



The Totteridge Academy

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Part of United Learning

2023-2024

A graphic featuring a red speech bubble with the text 'Y8' inside. Surrounding the bubble are various colorful icons: a yellow lightbulb, a purple diamond, a blue diamond, a green circle, a yellow diamond, and several plus signs in different colors.

Knowledge Organiser

Name:

Tutor Group:

Tutor & Room:

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Animal Farm by George Orwell (1945)

When?	Summary and Themes/Ideas	Quotations
Chapters 1-3	The animals are displeased with how they are treated by Farmer Jones and feel that they are exploited by man. Old Major delivers a speech detailing the oppression . The pigs are established as being of superior intelligence to the other animals.	<p>Chapter 1. Old Major: "Now, comrades, what is the nature of this life of ours? Let us face it: our lives are miserable, laborious, and short."</p> <p>Chapter 1. Old Major: "The life of an animal is misery and slavery: that is the plain truth."</p> <p>Chapter 1. Old Major: "Man is the only real enemy."</p> <p>Chapter 1. Old Major: "That is my message to you comrades: rebellion!"</p> <p>Chapter 1. Narrator: [Boxer was] 'Not of first-rate intelligence.'</p> <p>Chapter 2. Narrator: 'They were met with much stupidity and apathy.'</p> <p>Chapter 2. Narrator: [The Pigs were] 'Generally recognised as being the cleverest.'</p> <p>Chapter 2. Narrator: [Napoleon had] 'a reputation for getting his own way.'</p> <p>Chapter 2. Narrator: 'The others said of squealer that he could turn black into white.'</p>
	The animals vow to take back some element of control over their own lives on the farm and are successful in overthrowing Farmer Jones. The animals successfully rebel and take control of the farm. The animals decide on seven commandments as they establish their utopian vision of Animal Farm.	<p>Chapter 2. Narrator: 'In the past years, Mr Jones [...] had been a capable farmer, but of late he had fallen on evil days.'</p> <p>Chapter 2. Narrator: 'Without bothering to feed the animals.'</p> <p>Chapter 2. Narrator: 'Yes, it was theirs - everything that they could see was theirs.'</p> <p>Chapter 2. Narrator: [The pigs] 'taught themselves to read'.</p> <p>Chapter 2. Narrator: 'Whatever goes upon two legs is an enemy.'</p> <p>Chapter 2. Narrator: 'All animals are equal.'</p> <p>Chapter 3. Narrator: 'Their efforts were rewarded for the harvest was even bigger success than they hoped.'</p> <p>Chapter 3. Narrator: 'The pigs were so clever that they could think of a way around every difficulty.'</p> <p>Chapter 3. Squealer: 'Do you know what would happen if we pigs failed in our duty? Jones would come back!'</p>
Chapters 4-6	It quickly becomes clear that the pigs are the ones to lead the rebellion and gain power – often at the expense of the other and less intelligent animals they are able to exploit . Napoleon uses underhand tactics to seize power .	<p>Chapter 4. Narrator: 'Snowball, at the head of them, rushed forward.'</p> <p>Chapter 4. Narrator: [Snowball was] 'In charge of defensive operation' and 'gave his orders quickly'</p> <p>Chapter 4. Narrator: 'Animal hero, First class' [...] was conferred there and then on Snowball and Boxer.'</p> <p>Chapter 5. Narrator: 'Snowball wants to build a windmill [...] the animals would only have to work three days weekly.'</p> <p>Chapter 5. Napoleon: 'Nonsense.'</p> <p>Chapter 5. Narrator: 'there was no doubt as to which way the vote would go.'</p> <p>Chapter 5. Narrator 'Napoleon stood up and, casting a peculiar sidelong look at Snowball, uttered a high-pitched whimper.'</p> <p>Chapter 5. Narrator: [The dogs] 'They dashed straight for Snowball.'</p> <p>Chapter 5. Narrator: 'Silent and terrified, the animals crept back into the barn.'</p> <p>Chapter 5. Narrator/Squealer: 'The windmill was, in fact, Napoleon's own creation. He had seemed to oppose the windmill.... This [...] was something called tactics.'</p>
	Division of class and exploitation of less intelligent animals continues. The pigs gain even more power through manipulation	<p>Chapter 6. Pigs: "No animal shall sleep in a bed with sheets."</p> <p>Chapter 6. Napoleon: 'Strictly voluntary.'</p> <p>Chapter 6. Napoleon: 'This traitor has crept here under the cover of night.'</p> <p>Chapter 6. Boxer: "I will work harder" and "Napoleon is always right."</p>

Animal Farm by George Orwell (1945)

When?	Summary and Themes/Ideas	Quotations
Chapters 7-8	The pigs' manipulation increases, as does their exploitation of the other animals who are working harder for little return.	<p>Chapter 7. Narrator: 'Starvation seemed to stare them in the face.'</p> <p>Chapter 7. Narrator: 'Whenever anything went wrong it became usual to attribute it to Snowball.'</p> <p>Chapter 7. Narrator: [about Clover] 'There was no thought of rebellion or disobedience in her mind.'</p> <p>Chapter 7. Squealer: "Napoleon sank his teeth into Jones' leg."</p>
	Napoleon, a symbol of Stalin during the Russian Revolution , is promoted to leader of the farm – the other animals appear unaware of the widening class divide between them and the pigs.	<p>Chapter 8. Narrator: 'some animals remembered – or thought they remembered – that the sixth commandment decreed: 'No Animal shall kill any other animal'.'</p> <p>Chapter 8. Narrator [Napoleon] 'was always referred to in the formal style as 'Our Leader, Comrade Napoleon'.'</p> <p>Chapter 8. Narrator: 'A gun was fired every year on Napoleon's birthday.'</p> <p>Chapter 8. Narrator: [About Napoleon] 'Father of all animals, terror of mankind, protector of the sheepfold, duckling's friend...'</p>
Chapters 9-10	Boxer prepares for retirement but is then sent away. Towards the end of the novel, the pigs seem to have gone through a transformation as they now take on more qualities of the humans that they so despised at the start. The power of the pigs has been steadily increasing throughout and builds to a climax in the final chapter.	<p>Chapter 9. Boxer: "I will work harder"; he had no voice left."</p> <p>Chapter 9. Clover: "Boxer! Get out! Get out quickly! They're taking you to your death!"</p> <p>Chapter 9. Narrator: 'Boxer was never seen again.'</p> <p>Chapter 9. Narrator: 'It was necessary to elect a President... there was only one candidate.'</p> <p>Chapter 9. Narrator: 'With the songs, the processions, Squealer's list of figures, they were able to forget that their bellies were empty.'</p> <p>Chapter 10. Narrator: 'All animals were equal.'</p> <p>Chapter 10. Animals: "Four legs good, two legs better!"</p> <p>Chapter 10. Narrator: 'A pig walking on its hind legs.'</p> <p>Chapter 10. Narrator: 'Already it was impossible to say which was which.'</p>

The Tempest by William Shakespeare (1611)

When?	Summary and Themes/Ideas	Quotations
Act 1	<p>Scene 1. Exploration is exposed as dangerous.</p>	<p>1.1. Boatswain: "When the sea is. Hence! What cares these roarers for the name of king?"</p> <p>1.1. Mariners: "Mercy on us! We split, we split! – Farewell, my wife and children! – Farewell, brother! – We split, we split, we split!"</p>
	<p>Scene 2. Prospero is exposed as a victim of usurpation, for which he seeks revenge.</p> <p>Prospero is presented as a powerful coloniser and slave master. He controls Miranda, uses manipulation to control Ariel and has enslaved Caliban, presented here as a savage but one for whom we have some sympathy.</p> <p>Control is further established by Prospero as he manipulates the relationship between Ferdinand and Miranda.</p>	<p>1.2. Miranda (to Prospero): "O, I have suffered With those that I saw suffer."</p> <p>1.2. Prospero (to Miranda): "Thy father was the Duke of Milan and a prince of power."</p> <p>1.2. Prospero (to Miranda): "By foul play, as thou sayst, were we heaved thence."</p> <p>1.2. Prospero (to Miranda): "By being so retired, o'erprized all popular rate, in my false brother awaked an evil nature."</p> <p>1.2. Prospero (to Miranda): "There they hoist us to cry to th' sea that roared to us."</p> <p>1.2. Ariel (to Prospero): "All hail, great master! Grave sir, hail!"</p> <p>1.2. Prospero (to Ariel): "Hast thou, spirit, performed to point the tempest that I bade thee?"</p> <p>1.2. Ariel (to Prospero): "Ferdinand [...] was the first man that leaped; cried 'hell is empty, and all the devils are here'."</p> <p>1.2. Prospero (to Ariel): "Ariel, thy charge exactly is performed. But there's more work."</p> <p>1.2. Prospero (to Ariel): "I will rend an oak and peg thee in his knotty entrails till thou hast howled away twelve winters."</p> <p>1.2. Prospero (to Caliban): "Thou poisonous slave, got by the devil himself upon thy wicked dam, come forth!"</p> <p>1.2. Caliban (to Prospero and Miranda): "You taught me language, and my profit on't is I know how to curse. The red plague rid you for learning me your language!"</p> <p>1.2. Caliban (to Prospero and Miranda): "Hast thou not dropped from heaven?"</p> <p>1.2. Caliban (to Prospero): "This island's mine, by Sycorax my mother, which thou takest from me."</p> <p>1.2. Caliban (to Prospero): "For I am all the subjects that you have, Which first was mine own king."</p> <p>1.2. Prospero (to Caliban): "If you neglect my orders or do them grudgingly, I'll double you up with pains and cramps."</p> <p>1.2. Prospero (to Miranda): "I find my zenith doth depend upon a most auspicious star."</p> <p>1.2. Prospero (to Ariel): "Hast thou, spirit, performed to point the tempest that I bade thee?"</p> <p>1.2. Miranda: "I might call him a thing divine, for nothing natural I ever saw so noble."</p> <p>1.2. Prospero (aside): "It goes on, I see, as my soul prompts it."</p>

The Tempest by William Shakespeare (1611)

When?	Summary and Themes/Ideas	Quotations
Act 2	<p>Scene 1. The usurping 'men of sin' and the 'noble Neapolitan' Gonzalo arrive on the island. Antonio tempts Sebastian to usurp his brother, as he did to Prospero.</p>	<p>2.1. Gonzalo: "Here is everything advantageous to life." 2.1. Gonzalo: "In my kingdom I'd do everything differently from the way it's usually done." 2.1. Antonio (to Sebastian): "My strong imagination sees a crown dropping upon thy head." 2.1. Antonio (to Sebastian): "Twenty consciences, that stand 'twixt me and Milan, candied be they and melt ere they molest!" 2.1. Sebastian (to Antonio): "As thou got'st Milan, I'll come by Naples." 2.1. Ariel (to Gonzalo): "My master through his art foresees the danger that you, his friend, are, and sends me forth." 2.1. Ariel (to Gonzalo): "If of life you keep a care, shake off slumber and beware."</p>
	<p>Scene 2. Caliban, Stephano and Trinculo embark on a futile, comedic plot to usurp Prospero, exploring themes of colonisation.</p>	<p>2.2. Trinculo: "Misery acquaints a man with strange bedfellows." 2.2. Stephano: "Do you put tricks upon's with savages and men of Ind, ha?" 2.2. Caliban (aside): "That's a brave god and bears celestial liquor. I will kneel to him." 2.2. Caliban (to Stephano): "I'll show thee every fertile inch o' th' island and I will kiss thy foot." 2.2. Caliban: "Freedom, high-day, freedom."</p>
Act 3	<p>Scene 1. The relationship between Miranda and Ferdinand develops, thanks to Prospero's manipulation.</p>	<p>3.1. Ferdinand (to Miranda): "The mistress which I serve quickens what's dead and makes my labors pleasures." 3.1. Ferdinand (to Miranda): "But you, O you, so perfect and so peerless." 3.1. Ferdinand (to Miranda): "My heart fly to your service." 3.1. Miranda (to Ferdinand): "I am your wife, if you will marry me: If not, I'll die your maid: to be your fellow. You may deny me, but I'll be your servant, whether you will or no."</p>
	<p>Scene 2. Power is exposed as corruptive through the comedic antics of Caliban, Stephano and Trinculo. Caliban is portrayed as a victim of colonisation and slavery.</p>	<p>3.2. Stephano (to Trinculo): "If you prove a mutineer, the next tree." 3.2. Caliban (to Stephano): "If thy greatness will revenge it on him." 3.2. Caliban: "With a log batter his skull; or paunch him with a stake." 3.2. Caliban: "Let me lick thy shoe." 3.2. Caliban (to Stephano): "I thank my noble lord." 3.2. Caliban (aside): "I am subject to a tyrant, a sorcerer, that by his cunning hath cheated me of the island."</p>
	<p>Scene 3. Prospero utilises his power over Ariel to exert terrifying revenge for his usurpation. Alonso, Antonio and Sebastian are now under his control.</p>	<p>3.3. Ariel: "You fools, I and my fellows are ministers of fate." 3.3. Ariel: "I have made you mad...men hang and drown their proper selves." 3.3. Ariel: "You three from Milan did supplant good Prospero." 3.3. Ariel: "Thee of thy son, Alonso, they have bereft." 3.3. Prospero (aside): "They now are in my power and in these fits I leave them." 3.3. Alonso: "With him there lie muddled." 3.3. Gonzalo: "Their great guilt, like poison."</p>

The Tempest by William Shakespeare (1611)

When?	Summary and Themes/Ideas	Quotations
Act 4	Scene 1. Prospero offers Miranda to Ferdinand, reinforcing patriarchal views. Order is restored as Prospero quells the plot on his life, leaving him in total control .	<p>4.1. Prospero (to Ferdinand): "I ratify this my rich gift."</p> <p>4.1. Prospero (to Ferdinand): "But if thou dost break her virgin knot... discord shall bestrew the union of your bed."</p> <p>4.1. Prospero (to Ariel): "A devil, a born devil on whose nature nurture can never stick."</p> <p>4.1. Caliban: "If he awake, from toe to crown he'll fill our skins with pinches."</p> <p>4.1. Prospero (to Ariel): "At this hour lie at my mercy all mine enemies."</p> <p>4.1. Prospero (monologue): "We are such stuff as dreams are made on: and our little life is rounded with a sleep."</p>
Act 5	Scene 1. Prospero is humanised by Ariel and realises that forgiveness is more virtuous than revenge . Prospero's power as Duke is restored and he decides to give up his magic powers and return to Milan to live out his days.	<p>5.1. Ariel (to Prospero): "If you now beheld them, your affections would become tender."</p> <p>5.1. Prospero (to Ariel): "The rarer action is in virtue than in vengeance."</p> <p>5.1. Prospero: "I'll drown my books."</p> <p>5.1. Prospero: "Require my dukedom of thee, which perforce, I know, thou must restore."</p> <p>5.1. Prospero: "I do forgive thee, unnatural though thou art."</p> <p>5.1. Prospero (to Ariel): "I shall miss thee, but yet thou shalt have freedom."</p> <p>5.1. Ariel (to Prospero): "Merrily, merrily, shall I live now Under the blossom that hangs on the bough."</p> <p>5.1. Trinculo: "If these be true spies which I wear in my head, here's a goodly sight."</p> <p>5.1. Prospero: "And in the morn I'll bring you to your ship and so to Naples."</p>
Epilogue	Prospero seeks forgiveness from the audience, realising his earlier bitterness was wrong.	<p>Prospero: "Release me from my bands with the help of your good hands."</p> <p>Prospero: "As you from crimes would pardoned be, Let your indulgence set me free."</p>

Sherlock Holmes by Sir Arthur Conan Doyle (1892)

When?	Summary and Themes/Ideas	Quotations
The Red Headed League	<p>Sherlock Holmes is visited by Jabez Wilson, who tells him of the strange story of The Red Headed League. Mr Wilson has been offered lots of money to do a seemingly pointless job.</p> <p>Holmes uses powers of deduction and observation to establish that it is a hoax. Holmes becomes introspective to solve the case and work out that it is a front for a serious robbery.</p> <p>Watson acknowledges Sherlock's superior ability to use reason and rationality, as he catches the robbers red handed. Sherlock describes how these cases help him escape the boring routines of everyday life.</p>	<p>Sherlock: "for strange effects and extraordinary combinations we must go to life itself."</p> <p>Sherlock: "I shall keep on piling fact upon fact on you until your reason breaks down under them and acknowledges me to be right."</p> <p>Watson (narrator): 'Sherlock Holmes quick eye took in my occupation, and he shook his head with a smile.'</p> <p>Sherlock: "It is quite a three pipe problem."</p> <p>Sherlock: "It is introspective, and I want to introspect."</p> <p>Watson (narrator): 'In his singular character the dual nature alternately asserted itself and his extreme exactness and astuteness represented... the reaction against the poetic and contemplative mood which occasionally predominated in him.'</p> <p>Watson (narrator): 'Then it was that the lust of the chase would suddenly come upon him.'</p> <p>Watson (narrator): 'His brilliant reasoning power would rise to the level of intuition.'</p> <p>Watson (narrator): 'I was always oppressed with a sense of my own stupidity in my dealings with Sherlock Holmes.'</p> <p>Sherlock: "My life is spent in one long effort to escape from the common places of existence. These little problems help me to do so."</p>
A Scandal in Bohemia	<p>The character of Irene Adler is introduced as subverting female Victorian stereotypes. Sherlock Holmes meets the King of Bohemia who tells him that he is due to be married and asks Holmes to help him retrieve a scandalous photograph from Irene Adler.</p> <p>Holmes is reinforced as the embodiment of knowledge and observation, but also as an eccentric, cold character who lacks normal human emotion and empathy. Holmes comes up with a plan to get Irene Adler to reveal the location of the photograph by pretending that her house is on fire. Adler falls for the trick but later realises she has been duped and flees.</p>	<p>Watson (narrator): 'To Sherlock Holmes she is always the woman.'</p> <p>Watson (narrator): 'In his eyes she eclipses and predominates the whole of her sex...'</p> <p>Watson (narrator): 'All emotions, and that one (love) particularly, were abhorrent to his cold, precise but admirably balanced mind.'</p> <p>Watson (narrator): 'He was... the most perfect reasoning and observing machine the world has seen.'</p> <p>Watson (narrator): 'Grit in a sensitive instrument, or a crack in one of his high-power lenses, would not be more disturbing than a strong emotion in a nature such as his.'</p> <p>Watson (narrator): 'Holmes... loathed every form of society with his whole Bohemian soul.'</p> <p>Watson (narrator): 'He was pacing the room swiftly, eagerly, with his head sunk upon his chest and his hands clasped behind him... He was at work again.'</p> <p>Watson (narrator): 'I could not help laughing at the ease with which he explained his process of deduction.'</p> <p>Sherlock: "You see, but you do not observe."</p> <p>Sherlock: "It is a capital mistake to theorise before you have data. Invariably one begins to twist facts to suit theories instead of theories to suit facts."</p> <p>Watson (narrator): 'There was something in his masterly grip of a situation, and his keen, incisive reasoning, which made it a pleasure to study his system of work.'</p>

Sherlock Holmes by Sir Arthur Conan Doyle (1892)

When?	Summary and Themes/Ideas	Quotations
A Scandal in Bohemia (Continued)	Both Holmes and Watson underestimated Irene Adler because she is a woman, reinforcing their patriarchal and stereotypical views. In the end, she wins their respect due to the way she outsmarts them and the King of Bohemia. Her intelligence subverts Victorian stereotypes of women.	<p>Sherlock: (about Irene Adler) "She is the daintiest thing under a bonnet on this planet."</p> <p>Watson (narrator): 'She stood at the top with her superb figure outlined against the lights of the hall.'</p> <p>Watson (narrator): 'I never felt more ashamed in my life than when I saw the beautiful creature against whom I was conspiring.'</p> <p>Sherlock: "When a woman thinks that her house is on fire, her instinct is at once to rush to the thing that she values most. It is a perfectly overpowering impulse."</p> <p>Sherlock: "From what I have seen of the lady she seems indeed to be on a very different level to Your Majesty."</p> <p>Watson (narrator): 'And that was how the best plans of Mr. Sherlock Holmes were beaten by a woman's wit.'</p> <p>Watson (narrator): 'He used to make merry over the cleverness of women but I have not heard him do it of late.'</p>
A Case of Identity	<p>Mary Sutherland is introduced as a stereotypical Victorian representation of women – unintelligent, emotional, obsessed with her appearance, easily outsmarted and not to be taken seriously. She is being manipulated by her strange husband, Mr Hosmer Angel.</p> <p>Mary is the opposite of Irene Adler, who subverts these expectations. Her new husband wears a mask, has a strange appearance and she doesn't really know anything about him. Holmes is instantly suspicious.</p> <p>Holmes' eccentricity is further revealed as he makes deductions about the case in a relaxed manner. Holmes works out that Hosmer Angel is not all he appears to be, and is in fact Mary Sutherland's own stepfather, James Windibanks, who is pretending to be Hosmer Angel so that she never marries. While she remains at home, the family have access to all of her money. She has been tricked. Despite his eccentric behaviour, Holmes decency is made clear in his final treatment of 'Hosmer Angel'.</p>	<p>Sherlock: "life is infinitely stranger than anything which the mind of man could invent."</p> <p>Sherlock: "Depend upon it. There is nothing so unnatural as the commonplace."</p> <p>Sherlock: "it is my business to know things. Perhaps I have trained myself to see what others overlook. If not, why should you come to consult me?"</p> <p>Watson (narrator): 'on the pavement opposite there stood a large woman with a heavy fur boa round her neck, and a large curling red feather in a broad-brimmed hat which was tilted in a coquettish Duchess of Devonshire fashion over her ear. From under this great panoply she peeped up in a nervous, hesitating fashion at our windows, while her body oscillated backward and forward, and her fingers fidgeted with her glove buttons.'</p> <p>Sherlock: "Oscillation upon the pavement always means an affaire de Coeur."</p> <p>Watson (narrator): 'the lady herself loomed behind his small black figure like a full-sailed merchant-man behind a tiny pilot boat.'</p> <p>Watson (narrator): 'a startled look came over the somewhat vacuous face of Miss Mary Sutherland'</p> <p>Watson (narrator): 'I had expected to see Sherlock Holmes impatient under this rambling and inconsequential narrative, but, on the contrary, he had listened with the greatest concentration of attention'.</p> <p>Watson (narrator): 'A flush stole over Miss Sutherland's face, and she picked nervously at the fringe of her jacket.'</p> <p>Watson (narrator): 'For all the preposterous hat and the vacuous face, there was something noble in the simple faith of our visitor which compelled our respect'.</p> <p>Watson (narrator): 'he took down from the rack the old and oily clay pipe, which was to him as a counsellor, and, having lit it, he leaned back in his chair, with the thick blue cloud-wreaths spinning up from him, and a look of infinite languor in his face.'</p> <p>Sherlock: "It has long been an axiom of mine that the little things are infinitely the most important."</p> <p>Sherlock: "Never trust to general impressions, my boy, but concentrate yourself upon details."</p> <p>Sherlock: "The law cannot, as you say, touch you," said Holmes, unlocking and throwing open the door, "yet there never was a man who deserved punishment more."</p>


Indices, Fractions & Significant Figures




Indices		
Bases are the same	Multiplying add the powers, dividing subtract	$w^3 \times w^4 = w^{3+4} = w^7$ $w^3 \div w^4 = w^{3-4} = w^{-1}$
Base to the power, all to the power	Multiply the indices	$(w^3)^2 = w^6$
Base to the power of zero	Equals 1	$w^0 = 1$

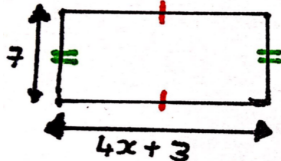
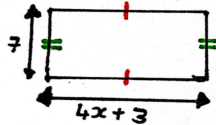
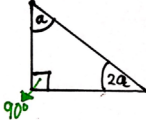
Rounding		
The first significant figure	Can never be zero	Round to 2sf $0.0065 \underline{5} \overline{3}$ $= 0.0065$
Estimation	1SF	Estimate $\frac{12 \times 7 + 4 \times 2^2}{0.53} \rightarrow \frac{12 \times 7 + 4 \times 2^2}{0.53} \rightarrow \frac{26}{0.5} = 52$

Prime Factorisation		
Prime numbers	Have exactly two factors	Factors of 2: 1, 2 Factors of 6: 1, 2, 3, 6
Factors of a number	Go into a number	F → 12 → M Factors: 1, 2, 3, 4, 6, 12 Multiples: 12, 24, 36, 48...
Multiples of a number	Are the times tables	
Prime factor form	Tree thing tree thing	Express 90 as a product of prime factors: $90 = 2 \times 3^2 \times 5$
Product of its primes	Product means times, 2, 3, 5, 7 don't forget your primes	
HCF or LCM of large numbers	Use a venn diagram	
HCF	Multiply the overlap (Common bases, lowest powers)	
LCM	Multiply them all (All bases, highest powers)	$280 = 2^3 \times 5 \times 7$ $900 = 2^2 \times 3^2 \times 5^2$ $HCF = 2^2 \times 5 = 20$ $LCM = 2^3 \times 3^2 \times 5^2 \times 7 = 2520$

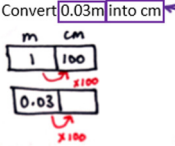
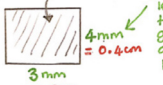
Fractions		
Always make your life simple	Simplify first	
Cancel anything on the top	With anything from the bottom	$\frac{10}{21} \times \frac{14}{25} = \frac{4}{15}$
Multiplying fractions	Top × top bottom × bottom	
Dividing fractions	Times by the reciprocal	$\frac{3}{8} \div \frac{7}{11} = \frac{3}{8}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


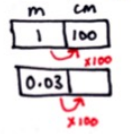
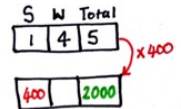
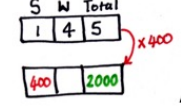
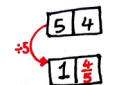
Solving Linear Equations		
Successful elimination	With an inverse operation	Solve $\frac{10x}{10} = \frac{5}{10}$
If you do it on 1 side	Do it to the other to keep the balance	
x on both sides	Get rid of the smallest 'x'	Solve $11 - 3x = 2x + 1$ $+3x \quad +3x$
x on both sides and brackets	Expand the bracket first	Solve $3(x + 4) = 5(2x - 1)$ $3x + 12 = 10x - 5$

Coordinates and Basic Graphs		
Plotting coordinates: Start at the Go along the Then go up/down the	Origin x axis y axis	Plot the coordinate (2, -3) 
Midpoint of coordinates	Stack them Add them Divide by 2	Find the midpoint of (3, 4) and (-2, -8) $\frac{(3, 4) + (-2, -8)}{2} = \frac{(1, -4)}{2} = (0.5, -2)$
x = ?	Goes through the x axis	Plot x = -2 
y = ?	Goes through the y axis	Plot y = -1 

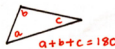

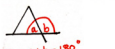

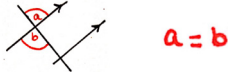



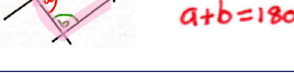
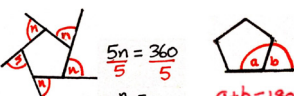

Forming and Solving Linear Equations		
Perimeter is	The distance around a 2D shape	Form an expression for the perimeter of this shape  $P = 4x + 3 + 7 + 4x + 3 + 7$ $P = 8x + 20$ Now Solve!
Area of a rectangle	Length × Width OR Base × Height	The area of this shape is 77cm². Work out the value of x  $A = l \times w$ $77 = 7(4x + 3)$ Now Solve!
Angles in a triangle	Add up to 180°	Form and solve an equation to find the value of 'a'  $a + 2a + 90 = 180$ $3a + 90 = 180$ Now Solve!




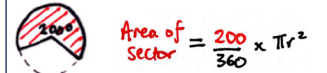
Box Method

Units of Measurement		
Converting units	Box method Bigger unit equals '1'	<p>Convert 0.03m into cm</p>  <p>Connection? Put it in a box!</p> <p>1cm = 10mm 1m = 100cm 1km = 1000m 1kg = 1000g 1l = 1000ml 1 min = 60 seconds 1 hour = 60 mins</p> <p>Answer: 3cm</p>
Converting units of area	Draw a rectangle Convert the lengths	<p>Convert 12mm² to cm²</p>  <p>3mm = 0.3cm 4mm = 0.4cm convert the lengths to cm</p> <p>0.3 x 0.4 = — cm²</p>

Ratio and Proportion		
Connection between two things	Box method	<p>Jay travels 15 miles in 35 minutes. How much will he travel in 1 hour?</p>  <p>Connection? Put it in a box!</p> <p>5 is the HCF of 35 and 60</p> <p>Answer: 36 miles</p>
What do we look for?	Up, down, side to side	
And if that fails?	Middle man, think HCF	
Converting units	Box method	<p>Convert 0.03m into cm</p>  <p>Connection? Put it in a box!</p> <p>Answer: 3cm</p>
Currency questions	Box method	
Recipe questions	Box method	
Value for money	Box method with same amounts	<p>To make juice I mix 1 part squash with 4 parts water. How much squash do I need for 2L of juice?</p>  <p>Connection? Put it in a box!</p> <p>Answer: 400ml</p>
Ratio questions	Box method with a total	<p>To make juice I mix 1 part squash with 4 parts water. How much squash do I need for 2L of juice?</p>  <p>Connection? Put it in a box!</p> <p>Answer: 400ml</p> <p>Write the ratio 5:4 in the form 1 : n</p>  <p>Answer: 1: $\frac{4}{5}$</p>

Angles, Circles and Percentages

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 and exterior	Add up to 180°	

Circles		
Circumference of a circle	$\pi \times d$	
Area of a circle	$\pi \times \text{radius squared}$	
Arc length is	Fraction of the circle times $\pi \times d$	
Area of a sector is	Fraction of the circle times πr^2	

Fractions, Decimals and Percentages		
% to fraction	Write it out of 100	Write 48% as a fraction in simplest form $48\% = \frac{48}{100} = \frac{12}{25}$ Always look to simplify
Decimals to fractions	First to %	Convert 0.6 to a fraction in simplest form $0.6 = 60\% = \frac{60}{100} = \frac{3}{5}$ Always look to simplify
Fractions to decimals	Division using bus stop	Convert $\frac{5}{8}$ to a percentage $5 \div 8 = 0.625 = 62.5\%$
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?	Convert to decimal first	$\frac{3}{20} = \frac{3}{20} = 0.15 = 15\%$

Area		
Area of a trapezium	Add up the parallel sides. Times the distance between them. Halve the answer you get. That's the area of a trapezium.	$3 + 7 = 10$ $10 \times 3 = 30$ $30 \div 2 = 15 \text{ cm}^2$
Shaded area	Big area minus small area	<p>Area of square $A = b \times h$ $A = 3 \times 3$</p> <p>Area of circle $A = \pi r^2$ $A = \pi (1.5)^2$</p>
Compound area	Split into separate shapes and add	<p>Area of rectangle $A = \frac{\pi r^2}{2}$ $A = \frac{\pi (2)^2}{2}$</p> <p>Area of triangle $A = \frac{b \times h}{2}$ $A = \frac{5 \times 2}{2}$</p>

Presenting Data																				
Pie charts	Box method Total frequency equals 360	<p>Draw a pie chart for the table below:</p> <table><thead><tr><th>Favourite Drink</th><th>Frequency</th><th>Angle</th></tr></thead><tbody><tr><td>Water</td><td>72</td><td>144°</td></tr><tr><td>Coca Cola</td><td>15</td><td></td></tr><tr><td>Dr Pepper</td><td>30</td><td></td></tr><tr><td>Orange Juice</td><td>18</td><td></td></tr><tr><td>Lemonade</td><td>45</td><td></td></tr></tbody></table> <p>Total frequency = 180 360</p> <p>To find the angles:</p> <p>Box angle: $\frac{180}{360} \times 360 = 180$</p> <p>Box angle: $\frac{72}{180} \times 360 = 144$</p>	Favourite Drink	Frequency	Angle	Water	72	144°	Coca Cola	15		Dr Pepper	30		Orange Juice	18		Lemonade	45	
Favourite Drink	Frequency	Angle																		
Water	72	144°																		
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Frequency	How often something happens	<table><thead><tr><th>Favourite Drink</th><th>Frequency</th></tr></thead><tbody><tr><td>Water</td><td>72</td></tr><tr><td>Coca Cola</td><td>15</td></tr><tr><td>Dr Pepper</td><td>30</td></tr><tr><td>Orange Juice</td><td>18</td></tr><tr><td>Lemonade</td><td>45</td></tr></tbody></table> <p>15 people prefer Coca Cola as their favourite drink.</p>	Favourite Drink	Frequency	Water	72	Coca Cola	15	Dr Pepper	30	Orange Juice	18	Lemonade	45						
Favourite Drink	Frequency																			
Water	72																			
Coca Cola	15																			
Dr Pepper	30																			
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Averages and spread		
Mean	Fair	<p>Calculate the mean for the following data set 8, 1, 1, 3, 2</p> $\frac{8 + 1 + 1 + 3 + 2}{5} = \frac{15}{5} = 3$ <p>Mean = 3</p>
Median	Middle (put the numbers in order)	<p>Calculate the median for the following data set 8, 1, 1, 3, 2</p> <p>1, 1, 2, 3, 8</p> <p>Median = 2</p>
Mode	Most	<p>Calculate the mode for the following data set 8, 1, 1, 3, 2</p> <p>1, 1, 2, 3, 8</p> <p>Mode = 1</p>
Range	Spread (largest - smallest)	<p>Calculate the range for the following data set 8, 1, 1, 3, 2</p> <p>8 - 1 = 7</p> <p>Range = 7</p>

Unit 1: Light and Space

1	What is a wave?	A transfer of energy
2	What are the two types of wave?	Longitudinal and transverse
3	In what direction are the vibrations in a longitudinal wave?	The same direction the wave is travelling
4	In what direction are the vibrations in a transverse wave?	Perpendicular to the direction the wave is travelling
5	What is a light source?	An object that releases light waves
6	What type of wave is light?	Transverse
7	What is a ray diagram?	A way of drawing how light travels
8	In a ray diagram, how must light be drawn?	Straight line, arrow in the middle, no gaps
9	What four things can occur when light meets an object?	Transmission, reflection, refraction, absorption
10	What occurs in transmission?	The wave goes through the object
11	What occurs in reflection?	The wave changes direction away from the object
12	What occurs in refraction?	The wave passes through into the object but changes direction
13	What is absorption?	The wave is stopped by the object and the objects heats up
14	In what process do plants absorb light?	Photosynthesis
15	Give a word equation for photosynthesis	Carbon dioxide + water > glucose + oxygen
16	What is a transparent object?	One that allows light to be transmitted through
17	What is an opaque object?	One which does not allow light to be transmitted through it; it absorbs the light
18	What is a translucent object?	One which absorbs some light, and scatters the rest as it is transmitted through the material
19	What is a "normal"?	A line drawn at right angles to a surface
20	What is the incident ray?	The ray of light approaching a surface
21	What is the reflected ray?	The ray of light reflected away from a surface

Unit 1: Light and Space

22	What is a medium?	The space or material which a light wave is travelling in
23	Why does refraction occur?	Light travels at different speeds in different mediums
24	How does the density of the medium affect the speed of light?	The denser the medium, the slower the light
25	Name the seven colours in visible light	Red, orange, yellow, green, blue, indigo, violet
26	What is a colour filter?	An object that absorbs some colours and transmits others
27	What gives objects their colour?	They absorb some colours and reflect others; we only see the reflected colours
28	What is a star?	A large sphere of very hot gas in space that emits light
29	What is the Sun?	The star nearest the Earth
30	What is an orbit?	The path an object takes around another object in space
31	What is a planet?	An object that orbits a star
32	What is the solar system?	A collection of planets and other objects orbiting the Sun
33	What is a galaxy?	A group of billions of stars
34	Name the planets in our solar system in order of distance from the Sun	Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
35	What is mass?	The amount of material contained in an object
36	What is the symbol for mass?	m
37	What is the unit and unit symbol for mass?	Kilograms, kg
38	What is a force?	A push, pull or twist
39	What is a field?	A field allows forces to act without physical contact
40	What is a gravitational field?	The field around an object that pulls other objects towards it
41	What is gravitational field strength?	The force experienced by 1 kg of mass in that field

Unit 1: Light and Space

42	What is the gravitational field strength on Earth?	about 9.8N/kg
43	What is the unit and unit symbol for gravitational field strength?	Newtons per kilogram, N/kg
44	What is weight?	The force exerted on an object by a gravitational field
45	What is the symbol for weight?	W
46	What is the unit and unit symbol for weight?	Newtons, N
47	What is the formula that relates weight, mass and gravitational field strength?	$W = m \times g$
48	What is the Earth's axis?	An imaginary straight line from the North pole to the South about which the Earth rotates
49	What causes day and night?	The rotation of the Earth on its axis
50	What is the time period of one rotation of the Earth on its axis?	24 hours
51	What causes seasons?	The Earth's tilted axis and its rotation around the Sun
52	What is the time period of one orbit of the Earth around the Sun?	365 days
53	What is the equator?	An imaginary line drawn around the middle of the Earth
54	What two things are affected by the seasons?	The temperature and length of the day
55	If the North pole is tilted towards the Sun, what affect will this have on the Northern hemisphere?	Temperature is higher, days are longer
56	When it is Winter in the Northern hemisphere, what season is it in the Southern hemisphere?	Summer
57	If the North pole is tilted towards the Sun, what affect will this have on the Southern hemisphere?	Temperature is lower, days are shorter
58	Why is it hotter in the hemisphere which is pointed to the Sun?	The sunlight is more concentrated
59	What is a light year?	The distance travelled by light in a year

Unit 2: Periodic Table

1	What are atoms made of?	Protons, neutrons and electrons
2	What is found in the nucleus of an atom?	Protons and neutrons
3	Where are the electrons in an atom?	Orbiting the nucleus in shells
4	What is between the electrons and the nucleus?	Empty space
5	What is an element?	A substance made of one type of atom only
6	What is a compound?	Two or more different atoms chemically bonded together
7	What is a mixture?	When different substances are together but not chemically bonded
8	What is the periodic table?	An organised table showing the different elements
9	Who first prepared the modern periodic table?	Mendeleev
10	Why did Mendeleev put some elements together in groups?	They had similar properties
11	Why did Mendeleev leave gaps in his periodic table?	For undiscovered elements
12	What is a group in the periodic table?	The vertical columns
13	What is a period in the periodic table?	The horizontal rows
14	What does the group an element is in tell you about its electrons?	How many it has in the outer shell
15	What does the period an element is in tell you about its electrons?	How many shells it has
16	What is charge?	A property of particles that can be positive or negative. Other particles have no charge (neutral)
17	What happens when the same charges come into contact?	They repel
18	What happens when opposite charges come into contact?	They attract
19	Name the three particles that make up atoms (subatomic particles)	Protons, neutrons, electrons
20	State the relative charges of the subatomic particles	Protons: +1, neutrons: 0, electrons: -1
21	What is the atomic number of an atom?	The number of protons in an atom
22	What is the mass number of an atom?	The number of protons + the number of neutrons in an atom
23	Why is the number of electrons in an atom equal to the number of protons?	As their charges cancel out
24	How do you calculate the number of neutrons in an atom?	Mass number - atomic number
25	How many electrons can go in the first shell?	2
26	How many electrons can go in the second and third shells?	8

Unit 2: Periodic Table

27	What is a property?	A characteristic of something
28	What are the two main types of element?	Metals and non-metals
29	Give three typical properties of metals	Conduct electricity, conduct heat, malleable, ductile, high melting/boiling points, strong
30	Give two typical properties of non-metals	Electrical insulators, heat insulators, low melting/boiling points, weak, brittle
31	What does electrical conductor mean?	Allows electricity to flow through it
32	What does electrical insulator mean?	Does not allow electricity to flow through it
33	What does heat conductor mean?	Allows heat to flow through it
34	What does heat insulator mean?	Does not allow heat to flow through it
35	What does malleable mean?	Easy to bend
36	What does brittle mean?	Shatters easily
37	What does strong mean?	Can hold a lot of weight
38	What does weak mean?	Can't hold a lot of weight
39	What does ductile mean?	Easy to stretch
40	If something has a high melting/boiling point, what state is it at room temperature?	Solid
41	If something has a low melting/boiling point, what state is it at room temperature?	Liquid or gas
42	What does hard mean?	Difficult to scratch
43	What does soft mean?	Easy to scratch
44	What does reactive mean?	Reacts easily with other substances
45	What does unreactive mean?	Does not react easily with other substances
46	What does magnetic mean?	It is attracted to magnets
47	In which group are the alkali metals found?	1
48	What is easier to separate, a mixture or a compound?	A mixture
49	When different substances are mixed together, what happens to their properties?	They are retained (they do not change)
50	When different substances are chemically bonded together, what happens to their properties?	They change
51	What are reactants?	The substances you start with in a reaction

Unit 2: Periodic Table

52	What are products?	The substances you end up with in a reaction
53	When naming a compound with a metal and a non-metal, which comes first in the name?	The metal
54	If a compound has a metal and a non-metal, what is its suffix?	-ide
55	What is a chemical formula?	A way of showing which atoms are in a substance
56	What is the conservation of mass?	That atoms cannot be created or destroyed
57	In a chemical reaction, what happens to the atoms?	They are rearranged
58	In terms of chemical bonds, what happens in a chemical reaction?	Some are broken and others are made
59	How could you tell if a chemical reaction has taken place?	Temperature change, colour change, gas formed, solid formed
60	If mass appears to be lost in a reaction, what has happened?	A gas has been produced which escapes
61	If mass appears to be gained in a reaction, what has happened?	Atoms of a gas from the air have been added
62	When magnesium reacts with oxygen, why does the mass increase?	Atoms of oxygen from the air have been added
63	When magnesium reacts with acid, why does the mass decrease?	A gas is produced which escapes
64	What is a physical change?	A change of state or dissolving
65	Why is a change of state not a chemical change?	No new substances are made
66	What name is given to the group 1 elements?	Alkali metals
67	Why are alkali metals called alkali metals?	They are metals that react with water to form alkalis
68	Why are alkali metals stored in oil?	To stop them reacting with oxygen
69	Give four properties of alkali metals	Very reactive, low density, soft, relatively low melting/boiling point
70	How does the reactivity of alkali metals change down the group?	Increases
71	How does the melting and boiling point of alkali metals change down the group?	Decreases
72	What are the products of a reaction between an alkali metal and water?	Form a hydroxide and hydrogen
73	What name is given to the group 7 elements?	The halogens
74	Give four properties of the halogens	Toxic, form coloured vapours, low melting/boiling point, reactive
75	How does the reactivity of halogens change down the group?	Decreases
76	How does the melting/boiling point of halogens change down the group?	Increases

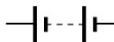
Unit 3: 8BD Digestion

1	What is digestion?	The breakdown of food into small molecules
2	Name 4 food groups	Carbohydrates, proteins, fats, vitamins and minerals
3	Give an example of a food containing carbohydrates	Potato, rice, bread, pasta
4	Give an example of a food containing protein	Meat, fish, eggs, milk, cheese
5	Give an example of a food containing fats	Meat, milk, yogurt, oil
6	Give an example of a food containing vitamins and minerals	Fruit, vegetables
7	What are carbohydrates broken down into?	Simple sugars
8	Give an example of a simple sugar	Glucose (sucrose, fructose)
9	What is glucose used for?	Respiration
10	What are proteins broken down into?	Amino acids
11	What are amino acids used for?	Growth and repair
12	What are fats broken down into?	Fatty acids and glycerol
13	What are fatty acids and glycerol used for?	Energy storage
14	What are vitamins and minerals used for?	Contribute to all aspects of health
15	What happens to the small molecules at the end of digestion?	They are absorbed into the blood
16	Name the organs in the digestive system in the order food passes through them	Mouth, oesophagus, stomach, small intestine, large intestine, rectum, anus
17	Where is food digested?	The mouth, the stomach and the small intestine
18	What happens in the small intestine?	Digested food is absorbed into the blood
19	What happens in the large intestine?	Excess water is absorbed (from undigested food)





Unit 3: 8BD Digestion

20	What does the liver do?	Produce bile
21	What does bile do?	Helps digest fats
22	What is an enzyme?	A biological catalyst
23	What is a catalyst?	Something that makes a chemical reaction faster
24	What do enzymes do?	Speed up digestion
25	What does the pancreas do?	Produce enzymes
26	Give four adaptations of the small intestine	Very long, contains villi, rich blood supply, has microvilli
27	Why is the small intestine long?	To increase surface area
28	Why does the small intestine have villi?	To increase surface area
29	Why does the small intestine have a rich blood supply?	To keep a high concentration gradient
30	Why does the small intestine have microvilli?	To increase surface area
31	What are gut bacteria?	Bacteria found in the large intestines
32	What do gut bacteria do?	Help digest food
33	What is obesity?	Having too much body fat
34	What causes obesity?	Eating too much sugary or fatty foods
35	What are the risks of obesity?	Coronary heart disease
36	What does coronary heart disease cause?	The heart to function worse
37	What is a deficiency disease?	A disease caused by not getting enough of one food group

Unit 4: Electricity

1	What is charge?	A property of particles that is positive or negative (some particles have no charge)
2	What is the charge of subatomic particles?	Protons: +1, Neutrons: 0, Electrons: -1
3	What is an electrical circuit?	A closed loop which charged particles flow round
4	In an electrical circuit, what charged particles are flowing?	Electrons
5	How do we count electrons?	In coulombs
6	What is current?	How quickly coulombs of electrons are flowing through a circuit
7	What is the unit for current?	Amps (A)
8	What does one amp represent?	One coulomb passing a point per second
9	Which particle transfers energy around a circuit?	Electrons
10	Where do electrons in a circuit get energy from?	A power supply
11	Name two power supplies	Electrical cell, mains
12	What is a battery?	Two or more cells connected together (in series)
13	What is potential difference?	The amount of energy each coulomb of charge transfers
14	What is the unit for potential difference?	Volts (V)
15	What happens to the current when potential difference increases?	It increases
16	Why does current increase when potential difference is increased?	The electrons are moving more quickly as they have more energy
17	What is resistance?	How electrons can be slowed down by the circuit
18	What is the unit for resistance?	Ohms (Ω)
19	What causes resistance?	Electrical devices
20	What is a device?	Something which transfers energy from the circuit to the surroundings
21	How do we draw cells in a circuit?	
22	How do we draw batteries in a circuit?	
23	How do we draw wires in a circuit?	
24	What is a switch?	A place in the circuit where it can be broken
25	How are switches drawn in a circuit?	

Unit 4: Electricity

26	Name 3 electrical devices that transfer energy in a circuit	Lamp, motor, resistor
27	How do lamps transfer energy to the surroundings?	Waves (and heating)
28	How do we draw motors?	
29	How do motors transfer energy to the surroundings?	Mechanical working (and heating)
30	How do we draw resistors?	
31	How do resistors transfer energy to the surroundings?	Heating
32	How is the current in a circuit calculated?	$V/R = I$
33	How do we measure the current in a circuit?	With an ammeter
34	How do we draw ammeters?	
35	How are ammeters connected to a circuit?	As part of the circuit (in series)
36	How do we measure the potential difference across a device?	With a voltmeter
37	How do we draw voltmeters?	
38	How are voltmeters connected to a circuit?	On the back of specific devices (in parallel)
39	What are the two main types of circuit?	Series and parallel
40	What are series circuits made of?	A single loop
41	How does current change in a series circuit change?	It doesn't
42	How does potential difference in a series circuit change?	It is shared between devices (It drops across each device)
43	What are parallel circuits made of?	Different loops and junctions
44	How does current in a parallel circuit change?	Splits at junctions
45	How does potential difference in a parallel circuit change?	Same across each loop
46	What is a conductor of electricity?	A material that allows electricity to pass through it
47	What is an insulator of electricity?	A material which does not allow electricity to pass through it
48	Give an example of a conductor of electricity	Copper, graphite (any metal)
49	Give an example of an insulator of electricity	Plastic, wood, rubber (most non-metals)

Unit 5: Ecology

1	What is an organism?	A living thing
2	What is a feeding relationship?	How different organisms eat each other
3	Why do organisms eat each other?	To get energy and nutrients
4	What diagram do scientists use to show feeding relationships?	Food chains and food webs
5	In a food chain, what name is given to the organism at the start?	Producer
6	Where do producers get their energy from?	The Sun
7	In a food chain or web, what name is given to an organism that eats another organism?	A consumer
8	In a food chain or web, what name is given to the organism that eats the producer?	Primary consumer
9	In a food chain or web, what name is given to the organism that eats the primary consumer?	Secondary consumer
10	In a food chain or web, what name is given to the organism that eats the secondary consumer?	Tertiary consumer
11	What name is given to organisms that eat animals?	Predators
12	What name is given to animals that are eaten by other organisms?	Prey
13	What is a herbivore?	An animal that eats plants
14	What is a carnivore?	An animal that eats other animals
15	What is an omnivore?	An animal that eats plants and animals
16	In a food chain or web, which direction are the arrows drawn in?	From the organism being eaten to the organism eating it
17	In a food chain or web, why are the arrows drawn from the organism being eaten to the organism eating it?	To show the flow of energy
18	What is decay?	The breakdown of dead organisms
19	What is a decomposer?	An organism that causes decay
20	What are the two main types of decomposer?	Detritivores and microbes
21	Give an example of a detritivore	Maggots, woodlice
22	Give an example of a microbe decomposer	Bacteria, fungi
23	Why is decay important?	It releases waste products that plants can use
24	What conditions are best for decay?	Lots of oxygen, warm temperatures, moisture
25	What is the "population" of an organism?	The number of that organism in a particular area

Unit 5: Ecology

26	What is interdependence?	How organisms depend on each other for survival
27	What is bioaccumulation?	How toxic materials can build up in a food chain
28	What is an adaptation?	A way in which an organism suits its environment
29	Name two types of adaptation	Physical and behavioural
30	Give an example of a physical adaptation	Sharp teeth, camouflage, foot surface area, spikes
31	Give an example of a behavioural adaptation	Making nests to shelter offspring (children), huddling for warmth, rolling into a ball, courtship displays
32	What is competition?	Where organisms have to struggle against each other for resources
33	What resources do organisms often compete over?	Food, water, space, light, mates
34	What is a species?	A group of organisms that can breed and produce fertile offspring
35	What is a mutation?	A change to an organism's DNA
36	What can mutations result in?	Slight changes to an organism's adaptations
37	What is natural selection?	How organisms with the most useful adaptations are more likely to survive and reproduce
38	What is evolution by natural selection?	That over time natural selection can result in large changes to organisms and new species arising
39	Give two sources of evidence for evolution	The fossil record, bacterial resistance
40	What does the fossil record show?	That over time species have changed physically
41	What is bacterial resistance?	How bacteria become resistant to antibiotics
42	What is extinction?	When an entire species dies out
43	Name two things that can cause extinction	New predators, new diseases, changes to habitat, more successful competitors, catastrophic events (like volcanoes or asteroid impacts)
44	How can scientists estimate population size?	Using quadrats
45	What is a pyramid of numbers?	A chart showing how many of each organism live in an area
46	What is classification?	How scientists put different organisms in groups
47	What are the seven classification levels?	Kingdom, phylum, class, order, family, genus, species
48	What are the five chordate groups?	Mammals, fish, birds, reptiles, amphibians
49	What is biodiversity?	The variety of different species in an area
50	Why is biodiversity important?	Moral reasons, species may be useful to us, protects food supply, limits large changes to food chains and webs
51	How do scientists try to maintain biodiversity?	Gene banks, protection of habitats, breeding programmes

Unit 6: 8PEa Electricity

1	What do we call a closed loop which can carry electricity?	A circuit
2	How do we count electrons?	In coulombs
3	What is current?	How quickly coulombs of electrons are flowing through a circuit
4	What is the unit and unit symbol for current?	Amps (A)
5	What does 1A represent?	One coulomb passing a point per second
6	Which particle transfers energy around a circuit?	Electrons
7	Where do electrons in a circuit get energy from?	A power supply
8	Name two power supplies	Electrical cell/battery, mains power
9	What is a battery?	Two or more cells connected together (in series)
10	What is potential difference?	The amount of energy each coulomb of charge transfers
11	What is the unit and unit symbol for potential difference?	Volts (V)
12	What happens to the current when potential difference increases?	It increases
13	What is resistance?	How electrons can be slowed down by the circuit
14	What is the unit and unit symbol for resistance?	Ohms (Ω)
15	What causes resistance?	Electrical devices
16	What is a device?	Something which transfers energy from the circuit to the surroundings
17	What is a switch?	A place in the circuit where it can be broken
18	Name 3 electrical devices that transfer energy in a circuit	Lamp, motor, resistor

19	How do lamps transfer energy to the surroundings?	Waves (and heating)
20	How do motors transfer energy to the surroundings?	Mechanical working (and heating)
21	How do resistors transfer energy to the surroundings?	Heating
22	What equation links potential difference, resistance and current?	$V/R = I$
23	How do we measure the current in a circuit?	With an ammeter
24	How are ammeters connected to a circuit?	As part of the circuit (in series)
25	How do we measure the potential difference across a device?	With a voltmeter
26	How are voltmeters connected to a circuit?	Across (on the back of) specific devices (in parallel)
27	What are the two main types of circuit?	Series and parallel
28	What are series circuits made of?	A single loop
29	How does current change in a series circuit change?	It doesn't
30	How does potential difference in a series circuit change?	It is shared between devices (It drops across each device)
31	What are parallel circuits made of?	Different loops and junctions
32	How does current in a parallel circuit change?	Splits at junctions
33	How does potential difference in a parallel circuit change?	Same across each loop
34	Give an example of a conductor of electricity	Copper, graphite (any metal)
35	Give an example of an insulator of electricity	Plastic, wood, rubber (most non-metals)

Unit 6: 8PEa Electricity

36	What is a field?	The area around an object where a non-contact force acts
37	Give three examples of fields	Gravitational, magnetic, electric
38	What are the two ends of a magnet called?	North pole and south pole
39	What happens when opposite magnetic poles are brought together?	They attract
40	What happens when the same magnetic poles are brought together?	They repel
41	What is a magnetic substance?	Something which is attracted to magnets
42	Name two magnetic substances	Iron, nickel (and cobalt)
43	What is the direction of a magnetic field?	From north to south
44	What are electromagnets formed from?	A coil of wire round an iron core
45	In what two ways can an electromagnet be made stronger?	Add more turns on the coil, increase current
46	What are the three options for charge?	Positive, negative, neutral
47	What is the (relative) charge on a proton, electron and neutron?	Proton: +1, electron: -1, neutron: 0
48	What happens when the same charges come into contact?	They repel
49	What happens when opposite charges come into contact?	They attract
50	What is an electric field?	The field around a charged object
51	How can objects gain a static charge?	By being rubbed together
52	How do electrons cause objects to have a static charge?	They can move from one object to another
53	If an object gains electrons, what charge does it have?	Negative
54	If an object loses electrons, what charge does it have?	Positive
55	What can a large build-up of static charge cause?	Electric shock

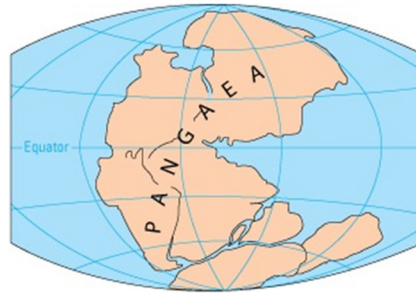
Unit 7: Materials and the Earth

1	What are the three main layers of Earth?	Crust, mantle, core
2	Which layer of Earth is made of solid rock?	Crust
3	Which layer of Earth flows very slowly?	Mantle
4	Which layer of Earth is solid metal?	Core
5	Why can the crust move?	It has tectonic plates (which are moved by the mantle)
6	What are the three types of rock?	Sedimentary, igneous, metamorphic
7	How do sedimentary rocks form?	Smaller bits of other rocks get stuck together
8	Give two properties of sedimentary rocks	Crumbly, form in layers
9	How do igneous rocks form?	When molten (liquid) rock cools and solidifies
10	How do metamorphic rocks form?	When rocks are compressed or heated within Earth's crust
11	In what kind of rock are fossils found?	Sedimentary
12	What is a porous rock?	A rock which absorbs water
13	What are the two main gases in Earth's atmosphere?	Oxygen and nitrogen
14	What approximate % of Earth's atmosphere is nitrogen?	78%
15	What approximate % of Earth's atmosphere is oxygen?	21%
16	Name two gases other than oxygen and nitrogen that are in Earth's atmosphere	Carbon dioxide, water vapour
17	How is carbon dioxide removed from the atmosphere?	Photosynthesis
18	In what three ways is carbon dioxide added to the atmosphere?	Respiration, combustion of fossil fuels, decomposition
19	Why is adding more carbon dioxide to the atmosphere a problem?	It causes global warming (which causes climate change)
20	How has the amount of carbon dioxide in the atmosphere changed over the last 200 years?	Increased rapidly
21	Why has the amount of carbon dioxide in the atmosphere increased rapidly over the last 200 years?	Humans began burning fossil fuels

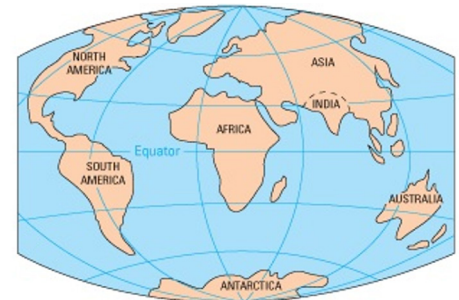
Key Processes:

Tectonic Drift

- The earth was initially a super continent called Pangea 250 million years ago.
- Plates move a few centimetres a year, but this adds up to thousands of kilometres over millions of year.
- This movement is called Tectonic Drift.



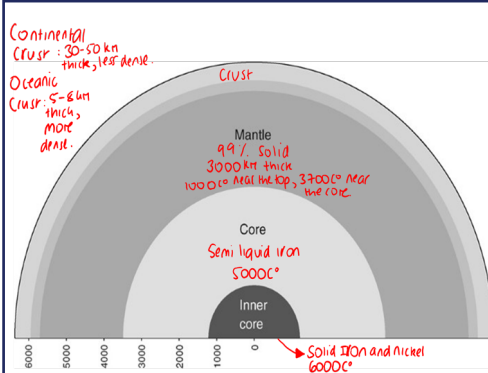
PERMIAN
225 million years ago



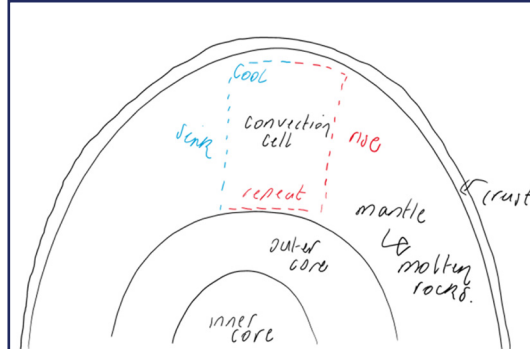
PRESENT DAY

Key Diagrams:

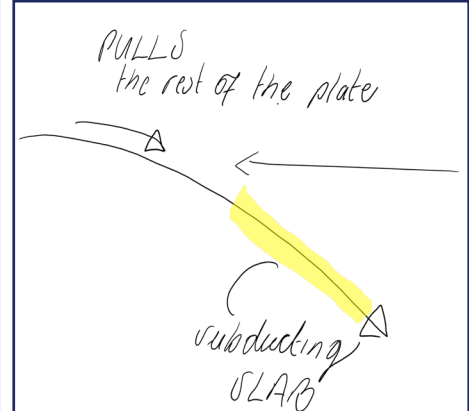
Layers of the Earth



Convection Currents



Slab and Pull Theory



Key Processes:

Why do people live in areas of tectonic hazards?

1. Creates tourism (e.g. Vesuvius in Italy).
2. The ash makes the land fertile meaning jobs for farmers.
3. Friends and family may live nearby.
4. Some people cannot afford to live elsewhere.

Predicting and Preparing for Volcanic Eruptions

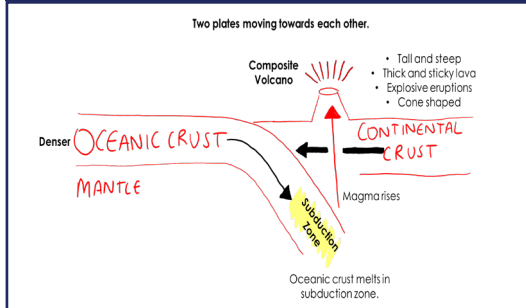
- Tiltmeters used to measure change in shape.
- Spectrometers to measure sulphur dioxide emissions.
- Evacuation and exclusion zones around the volcano.
- Ensure medical, food and water supplies are stocked.

Predicting and Preparing for Earthquakes

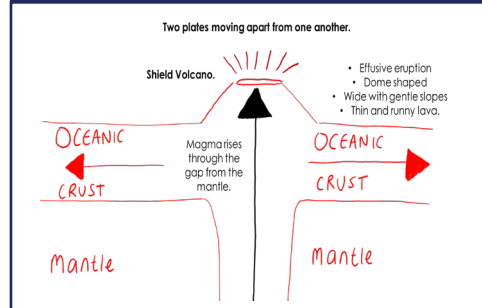
- Use seismometers to identify irregularities in tremors.
- Measure radon gas that will appear as cracks in the ground.
- Retrofit existing buildings with cross bracings.
- Practice earthquake drills.

Key Diagrams:

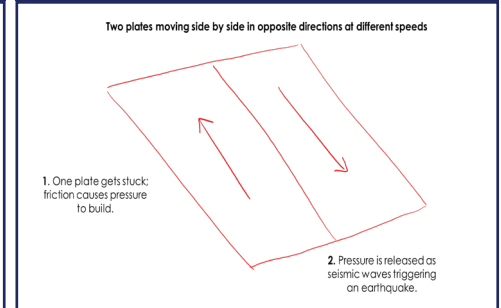
Convergent Margin



Divergent Margin

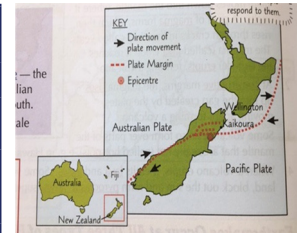


Conservative Margin



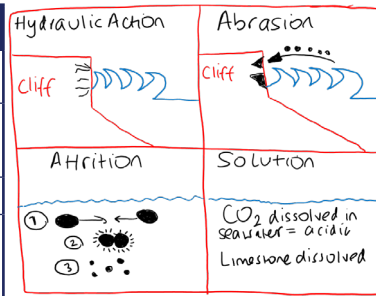
Application:

Earthquake location Both 7.8 magnitude	LIC Gorkha Nepal, 2015 GDP per capita: US\$ 690	HIC Kaikoura, New Zealand 2016: GDP per capita: US\$ 40,331
Primary effects	9,000 people died, 20,000 injured.	2 died and 50 injured.
Secondary effects	A lack of clean water led to 13 dying from Typhus.	100,000 landslides blocked roads and rail.
Short term responses	Search and rescue teams, water and medical support arrived quickly from India and China.	200 of the most vulnerable were evacuated from Kaikoura in 24 hours.
Long term responses	The road from Nepal to Tibet was reopened after 2 years.	Most roads and rail systems were repaired within 2 years.



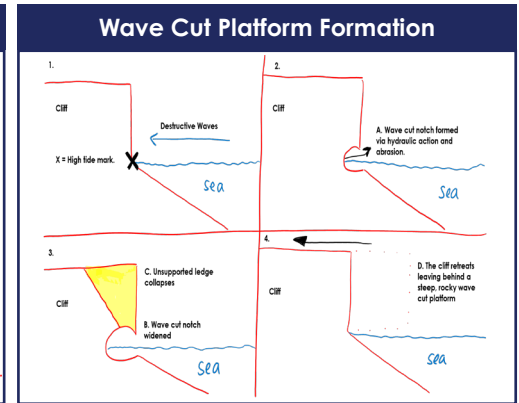
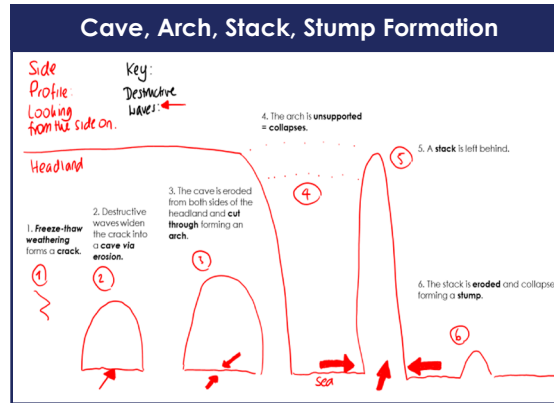
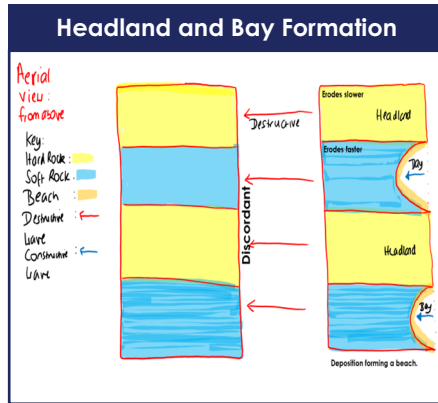
Key Processes:

Erosion Types	
Abrasion	Eroded material is hurled or scrapes against the cliff, breaking off rock.
Hydraulic Action	Waves compress pockets of air in cracks in a cliff, causing the crack to widen, breaking off rock.
Solution	Cliffs e.g. chalk dissolve in seawater.
Attrition	Eroded material in the sea, hit into each other breaking down into smaller pieces.



Weathering Types	
Freeze-Thaw Weathering (Mechanical)	Temperature changes causes water to freeze and then melt widening cracks in rocks until they break.
Root Action (Biological)	Seeds fall into cracks in rocks. These germinate and the roots break the rocks open until they break.
Burrowing (Biological)	Animals widen cracks in rocks.
Acid Rain (Chemical Weathering)	Rainwater is slightly acidic due to dissolved CO ₂ . This reacts with limestone rock causing it to dissolve.

Key Erosional Diagrams:

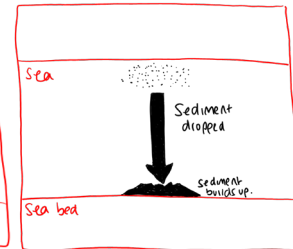
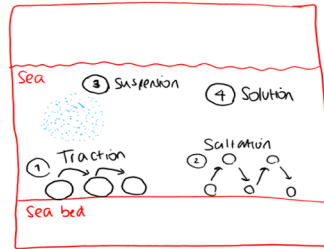


Application: Holderness Coastal Management Scheme

Reasons to protect	Coastal Management Strategies	Successes and Failures
<ol style="list-style-type: none"> 1. Rocks are made of soft rock (boulder clay), eroding at 2m per year. 2. The B1242 runs through Mableton and would be expensive to re-route. 	<ol style="list-style-type: none"> 1. 2 Rock groynes put in place at Mableton to trap sediment being transported by longshore drift, creating a wider beach to absorb the power of the waves. 2. Rock armour has been placed in front of the cliffs to absorb the wave energy. 	<ol style="list-style-type: none"> 1. Good – erosion in front of Mableton has reduced, so the road has been saved. 2. Bad – beaches further south have been starved of sediment so erosion has increased e.g. at Great Cowden.

Key Processes:

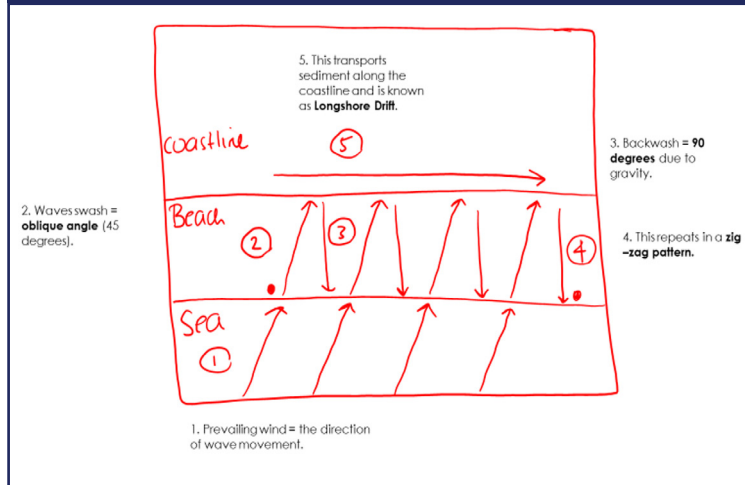
Transportation Types	
1. Traction	Large rocks are rolled along the seabed.
2. Saltation	Smaller rocks are bounced along the seabed.
3. Suspension	Smaller material/sediment is held in the water.
4. Solution	The smallest silt and sediment is dissolved into the water.



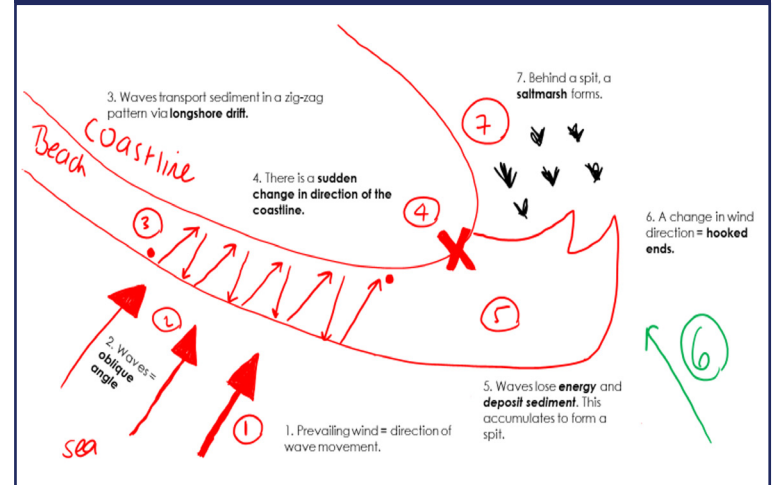
Deposition
Description
Material is dropped by the waves due to a loss of energy and velocity.

Key Depositional Diagrams:

Longshore Drift

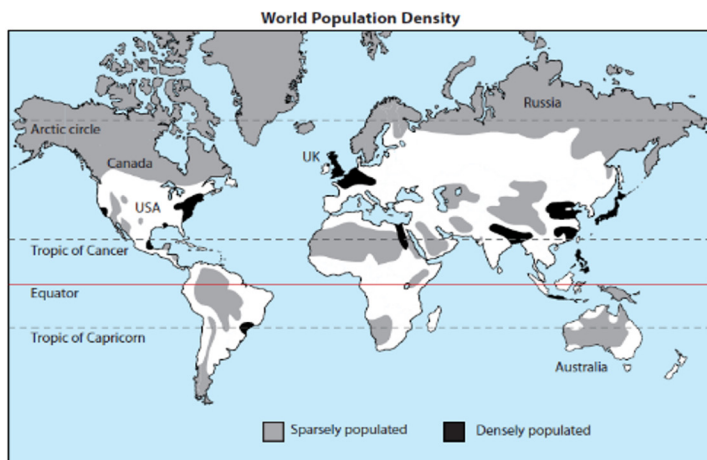


Spit Formation



Key Processes:

- **Sparsely Populated** – Places which contain few people per km sq.
- **Densely populated** – Places which contain many people per km sq.
- **Population density** – The number of people per km sq.



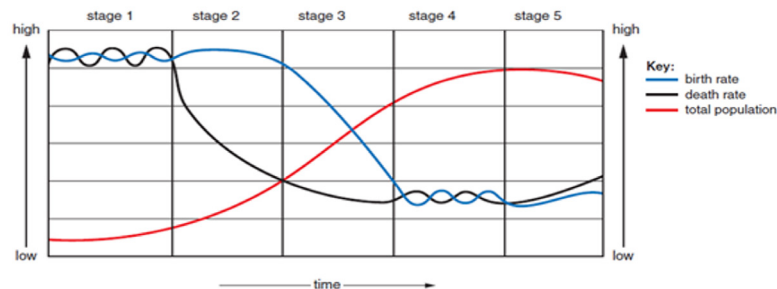
Factors affecting Population Density

Human = Red

Physical = Black

Densely Populated	Sparsely Populated
Pleasant climate	Steep slopes
Fertile soil	Poor soils
Access to infrastructure and services	Lack of access to infrastructure
Access to high paying jobs	Low paying, low skill jobs

Key Diagrams: The Demographic Transition Model



Stages of the DTM

Stage 1:

- Limited medical care + poor diet = high infant mortality.
- Strong religious values = high birth rate.
- Example: Indigenous Tribes in the Amazon Rainforest.

Stage 2:

- Increase in access to basic medical care = decreased infant mortality and death rate.
- Diets also improved.
- Birth rate remains high as children are needed to work on farms.
- Birth rate also remains high as religion plays a significant role in society.
- Example: Afghanistan.

Stage 3:

- Decrease in birth rate as women are able to access education.
- Decrease in birth rate as religion loses importance in society and contraception becomes available.
- Death rate continues to decline due to improvements in diet, healthcare and physical fitness.
- Total population continues to increase as there is natural increase.
- Example: India.

Stage 4:

- Birth rate remains low and fluctuating as women put careers before having children.
- Death rate remains low due to improvements in healthcare, diet and physical fitness.
- Total population reaches its peak and begins to fall.
- Example: The UK.

Stage 5:

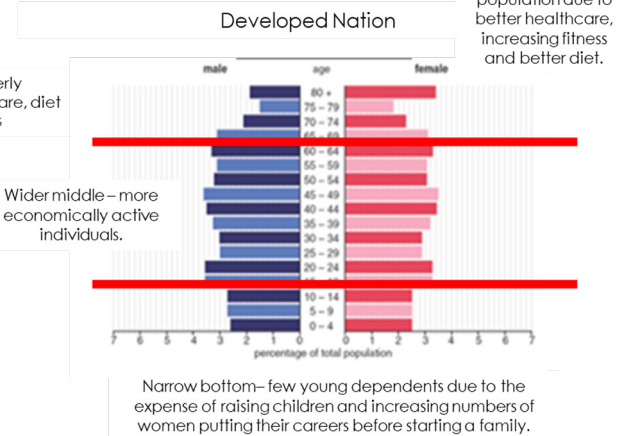
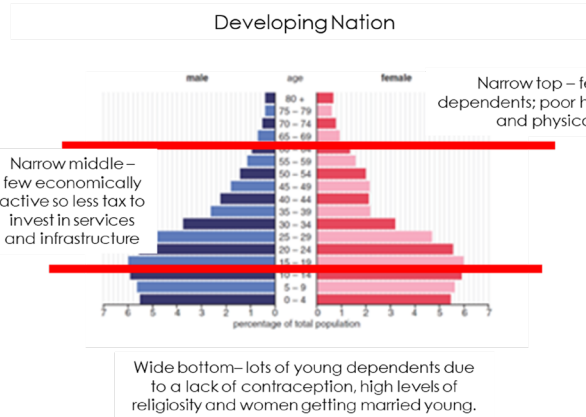
- Death rate is greater than birth rate = natural decrease.
- Ageing population due to improvements in healthcare, diet and physical fitness.
- Children are expensive so birth rates continue to fall.

Population and Migration

Population structure means the number / proportion of people in **each age range**, for each **gender**. Population pyramids show the population structure of the country they represent.

There are three groups on a population pyramid:

- Economically active** – 16-65 age group, working age and can provide taxes.
- Young dependents** – 0-15 age range, rely on the working age for support via taxes.
- Elderly dependents** – 65+ age range, rely on the working age for support via taxes.



Application: The UK's Ageing Population

Causes

- Better health care** so illnesses are treated with some success.
- Better diet** means heart attacks and diseases related to unhealthy eating are on the decline.
- Fitness**; the elderly are looking after themselves better than ever before, e.g. attending the gym etc.

Impacts

- 2/3s of hospital beds taken** by those over the age of 65, this can increase **waiting times**, putting pressure on the NHS.
- They receive a **state pension** causing a significant cost for the government.
- The elderly often **look after grandchildren**, this means that parents do not have to pay **expensive childcare costs**, so parents have more disposable cash.

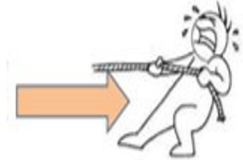
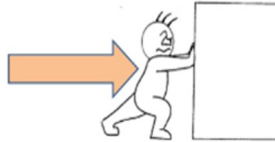
Population and Migration

Key Processes:

Migration is the movement of people, from one place to another.



International migration is when people move from one country (the source) to another country (the host).

Push factors encourage an individual to leave a place. It pushes them out.



Pull factors attract individuals to a place. It pulls them in.

Application:

Causes of Poland to UK Migration	Consequence for Host Country (UK)	Consequences for the Source Country (Poland)
Poland has always had a culture of mobility. For example, in the nineteenth century hundreds of thousands of Polish people migrated to the United States.	Polish migrants alone contribute £2.5bn in tax every year. This provides the government with more tax to invest in improving services and infrastructure.	Poland gains £1bn in remittances which the Polish government can invest in infrastructure and services. These remittances reduce the amount the UK government can invest in services and infrastructure.
The UK Government offered British citizenship to over 200,000 displaced Polish soldiers post WW2. This meant there was already an established Polish Diaspora in the UK.	About 10,500 Poles work in the NHS. These individuals help to treat sick Britons, increasing life expectancies in the UK.	
Following the end of communism, Poland had high unemployment and low wages. For example, in 2004, unemployment in Poland was 20% - in the UK it was only 4%.	80% of migrants are aged between 18 and 35, so the UK's ageing population is counteracted.	
In 2004, Poland joined the European Union, giving Polish people the legal right to come, live and work in the UK. The UK was one of only three countries that allowed these new European union migrants to come and work straight away.		

Topic 1: The Renaissance

Timeline

1. Lucretius wrote the poem De rerum natura (On the Nature of Things)	3. The end of the Roman Empire	5. Ideas, such as logic, flooded into Western Europe from the Islamic World and were studied by scholars such as John of Salisbury	7. Poggio discovered a copy of De rerum natura in a manuscript in a German monastery	9. Many buildings were re-built in Rome
c50 BC	c476 AD	1100s	1417	Early 1500s
2. Ptolemy wrote his most famous work on astronomy	4. Baghdad was built and scholars began studying and creating new knowledge at the House of Wisdom	6. Petrarch began searching for original versions of texts from Ancient Greece and Rome	8. The printing press was invented in Germany	10. Copernicus published a book containing his model of the universe, showing the Earth orbiting the Sun
c150 AD	762	1330s	c1440	1543

Key People

11. Aristotle	An Ancient Greek philosopher.
12. Euclid	An Ancient Greek mathematician.
13. Ptolemy	An astronomer from Alexandria.
14. Lucretius	A philosopher, who wrote De rerum natura at the height of the Roman Empire.
15. Al-Khwarizmi	An Islamic scholar in ninth-century Baghdad who wrote works on maths and astronomy.
16. John of Salisbury	An English scholar, author and bishop in the twelfth century.
17. Petrarch	An Italian scholar and one of the first humanists.
18. Poggio Bracciolini	A humanist scholar who discovered a long-forgotten poem by Lucretius in a monastery.
19. Niccolo Niccoli	A humanist scholar who copied De rerum natura in his angled handwriting.
20. Raphael	A Renaissance artist who decorated the pope's apartments in Rome with classical scenes.
21. Michelangelo	A Renaissance artist who painted the ceiling of the Sistine Chapel in Rome.
22. Copernicus	An astronomer who argued that the Earth orbits the Sun.
23. Galileo	An astronomer and physicist who supported Copernicus' model of the universe.

Key Words

24. Classical antiquity	The period of time when the Mediterranean was dominated by Ancient Greece and the Roman Empire.
25. Humanism	A movement that started in the 14th century, which wanted to re-discover the wisdom of ancient texts and focused more on the human world.
26. Manuscript	A book copied by hand.
27. Monastery	A community of monks living together.
28. Perspective	An artistic technique to represent three-dimensional objects on a two-dimensional surface.
29. Renaissance	The French word for 're-birth', used to describe a renewed interest in the classical period between c1400-1600.

Topic 1: The Renaissance

What Kind of Change Was the Renaissance?

30. Medieval manuscripts	<ul style="list-style-type: none"> • Following the end of the Roman Empire, monasteries were the main institutions in Western Europe that cared about books. • Books had to be copied out by hand, usually by monks, in order to be preserved but many pre-Christian texts from the classical period stopped being copied. Therefore, the availability of and interest in classical learning, wisdom and texts declined in Western Europe. • However, some classical texts continued to be studied in cathedral schools in Western Europe, and some arrived in Europe from the Islamic world in Arabic translations.
31. Humanism and Poggio's discovery	<ul style="list-style-type: none"> • In the 1330s, Petrarch, an Italian scholar, became one of the first people to start searching for original versions of forgotten texts from Ancient Greece and Rome. • Scholars like Petrarch became known as 'humanists' – they increased the amount of interest in classical antiquity and believed that the wisdom contained in classical texts would help them to purify the world and the Church. • Poggio Bracciolini was inspired by Petrarch. In 1417 he discovered a long-lost poem by the Roman poet Lucretius, called <i>De rerum natura</i> (On the Nature of Things). • In his poem, Lucretius described everything in the world as being built from atoms, which randomly collided and joined together to form larger objects. • Lucretius' poem suggested there was no special plan or place for humans in the universe, challenging the teachings of the medieval Church. • Lucretius's poem argued that everything in the world was temporary and would eventually break up into atoms, and so it encouraged people to embrace beauty and pleasure while alive.
32. Developments in knowledge	<ul style="list-style-type: none"> • In c1440, the printing press was invented in Germany, which made books cheaper and more widely available. Many classical texts, such as the complete works of Aristotle and a textbook version of Ptolemy's ideas, were printed in large numbers, along with new works. • As books became more widely read, scholars began to spot errors in them, correct these errors and so suggest new theories (e.g. Copernicus and Galileo).
33. Renaissance art and architecture	<ul style="list-style-type: none"> • Wealthy merchants spent money on new palaces, such as those in Venice, which sometimes included Islamic influences in their designs. • Artists were inspired by the classical world, and also mixed new colours using pigments/dyes from the East and used perspective to add depth to paintings. • There was lots of re-building in Rome as the city wanted to emphasise its links with the Roman Empire, and new papal buildings were decorated by Raphael and Michelangelo.

Topic 2: Revolutions In Ideas And Religion: Morebath

Timeline					
1. Henry VIII is crowned King of England 1509	3. The Pope issues a papal bull asking Luther to take back his views. Luther throws it into flames 1520	5. The Act of Supremacy makes Henry the Head of the Church and officially marks the break with Rome 1534	7. Edward VI is crowned King of England aged 9 1547	9. Elizabeth I is crowned Queen of England 1558	11. Sir Christopher Trychay dies 1574
1517 2. Martin Luther publishes his 95 theses stating why indulgences are wrong	1533 4. Henry VIII secretly marries Anne Boleyn	1536 6. Dissolution of the monasteries. Henry VIII issues a set of injunctions in Morebath	1553 8. Mary I is crowned Queen of England	1570 10. The Pope excommunicates Elizabeth I	

Key People	
12. Anne Boleyn	Henry VIII's second wife, who he divorced Catherine of Aragon for.
13. Catherine of Aragon	Henry VIII's first wife, who he divorced because she wasn't bearing sons.
14. Edward VI	Protestant King of England 1547-1553.
15. Elizabeth I	Protestant Queen of England 1558-1603.
16. Henry VIII	King of England 1509-47 who broke with Rome.
17. Martin Luther	A German monk who helped start the Reformation.
18. Mary I	Catholic Queen of England 1553-58.
19. Professor Eamon Duffy	Historian who studied Sir Christopher's accounts.
20. Sir Christopher Trychay	Morebath's village priest from 1519-1574.

Key Words			
21. Ale	A village party where ale (beer) was the main drink.	30. Morebath	A village in Devon, in South-West England.
22. Altar	A table used for religious ceremonies.	31. Papal bull	A formal announcement from the Pope.
23. Break with Rome	When Henry VIII made himself Head of the Church of England in 1534.	32. Protestant	A form of Christianity which emerged during the 1500s in protest against Catholicism.
24. Catholic	A major branch of Christianity, led by the Pope in Rome.	33. Puritan	An extreme Protestant.
25. Diet	A meeting.	34. Recant	Take back.
26. Heir	The person who is next in line for the throne.	35. Reformation	A movement to reform the Christian Church, which began with Martin Luther in Germany.
27. Indulgence	A forgiveness of one's sins purchased from the medieval Catholic Church.	36. Store	Village organisations that raised money for the upkeep of the Church, saints' images and candles.
28. Injunctions	Official order that prevents something.	37. Vestment	Garment worn by Christian clergymen, colourful and richly decorated for Catholics.
29. Middle Way	Elizabeth's religious settlement (compromise). It returned England to Protestantism but allowed Catholics to worship in secret.		

Topic 3: Elizabethan England

Timeline

1. Christopher Columbus set off in search of the Indies on behalf of the Spanish monarch. He 'found' the Caribbean. 1492	3. Elizabeth was crowned Queen of England (she ascended the throne in 1558) 1559	5. Elizabeth's Catholic cousin, Mary Stuart, arrived in England 1568	7. Francis Drake set out to Panama with plans to steal Spanish gold and silver 1572	9. Drake and Diego set out together to circumnavigate the globe. 1577	11. Mary Stuart was executed, which angered many Catholics in England and Europe. 1587	13. Sultan Ahmad al-Mansur sent a delegation from Morocco to England, led by Abd el-Ouahed ben Messaoud to convince Elizabeth that England and Morocco should invade Spain together 1600
1493 2. The Pope gave the Spanish permission to seek out and conquer any lands in this 'New World' belonging to those who weren't Christian	1560s onwards 4. English privateers started to raid Spanish shipping and port towns in the Caribbean	1570 6. The Pope issued a papal bull excommunicating Elizabeth, prompting more plots against her	1573 8. Drake and Diego captured over 150,000 pesos of Spanish silver and gold during a raid on Nombre de Dios	1585-86 10. First failed attempt to colonise Roanoke Island. In 1587, there was a second attempt which was found to have failed in 1590 – after all the colonists mysteriously disappeared!		1588 12. The Spanish Armada was defeated by the English

Key People

14. Abd el-Ouahed ben Messaoud		The ambassador Ahmad al-Mansur sent to England as part of the Morocco delegation in 1600.	20. Mary Stuart		Elizabeth's Catholic cousin, who also had a claim to the English throne.
15. Cimarrons	A group of enslaved Africans who had escaped and who Drake worked with to capture a large amount of gold and silver from the Spanish.		21. Philip II	The king of Spain during Elizabeth's reign.	
16. Diego, the Circumnavigator	A man who joined Drake's crew in Panama and later accompanied him on his circumnavigation voyage.		22. Sultan Ahmad al-Mansur		The ruler of Morocco at the end of Elizabeth's reign.
17. Francis Drake	An English privateer who worked for Elizabeth I and circumnavigated the globe.		23. Walter Raleigh	English sailor and explorer, and a noted favourite of Queen Elizabeth I.	
18. Hugh O'Neill	A Gaelic chieftain who fought against the English for control of the whole of Ireland in the Nine Years' War.		24. William Shakespeare		An English playwright who used stories from North Africa and the Islamic world as inspiration for his plays.
19. Mancho and Wanchese	Two young indigenous leaders who were brought to England and helped create an English-Algonquian dictionary.				

Key Words

25. Armada	A large fleet of warships.
26. Circumnavigation	To travel completely around, usually by sailing.
27. Colonisation	A process where a government or a group of people take control of another country to make it part of its empire.
28. Colony	A country or area controlled by another country. A colony is part of an empire.
29. Delegation	A body of representatives usually sent to negotiate with another country or leader.
30. Empire	A country or area controlled by another country. A colony is part of an empire.
31. Indigenous people	People who inhabited land before it was colonised.
32. Privateer	Pirates with permission from the Queen.
33. Roanoke Island	An island just off the coast of North America, inhabited by the Algonquian people in the 16th century.

Topic 4: The English Civil War

Timeline								
1. James I became King of England 1603	3. Charles I became King of England 1625	5. Charles I dissolved Parliament for 11 years until 1640 (Personal Rule) 1629	7. Charles I made his people pay Ship Money (inland areas from 1635) 1634	9. Taxpayers' Strike 1639	11. Parliament issued Grand Remonstrance 1641	13. Parliament passed the Nineteen Propositions June 1642	15. Trial and execution of Charles I 1649	17. Oliver Cromwell became Lord Protector 1653
1605 2. The Gunpowder Plot almost destroyed Parliament	1625 4. Charles married Henrietta Maria	1633 6. Charles I and Archbishop Laud start Arminian reforms	1637 8. Archbishop Laud introduced his prayer book in Scotland	1640 10. Charles I had to recall Parliament to pay for the war with Scotland	Jan 1642 12. Charles I stormed into the House of Commons to arrest five MPs	Aug 1642 14. The English Civil War started	1649 16. England became a Republic (The Commonwealth)	1660 18. Charles II was crowned King, beginning the Restoration

Key People	
19. James I	The first Stuart King of England, who came to the throne after the death of Elizabeth I.
20. Charles I	The second Stuart King of England, executed by Parliament following the Civil War.
21. Henrietta Maria	A Catholic French princess, who married Charles.
22. Lucy Hay	A close friend of Henrietta Maria, who switched sides repeatedly during the English Civil War.
23. William Laud	Arminian Archbishop of Canterbury.
24. Charles II	The King of England following the Restoration.

Key Words			
25. Absolutist	A ruler who has absolute power over their people.	31. Parliament	The group of people who make or change a country's laws.
26. Arminian	Protestants who worshipped in a similar way to Catholics.	32. Prayer Book	A book containing formal prayers to be used in worship.
27. Civil War	A war between people from the same country.	33. Radical	Somebody who wants big changes to government or society.
28. Divine Right of Kings	The belief that the monarch received their right to rule directly from God.	34. Republic	A country that is not ruled by a monarch.
29. Impeachment	Parliament accusing a government official of abusing the power of their position.	35. Restoration	The return of the monarchy to England with Charles II's coronation in 1660.
30. Member of Parliament	The person in Parliament who represents the people from one area.	36. Treason	A crime against your own people, nation or monarch.

Topic 5: Transatlantic Slavery

Timeline						
1. British colonies were established in North America. Britain became the dominant European trader of enslaved people throughout 17th-19th centuries 1607-1732	3. The British colonies in North America declared independence and formed the USA 1776	5. Petitions flooded Parliament to abolish the slave trade 1788	7. Haitian/St Domingue rebellion led by Toussaint L'Ouverture 1791	9. Haiti declared independent state 1804	11. Enslaved people in Jamaica go on strike in protest. Plantation owners respond with violence 1831	13. End of the apprenticeship clause, which bound formerly enslaved people to their former owners for up to six years after abolition. Many enslaved people within British colonies were finally given their freedom 1838
1768 2. Granville Sharpe, an abolitionist, won the legal case of Jonathan Strong	1781 4. Enslaved people who had become sick were thrown off the slave ship Zong	1789 6. Olaudah Equiano wrote his life story. His campaign for slave ship Zong was successful	1797 8. William Wilberforce joined 12 opponents of slavery, including Thomas Clarkson. He made speeches in Parliament	1807 10. The slave trade was abolished in the British Empire by Parliament. People could not be bought or sold although people who were already enslaved remained the 'property' of their masters		1833 12. Slavery was abolished in the British Empire, but only children under the age of 6 were freed immediately

Key People	
14. Adam Smith	Leader of The Enlightenment movement, he was an economist and a philosopher from Scotland. He is known as the 'father of capitalism' and believed that free market economies were required for financial success.
15. John Newton	Worked on slave ships as a young man. After a Christian conversion he renounced the slave trade and became a prominent abolitionist. He died shortly after the 1807 Abolition Act was passed in parliament.
16. Olaudah Equiano	A formerly enslaved person who had fought repeatedly for his freedom. He wrote an autobiography in 1789 called 'The interesting narrative of the life of Olaudah Equiano'.
17. Thomas Clarkson	A key campaigner for abolition. He formed the Society for the Abolition of the Slave Trade in 1787. After the Slave Act was passed in 1807, he continued campaigning in the Americas to abolish slavery there.
18. Toussaint L'Ouverture	Leader of the St Domingue, or Haitian, rebellion.
19. William Wilberforce	MP between 1784-1812 who proposed multiple abolition bills.

Topic 5: Transatlantic Slavery

Key People			
20. Abolition	The act of officially ending or stopping something, e.g. slavery.	31. Petition	A formal written request typically with many signatures appealing to authority about a particular cause, e.g. slavery.
21. Abolitionists	The leading campaigners against slavery.	32. Plantation	A large estate on which crops such as coffee, sugar, tobacco and cotton are grown.
22. Boycott	To stop buying or using goods as a form of protest.	33. Propaganda	Information or ideas, which are often selective, used to make people believe something .
23. Campaign	To work in an organised way towards a common goal, usually a political or social one.	34. Resistance	Refusing to accept something and challenging it within their means, e.g. cultural resistance.
24. Colony	A country or area under full or partial control of another country and settlers from that country.	35. Slave auctions	A place where enslaved people were traded to the highest bidder.
25. Dehumanisation	Any thought or act that regards a person as 'less than' human, which enslaved Africans heavily resisted.	36. Slave rebellions	An armed uprising by enslaved people against the plantation owners and the colonising authorities.
26. Empire	A large group of countries ruled over by a single monarch or sovereign state, e.g. The British Empire, USSR, The Roman Empire.	37. The Americas	A broad geographical term, which includes the North (USA after 1776) and South America and the Caribbean Islands, known as The West Indies.
27. Free Market	An economic system in which prices are determined by unrestricted competition by private businesses responding to supply and demand.	38. The Enlightenment	A European intellectual movement of the late 17th and early 18th centuries emphasising reason and individualism over tradition. Influenced by philosophers such as Adam Smith.
28. Interpretation	Historians' construction of the past as a way of explaining an event or period, using contemporary sources.	39. Trade triangle	A three-point trade process, from the transportation of commodities to West Africa, enslaved Africans to The Americas and raw materials to Britain.
29. Middle Passage	The sea journey undertaken by slave ships from West Africa across the Atlantic Ocean to The Americas.	40. Transatlantic slave trade	The transportation by slave traders of enslaved African people, to the Americas, from the 16th to the 19th centuries.
30. Overseer	The person who, on large plantations, directed the daily work of the enslaved workers. They were usually a white person.		

Topic 6: The Industrial Revolution

Timeline				
1. Thomas Newcomen developed the first steam engine, which provided power by burning coal to produce steam	3. James Watt and Matthew Boulton improved the steam engine	5. Parliament passed the Great Reform Act	7. Approximately 53,000 died from a cholera epidemic	9. The government asked Joseph Bazalgette to build a sewer system
1712	1770s	1832	1848 - 1849	1858
1764	1819	1833	1858	1888
2. James Hargreaves invented the Spinning Jenny, which could spin the same amount of cotton as eight workers	4. Peterloo Massacre	6. Parliament passed the Factory Act	8. The Great Stink	10. Match Girls' Strike

Key People	
11. Annie Besant	A middle-class campaigner, who wrote an article about the conditions at the Bryant & May factory.
12. Factory foreman	A worker who supervised and directed other workers.
13. Henry Hunt	The person who wanted to give a speech about Parliamentary reform before the Peterloo Massacre.
14. John Snow	The first person to make the connection between contaminated water and cholera.
15. Match Girls	The workers at the Bryant & May factory who went on strike.
16. Members of Parliament (MPs)	A representative of a constituency in Parliament, who helps to make and change laws.
17. Piecer	A child worker made to fix snapped threads in a cotton mill.
18. Scavenger	A child worker made to crawl below spinning machines to collect loose cotton.

Key Words	
19. Borough	An area which is represented by an MP in parliament. People in the borough vote for who they want to be their MP.
20. Cotton mill	A factory with machines for spinning or weaving to make cloth from cotton.
21. Electorate	The group of people who have the right to vote in elections.
22. Middle class	The group of people who would employ others to work for them (e.g. factory owner).
23. Strike	A refusal to work by a group of people in order to highlight an issue with their employer e.g. poor working conditions.
24. Suffrage	The right to vote in elections.
25. Trade union	An organisation of workers who fight for better pay, rights and conditions for workers.
26. Working class	The group of people who work in return for wages, usually in manual or industrial work (e.g. in factories).

Topic 6: The Industrial Revolution

Key Words

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25. Scavenger	A child worker made to crawl below spinning machines to collect loose cotton.
26. Sewer	An underground tunnel for carrying away human waste and waste material.
27. Trade Union	An organisation of workers who fight for better pay, rights and conditions for workers.
28. Strike	A refusal to work by a group of people in order to highlight an issue with their employer e.g. poor working conditions.
29. Protest	A public expression of your objection/disapproval of something.
30. Suffrage	The right to vote in elections.
31. MP	A Member of Parliament who represents a constituency.
32. Working Class	The group of people who work in return for wages, usually in manual or industrial work (e.g. in factories).
33. Middle Class	The group of people who would employ others to work for them (e.g. factory owner).

What was the Industrial Revolution?

34. Agriculture	New inventions meant that farms could grow more food using fewer workers.
35. Population	The population of Britain increased rapidly, increasing the demand for goods.
36. Technology	New machines and technology, such as the steam engine, were invented so goods could be manufactured more quickly.
37. Factories	Goods began to be manufactured in factories using machines, rather than by hand in the home.
38. Urbanisation	Many people moved to towns and cities to work in the factories. London grew from 1 million people in 1810 to 7 million people by 1911, making it the largest city in the world.
39. Raw materials	Deep coalmines were dug to provide enough coal to power steam engines.
40. Transport	Canals and railways were developed to transport raw materials and manufactured goods around the country.

Topic 7: The British Empire

Timeline						
1. East India Company granted a Royal Charter 1600	3. The First Fleet of 11 convict ships reaches 'Australia' 1788	5. Victoria becomes Queen of the UK 1837	7. The Great Exhibition is held in Hyde Park, London 1851	9. Sir Walter Mildmay founded Emmanuel College in Cambridge 1858	11. British Army occupies Egypt 1882	13. Death of Queen Victoria 1901
1770 2. Captain Cook claims 'Australia' for Britain	1820s-1832 4. Violent conflict between British colonists and Aboriginal Tasmanians which resulted in near-destruction of the Aboriginal Tasmanians	1845 6. The Irish Potato Famine begins	1857 8. The Indian Rebellion begins in Meerut	1876 10. Queen Victoria becomes Empress of India	1899 12. The start of the Boer War	

Key People	
14. James Cook	British explorer, navigator and colonist who mapped 'Australia's' eastern coastline.
15. Joseph Banks	Botanist on board the Endeavour who studied Australia's plants and wildlife.
16. Robert Clive	Officer in the East India Company who became Governor of Bengal Province.
17. Cecil Rhodes	Businessman and politician in southern Africa, and keen supporter of Empire.
18. Mathinna	Young Aboriginal girl whose drawing has recently been discovered in the archives of the British Museum. Her story reveals to us how Aborigines of 'Australia' experienced British colonialism in the 19th century.
19. Rani Lakshmibai	Indian queen of the state of Jhansi, northern India, who led the rebellion against British rule of India in 1857.
20. John Pope-Hennessy	British MP in the 19th century who was an Irish Catholic. He was an outspoken opponent of Britain's actions during the Indian Rebellion but then later became a Governor of the British Empire in Mauritius.

Topic 7: The British Empire

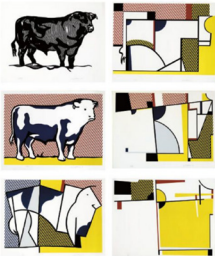
Key People			
21. Aborigine	Nomadic hunter-gatherer population native to 'Australia' and nearby islands.	34. Irish Republican Brotherhood	Secret organisation formed by Irish nationalists.
22. Admiral	Highest ranking naval officer, usually in command of a fleet.	35. Indigenous	Originating in a particular place.
23. Bengal	Wealthy province in northeast India, where the British built their factory called Calcutta.	36. Maharajas	Indian Princes who ruled their states in partnership with the British Empire.
24. Civil service	The permanent staff of a government, responsible for administering the country.	37. Mughals	Dynasty originally from Central Asia that ruled much of India from the 16th to 19th century.
25. Colony	A country or area under full or partial control of another country and settlers from that country.	38. Mutiny	Rebellion against authority, often soldiers or sailors against their commanding officers.
26. Dependent colony	A colony in which a small number of officials rule a large native population.	39. Nawab	Prince granted a province of India to rule on behalf of the Mughal Emperor.
27. East India Company	Private company formed in 1600 with rights to trade between India and England.	40. Patriotism	Showing strong support for your own country.
28. Endeavour	The ship that Captain Cook sailed on his first voyage to the lands that the British named 'Australia'.	41. Penal colony	A remote settlement used to exile convicted criminals from the general population.
29. Exports	Goods or services sold to other countries.	42. Press gangs	Groups who would travel Britain forcing men to enlist in the Army or Navy.
30. Factories (colonial)	Coastal trading posts where merchants can do business in foreign lands.	43. Puppet government	Situation where a country's ruler is controlled by an outside power.
31. Great Exhibition	International exhibition celebrating industry and culture held in 1851.	44. Raj	Term for British ruled India from 1858 until Indian Independence in 1947.
32. Home Rule	Policy advocating that Ireland regains its own government, and own Parliament.	45. Settlement colony	Colony in which native population is outnumbered by foreign arrivals.
33. Imports	Goods or services brought in from other countries.		

Abstraction, 21st Century Artists & Locality

Abstraction In Art: Abstract art is art that does not attempt to represent an accurate depiction of a visual reality but instead uses shapes, colours, forms, and gestural marks to achieve its effect.

1. What is abstraction in art look like?
2. What is Cubism?
3. How did Picasso respond to the situation in Guernica with his Art?

The use of Abstraction by famous 20th Century artists



Roy Lichtenstein



'Guernica' and 'The Weeping Woman'

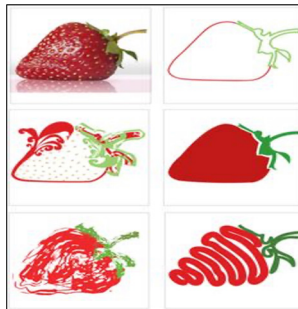
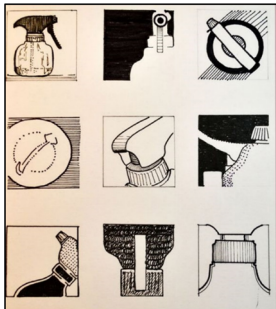


Picasso



Jean Du Buffet

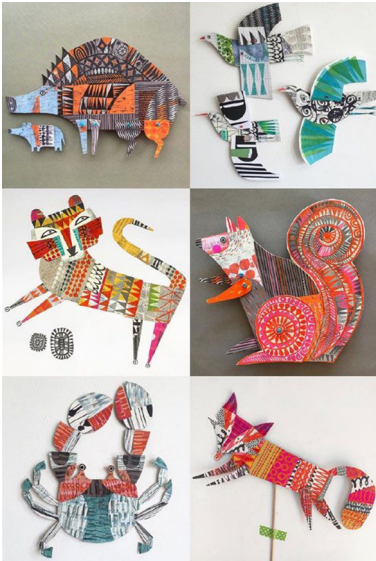
How do artists create abstract Art?



Roy Lichtenstein created the image of the bull in an abstract way; here are some examples of other images deconstructed to become 'abstracted from reality'.

The Guernica image above is a series of scenes showing the horror of war. How many can you find in the image? Picasso also painted Dora Marr's response to the bombing of Guernica. She is still recognisable as a 'Weeping woman'. Jean Du Buffet used monochrome colour to create a self portrait. Simple but highly effective!

Exploring the Work of 21st Century Artists: Clare Youngs



All artists are inspired by nature. We will be doing some observational drawing using a variety of materials techniques and processes. We will be printing onto different papers to create texture for our response to Clare Youngs

Clare Youngs is a collage artist, who makes colourful and playful artworks from cut paper. Each piece of paper used is hand painted or printed with textures and pattern work and then cut and pieced together to make the finished piece. Clare trained as a Graphic Designer and worked in the industry, in London design groups, before branching out into a more art-based career. Clare's work has a strong graphic feel about it, which directly stems from her background in design.

Pattern is also an important feature in many of her artworks. She uses pen and ink, paint, and printing methods to produce an endless variety of patterns to use. Clare will often print a texture over a pattern to add another layer and depth to the finished piece. Clare's work has a retro feel to it. Her love of mid-century design, especially textiles, and children's book illustration has been an influence when developing her own style. But really she is inspired by anything and everything!



Locality – Living in London: Ruth Allen

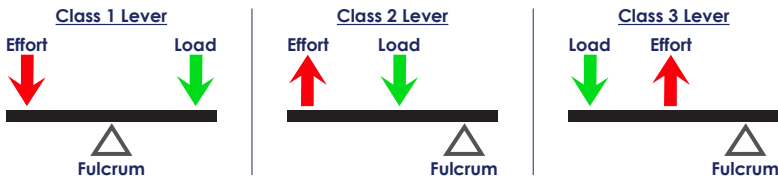


Ruth Allen graduated in 1997 with a degree in textiles and illustration. She is currently based in Stafford where she works from her home studio and teaches locally at a Residential Arts Centre. Her work is based around the theme of both architecture and interiors. The main inspiration for the ways in which she develops techniques, processes and use of colour comes from the 1950s textile prints and interior design. Her interest in the 1950s has developed over the last ten years and the work of Lucienne Day has formed a vital component in the development of her own art practice.

We will be using Ruth Allen's work as inspiration for our own line drawings from our own locations.

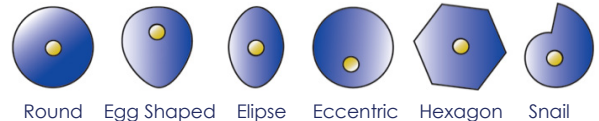
Cam Rotation

Key Terms	
Aesthetics	To describe how a product looks.
Customer	The person a product is designed for.
Environment	To consider how the product affects the nature.
Function	To describe how a product works.
Manufacture	To describe how a product is made.
ACCESSFM	Aesthetics / Cost / Customer / Environment / Safety / Size / Function / Manufacture.
Linear	Moving in a straight line, in one direction.
Reciprocating	Moving in both directions of a straight line
Oscillating	Swinging back and forth in a regular rhythm.
Rotating	Moving in a circular motion.
Cam	A rotating part to, generally, create reciprocating movement.
Follower	A follower contacts the cam to create movement on top of the cam.
Lever	A bar resting on a pivot used to move or lift an object.
Fulcrum	The pivot point in a lever.
Load	The object which is being moved.
Effort	The force being applied to a lever.
Class 1 Lever	Fulcrum in the centre of the lever.
Class 2 Lever	Load in the centre of the lever.
Class 3 Lever	Effort is in the centre of the lever.
123, FLE	How to remember the order of levers. FLE is what is in the middle.

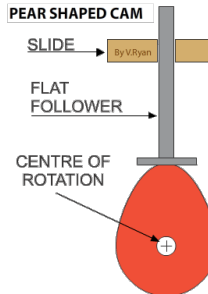


	Tenon Saw	To cuts straight lines in wood.
	Pillar Drill	To cut a circular hole in timber, polymers and metals.
	Try Square	To mark a 90-degree line on a piece of timber.
	Bench Hook	To hold timber whilst cutting. Usually to cut across the grain.
	Woodwork Vice	To hold timber tightly whilst cutting, shaping or marking.

Cam Types



PEAR SHAPED CAM



Health and Safety Rules

Always tie long hair back.

No loose clothing when using machines.

Wear goggles on the pillar drill, disc sander and belt sander. Always wear an apron.

No running in the workshop.

Stay in your place on the workbench unless you are collecting tools or using machines.

Key Terms

Polymer	Technical term for what we commonly call plastics .
Molecule	A group of atoms bonded together.
Polymer Chain	A chain of molecules found in all polymers.
Thermoforming	A polymer which can be reheated and reformed repeatedly .
Cross links	Connections between polymer chains.
Thermosetting	A polymer which cannot be reheated and reformed.
Raw material	The natural material from which a product is made.
Extracting oil	Drilling into the earth to remove oil.
Fractional distillation	Separating oil into different parts, including what is needed to make polymers .
Moulding	Turning a polymer into a product shape.
Stock Form	How we buy polymers/plastics to use to make products at school e.g. sheet, tubular, square profile.
PVA	Glue used to join timber or paper/board together.
Epoxy Resin	Glue used to join timber/metal/polymers together.
Solvent Cement	Glue used to join polymers together.
Contact Adhesive	Glue used to join timber/metal/polymers together.



















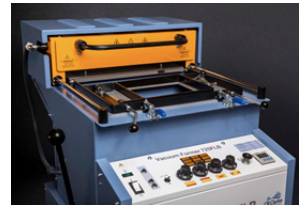
Solvent Cement is a very runny clear liquid that works by melting both edges of the Polymer that you want to stick Together. It is difficult to use precisely.



Tensol Glue has a very strong smell and is a very sticky, messy glue. It will stick most polymers together and will also stick wood to polymers. It must be used carefully as it is easy to get the glue all over the surface of the polymer.

Plastic Codes

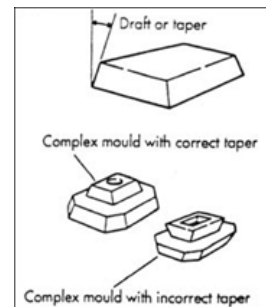
CODE	 PETE	 HDPE	 V	 LDPE	 PP	 PS	 OTHER	
PLASTIC TYPE	Polyethylene Terephthalate	High-Density Polyethylene	Vinyl	Low-Density Polyethylene	Polypropylene	Polystyrene	Other plastics	Biodegradable plastics
EXAMPLES	Water bottle, Soda bottle, Peanut butter container.	Milk container, Shampoo bottle, Motor oil bottle	Detergent container, Clear food packaging, Piping.	Plastic food wraps, Squeezable bottle.	Yogurt container, Ketchup bottle, Syrup bottle.	Disposable plate & cups, Meat trays.	Baby bottle, 5-gallon water container	Bio-based plastic bottles
RECYCLABLE ?								






A **Vacuum Former** uses heat just like a grill at home to heat up thermoplastics like **Polystyrene**.

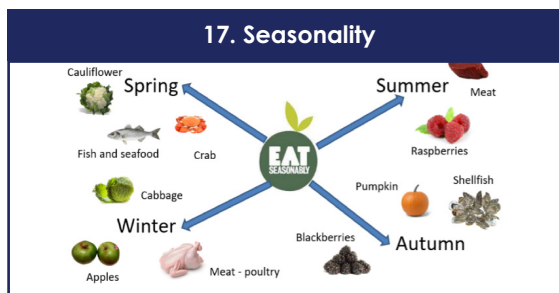
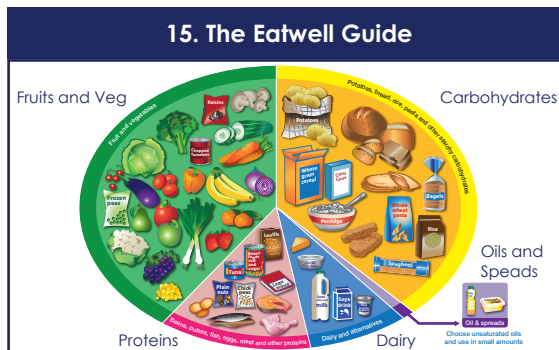
They are then stretched over a mould with a draft angle and the air is sucked out by vacuum.

The resulting shape is left to cool and removed from the mould. Vacuum formers can also **blow air** into a mould to create domes and other shapes.







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	Macronutrients	Nutrients we supposed to consume in large amounts such as carbohydrates, proteins and fats.
6	Micronutrients	Nutrients we supposed to consume in small amounts such as vitamins and minerals, including calcium, vitamin A, B, C, D, E and K.
7	Raising Agents	Three types: Chemical (such as baking powder), biological (yeast) and mechanical (whisk) used to get air into food to change the characteristics. For example, yeast fermenting to release CO ₂ to help create air bubbles in bread and make it rise.
8	Time Plan	A plan for how you will allocate time to each step of a method in a recipe while cooking.
9	Enzymic Browning	When a food reacts with oxygen to make it brown.
10	Food Sources and Origins	Where a food comes from – the original place. Such as pork from a pig.
11	Seasonality and Food Miles	The distance a product has travelled to reach the destination it is cooked and eaten in. For instance, peaches bought from abroad to the UK because they're not seasonal.





Equipment for Cooking		
	Spatula	Used to combine, smooth, separate, or collect mixtures or food during cooking or preparation. Different types of spatulas are available.
	Frying Pan	Used for different types of frying such as shallow frying, stir fry, deep frying
	Weighing Scale and Measuring Spoons	Used to measure the correct amount of solid food and liquid



16. Micronutrients

A: 	B9: 
B1: 	B12: 
B2: 	C: 
B3: 	D: 
B5: 	E: 
B6: 	K: 
B8: 	

MEALPRO

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>The diagram illustrates the components of production elements. At the center is a purple circle labeled 'Production elements'. Three main arrows radiate from it: one pointing up-left labeled 'Design', one pointing down-left labeled 'Acting', and one pointing down-right labeled 'Design'. The 'Design' arrows point to 'Lighting' (with a stage light icon), 'Special effects' (with a cloud icon), and 'Sound' (with a musical note and 'BANG!' icon). The 'Acting' arrow points to 'Vocal skills', 'Physical skills', 'Use of stage space' (with a stage floor plan icon), and 'Characterisation' (with three actor photos). The 'Design' arrow points to 'Hair', 'Make-up' (with a woman's face icon), 'Costumes' (with a knight's armor icon), 'Masks' (with two mask icons), 'Set' (with a stage set icon), and 'Props' (with a box icon).</p>	<ol style="list-style-type: none"> 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 Design elements – Set/props, lighting, costume, sound (music and sound effects, live and/or recorded) Character traits/aspects – Characterisation, physical skills/movement, vocal skills/voice, use of space/proxemics Staging – Selecting a performance space, adapting/modifying the performance space designing ideas for a play. Includes ideas for all design elements Performance space – Thrust, in the round, traverse, proscenium arch, end on, apron, black box, promenade, site specific 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 Costume – Type, period, fabric, colour, fit and condition, accessories, hair, make-up, masks Set – Type, period, size and scale, colours, entrances and exits, levels, ramps, revolves, drapes, curtains, flats, backdrops, projections/multimedia Lighting – Types, colours, angles and positions, special effects, transitions, blackouts, fades Sound – Types, music, volume/amplification/intensity, direction, live or recorded, positioning, sound effects

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 changes, 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	38. Naturalistic	Lifelike/believable
26. Style	The way in which something is performed e.g. naturalistically	39. Stylised	Non-naturalistic, an abstract style
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	40. Pitch	The vocal register - high or low
29. Posture	The way they stand and hold themselves	41. Pace	How quickly or slowly something is done
30. Gesture	Movements of hands, head, leg usually convey a message/meaning	42. Pause	A hesitation or silence
31. Facial expressions	The feelings (or lack of them) shown on the face	43. Emphasis	Stressing or highlighting something
32. Use of stage space	How an actor moves around the space, using levels, direction	44. 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	45. 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	46. Volume	Degree of loudness
35. Choreography/ stage fights	Setting movements to create meaning/blocking movements to create the impression of violence	47. 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)	48. 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	49. Phrasing	Use of hesitation, metre and/or grouping

Using Key Terms: Design

Lighting and Sound			
50. Backlight	Light projected from upstage	60. Blackout	No lighting
51. Barndoors	Metal flaps used to shape the light	61. Crossfade	Change from one state to another
52. Flood/wash	Unfocused wash of light / light covers the whole stage	62. Fade/snap	Light slowly on and off/quickly on and off
53. Floor lighting	Light on a low stand (creates shadows)	63. Colour filter	Plastic used to alter the colour
54. Followspot	Powerful lantern that follows the actor around the stage	64. Focus	How sharp or defined the light is
55. Footlights	Low lights downstage	65. Fogger	Creates smoke
56. Fresnel	A lantern with a soft beam	66. Gobos	Creates patterns of light
57. General cover	Light on the acting areas	67. Pyrotechnics	Creates fire effect
58. Pinspot	Tightly focused on a small area	68. Smoke and haze machine	Creates mist or fog
59. Profile	Creates clear outlines	69. Strobe	Short bursts of bright light

70. Abstract	Not realistic	75. Acoustics	Quality of sound
71. Motivational sound/ sound effects	Effect required by the script (gunshots)	76. Fade/snap	Gradual/sudden off or on
72. Musical theme or motif	Recurring section of music	77. Soundscape	Build-up of sounds to create an atmosphere or environment
73. Naturalistic	Realistic sounds	78. Reverb	Echoing
74. Recorded or live sound	Prerecord or happens during the performance		

Private Peaceful by Michael Morpurgo (2003)

1. **Plot** - Set in the fields of Devon and the WW1 battlefields of Flanders, two brothers fall for the same girl while contending with the pressures of their feudal family life, the war, and the price of courage and cowardice.
2. **Structure** - The play starts at the end and uses flashback to show the events in Tommo's life.
3. **Genre is a Historical war play** - A play that takes its inspiration from a historical event

Question areas	Context/social/cultural/historical; aspects of the character; the way the actor uses movement and voice; staging
Key words for question areas	<ol style="list-style-type: none"> 4. Social/cultural/historical - Context = Date-Place-Issue. 5. Character traits/Aspects of character - persona; what the character is like and their background. Status in life. A character might change during the plot. 6. Set design - style; colour; position; stage furniture; stage flats; wings; cyclorama; backdrop; legs; ground row; tabs; borders; levels; symbolism; location. The set should represent the context of the play. 7. 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 fast gobo; blackout). 8. Costume; - period costumes; culture; colour; fabric; style; condition; symbolism; element; item (e.g. shirt; hat; shawl; cane; umbrella); 9. 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 10. Performance space - thrust; in the round; traverse; end on 11. Sound design - sound effects; live or recorded; underscoring; direction; transitions; volume
Context	12. Written in 2003. The play is set in Cornwall, England and in France during WWI - 1914-1918. The play explores British cultural values in particular the 'British stiff upper lip' and the culture of courage and cowardice which lead to 290 British soldiers being executed by firing squad by the British Army.

Private Peaceful by Michael Morpurgo (2003)

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

16. Tommy "Tommo" Peaceful	Narrator & protagonist. Kind & fiercely loyal to brothers Charlie & Big Joe & their mother, Mrs. Peaceful. Struggles with feelings of inadequacy & guilt over his father's death. Hesitant to sign up to fight in WWI but does so to prove his bravery – he is 18 at the start of the play but joins up when he is 17. Loves Molly. When Charlie dies Tommo looks after his nephew & Molly after the war.	
	Recalling his father's death	"He is on his back, his face turned away from me as if he doesn't want me to see. One arm is outstretched towards me, his glove fallen off, his finger pointing at me"
	Recalling what prompted him to sign up.	"Suddenly someone prodded me hard in the small of my back. It was a toothless old lady pointing at me with her crooked finger. "Go on, son," she croaked. "You go and fight. It's every man's duty to fight when his country calls, that's what I say. Go on. Y'aint a coward, are you?"
	Tommo talking to Charlie before he is executed by the British Army.	It is the moment. I have to do it now. It is my last chance. I tell him about how Father had died, about how it had happened, what I had done, how I should have told him years ago, but had never dared to. He smiles. "I always knew that, Tommo. So did Mother. You'd talk in your sleep. Always having nightmares, always keeping me awake about it, you were. All nonsense. Not your fault. It was the tree that killed Father, Tommo, not you."
	Recalling Charlie's death	"They tell me he walked out with a smile on his face as if he were going for an early-morning stroll. They tell me that he refused the hood, and that they thought he was singing when he died."
17. Charlie Peaceful	Fiercely loyal and brave. Always sticks up for Tommo & always does what is right. Hated by Sgt Hanley who didn't like that Charlie wasn't afraid to stand up to him. Bravely rescues Cpt Wilkes. Even when being executed by firing squad, he has a smile on his face.	
18. Molly	Childhood friend of Tommo, Charlie & Big Joe. Both Tommo & Charlie love her but she eventually marries Charlie & has his baby. Thrown out of her parent's home when they find out she is pregnant. Goes to live with Mrs. Peaceful.	
19. Sergeant Hanley	One of the antagonists. Malicious and cruel to the men serving in the army. Orders Charlie's execution when Charlie refuses to leave injured Tommo on the battlefield.	

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	<p>21. Pace - fast or slow</p> <p>22. Gesture - a movement of part of the body, especially a hand or the head, to express an idea or meaning</p> <p>23. Gait - walk</p>	<p>24. Posture - the position in which someone holds their body</p> <p>25. Facial expression - usually links to an emotion. Tells the audience the characters feelings</p> <p>26. Eye contact or eye line - where the actor looks</p>
Voice	<p>27. Pace - fast or slow</p> <p>28. Pause - an actor stops talking for a moment/beat during a line.</p> <p>29. Pitch - high or low</p> <p>30. Tone - reveals an emotion i.e. angry, scared</p>	<p>31. Volume - loud or quiet</p> <p>32. Accent - shows where someone is from or gives clues as to their upbringing</p> <p>33. Emphasis - the stress on individual words that makes them stand out</p>

Private Peaceful by Michael Morpurgo (2003)

Rehearsal	
34. Performance space	<p>End on - 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.</p> <p>In the round - Audience are around the performance space</p> <p>Traverse - Two audience sides. The action takes place between the audience. The stage is like a catwalk in a fashion show.</p>
35. Blocking	Planning the space and the actor's movement

36. Design elements: key words: Lighting design; sound design; costume design; set design	
37. Themes/symbols	The design can also communicate abstract concepts, such as themes and symbols . As an example, a design could include dramatic red backlight lighting barbed wire with a body hanging from it to suggest the context and themes of WW1 and the death in the play.
38. 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.
39. Colour	Colour can be used within set design to symbolise various ideas on stage. For example, for this play we could include dull greys and a monochromatic palette single colour , this could enhance the sad atmosphere and dark themes in the play.
40. 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.
41. Location	The set can tell the audience where and when the scene takes place.
42. Symbolism	Represents a message on stage.

Describing Music Using 'Mad T-Shirt'

Melody	Articulation	Dynamics	Time/Tempo	Structure
Register– high or low Range – wide or narrow Sequence Ascending/ descending Scalic or broken chord movement Steps or leaps Ornaments Melodic ostinato/riff	Strummed Finger-picking Sustained Stab Staccato Legato Slurred Pizzicato/arco Accents	Pianissimo Piano Mezzopiano Mezzoforte Forte Fortissimo Crescendo Diminuendo	Number of beats in a bar Tempo Accelerando/ rallentando	How many sections What order Which sections are the same Ternary form: ABA 12-bar blues Pop song structure: intro/verse/ chorus/bridge/ outro
Harmony	Instruments		Rhythm	Texture
Major or minor Inversions Consonant or dissonant Key change Added notes in chords Harmonic rhythm Drone/pedal note 'Blue' note	Strings: violin/viola/cello/double bass/harp Woodwind: flute/oboe/clarinet/bassoon/piccolo Brass: trumpet/horn/ trombone/tuba Percussion: timpani/snare/ cymbals (and many others) Voices: soprano/alto/tenor/bass Keyboards: piano/harpsichord/ organ/synthesiser Rock/pop: electric/acoustic guitar/ bass guitar, drumkit, loops/samples		Duration: long or short notes Even or uneven rhythms Dotted rhythms Triplets Syncopation On a particular beat of the bar Rests/pauses Rhythmic ostinato/riff	Note or chord Bass/chords/melody Thick/thin Simple/complex Melody + accompaniment Counter melody Parallel/contrary motion Unison Imitation Call & response

The Elements of Music RECAP

1. Pitch	How high or low a piece of music or a sound is
2. Tempo	Tempo is how fast or slow the music is played
3. Dynamics	Dynamics is how loud or quiet the music played
4. Rhythm/Duration	Duration/rhythm means how long or short a note is.
5. Texture	Texture describes the different layers of sound
6. Timbre/Sonority	The sound quality of an instrument or voice
7. Articulation	How the music/notes are played
8. Silence	In music these are the RESTS. No sound

The Composers Corner

Bessie Smith



John Williams



Bob Marley



Keyboard & Music Notes

A. Keywords

1. Key/Tonality	The scale on which a passage of music is based. It is named after the bottom note of the scale.
2. Scale	A set of consecutive notes that go up or down in order
3. Accidentals	Sharps or flats
4. Sharp	# the black key to the right of the note
5. Flat	b The black key to the left of the note
6. Natural	♮ A sign which cancels out any previous sharp or flat
7. Major Scale	Tonality which sounds happy
8. Minor scale	Tonality which sounds sad
9. Chromatic	Music with lots of accidentals

C. Notes on the treble clef

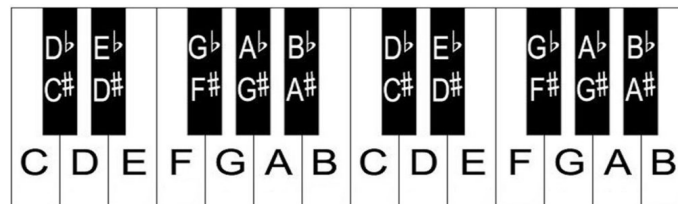


'Every Good Boy Deserves Football'

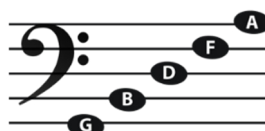
F. C major scale



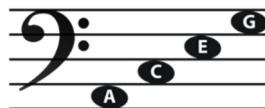
B. Notes on the keyboard



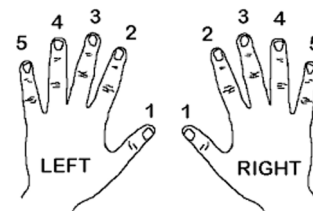
D. Notes on the bass clef



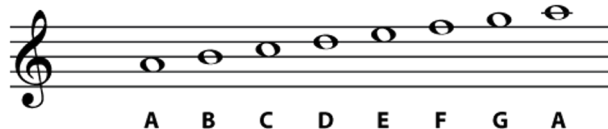
'Good Boys Deserve Football Always'



E. Finger numbers for playing the keyboard



G. A minor scale



Drums & Percussion

Instruments	
1. Djembe	
2. Surdo	
3. Agogo Bells	
4. Claves	
5. Dhol	
6. Tabla	

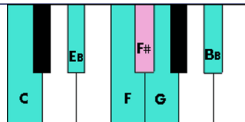
Keywords	
1. Percussion	Instruments that you hit to create sound
2. Call and Response	A texture where performer(s) do a call and others respond
3. Repetition	Repeating of a rhythm/motif
4. Cyclic Rhythm	Rhythm that repeats over and over
5. Ostinato	Repeating musical motif (rhythm or melody)
6. Polyrhythm	Two or more simultaneous rhythms
7. Cross rhythm	Type of polyrhythm where the rhythms don't easily slot together
8. Master drummer	The lead drummer (who performs the call)
9. Carnival	A street samba performance
10. Clave rhythm	Syncopated rhythm performed by claves in Samba music
11. Groove	A continuous and catchy rhythm

Music of The Indian Subcontinent	
1. Guru	Master performer
2. Improvise	Making up music during a performance, rather than referring to a pre-existing melody or part.
3. Raga	A set of pitches, similar to a scale.
4. Drone	A repeated note or set of notes repeated throughout a piece.
5. Tala	A cycle of beats that repeat.
6. Alap	The opening section of a piece of Indian classical music.
7. Chaal	The fundamental rhythm used in bhangra, played on the dhol.

1. Origins

Enslaved African people brought their musical traditions with them when they were transported to work in the North American colonies. These **work songs** were sung rhythmically in time with the task being done. Their songs were passed on **orally** (by word of mouth) and were never usually written down. They used **call and response** where phrases from a lead singer were followed by the others. Early styles of Blues were known as country blues and usually had a solo **singer** accompanied on **guitar** or **piano** sometimes with added **harmonica** or **drums**.

Using Email Professionally

2. 12-bar blues	The 12-bar blues is the name of the structure used in blues music. It is 12 chords, each lasting 1 bar. Roman numerals are used to label the chords, where I means chord 1 in the scale, IV means 4 etc.	$\begin{array}{c} - - - \\ IV - IV - - \\ V - IV - - \end{array}$
3. Chord	A chord is multiple notes played together at the same time. A chord using three notes is also called a triad. Blues music only uses 3 chords which are played at the start of every bar.	
4. Improvisation	When music is made up 'on the spot'	
5. Blues Scale	The blues scale is a certain selection of notes that have been put together to sound 'bluesy'. The scale is often used to create the improvisation.	
6. Walking Bass	The walking bass is the bassline of any Blues song. This is usually played by the double bass or bass guitar. The tempo of the bass line should be steady, which is why it is called the "walking" bass	

Using Email Professionally

1. Inbox	Where a user's emails are received.
2. Email address	Identifies the person/company that an email will be sent to.
3. Subject	A short description of what the email is about. Should be included in all emails.
4. Greeting	A formal word/phrase to start the email, e.g. 'Dear...'
5. Body	The actual message contained in the email.
6. Sign-off	A formal word/phrase to end the email, e.g. 'Kind regards'.
7. CC	Used to add more email addresses that the email will be sent to.
8. Reply	Used to respond to an email.
9. Forward	Used to send the same email to another address without having to write the email again.
10. Spam	Where unwanted/junk emails are kept.

Using Microsoft Word and Powerpoint

11. Microsoft Word	A program used to create documents.
12. Powerpoint	A program used to create slideshows.
13. Document	A piece of writing created electronically, e.g. a letter.
14. Slideshow	A presentation created using one or more slides made up of text and images.
15. Shortcut	Pressing two or more keys on the keyboard to do something, e.g. Ctrl C for Copy
16. Copy (Ctrl C)	When used with Paste, used to copy text or an image from one place to another.
17. Paste (Ctrl V)	When used with Copy, can place an image or text into a new place in a document or presentation.
18. Bold (Ctrl B)	Used to make text stand out by making it slightly bigger.
19. Italic (Ctrl I)	Used to make text stand out by tilting it forward.
20. Underline (Ctrl U)	Used to make text stand out by putting a line under it.
21. Font	The style of text on the screen. Common ones include Calibri, Arial, and Times New Roman.
22. Font size	The size of text on the screen.
23. Animation	A way of making text and images appear or disappear in Powerpoint.

E-Safety

24. Social Engineering	A range of methods to try and manipulate people into handing over personal details.
25. Phishing	A message that tries to get your personal details by getting you to click on a link.
26. Blagging	Making up a story to try to get personal details.
27. Shoulder Surfing	Looking over someone's shoulder to get details.
28. Virus	A harmful program that tries to damage your device
29. Anti-Virus	A program that protects your device from viruses.

Computer Systems

30. Computer system	An electronic device that can be programmed to perform instructions and store data.	43. FDE cycle	Fetch-Decode-Execute cycle. Performed by the CPU to constantly retrieve and execute instructions.
31. General-purpose computer	A computer designed to do many tasks, e.g., phone, laptop.	44. Operating System	Most important software on a computer. Can manage all software and hardware on a computer.
32. Embedded computer	A computer designed for a single task, e.g., calculator, washing machine.	45. Motherboard	Connects all the components of a computer together.
33. Program	A set of instructions written for a computer to perform.	46. Graphics card (GPU)	Handles graphics for the computer. Primarily used for gaming, video editing, and animations.
34. Hardware	Components of a computer you physically touch.	47. Power Supply	Supplies electricity to the computer.
35. Software	A set of programs on a computer.	48. Cooling	Prevents the CPU and other components from overheating.
36. Input device	A device that can input data from the user into the computer.	49. Control Unit	Controls the FDE cycle inside the CPU.
37. Output device	A device that can output data from a computer back to the user.	50. Arithmetic Logic Unit (ALU)	Performs basic maths and logic decisions inside the CPU.
38. Processor (CPU)	Processes data and instructions from programs.	51. Register	Stores 1 instruction or piece of data during the FDE cycle inside the CPU.
39. Memory (RAM)	Stores data and instructions from programs.	52. Monitor	The screen of a computer.
40. Storage (Hard drive)	Stores data, software, and files created by the user.	53. Keyboard	Used to type text and instructions into the computer.
41. Volatile	When a device needs constant power to store data.	54. Mouse	Used to point and click buttons on the screen.
42. Non-volatile	When a device can keep data stored even when the computer switches off		

Programming

55. Algorithm	A sequence of instructions to complete a task.	62. Python	An example of a programming language.
56. Sequence	Putting instructions in the correct order in an algorithm or program.	63. Syntax	The rules in a programming language to write instructions and use symbols correctly.
57. Condition	A statement, that can be checked by a program, that is True or False, e.g., is the time of day 1PM?	64. Variable	Can store data in a program and can always change value.
58. Selection	When a program performs an instruction based on a condition.	65. Constant	Can store data in a program and can never change value.
59. Multi-branch selection	When a program performs an instruction based on two or more conditions.	66. Function	Special keywords that do a specific job in a programming language.
60. Iteration	When a program repeats instructions based on a condition.	67. Integer	Whole number
61. Programming language	The language used to write instructions in a program.		

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>
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 (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>

Où es-tu allé(e) en vacances l'année dernière?

Pendant les vacances, je suis allé(e) en (During the holidays I went to)	Allemagne Égypte Écosse Espagne France Grande-Bretagne Italie Turquie	en avion (by plan) en bateau (by boat) en train (by train) en voiture (by car)	C'était ennuyeux (it was boring) C'était amusant (it was fun) C'était génial (it was great)
Je suis resté(e) dans (I stayed in) On est restés dans (we went to)	un hôtel (a hotel) un camping (a campsite) un appartement (an apartment)	au bord de la mer (by the sea) à la montagne (in the mountains) à la campagne (in the countryside)	

Comment as-tu voyagé?

J'ai voyagé (I travelled)	en avion (by plane) en bateau (by boat) en train (by train) en voiture (by car) à vélo (by bike)	et c'était rapide (and it was fast) et c'était lent (and it was slow) et c'était dangereux (and it was dangerous)	et c'était sur (and it was safe) et c'était bon marché (and it was cheap) et c'était cher (and it was expensive)
Je préfère voyager (I prefer to travel)		parce que c'est... (because it is)	

Qu'est-ce que tu as fait pendant les vacances?

Sentence starter	Activity in the perfect tense			opinion		
Le weekend dernier Last weekend	J'ai... (I ...)	nagé dans la mer/la piscine (swam in the sea/the swimming pool)	fait de la plongée sous-marine (went scuba-diving)	et c'était (and it was)	vraiment (really)	amusant (fun)
Le mois dernier Last month	On a... (We...)	visité un parc d'attractions (visited a theme park)	pris des photos (took photos)		très (very)	génial (great)
L'année dernière Last year		mangé des glaces (ate ice cream)	joué au tennis (played tennis)		assez (quite)	délicieux (delicious)
D'abord First of all		bronzé (sunbathed)	regardé des clips vidéo (watched video clips)		un peu (a bit)	relaxant (relaxing)
ensuite / puis then		acheté des baskets (bought some trainers)	écouté de la musique (listened to video clips)			intéressant (interesting)
après afterwards		fait du shopping (went shopping)				ennuyeux (boring)
 finalement finally						nul (rubbish)

Translation - Sentence Builders

Qu'est-ce que tu fais normalement pendant les vacances?

Normalement Normally je vais	en Allemagne en Écosse en Espagne	en Grèce en Albanie En Roumanie	au Portugal au Maroc aux États-Unis	avec mes ami(e)s avec ma famille – with my friends / my family
Pendant les vacances, During the holiday En général, Generally	Je visite le musée / le parc d'attractions – I visit the museum / the amusement park			parce que c'est relaxant / divertissant / rigolo / passionant / ennuyeux – because it's relaxing / enjoyable / funny / exciting / boring
	Je nage dans la mer ou dans la piscine / je bronze / je fais du surf – I swim in the sea or the swimming pool / I sunbathe / I surf			
	Je fais du shopping / je prends des photos / je joue aux jeux vidéo – I go shopping / take photos / play video games			
	Je visite le musée / le parc d'attractions – I visit the museum / the amusement park			

Qu'est-ce que tu voudrais faire pendant les vacances ?

Activity in the conditional tense		Opinion	
Je voudrais (I would like)	visiter une île tropicale (to visit a tropical island) faire un tour du monde (to travel the world)	car ce serait (because it would be)	amusant (fun)
J'aimerais vraiment (I would really like)	faire une expédition à la montagne (to go on an expedition in the mountains)		génial (great)
C'est mon rêve de (It's my dream to)	faire un safari en Afrique (to go on safari in Africa)		formidable (amazing)
	Monter la Tour Eiffel (to climb the Eiffel Tower)		inoubliable (unforgettable)
	voir les Chutes de Niagara (to see Niagra Falls)		incroyable (incredible)
	passer un mois en Australie (to spend a month in Australia)		
	Nager avec des dauphins/requins (to swim with dolphins/sharks)		

Qu'est-ce que tu aimes faire?

Sentence Starter	Opinion verb		Infinitive verb	Complement		Opinion	
Normalement Normally	je préfère I prefer	je déteste I hate	jouer to play/playing	au tennis tennis	au cinéma to the cinema	car c'est (because it is)	amusant amusing / fun intéressant interesting génial Great relaxant relaxing barbant Boring ennuyeux boring nul rubbish
En général In general	j'adore I love	Je veux I want	manger to eat/eating	aux jeux video videogames	au restaurant to the restaurant		
	j'aime I like	Je voudrais I would want	écouter to listen/listening	au restaurant at the restaurant	au bowling bowling		
	je n'aime pas I do not like	J'aimerais I would like	regarder to watch /watching	avec ma famille with my family	les magasins/du shopping shopping		
			aller to go/going	de la musique music	du vélo/de la natation cycling/swimming		
			faire to do/doing to go/going	des films sur netflix movies on netflix			
				des dessins animés cartoons			

Que fais-tu pendant ton temps libre?

Le week-end/pendant le week-end (At the weekend) Après le collège (After school) Le soir (In the evening) Le lundi/ le mardi/ le mercredi/ le jeudi/ le vendredi/ le samedi/ le dimanche (On Mondays/ on Tuesdays/ on Wednesdays/ on Thursdays/ on Fridays/ on Saturdays/ on Sundays) Une/deux/trois fois par semaine Once/twice/three times a week De temps en temps (Sometimes) Tous les jours (Every day)	Je fais (I do) On fait (we do)	de la gymnastique. (gymnastics) de l'athlétisme (athletics)	de la danse (dance)
	Je joue (I play) On joue (we play)	au foot. (football) au basket. (basketball) au tennis (tennis)	aux jeux vidéo (video games) de la guitare (the guitar) du piano (the piano)
	Je... (I...)	promène mon chien. (walk my dog) sors avec mes amis. (go out with my friends)	lis des livres. (read books)

Qu'est-ce que tu vas faire le weekend?

Sentence Starter	Conjugated verb		Infinitive verb	Verb complement		Opinion	
Ce weekend This weekend	Je vais I am going	J'espère I hope	jouer to play	au basket basketball aux jeux vidéo videogames	un musée a museum Le centre ville the town centre	Ça va être It is going to be	amusant amusing / fun
Le weekend prochain Next weekend	Ma soeur va My sister is going to	Je veux I want	voir to see				intéressant interesting
	Mes amis vont My friends are going to	Je voudrais I would want J'aimerais I would like	aller to go visiter to visit faire to do/make voyager to travel	Une spectacle a show Un match de foot a football match au restaurant to the restaurant en vacances on holiday	du shopping shopping des gateaux cakes en France to France		génial Great relaxant relaxing barbant Boring ennuyeux boring nul rubbish

Translation - Sentence Builders

Qu'est-ce que tu aimes regarder?							
J'adore (I love)	Je regarde (I watch)	les films fantastiques (fantasy films)	les films d'action (action films)	parce qu'ils sont (because they are)	divertissants (entertaining)	amusants (funny)	Masculine plural
J'aime (I like)	mais je n'aime pas... (but I don't like)	les films d'arts martiaux (martial arts films)	les dessins animés (cartoons)		Intéressants (interesting)	Ennuyeux (boring)	
J'aime regarder (I like to watch)	mais je déteste... (but I hate)	les films de science-fiction (sci-fi films)	les westerns (westerns)	parce qu'elles sont (because they are)	divertissantes (entertaining)	amusantes (funny)	Feminine plural
		les films d'horreur (horror films)	les comédies (comedies)		Intéressantes (interesting)	Ennuyeuses (boring)	
Mon acteur préféré c'est... (my favourite actor is...)				parce qu'il est (because he is)	intelligent (intelligent)	Beau (handsome)	Masculine singular
Mon actrice préférée c'est... (my favourite actress is...)				parce qu'elle est (because she is)	intelligente (intelligent)	belle (beautiful)	Feminine singular
Mon film préféré c'est... (my favourite film is...)				parce que c'est (because it is)	Divertissant (entertaining)	amusant (funny)	Masculine singular
					Intéressant (interesting)	Ennuyeux (boring)	

Quelle sorte de musique écoutes-tu?					
Opinion	Music genre	connective	adjective		
J'ai une passion pour (I'm passionate about)	la musique pop	parce que c'est (because it is)	original	émouvant (moving)	
J'adore	la musique électronique		relaxant		
J'aime	la musique classique		génial	agaçant (annoying)	
Je préfère	le rap/le rock/le métal		branché (trendy)	nul (rubbish)	
Je n'aime pas	le reggae/le hip-hop				
Je déteste					
Je (ne) suis (pas) fan (I'm not a fan of)	de la musique pop	parce que	ça me rend triste (it makes me sad)		
J'écoute	de la musique électronique		ça me rend heureux/heureuse (it makes me happy)		
Je n'écoute pas	de la musique classique				
	du rap/du rock/du métal				
	du reggae/du hip-hop				
Ma chanteuse préférée c'est... (my favourite singer is...)		parce qu'elle est (because she is)	originale	incroyable	Feminine singular
			formidable	belle	
Mon chanteur préféré c'est... (my favourite singer is...)		parce qu'il est (because he is)	original	incroyable	Masculine singular
			formidable	beau	

Quelle sorte de musique écoutes-tu?

Sentence starter	Activity in the perfect tense		Opinion		
Le weekend dernier Last weekend	J'ai... (I ...)	mangé au restaurant (ate at a restaurant)	joué au tennis (played tennis)	et c'était (and it was)	vraiment (really)
Samedi dernier Last Saturday	On a... (We...)	fait du shopping (went shopping)	regardé une série (watched a series)		très (very)
Dimanche dernier Last Sunday		fait du vélo (went cycling)	écouté de la musique (listened to music)		assez (quite)
	Je suis allé... (I went...)	au centre sportif (to the sports centre)	au bowling (bowling)		un peu (a bit)
	On est allés... (We went...)	au parc (to the park)	À la piscine (to the swimming pool)		
		au cinéma (to the cinema)			

Vocabulary: Comment est ta routine?

Sentence Starter	Verb	Connective	Verb
Le matin In the morning	je me réveille I wake up	et puis and then	je prends le petit-déjeuner I have breakfast
À huit heures du matin At 8am	je me lève I get up	et après ça and after that	je vais au collège I go to school
	elle s'habille she gets dressed		j'étudie sur l'ordinateur I study on the computer
Le soir In the evening	il se brosse les dents he brushes his teeth		je me douche I shower
	nous nous lavons we wash		je me couche I go to bed
À neuf heures du soir At 9pm	je mange avec ma famille I eat with my family		
	nous regardons la télé We watch TV		

Qu'est-ce que tu manges?

Sentence Starter	Verb	Noun		Reason	
Normalement Normally	je mange I eat	un sandwich a sandwich	de l'eau some water	parce que car	c'est délicieux it is delicious
Pour le petit-déjeuner For breakfast	je prends I have	du poulet some chicken	des pâtes some pasta		c'est sucré = it is sweet/sugary
Pour le déjeuner For lunch		du riz some rice	des frites some chips		c'est salé = it is salty
Pour le dîner For dinner	je bois I drink	du jus de fruit some fruit juice	des boissons gazeuses some fizzy drink		c'est bon pour la santé = it is good for your health
De temps en temps from time to time		du chocolat some chocolate	des légumes some vegetables		c'est sain = It's healthy
Souvent Often		du gâteau some cake	des jus de fruits some fruit juice		c'est malsain = It's unhealthy
Rarement Rarely		de la soupe some soup			
		de la salade some salad			
		de la dinde some turkey			
		de la pizza some pizza			

Où avez-vous mal?

Time Phrase	Activity	Therefore / So	Connective		Exclamation
Hier Yesterday	J'ai joué au foot/basket I played football / basketball	donc Therefore	J'ai mal au ventre /bras/dos/genou J'ai mal à la jambe/ gorge/tete J'ai mal aux pieds /épaules/dents		Quel désastre! What a disaster!
La semaine dernière Last week	J'ai joué aux jeux vidéos I played videogames		J'ai de la fièvre I have a fever	J'ai un rhume I have a cold	Quel dommage! What a shame / pity!
	J'ai fait du vélo I went cycling		J'ai vomé I'm sick	J'ai un coup de soleil I'm sunburnt	
Le weekend dernier Last weekend	J'ai mangé.... I ate...		J'ai une toux I have a cough	Je suis fatigué(e) I'm tired	ça fait mal It hurts
	Il faisait très chaud It was very hot		J'ai la grippe I have the flu	Je suis malade I'm ill	
	J'ai mal dormi I slept badly				

Translation - Sentence Builders

Qu'est-ce que tu as mangé hier?				
Sentence Starter	Verb	Noun		
Hier Yesterday	j'ai mangé I ate	du riz	et c'était	délicieux
Le weekend dernier Last weekend	j'ai bu I drank	du chocolat		sucré
		du gâteau		salé
		de la viande		dégoûtant
		de l'eau		bon
		des légumes		
		des fruits		
		des pâtes		
		des frites		
		des boissons gazeuses		

Chez le docteur		
Verb	Infinitive phrase	Frequency
Il faut You must	rester au lit Stay in bed rester au chaud Stay warm	Tous les jours Every day
Tu dois You must	aller chez le dentiste Go to the dentist aller à la pharmacie Go to the pharmacy Mettre un pansement Put a plaster on Dormir beaucoup Sleep a lot	Une/deux fois par jour Once/twice per day
	Prendre ce médicament Take this medicine Prendre des pastilles pour la gorge Take these throat sweets	

Quelle matières aimes-tu?					
Sentence Starter	Opinion verb	Infinitive verb	Subject	Connective	Reason
Normalement Normally	je préfère I prefer	étudier to study/studying	le français	parce que c'est because it is	intéressant interesting
En général In general	j'adore I love		le dessin		facile easy
Pendant le confinement During the lockdown	j'aime I like		le théâtre		logique logical
	je n'aime pas I do not like		l'EPS		créatif creative
	je déteste I hate		l'histoire		difficile difficult
			l'anglais		ennuyeux boring
			la géographie		
			la religion		
			la technologie		
			les sciences		
			les maths		

Translation - Sentence Builders

Comment est ton collège?	
Dans mon collège il y a... in my school there is	une grande salle a hall une cantine a canteen un terrain de football a football pitch un cour de récré(ation) a yard/playground un gymnase a gym une piscine a pool une bibliothèque a library un terrain de tennis a tennis court des laboratoires some science labs beaucoup de salles de classe lots of classrooms plus/moins d'examens more/less exams plus d'activités sportives more sports activities
Mon collège est my school is...	grand big petit small moderne modern chouette great nul rubbish

Que penses-tu des règles de ton école?				
Sentence Starter	Key structures	Infinitive phrase	Connective	Adjective
Dans mon école At my school	on doit you must il faut you have to	écouter le prof Listen to the teacher porter l'uniforme Wear a uniform faire ses devoirs Do your homework Être à l'heure Be on time	et je pense que c'est and I think it is et à mon avis c'est and in my opinion it is	juste fair injuste unfair strict Strict cool cool
	on ne peut pas you can't il est interdit de You're not allowed to	être en retard Be late mâcher du chewing-gum Chew chewing gum porter des baskets/du maquillage Wear trainers/makeup harceler les autres bully others utiliser un portable Use a phone avoir un piercing Have a piercing Fumer Smoke		

Quel est ton jour préféré au collège?					
Mon jour préféré c'est le... lundi mardi mercredi jeudi vendredi	car puisque parce que	on a j'ai je n'ai pas de/d'	français théâtre géographie musique technologie anglais EPS histoire informatique arts plastiques maths sciences	C'est	ennuyeux amusant créatif facile difficile intéressant nul Le/la prof est... sympa/sévère

Translation - Sentence Builders

Quelle matières aimes-tu?			
Sentence Starter	Verb	Noun	Adjective
Normalement normally,	je porte I wear	un t-shirt a T-shirt un sweat a sweatshirt un pull a jumper un pantalon trousers un jean jeans un survêtement a tracksuit un blazer a blazer	marron brown orange orange rouge(s) red rose(s) pink jaune(s) yellow bleu(e)(s) blue noir(e)(s) black vert(e)(s) green blanc(he)(s) white violet(te)(s) blue
Ce week-end This weekend	on doit porter we must wear	une robe a dress une casquette a cap une cravate a tie une jupe a skirt une chemise a shirt	
Pour aller au collège For school	je préfère porter I prefer to wear	des baskets trainers des chaussettes socks des chaussures shoes	
Pour aller à une fête For a party	je vais porter I'm going to wear j'ai porté I wore		

Qu'est-ce que tu portes pour aller au collège?			
Sentence starter	Present tense phrase		Opinion
Pour aller au collège For school	je porte (I wear)	un pantalon noir (black trousers) une chemise blanche (a white shirt) un pull noir (a black jumper) une jupe noire (a black skirt) des chaussures noires (black shoes) des chaussettes blanches (white socks) des baskets blanches (white trainers) un sweat à capuche orange (an orange hoody)	J'aime bien l'uniforme parce que (I really like the uniform because) Je déteste l'uniforme parce que (I hate the uniform because)
D'habitude Usually	j'aime porter (I like to wear) mais je voudrais porter (but I would like to wear)		C'est confortable (it's comfortable) C'est pratique (it's practical) C'est chic (it's elegant) C'est démodé (it's old-fashioned) C'est ennuyeux (it's boring)

Qu'est-ce que tu voudrais faire comme métier?			
Je voudrais être I would like to be	avocat(e) lawyer maçon bricklayer	(parce que) c'est un travail... (because) it is a ___ job	artistique artistic passionnant exciting
Je vais être I'm going to be	hôtesse/steward flight attendant		exigeant demanding important important
Je vais travailler comme I'm going to work as	danseur/se dancer pompier/pompière firefighter serveur/se waiter/ess chanteur/se singer cuisinier/cuisinière cook comptable accountant vendeur/se shop assistant électricien electrician infirmier/infirmière nurse écrivain(e) writer plombier/plombière plumber photographe photographer		facile easy difficile hard varié varied répétitif repetitive à responsabilités with responsibility avec de bonnes perspectives with good prospects avec un bon salaire with a good salary

3 Time Frames

PRESENT

PAST

FUTURE

Time Marker	Verb (in correct tense)	Place/activity/food
Normalement Normally Le week-end At the weekend	je mange I eat je joue I play j'aime regarder I like to watch je vais I go	des céréales cereal aux jeux vidéo video games les films d'horreur horror films au parc to the park
Hier Yesterday Le week-end dernier Last weekend	j'ai mangé I ate j'ai joué I played je suis allé(e) I went	
Ce soir This evening Ce week-end This weekend La semaine prochaine Next week	je vais manger I'm going to eat je vais jouer I'm going to play je voudrais regarder I would like to watch je vais aller I'm going to go	

Present tense – Irregular verbs

Some verbs are irregular. They don't follow the regular verb pattern.

avoir	to have
j'ai tu as il/elle a	i have you have he/she has
être	to be
je suis tu es il/elle est	i am you are he/she is

Present Tense - Verb Endings

		Regular ER Verbs	Regular IR Verbs	Regular RE Verbs
I	Je	-E	-IS	-S
You (s)	Tu	-ES	-IS	-S
He / She / One	Il / Elle / On	-E	-IT	
We	Nous	-ONS	-ISSONS	-ONS
You (pl)	Vous	-EZ	-ISSEZ	-EZ
They	Ils / Elles	-ENT	-ISSENT	-ENT

Translation - Sentence Builders

être - to be

je suis	I am
tu es	you are
il/elle/on est	he/she is/we are

nous sommes	we are
vous êtes	you are
ils/elles sont	they are

faire - to do/make

je fais	I do
tu fais	you do
il/elle/on fait	he/she does/we do

nous faisons	we do
vous faites	you do
ils/elles font	they do

aller - to go

je vais	I go
tu vas	you go
il/elle/on va	he/she goes/we go

nous allons	we go
vous allez	you go
ils/elles vont	they go

Studio Grammaire

Most verb form the perfect tense with part of avoir + a past participle.

For regular -er verbs, take off -er and ad é: manger (to eat) - j'ai mangé (I ate/I have eaten)

boire (to drink), faire (to do/make), lire (to read), prendre (to take) and voir (to see) have irregular past participles.

j' ai	dansé/regardé
tu as	bu
il/elle/on a	fait
nous avons	lu
vous avez	pris
ils/elles ont	vu

A few important verbs take être, not avoir.

The past participle has to agree with the subject:

Elle est allée en ville.

je suis	
tu es	
il/elle/on est	allé (e)(s)
nous sommes	resté (e)(s)
vous êtes	sorti (e)(s)
ils/elles sont	

¿Qué hiciste en las vacaciones? - What did you do in the holidays?

El verano pasado (Last summer)	fui a (I went to)	Grecia (Greece) Gales (Wales) Escocia (Scotland) Francia (France) España (Spain) Alemania (Germany) los Estados Unidos (the USA) la playa (the beach)	con (with)	mis padres (my parents) mis amigos (my friends) mi familia (my family) mis abuelos (my grandparents) mi clase (my class)	Por la mañana (In the morning) Por la tarde (In the afternoon) Por la noche (In the evening) Todos los días (everyday)	tomé el sol (I sunbathed) comí comida típica (I ate typical food) nadé en el mar (I swam in the sea) visité monumentos (I visited monuments)	compré recuerdos (I bought souvenirs) hice deportes acuáticos (I did aquatic sports) hice turismo (I went sightseeing) saqué fotos (I took photos)	y fue (and it was)	súper (really) muy (very) bastante (quite) un poco (a bit)	emocionante (exciting) interesante (interesting) relajante (relaxing) delicioso (delicious) divertido (fun) guay (cool) aburrido (boring) agotador (tiring) caro (expensive)
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¿Cómo fuiste? - How did you get there?

Viajé (I travelled)	en avión (by plane)	y fue rápido. (and it was fast)
Prefiero viajar (I prefer to travel)	en barco (by boat)	y fue lento (and it was slow)
	en tren (by train)	y fue peligroso (and it was dangerous)
	en coche (by car)	y fue seguro (and it was safe)
	En bicicleta (by bike)	y fue barato (and it was cheap)
		y fue caro (and it was expensive)
		Porque es (because it is)

Las vacaciones - Presente/Pasado/Futuro

Time marker	Verb	Complement		
Normalmente (Normally)	voy (I go)	a Francia (to France)	en barco (by boat)	con mi familia (with my family)
Generalmente / en general (In general)	vamos (we go)	a Alemania (to Germany)	en tren (by train)	con mis amigos (with my friends)
El año pasado (Last year)	fui (I went)	a Grecia (to Greece)	en avión (by plane)	con mis padres (with my parents)
El verano pasado (Last summer)	fuimos (we went)	a España (to Spain)	en bicicleta (by bicycle)	con mi instituto (with my school)
El año próximo (Next year)	me gustaría ir (I would like to go)	a Italia (to Italy)	en autocar (by coach)	con mi clase (with my class)
En el futuro (In the future)	voy a ir (I am going to go)		en coche (by car)	

¿Qué haces normalmente durante las vacaciones? - What do you usually do in the holidays?

Normalmente (Usually) A menudo (Often) Cada año (Every year)	voy a (I go to)	Grecia (Greece) Gales (Wales) Escocia (Scotland) Francia (France) España (Spain) Alemania (Germany) los Estados Unidos (the USA) la playa (the beach)	con (with)	mis padres (my parents) mis amigos (my friends) mi familia (my family) mis abuelos (my grandparents)	Generalmente (Generally) Por la mañana (In the morning) Por la tarde (In the afternoon) Por la noche (In the evening) Todos los días (everyday) A veces (sometimes)	tomo el sol (I sunbathe) como comida típica (I eat typical food) nado en el mar (I swim in the sea) visito monumentos (I visit monuments) compro recuerdos (I buy souvenirs) hago deportes acuáticos (I do aquatic sports) hago turismo (I go sightseeing) saco fotos (I take photos)	y es (and it is)	súper (really) muy (very) bastante (quite) un poco (a bit)	emocionante (exciting) interesante (interesting) relajante (relaxing) delicioso (delicious) divertido (fun) guay (cool) aburrido (boring) agotador (tiring) caro (expensive)
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¿Qué haces en tu tiempo libre? - What do you do in ree-time?

Time expression	Verbs	Complement		Reason
El fin de semana (At the weekend) Después del instituto (After school) Por la mañana (In the morning) Por la tarde (In the afternoon/evening) Una vez / dos veces / tres veces (Once/twice/three times a week) A veces (Sometimes) De vez en cuando (from time to time) Todos los días (Every day)	hago (I do) hacemos (we do)	gimnasia (gymnastics) atletismo (athletics)	equitación (horse-riding) natación (swimming)	porque (no) es because it is (not) divertido amusing / fun interesante interesting genial great emocionante exciting guay cool tonto silly
	juego (I play) jugamos (we play) FOR GAMES	al fútbol. (football) al baloncesto (basketball)	al ordenador (on the computer) a los videojuegos (video games)	
	toco (I play) tocamos (we play) FOR INSTRUMENTS	la guitarra (the guitar)	el piano (the piano)	
	escucho música (I listen to music) paseo al perro (I walk my dog) salgo con mis amigos (I go out with my friends) leo libros (I read books)			

Programas de televisión - TV programmes			
Opinion verb (1)	TV programmes (2)	Reason (3)	Verb (4)
Prefiero (I prefer) Odio (I hate) Me encanta(n) (I love) Me gusta(n) (I like) No me gusta(n) (I do not like)	el telediario / las noticias (the news) los programas de deporte (sports programmes) los programas de música (music programmes) los dibujos animados (cartoons) los concursos (game shows) los documentales (documentaries) las telenovelas (soaps / soap operas) las comedias (comedies) las series policíacas (detective series)	porque (because) ya que (since)	es... (It is) son... (They are)
Comparison (5)	Adjective (6)	Comparison (7)	TV programmes (2)
más (more) menos (It is)	aburrido/a /os/as (boring) informativo/a/os/as (informative) educativo/a/os/as (educational) gracioso/a/os/as (funny) animado/a/os/as (lively) entretenido/a/os/as (entertaining) emocionante(s) (exciting) interesante(s) (interesting)	que... (than...)	(see column two)

Tipos de películas - Film genres							
Opinion verb (1)	TV programmes (2)		Reason (3)	(4)	intensifier (5)	Adjective (6)	
Me encantan... (I love) Me fascinan... (I am fascinated by...) Me gustan mucho... (I like ... a lot) Prefiero... (I prefer) No me gustan nada... (I don't like at all) *Odio/Detesto (I hate)	las películas de las comedias (comedies)	amor (romantic) acción (action) aventura (adventure) artes marciales (martial arts)	ciencia ficción (science fiction) dibujos animados (animation) guerra (war) terror (horror)	porque (because) ya que (since)	son... (they are) súper (really) muy (very) bastante (quite) un poco (a bit)	interesantes (interesting) entretenidas (entertaining) aburridas (boring) informativas (informative) emocionantes (exciting)	aterradoras (scary) tontas (silly) románticas (romantic) geniales (great)

Qué vas a hacer el fin de semana? - What are you going to do at the weekend?

	Weather	Time expressions	IR (to go) present form	Infinitive	It is going to be	Adjective	
Si (If)	hace buen tiempo (the weather is good) hace mal tiempo (the weather is bad) hace sol (it's sunny) calor (it's hot) frío (it's cold) llueve (it rains)	el fin de semana (at the weekend) mañana (tomorrow) esta tarde (this afternoon)	voy a (I am going to) va a (he/she is going to) vamos a (we are going to)	descansar usar el ordenador montar en bici jugar a los videojuegos hacer deberes ver la tele ir de compras salir con mis amigos ir al cine	Va a ser (It is going to be)	genial (great) emocionante (exciting) interesante (interesting) guay (cool)	relajante (relaxing) divertido (fun) tedioso (annoying) aburrido (boring)

Vocabulary for this lesson – ¿Qué llevas?

Sentence Starter	Verb	Noun	Adjective		
Durante el confinamiento (During the lockdown)	Llevo (I wear)	un jersey (a jumper) un chándal (a tracksuit) un vestido (a dress) un pijama (a pyjama)	blanco (white) amarillo (yellow) rojo (red) negro (black) azul (blue) marrón (brown) gris (grey) verde (green) rosa (pink) naranja (orange) violeta (purple)	Adjective ending	
	prefiero llevar (I prefer to wear)			masculine	-O -OS
De vuelta a la escuela (On return to school)	voy a llevar (I'm going to wear)	una camisa (a shirt) una camiseta (a t-shirt) una chaqueta (a blazer) una sudadera (a sweatshirt) una gorra (a cap) una corbata (a tie) una falda (a skirt)		feminine	-A -AS
	tengo que llevar (I must wear) tenemos que llevar (we must wear)	unos pantalones (trousers) unos vaqueros (jeans) unos zapatos (shoes) unas zapatillas de deporte (trainers) unas calcetines (socks)		ends in -e	-E -ES
				Ends in a consonant	-L -N -S -LES -NES -SES

Year 8 - Sentence Builder

Vocabulary for this lesson - Mi rutina diaria

Sentence Starter	Verb	Time
Primero (Firstly)	Me despierto (I wake up)	a las seis (at 6 o'clock)
Luego (Then)	Me levanto (I get up)	a las seis y media (at 6.30)
Después (Afterwards)	Me baño (I have a bath)	a las siete (at 7 o'clock)
Siempre (Always)	Me ducho (I have a shower)	a las siete y media (at 7.30)
Por lo general (Generally)	Me lavo la cara (I wash my face)	a las ocho (at 8 o'clock)
	Me lavo los dientes (I brush my teeth)	a las ocho y cuarto (at 8.15)
	Me visto (I get dressed)	a las nueve (at 9 o'clock)
	Me maquillo (I put on make-up)	
	Me peino (I comb my hair)	
	Me aliso el pelo (I straighten my hair)	
	Me pongo gomina (I put gel on my hair)	
	Desayuno (I have breakfast)	
	Ceno (I have dinner)	
	Veo la tele (I watch TV)	
	Voy al insti (I go to school)	
	Hago mis deberes (I do my homework)	

¿Qué desayunas/comes/meriendas/cenas normalmente? - What do you usually have for breakfast/lunch/dinner?

Sentence Starter	Verb	Noun	Opinion
Siempre (Always)	desayuno (for breakfast I have...)	un bocadillo (a sandwich)	Me gusta 😊
Normalmente (Normally)	como (for lunch I have...)	pollo (chicken)	Me gusta mucho 😊😊😊
Por lo general/ Generalmente (Generally)	meriendo (for tea I have...)	pescado (fish)	Me encanta 😊😊😊😊
A menudo (Often)	ceno (for dinner I have...)	marisco (seafood)	No me gusta 😞
A veces (Sometimes)	bebo (I drink)	carne (meat)	No me gusta nada 😞😞😞
De vez en cuando (From time to time)	me gusta beber (I like to drink)	arroz (rice)	Odio 😞😞😞😞
Nunca (Never)	me gusta comer (I like to eat)	queso (cheese)	Prefiero ✓
		sopa (soup)	Me gustan 😊😊
		ensalada (salad)	Me encantan 😊😊😊😊
		fruta (fruit)	No me gustan 😞
		patatas fritas (chips)	Odio 😞😞😞😞
		verduras (vegetables)	Prefiero ✓
		pasta (pasta)	
		pizza (pizza)	
		tostadas (toast)	
		cereales (cereals)	
		galletas (cookies)	
		caramelos (sweets)	
		bebidas gaseosas (fizzy drinks)	
		zum de fruta (fruit juice)	
		agua (water)	
		leche (milk)	

¿Llevas una vida sana?

Llevo una dieta sana (I have a healthy diet)	el arroz/el pan (rice/bread) el pollo/el pescado (chicken/fish) la carne/la ensalada (meat/salad) la pasta/la pizza (pasta/pizza) los caramelos/los huevos (sweets/eggs) las galletas/las verduras (biscuits/vegetables)	porque es porque son	delicioso/a (delicious) rico/a (tasty) salado/a (salty) sano/a (healthy) dulce (sweet) asqueroso (disgusting) deliciosos/as (delicious) ricos/as (tasty) salados/as (salty) sanos/as (healthy) dulces (sweet) asquerosos (disgusting)
Me gusta (bastante) (I (quite) like)			
No me gusta(n) nada... (I really don't like...)			
Lo / La como... (I eat it...)	tres veces al día (three times a day) cada día/todos los días (every day) dos veces a la semana (two times a week)	los fines de semana (at weekends) una vez al mes (once a month) muy a menudo (very often)	a veces (sometimes) de vez en cuando (from time to time) (Casi)nunca lo / la / los / las como (I (nearly) never eat them)

El cuerpo

¿Qué te duele? Me duele el brazo/estómago/pie Me duele la cabeza/ garganta Me duele la espalda/mano/pierna Me duelen los dientes/oídos/ojos		(What hurts (you)?) (My arm/stomach/foot hurts) (My head/throat hurts) (My back/hand/leg hurts) (My teeth/ears/eyes hurt)
Tengo – (I have)	dolor de cabeza dolor de espalda	(a headache) (a backache)
Tengo – (I have)	un resfriado fiebre gripe tos quemaduras del sol vómito	(a cold) (a temperature) (the flu) (a cough) (a sunburn) (I have been sick)
Estoy – (I am)	cansado / cansada enfermo / enferma	(tired) (ill/sick)

¿Qué te duele y por qué?

Time Phrase	Activity	Therefore / So	Connective	Exclamation
Ayer (Yesterday)	Jugué al fútbol / baloncesto (I played football / basketball)	Por eso (Therefore)	Me duele el brazo/estómago/pie Me duele la cabeza/ garganta. Me duele la espalda/mano/pierna Me duelen los dientes/oídos/ojos	¡Qué desastre! (What a disaster!)
Hoy (Today)	Jugué a un videojuego (I played a videogame) Hice footing (I went jogging)	Así que (So)	Tengo gripe (I have the flu) Tengo catarro (I have a cold) Tengo quemaduras de sol (I'm sunburnt)	¡Qué pena! (What a shame / pity!)
La semana pasada (Last week)	Monté en bicicleta (I rode a bike)		Tengo fiebre (I have a fever) Tengo vómito (I have been sick)	¡Qué lástima! (What a shame / pity!)
El fin de semana pasao (Last weekend)	Comí.... (I ate...) Hizo mucho calor (It was very hot) No dormí mucho (I didn't sleep much)		Tengo tos (I have a cough)	¡Qué mal! (How bad!)

Las asignaturas escolares - School subjects

Los lunes Los martes Los miércoles Los jueves Los viernes	a (at)	la una	cinco (five past) y diez (ten past) cuarto (quarter past) veinte (twenty past) veinticinco (twenty-five past) media (half past)	tengo (I have) tenemos (we have) estudio (I study) estudiamos (we study)	español inglés dibujo teatro historia geografía informática música religión educación física	(No) me gusta porque es	divertido/a aburrido/a creativo/a interesante importante fácil (easy) difícil (difficult) útil (useful)
Por la mañana (In the morning) Por la tarde (In the afternoon)	a (at)	las dos tres cuatro cinco seis siete ocho nueve diez once doce	veinticinco (twenty-five to) menos veinte (twenty to) cuarto (quarter to) diez (ten to) cinco (five to)		ciencias matemáticas	(No) me gustan porque son	divertidos/as aburridos/as creativos/as interesantes importantes fáciles difíciles útiles

El uniforme escolar / La ropa

Sentence starter	Present tense phrase		Opinion	
En el insti (At school)	llevo (I wear) llevamos (we wear) tengo que llevar (I have to wear) tenemos que llevar (we have to wear)	unos pantalones negros (black trousers) una camisa blanca (a white shirt) un jersey azul (a blue jumper) una falda gris (a grey skirt)	Me encanta el uniforme porque es... (I love the uniform because it is...) Odio el uniforme ya que es... (I hate the uniform as it is...) porque es... (because it is...) porque son... (because they are...)	cómodo (comfortable) práctico (practical) elegante (elegant) bonito (pretty) guay (cool) incómodo (uncomfortable) feo (ugly) anticuado (oldfashioned)
Los fines de semana (At weekends)	me gusta llevar (I like to wear)	unos zapatos negros (black shoes) unos calcetines blancos (white socks) unas zapatillas de deporte blancas (white trainers) una sudadera naranja (an orange hoody)		

Year 8 - Sentence Builder

¿Que haces para estar en forma?					
Sentence starter	Expressions of frequency	Verb phrase		Connective	Justification
Para estar en forma..... (To be fit/in shape...)	Todos los días (every day)	Como sano (I eat healthily)	Hago ejercicio/deporte (I do exercise/sport)	porque (Because)	es sano (it is healthy)
	normalmente (normally)	Como muchas fruta y verduras (I eat lots of fruit and vegetables)	No como caramelos (I don't eat sugary foods)	ya que (because)	es bueno para la salud (it is good for your health)
	Dos/tres veces al días (two/three times a day)	Bebo mucho agua (I drink lots of water)	No como comida rápida (I don't eat fast-food)		es malo para la salud (it is bad for your health)
	De vez en cuando (From time to time)	Duermo ocho horas por noche (I sleep eight hours per night)	No bebo bebidas gaseosas (I don't drink fizzy drinks)		

Consejos para estar en forma				
Sentence starter	Expressions of frequency	Verb phrase	Connective	Justification
Para llevar una vida sana (to have a healthy lifestyle) Para mantenerse en forma (to keep in shape)	voy a (I am going to)	mer más sano /equilibrado (eat more healthily /balanced)	porque (Because)	es sano (it is healthy)
	tengo que (I have to)	comer muchas fruta y verduras (eat lots of fruit and vegetables)	ya que (Since)	es bueno para la salud (it is good for your health)
	quiero (I want to)	beber más agua (drink more water)		es malo para la salud (it is bad for your health)
	debemos (we must/should)	dormir ocho horas por noche (sleep eight hours per night)		
	hay que (we have to) (impersonal)	hacer ejercicio/deporte (do exercise/sport)		
		comer menos caramelos (eat less sweets)		
		comer menos comida rápida (eat less fast-food)		
		beber menos bebidas gaseosas (drink less fizzy drinks)		

Year 8 - Sentence Builder

¿En que te gustaría trabajar en el futuro?

Sentence starter	Modal verb	Infinitive structures	Connective	Verb	Adjective
En el futuro (In the future) Cuando sea mayor (When I am older)	voy a (I am going to)	ser enfermero/a (to) be a nurse ser veterinario/a (to) be a vet ser periodista (to) be a journalist	porque (because)	soy (I am)	trabajador/a (hard-working) paciente (patient) responsable (responsible) independiente (independent) organizado (organised) ambicioso (ambitious)
	me gustaría (I would like)	trabajar... (to work) en una oficina (in an office) al aire libre (outdoors) en equipo (in a team) solo/a (by myself) con niños (with children) con animales (with animals)	ya que (since)		
		tener... (to have) un trabajo creativo (a creative job) un trabajo manual (a manual job)		es (it is) sería (It would be)	variado (varied) práctico (practical) creativo (creative) emocionante (exciting) bien pagado (well-paid)

¿Qué te gustaría hacer en el futuro?

Sentence starter	Modal verb	Infinitive structures		Connective	Verb	Adjective
En el futuro (In the future) Cuando sea mayor (When I am older)	voy a (I am going to)	ser enfermero/a (to) be a nurse ser veterinario/a (to) be a vet ser periodista (to) be a journalist	tener hijos/una familia (to) have children/a family tener mi propio negocio (to) have my own business)	porque (because)	soy (I am)	trabajador/a (hard-working) paciente (patient) responsable (responsible) independiente (independent)
	me gustaría (I would like to)	ser feliz (to) be happy ser rico/a y famoso/a (to) be rich and famous)	viajar por el mundo (to) travel the world)	ya que (since)	es (it is)	variado (varied) práctico (practical) peligroso (dangerous) emocionante (exciting) bien pagado (well-paid)
	quiero (I want to)		estudiar en la universidad (to) study at uni)		sería (It would be)	

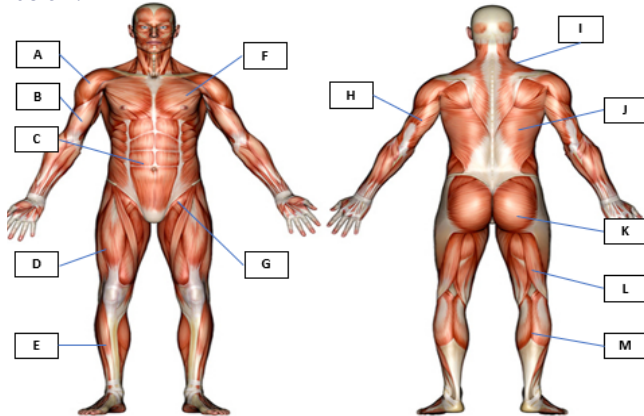
Verb Endings

Present			
	<u>ar</u>	<u>er</u>	<u>ir</u>
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

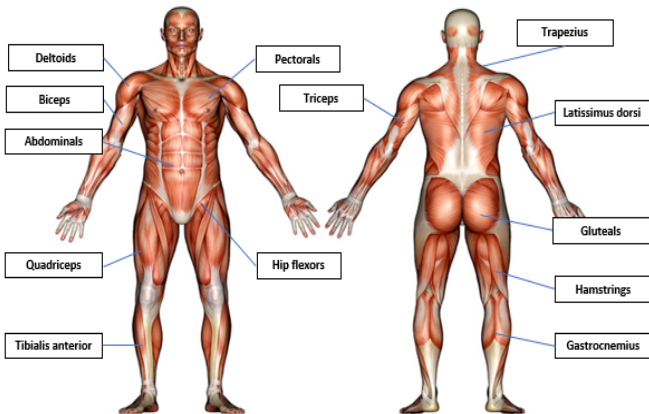
Preterite		
	<u>ar</u>	<u>er/ir</u>
I	- é	- í
You	- aste	- iste
He / She / It	- ó	- ió
We	- amos	- imos
You	- asteis	- isteis
They	- aron	- ieron

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

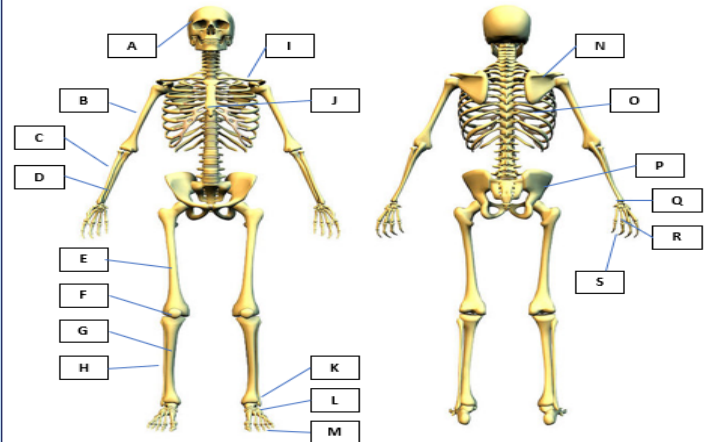
Identify parts A-M on the diagram of the muscular system below.



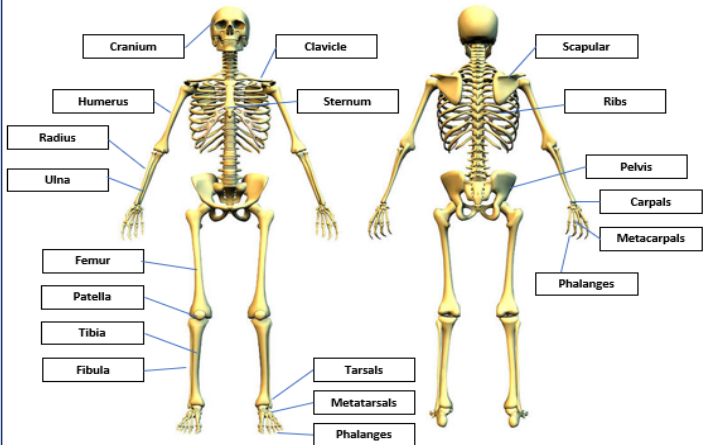
1A



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:

- Agility
- Balance
- Cardiovascular endurance
- Coordination
- Flexibility
- Muscular endurance
- Power
- Reaction time
- Maximal strength
- Static strength
- Speed

4A

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

Identify a sporting example for the following fitness components:

- Agility
- Balance
- Cardiovascular endurance
- Coordination
- Flexibility
- Muscular endurance
- Power
- Reaction time
- Maximal strength
- Static strength
- Speed

4B

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

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

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

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a template for writing or drawing. The margins are consistent on all sides.

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