function of the cell wall?	It strengthens and supports the cell
11	What is the function of the permanent vacuole?	It contains cell sap (to keep the cell rigid)
12	What is the function of the chloroplasts?	Where photosynthesis takes place
13	What is photosynthesis?	How plants use light to make glucose
14	What are eukaryotic cells?	Cells with a nucleus
15	What are prokaryotic cells?	Cells without a nucleus
16	Give an example of a eukaryotic cell	Animal or plant cells
17	Give an example of a prokaryotic cell	Bacteria
18	Which are larger: eukaryotic or prokaryotic cells?	Eukaryotic cells
19	What form does the genetic material in a prokaryotic cell take?	A single DNA loop
20	Give two differences between prokaryotic and eukaryotic cells	Eukaryotic cells have a nucleus and are much bigger
21	What are the two types of microscope?	Light and electron
22	What is magnification?	Making something small look bigger
23	What is an image?	What you see through a microscope
24	What is resolution?	The smallest detail you can see in a microscope
25	Give two advantages of light microscopes	Cheap, can look at live specimens
26	Give two advantages of electron microscopes	Large magnification and resolution
27	What is focus?	How clear an image is
28	How do you focus a light microscope?	Turning the coarse focus wheel then the fine focus wheel
29	What is the equation for calculating the image size?	actual size x magnification = image size

30	What is a unicellular organism?	A living thing made of only one cell
31	What is a multicellular organism?	A living thing made of lots of cells
32	What is a specialised cell?	A cell with a specific function
33	Name three specialised animal cells	Sperm cell, muscle cell, nerve cell
34	What is the function of a sperm cell?	To swim to the egg and fertilise it
35	Give two adaptations of sperm cells	Tail, lots of mitochondria
36	Why do sperm cells have tails?	To help them swim to the egg
37	Why do sperm cells have lots of mitochondria?	Release energy for swimming
38	What is the function of a nerve cell?	To carry electrical messages around the body
39	Give two adaptations of nerve cells	Dendrites, lots of mitochondria
40	Why do nerve cells have dendrites?	To connect to other cells
41	Why do nerve cells have lots of mitochondria?	To release the energy needed to send messages
42	What is the function of a muscle cell?	To contract and relax
43	Give three adaptations of muscle cells	Fibres, store glycogen, lots of mitochondria
44	Why do muscle cells have fibres?	To help them move
45	Why do muscle cells store glycogen?	To turn it into glucose
46	Why do muscle cells have lots of mitochondria?	To release the energy needed to move
47	Name four specialised plant cells	Palisade cell, root hair cell, xylem cell, phloem cell
48	What is the function of a root hair cell?	To take in water and minerals
49	Give two adaptations of a root hair cell	Large surface area, no chloroplasts
50	Why do root hair cells have a large surface area?	To improve absorption from the soil
51	Why don't root hair cells have chloroplasts?	There is no light underground, so the cells can't photosynthesise
52	What is the function of a palisade cell?	To capture/trap/absorb light energy for photosynthesis
53	Give an adaptation of a palisade leaf cell	Lots of chloroplasts
54	Why do palisade cells have lots of chloroplasts?	To do lots of photosynthesis
55	Where are palisade cells usually found?	On the upper layers of leaves
56	What is the function of a xylem cell?	Transport water
57	What is the structure of a xylem cell?	A dead hollow tube made of lignin
58	What is the function of the lignin within xylem tissue?	Strengthens the xylem and stops it bursting
59	What is the function of a phloem cell?	Transport of simple sugars and amino acids around the cell
60	What is the structure of a phloem cell?	Live cells which form hollow tubes

1	In order to enter a cell, which part of the cell must particles cross?	The cell membrane
2	When talking about particles, what does 'concentration' mean?	How many particles there are in a place
3	What does high concentration mean?	There are lots of particles in a place or volume
4	What does low concentration mean?	There are very few particles in a place or volume
5	What is diffusion?	The movement of particles from an area of high concentration to an area of low concentration
6	What is the definition of osmosis (in terms of water concentration)?	The movement of water molecules across a partially permeable membrane, from a high water concentration to a low water concentration
7	What is the definition of osmosis (in terms of the concentration of dissolved solute)?	The movement of water molecules across a partially permeable membrane, from a low dissolved solute concentration to a high dissolved solute concentration
8	What is a partially permeable membrane?	A membrane that allows some molecules to pass through but not other molecules
9	What does 'down a concentration gradient' mean?	From high concentration to low concentration
10	What does 'up a concentration gradient' mean?	From low concentration to high concentration
11	What is active transport?	The movement of particles from an area of low concentration to high concentration, which needs energy
12	Name two substances that move by diffusion within animal cells	1. Oxygen 2. Carbon dioxide
13	Name three factors which affect the rate of diffusion into cells	1. The difference in concentrations (concentration gradient); 2. Temperature; 3. Surface area of the membrane.
14	Name the factors that let exchange surfaces be more efficient	Large surface area, thin membranes, good blood supply, ventilation for gas exchange
15	What happens to an animal cell if it loses a lot of water?	It will shrivel up and stop working
16	What happens to an animal cell if it gains a lot of water?	It will burst and die
17	If a plant cell loses a lot of water, what happens?	The cell becomes lighter and the cell membrane moves away from the cell wall
18	If a plant cell gains a lot of water, what happens?	The cell becomes heavier and the cell membrane is pushed up against the cell wall
19	What do we call a solution that is more concentrated than in a cell?	Hypertonic
20	What do we call a solution that is less concentrated than in a cell?	Hypotonic
21	What do we call a solution that is the same concentration as in a cell?	Isotonic
22	Which methods of material transfer do not need energy?	Diffusion and osmosis
23	Which method of material transfer needs energy from cellular respiration?	Active transport
24	What is the volume of a cell or organism?	The total amount of space it takes up, measured in cubic millimetres or cubic metres
25	What is the surface area of a cell or organism?	The total external area of its surface. Measured in square millimetres or square metres
26	What is the surface area to volume ratio?	How much surface area an organism has compared to its volume
27	What happens to the surface area to volume ratio as an organism gets larger?	It gets smaller
28	How do root hair cells increase the rate of diffusion of materials into the roots?	They increase the surface area of the roots
29	How do alveoli increase the rate of diffusion of gases in the lungs?	They increase the internal surface area of the lungs
30	How do villi increase the rate of absorption of food molecules in the intestines?	They increase the internal surface area of the intestines
31	Give an example of a plant cell that uses active transport	Root hair cell (to absorb minerals from the soil)
32	Give an example of an animal cell that uses active transport	Cells in the small intestine (to absorb glucose into the blood)

## Unit C1: Chemistry Fundamentals

1	What is an atom?	The smallest part of an element that can still be identified as that element
2	What is the particle model?	A description of the arrangement of particles in solids, liquids and gases
3	What is a molecule?	A substance in which there are two or more atoms chemically bonded together
4	What is an element?	A substance made of only one type of atom
5	What is a compound?	A substance made of two or more different types of atoms chemically bonded together
6	What is a mixture?	A substance made of more than one thing not chemically bonded together
7	How does chromatography separate mixtures?	Some substances are more soluble in the solvent than others; these move further
8	How does distillation separate mixtures?	This separates substances according to their boiling points
9	How does filtration separate mixtures?	This separates substances according to their solubility in the solvent
10	In chromatography, what is the mobile phase?	The solvent: the liquid that the substances dissolve in
11	In chromatography, what is the stationary phase?	The paper that the solvent and dissolved substances move through
12	Which element has the symbol 'H'?	Hydrogen
13	Which element has the symbol 'O'?	Oxygen
14	Which element has the symbol 'Fe'?	Iron
15	Which element has the symbol 'C'?	Carbon
16	What does the 2 in O <sub>2</sub> mean?	There are 2 atoms of oxygen (in an oxygen molecule)
17	What does the 2 in CO <sub>2</sub> mean?	There are 2 atoms of oxygen (in a molecule of carbon dioxide)
18	What does the 2 in 2NaOH mean?	There are two molecules of NaOH (sodium hydroxide)
19	How many carbon atoms in 2CH <sub>4</sub> ?	2. Two molecules, each containing 1 carbon atom (2x1=2)

20	How many hydrogen atoms in 2CH <sub>4</sub> ?	8. Two molecules, each containing 4 hydrogen atoms (2x4=8)
21	Balance this equation: CH <sub>4</sub> + O <sub>2</sub> -> CO <sub>2</sub> + H <sub>2</sub> O	CH <sub>4</sub> + 2O <sub>2</sub> -> CO <sub>2</sub> + 2H <sub>2</sub> O
22	Balance this equation: C + O <sub>2</sub> -> CO <sub>2</sub>	It's already balanced!
23	Balance this equation: H <sub>2</sub> + O <sub>2</sub> -> H <sub>2</sub> O	2H <sub>2</sub> + O <sub>2</sub> -> 2H <sub>2</sub> O
24	Which state of matter has the highest density?	Solid - the particles are packed close together
25	In which state of matter do the particles have highest energy?	Gas - they are moving quickest and so have the highest kinetic (movement) energy
26	What is charge?	A property of particles that can be positive or negative. Other particles have no charge (neutral)
27	What happens when the same charges come into contact?	They repel
28	What happens when opposite charges come into contact?	They attract
29	Name the four models of the atom	Dalton, plum pudding, nuclear, electron shell (Bohr)
30	What was the Dalton model of the atom?	Atoms are hard, indivisible spheres
31	What was the plum pudding model of the atom?	Atoms are a sphere of spread out positive charge with negative electrons embedded into it
32	What did the gold foil experiment prove?	That atoms have nuclei with a positive charge
33	What was the nuclear model of the atom?	Atoms have a positive nucleus which electrons orbit
34	What is the electron shell (Bohr) model of the atom?	Atom has a positive nucleus which electrons orbit in fixed shells
35	What did James Chadwick discover?	The neutron
36	Which particles are found in the nucleus?	Protons and neutrons
37	Name the three particles that make up atoms (subatomic particles)	Protons, neutrons, electrons
38	State the masses of the subatomic particles	Protons: 1, neutrons: 1, electrons: 0
39	State the relative charges of the subatomic particles	Protons: +1, neutrons: 0, electrons: -1

## Unit C1: Chemistry Fundamentals

40	What is the atomic number of an atom?	The number of protons in an atom
41	What is the mass number of an atom?	The number of protons + the number of neutrons in an atom
42	Why is the number of electrons in an atom equal to the number of protons?	As their charges cancel out
43	How do you calculate the number of neutrons in an atom?	Mass number - atomic number
44	What are isotopes?	Atoms of the same element with a different number of neutrons
45	How are the electrons arranged in atoms?	Orbiting the nucleus in shells
46	How many electrons can go in the first shell?	2
47	How many electrons can go in the second and third shells?	8
48	What is an element?	A substance made of only one type of atom
49	What is a compound?	A substance made of two or more different types of atoms chemically bonded together
50	What is a mixture?	A substance made of more than one thing not chemically bonded together
51	What are groups in the periodic table?	The columns, numbered 1, 2, 3, 4, 5, 6, 7, 0
52	What can the group tell you about the electrons in an atom?	How many electrons in the outer shell. E.g. carbon is in group 4 so has 4 electrons in the outer shell
53	What are periods in the periodic table?	The rows in the periodic table
54	What can the period tell you about the electrons in an atom?	How many shells an atom has. E.g. carbon is in the second period so has two shells
55	Why did Mendeleev put some elements in groups?	Because they had similar properties (e.g. they reacted violently with water)
56	Why did Mendeleev leave gaps in his periodic table?	For elements that had not been discovered yet
57	What charge do electrons have?	-1
58	What charge will an ion of lithium take?	1+ (one electron in the outer shell, needs to lose it)

59	What charge will an ion of beryllium take?	2+ (two electrons in the outer shell, needs to lose them both)
60	What charge will an ion of barium take?	2+ (group 2 so two electrons in the outer shell, needs to lose them both)
61	What charge will an ion of fluorine take?	1- (7 electrons in the outer shell, needs to gain one)
62	If something has gained electrons, what charge will it have?	Negative
63	If something has lost electrons, what charge will it have?	Positive (because they have lost a negative charge!)
64	What charge will an ion of oxygen take?	2- (6 electrons in outer shell so needs to gain two)
65	What charge will an ion of selenium take?	2- (group 6, so has 6 electrons in the outer shell and needs to gain two)
66	Explain in terms of electrons what occurs when lithium bonds with chlorine	One electron transfer from lithium to chlorine
67	Why do atoms transfer electrons in ionic bonding?	So that they can have full outer shells
68	Explain in terms of electrons what occurs when lithium bonds with fluorine	One electron transfer from lithium to fluorine
69	Explain in terms of electrons what occurs when magnesium bonds with oxygen	Two electrons transfer from magnesium to oxygen
70	Explain in terms of electrons what occurs when beryllium bonds with oxygen	Two electrons transferred from beryllium to oxygen
71	Explain in terms of electrons what occurs when magnesium bonds with chlorine	Two electrons transfer from magnesium to two different chlorine atoms (one each)
72	Explain in terms of electrons what occurs when sodium bonds with oxygen	Two electrons transfer to an oxygen atom from two different sodium atoms
73	Why do sodium ions and chlorine ions form an ionic bond?	There is an electrostatic force of attraction between oppositely charged ions
74	Why don't sulfur ions and oxygen ions form ionic bonds with each other?	Both have negative charges so would repel

## 1. Les relations en famille - family relationships

<b>Où habitez-vous? / Où habites-tu? – where do you live?</b>	J'habite à Londres avec ma famille – I live in London with my family
	J'ai deux frères et une soeur – I have two brothers and one sister
	Je suis fils unique / Je suis fille unique (f) – I am an only child
	Mes parents sont divorcés, j'habite avec ma mère et mon beau-père – My parents are divorced, I live with my mother and my step-father
	Mon frère cadet / Mon frère aîné – my younger / older brother
	Ma soeur cadette / Ma soeur aînée – my younger / older sister
	J'ai les yeux bleus/verts/marron et les cheveux blonds/noirs/bruns/roux – I have blue/green/brown eyes and blonde/black/brown/red hair
	Mon frère (il) / Ma soeur (elle) a... - my brother (he)/My sister (she) has...
	Mes frères (ils) / Mes soeurs (elles) ont - my brothers / sisters (they) have
	J'ai quatorze ans / Mon frère a dix ans – I am 14yrs old / my brother is 10
<b>Décrivez votre famille – describe your family</b>	Je m'entends bien avec mon frère / mes frères / ma soeur / mes soeurs / mon père / ma mère / mes parents / mes cousins – I get on well with...
	Je ne m'entends pas bien avec / Je m'entends mal avec mes frères / soeurs / parents – I don't get on well with my brothers / sisters/parents
	Mon frère est sympa / mes frères sont sympas – my brother is nice / my brothers are nice
<b>Décrivez votre meilleur(e) ami(e) - describe your best friend</b>	Ma soeur est généreuse / mes soeurs sont généreuses – my sister is generous / my sisters are generous
	Mon meilleur ami est drôle, compréhensif mais des fois un peu égoïste – my best friend (m) is funny, understanding but sometimes a bit selfish
<b>Et votre petit(e) ami(e)? – and your girl or boy friend</b>	Ma meilleure amie est intelligente, compréhensive et vraiment sympa – my best friend (f) is intelligent understanding and really nice
	Ma petite amie est intelligente / créative / généreuse (f) Mon petit ami est intelligent / créatif / généreux (m) – my girl- / boyfriend is intelligent / creative / generous
<b>Décrivez votre partenaire idéal(e) et vos plans pour le futur. - describe your ideal partner and plans for the future.</b>	Mon partenaire idéal est gentil (m) Ma partenaire idéale est gentille (f) - my ideal partner is be kind
	Il / elle aime faire la cuisine / écouter la musique / les mêmes choses que moi – He / she likes cooking / listening to music / the same things as me
	Je voudrais avoir des enfants / Je ne voudrais pas avoir des enfants – I want to have children / I don't want to have children
	La famille est très importante pour moi – family is very important to me
	La liberté est très importante pour moi – freedom is very important to me

<b>ma famille</b>	my family
<b>mon père / mon beau-père</b>	my father / my step father
<b>ma mère / ma belle-mère</b>	my mother / my step mother
<b>mes parents / mes grand-parents</b>	my parents / my grand-parents
<b>mon grand-père</b>	my grandpa
<b>ma grand-mère</b>	my grandma
<b>mon frère / mon demi-frère</b>	my brother / my half or step brother
<b>ma soeur / ma demi-soeur</b>	my sister / my half or step sister
<b>ma tante / mon oncle</b>	my auntie / my uncle
<b>mon cousin (m) / ma cousine (f)</b>	my cousin
<b>mes cousin(e)s</b>	my cousins
<b>un (mon) chien / un (mon) chat</b>	a (my) dog / a (my) cat

<b>Je suis – I am</b>	<b>sympa(s) / agréable(s)</b>	nice
<b>Mon frère est... – my brother is... Il est – he is...</b>	<b>adorable(s) / mignon(ne)s</b>	adorable / cute
	<b>amusant(e)(s) / drôle(s)</b>	funny
<b>Ma soeur est – my sister is... Elle est – she is...</b>	<b>intelligent(e)(s)</b>	intelligent
	<b>compréhensif(s) / -ive(s)</b>	understanding
<b>Mes parents sont... – my parents are... Ils / elle sont – they are</b>	<b>créatif (-ive)(s)</b>	creative
	<b>travailleur(s) / euse(s)</b>	hard-working
	<b>timide(s)</b>	shy
	<b>gentil(le)(s)</b>	kind
	<b>généreux / -euse(s)</b>	generous
	<b>égoïste(s)</b>	selfish
	<b>casse-pieds / agaçant(e)(s)</b>	annoying
	<b>jaloux / jalouse(s)</b>	jealous
	<b>méchant(e)(s)</b>	mean
	<b>strict(e)(s) / sévère(s)</b>	strict
<b> paresseux / paresseuse (s)</b>	lazy	
	<b>désagréable (s)</b>	unpleasant

## 2. Manger et boire - food and drink

<b>Pour...- for</b>	le petit déjeuner - breakfast
	le déjeuner - lunch
	le goûter - snack
	le dîner - dinner

<b>normalement</b>	normally
<b>d'habitude</b>	usually
<b>tous les jours</b>	every day
<b>chaque jour</b>	each day
<b>à sept heures (07:00)</b>	at 7 am
<b>à la récré</b>	at breaktime
<b>à midi (12:00)</b>	at midday
<b>le matin</b>	the morning
<b>l'après-midi</b>	the afternoon
<b>le soir</b>	in the evenings
<b>à vingt heures (20:00)</b>	at 8pm
<b>le weekend</b>	at the weekend
<b>pendant la semaine</b>	during the week
<b>pendant la journée</b>	during the day
<b>pendant la soirée</b>	during the evening

<b>je mange... – I eat...</b>	des céréales
	un yaourt – a yoghurt
<b>j'aime manger – I like to eat</b>	des oeufs (m) - eggs
	du pain (grillé) – some bread (toast) avec du beurre / de la confiture – with butter / jam
<b>je n'aime pas manger – I don't like to eat</b>	un sandwich [de...] – a [...] sandwich un sandwich de jambon – a ham sandwich un sandwich de fromage – a cheese sandwich
	de la soupe – soup
	une pizza – a pizza
	un hamburger – a burger
	du riz – some rice
	du fromage – some cheese
	du poulet (rôti) – some (roast) chicken
	du jambon – some ham
	des légumes (m) – vegetables
	de la salade - salad
	des pâtes (f) - pasta
	des frites - chips
	des pommes de terre – potatoes
	des fruits (m) – fruit
une tablette de chocolat – a bar of chocolate du chocolat – some chocolate	
un paquet de chips – a packet of crisps des chips – crisps	
une bouteille de coca / de l'eau – a bottle of Coke / water	
un verre de lait – a glass of milk	
un jus d'orange / un café / un thé – an orange juice / a coffee / a tea	

### 3. Les fêtes - Festivals and special occasions

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Quelle est votre fête préférée? – what is your favourite festival / custom / celebration?	
<b>Je préfère // Ma célébration / fête préférée, c'est</b> - I prefer // My favourite celebration / festival is...	Noël / Pâques / Aïd al-Fitr / La Saint-Valentin / Mardi Gras / Hanoukka / le Saint-Sylvestre (Le Jour de l'An) / mon anniversaire – Christmas / Easter / Eid al-Fitr / Valentine's day / Mardi Gras / Hanukkha / New Year's Eve / my birthday
<b>parce que</b>	j'ai les cadeaux / j'adore le chocolat / on ne travaille pas / on se déguise / on s'habille / on partage un repas ... – I have presents / I love chocolate / you don't go to work / you wear costumes / you dress up / you share a meal
Où es-tu allé(e) / Où êtes-vous allé(e)s pour célébrer / fêter...?	Where did you go to celebrate...?
<b>Pour célébrer [...] – to celebrate [...]</b>	à l'église to church à la mosquée to mosque à la synagogue to synagogue au restaurant to a restaurant au centre ville into town / to the town centre chez ma tante / mon oncle / mes cousins / mes grand-parents... to my auntie's / uncle's / cousins' / grand parents' house...
<b>je suis allé(e) – I went</b>	
<b>on est allés / – we went</b>	
<b>Qu'est-ce que vous avez mangé et bu?</b>	What did you eat and drink?
<b>J'ai mangé / On a mangé un repas spécial / une dinde rôtie / des crêpes / des oeufs en chocolat</b> – I ate / we ate a special meal / a roast turkey / pancakes / chocolate eggs	
<b>Pour l'Iftar / l'Aïd al-Fitr on a mangé... – for Iftar / Eid al-Fitr we ate...</b>	
<b>J'ai bu / On a bu du thé / du coca / une coupe de champagne</b> – I drank / we drank tea / Coke / a glass of Champagne	
<b>cependant / part contre je n'aime pas....parce que...</b> – however / on the other hand I don't like....because...	
<b>il y a trop de monde</b> – there are too many people	
<b>je ne m'entends pas bien avec</b> – I don't get on well with...	
<b>je déteste...</b> - I hate...	
<b>un repas spécial</b>	a special meal
<b>une coupe de champagne</b>	a glass of Champagne
<b>le feu d'artifice</b>	firework display
<b>les feux d'artifice</b>	fireworks
<b>les cadeaux (m)</b>	presents
<b>les cartes</b>	cards
<b>les gâteaux (m)</b>	cakes
<b>un défilé militaire</b>	a military parade
<b>une parade</b>	a parade
<b>avec ma famille</b>	with my family
<b>avec mes amis</b>	with my friends

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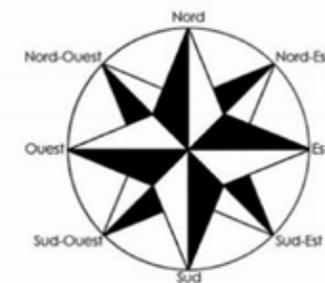
<b>Qu'est-ce que vous avez fait?</b>	What did you do?
<b>J'ai ...- I... On a ...- We...</b>	fait un gâteau / donné des cadeaux / regardé les feux d'artifice / écouté de la musique / vu des groupes / dansé / partager un repas – made a cake / gave presents / watched the fireworks / listened to music / saw some bands / danced / shared a meal
<b>Je suis allé(e) / on est allés à la fête de – I went / we went to the festival of...</b>	<b>J'ai aimé / adoré – I liked</b>
<b>Je suis parti(e) le vendredi avec mes copains – I left on the Friday with my mates</b>	<b>Je n'ai pas aimé – I didn't like</b>
<b>Je suis arrivé(e) le matin – I arrived in the morning On est arrivés le soir – we arrived in the evening</b>	<b>regarder – looking at faire – making donner – giving recevoir - receiving</b>
<b>Je suis resté(e) dans un hôtel – I stayed in a hotel On y est restés trois jours – we stayed three days On est restés chez mes cousins – we stayed at our cousins' house</b>	<b>le défilé / la fête / les feux d'artifice / les chocolats / les gâteaux / les cadeaux – the parade / fireworks/ chocolates / cakes / presents</b>
<b>On a campé – we camped</b>	<b>la musique / les groupes / l'atmosphère / le voyage / la nourriture ...the music / the bands / the atmosphere / the journey / the food...</b>
	<b>parce que...</b>
	because...
<b>C'était – it was</b>	délicieux / passionnant / animé / incroyable / fantastique / ennuyeux / un peu cher – delicious/ exciting / lively / incredible / fantastic / boring / a little expensive
<b>Il y avait – there was/ were</b>	une parade / des feux d'artifice / beaucoup de monde – a parade / fireworks / a lot of people
<b>Il faisait – it was (weather)</b>	froid / chaud / beau / nuageux – cold / hot / fine / cloudy
<b>Il pleuvait / neigeait</b>	– it was raining / snowing

## 4. Les fêtes francophones - Francophone festivals

<p><b>Le Saint-Sylvestre</b> : 31 décembre – New Year's Eve  <b>Le jour de l'An</b> : 1e janvier – New Year's Day  <b>Le Saint Valentin</b> : 14 février – Valentine's Day  <b>La fête des rois</b> : 6 janvier – Epiphany  <b>Poisson d'avril</b> : 1e avril – April Fools' Day  <b>La fête du travail</b> : 1e mai – Labour Day / May Day  <b>La fête des mères</b> : mai 26 – Mothers' Day  <b>La fête nationale</b> : 14 juillet – Bastille Day  <b>La Toussaint</b> : 1e novembre – All Saints' Day  <b>La veille de Noël / le réveillon</b> : 24 décembre – Christmas Eve  <b>Noël</b> : 25 décembre – Christmas</p> <p><b>Mardi Gras</b> – Mardi Gras  <b>Pâques</b> – Easter  <b>La Pâque juive</b> – Passover  <b>Rosh Hashanah</b> – Jewish New Year  <b>Hanoukka</b> – Hanukkah  <b>Le Ramadan</b> – Ramadan  <b>Aïd al-Fitr</b> – Eid al-Fitr</p> <p>Bonne anniversaire – happy birthday!          Joyeux Noël! – happy Christmas!          Bonne fête! – have a good party/celebration/festival!          Bonnes vacances! – Happy holidays / have a good holiday!</p>	<p>Le 14 juillet est la fête nationale française - the 14th July is the French national holiday.          Cette fête historique célèbre la Révolution française de 1789 – this historical celebration marks the French Revolution of 1789.</p> <p>En France, on donne des cadeaux la veille de Noël – in France we give presents on Christmas Eve          On va à la messe de minuit pour le réveillon – we go to midnight mass for the Christmas Eve celebration          La fête de Saint-Sylvestre est aussi Le Jour de l'An – The festival of Saint-Sylvestre is also New Year's Day</p> <p>On mange les galettes le six janvier – We eat Twelfth Night Cakes on the 6th January</p> <p>Le premier mai on vent du muguet dans les rues – On May Day, they Lily of the Valley in the streets          C'est un port-bonheur – it's a lucky charm          C'est aussi la fête du Travail et un jour de manifestations – it is also Labour Day and a day for demonstrations</p> <p>Pendant Mardi Gras, on peut chanter et danser dans les rues – during Mardi Gras you can sing and dance in the streets          On porte des masques / costumes – you wear masks / costumes</p> <p>Aïd al-Fitr c'est la fête de pardon et du partage – Eid al-Fitr is the celebration of forgiveness and sharing</p>	<p>C'est une fête religieuse / historique/ romantique / de famille / nationale / régionale          it's a religious / historical / romantic / family / national / regional festival</p> <p>Une fête culturelle – a cultural festival</p> <p>Je suis allé(e) à Cannes pour le festival du cinéma – I went to Cannes for the film festival</p> <p>Je suis allé(e) au festival de musique de Bretagne qui s'appelle le Vieilles Charrues – I went to the Bretagne music festival with is called the Vieilles Charrues</p> <p>On est allés au festival de danse hip-hop à Paris – the Paris hip-hop festival</p> <p>J'ai adoré Paris Photo – I loved the Paris Photo fair</p> <p>C'était trop cool! – It was too / so cool!          C'était absolument incroyable – it was absolutely incredible!</p>																				
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<b>trop</b>	too																					

## 5. Les pays francophones - Francophone countries – Places, Activities, Geography and Key Facts

<p><b>Où habites-tu / Où habitez-vous?</b> – where do you live?</p> <p><b>Qu'est-ce qu'on peut faire dans ta / votre région</b> – what can you do in your neighbourhood?</p>	<p>J'habite à Barnet, Londres dans le sud-est de l'Angleterre / I live in Barnet, London in the south east of England</p> <p>Il y a / Il n'y a pas beaucoup à faire dans ma région – there is / there isn't a lot to do in my area</p> <p>Il y a un centre commercial / une gare / un parc / un centre sportif / un cinéma / des magasins / des restaurants et cafés – there is a shopping centre / a station / a sports centre / a cinema / there are shops / restaurants and cafés</p> <p>On peut s'amuser au centre ville – you can enjoy yourself in the town centre</p> <p>On peut sortir avec des amis / voir un film / manger dans un bon restaurant / jouer au foot dans le parc / fair du shopping – go out with friends / see a film / eat in a good restaurant / play football in the park</p>
<p><b>Où allez-vous visiter?</b> – Where are you going to visit?</p>	<p>Je vais faire un tour de Paris – I am going to do a tour of Paris</p> <p>Je vais prendre le train / l'Eurostar – I'm going to take the train / the Eurostar</p> <p>J'y vais en avion / voiture / car / bateau – I'm going there by plane / car / coach / boat</p> <p>Je voudrais voir La Tour Eiffel – I would like to see the Eiffel Tower</p> <p>J'aimerais visiter la Martinique – I would love to visit Martinique</p> <p>Je vais en Algérie / en Maroc / en France pour voir ma famille – I'm going to Algeria / Morocco / France to see my family</p> <p>Ici on peut faire du surf / aller à la plage / faire du shopping / voir un match de foot – Here you can surf / go to the beach / go shopping / see a football match...</p> <p>Si j'ai le temps / assez d'argent je vais aller en vacances – If I have the time/enough money I'm going to go on holiday</p> <p>Si je passe mes examens je vais étudier / travailler à l'étranger – If I pass my exams I will study / work abroad</p>



<b>beau/belle</b>	beautiful
<b>connu(e)</b>	well-known
<b>ensoleillé(e)</b>	sunny
<b>peuplé(e)</b>	populated
<b>touristique</b>	touristic
<b>grand(e)</b>	big
<b>haut(e)</b>	high
<b>long(ue)</b>	long

<b>moche</b>	unattractive
<b>peu connu(e)</b>	little known
<b>ombreux(-euse)</b>	shady
<b>désert(e)</b>	deserted
<b>peu touristique</b>	not very touristic
<b>petit(e)</b>	little
<b>bas(se)</b>	low
<b>court(e)</b>	short

**French**  
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5. Les pays francophones - Francophone countries – Places, Activities, Geography and Key Facts

plus - more	+ adjective + que
moin - less	
aussi - as	

La France est plus grande que la Grande Bretagne – France is bigger than Great Britain
L'Angleterre est plus petite que la France – England is smaller than France
Paris est moins peuplé que Londres – Paris is less populated than London
La Tamise est plus longue que La Seine – The Thames is longer than the Seine
Le Mont Blanc est plus haut que le Ben Nevis – Mont Blanc is bigger than Ben Nevis
Marseille est plus au sud que Bordeaux – Marseille is further south than Bordeaux
La France est aussi peuplée que La Grande Bretagne – France is as populated as Great Britain

le / la / les plus – the most	+ adjective
le / la / les moins – the least	

La Loire est le plus grand fleuve de France – The Loire is the longest river in France
L'Algérie est le plus grand pays d'Afrique – Algeria is the largest country in Africa
La Réunion est le plus peuplé des territoires outre mer français – Reunion is the most populated French overseas territory
Le Mont Blanc est la plus haute montagne d'Europe – Mont Blanc is the highest mountain in Europe
À mon avis, c'est la plus belle partie de notre voyage – In my opinion it's the most beautiful part of our trip
Les dix montagnes les plus hautes – the ten highest mountains
C'est le plus connu – it's the best known
Ce sont les plus connus en France / au Quebec / du monde – they are the best known in France / Quebec / in the world

French  
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Relaciones con familia y amigos – Relationships with family and friends

1. ¿Cómo es tu familia? – what is your family like?

En mi familia hay In my family, there is/are	mi my	padre madre hermano/a abuelo/a tío/a primo/a	father mother brother/sister grandfather/grandmother uncle/aunt m/f cousin
	Tengo I have	mis My (for plural nouns)	padres abuelos hermanos primos

Tengo Tiene Tenemos Tienen	I have	los ojos verdes/azules/grises/marrones green/blue/grey/brown eyes
	s/he has	el pelo rubio/castaño/negro/pelirrojo blond/brown/dark/ginger hair
	we have they have	el pelo corto/largo/liso/ondulado/rizado short/long/straight/wavy/frizzy hair

Soy Es	I am s/he is	un poco bastante muy demasiado	a bit quite very too	divertido travieso generoso cariñoso abierto serio honrado perezoso orgullosa egoísta optimista feliz hablador trabajador	fun silly generous caring open serious honest lazy proud selfish optimistic happy talkative hard-working nice/kind sad happy
Sería	I / s/he would be				

Adjective agreement rule

Adj end	Masc sing	Masc plur	Fem sing	Fem plur
- O	- O	- OS	- A	- AS
- A	- A	- AS	- A	- AS
- R	- R	- RES	- RA	- RAS
- L	- L	- LES	- L	- LES
- Z	- Z	- CES	- Z	- CES
- E	- E	- ES	- E	- ES

2. ¿Cómo te llevas con familia? – How do you get on with your family?

Ahora Now Normalmente Normally Por lo general In general	me llevo bien I get on well me llevo mal I get on badly me peleo I fight/argue	con with	porque es because s/he is	+ personality adjective
En el pasado In the past Hace X años X years ago El año pasado Last year	me llevaba bien/mal I used to get on well me llevaba mal I used to get on badly me peleaba I used to argue/fight	+ family member	porque era because s/he was	

3. Relaciones y planes para el futuro – relationships and plans for the future

Mi novia ideal	My ideal girl	sería – would be	+ personality adjectives
		Tendría - would have	+ physical description
Mi novio ideal	My ideal bf	viviría - would live	en un piso/ una casa lujoso/a in a luxurious flat/ house
Mi pareja ideal	Mi ideal partner	estudiaría - would study	a la universidad/ ciencias/ idiomas/ comercio at university/ science/ languages/ business
		le gustaría - would like	viajar/ leer/ ver películas (to) travel / read/ watch movies

Creo/pienso que I believe/think that En el futuro In the future Cuando sea mayor When I am older Cuando tenga 20 años When I am 20 Después de mis estudios After my studies	me gustaría I would like  me encantaría I would love  quisiera I would love (=wish)	casarme - to get married enamorarme – to fall in love tener una familia - to have a family tener hijos – to have children encontrar el amor de mi vida to meet the love of my life vivir con mi novio/a to live with my boyfriend/girlfriend vivir juntos to live together
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## Las fiestas y las tradiciones – Festivals and traditions

### 4. Hablando de las fiestas – Talking about festivals

El Día de los muertos	se celebra is celebrated	el primero de noviembre	en México
Las Fallas		durante el mes de marzo	en Valencia
La Tomatina		el último día de agosto	en Buñol
San Fermín		del 6 al 14 de julio	en Pamplona
La Feria de Abril		en abril	en Sevilla
La Semana Santa		durante Pascua	en Valladolid
Durante esta fiesta During this festival	se llevan trajes de colores se queman figuras de madera se lanzan huevos/tomates se construyen hogueras se disparan fuegos artificiales se celebran los santos se ven batallas y desfiles se come comida típica se decoran las tumbas	colourful costumes are worn wooden figures are burnt eggs/tomatoes are thrown bonfires are built fireworks are set off saints are celebrated battles and processions are seen typical food is eaten tombs are decorated	

### 5. Ir a una fiesta – Going to a festival

En mi opinión In my opinion	asistir a + festival	era	used to be	emocionante interesting	exciting
Pienso que I think that		fue	was	peligroso raro/extraño impresionante	dangerous strange impressive
Creo que I believe that		es	is	guay tonto	cool stupid/silly
Desde mi punto de vista From my point of view		sería	would be	hermoso entretenido único	beautiful entertaining amazing
		será	will be	fascinante increíble estupendo	fascinating amazing marvellous

Spanish  
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### 6. ¿Cómo se celebra Navidad? – How is Christmas celebrated?

Durante Navidad During Christmas	la gente people	come uvas a medianoche canta villancicos va a la iglesia prepara platos típicos	eat grapes at midnight sing carols go to church prepare typical dishes
	la familia the family	Visitamos familia y amigos Llevamos ropa especial Decoramos la casa Decoramos el árbol de Navidad	We visit family and friends We wear special clothes We decorate the house We decorate the Christmas tree
		Pasamos tiempo con la familia Comemos comida deliciosa Bebimos champán Recibimos regalos	We spend time with the family We eat delicious food We drink Champagne We receive presents

### The preterite tense

Use the **preterite tense** to talk about completed actions in the past.

visitar (to visit)	beber (to drink)	salir (to leave / to go out)	irregular verbs ir (to go) ser (to be)
visité	bebí	salí	fui
visitaste	bebiste	saliste	fuiste
visitó	bebió	salíó	fue
visitamos	bebimos	salimos	fuimos
visitasteis	bebisteis	salisteis	fuisteis
visitaron	bebieron	salieron	fueron

Other irregular verbs in the preterite include:  
**tener** (e.g. **tuve** – I had), **hacer** (e.g. **hice** – I did / made)  
and **ver** (e.g. **vi** – I saw / watched).

Some verbs have a spelling change in the 'I' form only:  
jugar → jugué llegar → llegué sacar → saqué

## Cosas interesantes sobre España – Interesting things about Spain

### 7. ¿Qué hay en España? – What is there in Spain?

Hay There is	un castillo un cine un estadio un parque un polideportivo un centro comercial un museo	a castle a cinema a stadium a park a sport centre a shopping centre a museum	animado/a agradable bonito/a famoso/a limpio/a moderno/a nuevo/a pequeño/a pintoresco/a popular grande	lively nice pretty famous clean modern new small picturesque popular big
	una piscina una plaza una playa una tienda	a pool a square a beach a shop		

### 8. ¿Cuáles son los lugares de interés? – What are the places of interest?

En España/ Barcelona/ Sevilla....	hay	pueblos castillos museos	villages castle museums	antiguos/as bonitos/as típicos/as turísticos/as maravillosos/as interesantes grandes	old pretty/nice typical touristic wonderful interesting big
	there is/ are	ciudades playas montañas plazas de toros	cities beaches mountains bullrings		
		ríos y lagos refrescantes - refreshing rivers and lakes			

El clima es	The climate is	soleado / frío seco / variable	sunny / cold dry / variable
Ésta situado/a	It is located	en un valle en la montaña cerca de la playa al lado del río ...	in a valley in the mountains close to the beach next to the river
Está rodeado/a	It is surrounded	de sierra por la costa	by mountains by the coast

Spanish  
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### 9. ¿Qué se puede hacer? – What can you do?

Se puede You can One can	andar en la naturaleza	walk in nature
	bailar en la disco	dance in the club
	beber un vaso de vino	drink a glass of wine
	descansar en el sol	rest in the sun
	disfrutar de las vistas	enjoy the views
	esquiar en las montañas	ski in the mountains
	ir de paseo por las calles	go for a walk in the streets
	montar a caballo	go horse-riding
	nadar en el mar	swim in the sea
practicar deportes acuáticos	do/play water sports	
probar platos típicos	try typical dishes	

### A - THE - SOME - MANY

Remember the words for 'a', 'some' and 'the'.

	Singular	Plural
masculine	un museo	unos museos
feminine	una tienda	unas tiendas
masculine	el museo	los museos
feminine	la tienda	las tiendas

The words for 'many' or 'a lot of' are **muchos** and **muchas**.

masculine	muchos museos
feminine	muchas tiendas

## Life in an Emerging Country

Background	
1. Development is social and economic progress.	
2. When a country develops, the standard of living and quality of life improves. <b>(B)</b>	
3. Different factors can affect development such as economic, social and political factors. <b>(A)</b>	
4. Emerging countries have begun to experience higher rates of development, with a rapid growth in secondary industries. <b>(A, C)</b>	
5. Emerging countries have some of the fastest rates of urbanisation in the world. <b>(D)</b>	
6. This is causing urban areas (cities) to become highly populated, this process can have both opportunities and challenges. One such challenge is the growth of squatter settlements. <b>(E)</b>	
7. Emerging countries often host the factories of many transnational companies. They provide wages and taxes, and can promote development. However, they can also cause negatives. <b>(F, G)</b>	

A. Characteristics of emerging countries (7)	
<b>BRIC countries</b>	Brazil, Russia, India, China.
<b>MINT countries</b>	Mexico, Indonesia, Nigeria, Turkey.
<b>Industrialisation</b>	The process of a country moving from mostly agriculture (farming) to manufacturing (making) goods.
<b>Employment structure</b>	How the workforce is divided up between primary, secondary, tertiary and quaternary employment.
<b>Secondary industry</b>	An industry which manufactures goods.
<b>Exports</b>	Sending goods to another country for sale.
<b>Urbanisation</b>	The growth in the percentage of people living in towns and cities, causing them to grow.

B. Development indicators (3)	
<b>GDP per capita</b>	The total value of goods and services produced by a country in a year divided by the population.
<b>HDI (Human Development Index)</b>	A measure which combines GNI per capita, life expectancy and mean years of schooling.
<b>Life expectancy</b>	The average age you are expected to live to in a country.

D. Rural to urban migration (4)	
<b>Rural to urban migration</b>	The movement of people from rural areas (countryside) to urban areas (cities).
<b>Push factor</b>	Things that make people want to leave an area e.g. a lack of jobs.
<b>Pull factor</b>	Things that attract people to live in an area e.g. good health care.
<b>Mechanisation</b>	When machines begin to do the work which humans once completed.

F. Transnational corporations (TNCs) (5)	
<b>Transnational corporation</b>	Those that operate across more than one country.
<b>Footloose</b>	Industries which are not tied to a location due to natural resources or transport links.
<b>Globalisation</b>	The increased connectivity of countries around the world e.g. through trade.
<b>Host country</b>	The country where the TNC places its factories e.g. in an emerging or developing country.
<b>Source country</b>	The country where the headquarters for the TNC is located e.g. a developed country.

Geography  
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C. Encouraging development (4)	
<b>Subsidy</b>	Money given by a government to help an industry keep down the cost of exports.
<b>Tax breaks</b>	This reduces the amount of tax a company must pay (normally for a fixed period), therefore increasing profit.
<b>Minimum wage</b>	The lowest wage permitted by law in a country.
<b>Trade unions</b>	An organisation of workers who work to protect the rights of those employed.

E. Squatter settlements (5)	
<b>Squatter/shanty settlement</b>	An area (often illegal) of poor quality housing, lacking basic services e.g. water.
<b>Inequality</b>	Differences in wealth, and wellbeing.
<b>Sanitation</b>	Measures to protect public health e.g. clean water and disposing of sewage.
<b>Informal economy</b>	Jobs which are not taxed, workers do not have contracts or rights.
<b>Quality of life</b>	A measure of how 'wealthy' people are, but measured using housing, employment and environment, rather than income.

G. Impact of TNCs	
<b>Positive: (5)</b>	<ol style="list-style-type: none"> <li>1. More jobs.</li> <li>2. More taxes.</li> <li>3. Invest in infrastructure projects.</li> <li>4. GDP increases.</li> <li>5. Develop workers skills.</li> </ol>
<b>Negative: (3)</b>	<ol style="list-style-type: none"> <li>1. Can exploit workers e.g. long hours.</li> <li>2. Most of the profits from TNCs leave the country where production takes place.</li> <li>3. Increased levels of pollution e.g. air and water (from industrial waste).</li> </ol>

## Climate Change

Background	
1. Since the 1860s the global climate has been recorded. Since then the climate globally has increased by 0.8° Celsius.	
2. Climate scientists can use methods to find out about the global climate. <b>(A)</b>	
3. From this evidence we can see that the planet has always gone through periods of warming and cooling. Sometimes these changes are natural. <b>(B, C)</b>	
4. The rapid increase of carbon dioxide in the atmosphere from burning fossil fuels, is causing the enhanced greenhouse effect. <b>(D)</b>	
5. The enhanced greenhouse effect is causing changes to the planet and people. <b>(E, F)</b>	
6. Countries are trying to resolve the climate change issue by limiting the amount of carbon dioxide released into the atmosphere, this is known as mitigation. <b>(G, H)</b>	
7. Some countries are trying to adapt to climate change e.g. building flood barriers. <b>(G, H)</b>	

A. Measuring climate change (3)	
<b>Ice cores</b>	Each layer of ice in a core represents a different year. CO <sub>2</sub> can be measured in each layer, and therefore the temperature.
<b>Tree rings</b>	Each ring represents a different year. Wider rings show a warmer and wetter climate.
<b>Historical evidence</b>	Paintings and diaries e.g. paintings of ice fairs on the frozen Thames 500 years ago.

B. Changes in climate (3)	
<b>Climate change</b>	The process of the Earth's climate changing over time.
<b>Glacial periods</b>	Cold periods.
<b>Inter-glacial periods</b>	Warm periods.

C. Natural climate change (3)	
<b>Volcanic eruptions</b>	Ash from volcanic eruptions can block sunlight, making it colder.
<b>Sun spots</b>	The sun can give out more energy due to an increase in sun spots.
<b>Orbital change</b>	The orbit of the sun changes from oval (ellipse) to circular approx. 98,000 yrs.

E. Effects on people (6)	
<b>Tropical storms</b>	Increase in frequency and intensity so more damage.
<b>Sea-level rise</b>	Increased risk of floods, damaging property and businesses.
<b>Melting Arctic ice</b>	Affects trading routes in the Arctic Circle.
<b>More droughts / floods</b>	Crop failure, could lead to starvation and famine.
<b>Cost of defence</b>	Governments have to spend more money on disasters instead of developing.
<b>Environmental Refugees</b>	Pressure on countries to accept refugees.

G. Strategies to resolve climate change (4)	
<b>Adaptation</b>	Adapting to climate change to make life easier.
<b>Adaptation examples (3)</b>	<ol style="list-style-type: none"> <li>1. Building flood defences.</li> <li>2. Growing new crops to suit the new climate.</li> <li>3. Irrigation channels, sending water from areas of surplus to deficit.</li> </ol>
<b>Mitigation</b>	Trying to stop climate change from happening by reducing greenhouse gases.
<b>Mitigation examples (3)</b>	<ol style="list-style-type: none"> <li>1. International agreements.</li> <li>2. Alternative energies.</li> <li>3. Carbon capture.</li> </ol>

Geography  
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D. Human-induced climate change (5)	
<b>Greenhouse effect</b>	The way that gases in the atmosphere trap heat from the sun. Like glass in a greenhouse they let heat in, but prevent most from escaping.
<b>Greenhouse gases</b>	Gases like carbon dioxide and methane that trap heat around the Earth.
<b>Transport</b>	More cars, so more CO <sub>2</sub> causing the enhanced greenhouse effect.
<b>Farming</b>	Farming livestock produces methane, this is a greenhouse gas.
<b>Energy</b>	More energy required, meaning more fossil fuels burnt, so more CO <sub>2</sub> .

F. Effects on the environment (4)	
<b>Sea temperature rises</b>	Coral bleaching and destruction of marine ecosystems.
<b>More droughts</b>	Migration/death of species which can not survive drought conditions.
<b>Melting glaciers (ice rivers)</b>	Will send more fresh water into the sea, causing the sea level to rise.
<b>Melting Arctic ice</b>	Loss of habitats for animals, such as polar bears.

H. Place specific examples (2)	
<b>Adaption</b>	<u>The Thames Barrier.</u> Positive: Stops flooding due to rising sea levels. Negative: Expensive
<b>Mitigation</b>	<u>The Paris Agreement.</u> Positive: Countries are trying to lower CO <sub>2</sub> emissions. Negative: The USA pulled out and China did not sign up.

## TOPIC 1: THE FIRST WORLD WAR

### Timeline

1. The Triple Alliance was formed <b>1882</b>	3. Archduke Franz Ferdinand was assassinated <b>June 1914</b>	5. First Battle of Ypres <b>Oct-Nov 1914</b>	7. The Battle of the Somme – 1 million men were wounded or killed <b>July-Nov 1916</b>	9. The Battle of Arras <b>April-May 1917</b>	11. Battle of Cambrai <b>October 1917</b>	13. End of the First World War <b>November 1918</b>
<b>1907</b> 2. The Triple Entente was formed	<b>August 1914</b> 4. First World War began	<b>April-May 1915</b> 6. Second Battle of Ypres	<b>April 1917</b> 8. USA entered the war	<b>July-November 1917</b> 10. Battle of Passchendaele – many men drowned in mud	<b>August 1918</b> 12. The Hundred Days Offensive began	

### Key people

<b>14. Archduke Franz Ferdinand</b>	Heir to the throne of Austria-Hungary, whose assassination sparked the First World War
<b>15. Douglas Haig</b>	British general who launched the Battle of the Somme
<b>16. Ganga Singh</b>	A sergeant in the 57th rifles of the Indian corps who fought on the Western Front
<b>17. Gavrilo Princip</b>	Serbian assassin from the 'Black Hand' who shot Franz Ferdinand
<b>18. Mike Mountain Horse</b>	A member of a First Nation tribe in Canada who fought for Britain at Vimy Ridge and the Battle of Cambrai in 1917

### Key words

<b>19. Armistice</b>	Agreement to stop fighting	<b>24. No man's land</b>	Term for the area between two opposed trench systems (not held by either side)
<b>20. Artillery</b>	Heavy, wheeled guns that fire large explosive shells	<b>25. Trench warfare</b>	Warfare based in defensive trench systems, in which neither side can gain the advantage
<b>21. Austria-Hungary</b>	Central European empire that disintegrated after the First World War	<b>26. Triple Alliance</b>	Defensive pact formed in 1882 between Germany, Italy and Austria-Hungary
<b>22. Balkans</b>	South-eastern region of Europe with a complex mixture of national and ethnic groups	<b>27. Triple Entente</b>	Defensive alliance formed in 1907 between Britain, France and Russia
<b>23. Black Hand</b>	Serbian nationalist organisation that used violent methods to try and free Serbs	<b>28. Western Front</b>	Area of battle during the First World War in Belgium and France, consisting of Allied and German trench systems facing each other

## TOPIC 2: VOTES FOR WOMEN

### Timeline

1. Parliament first discussed the idea of giving women the vote <b>1867</b>	3. The WSPU was formed. Its members became known as the Suffragettes <b>1903</b>	5. The First World War began <b>1914</b>	7. The Representation of the People Act was passed. All men over 21 and some women could now vote <b>February 1918</b>	9. The Equal Franchise Act was passed, which gave all British women equal voting rights with men <b>1928</b>
<b>1897</b> 2. The NUWSS was formed. They became known as the Suffragists	<b>1913</b> 4. Suffragette Emily Davison died after being hit by a horse at the Epsom Derby	<b>1916</b> 6. Herbert Asquith was replaced by David Lloyd George as Prime Minister	<b>1919</b> 8. Nancy Astor became the first British woman to take her seat as an MP	

### Key people

<b>10. David Lloyd George</b>	Liberal Prime Minister of Britain from 1916 - 1922. He was supportive of female suffrage
<b>11. Emmeline Pankhurst</b>	Main founder of the WSPU, commonly known as the Suffragettes
<b>12. Millicent Fawcett</b>	Main leader of the Suffragists and founder of the NUWSS

### Key words

<b>13. Hunger strike</b>	A form of protest where prisoners refuse to eat	<b>17. Suffragettes</b>	Women's suffrage campaigners who believed in using direct action and civil disobedience
<b>14. Militant</b>	An aggressive style of campaigning	<b>18. Suffragists</b>	Women's suffrage campaigners who believed in debate and negotiation
<b>15. NUWSS</b>	National Union of Women's Suffrage Societies – an organisation of women's suffrage societies in Britain, also known as the Suffragists	<b>19. WSPU</b>	The Women's Social and Political Union – leading militant organisation campaigning for women's suffrage. Also known as the Suffragettes
<b>16. Suffrage</b>	The right to vote		

## Introduction to GCSE Art & Design project based work 'natural forms'

- I will learn the structure of the GCSE course for Art and Design.
- I will learn to draw with greater confidence.
- I will use a variety of materials, techniques and processes.
- I will learn how to present my work to a high standard.

### Techniques and key words to learn

- Start with a soft pencil line – a whisper on the page.
- Add detail with care.
- Add shading and a light source.



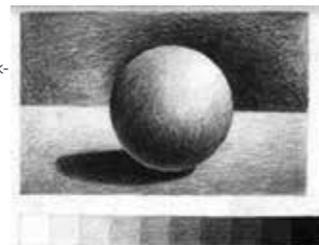
Plan your composition carefully – so that everything balances out.



### Key words to learn

Contrast, shape, texture, tone, form, composition, observation, balance, mark-making, stippling, smooth, hatching, cross hatching, dash, blend, directional.

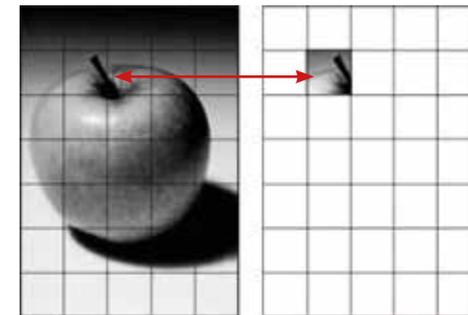
Remember a light source will give your images a 3D effect when shading and creating tone, like this.



## What are 'Natural Forms' in Art and Design?

Many artists use a grid to draw from a secondary source. Why would an artist find this practice useful?

Transfer the image using one square at a time...



Artists such as Vincent Van Gogh, Karl Blossfeldt and Angie Lewin have used Natural Forms as their inspiration. In your sketchbook, you can vary the way you present your work.

**FACTS TO LEARN: Vincent Van Gogh** only ever sold one painting. **Karl Blossfeldt** used Natural Forms in his photographs to draw attention to the intricacy of plant life.

**Angie Lewin** uses lino to create her prints, which are sold in great numbers.



Angie Lewin draws several studies before creating her final design.

### What are the Four Assessment Objectives?

- AO1** Developing ideas from a source – you will respond to a variety of different artists such as Vincent Van Gogh, Georgia O’Keeffe, Ernst Haeckel, Angie Lewin and Karl Blossfeldt.
- AO2** Materials, techniques and processes – you will be exploring a wide range of materials, using different techniques such as embroidery and processes such as printing.
- AO3** Recording of ideas – you will write critiques and explain how and why you have responded to the artist’s works. Annotating your own work indicates your intentions.
- AO4** Each artist you have explored and studied will enable you to produce a piece of work in your sketchbook that is personal to you.

### What should my final ideas look like in my sketchbook?

Natural forms come in all shapes and sizes. Which of these images inspires you?



What do you notice about each of these studies?



Close observation drawing with a tonal background.



Using different materials to meet AO2.

### How can I annotate my work successfully?



How can you make the presentation of your sketchbook to this high standard? It is vital for high marks against the four assessment objectives to work to this level. How will you ensure you can achieve work like these examples? What will you focus on to ensure this standard?

**The 4AO's were all met in this sketchbook:**  
 AO1: Artist references  
 AO2: Using different drawing materials  
 AO3: Drawing from images and annotation  
 AO4: Final drawings to show

## Geometric Jewellery Rotation

### Key Terms

- 1 Customer** A person who will buy OR use your product.
- 2 Client** A person or company asking you to work for them.
- 3 Design Brief** A guide for a project given to you by the client.
- 4 Ore** The solid material which metal is taken from.
- 5 Ferrous metal** A metal which contains Iron.
- 6 Non-Ferrous metal** A metal which does not contain iron.
- 7 Alloy** A metal made from 2 or more metals to improve its properties.
- 8 Pewter** Alloy metal which will melt at low temperatures. Contains many metals including Tin & Copper.
- 9 Mould** A hollow container designed for casting.
- 10 Casting** The process of using the mould to pour molten metal inside and create a shape when the metal has cooled.
- 11 Sprue hole** The gap where the metal enters the mould.
- 12 Sprue** The metal which is left over from moulding which takes the shape of the sprue hole.
- 13 Hearth** The base of the furnace in the workshop used for heating metal.

### 14. 6R's

- R Reduce** Minimise the amount of material and energy used in the production or use of the product.
- R Recycle** Take an existing product that has become waste and reprocess the material to use in a new product.
- R Reuse** Take an existing product that's become waste and use the material or parts for another purpose, without processing it.
- R Repair** When a product breaks down or doesn't function properly, you should be able to fix it.
- R Refuse** Don't use or buy a product if you think you don't need it or if it is bad for the environment.
- R Rethink** Ask if we can sustain our current way of life and the way we design and make. Come up with new solutions.

### Tools

- 15 Hacksaw** Saw designed to cut metal. Can be used with some plastics.
- 16 File** A tool used to remove material and shape metal or plastic.
- 17 Metal Working Vice** Used to grip pieces of metal to allow you to work on it with tools.
- 18 Wet and Dry paper** Abrasive paper used to create a finish on metal. Use rough paper first, moving to finer.
- 19 Brasso – Polishing solution** Liquid containing small particles to polish the surface of metal.
- 20 Pillar Drill** Used to cut holes in materials. Creates an accurate hole.

# Plastics Rotation

Key Terms	
1 CAD	Computer Aided Design.
2 CAM	Computer Aided Manufacture.
3 CNC	Computer Numerical Control.
4 GSM	Grams per square meter.
5 Paper & boards	Come in different weights and sizes and are measured in gsm.
6 Paper	Anything under 200 gsm.
7 Examples	Layout paper, tracing paper, bleed proof paper.
8 Boards	Anything over 200 gsm.
9 Board examples	Corrugated cardboard, foam core board, foil lined board.
10 Thermoforming Plastics	Plastics that can be heated and formed multiple times.
11 Examples (Thermoforming)	High Intensity Polystyrene (HIPS), Polypropylene (PP), Polymethyl Methacrylate (acrylic).
12 Thermosetting plastics	Plastics that can only be heated and formed once.
13 Examples (Thermosetting)	Epoxy Resin (ER), Urea Formaldehyde (UF), Melamine Formaldehyde (MF).
14 Bauhaus	German art school (1919-1933) that started the famous Bauhaus approach to design.
15 Bauhaus characteristics	Space, machine aesthetic, geometric shapes, patterns.
16 Marcel Breuer	Architect and furniture designer in the 1900s who worked at the Bauhaus.
17 Marcel Breuer's work	Wassily Chair, Cesca Chair, Model B 64.
18 Isometric projection	A sketching technique to create 3 dimensional drawings.
19 Plan View	A view of a product from above (2 dimensional). Also known as the top view.
20 Side View	A view of a product for one side (2 dimensional).

## Design Technology 2 of 3

Tools	
21  Strip heater	Heat plastic so that it can be formed/bent into different shapes
22  2D Design	Computer software used to create 2D designs (CADs) that can be sent to CNC machines (laser cutter).
23  Filletted arc	Used to turn sharp corners into curved corners.
24  Delete part of an object.	Delete part of a line between two points.
25  Transform - Rotate	Rotates your shape around a centre point by a preselected amount of times.
26  Grid lock	Fixes the cursor so that it only draws to and from each dot.

27 – Access fm			
A	Aesthetics	S	Safety
C	Customer	S	Size
C	Cost	F	Function
E	Environment	M	Materials

# Diet and Nutrition

Key Terms	
1 Health and safety	Rules you should follow in the kitchen to keep you safe while cooking and preparing food.
2 Cross-contamination	When bacteria from raw meat is spread onto vegetables. Puts people at risk of food poisoning. Avoided by using different equipment to prepare and cook raw meat and vegetables.
3 The Eatwell Guide	The main source of nutritional information in the diet – five food groups: Fruit and vegetables, carbohydrates, protein, dairy and alternatives, oils and spreads. Gives food portion information to people.
4 Nutritional Values	The amount of nutrients – both macro (big) and micro (small) – that a given dish provides you with.
5 Micronutrients	Nutrients such as vitamins and minerals, including calcium, vitamin A, B, C, D, E and K.
6 Elasticity and thickeners	Chemicals or compounds added to food to change the characteristic and make the food thicker – corn starch added to casseroles to thicken the sauce.
7 Sensory analysis	Using the senses – sound, texture, aesthetics, hearing, smell and umami – to decide how successful a dish is.
8 Heat transfer	Conduction, convection and radiation – frying = conduction, boiling = convection, grilling = radiation.
9 Fermentation	Micro-organisms – such as yeast – breaking down the carbohydrates in food into alcohol substances. We use different amounts of fermentation for different foods.
10 Method	The steps that are written down about how to make the dish.
11 Ingredients	The different food products that are needed to make a dish.

## Design Technology 3 of 3

Equipment for cooking	
12  Piping bag	Used to apply various liquid-based food to other foods – batter or icing. Part of shaping and moulding
13  Palette knife	Used to smooth or lift different types of foods or decorative foods, such as smoothing buttercream icing
14  Baking tray	Used to cook or bake food items. Different types of trays are available

15. The Eatwell Guide	
	<ul style="list-style-type: none"> <li>Fruit and veg</li> <li>Dairy and Alternatives</li> <li>Carbohydrates</li> <li>Oils and Spreads</li> <li>Protein</li> </ul>

16. Heat transfer		
		
Conduction – direct heat - frying	Convection – heat rising through liquid or air - boiling	Radiation – heat from light ray transfer – bbq/

# Brecht & The Caucasian Chalk Circle (1944)

- Plot:** A play derived from a Chinese story. It focuses on Grusha, who runs away from her home due to a political uprising. She saves and flees with the deceased governor's child. Two years later, the previous regime has returned to power.
- Structure:** The play structure is a play within a play.
- Genre: Epic Theatre** - encourages the audience to fully acknowledge that the production is merely a production and not reality.
- Genre: Political Theatre - comments on political or social issues.**
- Style: Non-naturalistic/non-realistic** - where no-one is pretending that what is happening on stage is real/realistic.

**Key question areas** - Social/cultural/historical context; aspects of a character; actors' movement and voice; staging; set design.

- Key words**
- Social/cultural/historical + context:** Date-Place-Issue.
  - Character traits/Aspects of character** - persona; what the character is like and their background. Their status in life. Remember: A character might change during the plot.
  - Set design** - style; colour; positioning; stage furniture; stage flats; wings; cyclorama; backdrop; legs; ground row; tabs; borders; levels; symbolism; location- the set should always represent the context of the play.
  - Lighting** - flood light; follow spot; gel; strobe; ultraviolet; spot light; side lights; up light; down light; warm wash; cold wash; flood light; fade-up; fade-down; cross fade (speed of fades can be slow, middle pace or fast) gobo; blackout.
  - Costume** - period costumes; cultural costumes; colour; fabric; style; condition; symbolism; element; item (e.g. shirt; hat; shawl; cane; umbrella).
  - Staging** - the process of selecting, designing, adapting to, or modifying the performance space for a play. This includes stagecraft elements as well as the structure of the stage and its components.
  - Performance space** - thrust; in the round; traverse; end on.
  - Sound design** - sound effects; live or recorded; underscoring; direction; transitions; volume.

**Social/cultural / Historical context**

- Brecht wanted to illustrate that the law under non-Marxist rule favours the ruling classes. The poor have few rights while the rich can buy theirs. The play is written from a Communist perspective: whoever can make the best use of resources in order to provide for others deserves to get those resources.
- An adaptation of an ancient Chinese play, Circle of Chalk, written in 1300 A.D. But Brecht sets it in Soviet Georgia near the end of WWII.

## Key characters – Key lines and stage directions that impact on the character

- Singer** Sings the parable of the Caucasian Chalk Circle to the peasants.
- Georgi Abashwili** The Governor. Beheaded after his brother the Fat Prince successfully stages a coup.
- Natella** Governor's wife. Leaves her baby, Michael behind when she flees the coup. Later tries to get Michael back to reclaim the Governor's estates. Azdak (judge) rules against her & chooses to give Michael to Grusha.
- Michael** The Governor's son & heir to the Governor's estates. Raised by Grusha who claims him as her own child.
- Arsen Kazbeki, the Fat Prince** Brother of the Governor. Stages the coup that kills his brother. After ruling for two years is beheaded at the return of the Grand Duke.
- Simon Shashava** A soldier, loyal to the Grand Duke. Grusha promises to marry him when he returns from war but is forced to marry another man before he returns. Azdak "mistakenly" annuls the marriage, allowing Grusha & Simon to get together in the end.
- Grusha Vashadze** A maid in the palace. Rescues Michael during coup. Cares for him for two years until Natella reclaims Michael. Both women appear before Azdak who chooses to give him

- 24. Characterisation -The act of changing voice, body language, movement, gesture etc when in role. The actor must use their skills to portray a character consistently throughout their performance.**
- |                 |  |              |   |
|-----------------|--|--------------|---|
| <b>Movement</b> | <b>25. Pace</b> (fast or slow)   | <b>Voice</b> | <b>31. Pace</b> (fast or slow)  |
|                 | <b>26. Gesture</b> (a movement of part of the body, especially the hands or the head, to express an idea or meaning) |              | <b>32. Pause</b> (An actor stops talking for a moment/beat during a line.)            |
|                 | <b>27. Gait</b> (walk)   |              | <b>33. Pitch</b> (high or low)  |
|                 | <b>28. Posture</b> (the position in which someone holds their body)  |              | <b>34. Tone</b> (reveals an emotion i.e. angry, scared)                               |
|                 | <b>29. Facial expression</b> (Usually links to an emotion. Tells the audience the characters feelings)               |              | <b>35. Volume</b> (loud or quiet)   |
|                 | <b>30. Eye contact or eye line</b> – where the actor looks   |              | <b>36. Accent</b> (shows where someone is from or gives clues as to their upbringing) |
|                 |  |              | <b>37. Emphasis</b> - the stress on individual words that makes them stand out        |

## Staging the Performance

- Performance space**
  - End on** - Audience on one side. This performance space is similar to a proscenium arch stage. The stage is at one end and the audience face it directly. In this type of stage there is no arch around the edge of the stage to 'frame' it.
  - In the round** - Audience are all around the performance space.
  - Traverse** - Audience on two sides. The action takes place between the audience. The stage is like a catwalk in a fashion show.
- Blocking** Planning how to use the space and the actor's movement.
- Design elements** Lighting design; sound design; costume design; set design.

## Design key words

- Themes/symbols** The design can also communicate abstract concepts, such as themes and symbols. As an example, a design could include dramatic red backlight lighting barbed wire with a body hanging from it to suggest the context and themes of WW1 and the death in the play.
- Style** Designs can be naturalistic this would aim to create the impression of reality through realistic-looking lighting, sound and set items. A play performed in a minimalistic style would use just a few, simple design elements to represent a setting and create an atmosphere for the audience.
- Colour** Colour can be used within set design to symbolise various ideas on stage. For example, for this play we could include dull greys and a monochromatic palette (single colour) this could enhance the sad atmosphere and dark themes in the play.
- Condition** The condition of a design can reveal important information about the setting or a character's circumstances. For example, shabby, dented and blood covered WW1 helmet might suggest the character has been in a battle and seen death first-hand.
- Position** Where you put the items of set on the stage.
- Stage furniture** Items of set that can be moved on stage but are not props.
- Location** The set can tell the audience where and when the scene takes place.
- Symbolism** Represents a message on stage.

## Conventions of Epic Theatre

- Verfremdungseffekt (estrangement effect or alienation effect)**
  - Actors play many characters
  - Rearrange set in full view of audience
  - Break the 4th wall (speak to the audience)
  - Flood the whole space with light, not just the stage
  - Live musicians and singing on stage

**Key Terms and Definitions**

- Leitmotif** A short **melody** that is associated with a character or idea in a film.
- Theme** A main tune within a film soundtrack, representing a particular character, ideas or object. They are longer than **leitmotifs**.
- Soundtrack** The music and sound recorded on a motion-picture film.
- Borrowed Music** Some music used in film soundtracks was composed for other (non-film) purposes, but is adopted for use in a film because it fits the film-maker's intentions.
- Diegetic** Music that is **part of the action**; the characters in the film can hear it.
- Non-diegetic** Music that is **not part of the action**; the characters in the film cannot hear it. It is just for the audience.
- Cuesheet** A detailed listing of musical cues matching the visual action of a film so that composers can time their music accurately to match the visual images.
- Storyboard** A planning tool (similar to a cuesheet) used by film **soundtrack** composers to plan the music to different scenes within a film.

**Instruments and their use**

- Woodwind (e.g. Flutes, clarinets, oboes)** Natural sounds such as bird song, animals, rivers. 
- Brass (e.g. Trumpets, trombones, tubas)** Soldiers, war, royalty, ceremonial occasions. 
- Glockenspiel** Magic, music boxes, fairy tales. 
- Timpani and Drums** War, fighting, thunder. 
- Strings (e.g. violins, violas, cellos, double basses)** Often used to portray emotions: passion, grief. Also used to convey fear or tension. 

**Music Theory**

- Pitch** The **highness or lowness** of a sound, indicated by clefs. Horror movie composers often use extremes of high and low **pitch** when creating musical soundtracks to create a feeling of 'tension' and 'suspense'.  
Treble clef (high)  Bass clef (low) 
- Major**  Music or chords built on a **major scale**. Used to convey happiness, success, optimism.
- Minor**  Music or chords built on a **minor scale**. Sadness, seriousness (e.g. a character learns of a loved one's death).
- Dynamics** The volume of the music or sounds – loud or quiet. Loud music conveys surprise, power, large things. Quiet music is for gentleness, weakness, intimacy, small things.  
*p mp mf f*
- Crescendo** Getting gradually louder. Objects or events getting closer. 
- Diminuendo** Getting gradually quieter. Objects getting further away. 
- Tempo**  How fast or slow the music is. Fast music conveys excitement, action or fast-moving things. Slow music is used for contemplation, rest or slow-moving things.
- Repeat**  Tells the performer to repeat a section of the music. Used when repeating patterns, for example a **leitmotif** or an **ostinato**.

**Christianity beliefs and teachings (Unit 2)**

**Topics covered:**

- |                       |                     |                         |               |
|-----------------------|---------------------|-------------------------|---------------|
| 1. Nature of God      | 5. The Incarnation  | 9. Life after death     | 13. Atonement |
| 2. Evil and Suffering | 6. The Crucifixion  | 10. Heaven and Hell     |               |
| 3. The Trinity        | 7. The Resurrection | 11. Sin and Salvation   |               |
| 4. Creation           | 8. The Ascension    | 12. Jesus and salvation |               |

**1. Nature of God**

**What do Christians believe about God?**

- Immanent (present in earth and involved with humanity)
- Transcendent (outside life and beyond understanding)
- Omnipotent (all-powerful)
- Omnibenevolent (all-loving and all-good)
- Merciful (compassionate and forgiving)
- Just (fair and judges humans actions)

**'God so loved the world that he gave his one and only Son'. John 3:16 'Nothing is impossible with God'. Luke 1:37**

**2. The problem of evil and suffering**

- Why is this a problem?** Many question why a loving God would allow people to suffer rather than prevent it.
- What do Christians believe?** Christians believe God treats all people fairly and is incapable of making the wrong judgement.
- How does this influence Christians?** Christians are therefore sure that they can trust God even when things appear to be going wrong.

**5. The Incarnation**

- What is it?** Incarnation means becoming flesh, taking a human form. It refers to the act of when God became human in the form of Jesus.
- What do Christians believe?** Christians believe that Jesus was both fully human and fully God during his time on earth.
- Evidence for this:** The gospels of Matthew and Luke explain clearly that Mary did not conceive Jesus sexually, but rather that it was an immaculate conception.
- It is a fundamental Christian belief that through the incarnation, God showed himself as a human being for around 30 years.
- Christians refer to Jesus as Christ, which is translated in to a Hebrew word which means Messiah.
- Christians believe that Jesus is the Messiah, sent to save God's people.
- When Jesus was baptised, a voice from Heaven was heard and said **'You are my Son' Mark 1:11**.
- On another occasion Peter referred to Jesus as 'Christ'.

**'This is how the birth of Jesus the Messiah came about: His mother Mary was pledged to be married to Joseph, but before they came together, she was found to be pregnant through the Holy Spirit'. Matthew 1:18**

**'You may believe that Jesus is the Messiah, the Son of God, and that by believing you may have life in his name'. Mark 14:61b-62a**

**3. The Trinity**

- What is it?** The concept of the trinity is that there are three 'persons' all of which are God.
- God is made up of three persons, not three separate people.
- God is not a physical being.
- Think of the three persons as non-physical elements.
- The trinity describes the following:
  - There is only one God
  - Each person of the Trinity is fully God
  - The persons of the trinity are not the same

**The Father**

- The first person of the trinity is the Father.
- God the Father is believed to be the creator of earth and all living things on it.
- As the creator, he acts as a good father would towards his children.
- He is believed to be omnipotent, omnibenevolent and omniscient.

**The Son**

- The second person of the trinity is referred to as the Son of God.
- The Son became incarnate on earth through Jesus.
- Christians believe Jesus was both fully human whilst on earth but also fully God as well.

**The Holy Spirit**

- The third person of the trinity is the Holy Spirit.
- Christians believe when Jesus left the earth, God sent the Holy Spirit.
- The Holy Spirit is there to influence, guide and sustain the earth and all life on it.
- The Holy Spirit is believed to be the unseen

**Key Words**

- Omnipotent** – all-powerful
- Omnibenevolent** – all-loving
- Omniscient** – all-knowing
- Original sin** – The belief that all humans are born with sin because Adam & Eve disobeyed God in the Garden of Eden
- The Holy Trinity** – The belief that there is one God made of three different persons – The Father, The Son & The Holy Spirit
- Incarnation** – God made flesh. Christians believe that Jesus is God
- Genesis** – The chapter in the Old Testament that tells the creation story
- Crucifixion** – death by being nailed to a cross
- Blasphemy** – the sin of being disrespectful towards God
- Miracle** – An Event science cannot explain
- Repent** – To ask forgiveness after committing a sin
- Resurrection** – To rise from the dead
- Ascension** – The belief that Jesus went to heaven in full physical form
- Atonement** – The belief that Jesus' death paid

## 4. Creation

### Genesis:

- Christians believe God created the earth and all living things.
- Genesis chapter 1 tells us the story of creation
- The story gives an account of how the universe was created, how the earth was made fit for life and finally how God created life including humans.
- It is believed to have happened in six days after which God rested.
- For Christians the most important part of the story is the fact that everything was created 'good.'

**'In the beginning, God created the heavens and the earth'. Genesis 1:1**

### Literal Interpretation of creation:

- They believe it is literally true.
- Everything that is in the story is the word of God and happened exactly as it is told.
- God created the world in seven days exactly as described in the story.
- Evidence of science and fossils is false and should be ignored.

### God inspired interpretation of creation:

- They believe that the account contains the truth but is not literally true.
- The world was created by God but the story was not dictated by God therefore may have some errors.
- God did create the world and all that is in it but may not have created it in seven days as described.

### Inspired by the world and a sense of God interpretation of creation:

- They believe that the story should not be taken as truth but is to show that God created the world and the Bible is to show them the message that God has to send us.
- In the case of creation, it is to show that we were created by a loving God who created us all and created a world for us to live in.

### The Word:

**'In the beginning was the Word, and the Word was with God, and the Word was God. He was with God in the beginning. Through him all things were made; without him nothing was made that has been made'. John 1:1-3**

- Experts have debated this teaching for year and specifically the identity of the Word.
- Most agree the Word, refer to God the Son who entered in history through Jesus.
- This shows that all three persons of the trinity were present in creation.
- Therefore, the trinity has existed since the beginning.
- This passage shows that the three persons are not part of a chain with the Son replacing.

## 6. The Crucifixion

- Jesus was sentenced to death by crucifixion (where criminals are nailed to a cross and lifted).
- Christians believe that even though Jesus was the Son of God, it does not mean he was spared the pain and horror of his death.
- Jesus forgave those who crucified him because they did not realise the significance on what was happening.
- The crucifixion gives Christians confidence that if they accept Jesus' sacrifice, sin can no longer destroy their lives as God forgives those who faithfully ask for it.
- It helps them to understand that suffering is a part of life, just as it was for Jesus and God understand what the sufferer is going through.

**'Jesus called out with a loud voice, 'Father, into your hands I coming my spirit.' When he has said this, he breathed his last'. Luke 23:46**

- Once Jesus had died a man called Joseph asked for the body so it could be buried.
- Due to it being the Sabbath day there was insufficient time to bury it properly, so Joseph laid the body of Jesus in a tomb and rolled a large stone to block the entrance.

## 7. The Resurrection

- According to accounts Jesus was placed in the tomb late on Friday afternoon.
- How long Jesus remained in the tomb was unclear because when some of Jesus' followers went on Sunday after Shabbat they found the tomb empty.
- All accounts make it clear that Jesus' body was nowhere to be found.
- Each story mentions the women meeting men (who may have been angels) who told them that Jesus had risen and to spread the message.
- The belief that Jesus rose from the dead is called the resurrection and is a key teaching of Christianity.
- For the next few days or weeks Jesus appeared to several people.
- He told each of them he had risen from the dead as he has predicted when he was alive.
- The story spread quickly and there were several different witnesses that said he had risen.
- Christians believe the resurrection shows the power of good over evil.
- They believe by accepting Jesus they can also be resurrection in some way.
- They have no need to fear death.
- It assures them that God will forgive their sins if they follow the teachings of Christianity.
- Without the resurrection there wouldn't be a Christian faith.

## 8. The Ascension

- The ascension is a matter of interpretation.
- If Jesus had the power to be able to rise from the dead, it is possible that the same power meant he could leave the earth physically and return to heaven.
- After meeting his disciples and asking them to carry on his good work, Jesus left them for the last time and ascended to heaven.

**'While he was blessing them, he left them and was taken up into heaven'. Luke 24:51**

## 9. Life after death

- Christians believe humans receive eternal life as a gift from God, and so a belief in the afterlife is dependent on a belief in God.
- The afterlife either begins upon death or at the Day of Judgement when Jesus will return to judge the living and the dead.

### Judgement:

- Christians believe it is God who judges the fate of those who die.
- He will take into account the life of the person and the extent to which they have tried to get close to him.
- Jesus makes it clear that in serving others, they are serving him.
- Christians believe that simply treating other people well and in accordance with Christian morality is not enough to guarantee a good afterlife.
- They believe that Jesus is the Son of God and in order to gain a good afterlife you have to have faith in him and following his teaching.

**'And the life everlasting'. The Apostles Creed**

**'I am the way and the truth and the life. No one comes to the Father except through me'. John 14:6**

## 10. Heaven and Hell

### Heaven:

- Traditional paintings show it as beyond the clouds and where God sits on a huge throne watching the earth.
- It is seen as a place of peace, joy and freedom from pain.
- Whether it is spiritual or physical is unclear.
- Some Christians believe that only those who believe in Jesus will be allowed in to heaven.
- Other Christians believe that heaven is reserved for Christians and followers of other faiths who have lived good lives.
- Other Christians believe that heaven is for those who call themselves Christian regardless of how they have lived their life. Simply being baptised guarantees you a place.
- All Christians believe that God will forgive sins and this will enable people to approach God's presence.

### Hell:

- Often seen as the opposite of heaven.
- Christians understand it to be a state of existence without God.
- It is often depicted as a place of eternal suffering, terror, fire and torture ruled by the devil.
- It leaves a difficult question as to whether if heaven is reserved for Christians where do non-Christians go.
- Many believe that all those who try to follow God will be accepted by him and not be sent to hell.

**The parable of the sheep and the goats indicates heaven is a reward for both faith and good actions – only one is insufficient.**

PRE  
2 of 4

PRE  
2 of 4

## 11. Sin and Salvation

Origins of Sin:

- Sin is any thought or action which separates humans from God.
- Christians believe that all humans commit sins as nobody is perfect. It is impossible not to sin.
- Some Christians believe in the idea of original sin. This is the idea that humans are born with an inbuilt tendency to do wrong.
- The idea is introduced in the story of Adam and Eve where they ate the forbidden fruit and were banished from the Garden of Eden.
- Christians believe that God gave humans free will in order to choose how to live their lives, but it doesn't mean that they can do whatever they want.
- Christians believe that the Christian teachings such as the give them guidance on how they should use their free will.

**The Ten Commandments. E.g. 'Thou shall not kill' and 'Honour thy mother and father'. Exodus 20:1-19**

Salvation:

- Salvation means to be saved from sin and the consequences of it.
- Salvation enables humans to get close to God again and be granted eternal life with God.
- Christians believe there are two main ways to get salvation:
  - Salvation through good works – the Old Testament makes it clear that a person achieves salvation through faith in God and by obeying God's law e.g. the Ten Commandments.
  - Salvation through grace – salvation is given by God through faith in Jesus and his teachings. It is not earned or deserved but a gift for the faithful.
- Whilst salvation works is the most widely believed type of salvation, many Christians believe it is possible to achieve salvation through grace along as there is evidence of it in the Bible.

## 12. Jesus and Salvation

- Christians believe that Jesus' death makes up for original sin and so can bring people back to God.
- Jesus knew that his death was necessary to restore the relationship between God and humans and make salvation available to all people.
- Christians believe through Jesus' death and resurrection; humans can receive forgiveness for sin.
- The fact that Jesus rose from the dead shows that God accepted Jesus' sacrifice and atonement, which means Jesus restored the relationship between God and humans.
- Jesus made salvation possible because God will now forgive anybody who asks in faith.

**'For the wages of sin is death, but the gift of God is eternal life in Christ Jesus our Lord'. Romans 6:23**

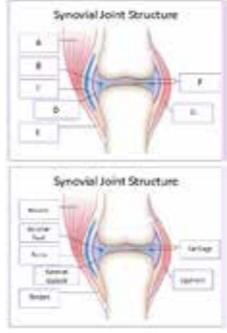
## 13. Atonement

- Atonement removes the effect of sin and allows people to restore their relationship with God. This is possible because of Jesus.
- God is holy and therefore does not overlook sin. The penalty of sin must be paid, and Christians believe it was paid through Jesus.

**'He is the atoning sacrifice for our sins, and not only for ours but also for the sins of the whole world'. 1 John 2:1-2**

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1	Identify parts A-G on the diagram of the muscular system on the right.	
2	Identify the role of synovial fluid.	Lubricates the joint to prevent friction
3	Identify the role of bursae.	Acts as a cushion preventing friction between muscle and bones
4	Identify the role of tendons.	Joins muscle to bone
5	Identify the role of ligaments.	Acts as a cushion preventing friction between bones
6	Identify the role of ligaments.	Joins bone to bone
7	Identify the type of joint found in the shoulder and hip.	Ball and socket joint
8	Identify the type of joint found in the elbow, knee and ankle.	Hinge joint
9	Identify joint actions which occur at the shoulder and hip.	Abduction Adduction Rotation Circumduction Flexion Extension
10	Identify joint actions which occur at the elbow and knee.	Flexion Extension
11	Identify joint actions which occur at the ankle.	Plantarflexion Dorsiflexion
12	Define abduction, adduction, rotation and circumduction.	<b>Abduction</b> = movement away from the midline of the body <b>Adduction</b> = movement towards the midline of the body <b>Rotation</b> = movement around an axis <b>Circumduction</b> = movement in a circular motion

13	Define flexion and extension.	<b>Flexion</b> = the decrease in the angle of a joint <b>Extension</b> = the increase in the angle of a joint
14	Define plantarflexion and dorsiflexion	<b>Plantarflexion</b> = pointing the toes down away from the body <b>Dorsiflexion</b> = pointing the toes up, towards the body
15	Identify sporting examples of abduction, adduction, rotation and circumduction.	<b>Abduction</b> = raising the arm sideways from the shoulder when catching a netball <b>Adduction</b> = lowering the arm to your side during a seat drop in trampolining <b>Rotation</b> = twisting the arm at the shoulder when playing a top spin shot in tennis <b>Circumduction</b> = moving the arm in a circle from the shoulder when bowling in cricket
16	Identify sporting examples of flexion and extension.	<b>Flexion</b> = bending the leg at the knee when preparing to kick a football <b>Extension</b> = straightening the leg at the knee when kicking a football
17	Identify sporting examples of plantarflexion and dorsiflexion.	<b>Plantarflexion</b> = pointing your toes down as you volley a ball in football <b>Dorsiflexion</b> = lowering your heel to the floor as you land from a jump shot in basketball
18	Identify three blood vessels found in the body.	<ul style="list-style-type: none"> <li>• Veins</li> <li>• Arteries</li> <li>• Capillaries</li> </ul>
19	Identify features of veins.	<ul style="list-style-type: none"> <li>• Transport blood towards the heart</li> <li>• Work under low pressure</li> <li>• Thin cell walls</li> </ul>
20	Identify features of arteries.	<ul style="list-style-type: none"> <li>• Transport blood away from the heart</li> <li>• Work under high pressure</li> <li>• Thick cell walls</li> </ul>
21	Define heart rate.	The number of times the heart beats per minute
22	Define stroke volume.	The volume of blood pumped from the left side of the heart per beat
23	Define cardiac output.	<ul style="list-style-type: none"> <li>• Heart rate X stroke volume</li> <li>• The volume of blood pumped from the left side of the heart per minute</li> </ul>
24	Define anticipatory rise.	The slight increase in heart rate ahead of starting exercise
25	Identify which side of the heart receives oxygenated blood and which side receives deoxygenated blood.	<ul style="list-style-type: none"> <li>• Left side = oxygenated blood</li> <li>• Right side = Deoxygenated blood</li> </ul>
26	Identify parts 1-9 on the diagram of the heart below.	<ul style="list-style-type: none"> <li>• 1 = Right atrium</li> <li>• 2 = Left atrium</li> <li>• 3 = Left atrium</li> <li>• 4 = Left ventricle</li> <li>• 5 = Pulmonary artery</li> <li>• 6 = Aorta</li> <li>• 7 = Superior vena cava</li> <li>• 8 = Inferior vena cava</li> <li>• 9 = Pulmonary vein</li> </ul> 



# Notes



Lined area for notes on page 40, consisting of 20 horizontal grey lines.

# Notes



Lined area for notes on page 41, consisting of 20 horizontal grey lines.

# Notes



A series of 20 horizontal grey lines spaced evenly down the page, providing a template for writing notes.