



The Totteridge Academy

The best in everyone™

Part of United Learning

Autumn Term

2020-2021



Knowledge Organiser

Name:

Tutor Group:

Tutor & Room:

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

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Sherlock Holmes by Sir Arthur Conan Doyle (1892)

Key vocab:			
	1.	Justice and Judgement – Being punished and judged for your exposed actions	
	2.	Society and Class – Clear division between working and upper classes	
	3.	Women and Femininity – Clear gender roles in a patriarchal society	
	4.	Knowledge and Observation – Sherlock uses a blend of these to solve crimes	
	5.	Appearance Vs Reality – Things not always being as they originally seem	
Story		Key idea and theme	Key quotes
The Red-Headed League	6.	The character of Sherlock Holmes is established as an intelligent one who is able to use powers of deduction and observation .	Sherlock: "My life is spent in one long effort to escape from the commonplaces of existence. These little problems help me to do so." Sherlock: "It is quite a three pipe problem." Sherlock: "for strange effects and extraordinary combinations we must go to life itself." Sherlock: "I shall keep on piling fact upon fact on you until your reason breaks down under them and acknowledges me to be right."
		The character of Sherlock Holmes becomes introspective in order to solve crimes. Watson acknowledges Sherlock's ability to use reason and rationality .	Sherlock: "It is introspective, and I want to introspect." Watson: (narrator) "Then it was that the lust of the chase would suddenly come upon him." Watson: (narrator) "His brilliant reasoning power would rise to the level of intuition"
The Adventure of the Blue Carbuncle	7.	The character of Sherlock sees the difference between appearance and reality .	Sherlock: "Many a little problem will be presented which may be striking and bizarre without being criminal." Sherlock: "On the contrary, Watson, you can see everything. You fail, however, to reason from what you see." Sherlock: "They are the devil's pet baits."
		The character of Sherlock Holmes uses his observational skills as a detective in order to make a judgement on others and serve justice .	Sherlock: "My name is Sherlock Holmes. It is my business to know what other people don't know." Sherlock: "I suppose that I am committing a felony, but it is just possible that I am saving a soul." Sherlock: "It is always awkward doing business with an alias."
The Adventure of the Six Napoleons	8.	The character of Sherlock Holmes reflects on crimes he has solved and draws on the ideas of appearance Vs reality .	Sherlock: "The Press, Watson, is a most valuable institution, if you only know how to use it." Sherlock: "The affair seems absurdly trifling, and yet I dare call nothing trivial when I reflect that some of my most classic cases have had the least promising commencement."
		Other characters in the story are presented as relying on surface facts and the appearance of what could be.	Lestrade: "The possession of this trifling bust was worth more in the eyes of this strange criminal than a human life." Lestrade: "It seemed to be one of those senseless acts of hooliganism which occur from time to time." Watson: (narrator describing Holmes) "triumph in his eyes."
A Scandal in Bohemia	9.	The character of Sherlock Holmes is reinforced as the embodiment of knowledge and observation .	Sherlock: "You see, but you do not observe." Sherlock: "I am lost without my Boswell." Sherlock: "Never theorize before you have data. Invariably you end up twisting facts to suit theories instead of theories to suit facts."
		The character of Sherlock Holmes is outsmarted by Irene Adler , subverting female Victorian stereotypes.	Watson: (narrator) "To Sherlock Holmes she is always the woman" Watson: (narrator) "In his eyes she eclipses and predominates the whole of her sex..." Watson: (narrator) "And that was how [...] the best plans of Mr. Sherlock Holmes were beaten by a woman's wit." Watson: (narrator) "He was pacing the room swiftly, eagerly, with his head sunk upon his chest and his hands clasped behind him."

The Adventure of the Speckled Band	10.	The character of Watson describes Sherlock as both an eccentric one and one who is dedicated to the pursuit of the truth.	Watson: (narrator) "Working as he did rather for the love of his art than for the acquirement of wealth, he refused to associate himself with any investigation which did not tend towards the unusual, and even the fantastic. Sherlock: "When a doctor does go wrong he is the first of criminals. He has nerve and he has knowledge." Sherlock: "Violence does, in truth, recoil upon the violent, and the schemer falls into the pit which he digs for another."
The Adventure of the Greek Interpreter	11.	The character of Watson describes Sherlock as an emotionless being who favours reason and observation over emotion and passion.	Watson: (narrator) "I found myself regarding him as an isolated phenomenon, a brain without a heart, as deficient in human sympathy as he was pre-eminent in intelligence." Watson: (narrator) "His aversion to women and his disinclination to form new friendships were both typical of his unemotional character." Sherlock: "I said that he (my brother) was my superior in observation and deduction."

The Tempest by William Shakespeare (1611)

Key vocab:	
1.	Power - the capacity or ability to direct or influence the behaviour of others or the course of events.
2.	Colonisation - the process of settling among and establishing control over the native people of an area.
3.	Slavery - the practice or system of owning slaves and the state of being a slave.
4.	Usurp - take a position of power or importance illegally or by force.
5.	Justice - fairness in the way people are dealt with.
When?	Key idea
Act 1	1. Exploration is exposed as dangerous.
	2. Prospero is exposed as a victim of usurpation .
	3. Prospero is exposed as a powerful coloniser and slave master .
	4. Justice is imposed by Prospero .
Key quotes	
1.1 Boatswain (to the mariners) - "When the sea is. Hence! What cares these roarers for the name of king?" 1.1 Gonzalo - "Our case is miserable" 1.1 Mariners - "Mercy on us! We split, we split! - Farewell, my wife and children! - Farewell, brother! - We split, we split, we split!"	
1.2 Prospero (to Miranda) - "Thy father was the Duke of Milan and a prince of power." 1.2 Prospero (to Miranda) - "By foul play, as thou sayst, were we heaved thence." 1.2 Prospero (to Miranda) - "By being so retired, o'erprized all popular rate, in my false brother awaked an evil nature." 1.2 Prospero (to Miranda) - "There they hoist us to cry to th' sea that roared to us."	
1.2 Ariel (to Prospero) - "All hail, great master! Grave sir, hail!" 1.2 Prospero (to Ariel) - "Ariel, thy charge exactly is performed. But there's more work." 1.2 Prospero (to Ariel) - "I will rend an oak and peg thee in his knotty entrails till thou hast howled away twelve winters." 1.2 Prospero (to Caliban) - "Thou poisonous slave, got by the devil himself upon thy wicked dam, come forth!" 1.2 Caliban (to Prospero) - "This island's mine, by Sycorax my mother, which thou takest from me." 1.2 Prospero (to Caliban) - "If you neglect my orders or do them grudgingly, I'll double you up with pains and cramps."	
1.2 Prospero (to Miranda) - "I find my zenith doth depend upon a most auspicious star." 1.2 Prospero (to Ariel) - "Hast thou, spirit, performed to point the tempest that I bade thee?" 1.2 Prospero (aside) - "It goes on, I see, as my soul prompts it."	

English 3 of 3

When?	Key idea	Key quotes
Act 2	5. The island offers new possibilities.	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."
	6. Power is exposed as consuming through Antonio and Sebastian .	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."
	7. Prospero is omnipotent and omniscient.	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."
	8. The relationship between colonisers and the colonised .	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 (singing) - "Freedom, high-day, freedom."
Act 3	9. Ferdinand proves his love to Miranda .	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."
	10. Power is exposed as corruptive through the comedic antics of Caliban, Stephano and Trinculo .	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."
	11. Caliban is portrayed as a victim of colonisation and slavery .	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."
	12. Prospero utilises his slave to exert revenge for his usurpation .	3.3 Ariel (monologue) - "You fools, I and my fellows are ministers of fate." 3.3 Ariel (monologue) - "I have made you mad...men hang and drown their proper selves." 3.3 Ariel (monologue) - "You three from Milan did supplant good Prospero." 3.3 Ariel (monologue) - "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 mudded." 3.3 Gonzalo - "Their great guilt, like poison."
Act 4	13. Views about women in the Victorian era are reinforced by the writer.	4.1 Prospero (to Ferdinand) - "I ratify this my rich gift." 4.1 Prospero (to Ferdinand) - "But if thou dost break her virgin knot... discord shall bestrew the union of your bed."
	14. Order is restored as Prospero quells the plot on his life.	4.1 Prospero (to Ariel) - "A devil, a born devil on whose nature nurture can never stick." 4.1 Caliban - "If he awake, from toe to crown he'll fill our skins with pinches." 4.1 Prospero (to Ariel) - "At this hour lie at my mercy all mine enemies."
Act 5	15. Prospero is humanised by Ariel .	5.1 Ariel (to Prospero) - "If you now beheld them, your affections would become tender." 5.1 Prospero (to Ariel) - "The rarer action is in virtue than in vengeance." 5.1 Prospero - "I'll drown my books."
	16. Prospero's power as Duke and justice is restored.	5.1 Prospero - "Require my dukedom of thee, which perforce, I know, thou must restore." 5.1 Prospero - "I do forgive thee, unnatural though thou art." 5.1 Prospero (to Ariel) - "I shall miss thee, but yet thou shalt have freedom." 5.1 Trinculo - "If these be true spies which I wear in my head, here's a goodly sight." 5.1 Prospero - "And in the morn I'll bring you to your ship and so to Naples."
Epilogue	17. Prospero seeks forgiveness.	Prospero - "Release me from my bands with the help of your good hands." Prospero - "Let your indulgence set me free."

Indices		
Bases are the same	Multiplying add the powers, dividing subtract	$w^3 \times w^4 = w^{3+4} = w^7$ $w^3 \div w^4 = w^{3-4} = w^{-1} = \frac{1}{w}$
Base to the power, all to the power	Multiply the indices	$(w^3)^2 = w^6$
Base to the power of zero	Equals 1	$w^0 = 1$
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	Factors of 12: 1, 2, 3, 4, 6, 12 Multiples of 12: 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 x 3 x 3 x 5
Product of its primes	Product means 'x', 2, 3, 5, 7 don't forget your primes	
Find the HCF or LCM of large numbers	Use Venn diagram	
HCF	Multiply the overlap	
LCM	Multiply them all	

Fractions		
Multiplying fractions	Top top bottom bottom	$\frac{2}{3} \times \frac{10}{21} = \frac{20}{63}$
Always make your life simple	Simplify first	
Dividing fractions	Times by the reciprocal	$\frac{3}{8} \div \frac{7}{11} = \frac{3}{8} \times \frac{11}{7} = \frac{33}{56}$
Adding fractions	Find the LCM	$\frac{7}{12} + \frac{2}{9} = \frac{7 \times 3}{36} + \frac{2 \times 4}{36} = \frac{21}{36} + \frac{8}{36} = \frac{29}{36}$
Comparing fractions	Find the LCM	Which is bigger? $\frac{4}{5}$ or $\frac{5}{6}$? LCM = 30 $\frac{24}{30}$ vs $\frac{25}{30}$ → 30 is bigger
Significant Figures		
First significant figure	Can never be zero	Round to 2sf 0.006333 → 0.0063
Estimation	1SF	Estimate $\frac{12.7 + 4.2^2}{0.53} \rightarrow \frac{12.7 + 4.2^2}{0.5} \rightarrow \frac{26}{0.5} = 52$

Solving Linear Equations		
Successful elimination	With an inverse operation	Solve $30x = 5$ $\frac{30x}{30} = \frac{5}{30}$ $x = \frac{1}{6}$
If you do it on 1 side	Do it to the other	
x on both sides	Get rid of the smallest 'x'	Solve $11 - 3x = 2x + 1$ $11 - 3x - 2x = 2x + 1 - 2x$ $11 - 5x = 1$ $11 - 5x - 11 = 1 - 11$ $-5x = -10$ $\frac{-5x}{-5} = \frac{-10}{-5}$ $x = 2$
x on both sides and brackets	Expand the bracket first	Solve $3(x+4) = 5(2x-1)$ $3x + 12 = 10x - 5$
Solving Linear Equations		
Plotting coordinates: Start at the Origin then go up/down the	Origin x axis y axis	Plot the coordinate (2, -3)
Midpoint of coordinates	Add them up and half it	Find the midpoint of (3, 4) and (-2, -8) $\frac{3 + (-2)}{2} = \frac{1}{2}$ $\frac{4 + (-8)}{2} = \frac{-4}{2} = -2$ Midpoint: (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 x width OR Base x Height	The area of this shape is 77cm ² . 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!

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	Relative to a light source, in which direction do light waves travel?	In all directions away from the light source
7	What type of wave is light?	Transverse
8	What is a ray diagram?	A way of drawing how light travels
9	In a ray diagram, how must light be drawn?	Straight line, arrow in the middle, no gaps
10	What four things can occur when light meets an object?	Transmission, reflection, refraction, absorption
11	What occurs in transmission?	The wave goes through the object
12	What occurs in reflection?	The wave changes direction away from the object
13	What occurs in refraction?	The wave passes through into the object but changes direction
14	What is absorption?	The wave finishes and heats up the object
15	In what process do plants absorb light?	Photosynthesis
16	Give a word equation for photosynthesis	Carbon dioxide + water → glucose + oxygen
17	What is a transparent object?	One that allows light to be transmitted through
18	What is an opaque object?	One which does not allow light to be transmitted through it; it absorbs the light
19	What is a translucent object?	One which absorbs some light, and scatters the rest as it is transmitted through the material
20	What is a "normal"?	A line drawn at right angles to a surface
21	What is the incident ray?	The ray of light approaching a surface
22	What is the reflected ray?	The ray of light reflected away from a surface
23	What is a medium?	The space or material which a light wave is travelling in
24	Why does refraction occur?	Light travels at different speeds in different mediums
25	How does the density of the medium affect the speed of light?	The denser the medium, the slower the light
26	Which organ is responsible for us being able to see?	The eye
27	In the eye, what is the function of the pupil?	Allows light to pass into the eye

28	In the eye, what is the function of the lens?	To focus light onto the retina
29	In the eye, what is the function of the retina?	Converts light rays into messages the brain can interpret
30	What causes long and short sightedness?	The lens not focusing light properly
31	Name the seven colours in visible light	Red, orange, yellow, green, blue, indigo, violet
32	What is a colour filter	An object that absorbs some colours and transmits others
33	What gives objects their colour?	They absorb some colours and reflect others; we only see the reflected colours
34	What is a star?	A large sphere of very hot gas in space that emits light
35	What is the Sun?	The star nearest the Earth
36	What is an orbit?	The path an object takes around another object in space
37	What is a planet?	An object that orbits a star
38	What is the solar system?	A collection of planets and other objects orbiting the Sun
39	What is a galaxy?	A group of billions of stars
40	Name the planets in our solar system in order of distance from the Sun	Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
41	What is mass?	The amount of material contained in an object
42	What is the symbol for mass?	m
43	What is the unit and unit symbol for mass?	Kilograms, kg
44	What is a force?	A push, pull or twist
45	What is a field?	A field allows forces to act without physical contact
46	What is a gravitational field?	The field around an object that pulls other objects towards it
47	What is gravitational field strength?	The force experienced by 1kg of mass in that field
48	What is the gravitational field strength on Earth?	about 10N/kg
49	What is the unit and unit symbol for gravitational field strength?	Newtons per kilogram, N/kg
50	What is weight?	The force exerted on an object by a gravitational field
51	What is the symbol for weight?	W
52	What is the unit and unit symbol for weight?	Newtons, N
53	What is the formula that relates weight, mass and gravitational field strength?	$W = m \times g$
54	What is the Earth's axis?	An imaginary straight line from the North pole to the South about which the Earth rotates
55	What causes day and night?	The rotation of the Earth on its axis
56	What is the time period of one rotation of the Earth on its axis?	24 hours

57	What causes seasons?	The Earth's tilted axis and its rotation around the Sun
58	What is the time period of one orbit of the Earth around the Sun?	365 days
59	What is the equator?	An imaginary line drawn around the middle of the Earth
60	What two things are affected by the seasons?	The temperature and length of the day
61	If the North pole is tilted towards the Sun, what affect will this have on the Northern hemisphere?	Temperature is higher, days are longer
62	When it is Winter in the Northern hemisphere, what season is it in the Southern hemisphere?	Summer
63	If the North pole is tilted towards the Sun, what affect will this have on the Southern hemisphere?	Temperature is lower, days are shorter
64	Why is it hotter in the hemisphere which is pointed to the Sun?	The sunlight is more concentrated
65	What is a light year?	The distance travelled by light in a year

Unit 2: Periodic table

67	What are atoms made of?	Protons, neutrons and electrons
68	What is found in the nucleus of an atom?	Protons and neutrons
69	Where are the electrons in an atom?	Orbiting the nucleus in shells
70	What is between the electrons and the nucleus?	Empty space
71	What is an element?	A substance made of one type of atom only
72	What is a compound?	Two or more different atoms chemically bonded together
73	What is a mixture?	When different substances are together but not chemically bonded
74	What is the periodic table	An organised table showing the different elements
75	Who first prepared the modern periodic table?	Mendeleev
76	Why did Mendeleev put some elements together in groups?	They had similar properties
77	Why did Mendeleev leave gaps in his periodic table?	For undiscovered elements
78	What is a group in the periodic table?	The vertical columns
79	What is a period in the periodic table?	The horizontal rows
80	What does the group an element is in tell you about its electrons?	How many it has in the outer shell
81	What does the period an element is in tell you about its electrons?	How many shells it has
82	What is charge?	A property of particles that can be positive or negative. Other particles have no charge (neutral)
83	What happens when the same charges come into contact?	They repel
84	What happens when opposite charges come into contact?	They attract

85	Name the three particles that make up atoms (subatomic particles)	Protons, neutrons, electrons
86	State the relative charges of the subatomic particles	Protons: +1, neutrons: 0, electrons: -1
87	What is the atomic number of an atom?	The number of protons in an atom
88	What is the mass number of an atom?	The number of protons + the number of neutrons in an atom
89	Why is the number of electrons in an atom equal to the number of protons?	As their charges cancel out
90	How do you calculate the number of neutrons in an atom?	Mass number - atomic number
91	How many electrons can go in the first shell?	2
92	How many electrons can go in the second and third shells?	8
93	What is a property?	A characteristic of something
94	What are the two main types of element?	Metals and non-metals
95	Give three typical properties of metals	Conduct electricity, conduct heat, malleable, ductile, high melting/boiling points, strong
96	Give two typical properties of non-metals	Electrical insulators, heat insulators, low melting and boiling points, weak, brittle
97	What does electrical conductor mean?	Allows electricity to flow through it
98	What does electrical insulator mean?	Does not allow electricity to flow through it
99	What does heat conductor mean?	Allows heat to flow through it
100	What does heat insulator mean?	Does not allow heat to flow through it
101	What does malleable mean?	Easy to bend
102	What does brittle mean?	Shatters easily
103	What does strong mean?	Can hold a lot of weight
104	What does weak mean?	Can't hold a lot of weight
105	What does ductile mean?	Easy to stretch
106	If something has a high melting/boiling point, what state is it at room temperature?	Solid
107	If something has a low melting/boiling point, what state is it at room temperature?	Liquid or gas
108	What does hard mean?	Difficult to scratch
109	What does soft mean?	Easy to scratch
110	What does reactive mean?	Reacts easily with other substances
111	What does unreactive mean?	Does not react easily with other substances
112	What does magnetic mean?	It is attracted to magnets
113	In which group are the alkali metals found?	1
114	What is easier to separate, a mixture or a compound?	A mixture

115	When different substances are mixed together, what happens to their properties?	They are retained (they do not change)
116	When different substances chemically bond together, what happens to their properties?	They change
117	What are reactants?	The substances you start with in a reaction
118	What are products?	The substances you end up with in a reaction
119	When naming a compound with a metal and a non-metal, which comes first in the name?	The metal
120	If a compound has a metal and a non-metal, what is its suffix?	...ide
121	What is a chemical formula?	A way of showing which atoms are in a substance
122	What is the conservation of mass?	That atoms cannot be created or destroyed
123	In a chemical reaction, what happens to the atoms?	They are rearranged
124	In terms of chemical bonds, what happens in a chemical reaction?	Some are broken and others are made
125	How could you tell if a chemical reaction has taken place?	Temperature change, colour change, gas formed, solid formed
126	If mass appears to be lost in a reaction, what has happened?	A gas has been produced which escapes
127	If mass appears to be gained in a reaction, what has happened?	Atoms of a gas from the air have been added
128	When magnesium reacts with oxygen, why does the mass increase?	Atoms of oxygen from the air have been added
129	When magnesium reacts with acid, why does the mass decrease?	A gas is produced which escapes
130	What is a physical change?	A change of state or dissolving
131	Why is a change of state not a chemical change?	No new substances are made
132	What name is given to the group 1 elements?	Alkali metals
133	Why are alkali metals called alkali metals?	They are metals that react with water to form alkalis
134	Why are alkali metals stored in oil?	To stop them reacting with oxygen
135	Give four properties of alkali metals	Very reactive, low density, soft, relatively low melting/boiling point
136	How does the reactivity of alkali metals change down the group?	Increases
137	How does the melting and boiling point of alkali metals change down the group?	Decreases
138	What are the products of a reaction between an alkali metal and water?	Form a hydroxide and hydrogen
139	What name is given to the group 7 elements?	The halogens
140	Give four properties of the halogens	Toxic, form coloured vapours, low melting and boiling point, reactive
141	How does the reactivity of halogens change down the group?	Decreases
142	How does the melting and boiling point of halogens change down the group?	Increases

1. Comment voyagez-vous? – How do you travel?

Comment voyagez-vous au collège/pour aller en vacances? – How do you travel to school/to go on holiday?
Comment préférez-vous voyager? – how do you prefer to travel?

Je prends... - I take...	la voiture/la voiture électrique/à essence – car/electric car/petrol car	parce que c'est – because it is...	rapide/lent – fast/slow
J'utilise...I use...	le vélo - bike	plus/moins – (more/less)	pratique – practical
J'aime prendre...- I like to take	le car- coach		écologique - eco
	le bus - bus		difficile/facile – difficult/easy
	le métro - tube		confortable/relaxant – comfortable/relaxing
	le train - train		bon pour la santé – good for your health
Je préfère... - I prefer	les transport en commun – public transport		cher - expensive
	le bateau - boat		stressant - stressful
	l'avion - aeroplane		polluant - polluting

J'utilise le bus parce que c'est **moins** cher que le train. – I use the bus because it's less expensive than the train.
Je préfère la voiture parce que c'est **plus** confortable que le métro. – I prefer the car because it's more comfortable than the tube.

L'avion est **le plus** rapide/cher/relaxant pour aller en vacances. – The aeroplane is the quickest/most expensive/most relaxing to go on holiday.
La voiture à essence est **la moins** écologique pour aller au collège. – The petrol car is the least eco to go to school.

3. Mes vacances de rêve – my dream holiday

Je voudrais / J'aimerais...	faire un safari/de la plongée/du trekking/de l'escalade/du camping - to go on a safari/go diving/go trekking/go climbing/go camping...	en Afrique/aux Seychelles/aux Caraïbes/en Brésil/dans les montagnes de l'Himalaya – in Africa/the Seychelles/the Caribbean/Brazil/the Himalayas
I would like to...	observer les animaux sauvages/rencontrer des extraterrestres/relaxer – observe wild animals/meet extraterrestrials/relax	dans la forêt tropicale/dans l'espace/sur une île déserte – in the tropical forest/in space/on a deserted island
	explorer le jungle/des planètes/ les plages – explore the jungle/planets /the beaches	
	voyager dans... – travel in... rester dans... – stay in...	un vaisseau spatial/un bateau croisière – space ship/cruise ship une cabane dans la forêt/un hôtel de luxe/une tente – a hut/luxury hotel/tent

2. Mes vacances – my holidays

Où allez-vous en vacances normalement? – where do you normally go on holiday?	Je vais en France/en Maroc/en Algérie/en Espagne/en Grèce/en Turquie/en Croatie/en Jamaïque/au Portugal/au Japon/au Sénégal/aux États-Unis/à l'île Maurice... – I go to France/Morocco/Algeria/Spain/Portugal/Greece/Turkey/Croatia/Jamaica/Portugal/Japan/Senegal/USA/Mauritius...
	Je reste en Grande-Bretagne – I stay in the UK
	avec mes ami(e)s/ma famille – with my friends/my family
Qu'est-ce que vous faites en vacances – what do you do on holiday?	Je visite le musée/le parc d'attractions – I visit the museum/the amusement park
	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
	parce que c'est relaxant/divertissant/rigolo/passionnant/ennuyeux – because it's relaxing/enjoyable/funny/exciting/boring
Où êtes-vous allé(e) en vacances l'an dernier? - where did you go on holiday last year?	Je suis allé(e)/On est allés – I went to.../We went to...
Qu'est-ce que vous avez fait? – What did you do?	On est restés dans un hôtel de luxe/une tente/une caravane/une cabane/une auberge de jeunesse – we stayed in a luxury hotel/tent/caravan/cabin/youth hostel
	J'ai visité/fait du shopping/pris des photos/nagé/bronzé/joué – I visited/went shopping/took photos/swam/sunbathed/played
	C'était relaxant/divertissant/rigolo/passionnant/ennuyeux – it was relaxing/enjoyable/funny/exciting/boring

4. La télé/YouTube

Les émissions musicales...tu les aimes? Music programmes...do you like them?	les comédies [f]	comedies	amusant(e)s	entertaining
	les émissions musicales [f]	music programmes		
bien sûr/surtout/pas du tout/pas tous [m]/pas toutes [f] of course/above all (especially)/not at all/not all	les émissions de télé-réalité [f]	TV reality shows	intéressant(e)s	interesting
	les émissions de sport [f]	sports programmes		
J'aime les comédies parce que je les trouve très/un peu/assez drôle I like comedies because I find them very/a little/quite funny	les dessins animés [m]	cartoons	divertissant(e)s	enjoyable
	les jeux télévisés [m]	game shows	éducatifs(-ives)	educational
Je n'aime pas les émissions de télé-réalité car je les trouve enfantines I don't like TV reality shows as I find them childish	les documentaires [m]	documentaries	ennuyeux(-euses)	boring
	Je les adore	I love them	enfantin(e)s	childish
	Je les aime (bien/beaucoup)	I like them (a lot)	nuls/nulles	rubbish
	Ça dépend	That depends		
	Je ne les aime pas	I don't like them		
	Je les déteste	I hate them		

5. La musique

Qu'est-ce que tu aimes comme musique? What music do you like?	le rock/le pop/le classique/le rap/le hip-hop/le reggae rock/pop/classical/rap/hip-hop/reggae	ça me fait danser	that makes me want to dance
		ça me fait dormir	that puts me to sleep
J'adore le hip-hop. Et toi? I love hip-hop. How about you?	le rythme/la mélodie/la voix (du chanteur/de la chanteuse) est original(e) – the rhythm/the melody/the singer's voice is original	ça me fait rêver	that inspires me
Ce que j'aime, c'est écouter différents types de musique. What I like, is to listen to different types of music	les paroles [f] sont originales/déprimantes/modernes les sentiments [m] sont originaux/déprimants/modernes the words/the sentiments are original/depressing/modern	ça me rend heureux [m]/heureuse [f]	that makes me happy
		ça me rend triste	that makes me sad
Je viens d'écouter... I have just listened to...	entraînant (e) (s)/rapide (s)/lent (e) (s) lively/fast/slow	ça me calme	that calms me

6. Le cinéma

Quel est le dernier film que tu as vu? (informal) / Quel est le dernier film que vous avez vu ? What's the latest film you saw?	Je l'ai adoré parce que c'était drôle/passionnant/triste/émouvant I loved it because it was funny/exciting/sad/moving
J'ai vu un film d'horreur/d'action/de science-fiction/d'arts martiaux/romantique/comique/à suspense I saw a horror film/an action film/a sci-fi film/a martial arts film/a romantic film/a funny film/a thriller	Je l'ai aimé (bien/beaucoup) - I liked it (a lot)
qui s'appelait... – which was called...	Je ne l'ai pas aimé - I didn't like it
en streaming/sur mon portable/ à la télé/chez moi/chez mon ami (e)/au cinéma streamed/on my mobile or laptop/on the TV/at my house/at my friend's house/at the cinema	Je l'ai détesté - I hated it
Dans le film, il y a deux personnages principaux: le héros/la héroïne et son pire ennemi In the film, there are two main characters: the hero and his/her worst enemy	Je (ne) le recommande (pas) - I (don't) recommend it
L'action se déroule à Paris/en Chine/en espace/dans un château The action takes place in Paris/in China/in space/in a castle	Le weekend dernier je suis allé(e) au cinéma, j'ai vu /regardé ... Last weekend I went to the cinema, I saw/watched...
	Le weekend prochain je vais aller au cinéma, je vais voir/regarder Next weekend I am going to the cinema, I'm going to see/watch

French
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7. Les livres – books

Quel est le dernier livre que tu as lu ? (informal)/Quel est le dernier livre que vous avez lu ? What's the latest book you read?	J'ai lu un roman d'aventure/un roman de guerre/un roman historique/une (auto)biographie /la littérature non-romanesque I read an adventure novel/a war novel/a historical novel/an (auto)biography/non-fiction
J'aime lire/Je n'aime pas lire/Je vais lire... I like reading/I don't like reading/I am going to read...	Je préfère les romans de science-fiction/d'amour/d'horreur/fantastiques/comiques I prefer sci-fi novels/love-stories/horrors/fantasy/funny novels

9. On va où ? – Where shall we go ?

On se retrouve... We meet/let's meet	chez moi/chez toi – at my house/at your house
	au stade/sur la place next to the stadium/on the square
	devant le musée/au bowling in front of the museum/the bowling alley
	derrière le cinéma/à la piscine behind the cinema/at the swimming-pool
	en face du parc – opposite the park

10. Pourquoi tu ne peux pas sortir ? – why can't you come out ?

Je m'excuse, je ne peux pas parce que... I am sorry, I can't because...	je dois - I have to	faire mes devoirs – do my homework
		ranger ma chambre – tidy up my room
		promener le chien – walk the dog
		me laver les cheveux – wash my hair
		sortir avec mes parents – go out with my parents
		garder mon petit frère – look after my brother
	je n'ai pas d'argent – I don't have any money	

French
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8. Et si on sortait ? – Shall we go out ?

Tu veux? Do you want...?	aller au bowling/à la piscine? to go to the bowling alley/swimming-pool?
Tu voudrais? Would you like?	aller au centre commercial/au parc/au cinéma? to go to the shopping centre/park/cinema?
	aller au musée/au resto/ au centre sportif? to go to the museum/restaurant/sport centre?
	aller faire du shopping?/acheter des vêtements? to go shopping?/to buy clothes
	jouer au foot/basket? play football/basketball
	regarder un film/voir un match de foot? watch a movie/see a football match?
	faire de la natation/du bowling/du skate? go swimming/bowling/skate-boarding
Tu veux...?	Do you want...?
Je veux	I want...
Tu voudrais?	Would you like...?
Je voudrais...	I would like...
Je peux	I can
On se retrouve où?	Where do we meet up?

11. On achète des vêtements – let's buy some clothes

Je voudrais essayer – I would like to try on	les baskets – (the) trainers	rouge(s) – red	Avez-vous une jupe en bleu/rouge/vert – do you have a skirt in blue/red/green?
	les bottes - boots	rose(s) – pink	Avez-vous une robe en coton / laine - do you have a dress in cotton/wool?
	la veste - jacket	orange – orange	Je voudrais une ceinture/des bottes en cuir – I would like a leather belt/leather boots
	le manteau - coat	jaune(s) – yellow	La taille est trop grande/petite, avez-vous une taille plus petite/grande? – The size is too big/small, do you have a smaller/bigger size?
	le jean - jeans	vert(e)(s) – green	Est-ce que le t-shirt est en solde? Is the t-shirt on sale?
	le pantalon - trousers	bleu(e)(s) – blue	Je voudrais échanger/retourner les chaussettes, j'ai le ticket de caisse – I would like to exchange/return the socks, I have the receipt
	la jupe - skirt	gris(e)(s) – grey	Où est le miroir/la cabine d'essayage/la caisse s'il vous plaît? – where is the mirror/changing room/cashier please?
	la robe - dress	brun(e)(s) / marron – brown	C'est combien, les chaussures? – How much are the shoes?
	le haut - top	noir(e)(s) – black	un t-shirt bleu/rayé/à pois/à fleurs – a blue/stripy/spotted/flowery t-shirt
le pull - jumper	blanc(s) / blanche(s) – white	une chemise bleue/rayée/à pois/à fleurs – a blue/stripy/spotted/flowery shirt	
Je voudrais acheter – I would like to buy	un chapeau – (a) hat		des baskets bleus/rayés/à pois/à fleurs – blue/stripy/spotted/flowery trainers
	une casquette – baseball cap		des chaussettes bleues/rayées/à pois/à fleurs – blue/stripy/spotted/flowery socks
	un collant - tights		
	une ceinture – a belt		
	une écharpe - scarf		
	une montre - watch		

12. On fait les courses – let's do the grocery shopping

Ma mère / mon père m'a demandé de faire les courses – my mother/father asked me to do the shopping	
Je vais au supermarché/marché – I'm going to the supermarket/the market	
Je vais faire les courses avec mes parents – I'm going to do the shopping with my parents	
Je dois/vais/voudrais acheter – I have to/am going to/would like to buy...	du pain – some bread
	une baguette – a baguette
	du riz – some rice
On doit/va/voudrait acheter – we have to/are going to/would like to buy...	du fromage – some cheese
	du yaourt – some yoghurt
	un poulet – a chicken
	du jambon – some ham
	des légumes (m) – vegetables
	des fruits (m) – fruit
	des pâtes (f) - pasta
	des oeufs (m) - eggs
	une tablette de chocolat – a bar of chocolate
	un paquet de chips – a packet of crisps
	une bouteille de coca/vin/bière/de l'eau – a bottle of Coke/wine/beer/water
	une boîte de soupe – a tin of soup

French
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1. Las preguntas – the questions

PAST time frame	¿Adónde fuiste de vacaciones? ¿Cómo fuiste de vacaciones? ¿Con quién fuiste de vacaciones? ¿Cómo fue? ¿Qué hiciste? ¿Te gustó/gustaron?	Where did you go on holiday? How did you go on holiday? Who did you go on holiday with? How was it? What did you do? Did you like it/them?
PRESENT time frame	¿Adónde vas de vacaciones? ¿Cómo vas de vacaciones? ¿Con quién vas de vacaciones? ¿Cómo es? ¿Qué hace? ¿Te gusta/gustan?	Where do you go on holiday? How do you go on holiday? Who do you go on holiday with? How is it? What do you do? Do you like it/them?
FUTURE time frame	¿Adónde irías de vacaciones? ¿Cómo fuiste de vacaciones? ¿Con quién fuiste de vacaciones? ¿Cómo sería? ¿Qué harías? ¿Te gustaría/gustarían?	Where would you go on holiday? How would you go on holiday? Who would you go on holiday with? How would it be? What would you do? Would you like it/them?

2. Time markers + Key verbs

PAST time frame	la semana pasada el año pasado hace X años las vacaciones pasadas	last week last year X years ago last holiday	fui fuimos	I went we went
PRESENT time frame	normalmente generalmente usualmente por lo general	normally generally usually in general	voy vamos	I go we go
FUTURE time frame	la semana próxima el año próximo en el futuro las vacaciones próximas	next week next year in the future next holiday	iría iríamos	I would go we would go
			sería	it would be

3. ¿Adónde? - Where

PAST time frame	fui fuimos	I went we went	a - to	Escocia España Francia Gales Grecia Inglaterra Irlanda Italia	Scotland Spain France Wales Greece England Ireland Italy
PRESENT time frame	voy vamos	I go we go			
FUTURE time frame	iría iríamos	I would go we would go			

4. ¿Cómo? – How?

PAST time frame	fui fuimos	I went we went	en by	avión autobús autocar barco bicicleta coche metro tren	plane bus coach boat bicycle/bike car tube/underground train
PRESENT time frame	voy vamos	I go we go			
FUTURE time frame	iría iríamos	I would go we would go			
			a pie	walking/by foot	

5. ¿Por qué? – Why?

Porque Because	es it is	un poco bastante muy demasiado	a bit quite very too	barato caro cómodo incómodo lento limpio rápido seguro	cheap expensive comfortable uncomfortable slow clean fast safe
Ya que As / since	no es it is not				

Spanish
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6. ¿Cón quién? – who with?

PAST time frame	fui fuimos	I went we went	con with	mi familia mis amigos mis padres mi clase mi novio mi novia mi mejor amigo/a	my family my friends my parents my class my boyfriend my girlfriend my best friend
PRESENT time frame	voy vamos	I go we go			
FUTURE time frame	iría iríamos	I would go we would go			

7. Las actividades – the activities

PAST time frame	Descansé en la playa. Monté en bicicleta. Nadé en el mar. Saqué fotos. Tomé el sol. Visité monumentos. Bebí una limonada. Comí paella. Escribí SMS. Salí con mi familia	I relaxed on the beach. I rode my bike. I swam in the sea. I took photos. I sunbathed. I visited monuments. I drank a lemonade. I ate paella. I wrote texts. I went out with family.
PRESENT time frame	Descanso en la playa. Monto en bicicleta. Nado en el mar. Saco fotos. Tomo el sol. Visito monumentos. Bebo una limonada. Como paella. Escribo SMS. Salgo con mi familia	I relax on the beach. I ride my bike. I swim in the sea. I take photos. I sunbathe. I visit monuments. I drink a lemonade. I eat paella. I write texts. I go out with family.
Infinitive form	descansar – montar – nadar – sacar – tomar – visitar beber – comer escribir – salir	

8. ¿Qué harías para tus vacaciones ideales? What would you do for your ideal holidays?

FUTURE time frame	Me encantaría Me gustaría	I would love I would like	ir to go	+ country + who with
	Iría Iríamos	I would go we would go		
	Viajaría Viajaríamos	I would travel we would travel		+ transport
	Me encantaría Me gustaría	I would love I would like		+ Infinitive form of the verb

9. Adjetivos para justificar opiniones – adjectives to justify opinions

PAST time frame	(no) fue It was (not)	un poco a bit	divertido. educativo. emocionante. entretenido. estupendo. fenomenal. flipante. genial. guay. horrible. horroroso. raro.	fun. educational. exciting. entertaining. brilliant. fantastic. awesome. great. cool. horrible. terrible. weird.
PRESENT time frame	(no) es It is (not)	bastante quite		
FUTURE time frame	(no) sería It would (not) be	muy very		
		demasiado too		

10. Palabras útiles – useful words

primero luego más tarde después también además pero sin embargo	firstly then later afterwards also furthermore but however	ya que puesto que incluso si el primer día (on) el último día (on) otro día por la mañana por la tarde	as/since since even if/although the first day the last day another day in the morning in the afternoon
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11. ¿Te gustaría salir conmigo? – Would you like to go out with me?

¿Quieres Do you want...	ir a la bolera/a la piscina? to go to the bowling alley/swimming-pool?
	ir al centro comercial/al parque/al cine? to go to the shopping centre/park/cinema?
¿Te gustaría... Would you like...	ir al museo/al restaurante/ al polideportivo? to go to the museum/restaurant/sport centre?
	ir de compras/hacer las compras? to go shopping?
	jugar al fútbol/baloncesto/balonmano? play football/basketball/handball?
	ver una película/un partido de fútbol? watch a movie/a football match?

12. ¿Dónde quedamos? - Where do we meet up?

Quedamos We meet	en mi casa/en tu casa – at my house/at your house
	al lado del estadio/de la plaza next to the stadium/the square
	delante del museo/de la bolera in front of the museum/the bowling alley
	detrás del cine/de la piscina behind the cinema/the swimming-pool
	enfrente del parquet – opposite the park

13. ¿Por qué no puedes salir? - Why can't you go out?

Lo siento, no puedo porque...	tengo que I have to	hacer mis deberes – do my homework
		ordenar mi dormitorio – tidy up my room
I am sorry, I cannot because..		pasear al perro – walk the dog
		lavarme el pelo – wash my hair
		salir con mis padres – go out with my parents
		cuidar a mi hermano – look after my brother
		no tengo dinero – I do not have money
		no tengo tiempo – I do not have time

14. ¿Te gustaría ir de compras? - Would you like to go shopping?

Me gustaría I would like	comprar to buy	un vestido – a dress un traje – a suit un jersey – a jumper un sombrero – a hat un cinturón – a belt	blanco - white negro - black amarillo - yellow naranja - orange verde - green azul - blue marrón - brown	
		una falda – a skirt una camiseta – a t-shirt una chaqueta – a blazer una corbata – a tie	blanca - white negra - black amarilla - yellow naranja - orange verde - green azul - blue marrón - brown	
		unos pantalones unos vaqueros	some trousers some jeans	blancos - white negros - black amarillos - yellow naranjas - orange verdes - green azules - blue marrones - brown
Quiero I want	probar to try	unas zapatillas unas botas	some shoes some boots	blancas - white negras - black amarillas - yellow naranjas - orange verdes - green azules - blue marrones - brown

15. ¿Cuánto cuesta? - How much is it?

¿Cuánto – how much	Cuesta - costs	El vestido rojo? The red dress?	
El vestido rojo The red dress		diez – 10 quince – 15 veinete – 20 treinta – 30	euros – euros

Background	
1. Coastlines are dynamic changing landscapes, which are affected by the action of the waves.	
2. Waves can have differing features; these features can influence the processes and landforms which may develop. (A)	
3. Destructive waves can erode the coastline. (B)	
4. Through erosion a number of distinctive coastal features can form. (D, E, F)	
5. Further processes act on the coastline, leading to material being transported along the coastline. (C)	
6. This material will eventually be deposited leading to the formation of landforms such as spits. (G)	
7. Coastal erosion can impact the landscape and people.	
8. Different strategies are used to reduce erosion. (H)	
9. Often these strategies can be controversial. (I)	

A Wave features	
Swash	Movement of a wave up the beach. The direction is dependent upon the prevailing (common) wind direction.
Backwash	Movement of a wave back down the beach, this happens at 90° due to gravity.
Constructive wave	Have a strong swash and weak backwash; they cause deposition.
Destructive wave	Have a weak swash and strong backwash; they cause erosion.
Fetch	The distance a wave has travelled.

B Types of erosion – wearing away of rock	
Hydraulic action	Waves compress pockets of air in cracks in a cliff, causing the crack to widen, breaking off rock.
Abrasion	Eroded material is hurled or scraped against the cliff, breaking off rock.
Attrition	Eroded material in the sea hits into each other, breaking down into smaller pieces.
Solution	Cliffs e.g. chalk dissolve in seawater.

C Other coastal processes	
Transportation	The movement of sediment e.g. traction, saltation, suspension and solution.
Deposition	When waves drop the sediment they are transporting, either due to a loss of energy or change in direction of coastline.
Longshore drift	The movement of sediment along the coastline in a zig-zag motion, due to the wind.
Weathering	Breaking down of rocks by physical and chemical processes.

D Headlands and bays	
Geology	Different rock types e.g. resistant rock (granite) and less resistant rock (clay).
Headland	Resistant hard rock which is slowly eroded so sticks out to sea.
Bay	Less resistant soft rock which is quickly eroded, retreating to form a bay.

E Wave cut platforms	
Wave cut notch	These form at the foot of a cliff due to erosion. This undercuts the cliff above leaving it unsupported.
Wave cut platform	When the unsupported cliff collapses, the process repeats and the cliff retreats leaving a sloping wave cut platform.

I Case study example: Holderness coast, Mablethorpe			
Where?	The fastest eroding coastline in Europe, in East Yorkshire.		
Reasons to protect	Management strategies	Success	
1. Rocks are made of soft rock (fill), eroding at 2m per year. 2. The B1242 runs through Mablethorpe and would be expensive to re-route.	1. Rock groyne put in place to trap sediment being transported by longshore drift, creating a wider beach to absorb the power of the waves. 2. Rip-rap has been placed in front of the cliffs to absorb the wave energy.	1. Good – erosion in front of Mablethorpe 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.	

Background	
1. The Earth's structure is made up of layers. (A)	
2. The characteristics of these layers fuel tectonic plate theory. (B)	
3. There are four different plate boundaries, each with their own characteristic and resulting hazards. (C)	
4. Volcanoes can be found along constructive and destructive boundaries, although the volcanoes found at these boundaries are different. (D)	
5. Earthquakes take place along all of the boundaries, but are often most significant at conservative boundaries. Earthquakes have key features and are measured using the Richter scale. (E)	
6. People continue to live in tectonic areas for a number of reasons. (F)	
7. Some of these reasons relate to how we monitor, protect and plan for such hazards. (G)	
8. However, the impacts of these hazards can still be significant; although they can vary based upon a country's level of development. (H, I)	

A The layers of the Earth	
Crust	The thin outer layer of the Earth which is divided into plates called tectonic plates.
Mantle	Middle layer of the earth, between the crust and the core, approx. 2900km thick.
Core	The centre, hottest layer of the earth, broken into the inner (solid) and outer core (liquid).

B Theory	
Plate boundaries	The place where plates meet.
Convection currents	Radioactive decay in the core causes the warmer less dense magma in the mantle to rise, cool, and then sink. These convection currents cause tectonic plates to move.
Oceanic crust	The part of the Earth's crust under the oceans, usually 6-8km thick.
Continental crust	The part of the Earth's crust which contains land and is 30-50km thick.

C Different plate boundaries	
Constructive	Where two tectonic plates move apart and new crust is created.
Destructive	Where two tectonic plates come together. The denser oceanic plate is subducted, leading to violent volcanic eruptions.
Conservative	Where tectonic plates move alongside, or past each other.
Collision	Where two continental plates collide, forcing the land upwards and forming mountains.

D Volcanoes	
Shield volcano	A gently sloping volcano formed by runny lava (low viscosity), usually at constructive boundaries.
Composite volcano	A steep volcano formed by alternating layers of lava and ash, on destructive boundaries.
Pyroclastic flow	Torrent of hot ash, rock, gas and steam from a volcano.

G Volcanoes		Earthquakes	
Monitoring	1. The shape may change. 2. Increase in gases given off e.g. sulphur dioxide.	1. Irregular tremors measured. 2. Radon gas levels increase as rocks crack.	
Protect	Lava diversion channels.	Earthquake proof buildings.	
Planning	1. Evacuation. 2. Emergency services trained.	1. Earthquake drills. 2. Emergency services on-call.	

H Effects of tectonic hazards	
Primary effects	Direct impacts of an event e.g. people killed, injured, or buildings collapse.
Secondary effects	The indirect impacts of an event, usually occurring in the weeks, hours, months after the event e.g. the outbreak of disease from contaminated water.

E Earthquakes	
Epicentre	The point on the Earth's surface directly above the focus of an earthquake.
Focus	The source of an earthquake beneath the Earth's surface.
Seismic waves	Fast waves of energy generated from the focus.
Richter scale	A scale that measures the energy released by an earthquake.

F Why people live in tectonic danger zones	
Volcanoes	1. Jobs in tourism. 2. Geothermal energy created. 3. Ash makes the ground fertile, which is good for farming. 4. Diamonds and gold from previous eruptions can be mined.
Earthquakes	1. Friends and family live in the area. 2. It has not happened in such a long time, so people take the risk. 3. Employment in the area.

I Examples	
Developing Haiti Port Au Prince	1. 318,000 dead. 2. 1.5 million homeless. 3. Cholera outbreak killed 8,000.
Developed New Zealand Christchurch	1. 181 dead. 2. 80% of the city without electricity. 3. The Rugby World Cup was cancelled. 4. Schools closed for 2 weeks.

Topic 1: Henry VIII and The English Reformation

Timeline

1. Henry VII, the first Tudor monarch, became King of England 1485	3. Martin Luther nailed his 95 theses to his church door in Wittenberg 1517	5. Henry VIII married his second wife, Anne Boleyn 1533	7. The Dissolution (closure) of the Monasteries began. 1536	9. Henry VIII ordered every church to have an English Bible 1538	11. Edward VI was crowned King 1547
1509 2. Henry VIII became King of England	1521 4. Henry VIII wrote 'Defence of the Seven Sacraments' attacking Martin Luther	1534 6. The Act of Supremacy was passed, starting the English Reformation	Oct 1536 8. The Pilgrimage of Grace took place	1539 10. Parliament passed the Six Articles	

Key people

12. Catherine of Aragon	Henry VIII's first wife and the daughter of the King and Queen of Spain
13. Henry VIII	King of England from 1509-1547 who started the English Reformation
14. Martin Luther	A German monk who helped to start the Reformation
15. Thomas Cromwell	Henry VIII's chief minister from 1532 and a strong Protestant
16. Thomas Wolsey	Henry VIII's Lord Chancellor from 1515-29

Key words

17. Annul	To cancel or make non-existent	22. Protestantism	A form of Christianity which emerged during the 1500s in protest against Catholicism
18. Book of Common Prayer	A book of prayers used for Church of England services and written in English		
19. Break with Rome	England's decision to leave the Roman Catholic Church	23. Reformation	A movement to reform the Christian church which began with Martin Luther in Germany
20. Corruption	The misuse of power for dishonest or immoral purposes		
21. Indulgence	A forgiveness of one's sins purchased from the medieval Catholic Church	24. Transubstantiation	The change of bread and wine into the body and blood of Christ during communion

Topic 2: Religious Change Under The Later Tudors

Timeline

1. Mary I was crowned Queen of England 1553	3. Elizabeth I was crowned Queen of England 1558	5. Mary, Queen of Scots fled to England 1568	7. The Pope excommunicated Elizabeth I 1570	9. The Throckmorton Plot was uncovered by Sir Francis Walsingham 1583	11. Mary, Queen of Scots was executed 1587	13. Elizabeth I died, leaving no direct heir to the throne. 1603
1554 2. Mary I married Philip II of Spain	1559 4. The Act of Supremacy and the Act of Uniformity were passed	1569 6. The Revolt of the Northern Earls occurred but was crushed by Elizabeth's army	1571 8. The Ridolfi Plot was uncovered by Sir William Cecil	1586 10. The Babington Plot was foiled by Walsingham	1588 12. The Spanish Armada set sail for England but was defeated	

Key people

14. Edward VI	King from 1547-1553 and died aged 15
15. Elizabeth I	Queen from 1558-1603
16. Francis Drake	Famous Elizabethan sailor and privateer
17. Francis Walsingham	Principal Secretary and 'spymaster' to Elizabeth I
18. Mary I	Catholic Queen from 1553-1558
19. Mary, Queen of Scots	Elizabeth I's Catholic cousin and the most significant threat to her reign
20. Philip II	King of Spain from 1556-1598

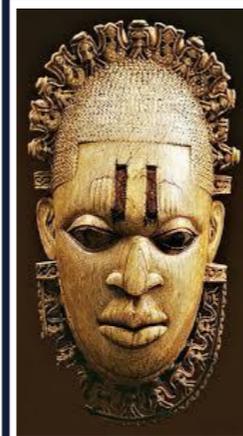
Key words

21. Armada	Fleet of warships	27. Privateer	A private sailor or pirate, authorised by their government to attack enemy ships
22. Crucifix	A Christian cross bearing a representation of Jesus Christ		
23. Elizabethan Religious Settlement	Elizabeth's 'middle way' that returned England to Protestantism but allowed Catholics to worship in secret	28. Propaganda	A piece of information used to promote a cause or point of view
24. Fireships	Empty ships set on fire		
25. Martyr	A person who is killed for their belief	29. Puritan	An extreme Protestant
26. Papal Bull	A formal announcement from the Pope	30. Stained glass	Decorative coloured glass, often found in the windows of churches and cathedrals
		31. Vestments	Garments worn by Christian clergymen, colourful and richly decorated for Catholics

Cultural Art – African Masks and Islamic Patterns

- I will learn that art and culture are entwined.
- I will learn the significance of African masks.
- I will learn the importance of Islamic patterns in architectural design.

How Artists Were Influenced by African Art



FACTS TO LEARN about African Masks:

- Most African masks are created to wear by people. They are often used in events and ceremonies. You can see the old tribes in Africa wearing the mask in the funeral or wedding.
- The meaning of the African mask is always associated with spiritual connection and meaning.
- The material used to create the African mask is wood. But sometimes people incorporate it with fabric, light stone, bronze, pottery or even copper.



Artists such as **Pablo Picasso** were influenced by African art: This painting from 1908 was painted by Picasso after he saw the African masks on display in a museum in Paris in 1900.

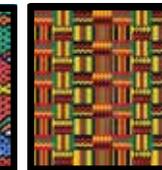
KEY WORDS TO LEARN about African Art: texture, pattern, symmetry, tribal, ceremonial, spiritual, dissonant, geometric, ancestors and abstract.



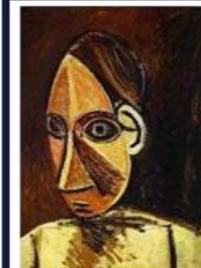
This artwork by **Paul Klee** shows African style pictograms.

What do you think these images depict?

How many figures can



Past and Present Artists Influenced by African Art



Pablo Picasso's self portrait was strongly influenced by the African art he saw in Paris.

Kenal Louis is a contemporary artist who creates modern mask designs. He is quoted saying:

"I will spark a change in the world through art."

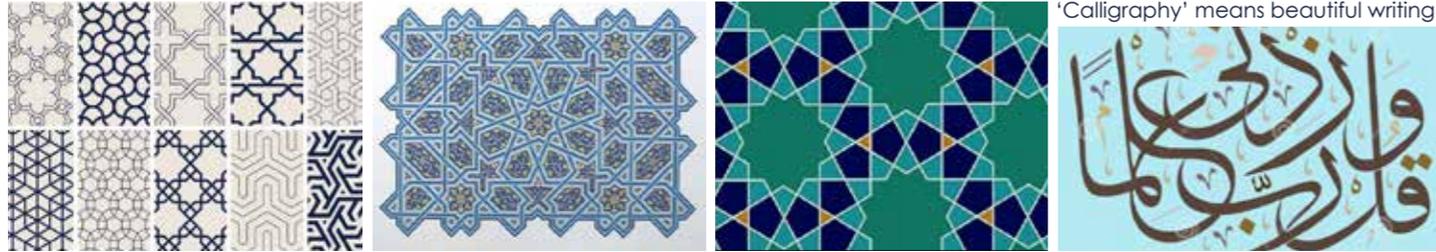
What are the key features of his artworks? How has he made the mask designs original? What would you add to these designs?



How to Create an Islamic Pattern

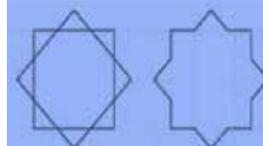
What is Islamic Art?

FACTS TO LEARN: Islamic art is not art of a specific religion, time, place or of a single medium. Instead it spans some 1400 years. Islamic Art covers many lands and populations and includes a range of artistic fields including architecture, calligraphy, painting, glass, ceramics, and textiles, among others.

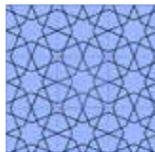


'Calligraphy' means beautiful writing:

How Do We Create Islamic Designs?

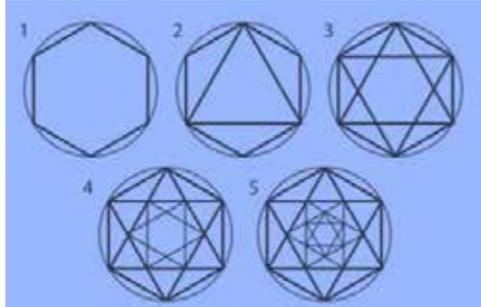


These patterns are created by repeating the simple star pattern below.



This simple star pattern is the start of how the second pattern is created: A grid is drawn and then the design is extended to the edges of each square. Can you try this simple design on gridded paper?

Islamic art is a fascinating way of creating beautiful accurate patterns. Using the basic steps above, you will be able to create a wide range of patterns and render them so that they are unique to you and your ideas. You will then create a tile design using a variety of materials, techniques and processes.



How do I create an Islamic pattern?

1. Create a hexagon inside a circle.
2. Create an equilateral triangle inside the hexagon.
3. Repeat the last task again upside down.
4. Repeat the triangles again inside the centre of the star.
5. And again – inside the star.
6. Render the design in colours used by Islamic artists.

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
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	Class of lever and central part for each lever
Deciduous	A tree which sheds its leaves each year
Coniferous	A tree which has leaves/needles which do not fall each year
Hard wood	A timber cut from a deciduous tree
Soft wood	A timber cut from a coniferous tree
Manufactured board	A man-made timber produced through gluing wood layers or wood fibres together

Design Technology

1 of 3

	Tenon Saw	To cut straight lines in timber.
	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.
	Vice	To hold timber tightly whilst cutting, shaping or marking.

Levers

Tree types

Deciduous tree Coniferous tree

Cam types

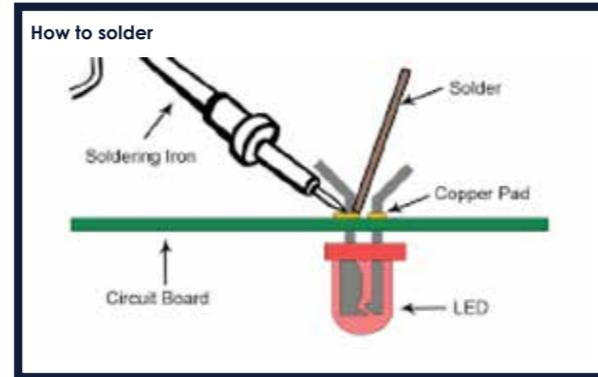
Round Egg Shaped Elipse Eccentric Hexagon Snail

Speaker Rotation

Key Terms	
Soldering	A process in which two or more components are joined together by melting and putting solder into the joint
Printed circuit board	Mechanically supports and electrically connects electronic components
Solder	Fusible metal alloy used to create a permanent bond between metal work pieces
Switch	 Makes or breaks the circuit
Wire	 Rod of metal that allows electrical current to flow through it
Battery	 Provides electrical current to a circuit
Loudspeaker	 Converts electrical audio signal into a corresponding sound
LED (light emitting diode)	 Emits light when electrical current flows through it
Resistor	 Restricts/reduces the flow of electricity in a circuit
Capacitor	 Stores electrical energy and give it back again to the circuit when necessary
Ohms	The unit of measure for electrical resistance
Art Deco	A movement in the decorative arts and architecture that originated in the 1920s
Raymond Templier	A French jewellery designer best known for his Art Deco and abstract designs in the 1920s and 1930s
Thermoforming plastics	Plastics that can be heated and formed multiple times
Examples	High Intensity Polystyrene (HIPS), Polypropylene (PP), Polymethyl Methacrylate (acrylic)
Thermosetting plastics	Plastics that can only be heated and formed once
Examples	Epoxy Resin (ER), Urea Formaldehyde (UF), Melamine Formaldehyde (MF)

Design Technology 2 of 3

	Soldering Iron	Heat solder between printed circuit board and electrical component to form an electrical joint.
	Wire Cutters	Cuts wire.
	Wire Strippers	Removes wire casing to expose wire (does not cut the wire).
	Solder Sucker	Removes unwanted solder from printed circuit board.



Food Science

Key Terms	
Health and Safety	Rules you should follow in the kitchen to keep you safe while cooking and preparing food
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
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
Nutritional Values	The amount of nutrients – both macro (big) and micro (small) – that a given dish provides you with
Micronutrients	Nutrients such as vitamins and minerals, including calcium, vitamin A, B, C, D, E and K
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
Time plan	A plan for how you will allocate time to each step of a method in a recipe while cooking
Enzymic browning	When a food reacts with oxygen to make it brown
Hidden sugars	The sugars a food product breaks down into when it's digested
Food sources and origins	Where a food comes from – the original place. Such as pork from a pig.
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

Design Technology 3 of 3

	Spatula	Used to combine, smooth, separate or collect mixtures or food during cooking or preparation. Different types of spatulas are available.
	Frying pan	A flat-bottomed pan used for frying, searing, and browning foods.
	Corer	A device for removing the core and pips from an apple.



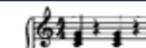
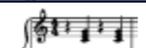
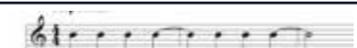
Private Peaceful by Michael Morpurgo (2003)

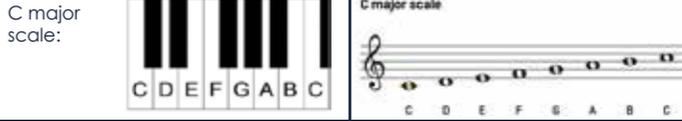
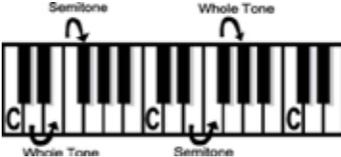
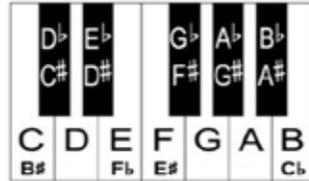
<p>1. Plot - Set in the fields of Devon and the WW1 battlefields of Flanders, two brothers fall for the same girl while contending with the pressures of their feudal family life, the war, and the price of courage and cowardice.</p> <p>2. Structure - The play starts at the end and uses flashback to show the events in Tommo's life.</p> <p>3. Genre is Tragedy - A type of drama in which characters undergo suffering or calamity and which usually ends with a death. A sad or catastrophic event causing suffering or death.</p> <p>4. Genre is a Historical war play - A play that takes its inspiration from a historical event</p>	
Question areas	Context/social/cultural/historical; aspects of the character; the way the actor uses movement and voice; Staging
Key words for question areas	<p>5. Social/cultural/historical - Context = Date-Place-Issue.</p> <p>6. Character traits/Aspects of character - persona; what the character is like and their background. Status in life. A character might change during the plot.</p> <p>7. 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.</p> <p>8. Lighting; - flood light; follow spot; gel; strobe; ultraviolet; spot light; side lights; up light; down light; warm wash; cold wash; flood light; Fade-up; fade-down; cross fade (speed of fades can be slow, middle pace fast gobo; blackout).</p> <p>9. Costume; - period costumes; culture; colour; fabric; style; condition; symbolism; element; item (e.g. shirt; hat; shawl; cane; umbrella);</p> <p>10. Staging - the process of selecting, designing, adapting to, or modifying the performance space for a play. This includes stagecraft elements as well as the structure of the stage and its components</p> <p>11. Performance space - thrust; in the round; traverse; end on</p> <p>12. Sound design - sound effects; live or recorded; underscoring; direction; transitions; volume</p>
Context	13. 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.
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 Healy	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>
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.

Key Terms/Themes	
SKA	A genre that was popular in Jamaica during the early 1960s. It is characterised by off-beat rhythms and walking bass lines . (Listen to <i>My Boy Lollipop</i> by Millie Small).
ROCKSTEADY	A genre that was popular in Jamaica in the mid-1960s. Like Ska, it uses off-beat rhythms and the bass guitar usually plays rhythmic riff. However, the tempo was slower than Ska. (Listen to <i>You Can Get it if You Really Want</i> by Desmond Dekker).
REGGAE	Reggae was popular in Jamaica during the late 1960s. It grew out of Ska and Rocksteady . Like Rocksteady , it uses off-beat rhythms and the bass guitar plays rhythmic riffs . The tempo is faster than Rocksteady , but slower than Ska .
RASTAFARIANISM	A religion developed in Jamaica during the 1930s. It is very closely associated with Reggae.
POLITICAL LYRICS	Many Reggae songs have lyrics that reference issues such as apartheid and anti-racism.
R&B	Rhythm and Blues . A genre of music that originated in the African American community of America. It had a huge influence on the development of Reggae.

Instruments	
BASS GUITAR	The bass guitar is an important instrument in most reggae songs. It usually plays distinctive rhythmic riffs . 
VOICE	Famous reggae singers include Bob Marley and Burning Spear. 
DRUMS	Reggae uses a full drum kit , which plays very distinctive drum pattern. 
ELECTRIC ORGAN	Reggae songs often have organs, which are used to play chords and hooks . 
GUITAR	The guitars in reggae usually strum on the off-beat. 

Key Terms/Themes		
TEMPO	Tempo is the musical word for speed. Reggae songs are usually quite slow , but not as slow as Rocksteady . 	
RHYTHM	A rhythm is a pattern of sounds of different lengths. Rhythms can either be on or off the beat . 	
METRE	Metre is the number of beats in a bar . Most reggae songs have four beats in a bar . 	
ON-BEATS	When there are four beats in a bar , the on-beats are 1 and 3, as these are where the 'natural' stress falls. 	
OFF-BEATS	When there are four beats in a bar, the off-beats are 2 and 4, as these do not naturally have a stress. 	
SYNCOPATION	When the off-beats are given more emphasis than the main beats. 	

Key Word	Definition
SCALE	A set of next-door notes that go up or down in order
KEY	Notes from a piece of music come from a particular scale. The scale on which a piece is based determines its key. For example, a piece which uses notes from the A minor scale is in 'A minor'.
TONALITY	Whether a piece is major or minor.
MAJOR SCALE	A scale that uses the following pattern: Tone – Tone – Semitone – Tone – Tone – Tone – Semitone. Often described as 'happy-sounding'. C major scale: 
MINOR SCALE	A scale that uses the following pattern: Tone – Semitone – Tone – Tone – Semitone – Tone – Tone. Often described as 'sad-sounding'. A minor scale: 
SEMITONE	The smallest space between two next-door notes e.g. between C and C#.  Examples of semitones: 
WHOLE TONE	The space between two next-door notes. A whole tone is made up of two semitones.  Examples of whole tones: 
ACCIDENTAL	A sharp or flat note.
SHARP	Higher in pitch by one semitone – i.e. the higher of the two next-door notes on the keyboard.  
FLAT	Lower in pitch by one semitone – i.e. the lower of the two next-door notes on the keyboard.  

Does it make sense to believe in God?

Keywords:

Omnibenevolent (all-loving)
Omnipotent (almighty/all-powerful)
Omniscient (all-seeing)
Omnipresent (everywhere)
Immortal (cannot die)
Monotheism belief in one God
Polytheism belief in many Gods
Atheism: Believing God does not exist
Agnostic: Believing that we can never know whether God exists
Immanence the belief that we can experience God in our lives
Transcendence the belief that God is above us and we cannot understand or experience his presence in the world
Empiricism: the belief that we gain knowledge through experience – through our 5 senses
The Big Bang: A scientific theory for the creation of the universe
Abrahamic God: The God that Christians, Muslims and Jews believe in
Miracle: An event that science cannot explain pointing to the possible existence of a greater power
Revelation: God revealing himself
Morality: knowing the difference between right and wrong

1. Why people do/ don't believe in God

People Believe in God Because of:

- Religious upbringing : People are often born into religious families and households. From an early age they are taught about God within their own religious setting

Examples:

- In Islam when a child is born a male relative will often whisper the adhan (call to prayer) in the child's ear. Children often go to Madrassa to learn Qur'anic Arabic and set prayers
- In Christianity babies are often Baptised to welcome them into the Christian faith. They may also be given God-parents – people who will help to guide them in faith

People Believe in God Because:

- There is so many unexplained phenomena in the world. Belief in God helps people to make sense of the world
- Because belief in God provides comfort and guidance

People don't Believe in God Because:

- There is not empirical evidence for his existence – no one has ever seen him
- There is too much evil & suffering in the world for an omnibenevolent God to exist

Topics covered:

- | | |
|--------------------------|-------------------|
| 1. Why believe in God? | 4. Miracles |
| 2. Cosmological argument | 5. Revelations |
| 3. Design Argument | 6. Moral Argument |

2. First Cause/Cosmological argument

What is it? – The First Cause argument says that everything that exists has a cause. The universe too must have a cause - something must have started it. But that something had to be eternal and not caused by something else, otherwise that other thing would be the cause, and so on. Theists believe that God is the eternal, almighty cause that began the process of creation of everything we know.

Strengths of this argument:
Scientific discoveries, eg the Big Bang theory, can be seen to support the first cause argument. If God caused the 'Big Bang', then God is the 'first cause' that brought the cosmos (universe) into existence. It confirms to the theist that there is purpose to the cosmos and a place for God as its 'creator'

Weakness of this argument:

- the argument contradicts itself – if everything has a cause then what caused God?
- Big Bang not necessarily caused by God

3. Design/ Teleological argument

What is it? it is possible to prove the existence of God by observing the nature of the world we live in. The world shows signs of **ORDER** and things working to achieve a **PURPOSE**. This is evidence of **DESIGN**. In other words, God is the DESIGNER of an ordered and purposeful world.

Who is William Paley?
William Paley supported this argument by way of **ANALOGY**. In the same way that a watch is clearly designed for a purpose by the watchmaker, Paley argues that the world is clearly designed for the purpose of supporting human life.

Strengths of this argument

- It fits well with many religious stories such as the Christian creation story
- It explains many unexplained things such as why the world is ordered in such a way

Weakness of this argument:

- If an intelligent designer designed the universe, then who designed the intelligent designer?
- The complexity of the universe does not prove God exists, there are more scientific explanations such as evolution and natural selection
- The designer does not have to be the Abrahamic God

4. Miracles

What is it? – an event that breaks the rules of science and points to the existence of God

Biblical Examples – Feeding of the 5 thousand/ Jesus walking on water/Moses parting the Red Sea
Modern examples: being cured from a disease which is scientifically impossible to cure

How do Miracles prove God's existence?

- If science can't prove it and there is no logical explanation, theists claim that it points to the existence of a higher power – God

Strengths of the argument:

- Evidence in religious texts
- Many people have seen miracles
- When there is no explanation, God can be a logical conclusion

Weakness of the argument:

- Eyewitnesses can be deceived
- There is always a logical conclusion – all miracles can be explained

5. The argument for revelation

What is revelation? - The idea that God makes himself known to people through religious experiences and events.

What are the 2 types of revelation?

Special Revelation: When God makes himself known to an individual through direct personal experience e.g. When God spoke to Moses in the form of a burning bush/story of Saul
General Revelation: God making himself known through everyday ordinary common human experiences e.g. reading religious texts/many people consider the beauty and complexity of the earth and nature as proof that God exists.

How does special revelation prove God exists?

It is direct contact with God – God has spoken to you therefore he exists.

How does General revelation prove God exists?

- shows that God is working in the universe

Awe and wonder: a sense of appreciation for the power and beauty of nature
Conversion: a powerful experience that leads to one making a dramatic change in their life

Strengths of the revelation argument:

- it is difficult to ignore the existence of God if you have had direct contact with him
- Revelation is available for all to experience in the everyday experiences of the world and nature
- It has caused conversion in many people – makes people become religious

Weakness of the revelation argument:

- What someone might call direct contact with God can be disputed, there might be a logical explanation
- It cannot be scientifically proved or tested

6. The Moral Argument

What is morality?
Knowing the difference between right and wrong actions

What is the moral Argument? The argument is as follows:

- Everyone knows the difference between 'right' and 'wrong'
- our universal sense of morality must come from somewhere
- The source of our morality must be God
- therefore God exists

How does this prove God exists?

- There is no other explanation as to how everyone has the same ideas about 'right' and 'wrong'

Strengths of this argument:

- People from different times, cultures and societies all have similar ideas of what morality is

Weakness of the argument:

- Could be from evolution - we have developed a sense of morality over time.
- Could be from social conditioning - taught from an early age that lying and stealing is wrong.

8.1	Identify the six functions of the skeletal system. <ul style="list-style-type: none"> • Shape • Support • Movement • Mineral storage • Protection • Production of red blood cells
8.2	Muscles work in pairs. Identify the name of the muscle which works during movement. <ul style="list-style-type: none"> • Agonist
8.3	Muscles work in pairs. Identify the name of the muscle which relaxes during movement. <ul style="list-style-type: none"> • Antagonist
8.4	Identify the agonist and antagonist when preparing to kick a football (i.e. bending the leg).
8.5	<ul style="list-style-type: none"> • Agonist = Hamstrings • Antagonist = Quadriceps
8.6	Identify the agonist and antagonist when striking a football (i.e. straightening the leg).
8.7	<ul style="list-style-type: none"> • Agonist = Quadriceps • Antagonist = Hamstrings
8.8	Identify the agonist and antagonist when throwing a punch in boxing (i.e. straightening the arm).
8.9	<ul style="list-style-type: none"> • Agonist = Triceps • Antagonist = Biceps
8.10	Identify the agonist and antagonist when taking a guard in boxing (i.e. bending the arm).
8.11	<ul style="list-style-type: none"> • Agonist = Biceps • Antagonist = Triceps
8.12	Identify the two types of muscle contraction. <ul style="list-style-type: none"> • Isotonic • Isometric
8.13	Describe isotonic muscle contraction. <ul style="list-style-type: none"> • Muscle contraction where there is a change in the length of the muscle
8.14	Describe isometric muscle contraction. <ul style="list-style-type: none"> • Muscle contraction where there is no change in length of the muscle

8.15	Identify the two types of isotonic contraction. <ul style="list-style-type: none"> • Concentric • Eccentric
8.16	Describe the two types of isotonic contraction. <ul style="list-style-type: none"> • Concentric = muscle length gets shorter • Eccentric = muscle length gets longer
8.17	Identify when eccentric contractions take place. <ul style="list-style-type: none"> • During controlled downward movement
8.18	Identify examples of an eccentric contraction. <ul style="list-style-type: none"> • The downwards phase of a squat • The downwards phase of a press-up
8.19	Identify the agonist and antagonist during the downward phase of a squat.
8.20	<ul style="list-style-type: none"> • Agonist = Quadriceps • Antagonist = Hamstrings
8.21	Identify the agonist and antagonist during the upwards phase of a squat.
8.22	<ul style="list-style-type: none"> • Agonist = Quadriceps • Antagonist = Hamstrings
8.23	Identify the agonist and antagonist during the downward phase of a press-up.
8.24	<ul style="list-style-type: none"> • Agonist = Triceps • Antagonist = Biceps
8.25	Identify the agonist and antagonist during the upwards phase of press-up.
8.26	<ul style="list-style-type: none"> • Agonist = Triceps • Antagonist = Biceps
8.27	Define inspiration. <ul style="list-style-type: none"> • Breathing in into the lungs
8.28	Define expiration. <ul style="list-style-type: none"> • Breathing air out of the lungs

8.29	Describe the role of the ribs and diaphragm during inspiration. <ul style="list-style-type: none"> • Ribs rise up • Diaphragm contracts and moves down
8.30	Describe the role of the ribs and diaphragm during expiration. <ul style="list-style-type: none"> • Ribs move down • Diaphragm relaxes and moves up
8.31	Identify the name of the muscles situated in between the ribs which support the process of respiration. <ul style="list-style-type: none"> • Intercostal muscles
8.32	Identify which of the intercostal muscles contracts to pull the rib cage up during inspiration. <ul style="list-style-type: none"> • External intercostal muscles
8.33	Identify which of the intercostal muscles contracts to pull the rib cage down during expiration. <ul style="list-style-type: none"> • Internal intercostal muscles
8.34	Define aerobic. <ul style="list-style-type: none"> • With oxygen
8.35	Define anaerobic. <ul style="list-style-type: none"> • Without oxygen
8.36	Identify the equation for aerobic respiration. <ul style="list-style-type: none"> • Glucose + Oxygen = Energy + CO₂ + Water
8.37	Identify the equation for anaerobic respiration. <ul style="list-style-type: none"> • Glucose = Energy + Lactic Acid
8.38	Describe aerobic exercise in terms of duration and intensity. <ul style="list-style-type: none"> • Long duration • Low intensity
8.39	Identify which fitness component is developed through aerobic exercise. <ul style="list-style-type: none"> • Cardiovascular endurance
8.40	Identify examples of an aerobic sporting activity. <ul style="list-style-type: none"> • A marathon • Long distance cycling

8.41	Describe anaerobic exercise in terms of duration and intensity. <ul style="list-style-type: none"> • Short duration • High intensity
8.42	Identify which fitness components are developed through anaerobic exercise. <ul style="list-style-type: none"> • Power • Speed
8.43	Identify examples of an anaerobic sporting activity. <ul style="list-style-type: none"> • 100m sprint • High jump
8.44	Define the following training methods: a. Circuit training b. Continuous training c. Interval training d. Weight training e. Plyometric training f. Static stretching g. Fartlek training h. Altitude training a. A series of stations working different muscle groups b. One extended period of training with no rest periods c. Structured periods of work and rest d. A series of exercises using either 'free weights' or resistance machines e. Training involving jumping, hopping and bounding f. Training using stretches which are held in a set position g. Training over different terrain with changing levels of intensity (also known as 'speed play') h. Exercise completed high above sea level
8.45	Identify the fitness component improved in each of the training methods listed in Q8.44. a. Muscular endurance b. Cardiovascular endurance c. Speed d. Strength e. Power f. Flexibility g. Cardiovascular endurance h. Cardiovascular endurance

8.46	Identify how an athlete would calculate their maximum heart rate (MHR)?
	<ul style="list-style-type: none"> MHR = 220 – age
8.47	Define the term aerobic threshold.
	<ul style="list-style-type: none"> The point at which your training becomes aerobic 60% of MHR
8.48	Define the term anaerobic threshold.
	<ul style="list-style-type: none"> The point at which your training becomes anaerobic 80% of MHR
8.49	Identify the aerobic training zone.
	<ul style="list-style-type: none"> 60-80% of MHR
8.50	Identify the anaerobic training zone.
	<ul style="list-style-type: none"> 80-90% of MHR
8.51	Define oxygen debt.
	<ul style="list-style-type: none"> A temporary shortage of oxygen in the body following anaerobic exercise
8.52	Define EPOC.
	<ul style="list-style-type: none"> Excess Post Exercise Oxygen Consumption The body takes on board additional oxygen after exercise to repay the oxygen debt developed during anaerobic work.
8.53	Describe how EPOC occurs.
	<ul style="list-style-type: none"> Increased breathing rate (breathing quicker) and depth of breathing (breathing heavier) to take in more oxygen.
8.54	Define a balanced diet.
	<ul style="list-style-type: none"> Eating the right number of calories for energy expended
8.55	Identify reasons for maintaining a healthy balanced diet.
	<ul style="list-style-type: none"> To avoid unused energy being stored as fat To provide nutrients for growth and repair To ensure suitable energy levels for physical activity

8.56	Identify the seven nutrients which make up a healthy balanced diet.
	<ul style="list-style-type: none"> Carbohydrates Fats Protein Fibre Vitamins Minerals Water
8.57	Identify the recommended % of macro nutrients (carbohydrates, fats and protein) in a healthy balanced diet.
	<ul style="list-style-type: none"> Carbohydrates = 55-60% Fats = 25-30% Protein = 15-20%
8.58	Identify the recommended daily calorie intake for an adult male and female.
	<ul style="list-style-type: none"> Male = 2,500 calories Female = 2,000 calories
8.59	Identify factors which may influence an individual's required calorie intake.
	<ul style="list-style-type: none"> Level of physical activity Gender Age Height
8.60	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
8.61	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

Notes

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