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2023-2024



Knowledge Organiser

Name:

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DNA by Dennis Kelly (2008)

When?	Summary and Themes/Ideas	Quotations
Act 1	Mark and Jan discuss that someone is dead. The audience are thrown into the middle of the action.	<p>1.1. Jan: "Like dead, dead." 1.1. Mark: "It's not funny because it's not a joke, if it was a joke it would be funny." 1.1. Jan: "What are we going to do?"</p>
	The nature of Leah and Phil's relationship is revealed – Leah is presented as insecure.	<p>1.2. Leah: "What are you thinking? (No answer)." 1.2. Leah: "Not that I'm bothered. I'm not bothered, Phil, I'm not, it doesn't, I don't care." 1.2. Leah: "You're not scared. Nothing scares, there, I've said it; scared. Scared, Phil. I'm scared."</p>
	John struggles to maintain control as the leader of the group. The gang fails to take responsibility for their bullying of Adam which results in his supposed death. Instead, Phil plans to frame a non-existent person to absolve the gang of their guilt.	<p>1.3. John: "You're going to have to listen to me on this one, and you are going to have to believe me." 1.3. John: "Everyone respects you and everyone's scared of you and who made that, I mean I'm not boasting, but who made that happen?" 1.3. John: "Don't say it again, Richard, or I'm gonna hurt you." 1.3. Danny: "I want to say nothing, just like you, you're right, you're right, John." 1.3. Mark: "I mean we were just having a laugh, weren't we, we were all, you know..." 1.3. Mark: "Adam was, he was laughing harder than anyone." 1.3. Mark: "Oh, he was terrified, he was completely, but like you know, pretending." 1.3. Mark: "You're having a laugh, together, what is this nutter gonna do next." 1.3. Jan: "Stubbed out cigarettes on him." 1.3. Phil: "Cathy, Danny, Mark, you go to Adam's house, you wait until his mum's out, you break in."</p>
	Leah's monologue reveals the nature of bullies and highlights her own moral character.	<p>1.4. Leah: "They kill and sometimes torture each other to find a better position within the social structure. A chimp'll just find itself on the outside of a group." 1.4. Leah: "For years we've thought that chimps were our closest living relative, but now they saying it's the bonobos." 1.4. Leah: "Empathy. That's what bonobos have."</p>
Act 2	Brian's morality begins to kick in as he feels guilty and refuses to partake in Phil's plan.	<p>2.1. Mark: "He's not going." 2.1. Jan: "Is he insane? Is he off his head?" 2.1. Jan: "What are we going to do?"</p>
	Leah tries to gain Phil's affection and attention which reinforces her insecurities. Her fears about the gang are evident.	<p>2.2. Leah: "Are you happy? No, don't answer that, Jesus, sorry, what's wrong with me?" 2.2. Leah: "I can talk to you, because you can see the incredibly precious beauty and fragility of reality." 2.2. Leah: "Where will it stop. Only been four days but everything's changed."</p>

DNA by Dennis Kelly (2008)

When?	Summary and Themes/ Ideas	Quotations
Act 2	The lack of responsibility by the gang backfires as their plan begins to fall apart when a real man is found by the police in connection to Adam's disappearance.	<p>2.3. Leah: "The man who kidnapped Adam doesn't actually exist." 2.3. Leah: "Phil? Any ... any thoughts? Any words, any comments any ... ideas?" 2.3. Lou: "What if he goes to prison?" 2.3. Danny: "How am I gonna get references?" 2.3. Cathy: "It was great .. They wanted to interview me ... get on the telly." 2.3. Richard: "What we wanted was to cover up what had happened, not to frame someone else." 2.3. Brian: "I can't identify him, I can't go in there, don't make me go in there, I'm not going in there." 2.3. Phil: "We'll take you up the grille now. We'll get you by the arms. By the legs. And we'll swing you onto the grille."</p>
	Leah continues to feel guilty whilst Phil disconnects from reality.	<p>2.4. Leah: "Do you think it's possible to change things?" 2.4. Leah: "D'you think we're doomed to behave like people before us did?"</p>
Act 3	It is hinted that Adam is found alive.	<p>3.1. Jan: "I mean are you...there's no mistake or..." 3.1. Mark: "In the woods, Cathy found him in the woods."</p>
	Leah's morality compels her to leave but her attachment to the gang keeps her. The priorities of the other characters reveal their level of responsibility .	<p>3.2. Leah: "I'm going. I'm out of here, I'm gone." 3.2. Leah: "Well, its not all roses, you know. Brian's on medication. Did you know that? Phil?" 3.2. Leah: "You're not even thinking of thinking of stopping me. The only thing in your brain at the moment is that waffle."</p>
	Adam is alive and things descend into chaos. The gang attempt to protect themselves as a collective group, causing Phil to make the immoral decision to murder Adam.	<p>3.3. Brian: "I found him, I found him, I found Adam living in a hedge, I found him." 3.3. Cathy: "Like a warren in this hedge and he's dragged bits of cardboard and rags to make it better, more waterproof." 3.3. Brian: "Shall we rub our faces against the earth? What do you think, shall we rub our faces against the earth?" 3.3. Cathy: "I used violence. I threatened to gouge one of his eyes out." 3.3. Adam: "I felt like the dark was my fear, do you know what I mean? I was wrapped in it. Like a soft blanket." 3.3. Adam: "I caught a rabbit once and ate that...I found a dead bird and ate some of that." 3.3. Phil: "If you go now and you say nothing to no one about this, you won't be in trouble." 3.3. Leah: "Phil, he's off his head. He's injured, he's been living of insects for week, he's insane Phil, he needs help." 3.3. Leah: "It's Adam, Phil, Adam! We used to go to his birthday parties, he used to have that cheap ice cream." 3.3. Phil: "I'm gonna do an experiment with this plastic bag. I want you to stay still while I do this experiment."</p>
	Leah and Phil's relationship crumbles as a result of their different moral compasses and willingness to take responsibility .	
Act 4	Leah has finally left as a result of her guilt and the gang's lack of responsibility .	<p>4.1. Jan: "What, she's gone?" 4.1. Mark: "Without saying a thing."</p>
	Richard reveals the fractured state of the gang and the loss of their leader .	<p>4.2. Richard: "When's Phil going to come down from that stupid field?" 4.2. Richard: "John Tate's found god. Yeah, Yeah I know. He's joined the Jesus Army." 4.2. Richard: "Brian's on stronger and stronger medication. They caught him staring at a wall and drooling last week." 4.2. Richard: "She's insane. She cut a first year's finger off, that's what they say anyway." 4.2. Richard: "Jan and Mark have taken up shoplifting, they're really good at it."</p>

Frankenstein by Mary Shelley (1818)

When?	Summary and Themes/Ideas	Quotations
Prologue	Letter 1. Captain Robert Walton writes to his sister Margaret to tell her he is ready for his journey. He is ambitious and excited about gaining new knowledge to benefit all.	Letter 1. Walton: 'My daydreams become more fervent and vivid.' Letter 1. Walton: 'I shall satiate my ardent curiosity with the sight of a part of the world never before visited.'
	Letter 2. Walton is isolated and feels nobody understands him.	Letter 2. Walton: 'I desire the company of a man who could sympathise with me.'
	Letter 3. Walton writes that he expects his ambition to be fulfilled. Shelley introduces the concept that being overly ambitious can lead to loneliness and unfulfillment .	Letter 3. Walton: 'Success shall crown my endeavours.' Letter 3. Walton: 'What can stop the determined heart and resolved will of man?'
	Letter 4. Trapped in the ice, Walton sees a mysterious stranger; Victor Frankenstein. After being rescued, Victor explains how he got to the North Pole and how his ambitions led to his downfall.	Letter 4. Frankenstein (to Walton): "Do you share my madness? Have you drunk of the intoxicating draught? Hear me... and you will dash the cup from your lips." Letter 4. Frankenstein (to Walton): "You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent to sting you, as mine has been."
Chapters 1-4	Chapter 1. Victor describes his perfect childhood, and how his father adopted Victor's cousin Elizabeth after her parents died, thus establishing the importance of family early in the narrative. Over time, Victor and Elizabeth develop a close friendship .	Chapter 1. Frankenstein: 'My parents seemed to draw inexhaustible stores of affection from a mine of love to bestow.' Chapter 1. Frankenstein: 'Elizabeth was mine – to protect, love and cherish.'
	Chapter 2. Victor introduces his childhood best friend Henry Clerval, to whom he shared a happy and close connection with. As a teenager, Victor develops his love for not only the natural world , but also science and natural philosophy. One evening, Victor witnesses lightning strike a tree and is in awe of the power of nature ; this event sparks a passion for electricity and later, Galvanism.	Chapter 2. Frankenstein: 'I studied the wild fancies of these writers with delight.' Chapter 2. Frankenstein: 'It was the secrets of heaven and earth that I desired to learn.' Chapter 2. Frankenstein: 'I had never beheld anything so utterly destroyed.' Chapter 2. Frankenstein: 'Destiny was too potent and her immutable laws had decreed my utter and terrible destruction.'
	Chapter 3. Victor recounts at aged 17, he leaves Geneva for Ingolstadt to study. However, just before he leaves, his mother dies, and Victor is consumed with grief. Her dying wish was that Victor and Elizabeth one day marry. At university, Victor attends lectures and meets with professors. He dislikes Krempe, but admires Professor Waldman, who shares his passion , inspiring him to pursue his scientific studies .	Chapter 3. Frankenstein: 'Chance - or rather the evil influence, the Angel of Destruction, which asserted omnipotent sway over me from the moment I turned my reluctant steps towards my father's door.' Chapter 3. Frankenstein: 'I will pioneer a new way, explore unknown powers and unfold to the world the deepest mysteries of creation.'
	Chapter 4. Victor spends two years isolating himself and ignoring his family to research the secret of life – the first sign of abandonment . His pursuit of knowledge results him in studying throughout the night and spends time in graveyards and charnel houses. Alone, he devotes his studies to how the human body is built and how it decays resulting in obsession and the beginning of a loss of reality.	Chapter 4. Frankenstein: 'My application became so eager that the stars often disappeared in the light of the morning.' Chapter 4. Frankenstein: 'No one can conceive the variety of feelings which bore me onwards, like a hurricane, in the first enthusiasm of success.' Chapter 4. Frankenstein: 'A new species would bless me as its creator and source; many happy and excellent natures would owe their being to me.' Chapter 4. Frankenstein: 'My cheek had grown pale with study.' Chapter 4. Frankenstein: 'A resistless and almost frantic impulse urged me forward; I seemed to have lost all soul or sensation but for this one pursuit.'

Frankenstein by Mary Shelley (1818)

Chapters 5-10

When?	Summary and Themes/Ideas	Quotations
	<p>Chapter 5. One stormy night, Victor completes his experiment and the creature he has generated awakens. However, the appearance of the creature horrifies him, and out of prejudice, abandons the creature. Victor realises that he has driven himself to the brink of destruction chasing an impossible dream. He becomes very ill and is nursed back to health by Henry Clerval; his recovery takes many months, exposing the severe impact 'playing God' has had on Victor.</p>	<p>Chapter 5. Frankenstein: 'How can I describe my emotions at this catastrophe, or how delineate the wretch whom with such infinite pains and care I had endeavoured to form?'</p> <p>Chapter 5. Frankenstein: 'Now that I had finished the beauty of the dream vanished and breathless horror and disgust filled my heart.'</p> <p>Chapter 5. Creature: 'A grin wrinkled his cheeks.'</p>
	<p>Chapter 6. In a letter Elizabeth had written to Victor, she informs him of a woman (Justine Moritz) who once lived with the Frankenstein's has returned. Victor spends time in nature with his childhood friend Henry.</p>	<p>Chapter 6. Frankenstein: 'Study had before secluded me from the intercourse of my fellow-creatures, and rendered me unsocial; but Clerval taught me again to love the aspect of nature, and the cheerful faces of children.'</p> <p>Chapter 6. Frankenstein: 'I was undisturbed by thoughts which during the preceding year had pressed upon me, notwithstanding my endeavours to throw them off, with an invincible burden.'</p>
	<p>Chapter 7. Victor receives a letter telling him that his younger brother William has been murdered. Near his home in Geneva, he sees the creature, the product of Victor's misplaced ambition, and is convinced that he is responsible for William's death. The next day, Justine Moritz is accused of murdering William on the evidence that a locket belonging to William was found on Justine. Choked with fear that he may be classified as insane, Victor cannot tell the court the truth and remains silent.</p>	<p>Chapter 7. Frankenstein: 'I discovered my lovely boy stretched on the grass livid and motionless.'</p> <p>Chapter 7. Frankenstein: 'Vivid flashes illuminating the lake making it appear like a vast sheet of fire.'</p> <p>Chapter 7. Frankenstein: 'The deformity of its aspect more hideous than belongs to humanity, instantly informed me that it was the wretch, the filthy daemon, to whom I had given life.'</p> <p>Chapter 7. Frankenstein: 'I had turned loose into the world a depraved wretch, whose delight was in carnage and misery.'</p>
	<p>Chapter 8. Justine foolishly confesses to the crime believing she will be granted salvation but is sentenced to death for William's murder. After her execution, Victor is wracked with guilt knowing that the creature is the murderer, and he is ultimately responsible for the deaths of William and Justine.</p>	<p>Chapter 8. Justine (to Elizabeth): 'I confessed, that I might obtain absolution; but now that falsehood lies heavier at my heart than all my other sins'.</p> <p>Chapter 8. Frankenstein: 'Torn by remorse, horror and despair, I beheld those I loved spend vain sorrow upon the first hapless victims to my unhallowed arts.'</p>
	<p>Chapter 9. Blaming himself, and dejected by the deaths of William and Justine, Victor contemplates suicide but restrains himself by thinking of his father and Elizabeth. Instead, Victor seeks solitary solace on the mountains and reflects on his actions. Whilst one with nature, and feeling enlightened, he sees the creature approach him.</p>	<p>Chapter 9. Frankenstein: 'When I reflected on his crimes and malice, my hatred and revenge burst all bounds of moderation.'</p> <p>Chapter 9. Frankenstein: 'I wished to see him again that I might avenge the deaths of William and Justine.'</p> <p>Chapter 9. Frankenstein: 'I listened with the extremist agony. I was the true murderer.'</p>
	<p>Chapter 10. Victor and the creature confront each other in the Alps. Victor challenges the creature to a duel and is shocked at how eloquently the creature communicates with him, stating he is stronger and mightier than Victor and demands that he listens to him. The creature begins to take over the narrative and describes how he has been a victim of prejudice by society.</p>	<p>Chapter 10. Creature (to Frankenstein): "All men hate the wretched."</p> <p>Chapter 10. Creature (to Frankenstein): "How dare you sport thus with life?"</p> <p>Chapter 10. Creature (to Frankenstein): "I ought to be thy Adam, but I am rather the fallen angel."</p> <p>Chapter 10. Creature (to Frankenstein): "I was benevolent and good; misery made me a fiend."</p> <p>Chapter 10. Frankenstein (to Creature): "Abhorred monster! ... Wretched devil!"</p> <p>Chapter 10. Frankenstein: 'For the first time I felt the duties of a creator towards his creature.'</p>

Frankenstein by Mary Shelley (1818)

When?	Summary and Themes/Ideas	Quotations
Chapters 11-16	Chapter 11. The creature describes how at first, he was completely unaware of his surroundings. Isolated from his creator, he learned to feed himself and finds a fire made by villagers. Whilst in search of food, he experiences rejection and prejudice from villagers; the creature learns of the cruelty and superficiality of humans . Realising that mankind was always going to treat him as an outsider, the creature finds a hovel next to a family dwelling. He observes the family and this becomes the epicentre of his studying of human nature.	Chapter 11. Creature: 'I was a poor, helpless, miserable wretch.' Chapter 11. Creature: 'I sat down and wept.' Chapter 11. Creature: 'Here then I retreated and lay down happy to have found a shelter, however miserable, from the barbarity of man.'
	Chapter 12. The creature continues to learn from the DeLacey family; he begins to understand English and the importance of family . As he is beginning to gain a sense of morality , the creature helps the family by leaving firewood by their house. At one point, the creature realises how grotesque he appears when he spots his reflection in a pool of water and contemplates how he might be rejected further by humanity due to his appearance.	Chapter 12. Creature: 'The gentle manners and beauty of the cottagers greatly endeared them to me: when they were unhappy, I felt depressed; when they rejoiced, I sympathised in their joys.' Chapter 12. Creature: 'I imagined they would be disgusted until by my gentle demeanour, I should win their love.'
	Chapter 13. The creature continues to observe the DeLacey's and begins to understand the concept of companionship . They teach each other history and language, and the creature benefits from this as he can now understand human communication. In the next chapter, the history of the DeLacey's is revealed.	Chapter 13. Creature: 'I admired virtue and good feelings and loved the gentle manners and amiable qualities of my cottagers.' Chapter 13. Creature: 'But where were my friends and relations? No father had watched my infant days, no mother had blessed me with smiles and caresses.'
	Chapter 15. While foraging in the forest, the creature encounters a satchel with books including John Milton's Paradise Lost. The creature carefully learns to read and reflects on the nature of his own isolation . As he rummages through his own clothing, he finds some papers from Frankenstein's journal and becomes enraged at the detail of his creation and abandonment by his creator. In a futile attempt to be accepted by society, the creature introduces himself to the blind DeLacey. When the other cottagers arrive, they react with violence and drive the creature away.	Chapter 15. Creature: 'My person was hideous and my stature gigantic. What did this mean? Who was I? What was I? Whence did I come?' Chapter 15. Creature: 'Satan had his companions, fellow devils, to admire and encourage him but I am solitary and abhorred.' Chapter 15. Creature: 'I could have torn him limb from limb as the lion rends the antelope.'
	Chapter 16. The creature, spurned by all humanity, goes to Geneva to seek revenge on Victor Frankenstein. On the way, he encounters a drowning girl, saves her but is shot by a villager. He later meets a young boy: William (Victor's brother). Enraged and consumed with revenge , the creature strangles William and frames Justine Moritz. His narrative is over.	Chapter 16. Creature: 'Cursed, cursed creator. Why did I live?' Chapter 16. Creature: 'My daily vows rose for revenge.' Chapter 16. Creature: 'I, like the arch-fiend, bore a hell within me, and finding myself unsympathised with, wished to tear up the trees, spread havoc and destruction around me.' Chapter 16. Creature: 'I gazed on my victim and my heart swelled with exultation and hellish triumph.'
Chapter 17	Chapter 17. Shelley moves the action back to the present tense with Victor and the creature speaking in the mountains. The creature begs Victor to create him a female companion , so he doesn't perpetually live in isolation and rejection . Initially, Victor refuses because he is worried about the consequences but feels sympathy for the creature and fear over what might happen if he refuses. He agrees.	Chapter 17. Creature (to Frankenstein): "You must create a female for me with whom I can live in the interchange of those sympathies necessary for my being." Chapter 17. Creature (to Frankenstein): "If I cannot inspire love I will cause fear." Chapter 17. Frankenstein: 'I sometimes wished to console him; but when I saw that filthy mass that moved and talked, my heart sickened.' Chapter 17. Frankenstein: 'I concluded that the justice due to him and my fellow creatures demanded that I should comply with his request.'

Frankenstein by Mary Shelley (1818)

When?	Summary and Themes/Ideas	Quotations
Chapters 18 – 24	Chapter 18. Fearful of the consequences of making a companion for the creature, Victor withholds creating the female. Victor asks Henry Clerval to accompany him to England and is determined that they will not fall to the creature's revenge .	Chapter 18. Frankenstein: 'I was aware also that I should often lose all self-command, all capacity of hiding the harrowing sensations that would possess me during the progress of my unearthly occupation.' Chapter 18. Frankenstein: 'The danger of his machinations.'
	Chapter 19. Victor begins to work on creating a female companion . Again, he isolates himself from his family and friends to construct the second creation.	Chapter 19. Frankenstein: 'I saw an insurmountable barrier placed between me and my fellow men; this barrier was sealed with the blood of William and Justine.' Chapter 19. Frankenstein: 'During my first experiment, a kind of enthusiastic frenzy had blinded me to the horror of my employment. But now I went to it in cold blood, and my heart often sickened at the work of my hands.'
	Chapter 20. One night, Victor destroys the companion in front of the creature. He is determined to not perpetuate the problem he had created in the first place by the possibility of the creatures being able to reproduce. The creature swears revenge on Victor and informs him that he shall be with him on his wedding night. Victor discards evidence of the companion by throwing the body parts into a lake at night.	Chapter 20. Frankenstein: 'The wretch saw me destroy the creature on whose future existence he depended for happiness.' Chapter 20. Frankenstein (to Creature): "Begone! I do break my promise; never will I create another like yourself, equal in deformity and wickedness." Chapter 20. Creature (to Frankenstein): "Beware, for I am fearless and therefore powerful... I shall be with you on your wedding night."
	Chapter 21. To his horror, Victor learns Henry Clerval has been murdered; Victor is accused of murder as his boat was seen by witnesses near the discarded body parts of the female companion . After two months of illness, Victor's father visits him and Victor is later released from prison. Both him and his father depart for Geneva, and they begin planning his wedding to Elizabeth.	Chapter 21. Frankenstein: 'The human frame could no longer support the agonies that I endured, and I was carried out of the room in strong convulsions.' Chapter 21. Frankenstein: 'Why did I not die? More miserable than man ever was before, why did I not sink into forgetfulness and rest?'
	Chapter 23. On the evening of their wedding night, Victor hears a scream and finds Elizabeth murdered and sees the creature from the window. Consumed with grief yet again, Victor vows revenge . He informs his father of the sad news, and he is so overcome with grief that he tragically dies.	Chapter 23. Frankenstein: 'A grin was on the face of the monster.' Chapter 23. Frankenstein: 'Great God! Why did I not then expire! Why am I here to relate the destruction of the best hope and the purest creature on earth?' Chapter 23. Elizabeth: 'She was there, lifeless and inanimate, thrown across the bed, her head hanging down and her pale and distorted features half covered by her hair.' Chapter 23. Frankenstein: 'My rage is unspeakable.'
	Chapter 24. With his entire family killed, Victor spends the rest of his life chasing the creature. He completes his story to an amazed Walton and then dies. Walton then regains control of the narrative, continuing the story in the form of further letters to his sister. Walton then finds the remorseful creature crying over Victor's death. The creature tells Walton that he will now kill himself. Walton realises the danger of unchecked ambition and turns his crew home.	Chapter 24. Frankenstein: 'I was cursed by some devil and carried about an eternal hell.' Chapter 24. Frankenstein: 'I must pursue and destroy the being to whom I gave existence.' Chapter 24. Creature (to Walton): "You hate me; but your abhorrence cannot equal that with which I regard myself." Chapter 24. Creature (to Walton): "I shall die. I shall no longer feel the agonies which now consume me."

Romeo and Juliet by William Shakespeare (1594-96)

When?	Summary and Themes/Ideas	Quotations
Prologue	The chorus tells us of the lovers' fate and the family feud between the Montagues and Capulets. Shakespeare introduces the idea of fate and destiny that the couple had to meet for the conflict to end.	<p>Prologue. Chorus: "From ancient grudge break to new mutiny."</p> <p>Prologue. Chorus: "A pair of star-crossed lovers take their life."</p> <p>Prologue. Chorus: "Doth with their death bury their parents' strife."</p> <p>Prologue. Chorus: "The fearful passage of their death-marked love."</p>
Act 1	The family feud between the two families is established and family loyalty transcends onto the family servants. Hypermasculinity is introduced in the form of bawdy remarks and physical violence to protect male pride and family honour .	<p>1.1. Sampson (to Gregory): "Women being the weaker vessels are ever thrust to the wall."</p> <p>1.1. Sampson (to Abram): "I do not bite my thumb at you, sir, but I bite my thumb, sir."</p> <p>1.1. Benvolio (to all): "Part, fools! Put up your swords, you know not what you do."</p> <p>1.1. Tybalt (to Benvolio): "What, drawn and talk of peace! I hate the word as I hate hell, all Montagues, and thee."</p> <p>1.1. Prince Escalus (to all): "If ever you disturb our streets again, your lives shall pay the forfeit."</p>
	Romeo explains his conflicting feelings about life and love . Furthermore, it is revealed that Romeo is a Petrarchan lover and Benvolio advises Romeo to move on from desiring Rosaline.	<p>1.1. Benvolio (to Montague): "Where underneath the grove of sycamore... did I see your son."</p> <p>1.1. Montague (to Benvolio): "Shuts up his windows, locks fair daylight out, and makes himself an artificial night."</p> <p>1.1. Romeo (to Benvolio): "O brawling love, O loving hate... feather of lead, bright smoke, cold fire, sick health..."</p> <p>1.1. Romeo (to Benvolio): "she'll not be hit with Cupid's arrow, she hath Dian's wit and in strong proof of chastity well arm'd."</p> <p>1.1. Benvolio (to Romeo): "Examine other beauties."</p>
	Lord Capulet arranges for Paris to meet Juliet at a ball and begin their courtship. Meanwhile, the motif of fate recurs when the illiterate servant asks Romeo to read invitation list and sees Rosaline's name on the list. Benvolio and Romeo decide to gate-crash the ball.	<p>1.1. Paris (to Lord Capulet): "What say you to my suit?"</p> <p>1.1. Capulet (to Paris): "Let two more summers wither in their pride, ere we may think her ripe to be a bride."</p> <p>1.2. Capulet (to Paris): "But woo her, gentle Paris, get her heart, my will to her consent is but a part..."</p> <p>1.2. Servant (to Romeo + Benvolio): "I pray, can you read any thing you see?"</p> <p>1.2. Benvolio (to Romeo): "Compare [Rosaline's] face with some that I shall show, and I will make thee think thy swan a crow."</p>
	Shakespeare establishes Lady Capulet's and Juliet's attitudes towards marriage . Shakespeare also highlights Juliet's close relationship to the Nurse who raised her as a baby and juxtaposes this to a distant mother-daughter relationship with Lady Capulet.	<p>1.3. Nurse (about Juliet): "Thou wast the prettiest babe that e'er I nurs'd."</p> <p>1.3. Lady Capulet (to Juliet): "How stands your dispositions to be married?"</p> <p>1.3. Juliet (to Lady Capulet): "It is an honour I dream not of."</p> <p>1.3. Lady Capulet (to Juliet): "...younger than you, here in Verona, ladies of esteem, are made already mothers."</p> <p>1.3. Lady Capulet (to Juliet): "This night you shall behold [Paris] at our feast."</p> <p>1.3. Nurse (to Juliet): "Go, girl, seek happy nights to happy days."</p>

Romeo and Juliet by William Shakespeare (1594-96)

When?	Summary and Themes/Ideas	Quotations
Act 1	Romeo has a terrible feeling that if he attends the ball, something will happen that will result in his death . However, he is overpowered by his friends Mercutio and Benvolio, and they all gate-crash the Capulet Ball.	<p>1.4. Romeo (to Benvolio + Mercutio): "Some consequence yet hanging in the stars shall bitterly begin his fearful date with this night's revels."</p> <p>1.4. Romeo (to Benvolio + Mercutio): "Untimely death."</p> <p>1.4. Romeo (to Benvolio + Mercutio): "Direct my sail! On, lusty gentlemen."</p>
	Tybalot spots Romeo at the ball and is outraged by Romeo's shameless dishonour by attending. Tybalot vows to seek revenge for this. Romeo sees Juliet for the first time and they fall madly in love with each other at the Capulet ball. By the end of the scene, they realise that their love is forbidden and doomed .	<p>1.5. Romeo: "O, she doth teach the torches to burn bright."</p> <p>1.5. Romeo: "Did my heart love till now? Forswear it, sight! For I ne'er saw true beauty till this night."</p> <p>1.5. Tybalot (to Capulet): "Uncle, this is a Montague, our foe... I will not endure him."</p> <p>1.5. Tybalot: "This intrusion shall [...] convert to bitterest gall."</p> <p>1.5. Romeo (to Juliet): "My lips, two blushing pilgrims, ready stand to smooth that rough touch with a tender kiss."</p> <p>1.5. Juliet (to Romeo): "For saints have hands that pilgrims' hands do touch, and palm to palm is holy palmers' kiss."</p> <p>1.5. Romeo (to Juliet): "Give me my sin again."</p> <p>1.5. Juliet: "If he be married, my grave is like to be my wedding bed."</p> <p>1.5. Juliet: "My only love sprung from my only hate."</p>
Act 2	Romeo hides from his friends after the ball and runs back to the Capulet house to see Juliet. Juliet questions the meaning of family loyalty and expresses her love for Romeo. When he reveals himself, Romeo proposes and they arrange for the Nurse to act as their go-between.	<p>2.2. Juliet: "O Romeo, Romeo, wherefore art thou Romeo?"</p> <p>2.2. Juliet (to Romeo): "That which we call a rose by any other word would smell as sweet."</p> <p>2.2. Juliet (to Romeo): "Deny thy father and refuse thy name."</p> <p>2.2. Romeo: "It is the east, and Juliet is the sun."</p> <p>2.2. Romeo (to Juliet): "But love from love, toward school with heavy looks."</p> <p>2.2. Juliet (to Romeo): "It is too rash, too unadvisedly, too sudden."</p> <p>2.2. Romeo (to Juliet): "Th'exchange of thy love's faithful vow for mine."</p> <p>2.2. Juliet (to Romeo): "My love as deep; the more I give to thee the more I have, for both are infinite."</p>
	The Friar is sceptical of Romeo's new infatuation but agrees to help the lovers marry as he believes their union will end the family feud although he warns them of rushing into love too soon.	<p>2.5. Friar Lawrence (to Romeo): "Young men's love then lies not truly in their hearts, but in their eyes."</p> <p>2.5. Friar Lawrence (to Romeo): "These woes were all for Rosaline. And art thou chang'd?"</p> <p>2.5. Friar Lawrence (to Romeo): "I'll thy assistant be: for this alliance may so happy prove to turn your households' rancour to pure love."</p> <p>2.5. Nurse (to Juliet): "Have you got leave to go to shrift today?... Then hie you hence to Friar Lawrence' cell, there stays a husband to make you a wife."</p> <p>2.6. Friar Lawrence (to Romeo + Juliet): "These violent delights have violent ends."</p> <p>2.6. Friar Lawrence (to Romeo + Juliet): "The sweetest honey is loathsome in his own deliciousness and... confounds the appetite."</p>

Romeo and Juliet by William Shakespeare (1594-96)

When?	Summary and Themes/Ideas	Quotations
Act 3	The conflict between the Montagues and Capulets intensifies. Tybalt challenges Romeo to a duel , and Romeo refuses to fight . Mercutio, outraged from this refusal, draws his own sword and in the fighting , both he and Tybalt are killed . Consequently, Romeo is banished by the Prince.	<p>3.1. Tybalt (to Romeo): "Romeo...thou art a villain... turn and draw."</p> <p>3.1. Romeo (to Tybalt): "I do protest I never injured thee, but love thee better than thou canst devise."</p> <p>3.1. Mercutio (to Tybalt): "O calm, dishonourable, vile submission!"</p> <p>3.1. Mercutio (to Romeo): "A plague o' both your houses."</p> <p>3.1. Romeo: "O sweet Juliet, thy beauty hath made me effeminate."</p> <p>3.1. Romeo: "fire-ey'd fury be my conduct now!"</p> <p>3.1. Romeo: "O I am fortune's fool."</p>
	Unaware of the events, Juliet eagerly awaits her husband but the Nurse brings her news that Romeo has killed Tybalt in a fight. At first, she is shocked and distraught, but realises she must stand by Romeo.	<p>3.2. Juliet: "Give me my Romeo, and when he shall die, take him and cut him out in little stars."</p> <p>3.2. Nurse (to Juliet): "Tybalt is gone and Romeo banished, Romeo that kill'd him..."</p> <p>3.2. Juliet (to Nurse): "Shall I speak ill of him that is my husband?"</p> <p>3.2. Juliet (to Nurse): "Give this ring to my true knight, and bid him to come to take his last farewell."</p>
	Romeo and Juliet risk spending one night together before Romeo is banished from Verona. After Romeo leaves, Lady Capulet brings Juliet news of her arranged marriage to Paris which she bravely rejects. Enraged by possible public humiliation, Capulet aggressively presents patriarchal power over Juliet and threatens her to marry Paris or be disowned.	<p>3.5. Juliet (to Romeo): "O God, I have an ill-divining soul!"</p> <p>3.5. Juliet (to Romeo): "Methinks I see thee, now thou art below, as one dead in the bottom of a tomb."</p> <p>3.5. Romeo (to Juliet): "And trust me, love, in my eye so do you: dry sorrow drinks our blood."</p> <p>3.5. Juliet (to Lady Capulet): "I will not marry yet, and when I do, I swear it shall be Romeo."</p> <p>3.5. Capulet (to Juliet): "Out, you green-sickness carrion! Out, you baggage!"</p> <p>3.5. Capulet (to Juliet): "Hang thee, young baggage, disobedient wretch!"</p> <p>3.5. Capulet (to Juliet): "Get thee to church... or never after look me in the face."</p>
Act 4	Friar Lawrence comes up with a quick solution to not only prevent the marriage but reunify Romeo and Juliet.	<p>4.1. Juliet (to Friar Lawrence): "I long to die, if what thou speak'st speak not of remedy."</p> <p>4.1. Juliet (to Friar Lawrence): "bid me go into a new made grave."</p> <p>4.1. Friar Lawrence (to Juliet): "No warmth, no breath shall testify thou livest."</p> <p>4.1. Friar Lawrence (to Juliet): "The roses in thy lips and cheeks shall fade."</p>
	Juliet suspects the sleeping potion he has given her will kill her to cover his implication in unifying Romeo and Juliet. However, in desperation, she takes the potion and the Nurse discovers Juliet's body.	<p>4.3. Juliet: "What if it be a poison... to have me dead..."</p> <p>4.3. Juliet: "Methinks I see my cousin's ghost seeking out Romeo."</p> <p>4.3. Juliet: "Here's drink – I drink to thee."</p> <p>4.5. Nurse: "Help, help! My lady's dead!"</p> <p>4.5. Nurse (to Lady Capulet): "O lamentable day!"</p>

Romeo and Juliet by William Shakespeare (1594-96)

When?	Summary and Themes/Ideas	Quotations
Act 4	Friar Lawrence arrives at the Capulet household to proceed with the wedding, but Capulet informs him of Juliet's death .	<p>4.5. Capulet (to Friar Lawrence): "Death lies on her like an untimely frost."</p> <p>4.5. Capulet (to Friar Lawrence): "Despised, distressed, hated, martyr'd, killed!"</p> <p>4.5. Friar Lawrence (to Capulet): "She's not well married that lives married long, but she's best married that dies married young."</p> <p>4.5. Friar Lawrence (to Capulet): "Bear her to church, for though fond nature bids us all lament."</p>
Act 5	The Friar's plan goes wrong as Romeo is told that Juliet is dead from a witness at Juliet's funeral. Romeo is consumed with grief and purchases poison and plans to visit Juliet's tomb.	<p>5.1. Romeo (to Balthasar): "I defy you, stars!"</p> <p>5.1. Romeo (to Balthasar): "The trunk may be discharged of breath, as violently as hasty powder fired."</p> <p>5.1. Romeo: "Well, Juliet, I will lie with thee tonight."</p> <p>5.1. Romeo: "Let me have a dream of poison."</p> <p>5.1. Romeo: "Come, cordial and not poison, go with me to Juliet's grave, for there must I use thee."</p>
	Paris, praying at Juliet's tomb, encounters Romeo. Romeo fights with Paris in the Capulet tomb and slews Paris. When Romeo finds Juliet's body, he drinks the poison. After Juliet awakes and sees Romeo's dead body, she kills herself.	<p>5.3. Paris (to Romeo): "Can vengeance be pursued further than death?"</p> <p>5.3. Romeo (to Juliet): "Death, that hath suck'd the honey of thy breath, hath had no power yet upon thy beauty."</p> <p>5.3. Romeo (to Juliet): "The doors of breath, seal with a righteous kiss a dateless bargain to engrossing death!"</p> <p>5.3. Romeo (to Juliet): "Thy drugs are quick. Thus with a kiss I die."</p>
	The doomed lovers die in the Capulet tomb. Friar Lawrence explains what has happened and the heads of households bury their strife.	<p>5.3. Juliet (to Romeo): "O happy dagger!"</p> <p>5.3. Prince (to all): "Capulet, Montague? See what a scourge is laid upon your hate."</p> <p>5.3. Prince (to all): "All are punished."</p> <p>5.3. Capulet (to Montague): "O brother Montague, give me thy hand."</p>

Fractions are my friends!		
Always make your life simple	Simplify first	$\frac{2 \cancel{10}^2}{3 \cancel{21}_3} \times \frac{\cancel{14}^2}{\cancel{25}_5} = \frac{4}{15}$
Cancel anything on the top	With anything from the bottom	
Multiplying fractions	Top \times top bottom \times bottom	
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	$\frac{7}{12} + \frac{2}{9} = \frac{12}{36} + \frac{8}{36} = \frac{20}{36} = \frac{5}{9}$
Comparing fractions	Find the LCM	<p>which is bigger $\frac{4}{5}$ or $\frac{5}{6}$?</p> $\frac{24}{30} < \frac{25}{30} \text{ Bigger}$

Notation		
Expression	No equals sign	$2x - 12 + 3x$
Equation	Has an equals sign	$2x - 12 + 3x = 20$
Identity	True with any value for x	$5(x-3) \equiv 5x - 15$
Formula	Equals with more than one unknown	Area of a Trapezium $= \frac{(a+b)h}{2}$

Factors, Multiples and Primes		
Prime factor form	Tree thing tree thing	<p>Express 90 as a product of prime factors:</p> <pre> 90 / \ 9 10 / \ / \ 3 3 2 5 </pre> $90 = 2 \times 3^2 \times 5$
Product of its primes	Product means times, 2, 3, 5, 7 don't forget your primes	
HCF or LCM of large numbers	Use a venn diagram	<p>80 and 24</p> <pre> 80 24 / \ / \ 2 2 2 2 3 / \ / \ 2 2 2 2 </pre> <p>HCF = overlap $2 \times 2 \times 2 = 8$ LCM = all $80 \times 3 = 240$ or $24 \times 10 = 240$</p> <p>$280 = 2^3 \times 5 \times 7$ HCF = $2^2 \times 5 = 20$ $900 = 2^2 \times 3^2 \times 5^2$ LCM = $2^3 \times 3^2 \times 5^2 \times 7 = 12600$</p>
HCF	Multiply the overlap (Common bases, lowest powers)	
LCM	Multiply them all (All bases, highest powers)	

Decimal Manipulation		
Multiplying decimals	Gelosia	$2.6 \times 176 =$ <pre> 2.6 x 176 ---- 156 182 352 ---- 459.6 </pre> <p>Add decimal point at end of integer.</p>
Dividing numbers	Bus stop	Work out $3 \div 8$
First number	Goes in the bus stop	$= 8 \overline{) 3.0000}$ $= 0.375$
Dividing by a decimal	Equivalent fractions, Turn the denominator into an integer	Calculate $0.0642 \div 0.03$

Estimation & Limits of accuracy

Rounding	Find the decider	Round 58,624 to the nearest 100
5 or above 4 or below	Give it a shove Let it go	$\begin{array}{r} \downarrow \\ 58,624 \\ \text{decider} \end{array}$
Error interval	Range of possible values	$x = 3.68$ (3sf). Find the error interval for x . $\begin{array}{c} 3.67 \quad 3.68 \quad 3.69 \\ \leftarrow \quad \quad \rightarrow \\ 3.675 \quad 3.685 \end{array}$ Ans: $3.675 \leq x < 3.685$
How do we find them?	Use a number line	

Simplifying

Simplifying algebraic fractions	It's always wise to factorise	Simplify $\frac{18m^3 + 12m^2}{3m^2 + 2m} = \frac{6m^2(3m+2)}{m(3m+2)} = 6m$ $\frac{6b^5}{27+3b} \times \frac{9+b}{b^6} = \frac{6}{3} = 2$
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Expressions and Substitution

Substitution	Replace with brackets	$a = 5$ and $b = -2$. Calculate $6a - 3b$ $= 6(5) - 3(-2) = 30 + 6 = 36$
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Expanding and Factorising

What do we look for?	Common Factors	Factorise $6xy^2 - 9x^2y - 12xy$ $3xy(2y - 3x - 4)$
$Ax^2 + bx + c$		$a(x+b) = ax + ab$ $x^2 + 5x + 4 = (x+1)(x+4)$ $4x^2 - 81 = (2x-9)(2x+9)$ $2x^2 - 5x - 3 = (2x+1)(x-3)$ check by expanding

Fractions, Decimals and Percentages

% means	Out of 100	Write 48% as a fraction in simplest form $48\% = \frac{48}{100} = \frac{12}{25}$
Fractions to decimals	The line means divide	Convert $\frac{5}{8}$ to a percentage $5 \div 8 = 0.625 = 62.5\%$
What do we use?	Bus stop	
Fractions to %	Equivalent fractions Make the denominator 100	Write $\frac{3}{20}$ as a percentage $\frac{3}{20} = \frac{15}{100} = 15\%$
And if that fails?	The line means divide	

Indices

Bases are the same	Multiplying add the powers, dividing subtract	$w^3 \times w^4 = w^{3+4} = w^7$ $w^3 \div w^4 = w^{3-4} = w^{-1} = \frac{1}{w}$
Base to the power, all to the power	Multiply the indices	$(w^3)^2 = w^6$
Base to the power of zero	Equals 1	$w^0 = 1$
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 $\frac{2}{3} \times \frac{3}{2} = 1$
Complicated indices	Reciprocal Root Power	$125^{-\frac{2}{3}} = \left(\frac{1}{125}\right)^{\frac{2}{3}} = \left(\frac{1}{\sqrt[3]{125}}\right)^2 = \left(\frac{1}{5}\right)^2 = \frac{1}{25}$

Percentages

Percentages questions

Original x Multiplier = Final

$$O \times M = F$$

Finding final:

Increase 70 by 200%
 $\downarrow O$ $\downarrow M$ $F?$

Finding original:

A TV is reduced by 15% $\rightarrow M$
 It now costs £255 $\rightarrow F$
 What was the price originally? $\rightarrow O?$

Finding percentage change:

Jo's wage increases
 from £6.15 to £7.38 $\rightarrow F$
 What is the % increase? $\rightarrow M?$

For the multiplier

Start with 100
 Go up or down
 Turn into a decimal

The multiplier for a decrease of 40%

$$100\% - 40\% = 60\%$$

$$60\% = \frac{60}{100} = 0.6$$

Ratio and Proportion

Connection between two things

Box method

What do we look for?

Up down, side to side

And if that fails?

Middle man, think HCF

Converting units

Box method

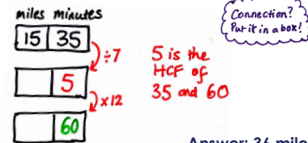
Currency questions

Box method

Recipe questions

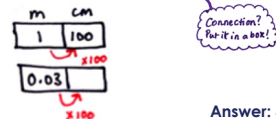
Box method

Jay travels 15 miles in 35 minutes.
 How much will he travel in 1 hour?



Answer: 36 miles

Convert 0.03m into cm

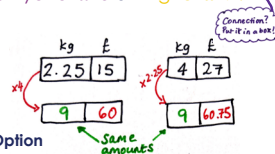


Answer: 3cm

Value for money

Box method with same amounts

Which is better value,
 2.25 kg of rye for £15 or 4kg for £27?

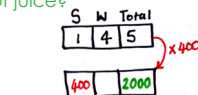


Answer: Option 1 is 75p cheaper

Ratio questions

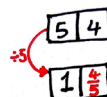
Box method with a total

To make juice I mix 1 part squash with 4 parts water. How much squash do I need for 2L of juice?



Answer: 400ml

Write the ratio 5:4 in the form 1 : n



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

Probability

Probability	Always adds up to 1	Find x. <table border="1"><tr><td>Number rolled</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>probability</td><td>0.14</td><td>0.15</td><td>0.21</td><td>0.14</td><td>x</td><td>0.31</td></tr></table>	Number rolled	1	2	3	4	5	6	probability	0.14	0.15	0.21	0.14	x	0.31
Number rolled	1	2	3	4	5	6										
probability	0.14	0.15	0.21	0.14	x	0.31										
If two events have an equal chance	Sample space to show the outcomes	You toss two fair coins. What is the probability of both showing tails? <div><div>H T H HH HT T TH TT</div><div>$p(TT) = \frac{1}{4}$</div></div>														
And if they don't?	Probability tree, Across times, Down add	Calculate the probability of getting one of each colour. 														
If you see 'and'?	Times	Evaluate the probability of rolling a 5 on a fair six-sided dice and getting heads from a fair coin toss. $p(5) = \frac{1}{6}$ $p(H) = \frac{1}{2} \rightarrow p(5 \text{ AND } H) = \frac{1}{6} \times \frac{1}{2}$														
If you see 'or'?	Add	Evaluate the probability of getting an even number or a 3 on a fair six-sided dice. $p(\text{even}) = \frac{1}{2}$ $p(3) = \frac{1}{6} \rightarrow p(\text{even OR } 3) = \frac{1}{2} + \frac{1}{6}$														
Venn Diagrams	Start in the middle and work your way out.	25 people like football, 18 like cricket. a) How many in total if 15 like both? 														
And if we can't	Call it x	b) How many like both if 37 like either? <div><div>Total = 25 - x + x + 18 - x</div><div>37 = 43 - x</div><div>x = 6</div></div>														



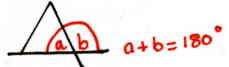






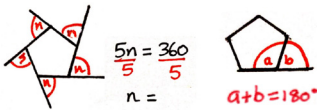

Linear Equations

Successful elimination	With an inverse operation	Solve $\frac{x}{3} + 5 = 8$ $\frac{x}{3} - 5 = 8 - 5$ $\frac{x}{3} = 3 \times 3$ $x = 9$
If you do it to one side	Do it to the other	
x on both sides	Get rid of the smallest x	Solve $11 - 3x = 2x + 1$ $+3x \quad +3x$

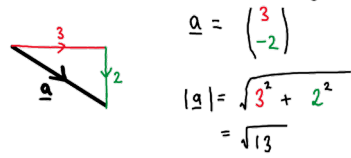
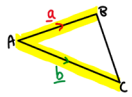
Linear Inequalities

Inequalities with negative x	Move the x and make it positive	Solve $-2x > 10$ $+2x \quad +2x$ $0 > 10 + 2x$ $-10 \quad -10$ $-10 > 2x$ $\frac{-10}{2} > \frac{2x}{2}$ $-5 > x$
Inequalities with two sides	Solve both sides separately, then combine	Solve & represent on a number line $3 < x - 9 \leq 5$ $3 < x - 9$ $x - 9 \leq 5$ $x \leq 14$
Strict inequality < >	Open dot	$12 < x$ $\hookrightarrow 12 < x \leq 14 \leftarrow$
Weak inequality $\leq \geq$	Solid dot	$12 \leq x \leq 14$

Angles

Angles in a triangle	Add up to 180°	
Angles in a quadrilateral	Add up to 360°	
Angles on a straight line	Add up to 180°	
Opposite angles	In a parallelogram are equal	
Vertically opposite	Angles are equal	
Parallel lines	Fs and Zs	
Fs	Corresponding angles are equal	
Zs	Alternate angles are equal	
Co-interior angles	Add up to 180°	
Exterior angles	Add up to 360°	
Interior plus exterior	Add up to 180°	

Vectors

Vectors	Magnitude and direction	Write \mathbf{a} as a column vector and work out its magnitude 
Parallel vectors	It's always wise to factorise	Which of the following vectors are parallel? $\mathbf{a} = \begin{pmatrix} 8 \\ 12 \end{pmatrix}$, $\mathbf{b} = \begin{pmatrix} 9 \\ 15 \end{pmatrix}$, $\mathbf{c} = \begin{pmatrix} 12 \\ 18 \end{pmatrix}$ $\mathbf{a} = 4 \begin{pmatrix} 2 \\ 3 \end{pmatrix}$, $\mathbf{b} = 3 \begin{pmatrix} 3 \\ 5 \end{pmatrix}$, $\mathbf{c} = 6 \begin{pmatrix} 2 \\ 3 \end{pmatrix}$ \mathbf{a} and \mathbf{c} are multiples of $\begin{pmatrix} 2 \\ 3 \end{pmatrix}$ so they are parallel.
Solving vector problems	Plan your route first	$\overrightarrow{AB} = \mathbf{a}$, $\overrightarrow{AC} = \mathbf{b}$ Write \overrightarrow{BC} in terms of \mathbf{a} and \mathbf{b} Route: $\overrightarrow{BC} = \overrightarrow{BA} + \overrightarrow{AC}$ $= -\mathbf{a} + \mathbf{b}$ 

Transformations

Translations	Movements with vectors	<p>Describe the transformation that maps A onto B</p> <p>Translation by vector $\begin{pmatrix} 5 \\ -6 \end{pmatrix}$</p>
Reflections	Mirror line of symmetry	<p>Describe the transformation that maps A onto B</p> <p>Reflection in the line $x=1$</p>
Rotations	Angle, Direction, Centre	<p>Describe the transformation that maps A onto B</p> <p>Rotation 90° (clockwise) about $(-1, -1)$</p>
Describing enlargements	Enlargement, Scale factor, Centre	<p>Describe the transformation that maps A onto B</p> <p>Enlargement scale factor $\frac{1}{3}$ centre $(-4, -5)$</p>
Drawing enlargements	Vector FROM the centre TO each point	<p>Enlarge this triangle by scale factor of 1.5, through the centre $(-1, 2)$</p> <p>Centre to A': $1.5 \times \begin{pmatrix} -4 \\ 3 \end{pmatrix} = \begin{pmatrix} -6 \\ 4.5 \end{pmatrix}$</p> <p>Centre to B': $1.5 \times \begin{pmatrix} -1 \\ 3 \end{pmatrix} = \begin{pmatrix} -1.5 \\ 4.5 \end{pmatrix}$</p> <p>Centre to C': $1.5 \times \begin{pmatrix} 1 \\ -1 \end{pmatrix} = \begin{pmatrix} 1.5 \\ -1.5 \end{pmatrix}$</p>

Circles

Circumference of a circle	$\pi \times d$	$C = \pi d$
Area of a circle	πr^2	$A = \pi r^2$
Arc length is	Fraction of the circle times $\pi \times d$	<p>Arc length = $\frac{200}{360} \times \pi d$</p>
Area of a sector is	Fraction of the circle times πr^2	<p>Area of Sector = $\frac{200}{360} \times \pi r^2$</p>

Surface Area

Surface area	Area of each face Add them up	<p>Area A Area A Area B Area B Area C Area C</p> <p>Total Surface Area</p>
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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

Unit B1: Cell Biology – Cells, Tissues and Organs

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

Unit B1: Cell Biology – Transport of Materials

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 ₂ mean?	There are 2 atoms of oxygen (in an oxygen molecule)
17	What does the 2 in CO ₂ 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 ₄ ?	2. Two molecules, each containing 1 carbon atom (2x1=2)
20	How many hydrogen atoms in 2CH ₄ ?	8. Two molecules, each containing 4 hydrogen atoms (2x4=8)
21	Balance this equation: CH ₄ + O ₂ -> CO ₂ + H ₂ O	CH ₄ + 2O ₂ -> CO ₂ + 2H ₂ O
22	Balance this equation: C + O ₂ -> CO ₂	It's already balanced!
23	Balance this equation: H ₂ + O ₂ -> H ₂ O	2H ₂ + O ₂ -> 2H ₂ 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

Unit C1: Chemistry Fundamentals

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
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

Unit C1: Chemistry Fundamentals

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+ (group one electron in the outer shell, needs to lose it)
59	What charge will an ion of beryllium take?	2+ (group 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- (group 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- (group 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

Unit P1: Energy

1	Name the eight energy stores	Thermal, kinetic, gravitational potential, chemical potential, elastic potential, magnetic, nuclear, electrostatic
2	Which energy store changes when temperature increases, and how does it change?	Thermal store increases
3	Which energy store changes when temperature decreases, and how does it change?	Thermal store decreases
4	Which energy store changes when speed increases, and how does it change?	Kinetic store increases
5	Which energy store changes when speed decreases, and how does it change?	Kinetic store decreases
6	Which energy store changes when an object is raised in height, and how does it change?	Gravitational potential store increases
7	Which energy store changes when an object is lowered in height, and how does it change?	Gravitational potential store decreases
8	Which energy store changes when batteries, fuel or food are used and how does it change?	Chemical potential store decreases
9	Which energy store changes when batteries are charged?	Chemical potential store increases
10	Which energy store changes when objects are stretched or squeezed, and how does it change?	Elastic potential store increases
11	Which energy store changes when stretched or compressed objects relax, and how does it change?	Elastic potential store decreases
12	Name the four energy transfers	Mechanical Work, Waves, Heating, Electrical Work
13	How is energy transferred when people or machines push or pull objects?	Mechanical Work

14	Name two types of wave energy transfer	Light and Sound
15	How is energy transferred through wires?	Electrical Work
16	How is energy transferred from hot objects to cold objects?	Heating
17	What is the unit and unit symbol for energy?	joule, J
18	What is power?	Rate of energy transfer
19	What is the unit and unit symbol for power?	watt, W
20	What is 1 W equivalent to in terms of joules and seconds?	One joule is transferred every second
21	What is the equation that relates power, energy and time (in symbols)?	$P \times t = E$
22	What is the equation that relates power, energy and time (in words)?	Power x time = energy
23	What is the equation that links work done, power and time (in symbols)?	$P \times t = W$
24	What is the equation that links work done, power and time (in words)?	Power x time = work done
25	State the law of conservation of energy	Energy cannot be created or destroyed
26	What is the equation for calculating efficiency as a decimal?	$\text{efficiency} = \frac{\text{useful energy output}}{\text{total energy input}}$
27	What is the equation for calculating efficiency as a percentage?	$\text{efficiency} = 100 \times \frac{\text{useful energy output}}{\text{total energy input}}$
28	What is the equation for calculating efficiency in terms of power?	$\text{efficiency} = \frac{\text{useful power output}}{\text{total power input}}$
29	What is "wasted" energy?	Energy that is not transferred in useful ways
30	Why is efficiency never 100%?	Energy is always dissipated to the surroundings
31	What does dissipated mean?	Lost to the surroundings as thermal energy

32	If a machine has moving parts, how can we reduce unwanted energy transfers?	Lubrication
33	How can we reduce the amount of energy hot objects lose by heating the surroundings?	Increasing thermal insulation
34	What is the relationship between thermal conductivity and the rate of energy transfer across the material?	The higher the thermal conductivity, the higher the rate of energy transfer across the material
35	What is the relationship between the thickness of a building's walls and the building's rate of cooling?	The thicker the walls, the slower the rate of cooling
36	What is the relationship between the thermal conductivity of a building's walls and the building's rate of cooling?	The greater the thermal conductivity of the walls, the greater the rate of cooling
37	What is the equation for calculating kinetic energy (in symbols)?	$E_k = 0.5 m v^2$
38	What is the equation for calculating kinetic energy (in words)?	kinetic energy = $0.5 \times \text{mass} \times \text{velocity}^2$
39	What is the symbol for kinetic energy?	E_k
40	What is the symbol for mass?	m
41	What is the symbol for velocity?	v
42	What are the units for velocity?	metres per second, m/s
43	What are the units for mass?	kilograms, kg
44	What is the unit for the spring constant?	newtons per metre, N/m
45	What is the equation for calculating gravitational potential energy (in symbols)?	$E_p = m g h$
46	What is the equation for calculating gravitational potential energy (in words)?	gravitational potential energy = mass x gravitational field strength x height

47	What is the symbol for gravitational potential energy?	E_p
48	What is the symbol for gravitational field strength?	g
49	What is the symbol for height?	h
50	What are the units for height?	metres, m
51	What is the unit for gravitational field strength?	newtons per kilogram, N/kg
52	What are the units for specific heat capacity?	J/kg °C
53	What does specific heat capacity mean?	The energy required to increase the temperature of one kg of a substance by one °C
54	When calculating change in thermal energy, what is meant by $\Delta\theta$?	Temperature change
55	When calculating change in thermal energy, what are the units for temperature change?	degrees celcius, °C
56	What is the symbol for specific heat capacity?	c
57	What are energy resources used for?	Transport, electricity and heating
58	What is a renewable energy resource?	A resource which is being replenished as it is used
59	What is a non-renewable energy resource?	A resource which is not being replenished as it is used
60	Name two non-renewable energy resources	Fossil fuels, nuclear
61	Name the three fossil fuels	Coal, crude oil, natural gas
62	Give two advantages of using fossil fuels for energy	Readily available, reliable, high energy content per kg
63	Give two disadvantages of using fossil fuels for energy	Non-renewable, release carbon dioxide when burnt
64	Give two advantages of using nuclear fuels for energy	Very high energy output, no carbon dioxide released

Unit P1: Energy

65	Give two disadvantages of using nuclear fuels for energy	Risk of nuclear accident, and radioactive, toxic waste needs to be buried for a long time
66	Name seven renewable energy resources	Wind, solar, geothermal, hydroelectric, tidal, waves, biofuel
67	Give two advantages of using wind power for energy	Renewable, does not release carbon dioxide
68	Give two disadvantages of using wind power for energy	Unreliable, can be noisy, often low power output
69	Give two advantages of using solar power for energy	Renewable, does not release carbon dioxide
70	Give two disadvantages of using solar power for energy	Unreliable, often low power output
71	Give two advantages of using geothermal power for energy	Renewable, does not release carbon dioxide
72	Give one disadvantage of using geothermal power for energy	Cannot be built anywhere
73	Give two advantages of using hydroelectric power for energy	Renewable, does not release carbon dioxide
74	Give two disadvantages of using hydroelectric power for energy	Habitat loss, can cause flooding
75	Give two advantages of using tidal power for energy	Renewable, does not release carbon dioxide
76	Give two disadvantages of using tidal power for energy	Damages aquatic habitats, difficult to build
77	Give two advantages of using wave power for energy	Renewable, does not release carbon dioxide
78	Give a disadvantage of using wave power for energy	Very low power output
79	Give two examples of biofuels	Biodiesel, wood
80	Give two advantages of using biofuels for energy	Renewable, carbon neutral
81	Give a disadvantage of using biofuels for energy	Lots of land required

Unit B2: Organisation in Animals

1	What is digestion of food?	Breaking down large, complex food molecules into smaller ones
2	Why is digestion important?	Digestion produces small molecules that can be absorbed into our blood
3	How do our teeth help us digest food?	They break the food into smaller pieces, to increase the total surface area
4	What are two functions of saliva in digestion?	1. To moisten food to allow easier swallowing 2. To start chemical digestion by enzymes
5	What are the 7 main food groups?	In any order: fats, proteins, carbohydrates, fibre, minerals, vitamins and water
6	Which of the 7 main food groups are large polymer molecules?	Fats, carbohydrates and proteins
7	Which of the food group molecules begins to be digested in the mouth?	Carbohydrates (don't write carbs!)
8	Which of the food group molecules begins to be digested in the stomach?	Proteins
9	What is the name of the enzyme that digests carbohydrates?	Amylase (a type of carbohydrase)
10	What is the name of the enzyme that digests proteins?	Protease
11	What is the name of the enzyme that digests fats and lipids?	Lipase
12	What is the function of the mouth in digestion?	To mechanically break up food into smaller pieces to increase surface area
13	What is a polymer?	A large molecule made up of repeating units of similar or identical small molecules
14	How does stomach acid help digestion?	1. It breaks up large particles of proteins 2. It provides an optimum pH for protease enzymes
15	What is an enzyme?	A protein which can speed up a reaction without being used up itself
16	What is the order in which food passes through the digestive system?	Mouth -> oesophagus -> stomach -> small intestine -> large intestine -> rectum -> anus
17	What is the function of the small intestine?	To absorb sugars, lipids, amino acids, vitamins and minerals from digested food.
18	Give an adaptation of the small intestine which improves absorption of digested molecules	Structures called villi increase the surface area for increased diffusion into the blood
19	What is the function of the large intestine?	To absorb water from digested food
20	What is bile?	A substance that emulsifies fat and neutralises stomach acid
21	What is the function of the liver in digestion?	To produce bile
22	What is the function of the gall bladder?	To store bile until it can be released into the small intestine
23	What is the function of the rectum?	To store undigested material before excretion
24	Name where carbohydrase is made in the body	Salivary glands, pancreas and small intestine
25	What do carbohydrases break down and what is produced?	Carbohydrates to simple sugars (e.g. amylase breaks down starch to glucose)

Unit B2: Organisation in Animals

26	Name where protease is made in the body	Stomach, pancreas and small intestine
27	What do proteases break down and what is produced?	Proteins to amino acids
28	Name where lipase is made in the body	Pancreas and small intestine
29	What do lipases break down and what is produced?	Lipids (fats) to fatty acids and glycerol
30	What are the products of digestion used for?	To build new carbohydrates, lipids and proteins in cells
31	What is the test for protein in food?	Add Biuret reagent to a sample or solution of the food. Reagent turns from blue to purple or violet
32	What is the test for glucose (sugar) in food?	Add Benedict's reagent to a sample or solution of the food, heat to 75 degrees Celsius. Reagent turns from blue to orange/red
33	What is the test for starch in food?	Add iodine solution to a sample or solution of the food. Reagent turns from orange to blue/black
34	What is the test for fats or lipids in food?	Add ethanol or Sudan III to a sample of the food, then shake. The upper layer will be cloudy white (red if using Sudan III)
35	What is the active site of an enzyme?	Part of the surface which joins to a substrate and where the reaction happens
36	What is a substrate?	The molecule that an enzyme will join with and change (for example, break it down)
37	Why is the active site of an enzyme called 'complementary'?	It fits the shape of the substrate perfectly
38	Name two factors that can affect the shape of an enzyme's active site	pH and high temperature
39	What happens when an enzyme is denatured?	Its active site changes shape so it can't join to the substrate
40	In Biology, what do we mean by 'tissue'?	A group of identical (or very similar) cells working together to do a particular job
41	In Biology, what do we mean by 'organ'?	A collection of different types of tissue that all work together to perform a specific function
42	In Biology, what is an organ system?	A group of organs that work together to perform a particular function
43	Name one organ system in humans	For example: digestive system, nervous system, circulatory system, skeletal system, reproductive system, endocrine system
44	Which system transports substances around the body?	The circulatory system
45	Why is our heart an example of an organ?	It is a group of different tissues that work together to pump blood round the body
46	What are the walls of the heart made from?	Muscle cells and tissue
47	Name the two types of chambers in the heart	Atrium and ventricle
48	Which are the upper chambers of the heart?	Atria (singular: atrium)
49	Which are the lower chambers of the heart?	Ventricles
50	When the muscles in the atria contract, where does the blood go to?	To the ventricles

Unit B2: Organisation in Animals

51	When the muscles in the ventricles contract, where does the blood go to?	Out of the heart, either into the pulmonary artery or into the aorta
52	What is the job of the heart valves?	To prevent backflow of blood in the heart
53	To where does blood flow after leaving the right hand side of the heart?	The lungs
54	To where does blood flow after leaving the left hand side of the heart?	The rest of the body, except the lungs
55	Through which blood vessel does blood flow away from the heart?	Arteries
56	Through which blood vessel does blood flow back into the heart?	Veins
57	Name the blood vessel by which blood leaves to the rest of the body from the heart	Aorta
58	Name the blood vessel by which blood arrives back to the heart from the rest of the body	Vena cava
59	Name the blood vessel by which blood leaves the heart to the lungs	Pulmonary artery
60	Name the blood vessel by which blood leaves the lungs to go back to the heart	Pulmonary vein
61	Which blood vessels have thick walls containing muscle tissue and elastic fibres?	Arteries
62	Which blood vessels have thinner walls and contain valves?	Veins
63	Name two key adaptations of capillaries	Very thin wall (only one cell thick) to reduce distance diffusion has to occur across; very narrow to reduce the distance that diffusion has to occur across
64	Where is the "natural" pacemaker of the heart located?	The right atrium
65	Where are the lungs located?	The upper part of the body (thorax)
66	What protects the lungs?	The rib cage
67	What separates the lungs from the abdomen (lower part of body)?	The diaphragm
68	What gas diffuses into the bloodstream from the lungs?	Oxygen
69	What gas diffuses out of the bloodstream into the lungs?	Carbon dioxide
70	Name the structure which carries air from the nose and mouth to the lungs	Trachea
71	Name the two structures which branch off from the Trachea	Bronchi (singular: bronchus)
72	Name the structure which branch off from the bronchi	Bronchiole(s)
73	What are the small gas exchange structures in the lungs called?	Alveoli (singular: alveolus)
74	Describe some adaptations that alveoli have to make them an efficient gas exchange surface	Any from: Thin walls (one cell thick); rich capillary network; efficient movement of blood through capillaries; folded inner surface; alveoli contain mucus
75	How does having thin walls improve diffusion in the alveoli?	It decreases the distance that gases have to travel

Unit B2: Organisation in Animals

76	How does a rich capillary network around the alveoli improve diffusion of gases?	It increases the size of the gas exchange surface
77	How does the movement of blood in the capillaries surrounding the alveoli improve diffusion of gases?	It maintains the concentration gradient between the alveoli and the blood
78	How does the folded inner surface of the alveoli increase the diffusion of gases?	It increases the surface area
79	How does the mucus in the alveoli improve diffusion?	It dissolves gases from the air for more efficient gas exchange
80	Is blood a cell tissue or organ?	A tissue
81	What is the component of blood called that carries all of the blood cells in it?	Plasma
82	What are the three main cell types found in blood?	Red blood cells, white blood cells, platelets
83	Which gas dissolves in blood plasma for transport from the organs to the lungs?	Carbon dioxide
84	What does blood transport from the small intestine to other organs?	Soluble products of digestion
85	What major gas do red blood cells transport?	Oxygen
86	What major organelle do red blood cells lack?	A nucleus
87	What do red blood cells contain that allows them to carry oxygen?	Haemoglobin
88	What do white blood cells do?	Defend the body against microorganisms
89	What do platelets do?	Help clot the blood at wound sites
90	What are the coronary arteries?	Blood vessels that supply the heart muscle tissue with blood
91	What occurs in coronary heart disease (CHD)?	The coronary arteries become blocked with fatty deposits, narrowing them
92	How can coronary heart disease cause heart attacks?	Lack of blood to heart muscle cells means they can't release energy and contract
93	How do stents treat coronary heart disease?	Re-opens the blocked coronary artery, restoring blood flow
94	How do statins treat coronary heart disease?	Decreases the blood concentration of cholesterol, which reduces build-up of fatty deposits in the coronary arteries.
95	Why are faulty heart valves life-threatening?	They allow back-flow of blood in the heart
96	Name two sources of replacement heart valves	1. Mechanical 2. Biological (e.g. pigs or sheep).
97	Describe a treatment used in the case of total heart failure	Heart transplant
98	Name a risk of surgical intervention in heart disease	Infection
99	When would an artificial heart be used?	1. To allow the heart to rest and recover 2. To keep the patient alive whilst they wait for a transplant

Unit B2: Organisation in Plants

1	Name three plant tissues	Any from: epidermal, palisade mesophyll, spongy mesophyll, xylem, phloem, meristem
2	Name three plant organs	Leaves, stems and roots
3	What is the role of the epidermal tissue in plants?	To cover and protect
4	What is the role of the palisade mesophyll tissue in plants?	This is where photosynthesis happens
5	What is the role of the spongy mesophyll tissue in plants?	This is where gas exchange occurs
6	What is the role of the xylem tissue in plants?	Transport of water (and dissolved ions) from the roots
7	What is the role of the phloem tissue in plants?	Transport of dissolved sugars (from the leaves)
8	What is the role of the meristem tissue in plants?	To divide into cells at the growing tips of shoots and roots
9	What is transpiration?	The movement of water from the roots to the leaves, eventually leaving the leaves via evaporation
10	Name some factors which affect the rate of transpiration in plants	1. Temperature 2. Humidity 3. Air movement 4. Light intensity
11	What is translocation?	The movement of sugars from the leaves to the rest of the plant through phloem vessels
12	Describe the adaptations of xylem tissue	Hollow tubes strengthened by lignin
13	Describe the adaptations of phloem tissue	Elongated cells with pores in the end cell walls to aid the movement of dissolved sugars
14	What is the role of stomata?	Provides a hole through which water, oxygen and carbon dioxide can move in and out of the leaf
15	What is the role of guard cells?	To control the opening and closing of stomata to control water loss and gas exchange in the plant

Unit C2: Structure and Bonding

1	What charge do electrons have?	-1
2	What charge will an ion of lithium take?	1+ (group one electron in the outer shell, needs to lose it)
3	What charge will an ion of beryllium take?	2+ (group two electrons in the outer shell, needs to lose them both)
4	What charge will an ion of barium take?	2+ (group 2 so two electrons in the outer shell, needs to lose them both)
5	What charge will an ion of fluorine take?	1- (group 7 electrons in the outer shell, needs to gain one)
6	If something has gained electrons, what charge will it have?	Negative
7	If something has lost electrons, what charge will it have?	Positive (because they have lost a negative!)
8	What charge will an ion of oxygen take?	2- (group 6 electrons in outer shell so needs to gain two)
9	What charge will an ion of selenium take?	2- (group 6, so has 6 electrons in the outer shell and needs to gain two)
10	Explain in terms of electrons what occurs when lithium bonds with chlorine	One electron transferred from lithium to chlorine
11	Why do atoms transfer electrons in ionic bonding?	So that they can have full outer shells
12	Explain in terms of electrons what occurs when lithium bonds with fluorine	One electron transferred from lithium to fluorine
13	Explain in terms of electrons what occurs when magnesium bonds with oxygen	Two electrons transferred from magnesium to oxygen
14	Explain in terms of electrons what occurs when beryllium bonds with oxygen	Two electrons transferred from beryllium to oxygen
15	Explain in terms of electrons what occurs when magnesium bonds with chlorine	One electron transferred from magnesium to two different chlorine atoms
16	Explain in terms of electrons what occurs when sodium bonds with oxygen	Two electrons transferred to an oxygen atom from two different sodium atoms
17	Why do sodium ions and chlorine ions form an ionic bond?	There is an electrostatic force of attraction between oppositely charged ions
18	Why don't sulphur ions and oxygen ions form ionic bonds with each other?	Both have negative charges so would repel
19	Describe the structure of a giant ionic lattice	A 3D network of alternating positive and negative ions, held together by the electrostatic force of attraction
20	State the melting points of ionic substances	High
21	Explain why ionic substances have high melting points	Strong bonds between oppositely charged ions are hard to break
22	Will NaCl(s) conduct electricity?	No

Unit C2: Structure and Bonding

23	Will NaCl (aq) conduct electricity?	Yes (aq stands for aqueous which means it is dissolved in water)
24	Will NaCl (l) conduct electricity?	Yes
25	What does molten mean?	Melted
26	Explain why ionic compounds do not conduct electricity when solid	Because the ions are not free to move
27	Explain why ionic compounds conduct electricity in solution	Because the ions are free to move
28	Explain why ionic compounds conduct electricity when molten	Because the ions are free to move
29	What does soluble mean?	Dissolves in water
30	What does insoluble mean?	Does not dissolve in water
31	Magnesium carbonate is insoluble. What do you need to do before it will conduct electricity?	Melt it
32	Sodium fluoride is soluble. Explain what the easiest way for it to conduct electricity is	Dissolve it in water because this does not require high temperatures
33	Explain why chlorine and fluorine form covalent bonds	They are both non-metals
34	Complete the sentence: In covalent bonds, electrons are _____	Shared
35	In ionic bonds, electrons are _____	Transferred
36	What is the name given to the structure of diamond, graphite and silicon dioxide?	Giant covalent
37	How many bonds does each carbon have in diamond?	4
38	Explain why diamond has a high melting point	Giant structure with strong covalent bonds between the atoms, requires a lot of energy to break
39	Explain why most giant covalent substances do not conduct electricity (3 marks)	There are no electrons/ions/charged particles that are free to move
40	Explain why graphite conducts electricity	Has delocalised electrons between the layers that can move through the graphite
41	Making full reference to structure and bonding in graphite, explain how it conducts electricity	Each carbon has 3 bonds, 1 electron is delocalised, free to carry charge through the graphite
42	Explain why graphite can act as a lubricant	Weak forces between layers which are free to slide over each other
43	What is graphene?	One layer of graphite

Unit C2: Structure and Bonding

44	What is a fullerene?	Substance made of carbon atoms arranged in a cage
45	What type of substance are methane and water?	Simple molecular (or simple molecules)
46	What is a molecule?	A group of atoms chemically bonded together
47	Describe the structure of simple covalent molecules	Strong covalent bonds between atoms, weak forces holding the molecules together
48	What are intermolecular forces?	Weak forces between molecules which hold them together
49	Explain why methane has a low melting point	It is a simple molecular substance with weak forces between the molecules (which are easy to break)
50	What is a polymer?	Millions of small molecules joined together in a chain to form a large molecule
51	Describe the main features of metals in terms of their structure	Positive metal ions arranged in layers with delocalised electrons
52	Explain why metals can conduct electricity	Delocalised electrons are free to carry charge
53	Explain why pure metals are soft	Layers of metal ions are free to slide over each other
54	What is an alloy?	A mixture of two or more elements, at least one of which is a metal
55	Give a reason for alloying a metal	To make it harder, to make it less reactive
56	Explain why alloys can be harder than pure metals	Different size of atoms disturb the layers to stop them sliding over each other
57	In terms of electrons, what do group 1 elements have in common?	1 electron in the outer shell
58	In terms of electrons, what do group 7 elements have in common?	7 electrons in the outer shell
59	In terms of electrons, what do group 0 elements have in common?	Full outer shell
60	What is more reactive, lithium or sodium?	Sodium
61	What is more reactive, chlorine or bromine?	Chlorine
62	Define inert	Unreactive
63	Explain why the noble gases are inert	They have full outer shells, so do not need to gain or lose electrons
64	What is a trend?	A pattern in properties

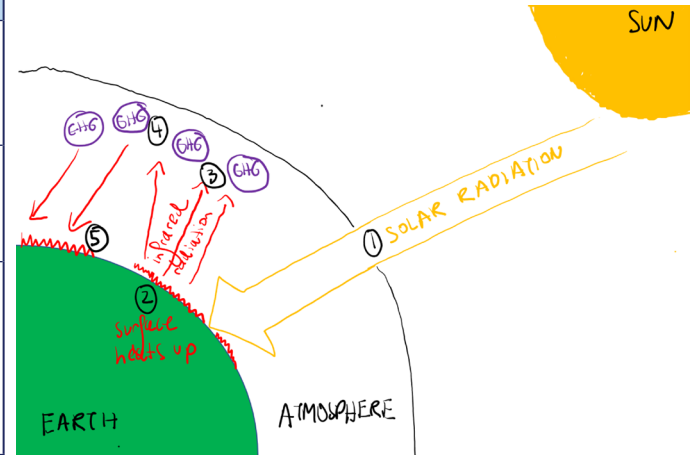
Unit C2: Structure and Bonding

65	State the trend in the melting points of the alkali metals	Gets lower down the group
66	What state is fluorine at room temperature?	Gas
67	What state is chlorine at room temperature?	Gas
68	What state is bromine at room temperature?	Liquid
69	What state is iodine at room temperature?	Solid
70	Balance the equation: $2\text{Li} + \text{H}_2\text{O} \rightarrow \text{LiOH} + \text{H}_2$	$2\text{Li} + 2\text{H}_2\text{O} \rightarrow 2\text{LiOH} + \text{H}_2$
71	Balance the equation: $2\text{K} + \text{H}_2\text{O} \rightarrow \text{KOH} + \text{H}_2$	$2\text{K} + \text{H}_2\text{O} \rightarrow \text{KOH} + \text{H}_2$
72	Name LiOH	Lithium hydroxide
73	Name KOH	Potassium hydroxide
74	Explain why the group 1 elements are called alkali metals	They are metals that form alkalis when they react with water
75	What is a displacement reaction?	A reaction in which a more reactive element takes the place of a less reactive element in a compound
76	Explain why the following reaction does not proceed: $\text{KBr} + \text{I}_2$	Iodine is less reactive than bromine so cannot displace it
77	Balance the below equation and explain why it is a displacement reaction: $\text{KBr} + \text{Cl}_2 \rightarrow \text{KCl} + \text{Br}_2$	$2\text{KBr} + \text{Cl}_2 \rightarrow 2\text{KCl} + \text{Br}_2$; chlorine has displaced bromine as it is more reactive
78	Explain why fluorine is more reactive than chlorine	Fewer shells/electrons, less shielding (or stronger attraction from nucleus), easier to gain electrons
79	Explain why potassium is more reactive than lithium	More shells/electrons, less shielding (or weaker attraction from nucleus), easier to lose electrons
80	Explain why bromine is less reactive than chlorine	More shells/electrons, more shielding (or weaker attraction from nucleus), harder to gain electrons
81	Explain why sodium is less reactive than caesium	Fewer shells/electrons, less shielding (or stronger attraction from nucleus), harder to lose electrons

Weather	Short term state of the atmosphere in a particular location.
Climate	Long term state of the atmosphere (usually 30 years or more)
Climate change	Long-term shift in the state of the atmosphere.
Greenhouse gasses	Gasses which absorb and re-emit infrared radiation.
Mitigation strategies	Actions that prevent or reduce the causes of climate change.
Adaptation strategies	Actions that help people cope with the effects of climate change.

Natural Factor	Time-Frame	Diagram
Orbital Change	100,000 years	
Sunspots	11 years	
Volcanic Eruptions	Unpredictable	

The Greenhouse Effect

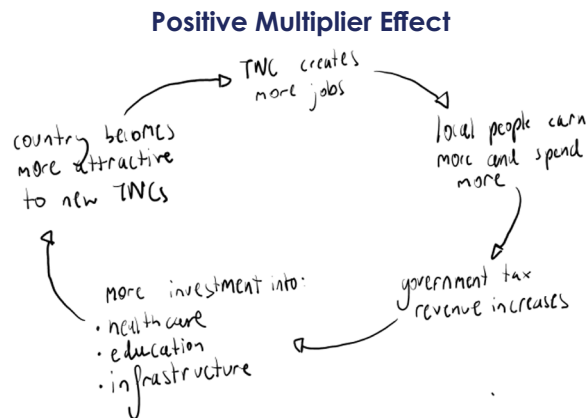


Responses To Climate Change

Mitigation	Adaptation
Electric vehicles, such as Tesla.	Flood resilient housing, such as elevated houses in Northern Bangladesh.
Carbon Capture and Storage, such as Boundary Dam Power Station.	Farmer field schools, such as saltwater growing techniques in Southern Bangladesh.
International agreements, such as Glasgow 2021 declaration to ban and reverse deforestation.	Rainwater storage, such as Hafirs in Sudan for irrigation.

Newly emerging economy	A country experiencing high levels of industrialisation, improvements to quality of life and economic development.
Mechanisation	When jobs previously done by humans are replaced by machinery.
Subsidy	Money given by a government to a company to help them make more profit.
Tax break	A reduction in tax over a fixed period of time.
Informal sector	Jobs with no formal contract.
Favela	Brazilian term for a squatter settlement or informal housing.
Transnational corporation	A company that operates across more than one country.

Sector	Definition	Country
Primary	Extraction of raw materials	LIC
Secondary	Manufacturing of products	NEE
Tertiary	Provision of services	HIC



Impacts Of Shell On Nigeria	
Advantages	Disadvantages
Shell creates 65,000 direct and 250,000 indirect jobs.	Environmental damage e.g. Bodo Oil Spills.
Shell invested \$1.5m into improving medical equipment in the Central Hospital, Abuja.	Leakage effect – Shell is an Anglo-Dutch company.
Shell launched a development programme, called Shell LiveWire, which supports young entrepreneurs.	Corruption – Shell paid \$1.3bn to a corrupt former government minister for an oil field.

Topic 1: The First World War

Timeline						
1. The Triple Alliance was formed	3. Archduke Franz Ferdinand was assassinated	5. Battle of Mons	7. The Battle of the Somme	9. The Battle of Arras	11. Bolsheviks pull Russia out of the war	13. Treaty of Versailles was signed
1882	June 1914	August 1914	July-Nov 1916	April-May 1917	March 1918	1919
1907 2. The Triple Entente was formed	August 1914 4. First World War began	Oct -Nov 1914 6. First Battle of Ypres	April 1917 8. USA entered the war	July-November 1917 10. Battle of Passchendaele	November 1918 12. End of the First World War	

Key People	
14. Archduke Franz Ferdinand	Heir to the throne of Austria-Hungary, whose assassination sparked the First World War.
15. Algerian Troops	Soldiers who fought in WWI due to Algeria being a part of France's Empire.
16. Chinese Labour Corps	Workers who came from China to do work linked to the war e.g. digging trenches, repairing machinery.
17. Ganga Singh	A sergeant in the 57th rifles of the Indian corps who fought on the Western Front.
18. Mike Mountain Horse	A member of a First Nation tribe in Canada who fought for Britain at Vimy Ridge and the Battle of Cambrai in 1917.
19. Private John Parr	A soldier from Finchley, who many believe was the first British soldier to be killed during WWI.

Key Words			
20. Alliance	A union formed between two or more countries, often promising each other military support.	26. Imperialism	Conquering and ruling other countries.
21. Arms race	A race between countries to build the biggest armies and make the most weapons.	27. Militarism	The belief that your country should have a strong army.
22. Assassination	To murder someone for money or for political reasons.	28. Nationalism	Intense loyalty to your nation and a desire for it to be successful or independent. This often means excluding others and feeling your nation is better than all others.
23. Balkans	South-east Europe – including Serbia, Bulgaria, and Greece.	29. Triple Entente	The alliance between Britain, France and Russia (formed in 1907).
24. Front	The line where two opposing armies meet.	30. Triple Alliance	The alliance between Germany, Austria-Hungary and Italy (formed in 1882).
25. Great Powers	Countries with international influence and military strength (Germany, Britain, France, Russia, Austria-Hungary).	31. Western Front	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 1867	3. The WSPU (Suffragettes) was formed. 1903	5. Cat and Mouse Act 1913	7. Herbert Asquith was replaced by David Lloyd George as Prime Minister 1916	9. The Equal Franchise Act was passed, which gave all British women equal voting rights with men 1928
1897 2. The NUWSS (Suffragists) was formed.	1913 4. Suffragette Emily Davison died after being hit by a horse at the Epsom Derby	1914 6. The First World War began	February 1918 8. The Representation of the People Act was passed. Women over the age of 30 who were married to someone who owned property or who owned property themselves and working-class men gained the right to vote.	

Key People	
10. Annie Kenney	Suffragette who was sent to prison 13 times for her Suffragette activism.
11. David Lloyd George	Liberal Prime Minister of Britain from 1916-1922. He was supportive of female suffrage.
12. Emily Davison	Suffragette who died at the Epsom Derby after she tried to attach a Suffragette banner to the King's horse.
13. Emmeline Pankhurst	Main founder of the WSPU.
14. Flora Murray	Doctor and Suffragette who made use of her medical knowledge by providing care to Suffragettes recovering from hunger strike in prison.
15. Millicent Fawcett	Main leader of the Suffragists and founder of the NUWSS.

Key Words			
16. Cat and Mouse Act	A law that allowed the police to rearrest women, as suffragettes went on hunger strike in prison. So they were released and were arrested again after they had eaten.	22. Peaceful methods	Non-militant methods (Suffragists) e.g. handing out leaflets, putting up posters and collecting signatures on petitions.
17. Enfranchisement	To be given the right to vote.	23. Suffrage	The right to vote.
18. Hunger strike	A form of protest where prisoners refuse to eat.	24. Suffragettes	Women's suffrage campaigners who believed in using direct action and civil disobedience.
19. Lobbying	Trying to persuade someone in authority, usually government, to support a bill (a proposed law).	25. Suffragists	Women's suffrage campaigners who believed in debate and negotiation.
20. Militant	An aggressive style of campaigning (Suffragettes) e.g. smashing windows and arson.	26. WSPU	The Women's Social and Political Union – leading militant organisation campaigning for women's suffrage, also known as the Suffragettes.
21. NUWSS	National Union of Women's Suffrage Societies – an organisation of women's suffrage societies in Britain, also known as the Suffragists.		

Topic 4: Totalitarian States

Timeline SOVIET UNION (USSR)	
Feb 1917	Tsar Nicholas II is removed.
Oct 1917	October Revolution – Bolsheviks (communists) take power.
1918-21	Russian Civil War. Communists win and increase their power.
Jan 1924	Lenin dies. Stalin gets rid of his rivals and soon takes power.
1928	Stalin begins industrialisation and collectivisation.
1932-33	Famine kills between 5-7 million people, including up to 5m in Ukraine.
1937-38	'Great Terror' – 1 million people are purged from the Party and executed.
1941-5	The USSR enters WW2 after Germany invades. Victory in 1945.
March 1953	Stalin dies. Communists remain in power until 1991.

Timeline GERMANY	
1918	Germany lost WW1. Start of the Weimar Republic.
1923	Hyperinflation – money loses value.
1929-33	Great Depression – high unemployment; extremists gain popularity.
Jan 1933	Hitler becomes chancellor after the Nazis get most votes.
Mar 1933	Dachau (first concentration camp) opened.
Aug 1934	Hitler became 'Führer' (dictator).
1935	Nuremberg Laws extend racial discrimination.
1936	Berlin Olympics. Height of Nazi propaganda.
1939	Hitler Youth made compulsory.
1941	Germany invades USSR. Start of genocide against Jews, Poles, Slavs.
1945	Hitler commits suicide as Germany loses WW2. End of Nazi regime.

Key People	
1. Adolf Hitler	Leader of the Nazi Party (NSDAP) and leader of Germany 1933-1945.
2. Joseph Goebbels	Propaganda Minister of Nazi Germany.
3. Heinrich Himmler	Head of the SS, which ran the Nazi system of police and concentration camps.
4. Joseph Stalin	Leader of the Soviet Union from Lenin's death until he died in 1953.
5. Alexandra Kollontai	A leading Bolshevik whose work helped improve the position of women in the USSR in the early 1920s.
6. Sophie Scholl	German student who was part of the White Rose group.

Topic 4: Totalitarian States

Key Words			
1. Totalitarian	A government which controls every aspect of people's lives.	12. Propaganda	Information or ideas, which are often false or selective, used to make people believe something.
2. Dictator	A leader who has complete power to do whatever they want, and often uses violence and force to keep control.	13. Indoctrinate	Train people to believe something.
3. Communism	A system where property and businesses are publicly owned (or owned by the government) and everyone is completely equal (in theory).	14. Cult of Personality	Using propaganda to present a leader as perfect, heroic and someone that should be worshipped.
4. Capitalism	A system where property/businesses can be privately owned, and some people can make more money than others.	15. Censorship	Stopping people from saying or publishing certain things.
5. Fascism	Extreme right-wing beliefs, which include a dictator, one-party state, militarism, nationalism, and racism.	16. Terror	Violent action/threats designed to cause fear in a population.
6. Ideology	A set of beliefs, often about politics or society (e.g. communism/capitalism/fascism/liberalism).	17. Denounce	Accuse someone of something/turn them in for committing a crime.
7. Bolsheviks	Russian Communist Party, led by Lenin and then Stalin.	18. Conform	Act like others, even if you don't really agree with what you're doing.
8. Revolution	A dramatic change in a country's political system and society, often involving violence.	19. Concentration Camp	A place where many people can be kept prisoner – especially political enemies/minority groups.
9. Collectivisation	Removing small, individual farms and creating large-scale farms owned by the government.	20. Gulag/Labour camp	A camp where people are kept under armed guard and are forced to work.
10. Industrialisation	When an economy moves away from agriculture, and starts making more in factories (e.g. steel/coal).	21. Gestapo	The Nazi Secret Police.
11. Volksgemeinschaft	'People's Community' – Nazi idea that Germans should form an ideal, traditional society working for the good of the nation.	22. NKVD	Soviet secret police.

Topic 5: The Second World War and The Holocaust

Timeline	
Jan 1933	1. Hitler comes to power in Germany.
15 Sep 1935	2. Nuremberg Laws.
Nov 1938	3. Kristallnacht – pogrom in Germany.
18 Aug 1939	4. T4 euthanasia programme starts killing disabled people.
1 Sep 1939	5. Germany invades Poland – Jews forced into cities and later ghettos.
June 1940	6. Germany defeats France, Belgium & Netherlands.
22 June 1941	7. Germany invades the USSR. Einsatzgruppen begin mass shootings, e.g. Babi Yar.
Dec 1941	8. Gassing of Jews begins in the first death camp, Chelmno.
20 Jan 1942	9. Wannsee Conference formalises the Final Solution.
Mar-July 1942	10. Death camps open at Belzec, Sobibor and Treblinka.
May 1942	11. Start of mass murder at Auschwitz of Jews from across Europe.
Feb 1943	12. Sinti & Roma arrive in Auschwitz.
Mar 1943	13. New gas chambers purpose-built at Auschwitz-Birkenau.
Apr 1943	14. Warsaw Ghetto Uprising.
Aug-Oct 1943	15. Uprisings at Treblinka and Sobibor.
May 1944	16. Deportations of Hungarian Jews to Auschwitz.
Jan-May 1945	17. Germany defeated. Camps liberated by Allied armies. Many survivors are put in 'Displaced Persons Camps'.
Jan 1945	18. Death march from Stutthof & Auschwitz.

Key People	
1. Adolf Hitler	Führer (leader) of Germany; bears most responsibility for WW2 & the Holocaust.
2. Joseph Goebbels	Propaganda Minister – persuaded many Germans to support antisemitic acts.
3. Heinrich Himmler	Head of the SS – coordinated all the camps and mass shootings.
4. Reinhard Heydrich	A leading Nazi who played a central role in developing the Final Solution.
5. Adolf Eichmann	Head of deportations; organised the murder of Hungarian Jews in 1944.
6. Josef Mengele	Doctor who performed horrific medical experiments in Auschwitz, esp. on twins.
7. Arthur Greiser	Set up the first death camp, Chelmno, to deal with overcrowding in the Lodz Ghetto.
8. Adam Czerniakow	Head of the Jewish Council in the Warsaw ghetto; committed suicide rather than deport children.
9. Chaim Rumkowski	Head of the Jewish Council in the Lodz Ghetto; deported children and elderly so others might survive.
10. Mordechai Anielewicz	One of the leaders of the Warsaw Ghetto Uprising in 1943.
11. Anne Frank	Jewish girl who kept a diary while hiding in Amsterdam; they were found and sent to camps. Anne died in Bergen-Belsen.

Topic 5: The Second World War and The Holocaust

Key Words			
1. Holocaust	The murder of 6 million Jews by the Nazis and their collaborators.	11. Deportation	Removing people by force and transporting them somewhere else (often to a ghetto or camp)
2. Final Solution	The official Nazi plan to murder all the Jews of Europe.	12. Einsatzgruppen	SS 'Death squads' that followed the German army into the USSR – killed 1.5 million in mass shootings
3. Antisemitism	Hatred of Jewish people.	13. Concentration Camp	A prison camp set up to keep political and racial enemies in horrific conditions.
4. Persecution	Abusive treatment of a group of people over a long period, aiming to subjugate or expel them.	14. Labour camp	A place where many people are kept prisoner and forced to work, usually doing hard manual labour.
5. Genocide	Deliberate destruction of a national/ ethnic/ cultural group, including mass murder.	15. Death Camp (extermination camp)	A camp designed for mass murder in a systematic, efficient and industrialised way, usually by gassing.
6. Pogrom	Large-scale acts of violence and destruction against a minority (usually Jewish) community.	16. Gas Chamber	Sealed rooms filled with poisonous gas to murder prisoners.
7. Kristallnacht	'Night of Broken Glass' – a pogrom against the German Jewish community, on 9-10 Nov 1938.	17. SS (Schutzstaffel)	The organisation which controlled police & camps, which carried out the mass murder.
8. Star of David 	Symbol of the Jewish people. Jews had to wear a yellow star on their clothing.	18. Collaborator	Someone from occupied countries who worked with the Nazis to kill Jews.
9. Aryan	The 'master race' in Nazi belief – 'pure' Germans, especially with blond hair and blue eyes.	19. Resistance	Fighting back against a regime or refusing to follow their rules.
10. Ghetto	A section of a city where Jews were forced to live and unable to leave.		
FUNCTIONALISM: The historical view that the Holocaust developed gradually due to the circumstances of WW2 and the initiative of leading Nazis.		INTENTIONALISM: The historical view that Hitler planned the details of the Holocaust	

Topic 6: British Civil Rights Movement and Post-War Britain

Timeline	
May 1945	1. End of Second World War.
1948	2. British Nationality Act passed.
June 1948	3. HMS Windrush arrives in Britain.
July 1948	4. Formation of NHS.
1958	5. Notting Hill race protests.
1962 and 1968	6. Commonwealth Immigrants Acts.
1963	7. Bristol Bus Boycott.
1964	8. Battle of Brighton.
1965	9. First Race Relations Act passed, banning racial discrimination in public places and making promoting racial hatred a crime.
1965	10. Abolition of the death penalty.
1966	11. First Notting Hill Carnival.
1967	12. Homosexuality decriminalised.
1967	13. Abortion Act.
1968	14. Second Race Relations Act passed, focused on eradicating discrimination in housing and employment.
1968	15. Rivers of Blood speech.
1968	16. Dagenham Womens' Strike.
1970	17. Equal Pay Act passed.
1970	18. Mangrove 9 tried for 'inciting a riot'.
1971	19. Attempt to legislate against trade union action.
1978-79	20. Winter of Discontent.
1981	21. Black People's Day of Action.
1984-85	22. Miners' Strike.
1988	23. Thatcher's government passed Section 28.
1989	24. Stonewall founded.

Key People	
22. Aneurin (Nye) Bevan	Labour Minister of Health 1945-51.
23. Clement Attlee	Labour Prime Minister 1945-51.
24. William Beveridge	Social policy expert whose 1942 report recommended that government should fight the five Giants of 'Want, Disease, Ignorance, Squalor and Idleness'.
25. Winston Churchill	Conservative Prime Minister 1940-45 and 1951-55.
26. Claudia Jones	Trinidadian journalist who founded the West Indian Gazette in 1958 and was a key figure in founding the Notting Hill Carnival.
27. Altheia Jones-LeCointe	Trinidadian doctor, also the leader of the British Black Panther movement.
28. Paul Stephenson	Social worker and community activist, he led the Bristol Bus Boycott.
29. Harold Wilson	Labour Prime Minister 1964-70 and 74-76.
30. Barbara Castle	Labour MP who held important positions in Harold Wilson's government, including passing the Equal Pay Act.
31. Enoch Powell	Conservative MP that made a speech that fuelled racism and divisions in society, known as the Rivers of Blood speech.
32. Edward Heath	Conservative Prime Minister 1970-74.
33. James Callaghan	Labour Prime Minister 1974-79.
34. Margaret Thatcher	Conservative Prime Minister 1979-1990.
35. Harold Moody	Doctor and civil rights campaigner, founded the League of Coloured Peoples in Britain.
36. Bernard Coard	Grenadian scholar who published research in 1971 about the institutionalised racism that existed in British schools.
37. Jocelyn Barrow	Leader of the campaign against the colour bar in retail work and General Secretary of the Campaign Against Racial Discrimination (CARD) from 1964-1967, which lobbied the government for change in employment and housing discrimination.
38. Olive Morris	Civil rights campaigner, and member of the British Black Panthers, who founded the Brixton Black Women's Group and campaigned for fairer housing and against police brutality.

Topic 6: British Civil Rights Movement and Post-War Britain

Key Words

35. Abortion	The deliberate termination of a pregnancy.	52. Lobbying	Attempt to try and influence government decisions by talking to the MPs who vote on laws.
36. Boycott	When people refused to buy or use something as a protest.	53. Mangrove 9	A group of British black activists tried for inciting a riot at a 1970 protest against the police targeting of The Mangrove, a Caribbean restaurant in Notting Hill.
37. Blitz	A fast violent attack, usually with bombs, dropped by an aircraft.	54. Mods and Rockers	Two conflicting British youth subcultures of the early/ mid 1960s to early 1970s.
38. British Empire	The group of countries that in the past were ruled or controlled by the UK.	55. NHS	National Health Service - the free British health service set up in 1948.
39. Capital punishment	The legally authorised killing of someone as a punishment.	56. Picket	Protesting outside the place you are protesting against.
40. Civil disobedience	Refusing to obey laws or pay taxes, as a peaceful form of protest.	57. Pro-life campaigns	People who oppose abortion and believe a fertilised egg is the start of a life.
41. Commonwealth	A group of countries that used to be part of the British Empire.	58. Public health	Preventing disease, prolonging life, and promoting health through the organised efforts of society.
42. Decriminalisation	To stop treating something as illegal.	59. Rationing	Giving every person a fixed amount of food, fuel or clothing when there are shortages.
43. Decolonisation	The process of state(s) leaving an empire to become independent nation(s).	60. Rioting	When a large number of people behave in a noisy, violent, and uncontrolled way.
44. Exploitation	Taking advantage of someone in order to profit from their work.	61. Section 28	A law which made it illegal to teach about gay and lesbian relationships.
45. Feminism	The belief and process of gaining greater social, economic, and political equality for women.	62. Stonewall	A campaign group and social movement set up to campaign for the equality of lesbian, gay, bi and trans people across Britain.
46. Grassroots activism	A community-led, local movement that tried to create progress for their causes, e.g. in health, education and housing.	63. Strikes	To refuse to continue doing something.
47. HMS Windrush	The ship that arrived at Tilbury docks in 1948 carrying passengers from the West Indies who were emigrating to Britain.	64. Trade Union	An organisation that represents workers and protects their rights and pay.
48. Industrial action	An act by an employee or employer to prevent work from happening, e.g. strikes, go-slows, overtime bans.	65. Welfare state	A system where government looks after people, especially the old, children, sick and unemployed.
49. Institutional racism	When an organisation's systems treat a specific race unfairly.	66. Winter of Discontent	Name given to the winter of 1978-79 when there were lots of strikes.
50. Legislation	The process of making or enacting laws.	67. Women's Liberation Movement	A political alignment of feminism that emerged in the late 1960s and continued into the 1980s promoting political, intellectual, and cultural change.
51. Liberalisation	The easing of restrictions on something, usually political, such as legalising abortion.		

Pop Art, Opposites & Natural Forms

Pop Art is an art movement based on modern popular culture and the mass media, especially as a critical or ironic comment on traditional fine art values.

Pop Art

1. Where and when did the Pop Art movement begin?
2. What are the three main components of Pop Art?
3. What are the main influences behind Pop Art?

The Famous Four: Peter Blake, Andy Warhol, Roy Lichtenstein, and Claus Oldenburg



What are the key features of Pop Art?

How would you describe this style of work?

Opposites: Notan: Light & Dark Harmony

Notan is the combination of lights and darks especially as used in Japanese art: the design or pattern of a work of art as seen in flat areas of dark and light values only — compare chiaroscuro.



Notan is a sophisticated way of creating symmetrical images from one sheet of paper. The skill is ensuring that the image is placed in the correct position, otherwise the harmony fails – because there is a discord in the image.

Notan is a Japanese term which literally means 'light dark harmony'



Can you see how the image reflects the exact image that it cut from?

Natural Forms

Exploring the work of 21st Century Artists: Angie Lewin,
Cheryl Cochran, & Mariann Johansen-Ellis and 17th Century: Robert Hook



Angie Lewin creates prints from lino cuts. What do you notice about her work? What do you like about her images



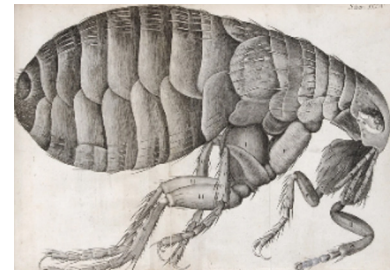
Artists are inspired by Natural Forms. Cheryl Cochran creates pigeons with personalities.

Observational drawing is the starting point to all final pieces. How is the 3D illusion created?



Mariann Johansen Ellis is a Danish print maker that creates stylised fish images and other marine life.

In 1665, Robert Hook a scientist and artist, drew the first observational drawing of a flea.



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.




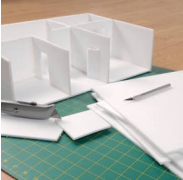
6 Rs

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.

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

Structures Modelmaking Rotation

Key Terms	
1. CAD	Computer Aided Design.
2. CAM	Computer Aided Manufacture.
3. CNC	Computer Numerical Control.
4. GSM	Grams per square metre.
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 – function over form .
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).

	Layout paper	Used for quick sketches. It is translucent and can be used to trace through designs.
	Bleed-proof paper	Important presentations and when using marker pens.
	Corrugated cardboard	Used for packaging because the fluted centre increases the material's impact resistance.
	Foam-core board	The foam core is covered on both sides with thin card. It can be used for architectural models as it keeps its rigidity when cut.



Norman Foster is a British architect famous for his modernist buildings. He was working class and won scholarships to study at University.

His work is very technical and uses new materials and new methods of construction. For example, the Millau Bridge in France used satellite technology to ensure the pillars were upright. He also designed Stansted Airport, the Swiss Re tower known as "the Gherkin" and London City Hall.






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	Sensory Analysis	Using the senses – sound, texture, aesthetics, hearing, smell and umami – to decide how successful a dish is.
7	Heat Transfer	When heat is transferred from the source of heat to the food. Conduction, convection and radiation – frying = conduction, boiling = convection, grilling = radiation.
8	Fermentation	Micro-organisms – such as yeast – breaking down the carbohydrates in food into alcohol substances. We use different amounts of fermentation for different foods.
9	Method	The steps that are written down about how to make the dish.
10	Ingredients	The different food products that are needed to make a dish.
11	Food Evaluation	The process of analysing food products to determine their sensory, nutritional, and safety properties.
12	Balanced Diet	Eating a variety of foods to get all the nutrients in the right proportions and quantities to be healthy.
13	Composite Meal	A food/dish made from different food groups, e.g. pizza, spaghetti bolognese.

Equipment for Cooking

	14. Piping Bag	Used to apply various liquid-based food to other foods – batter or icing. Part of shaping and moulding
	15. Palette Knife	Used to smooth or lift different types of foods or decorative foods, such as smoothing butter cream icing
	16. Baking Tray	Used to cook or bake food items. Different types of trays are available

17. The Eatwell Guide

Fruit and Veg

Dairy and Alternatives

Carbohydrates

Oils and Spreads

Protein

the eatwell plate



18. Heat Transfer



Conduction – direct heat - frying



Convection – heat rising through liquid or air - boiling



Radiation – heat from light ray transfer – bbq/grilling

Diet and Nutrition

Food Group	Nutrients
Fruit and vegetables.	Vitamins, minerals, water and fibre.
Potatoes, bread, rice, pasta and other starchy carbohydrates.	Carbohydrates, fibre, calcium and B group vitamins.
Oils and spreads.	Fat.
Dairy and alternatives.	Calcium, fat, protein, Vitamin D and water.
Beans, pulses, fish, eggs, meat and other proteins.	Protein, fat, vitamin D and iron.

The Eight Tips for Healthy Eating

1. Base your meals on starchy foods.
2. Eat lots of fruit and vegetables.
3. Eat more fish – including a portion of oily fish each week.
4. Cut down on saturated fat and sugar.
5. Eat less salt – no more than 6g a day for adults.
6. Get active and try to be a healthy weight.
7. Don't get thirsty.
8. Don't skip breakfast.



eatwell

8 TIPS for HEALTHY EATING

- 1 Base your meals on starchy foods**
- 2 Eat lots of fruit and veg**
- 3 Eat more fish – including a portion of oily fish each week**
- 4 Cut down on saturated fat and sugar**
- 5 Eat less salt – no more than 6g a day for adults**
- 6 Get active and try to be a healthy weight**
- 7 Drink plenty of water**
- 8 Don't skip breakfast**

Question areas	<ol style="list-style-type: none"> Evaluate – Good and bad. Say whether the production element you are writing about was successful in communicating the intended effect/impact or not Analyse – Identify the techniques that were used and explain their intended impact on the audience (using drama key terms) Describe – Clearly and concisely describe the moment as it happened on stage so the examiner can visualise it in their mind
Key terms - Production elements	<p>4.</p> <p>5. Semiotics – The acting and/or design can communicate abstract concepts, themes and symbols. As an example, a design could include a large, dead tree to suggest the themes of death in a play</p> <p>6. Design elements – Set/props, lighting, costume, sound (music and sound effects, live and/or recorded)</p> <p>7. Character traits/aspects – Characterisation, physical skills/movement, vocal skills/voice, use of space/proxemics</p> <p>8. Staging – Selecting a performance space, adapting/modifying the performance space designing ideas for a play. Includes ideas for all design elements</p> <p>9. Performance space – Thrust, in the round, traverse, proscenium arch, end on, apron, black box, promenade, site specific</p> <p>10. Acting – Vocal skills, physical skills, characterisation, use of stage space/proxemics, interaction with other characters, handling of props. Using all the key terms write notes on three key moments</p> <p>11. Costume – Type, period, fabric, colour, fit and condition, accessories, hair, make-up, masks</p> <p>12. Set – Type, period, size and scale, colours, entrances and exits, levels, ramps, revolves, drapes, curtains, flats, backdrops, projections/multimedia</p> <p>13. Lighting – Types, colours, angles and positions, special effects, transitions, blackouts, fades</p> <p>14. Sound – Types, music, volume/amplification/intensity, direction, live or recorded, positioning, sound effects</p>

Research the Play

15. Plot	The storyline of a play	18. Context	When and where the play is set
16. Character	A person in the narrative/plot	19. Possible intentions of the playwright	Why the playwright wrote the play, what message did they want to convey to an audience?
17. Theme	An idea or message that the writer highlights during the play	20. Original performance conditions	When and where was the play first performed?

Making Notes About the Performance

21. Director	Responsibility for the practical and creative interpretation of a dramatic script	23. Key scenes	As well as the beginning and end choose three key scenes to make notes on. You should consider the climax of the play, tension, something is revealed or changed, dramatic moments
22. Artistic vision/intention	What the director wants the audience to think, feel or learn by watching the play	24. Tension/Climax	When the audience are waiting for something to happen and the scene builds to a moment of climax. (Silence, stillness, sudden, slow, staring or pausing used by the actor.) Design elements and acting are used to create tension in the play

Using Key Terms: Acting

Characterisation	
25. Motivation	What a character wants or needs in a scene
26. Style	The way in which something is performed e.g. naturalistically
27. Subtext	The unspoken meaning, feelings and thoughts beneath the lines

Physical Skills and Vocal Skills			
28. Movement	Changing positions or moving across the space	38. Pitch	The vocal register - high or low
29. Posture	The way they stand and hold themselves	39. Pace	How quickly or slowly something is done
30. Gesture	Movements of hands, head, legs usually convey a message/meaning	40. Pause	A hesitation or silence
31. Facial expressions	The feelings (or lack of them) shown on the face	41. Emphasis	Stressing or highlighting something
32. Use of stage space	How an actor moves around the space, using levels, direction	42. Inflection	Saying a word in a particular way to stress its meaning
33. Interaction/ Proxemics	How a character reacts to other characters. Proxemics mean moving towards or away from another character and the distance between the characters	43. Accent	A way of pronouncing words associated with a country, region or social class
34. Handling of props	How a prop is handled during a performance	44. Volume	Degree of loudness
35. Choreography/ stage fights	Setting movements to create meaning/blocking movements to create the impression of violence	45. Delivery	How dialogue is said to convey meaning
36. Stage business	Minor movements or blocking that an actor does to establish a situation (reading a book/ closing a window)	46. Emotional range/tone	Feelings are expressed by the way the line is said
37. Pace and pause of movement	The speed of the movement and use of stillness to convey a meaning, feeling or atmosphere	47. Phrasing	Use of hesitation, metre and/or grouping

Using Key Terms: Design

Lighting and Sound	48. Backlight	Light projected from upstage	63. Fogger	Creates smoke
	49. Barndoors	Metal flaps used to shape the light	64. Gobos	Creates patterns of light
	50. Flood/wash	Unfocussed wash of light / light covers the whole stage	65. Pyrotechnics	Creates fire effect
	51. Floor lighting	Light on a low stand (creates shadows)	66. Smoke and haze machine	Creates mist or fog
	52. Followspot	Powerful lantern that follows the actor around the stage	67. Strobe	Short bursts of bright light
	53. Footlights	Low lights downstage	68. Abstract	Not realistic
	54. Fresnel	A lantern with a soft beam	69. Motivational sound/sound effects	Effect required by the script (gunshots)
	55. General cover	Light on the acting areas	70. Musical theme or motif	Recurring section of music
	56. Pinspot	Tightly focused on a small area	71. Naturalistic	Realistic sounds
	57. Profile	Creates clear outlines	72. Recorded or live sound	Prerecord or happens during the performance
	58. Blackout	No lighting	73. Acoustics	Quality of sound
	59. Crossfade	Change from one state to another	74. Fade/snap	Gradual/sudden off or on
Set	60. Fade/snap	Light slowly on and off / quickly on and off	75. Soundscape	Build-up of sounds to create an atmosphere or environment
	61. Colour filter	Plastic used to alter the colour	76. Reverb	Echoing
	62. Focus	How sharp or defined the light is	82. Furnishings/stage furniture	Chairs, tables (set dressings - cushion, paintings etc.)
	77. Box set	A setting of a complete room often naturalistic	83. Fly	Raise and lower scenery from above the stage
	78. Backcloth/drop	Hangs at the rear of the scene	84. Gauze or scrims	Curtains that go transparent when lit a certain way
Costume	79. Cyclorama	Curved screen filling the rear of the stage	85. Symbolic	Representing something usually non-naturalistic
	80. Trap/trapdoor	Door in the floor of the stage	86. Multimedia and projections	Film or images used in the performance
	81. Flat and truck	Scenery on a flat frame/platform on wheels	92. Fabric	Silk, cotton, wool, chiffon, rubber, fur
	87. Headwear	Hat, cap, scarf, headband, ribbon, clasp etc.	93. Decorations/trim	Sequins, rhinestones, lace/buttons, braid, embroidery, fur
	88. Wigs/facial hair	Colour, length, style/moustache, sideburns, beards	94. Padding/silhouette/fit	Character padding, pregnancy/tight, loose, high waisted
Costume	89. Make-up/mask	Natural, character, stylised or fantasy	95. Colour	Palette = range of colour and/or coding = might be significant to the character
	90. Accessories	Jewellery, ties	96. Condition	Distressed, worn out, old, clean, pressed, soiled, ripped, mended, faded
	91. Style	Victorian, minimalistic, monochromatic, boho, gothic, hipster, modern		

Brecht & Sing Yer Heart Out For The Lads

1. **Plot:** Set in a south-west London pub, during the 2000 England vs. Germany match. As England lose again, their supporters in The King George lose it too – at full time, patriotism has become unapologetic racism.
2. **Genre: Epic Theatre** – encourages the audience to fully acknowledge that the production is merely a production and not reality.
3. **Genre: Political Theatre** – comments on political or social issues.
4. **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

5. **Social/cultural/historical + context:** Date-Place-Issue.
6. **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.
7. **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.
8. **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.
9. **Costume** – period costumes; cultural costumes; colour; fabric; style; condition; symbolism; element; item (e.g. shirt; hat; shawl; cane; umbrella).
10. **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.
11. **Performance space** – thrust; in the round; traverse; end on.
12. **Sound design** – sound effects; live or recorded; underscoring; direction; transitions; volume.

Social/cultural/historical context

13. Roy Williams (the playwright) wanted to write something that was about racism and cultural identity but also close to home.
14. Set during the 2000's England-Germany match, Roy Williams was inspired after a visit to the pub which left him shocked at some fans racist, sexist and xenophobic behaviour.

Brecht & Sing Yer Heart Out For The Lads

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

15. Glen	Young 15 year-old white male, tries to fit in but intimidated by Bad T and Duane as they pick on him at school.
16. Bad T	Young 15 year-old black male, a leader out of his friends, manipulative and intimidating, he bullies Glen.
17. Duane	Young 15 year-old black male, follower of Bad T, doesn't think for himself.
18. Mark	Early thirties, black male, looks out for Glen and tries to help him. Mark ends up being stabbed by Glen.
19. Gina	Early thirties, white female, Glen's mother and the landlady at the pub.

20. 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.		
Movement		Voice	
21. Pace	Fast or slow	26. Pace	Fast or slow
22. Gesture	A movement of part of the body, especially the hands or the head, to express an idea or meaning	27. Pause	An actor stops talking for a moment/beat during a line.
23. Gait	Walk	28. Pitch	High or low
24. Posture	The position in which someone holds their body	29. Tone	Reveals an emotion i.e. angry, scared
25. Facial expression	Usually links to an emotion. Tells the audience the characters feelings	30. Volume	Loud or quiet
		31. Accent	Shows where someone is from or gives clues as to their upbringing

Brecht & Sing Yer Heart Out For The Lads

Staging the Performance

32. Performance Space	<p>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.</p> <p>In the round – Audience are all around the performance space.</p> <p>Traverse – Audience on two sides. The action takes place between the audience. The stage is like a catwalk in a fashion show.</p> <p>Thrust – The audience sit on three sides and the stage thrusts forward lightly into the audience.</p>
33. Blocking	Planning how to use the space and the actor's movement.
34. Design Elements	Lighting design; sound design; costume design; set design.

Design Key Words

35. 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 death in a play.
36. 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.
37. Colour	Colour can be used within set design to symbolise various ideas on stage. For example, for a play we could include dull greys and a monochromatic palette (single colour) this could enhance the sad atmosphere and dark themes in the play.
38. 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.
39. Position	Where you put the items of set on the stage.
40. Stage furniture	Items of set that can be moved on stage but are not props.
41. Location	The set can tell the audience where and when the scene takes place.
42. Symbolism	Represents a message on stage.

Conventions of Epic Theatre

43. Verfremdungseffekt (alienation effect)	<ul style="list-style-type: none"> • 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.
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Junk by Melvin Burgess 1999

Plot Summary	Set on the streets of Bristol, England, it features two runaway teenagers who join a group of squatters, where they fall into heroin addiction and embrace anarchism.
Context	Burgess set the book in Bristol, where he lived for a period, in the early to mid '80s. In his author's note, he writes: "All the major events have happened, are happening and will no doubt continue to happen. I saw many of them myself [...] The book isn't fact; it isn't even fiction. But it's all true, every word.
Structure	Junk is a story told from 10 different perspectives, by 10 characters – some of whom are based on real people Burgess knew in the Bristol days, and still knows.

Key Characters

David 'Tar' Lawson	Fourteen years old at the start of the play. Abused by his father, he is never proud of taking drugs but becomes a heroin addict after discovering that the drug helps him forget the abuse he has endured.
Gemma Brogan	Tar's girlfriend, a rebellious fourteen-year old, who runs away with him. She later becomes a sex worker and a heroin addict.
Richard	An anarchist and left-wing activist who helps Gemma and Tar find somewhere to live. He is in his twenties.
Vonny	Eighteen-year old anarchist who lives with Richard and Jerry, who ultimately helps Gemma along the path to rehabilitation.
Jerry	Boyfriend of Vonny, lives with Richard and Vonny in the squat.
Lily	A fifteen-year old heroin addict who takes a liking to Gemma. She grew up in the care system and it is hinted that she, too, suffered abuse.
Rob	Sixteen-year-old addict boyfriend of Lily. He has had a transient upbringing.

Themes

Addiction	Most of the characters use drugs to cope with their emotions and become addicted because of this.
Drugs	The play focuses around how Gemma and Tar are influenced by the people they meet and become dependent on drugs.
Abuse	Tar and some of the other characters have endured abuse from their carers as children.
Homelessness	The characters become squatters when they get to Bristol.

Junk by Melvin Burgess 1999

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.

Movement	<ol style="list-style-type: none"> 1. Pace – Fast or slow 2. Gesture – A movement of part of the body, especially a hand or the head, to express an idea or meaning 3. Gait – Walk 4. Posture – The position in which someone holds their body 5. Facial expression – Usually links to an emotion. Tells the audience the character's feelings and what they are thinking 6. Body Language – The way we move and hold ourselves to show how we feel 7. Levels – Helps to tell the status of the character 8. Eye line/eye contact – Where we look
Voice	<ol style="list-style-type: none"> 9. Pace – Fast or slow 10. Pause – An actor stops talking for a moment/beat during a line. 11. Pitch – High or low 12. Tone – Reveals an emotion i.e. angry, scared 13. Volume – Loud or quiet 14. Accent – Shows where someone is from or gives clues as to their upbringing 15. Emphasis – Putting stress on a particular word or phrase in a sentence

Staging The Performance

End-on Performance Space	One audience 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.
Thrust	Audience sat on three sides. Often, the front of the stage thrusts forward into the audience, like at a concert.
Blocking	Planning the space and the actor's movement.
Set Design	What the stage looks like and the furniture. As a set designer you will need to consider the practical aspects of set design. The play has lots of fast-paced scenes in various locations, the set design will need to be kept minimal to help with the quick changes.


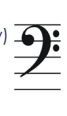
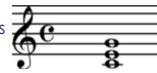
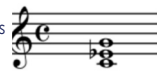


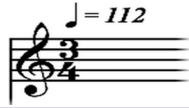

Key Terms and Definitions

1. Leitmotif	A short melody that is associated with a character or idea in a film.
2. Theme	A main tune within a film soundtrack, representing a particular character, ideas or object. They are longer than leitmotifs .
3. Soundtrack	The music and sound recorded on a motion-picture film.
4. 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.
5. Diegetic	Music that is part of the action ; the characters in the film can hear it.
6. Non-Diegetic	Music that is not part of the action : the characters in the film cannot hear it. It is just for the audience.
7. 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.
8. 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. Treble clef (high)  Bass clef (low) 	Horror movie composers often use extremes of high and low pitch when creating musical soundtracks to create a feeling of 'tension' and 'suspense'.
Major	Music or chords built on a 	Used to convey happiness, success, optimism
Minor	Music or chords built on a 	Sadness, seriousness (e.g. a character learns of a loved one's death)
Dynamics	The volume of the music or sounds – loud or quiet <i>p mp mf f</i>	Loud music conveys surprise, power, large things. Quiet music is for gentleness, weakness, intimacy, small things
Crescendo	Getting gradually louder 	Objects or events getting closer
Diminuendo	Getting gradually quieter 	Objects getting further away
Tempo	How fast or slow the music 	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.

Hip Hop & Rap

Hip Hop Timeline

1970s	1980s	1990s	2000s	2010s
Hip Hop invented in the Bronx at street parties with Jamaican sound systems. MCs 'toasted' while the DJ operates the turntables.	Hip Hop develops. Songs might have a sample, with simple rhyming couplets over the top.	DJs use more samples than before, and the lyrics become more complex. Rappers often sing about themselves and their personal life.	Hip Hop becomes more popular and international, and rappers start to use it as a means to spread social and political messages.	Hip Hop develops into multiple other genres, and there are also countless collaborations with other styles.

Keywords

1. Rapping	Reciting lyrics in time to the beat
2. DJ (disc jockey)	Person who operates the turntables
3. Lyrics	The words to a song
4. Rhyme	When two words sound the same
5. Rhyming couplet	Two lines of a verse which rhyme at the end
6. Internal rhyme	When words sound the same within a line
7. Flow	The way the lyrics of a rap are delivered
8. Sample	A section of music taken from another song
9. The get-down/ Instrumental	The part of the song when the singer drops out and it's only the instruments
10. Sound system	A set of speakers which amplifies sound
11. Verse	The section of the song which tells the story
12. Chorus	The section of the song which repeats and carries its main message
13. Backing	The accompaniment to a song
14. Tempo	The speed of the music
15. Beat	Pulse of the music
16. Bassline	Low-pitched part played by the lowest instrument
17. Mixing	When records are mixed together
18. Scratching	Moving a vinyl back and forth which cuts the sound in and out

2.



3.



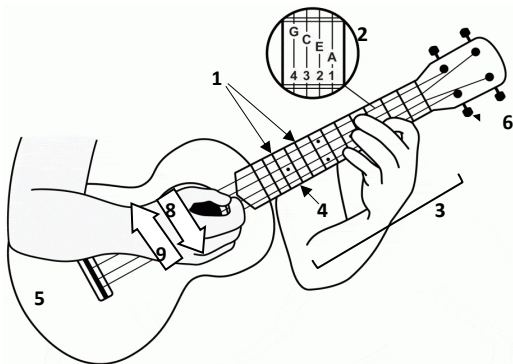
Examples to listen to

1970s	Rapper's Delight by The Sugarhill Gang	
1980s	Hard Times by Run DMC	
1990s	The Fresh Prince of Bel Air by DJ Jazzy Jeff & The Fresh Prince	
2000s	Lose Yourself by Eminem	
2010s	Blinded by Your Grace Part 2 by Stormzy	
2020s	Location by Dave	

Band Breakout

Ukulele/ Guitar/Bass Guitar Keywords

1. Fret	The thin strips of metal set into the neck of a ukulele to allow you to change notes
2. String	The four strings of the instrument (G – C – E – A)
3. Fingerboard	The area of the neck over which the strings run and into which the frets are mounted
4. Neck	The piece of wood that holds the fingerboard and runs between the body and the headstock
5. Body	The rounded wooden main section of the instrument
6. Peg	The tuning peg that is turned to tighten or loosen the string
7. Strumming	A style of playing which involves running the fingers over the strings in rhythm
8. Down stroke	Strumming action moving from top to bottom (from G to A)
9. Up stroke	Strumming action moving from bottom to top (from A to G)
10. Plucking	To play a single note/string



Keyboard Keywords

11. Key (on the keyboard)	The white or black buttons on the keyboard
12. Fingering	How the hands are used to play the keys
13. Melody	The main tune, played by the left hand
14. Bass Line	The lowest part in the texture, played by the left hand on the keyboard
15. Sharp	# The black note to the right of the key
16. Flat	b The black note to the left of the key
17. Notes on the keyboard	

Drum Kit Keywords

18	
19. Count-in	When the drummer counts the group in to start
20. Pulse	The constant beat
21. Tempo	The speed of the music

Fusions

Afrobeat Keywords

Afrobeat	Style created by Fela Kuti, fusing highlife with African rhythms and jazz.
Highlife	A style from Ghana featuring horns and guitars
Social and political commentary	Fela Kuti used his music's lyrics to encourage people to have resilience against unfair governments and take pride in their identity

Neo-tango Keywords

Neo-tango	Style of music that combines traditional Argentinian tango with electronic musical elements
Tango	An Argentinian style which blended South American, African and European dance genres.
Syncopation	When the rhythms stress the off-beats
Electronic instruments	Instruments that are not acoustic i.e. they need electricity to make sound
Synthesizer	Electronic keyboard where the pitches can be set to different sounds
Drum machine	Device that imitates the sounds of drums and can be programmed to repeat beats

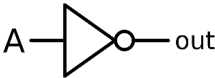
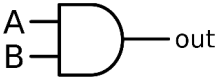
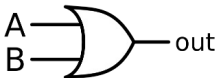






Afrobeat Keywords

Bhangra	A style of music that developed in the UK in the 1970s. It combines North Indian and western dance styles.
Dhol	Indian drum which plays the chaal rhythm 
Tumbi	Indian string instrument which often plays the repeating riff 
Tabla	Set of two Indian drums 
Chaal rhythm	Repeating rhythm found in most bhangra music: Da-na-na-na-da-da-na
Punjabi	Language used in much Bhangra music

Afrobeat Keywords

The American War of Independence	1775-1783 – the war in which the American colonies fought for independence from British rule
Fusion	When a song uses musical characteristics of more than one genre
Musical theatre	Plays where much of the dialogue is sung instead of spoken
Hip Hop	Genre which gave birth to rap and DJing
Rap	Reciting lyrics in time to the beat
Chord sequence	A series of chords that repeats in a particular order
Hook	A short memorable melodic phrase that repeats throughout a piece
Bassline	The lowest-pitch part in the music

Representing Data	
1. Bit	Binary digit. A single 0 or 1. The smallest unit of data storage in a computer
2. Logic gate	A building block of a computer that takes in one or more inputs (bits) and outputs a result (0 or 1) based on a logical function.
3. NOT	A logic gate that inverts the value of the input 
4. AND	A logic gate that outputs a 1 if both inputs are 1 
5. OR	A logic gate that outputs a 1 if either or both inputs are 1 
6. Logic Circuit	A collection of logic gates joined together.
7. Binary	A number system that has two digits (0 and 1). It is also called base-2 and all data and instructions on a computer are stored as binary.
8. Decimal	The standard system used to represent numbers. Contains the digits 0 to 9 (10 digits).
9. Binary addition	Adding two or more binary numbers together. Can be done using the column method.
10. ASCII	The set of characters used to represent text in a computer.

Algorithms	
11. Computational thinking	A range of methods used by humans to solve a problem in a similar way to how a computer would solve it.
12. Abstraction	Removing unnecessary detail from a problem to keep only the important parts, making it easier to solve.
13. Decomposition	Breaking a problem down into smaller parts to make it easier to solve.
14. Flowchart	A diagram used to show an algorithm visually.
15. Start/Stop	The beginning / end of a flowchart. 
16. Process	An instruction / calculation in a flowchart 
17. Decision	A decision made in a flowchart. 
18. Input / Output	Data that is input or output in a flowchart. 
19. Linear search	Starts from the first item in a list and compares item by item until it finds what it is looking for.
20. Binary Search	Starts from the middle item in a list and compares it to what it is looking for. It can then get rid of half of the items if it needs to continue searching.
21. Bubble sort	Sorts a list by comparing two items at a time.
22. Merge sort	Sorts a list by first splitting items then joining them back together.

Cybersecurity	
23. Malware	Malicious software. It is harmful to a computer.
24. Virus	A type of malware that can spread by infected files.
25. Trojan	Malware that pretends to be legitimate software
26. Worm	Malware that can replicate itself to spread to others
27. Pharming	Using fake websites to try to steal data.
28. Encryption	Scrambling data so that only the correct people can access it.
29. Authentication	Protecting data by checking the identity of someone

Computer Networks	
Network	A group of computers joined together
LAN	Local area network. Covers a small area / 1 site.
WAN	Wide area network. Covers several locations.
PAN	Personal area network. Covers only a few metres.
Switch/Hub	A device that can connect multiple computers to a network
Router	A device that can transport data along a network.
Wired Network	Network that uses cables, e.g. ethernet, fibre-optic
Wireless Network	Network that does not use cables, e.g. Wi-Fi
Topology	The layout of a network
Bus topology	Multiple computers are connected along a single cable called a bus.
Star topology	Multiple computers are connected through a switch/hub.
Internet	The biggest network on the planet. Billions of devices are connected to it
IP address	A unique address made up of numbers that identifies the location of a network.
Protocol	A set of rules that determines how data is sent across a network
Firewall	Protects a network by checking incoming/outgoing data.

Programming	
Algorithm	A sequence of instructions to complete a task.
Sequence	Putting instructions in the correct order in an algorithm or program.
Condition	A statement, that can be checked by a program, that is True or False, e.g. is the time of day 1PM?
Selection	When a program performs an instruction based on a condition.
Multi-branch selection	When a program performs an instruction based on two or more conditions.
Indefinite iteration	When a program repeats instructions based on a condition.
Definite iteration	When instructions repeat only a specific number of times.
Programming language	The language used to write instructions in a program.
Python	An example of a programming language.
Syntax	The rules in a programming language to write instructions and use symbols correctly.
Variable	Can store data in a program and can always change value.
Constant	Can store data in a program and can never change value.
Function	Special keywords that do a specific job in a programming language.
Data Type	The type of data that a variable in a program may be.
Integer	Whole number.
Real/Float	Decimal number.
Character	A single letter or number with speech marks around it.
String	A group of characters joined together.
Boolean	A variable that can only be True or False

Python Knowledge	Meaning	Example
Variable assignment	Creating a variable and giving it a value.	<code>celsius = 25</code>
print() function	Displays a message.	<code>print("Hello")</code>
	Display multiple messages.	<code>print("Hello", "World")</code>
	Display a variable (no speech marks needed)	<code>name = "Bob"</code> <code>print(name)</code>
	Display messages and a variable.	<code>name = "Bob"</code> <code>print("Hello", name, "how are you?")</code>
Variable modification	Changing the value of a variable.	<code>celsius = celsius + 32</code>
input() function	Lets the user type something in.	<code>print("Enter a name")</code> <code>name = input()</code>
int() function	Converts a value or an input from the user into an integer	<code>print("Enter a number")</code> <code>number = int(input())</code>
if... statement (Selection)	Can perform an instruction if a condition is true	<code>if number > 5:</code> <code> print("Greater than 5")</code>
else... statement	Can perform an instruction when a condition is false. Used after if block	<code>if number > 5:</code> <code> print("Greater than 5")</code> <code>else:</code> <code> print("Not greater than 5")</code>

Python Knowledge	Meaning	Example
elif... statement (Multi-branch selection)	Can perform an instruction if a different condition is true. Used after if block	<code>if number > 5:</code> <code> print("Greater than 5")</code> <code>elif number < 5:</code> <code> print("Less than 5")</code> <code>else:</code> <code> print("Equal to 5")</code>
while... statement (Indefinite iteration)	Can perform repeated instructions if a condition is true.	<code>while number < 0:</code> <code> print("Number cannot be less than zero")</code> <code> number = int(input())</code>
for... statement (Definite iteration)	Performs instructions only a specific number of times based on a given range.	<code>for i in range(5):</code> <code> print("Hello!")</code>
Lists	Two or more values stored in a single variable. Square brackets are used in Python when creating a list.	<code>listIntegers = [3,5,8,4]</code>
	We can access an item in a list using a list index. This refers to the item's position in a list.	<code>firstNumber = listIntegers[0]</code> <code>lastNumber = listIntegers[3]</code> <code>print(firstNumber) # output:3</code> <code>print(lastNumber) # output:4</code>
	A for statement can go through each item in the list and perform an instruction.	<code>for number in listIntegers:</code> <code> print(number) # outputs all the numbers in the list</code>
	The reversed() can function to output the list in reverse.	<code>listCities = ["London", "Paris", "Barcelona"]</code> <code>citiesReversed = reversed(listCities)</code> <code>print(citiesReversed)</code>
	The append() function can add an item to the end of a list.	<code>listCities.append("Bristol")</code> <code>print(listCities)</code>
	The insert() function can add an item to the list at a specific position	<code>listCities.insert(3, "Tokyo")</code> <code># Will add "Tokyo" to the list at index 3</code>
	The pop() function can remove an item from a list at a specific position	<code>listCities.pop(2) # Will remove "Paris" from the list</code>

1. Les Relations En Famille - Family Relationships

<p>Où habitez-vous? / Où habites-tu? – Where do you live?</p>	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
<p>Décrivez votre meilleur(e) ami(e) - Describe your best friend</p>	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 by brothers / sisters/parents
	Mon frère est sympa / mes frères sont sympas – my brother is nice / my brothers are nice
	Ma soeur est généreuse / mes seours sont généreuses – my sister is generous / my sisters are generous
<p>Et votre petit(e) ami(e)? – And your girl or boy friend</p>	Mon meilleur ami est drôle, compréhensif mais des fois un peu égoïste – my best friend (m) is funny, understanding but sometimes a bit selfish
	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

1. Les Relations En Famille - Family Relationships

Décrivez votre partenaire idéal(e) et vos plans pour le futur. – Describe your ideal partner and plans for the future.	Mon partenaire idéal est gentil (m) Ma partenaire idéale est gentille (f) – <i>My ideal partner is be kind</i>
	Il / elle aime faire la cuisine / écouter la musique / les mêmes choses que moi – <i>He / she likes cooking / listening to music / the same things as me</i>
	Je voudrais avoir des enfants / Je ne voudrais pas avoir des enfants – <i>I want to have children / I don't want to have children</i>
	La famille est très importante pour moi – <i>Family is very important to me</i>
	La liberté est très importante pour moi – <i>Freedom is very important to me</i>

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

Je suis – I am Mon frère est... – my brother is... Il est – he is... Ma soeur est – my sister is... Elle est – she is... Mes parents sont... – my parents are... Ils / elle sont – they are	Sympa(s) / agréable(s)	<i>Nice</i>
	Adorable(s) / mignon(ne)(s)	<i>Adorable / cute</i>
	Amusant(e)(s) / drôle(s)	<i>Funny</i>
	Intelligent(e)(s)	<i>Intelligent</i>
	Compréhensif(s) / -ive(s)	<i>Understanding</i>
	Créatif (-ive)(s)	<i>Creative</i>
	Travailleur(s) / euse(s)	<i>Hard-working</i>
	Timide(s)	<i>Shy</i>
	Gentil(le)(s)	<i>Kind</i>
	Généreux / -euse(s)	<i>Generous</i>
	Egoïst(e)(s)	<i>Selfish</i>
	Casse-pieds / agaçant(e)(s)	<i>Annoying</i>
	Jaloux / jalouse(s)	<i>Jealous</i>
	Méchant(e)(s)	<i>Mean</i>
	Strict(e)(s) / sévère(s)	<i>Strict</i>
	Paresseux / paresseuse (s)	<i>Lazy</i>
	Désagréable (s)	<i>Unpleasant</i>

2. Manger Et Boire - Food and Drink

Pour...- for	le petit déjeuner – breakfast
	le déjeuner – lunch
	le goûter – snack
	le dîner – dinner

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

je mange... – I eat...	des céréales
	un yaourt – a yoghurt
j'aime manger – I like to eat	des oeufs (m) – eggs
	du pain (grillé) – some bread (toast) avec du beurre / de la confiture – with butter / jam
je n'aime pas manger – I don't like to eat	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

Quelle est votre fête préférée? – what is your favourite festival / custom / celebration?

Je préfère // Ma célébration / fête préférée, c'est – 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 / Hanukkah / New Year's Eve / my birthday	parce que	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
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Où es-tu allé(e) / Où êtes-vous allé(e)s pour célébrer / fêter...?	Where did you go to celebrate...?
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Cependant / part contre je n'aime pas....Parce que... – However / on the other hand i don't like....Because...
Il y a trop de monde – There are too many people
Je ne m'entends pas bien avec – I don't get on well with...
Je déteste... – I hate...

Pour célébrer [...] – to celebrate [...] je suis allé(e) – I went on est allés / – we went	À l'église	<i>To church</i>
	À la mosquée	<i>To mosque</i>
	À la synagogue	<i>To synagogue</i>
	Au restaurant	<i>To a restaurant</i>
	Au centre ville	<i>Into town / to the town centre</i>
	Chez ma tante / mon oncle / mes cousins / mes grand-parents...	<i>To my autie's / uncle's / cousins' / grand parents' house...</i>

Qu'est-ce que vous avez mangé et bu?	What did you eat and drink?
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J'ai mangé / On a mangé un repas spécial / une dinde rôtie / des crêpes / des oeufs en chocolat – I ate / we ate a special meal / a roast turkey / pancakes / chocolate eggs
Pour l'Iftar / l'Aïd al-Fitr on a mangé... – for Iftar / Eid al-Fitr we ate...
J'ai bu / On a bu du thé / du coca / une coupe de champagne – I drank / we drank tea / Coke / a glass of Champagne

Un repas spécial	<i>A special meal</i>
Une coupe de champagne	<i>A glass of champagne</i>
Le feu d'artifice	<i>Firework display</i>
Les feux d'artifice	<i>Fireworks</i>
Les cadeaux (m)	<i>Presents</i>
Les cartes	<i>Cards</i>
Les gâteaux (m)	<i>Cakes</i>
Un défilé militaire	<i>A military parade</i>
Une parade	<i>A parade</i>
Avec ma famille	<i>With my family</i>
Avec mes amis	<i>With my friends</i>

3. Les Fêtes - Festivals and Special Occasions

Qu'est-ce que vous avez fait?

What did you do?

J'ai ... - I...
On a ... - We...

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*

Je suis allé(e) / on est allés à la fête de – *I went / we went to the festival of...*

Je suis parti(e) le vendredi avec mes copains – *I left on the Friday with my mates*

Je suis arrivé(e) le matin – *I arrived in the morning*
On est arrivés le soir – *we arrived in the evening*

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*

On a campé – *we camped*

J'ai aimé / adoré
– *I liked*

Je n'ai pas aimé – *I didn't like*

regarder – *looking at*
faire – *making*
donner – *giving*
recevoir – *receiving*

le défilé / la fête / les feux d'artifice / les chocolats / les gâteaux / les cadeaux
– *the parade / fireworks/ chocolates / cakes / presents*

la musique / les groupes / l'atmosphère / le voyage / la nourriture – *...the music / the bands / the atmosphere / the journey / the food...*

parce que...

because...

C'était – *it was*

délicieux / passionnant / animé / incroyable / fantastique / ennuyeux / un peu cher – *delicious/ exciting / lively / incredible / fantastic / boring / a little expensive*

Il y avait – *there was/ were*

une parade / des feux d'artifice / beaucoup de monde – *a parade / fireworks / a lot of people*

Il faisait – *it was (weather)*

froid / chaud / beau / nuageux – *cold / hot / fine / cloudy*

Il pleuvait / neigeait

– *it was raining / snowing*

4. Les Fêtes Francophones - Francophone Festivals

<p>Le Saint-Sylvestre : 31 décembre – <i>New Year's Eve</i> Le jour de l'An : 1e janvier – <i>New Year's Day</i> Le Saint Valentin : 14 fevrier – <i>Valentine's Day</i> La fête des rois : 6 janvier – <i>Epiphany</i> Poisson d'avril : 1e avril – <i>April Fools' Day</i> La fête du travail : 1e mai – <i>Labour Day / May Day</i> La fête des mères : mai 26 – <i>Mothers' Day</i> La fête nationale : 14 juillet – <i>Bastille Day</i> La Toussaint : 1e novembre – <i>All Saints' Day</i> La veille de Noël / le réveillon : 24 décembre – <i>Christmas Eve</i> Noël : 25 décembre – <i>Christmas</i></p> <p>Mardi Gras – <i>Mardi Gras</i> Pâques – <i>Easter</i> La Pâque juive – <i>Passover</i> Rosh Hashanah – <i>Jewish New Year</i> Hanoukka – <i>Hanukkah</i> Le Ramadan – <i>Ramadan</i> Aïd al-Fitr – <i>Eid al-Fitr</i></p> <p>Bonne anniversaire – <i>Happy birthday!</i> Joyeux Noël! – <i>Happy Christmas!</i> Bonne fête! – <i>Have a good party/celebration/festival!</i> Bonnes vacances! – <i>Happy holidays / have a good holiday!</i></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 masse de minuit pour le reveillon – 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>	
l'automne	<i>autumn</i>	absolument	<i>absolutely</i>		
l'hiver	<i>winter</i>	tellement	<i>really</i>		
le printemps	<i>spring</i>	vraiment	<i>truly</i>		
l'été	<i>summer</i>	très	<i>very</i>		
l'été dernier / prochain	<i>last / next summer</i>	trop	<i>too</i>		

5. Les Pays Francophones - Francophone Countries – Places, Activities, Geography and Key Facts

Où habites-tu / Où habitez-vous? –
Where do you live?

Qu'est-ce qu'on peut faire dans ta / votre région
– What can you do in your neighbourhood?

J'habite à Barnet, Londres dans le sud-est de l'Angleterre – I live in Barnet, London in the south east of England

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

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

On peut s'amuser au centre ville – You can enjoy yourself in the town centre

On peut sortir avec des amis / voir un film / manger dans un bon restaurant / jouer au foot dans le parc / faire du shopping – Go out with friends / see a film / eat in a good restaurant / play football in the park

Où allez-vous visiter? – Where are you going to visit?

Je vais faire un tour de Paris – I am going to do a tour of Paris

Je vais prendre le train / l'Eurostar – I'm going to take the train / the Eurostar

J'y vais en avion / voiture / car / bateau – I'm going there by plane / car / coach / boat

Je voudrais voir La Tour Eiffel – I would like to see the Eiffel Tower

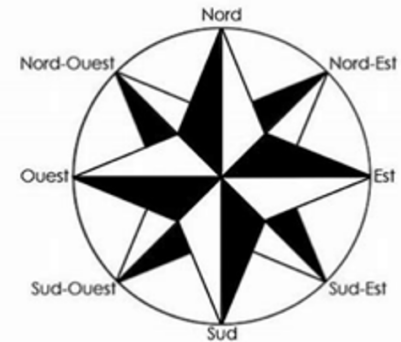
J'aimerais visiter la Martinique – I would love to visit Martinique

Je vais en Algérie / en Maroc / en France pour voir ma famille – I'm going to Algeria / Morocco / France to see my family

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...

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

Si je passe mes examens je vais étudier / travailler à l'étranger – If I pass my exams I will study / work abroad



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

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

5. Les Pays Francophones - Francophone Countries – Places, Activities, Geography and Key Facts

plus - <i>more</i>	+ adjective + que
moin - <i>less</i>	
aussi - <i>as</i>	

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 – <i>the most</i>	+ adjective
le / la / les moins – <i>the least</i>	

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*

Relaciones Con Familia y Amigos – Relationships with Family and Friends

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

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

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

Soy Es <i>I am s/he is</i>	un poco bastante muy demasiado <i>a bit quite very too</i>
Sería <i>I / s/he would be</i>	

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

divertido	fun
travieso	silly
generoso	generous
carriñoso	caring
abierto	open
serio	serious
honrado	honest
perezoso	lazy
orgullosa	proud
egoísta	selfish
optimista	optimistic
feliz	happy
hablador	talkative
trabajador	hard-working
amable	nice/kind
triste	sad
alegre	happy

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

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

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

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

Creo/pienso que <i>I believe/think that</i> En el futuro <i>In the future</i> Cuando sea mayor <i>When I am older</i> Cuando tenga 20 años <i>When I am 20</i> Después de mis estudios <i>After my studies</i>	me gustaría <i>I would like</i> me encantaría <i>I would love</i> quisiera <i>I would love (=wish)</i>	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 <i>to meet the love of my life</i> vivir con mi novio/a <i>to live with my boyfriend/girlfriend</i> vivir juntos <i>to live together</i>
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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

<p>Durante esta fiesta</p> <p>During this festival</p>	<p>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</p>	<p>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</p>
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5. Ir a una fiesta – Going to a festival

<p>En mi opinión In my opinion</p> <p>Pienso que I think that</p> <p>Creo que I believe that</p> <p>Desde mi punto de vista From my point of view</p>	<p>asistir a + festival</p> <p>attending + festival</p>	<p>era used to be</p> <p>fue was</p> <p>es is</p> <p>sería would be</p> <p>será will be</p>	<p>emocionante exciting interesante interesting peligroso dangerous raro/extraño strange impresionante impressive guay cool tonto stupid/silly hermoso beautiful entretenido entertaining único unique fascinante fascinating increíble amazing estupendo marvellous</p>
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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 Pasamos tiempo con la familia Comemos comida deliciosa Bebimos champán Recibimos regalos	We visit family and friends We wear special clothes We decorate the house We decorate the Christmas tree 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 visitaste visitó visitamos visitasteis visitaron	bebí bebiste bebió bebimos bebisteis bebieron	salí saliste salió salimos salisteis salieron	fui fuiste fue fuimos fuisteis 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 There are	un castillo	a castle	animado/a	lively
	un cine	a cinema	agradable	nice
	un estadio	a stadium	bonito/a	pretty
	un parque	a park	famoso/a	famous
	un polideportivo	a sport centre	limpio/a	clean
	un centro comercial	a shopping centre	moderno/a	modern
	un museo	a museum	nuevo/a	new
	una piscina	a pool	pequeño/a	small
	una plaza	a square	pintoresco/a	picturesque
	una playa	a beach	popular	popular
	una tienda	a shop	grande	big

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

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 horseriding
	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

¿Te gustan los festivales? - Do you like festivals?

Opinion	Nouns/verbs	Connective	Is /are	Adjective....
me gusta(n)	los festivales	ya que	es	muy tedioso/a/os/as
me mola(n)	la música	puesto que	son	Emocionante(s)
me chifla(n)	los conciertos	porque		Inolvidable(s)
No me gusta(n)	los disfraces			Increíble(s)
No me gusta(n)	celebrar			fantástico/a/os/as
No me mola(n)	bailar			Horrible(s)
No me importa(n)	disfrazarme			
Detesto	Ver			

	My...	Opinion (likes, loves)	Activity	Given that, because	Is / are	Adjective....
A	mi madre	le gusta	los festivales	ya que	es	muy tedioso
	mi padre	le mola	la música	puesto que	son	emocionante
	mi abuelo	le chifla	los conciertos	porque		inolvidable
	mi hermano	no le	los disfraces			increíble
	mi hermana	gusta	celebrar			fantástico
	mi primo	no le	bailar			horrible
	mi prima	mola	disfrazarse			
			ver			

¿Qué hiciste en la fiesta? – What did you do at the festival?

Time phrase	Activity in past or future	Noun	It was	Adjective
Hace dos años	bailé	música	fue	increíble
El año pasado	VI	desfiles		genial
Hace un mes	escuché	comida típica		fantástico
Hace tiempo	visité	mi casa		inolvidable
	decoré	fuegos artificiales		increíble
	comí	la ciudad de		un poco tedioso
	me disfrazé	...		horrible
	Llevé	ropa especial		

¿Qué vas a hacer en la fiesta? – What are you going to do at the festival?

Time phrase	Activity in past or future	Noun	It was	Adjective
El año que viene	voy a bailar	música	va a ser	increíble
En el futuro	voy a ver	desfiles		genial
Dentro de dos meses	voy a escuchar	comida típica		fantástico
El mes que viene	voy a visitar	mi casa		inolvidable
	voy a decorar	fuegos artificiales		increíble
	voy a comer	la ciudad de		un poco tedioso
	voy a disfrazarme	...		horrible
	voy a llevar	ropa especial		

Year 9 - Sentence Builder

¿Cómo son diferentes las ciudades? – What country would you like to visit?

Opinion Phrase	Infinitive	Adjective	In order to..	Infinitive	Place / Activity	
Me gustaría I would like	visitar to visit	Cuba	Para In order to....	Visitar visit	La jungla / selva The jungle	La comida típica Local food
Me encantaría I would	ir a to go to	México		Descubrir discover	Las montañas The mountains	Las ciudades antiguas The old cities
	vaiar a to travel to	Perú		Ver see	Las playas tropicales The tropical beaches	Los sitios históricos Historical sites
		España		Probar try	El desierto The unale	las ciudades antiguas The old cities
		Argentina		Hacer do	Una excursión A trip / excursion	Los festivales The festivals
		Costa Rica			Un tour A tour	
		Colombia				
		La República Dominicana				

¿Cómo es/era el medio ambiente? – How is/was the environment

Time expression	Key Structure 1	Quantifier	Complement	Connective	Key Structure 2	Adjective
Antes Before	había there used to be	mucho/a/os/as a lot of	ruido noise	por lo tanto therefore	era it used to be	sostenible sustainable
Cuando era	no había there didn't used to be	tanto/a/os/as so much / so many	tráfico traffic	por eso therefore	no era it didn't used to be	sucio dirty
pequeño/ a When / was young	tenía it used to have	demasiado/a/os/as too much	basura rubbish	entonces so	estaba it used to be	limpio clean
Ahora Now	no tenía it didn't used to have	suficiente(s) enough	polución/contaminación (del aire/del agua/ de los ríos/ mares) (air/water/river/sea pollution)		no estaba it didn't used to be	serio serious
Hoy en día Nowadays	hay there is	más more	espacios verdes green spaces		es it is	bonito pretty
	no hay there isn't	menos less	fábricas factories		no es it isn't	feo ugly
	tiene it has		medios de transporte público modes of public transport		está it is	turístico touristy
	no tiene it hasn't		redes de transporte público public transport networks		no está it isn't	moderno modern
			bolsas de plástico plastic bags			histórico historic
						industrial industrial
						tranquilo calm
						ruidoso noisy

¿Qué se debería hacer para mejorar el medio ambiente? – What should you do in order to protect the environment?

In my opinion	It is necessary to	Action (e.g. respect rules)	Because, given that...	Reason	
Pienso que A mi modo de ver Desde mi punto de vista Diría que	(No) se debe (No) se debería (No) hay que	Apagar la luz Ducharse en vez de bañarse Separar la basura Reciclar el plástico y el vidrio Cerrar el grifo Desenchufar los aparatos eléctricos Malgastar el agua Usar bolsas de plástico	porque puesto que ya que	Es... muy importante esencial justo normal necesario crucial	ahorra energía reduce las emisiones causa contaminación daña el medio ambiente protege el medio ambiente

¿Qué derechos tienen los niños? - What rights do children have?

Location	Verb	Infinitive	Because...	Reason	Therefore...	Verb	Noun
En Inglaterra... Francia... España... Colombia... Venezuela... Argentina... Brasil... otros países other countries otras ciudades other cities	los niños no pueden... children can't...	Dar su opinion Give their opinion Dormir Sleep Ir al insti Go to school Salir Go out Jugar con SUS hermanos Play with their siblings Respirar bien Breathe well	porque ya que dado que	tienen que trabajar They have to work tienen que ganar dinero They have to earn money hay mucha Violencia There is a lot of violence es muy peligroso It is very dangerous el aire está contaminado The air is polluted	Así que Por eso	No tienen el derecho They don't have the right	al juego to play a la educación to education al amor y a la familia to love and family a un medio ambiente sano to a healthy environment a la libertad de expresión to freedom of expression a vivir en armonía to live in harmony

Verb Endings

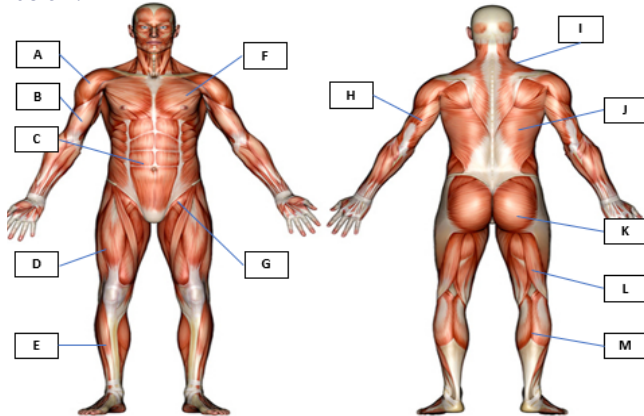
Present			
	ar	er	ir
I	- o	- o	- o
You	- as	- es	- es
He / She / It	- a	- e	- e
We	- amos	- emos	- imos
You	- áis	- éis	- ís
They	- an	- en	- en

Near Future			
I	voy	+ a	+ infinitive
You	vas		
He / She / It	va		
We	vamos		
You	vais		
They	van		

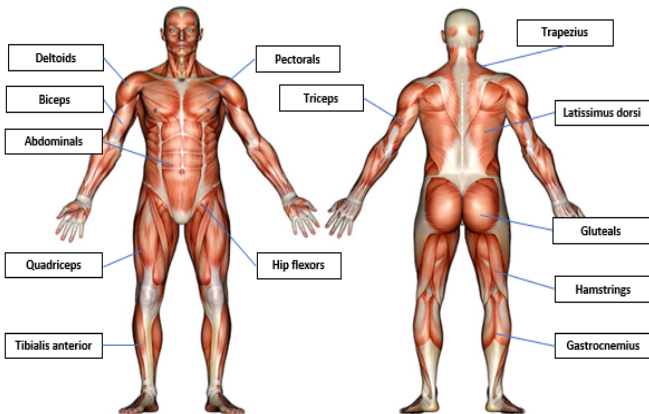
Preterite		
	ar	er/ir
I	- é	- í
You	- aste	- iste
He / She / It	- ó	- ió
We	- amos	- imos
You	- asteis	- isteis
They	- aron	- ieron

Imperfect		
	ar	er/ir
I	- aba	- ía
You	- abas	- ías
He / She / It	- aba	- ía
We	- ábamos	- íamos
You	- abais	- íais
They	- aban	- ían

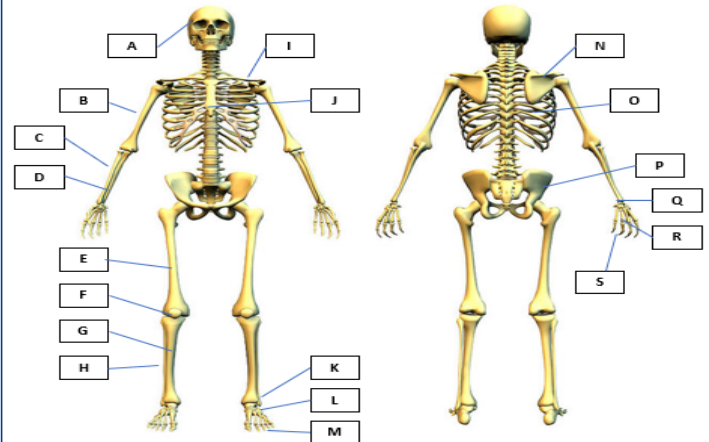
Identify parts A-M on the diagram of the muscular system below.



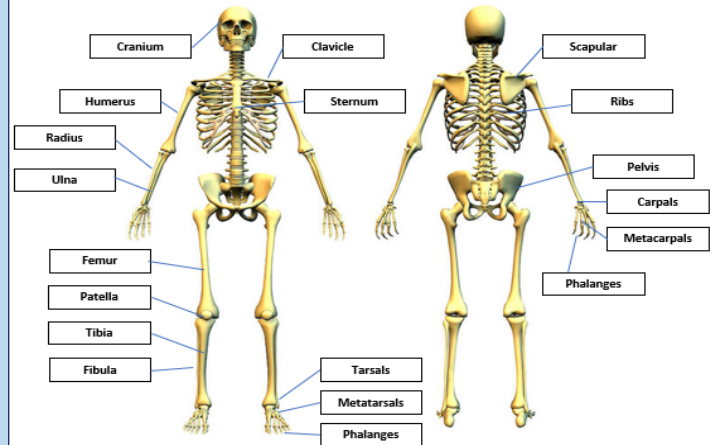
1A



Identify parts A-S on the diagram of the skeletal system below.



2A



3A	Identify three immediate effects of exercise.
	<ul style="list-style-type: none"> • Sweating • Red face • Increased body temperature • Increased heart rate • Increased breathing rate
3B	Identify three short-term effects of exercise.
	<ul style="list-style-type: none"> • Fatigue • Muscle soreness (DOMS) • Dizziness • Nausea
3C	Identify three long-term effects of exercise.
	<ul style="list-style-type: none"> • Lower resting heart rate • Weight loss • Increased muscle mass • Increased strength and cardiovascular endurance
3D	Define health .
	<ul style="list-style-type: none"> • A state of complete physical, mental, and social well-being
3E	Define fitness .
	<ul style="list-style-type: none"> • The ability to meet the demands of your environment
3F	Identify three positive influences on health.
	<ul style="list-style-type: none"> • Regular exercise • Healthy diet • Regular sleep • Positive friendship groups • High quality education

3G	Identify three negative influences on health.
	<ul style="list-style-type: none"> • Lack of exercise • Unhealthy diet/too much fatty food • Lack of regular sleep • Lack of positive friendship groups • Lack of education
3H	Identify three types of substance abuse.
	<ul style="list-style-type: none"> • Alcohol • Drugs • Smoking cigarettes
3I	Identify the negative effects alcohol can have on a person's health.
	<ul style="list-style-type: none"> • Dehydration • Nausea • Memory loss • Liver damage
3J	Identify the negative effects drugs can have on a person's health.
	<ul style="list-style-type: none"> • Feeling paranoid • Poor judgment • Heart problems
3K	Identify the negative effects smoking cigarettes can have on a person's health.
	<ul style="list-style-type: none"> • Lung cancer • Increased blood pressure • Poor circulation

Define the following fitness components:

- a. Agility
- b. Balance
- c. Cardiovascular endurance
- d. Coordination
- e. Flexibility
- f. Muscular endurance
- g. Power
- h. Reaction time
- i. Maximal strength
- j. Static strength
- k. Speed

4A

- a. The ability to move and change direction quickly with control.
- b. Maintaining the centre of mass over the base of support.
- c. The ability of the heart and lungs to supply oxygen to the working muscles.
- d. The ability to use two or more parts of the body together with control.
- e. The range of movement possible at a joint.
- f. The ability of a muscle or muscles to repeat contractions without fatigue.
- g. Maximum strength x maximum speed.
- h. The time taken to respond to a stimulus.
- i. The largest force possible in single contraction.
- j. The amount of strength applied to an immovable object.
- k. The maximum rate at which you can perform a movement or cover a distance.

Identify a sporting example for the following fitness components:

- a. Agility
- b. Balance
- c. Cardiovascular endurance
- d. Coordination
- e. Flexibility
- f. Muscular endurance
- g. Power
- h. Reaction time
- i. Maximal strength
- j. Static strength
- k. Speed

4B

- a. When marking an opponent in netball.
- b. When performing a handstand in gymnastics.
- c. When running at the end of a marathon.
- d. When moving the arms and legs to serve a ball in tennis.
- e. When stretching out wide to catch a ball in cricket.
- f. When repeatedly punching an opponent in boxing.
- g. When jumping for a rebound in basketball.
- h. When returning a smash in badminton.
- i. When throwing a shot putt in athletics.
- j. When holding a handstand in gymnastics.
- k. When moving the legs quickly in the 100m.

5A	<p>Define aerobic.</p> <ul style="list-style-type: none"> • With oxygen
5B	<p>Define anaerobic.</p> <ul style="list-style-type: none"> • Without oxygen
5C	<p>Identify the equation for aerobic respiration.</p> <ul style="list-style-type: none"> • Glucose + Oxygen = Energy + CO₂ + Water
5D	<p>Identify the equation for anaerobic respiration.</p> <ul style="list-style-type: none"> • Glucose = Energy + Lactic Acid
5E	<p>Describe aerobic exercise.</p> <ul style="list-style-type: none"> • Long duration and low intensity exercise
5F	<p>Describe anaerobic exercise.</p> <ul style="list-style-type: none"> • Short duration and high intensity exercise
5G	<p>Identify examples of an aerobic sporting activity.</p> <ul style="list-style-type: none"> • A marathon • Long-distance cycling
5H	<p>Identify examples of an anaerobic sporting activity.</p> <ul style="list-style-type: none"> • 100m sprint • High jump

5I	<p>Identify the fitness components developed through aerobic exercise.</p> <ul style="list-style-type: none"> • Cardiovascular endurance
5J	<p>Identify the fitness components developed through anaerobic exercise.</p> <ul style="list-style-type: none"> • Power and speed
5K	<p>Identify how an athlete would calculate their maximum heart rate (MHR)?</p> <ul style="list-style-type: none"> • MHR = 220 – age
5L	<p>Define heart rate.</p> <ul style="list-style-type: none"> • The number of times the heart beats per minute
5M	<p>Define stroke volume.</p> <ul style="list-style-type: none"> • The volume of blood pumped from the left side of the heart per beat
5N	<p>Define cardiac output.</p> <ul style="list-style-type: none"> • Heart rate x stroke volume
5O	<p>Define anticipatory rise.</p> <ul style="list-style-type: none"> • The slight increase in heart rate ahead of starting exercise
5P	<p>Identify the aerobic and anaerobic training zones.</p> <ul style="list-style-type: none"> • Aerobic = 60 – 80% of MHR • Anaerobic = 80 – 90% of MHR

6A	Identify the seven nutrients which make up a healthy balanced diet.
	<ul style="list-style-type: none"> • Carbohydrates • Fats • Protein • Fibre • Vitamins • Minerals • Water
6B	Identify the main benefit of each nutrient listed in Q8.40.
	<ul style="list-style-type: none"> • Carbohydrates = body's main energy source • Fats = body's secondary energy source • Protein = muscle growth and repair • Fibre = supports digestive system • Vitamins = supports immune system • Minerals = helps maintain strong bones • Water = helps maintain hydration
6C	Identify examples of each nutrient listed in Q8.40.
	<ul style="list-style-type: none"> • Carbohydrates = pasta, rice, potatoes • Fats = red meat, cheese, nuts • Protein = chicken, fish, eggs • Fibre = brown bread, cereal, porridge • Vitamins = fruit and vegetables • Minerals = milk (calcium) • Water = water
6D	Define sedentary lifestyle.
	<ul style="list-style-type: none"> • A person's choice to engage in little physical activity

6E	Identify consequences of a sedentary lifestyle.
	<ul style="list-style-type: none"> • Weight gain/obesity • Heart problems (e.g., hypertension) • Diabetes • Low self-esteem
6F	Define obesity.
	<ul style="list-style-type: none"> • A person with a large fat content (BMI >30)
6G	Identify causes of obesity.
	<ul style="list-style-type: none"> • High calorie consumption combined with minimal physical activity
6H	Identify physical, mental and social effects of obesity.
	<ul style="list-style-type: none"> • Physical effects: cancer, heart disease, diabetes • Mental effects: depression, loss of confidence • Social effects: inability to socialise
6I	Define dehydration.
	<ul style="list-style-type: none"> • The harmful reduction of water in the body
6J	Identify causes of dehydration.
	<ul style="list-style-type: none"> • Not drinking enough fluids • Over-exercising
6K	Identify three effects of dehydration.
	<ul style="list-style-type: none"> • Blood thickens • Increased heart rate • Fatigue

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